



24" वार्षिक आम बैठक, नई दिल्ली, 19 सितम्बर, 2013 24" Annual General Meeting, New Delhi, September 19, 2013



## Dear Shareowners,

It is my great pleasure to welcome you all to the 24th Annual General Meeting of your Company. I thank you all for making it convenient to attend the meeting.

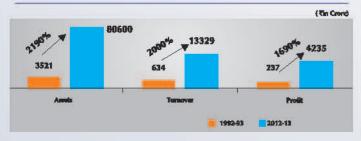
The Directors' Report and the Company's Annual Accounts for the financial year ending 31st March, 2013 have already been circulated to you. With your kind permission, I take them as read.

Ladies and Gentleman, this is my third address at your Company's AGM and I feel proud to meet you after completion of another eventful financial year. I extend my profound gratitude for your continued patronage, encouragement, support and acknowledge with humility, the confidence reposed upon me and on the Board of Directors.

The financial year 2012-13 has been a challenging year on multiple fronts. I take this opportunity to share the vision, measures taken to address challenges, technology advancements, new business initiatives for sustainable development, accomplishment in smart grid projects, integration of renewables, partnering with State utilities, etc.

Dear Shareholders, journey of a thousand miles begins with a single step. Likewise your Company too started with tender foot in October, 1989 and now is entering its silver jubilee year next month. The journey so far has been exhilarating as well as overwhelming for an organization which started its modest operations in FY 1992-93. During the course of journey, we achieved many milestones, scaled new heights and registered excellent growth on all fronts. I wish to present some of these to you:

#### **GROWTH IN LAST 21 YEARS OF COMMERCIAL OPERATIONS**



I would like to thank again each one of our stakeholders for their continuous support and confidence and inspiration provided to achieve the vision of becoming a World Class, Integrated and Global Transmission Company.

#### **ECONOMIC SCENARIO AND POWERGRID**

Friends, our Country has registered GDP growth of 5% for the Financial Year 2012-13, which is lower as compared to average annual growth of 8% achieved in XI Plan period (2007-2012). This has been attributable to multiple factors encountered on domestic and global fronts. To bring back the economy on to the growth trajectory and achieving country's socio-economic growth targets, accelerated development of key infrastructure sectors like power is of paramount importance. I, on behalf of our dedicated & committed workforce, assure you that we are fully geared up to meet the expectations and even surpass the excellent track record in all of our operations.

Dear Shareholders, despite difficulties being faced by Indian Economy, your Company has registered an impressive growth of 24% in its turnover during the FY 2012-13 and the momentum is continuing in 2013-14.

Your Company has made significant contribution in propping up the economy through accelerated capex programme and augmenting the capacity of its power transmission and telecom infrastructure. Our continued expansion plan has been providing growth to the recession ridden electricity industry, particularly equipment manufacturers/vendors in transmission and allied sectors.

Another major concern that has recently developed at macroeconomic level is the persistent depreciation of the INR since May, 2013, which has depreciated as much as about 19%. While, Government and RBI are closely monitoring the situation and taking necessary steps in this regard, I would like to share that your Company's exposure to foreign exchange risk is minimal. Only about 33% of total debt is from foreign sources and our equipment import constitutes to only about 8%-10% of the capital expenditure planned in FY 2013-14. You will be pleased to note that foreign exchange rate variation being a pass through component in our tariff will not materially affect your Company's bottom line. However, for effectively addressing the issue of Foreign Exchange Rate Variation for the stakeholders interest, your Company is in the process of evolving an appropriate foreign exchange hedging policy.

Over the years, your Company has taken initiatives for encouraging development of major electrical equipment such as HVDC/ 765kV Transformers, Reactors, Insulators, SVCs, etc., indigenously for self reliance. In this direction, you will be pleased to note that your Company has been playing a critical role and facilitating not only seamless integration of new technology but also setting up of manufacturing facilities in India to meet country's long term requirements. Your Company has also taken initiatives under PPP model for development of technological products like 1200 kV UHV AC, Smart Grid, Smart Energy meters, Phasor Measurement Units (PMUs) etc., indigenously. As a result of these, today almost all our equipment can be sourced domestically.

I am happy to share with you that some of the Indian Companies are exporting their products / services so developed and also through your Company's international assignments. All these initiatives are contributing significantly in saving the precious foreign exchange as well as improving the Current Account Deficit situation.

In addition your company as Central Transmission Utility has so far granted Long Term access & conctivity for about 83000 MW & 70000



MW respectively & processed about 75 Medium Term Open Access applications for different quantum of power. Addition of such large generation capacity and matching transmission and distribution infrastructure shall go a long way in meeting power demand in the country. Further, to provide comfort to private investors entering into transmission business, your Company has also undertaken the responsibility of Billing, Collection and Disbursement of Transmission Tariff on behalf of all the Inter-State Transmission System (ISTS) licensees under Point of Connection mechanism.

### **PERFORMANCE HIGHLIGHTS**

Friends, we have carried out a number of challenging tasks, both domestically and internationally. However, we can't afford to put our feet up as we have a long journey ahead. It reminds me of a shloka:

उद्यमेन हि सिध्यन्ति कार्याणि न मनोरथैः । न हि सुप्तस्य सिंहस्य प्रविशन्ति मुखे मृगाः ।।

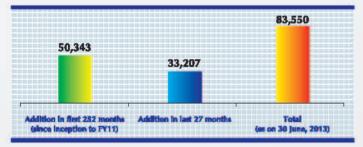
Work gets accomplished only by effort, and hard work, not merely by wishing. The prey doesn't enter a sleeping lion's mouth.

In this backdrop, I would like to share some of the performance highlights of your Company:

Project implementation: Your Company has once again demonstrated an exceptional performance by adding about 7,156 circuit kilometres (ckm)of Extra High Voltage transmission lines, 17 new EHV sub-stations and transformation capacity of more than 40,230 Mega Volt Amperes (MVA), despite constraints of challenging terrains, hostile climate, severe Right-of-Way problems etc.. These additions during the year have enhanced the Gross Asset Base by about ₹17,213 Crore, up by 27% as compared to previous year. I am happy to inform that asset base added in last 27 months is about 66% of the asset base created since inception up to FY 2011 (252 months).

#### **Growth in Gross Fixed Assets**

(₹. In Crore)



Implementation of High Capacity Power Transmission Corridors (HCPTCs) is progressing as planned, matching with generation projects. In fact, some of the elements under HCPTCs in the State of Chhattisgarh and Odisha have already been commissioned in FY 2012-13 and further elements of HCPTCs are expected to be completed progressively by FY 2015-16.

Your Company has successfully commissioned AC portion of the prestigious Indo-Bangladesh interconnection in August, 2013. With this, Indian grid has been interconnected with third South Asian country, besides Bhutan and Nepal.

Financial Performance: Your Company achieved a Turnover of ₹13,329 Crore and Net Profit of ₹4,235 Crore in FY 2012-13 as

compared to **₹ 10,785** Crore and **₹ 3,255** Crore respectively during FY 2011-12, registering a growth of about 24% in Turnover and 30% in Net Profit. Your Company has been consistently surpassing the expectations of the shareholders through its improved performance in its business verticals. Your Company's scrip has been outperforming the sectoral indices and the Sensex consistently.

Dear Members, your Company made an investment of ₹20,037 Crore during the year, an increase of about 13% over last year. Present Asset Base of your Company stands at about ₹1,28,000 Crore including the work in progress, construction stores & advances and is expected to witness quantum jump with the planned enhanced capex programme in XII Plan period (FY 2012-17).

For meeting our CAPEX in the XII Plan, new funding options were also resorted to like availing a loan of US\$ 270 million from IFC, ICF Debt Pool LLP and consortium banks. Further, in January, 2013 your Company's maiden issue of 10 year Foreign Currency Bonds met with a resounding success and was over subscribed by nearly 19 times. Through this maiden issue, your Company raised US \$ 500 million at a coupon rate of 3.875% p.a. and the Bonds are currently listed in Singapore Stock Exchange.

Operational Performance: Your Company crossed the benchmark values of '1,00,000 ckm' & '1,50,000 MVA' during the year with total transmission network of 1,02,035 ckm and 1,69,570 MVA of transformation capacity along with 171 nos. of sub-stations, as on August 31, 2013. Your Company continued to attain the transmission system availability of 99.90%, with number of trippings per line at 0.58. Your Company continues to maintain its track record of achieving high availability of its transmission network through deployment of State-of-the-Art O&M techniques.



Patrolling of such a vast transmission network traversing length & breadth of the country is a herculean task. Towards this, to start with, aerial patrolling of transmission lines by using helicopters, especially in difficult terrain has been undertaken for 15,000 kilometers. To take it further, deployment of helicopters for maintenance purposes is also being explored.

Presently, 43 sub-stations of your Company are being operated remotely for optimal utilization of resources. Working towards our dream of operating all the sub-stations from a centralized location, your Company is establishing "National Transmission Asset Management Centre (NTAMC)" to enable remote operation, control and monitoring of all sub-stations leading to optimum response time and economical utilization of resources. First phase of the project is envisaged to be operational this year.

As a step further for enhancing operational efficiency, "Maintenance Service Hubs" has been introduced with specialist maintenance crew to cater to the need of group of sub-stations.

#### TOWARDS PAN INDIA SYNCHRONOUS NATIONAL GRID

Your Company, through upgradation of two (2) nos. 400 kV single circuit Gwalior-Agra lines at 765 kV level and commissioning of 765 kV single circuit Sasaram-Fatehpur line, has augmented the interregional power transfer capacity between Western & Northern and Eastern & Northern Regions by 4,100 MW. The present Inter-regional power transfer capacity of National Grid stands at 31,850 MW. Matching with the generation capacity addition and power transfer requirements, the inter-regional transmission capacity of the National Grid has been planned to increase to 66,000 MW by XII Plan end for which the implementation activities have already been undertaken.

Dear shareholders, our long cherished dream of 'One Nation – One Frequency' is likely to be achieved this year through commissioning of 765 kV Raichur-Solapur transmission system connecting Southern grid synchronously with rest of the grid. Synchronous integration of Southern Grid with rest of the Grid will not only relieve the occasional congestions being experienced in few transmission corridors, but also be a great boost for economic growth of the Country.



#### **GRID MANAGEMENT BY POSOCO**

Power System Operation Corporation Limited (POSOCO), a fully owned subsidiary of your Company, is looking after the function of real time grid management of the country. Through its efficient management, POSOCO has facilitated about **66 Billion Units (BUs)** of inter-regional energy transfer across the country during FY 2012-13, which is about 12% higher than the previous year's energy transfer of about 59 BUs.

Electricity market is becoming more active and vibrant resulting in more than 32,000 transactions under Short Term Open Access during the year involving about 73 BUs of energy. Friends, in



View of NLDC

monetary terms, impact of this magnitude of energy transfer translates into about ₹30,000 Crore, equivalent to about 10,000 MW of electricity trade leading to economy and efficiency having multiplying effect on Country's economy. This has also resulted in reduction of SPOT Electricity market price from about ₹8-10 to ₹2-3 in 3-4 years. On the other hand, volume of Unscheduled Interchanges (UI) in monetary terms on a weekly basis has been reduced to 1/5<sup>th</sup>, post grid disturbance. All this has been made possible because of your Company's fully integrated pan India transmission network, State-of-Art Load Despatch & Communication facilities and also transparent operation of POSOCO being independent of ownership and control of market participants (e.g. generators, distributors & suppliers).

Dear Friends, we had two major grid disturbances last year i.e. on 30<sup>th</sup> and 31<sup>st</sup> July, 2012 and had assured that it would not reoccur. You are aware that restoration of majority system was achieved in record time of about six to eight hours and the entire system was normalized on the same day(s), which is one of the quickest restorations in the world. The implementation of recommendations/ measures of the Enquiry Committee, set up by Gol for investigation of these disturbances, such as third party protection audit, regulatory interventions for review of UI mechanism, Islanding schemes, preparation of comprehensive defense plan covering underfrequency, rate of change of frequency and voltage, system protection schemes to cover large generation and transmission line outages, etc. have been undertaken by various utilities expeditiously.

As a step towards maintaining higher grid security, the grid operating frequency band has been tightened from 49.5-50.2 Hz to 49.7-50.2 Hz w.e.f. 00:00 hours of September 17, 2012 as per regulations of CERC. For further tightening the frequency band to 49.9 - 50.1 Hz and impose limits on UI injection/ withdrawal, petitions have been filed with CERC. For further improving the grid performance, regulations to relieve congestion in real time operation and to levy congestion charges both upstream & downstream of congested transmission corridor have been notified by CERC.

Further, your Company is also implementing a Grid Security Expert System, a project for advance defense plan for the Secure Grid Operation. This system shall enable all State Load Despatch Centers, Regional Load Despatch Centers and National Load Despatch Center to manage the load disconnection & generation disconnection automatically depending upon the criticality of Grid, based on real time information.

## PERFORMANCE IN TELECOM

Dear Shareholders, your Company presently manages an all India Broad Band Telecom Network of about 30,000 km connecting all metros, major cities, towns, State capitals including remote areas of





Telecom Antenna on Transmission Tower

North-Eastern Region and Jammu & Kashmir with about 290 Points of Presence (PoPs) across the country with over 99.92% availability. Your Company is also in the process of installing OPGW of about additional 1,00,000 km on its various transmission lines across the country for grid monitoring/smart grid purposes, which will also be available to expand our Telecom business to reach out more cities and towns.

Telecom business has registered an income of about **₹231** Crore in FY 2012-13, an increase of 15% from previous year in spite of market recession in telecom sector.

Your Company is one of the implementing agencies of the prestigious National Knowledge Network project of Government of India, to connect all knowledge centres across the country such as Indian Institutes of Technology (IITs), Indian Institute of Science (IISc) etc., on high speed network. We have already completed and commissioned about 85% of the links as on date. Revenue of approximately ₹900 Crore over a period of ten years is envisaged for your Company.

You may be aware that Government of India has initiated a prestigious project through National Optical Fiber Network (NOFN) to interconnect 2,50,000 Gram Panchayats (GPs). Your Company has been chosen as one of the agency to implement the NOFN project and now working in four (4) States viz. Andhra Pradesh, Himachal Pradesh, Jharkhand & Odisha involving about 36,000 GPs in about 89 districts covering 1,769 blocks at an estimated cost of about **₹2,700 Crore**. As a part of this, a pilot project undertaken at Parawada Block of Viskhapatnam District (Andhra Pradesh) was completed successfully by your Company in October 15, 2012. Detailed Project Development Agreement for project execution has been signed on May 21, 2013 with a centage of 10% of the project cost to your Company. The work is under progress and the project is envisaged to be completed within twenty four (24) months.

Your Company is further expanding into value added services such as Multi Protocol Label Switching for providing Virtual Private Networks, which will facilitate to increase customer base in telecom domain including major Corporate, Banking and Financial Stringing work in Dubai Consultancy project

Institutions, Public Sector Undertakings and Government Organizations.

Keeping in view the national interest, strategic nature of the North-Eastern Region and to support the initiatives of the Government of India, your Company shall provide bulk bandwidth to Bharat Sanchar Nigam Ltd. (BSNL) on a long term basis, which will enable BSNL to provide reliable services to common people of North East.

## **CONSULTING SERVICES**

Capitalizing on its immaculate expertise developed in the areas of Power Transmission, Sub-transmission, Distribution and Telecom, your Company continues to provide Consultancy services to various utilities at National and International level in the unique role of "Utility turned Consultant", thereby adding further value to its shareholders.

During FY 2012-13, on domestic front, your Company has secured 26 new assignments for public & private utilities having aggregate project cost of ₹715 Crore, which reflects unbounded trust in your Company by Public & Private utilities alike. Your Company has signed agreements with six (6) NER States (Assam, Meghalaya, Mizoram, Manipur, Nagaland and Tripura) on 7th June 2013 to provide services as "Project Design cum Implementation Supervision Consultant" for implementation of "NER Power System Improvement project" funded by The World Bank at an estimated cost of about ₹8,400 Crore. For Arunachal Pradesh & Sikkim States, your Company shall also implement sub-transmission and distribution works on similar basis at an estimated cost of about ₹4,800 Crore, funded by Government of India.

Your Company, being the front runner in Smart Crid implementation in the country is providing technical services / assistance to various utilities.

On overseas front, we are pursuing aggressively towards expanding our foot prints. In this direction, we have emerged as leading consultant in South East Asia and now spreading our wings towards Africa, which is going through the same growth phase as witnessed



by Indian Power Sector few decades back. Thus, there are ample opportunities to leverage our expertise and replicate the success achieved in Indian Transmission sector in Africa. We have also joined hands with other leading power sector companies to offer integrated solutions for generation, transmission & distribution to international power utilities. In Ethiopia, your Company, taking lead role in a consortium, is poised to take over the management of power system of Ethiopian Electric Power Corporation encompassing generation, transmission and distribution system on Contract basis. This will open up new vistas for your Company at international level. Currently, your Company is providing its services in various areas in fourteen (14) countries viz. Nepal, Bhutan, Bangladesh, Afghanistan, Sri Lanka, Myanmar, UAE, Nigeria, Ethiopia, Kenya, Tajikistan, Congo, Pakistan and Kyrgyz Republic, with good prospect in few more countries this year. During FY 2012-13, your Company secured new international assignments having aggregate project cost equivalent to ₹332 Crore.

Your Company has formed its maiden International Joint Venture Company, named "Power Transmission Company Nepal Ltd." (PTCN) in Nepal which together with another Joint Venture Company, named 'Cross-border Power Transmission Company Ltd.' (CPTC) in India shall undertake implementation of 125 km. long Indo-Nepal cross-border interconnection transmission link from Muzaffarpur in India to Dhalkebar in Nepal. In CPTC, your Company holds 26% stake and it will also have equity contribution of 26% in PTCN.

Through various Consultancy assignments, your Company has registered revenue of ₹315 Crore in FY 2012-13.

#### XII PLAN PROGRAMME

In XII Plan, your Company had planned to undertake an investment of ₹1,00,000 Crore for transmission network addition of about 40,000 ckm of transmission lines and about 1,00,000 MVA of transformation capacity. Out of this, your Company has already made a Capital expenditure of ₹20,037 Crore in FY 2012-13 i.e., the 1\* year of the XII Plan. In fact, your Company is the only Company in power sector, which has surpassed its target.

Besides above, a number of additional projects are also being taken up in this Plan, which includes prioritized schemes under Green Energy Corridors, critical projects, Smart Grid, Dynamic Compensation in the grid, Joint Venture projects with State utilities and projects bagged under Tariff Based Competitive Bidding route. You will be glad to know that your Company has won three (3) projects and emerged lowest in another one, out of the five (5) projects tendered under competitive bidding, post January, 2011. These additional projects have increased total investment programme to over ₹1,10,000 Crore in the XII Plan. In this current FY, implementation of capex programme of over ₹22,000 Crore is in full swing. The increased investment requirement calls for infusion of additional equity. Considering internal resource generation position, Follow-on Public Offer of your Company is expected shortly. Ministry of Power, Government of India has proposed raising of 13% fresh equity and 4% disinvestment for approval of Government of India.

I am extremely grateful to Ministry of Environment and Forests (MoEF) for its continuous support in according expeditious forest clearance to our transmission projects. I would also like to specifically convey my gratitude to MoEF for granting relaxation under Forest Rights Act, 2006 to linear projects, including

transmission lines which accelerated grant of forest clearance resulting in timely commissioning of transmission projects. This will go a long way in meeting the XII Plan targets. We are greatly indebted to our Hon'ble Minister of State (I/C) for Power, Shri Jyotiraditya M. Scindia ji, whose untiring efforts in taking up this matter with MoEF have resulted in getting this relaxation for transmission projects.

Considering the existing business as planned and with envisaged success in new business ventures, your Company can achieve a Turnover of around ₹40,000 Crore by FY 2021-22, with the support of all the stakeholders.

#### **ENTERPRISE RESOURCE PLANNING (ERP)**

Taking into account the exponential growth in the business and volume of operations, your Company has decided to implement ERP solution with the objective of bringing further efficiency and effectiveness in its business processes. The ERP solution is presently under implementation covering all the core processes of your Company viz. Project Management, Operation & Maintenance, Finance, HR, Procurement & Material Management, Commercial etc. and it is expected that the first phase will roll out in the current financial year.

#### **TECHNOLOGY LEADER**

Your Company strongly believes that continuous Research, Development and Demonstration (RDD) are the key to remain as technology leader. We accord high priority to RDD activities and focus on development of technological solutions having potential for environmental, societal & economical benefits to address for future requirement.



1200 kV Switchyard

Your Company has transformed the vision on development of "Supergrid" at 765kV level overlaying vast network of 400kV transmission system into a reality. In this direction, we have already established more than 7,000 ckm of 765kV transmission lines and about 20,000 ckm is under construction integrated with underlying 400kV system. With this, your Company shall attain a new leadership position in establishment of 765kV EHV system in the world i.e. total of existing and under implementation 765kV transmission network of your company will be more than the total existing 765kV network in rest of the world put together.

Implementation of ±800 kV, 6,000 MW multi-terminal HVDC system of around 2,000 km from North-Eastern Region (Biswanath Chariali in Assam and Alipurduar in West Bengal) to Northem Region (Agra in Uttar Pradesh) is progressing well with first phase



targeted for commissioning by 2014-15. Upon completion of this high capacity NER-NR/WR expressway, it shall be one of the largest multi-terminal HVDC systems in the world at this voltage level.

Moving ahead, your Company has successfully commissioned the world's highest transmission voltage of 1200 kV Ultra High Voltage AC (test line) at its National Test Station, Bina, Madhya Pradesh in December, 2012. Presently, field tests are under progress. This pioneering UHV technology has been developed indigenously after four (4) years of open collaborative RD & D efforts of your Company with participation of almost all domestic manufacturers in this field. With this, the dream of India becoming a world leader in 1200 kV UHV AC technology is realised. 1200kV UHV AC Wardha -Aurangabad 350 km long transmission line is being constructed, to usher in 1200 kV era in the country, which will be initially charged at 400 kV level and shall be operated at rated voltage of 1200 kV in XIII Plan. Friends, you would be delighted to know that your Company has showcased this technological advancement through filing for patent of "High power transmission suspension towers" developed indigenously under 1200 kV UHV AC system.

Creativity & Innovation are a 'PART' of your Company's DNA. Recognizing the necessity to be innovative in all its business operations in the competitive market, your Company is setting up **POWERGRID Advance Research & Technology Centre (PART)** at Manesar complex with multi disciplinary facilities like power system simulation lab, PMU test lab, Smart Grid Knowledge Center, material science lab, civil engineering simulation lab, design simulation & validation lab, transmission line research facility, energy efficiency demonstration lab etc. Friends, your Company shall be investing about ₹200 Crore for establishing such RD&D facilities which is expected to be completed progressively in next 2 to 3 years.

Your Company is also establishing Transmission Line Research Lab at Bina, central part of India to undertake long term field testing and optimisation studies of transmission lines. This shall facilitate research on development of different class of transmission voltages up to 1200kV.

Your Company is also planning an Ultra High Voltage Test Lab to support testing of equipment upto 1200kV class including impulse & power frequency tests. These facilities shall validate the testing of equipment post Short Circuit testing at National High Power Test Laboratory, being established at Bina by JV of POWERGRID, NTPC, NHPC, DVC & CPRI, which will be operational shortly.

Considering the specialised nature of works in our business areas, your Company has started inducting specialists holding Doctorate, M.Tech, MBA degrees etc. for enhancing the overall skill set of the workforce and also to develop as a learning organisation.

#### **NEW INITIATIVES FOR FUTURE PREPAREDNESS**

Friends, Indian economy has opened up opportunities in new business areas. To harness this opportunities, your Company has taken up various new initiatives such as Smart Grid/ City projects, integration of renewables, Energy Efficiency, Backward integration for manufacturing of key products, JVs with States, etc. Friends, we are now in consolidation phase and I take this opportunity to share some of the developments taken place in these initiatives.

#### Smart Grid - Transforming energy system into next orbit

Towards sustainability in power sector including more reliance on renewable generation and bringing consumer participation in the

real time energy management process, your Company took pioneering initiatives for development of smart grid in the entire value chain of power system in a holistic manner. The smart grid pilot project at Puducherry which is first such kind of project in the country, being developed through open collaboration with more than 55 domestic vendors, has made significant progress in shared understanding of various smart grid technologies. We have successfully implemented smart grid control center integrating various smart grid technologies covering Advanced Metering Infrastructure (AMI) solution through integration of more than 1000 smart meters with different backhaul communication technologies



Outage Management System, Demand Response, Smart Home Energy Management System, etc. This has facilitated field provenness of technology and also minimum requirements for successful implementation. The AMI has enabled Distribution Transformer wise online energy accounting/audits, better visualization of consumer behavior in energy consumption, tamper detection/alarm, load control etc. In addition, Smart street light automation system has been implemented which has resulted into considerable reduction of energy consumptions. Other Smart Grid attributes are being implemented in a progressive manner. First inhouse designed grid interactive solar photovoltaic plant of 50kwp capacity has been installed at our Manesar complex.

Recognising the importance of development of innovation in the power system, your Company is focusing on development of innovative technological products like Micro-grid controller, Smart Home Energy Management System, etc. in association with premier academic institutions like IITs, NITs, etc. We have also planned to develop intelligent and affordable products like smart meter, DTMU, energy storage etc. in Indian context as a partnership model with various manufacturers.

Towards smart transmission for maintaining grid stability and security, your Company is implementing State-of-the-Art Wide Area Measurement System (WAMS) through application of synchrophasor technology (Phasor Measurement Unit) in an unified manner in the State and ISTS network under "Unified Real Time Dynamic State Measurement System (URTDSM)" scheme. In this direction, WAMS pilot project in all the five(5) regional grids have been successfully implemented which has demonstrated technological effectiveness on real time measurements and better visualization of power system for monitoring of safety & security of the grid, enhanced situational awareness and taking control/corrective actions. CERC has already accorded regulatory approval for implementation of the URTDSM project comprising installation of over 1,700 PMUs across the

country, phasor data concentrator at the State and Regional/National Load Despatch centres and development of analytics jointly with IIT, Bombay.

#### Development of Green Energy Corridors - Renewable Integration

To promote harnessing of renewable energy sources viz. wind and solar, your Company has made an assessment of renewable capacity addition programme in the XII Plan and identified "Green Energy Corridors", a comprehensive plan covering transmission requirement at both inter-State and intra-State levels. Further, to address the volatility of renewable generation, other control infrastructures have been identified like forecasting of renewable



generation, flexible generation, dynamic reactive compensation, application of smart grid - demand side management & demand response, energy storage, establishment of Renewable Energy Management Center etc. The transmission strengthening schemes as part of Green Energy Corridors has been firmed up in consultation with stakeholders, Central Electricity Authority, Ministry of Power, Ministry of New and Renewable Energy (MNRE) and Planning Commission. Recognising the necessity for development of "Green Energy Corridors", a joint declaration of intent has also signed between Government of India & Government of Germany for cooperation in the field of integration of renewable energy sources with financial assistance through KfW for about one(1) billion Euro, besides sharing of technical expertise in the above field.

#### Initiatives towards Energy Efficiency

The Power Generation capacity in the country is steadily increasing. Still there is shortage in energy and it is estimated that more than 20% of the energy can be saved by efficient use of energy i.e. same energy more power. Considering the urgent need of the hour, your Company has set-up a dedicated Energy Efficiency department, to undertake energy audit and implementation of energy efficient measures. In light of Gol's policy on mandatory energy audit of designated energy intensive consumers and efficiency improvement for industrial establishments, your Company envisages good business opportunity in this area. This vision eventually has become a win-win situation for your Company as well as for the commercial & industrial establishments to meet the statutory requirement of energy efficiency/ conservation stipulated by Bureau of Energy Efficiency (BEE), Ministry of Power. Your Company already has a pool of Certified Energy Auditors and has further taken up large scale training initiatives for certification of more engineers by (BEE) in order to go in this venture in a big way and would help us to acquire a

strategic position in this field. In a short span, we have carried out energy audit of various commercial as well as industrial establishments, like integrated steel plant, steel re-rolling mills, cable manufacturing plant, institutes and many other industries. Apart from energy audits, we are also in the process of product development to meet the energy efficiency requirement of the industries and have already started implementation of energy efficiency measures in some of the steel re-rolling mills by installing waste heat recovery system in their furnaces. To take this initiative further, we are also in the process of getting empanelled as an Energy Service Company (ESCO) with BEE to take up implementation assignments. Your company is also in the process of implementation of ISO 50001 for Energy Management System.

#### Forging Strategic Partnerships

Considering the long term requirement of transmission line towers, your Company has signed a Memorandum of Understanding (MoU) with prime Steel producers like Steel Authority of India Limited for manufacturing of tower parts including research & development facilities. This is in addition to the MoUs signed earlier with National Aluminium Company Limited for manufacturing conductors and Rashtriya Ispat Nigam Limited for tower parts. Your Company is also exploring the selection of JV technology partner for developing Polymer Insulators for its requirements.

Your Company has signed MoU with RITES in July, 2013 to set up a Joint Venture Company to plan, construct, own, operate & maintain transmission and distribution system down up to & including the traction sub-stations of Railways and also to collaborate in the areas of mutual interest.

For inclusive growth in power transmission sector, the development of sub-transmission system in the States is essential. In this direction, your Company has joined hands with Bihar State Power (Holding) Company Limited to form a Joint Venture Company "Bihar Grid Company Limited" and with Odisha Power Transmission Corporation Limited for forming "Kalinga Bidyut Prasaran Nigam Private Limited", on 50:50 equity participation basis for developing sub-transmission projects in respective State(s). Various regulatory & statutory approvals for taking-up these projects are under process.

#### **HUMAN RESOURCE MANAGEMENT**

Dear Shareholders, behind achievements of every Company, there is a motivated and dedicated team of Human Resources. Therefore, Human Resources are the most important and strategic asset and your Company strongly believes that any investment made for enriching their growth shall always result into manifold returns to the Company. In this direction, your Company initiated various





programmes for widening and enhancing the knowledge spectrum of the employees through sharing, nurturing and capitalising the intellectual capital.

The sector has been growing exponentially and simultaneously traversing through what we call as VUCA times. Rapid changes and growth in the sector has created need for multi dimensional new skill set. The Volatility and Uncertainty of the current environment is forcing us to reorient our strategies on Human Resources (HR). The Complexity and Ambiguity in the environment is increasing day by day with new rules and regulations. Thus VUCA times on one hand provide new challenges and on the other hand open up plethora of opportunities. The Organizations giving due emphasis on development of Human Resources can successfully harness the opportunities thrown open in this challenging scenario.

Your Company since its inception has been focusing on employee empowerment in order to groom future leaders for the sector. I am happy to share with you that many top strategic positions in various key organizations of the sector are presently being headed by personnel who were with POWERGRID earlier. To make further inroads in development of leadership pipeline, your Company is in the process of establishing POWERGRID Academy of Leadership (PAL) in its Manesar Complex. This shall have State-of-The-Art facilities with residential complex for enriching human capital through exposure to contemporary national and international practices and achieving dominant leadership in the sector. This Academy is expected to be functional within the current financial year. Your Company has also signed MoUs with prestigious academic institutions like various IITs, IIMs and other Management Institutions to leverage each other's capability and resources in the areas of pedagogy, training, research and innovation in systems, processes, etc.

# CORPORATE SOCIAL RESPONSIBILITY (CSR) AND SUSTAINABLE DEVELOPMENT (SD)

Dear Friends, your Company is of firm belief that the relentless single-minded pursuit of profit is endangering the planet and its people. Thus the Corporates have responsibility towards all stakeholders including people of the communities in which it operates. Moreover, there are evidences to suggest that Companies with sound sustainability programs in all probability are better managed and are able to deliver strong financial performances. Continuing with this legacy, Your Company has taken many proactive measures in the field of Community Development, Livelihood generation through skill development, healthcare, education, plantation, sanitation etc. I am glad to share that during the year your Company has under taken 440 projects under CSR.

To integrate our business processes with perceived social responsibility, Your Company started Capacity Building Programs in partnership with leading EPC companies for training unemployed youth in the field of transmission. The project has been an astounding success with over 90% trainees being gainfully employed. Guided by the success of this program, we are now initiating action for taking up this program on a much larger scale.

You shall be pleased to note that to fulfill our commitment towards environment conservation and enhancing green cover, we partnered with Department of Forest, Assam under the project named "Greening of Sonitpur district", under which 1,00,000 (one lakh) saplings were planted in the degraded forest with more than 60% survival rate.



Friends, Conservation of the natural resources and efforts to increase the power transfer intensity i.e. mega watt per meter of right-of-way is an integral part of Corporation's sustainability strategy. The specific consumption of raw materials in our business have been reduced over the years through technological innovation using high capacity transmission lines i.e. 765 kV,  $\pm 800$  HVDC, 1200 kV UHV AC and multi circuit \ High Temperature low Sag Conductor System for bulk power transmission.

Your Company has constantly strived to optimize route alignment of the transmission corridors utilizing technological advancements with specific emphasis on avoidance of Forest, National Parks/Wildlife Sanctuaries and other ecologically sensitive and biologically diverse areas. Reduction in involvement of forest area has been achieved progessively from 6 % in 1998 to 0.8 % in 2013. Complete avoidance of Great Indian Bustard Sanctuary in 765kV Indore-Dahod transmission line and Achanakmar-Amarkantak Biosphere Reserve in 765kV Dharmanjaygarh-Jabalpur transmission line are the testimony of your Company's commitment to sustainability.

Dear Friends, you will be pleased to know that your Company has released its GRI-G3 based, second biennial sustainability report in March, 2013. The report has been rated with GRI application level B+ by the accredited assurance provider M/s TUV Rheinland, a group Company of Germany, as per International Standards namely, "UK Standard AA1000:2008 APS" and "AA1000:2011 SES".

I take this opportunity to proudly announce that in order to reduce our carbon footprint, your Company's NTAMC building at Manesar complex is being designed and constructed following the norms of Green Building of Green Rating for Integrated Habitat Assessment (GRIHA). Further, your company has introduced the usage of electric vehicle with solar charging facilities in its operations.

As part of Sustainable Development initiatives, your Company has also established a "Waste Paper Recycling" plant to recycle waste paper and recycled paper produced in-house is now utilized for making Company's letterheads, visiting cards, envelopes, file / folders, pads etc. This initiative shall further reduce our carbon footprints as one (1) ton of paper requires cutting of 17 mature trees.

Marching towards this, we intend to invest equity in proposed Ultra Mega Solar Power Plant (1000 MW in phase-I) in Rajasthan (through JV route), being spearheaded by MNRE.

#### **CORPORATE GOVERNANCE**

Your Company has inculcated a culture of good governance and this culture of ethics, transparency and realization of our mission and moving towards our vision is being recognized well. Your company remains committed to uphold the highest standard of governance

and is in pursuit of higher value creation for all stakeholders. During the year, your Company has complied with the conditions of Corporate Governance, as stipulated in the Listing Agreement/Guidelines of Corporate Governance for CPSEs issued by the Department of Public Enterprises.

Your Company's sustained performance has been well recognized by the market. In fact, your Company has recently been conferred the Special Jury Award for Lasting Impact on Indian Economy in the Governance Now PSU Awards. Further, I am happy to share that your Chairman & Managing Director has been selected as 'Best CEO' in the Power Sector Category by 'sell-side' analysts in the 2013 All-Asia Executive team Rankings by 'Institutional Investor', a North American entity. The rankings recognize Asia's Best CEOs, Companies with the Best Investor Relations in different sectors etc., across Asia. The attributes considered for evaluation included access to senior management, responsiveness, transparency of financial reporting and disclosure, etc. Your Company has also been conferred 'Certificate of Recognition' for Excellence in Corporate Governance, 2012 by the Institute of Company Secretaries of India, for adopting exemplary Corporate Governance practices.

#### **ACKNOWLEDGEMENTS**

At the end I would like to extend my sincere thanks to you - my esteemed shareholders, for your confidence and valuable support to me, to the Board of Directors & to Company as a whole. I am confident that your continued support shall be available to us in the same way that you have stood by us over the years. I also express my gratitude to our valuable clients, in India and abroad, for their patronage and faith in our services, which always inspire us for improving the performance of the Company.

I am grateful to the agencies/ institutions from Government of India particularly the Ministry of Power, Central Electricity Authority,

Ministry of Finance, Planning Commission, Ministry of Environment and Forest, Ministry of New and Renewable Energy, Department of Public Enterprises, Ministry of Statistics & Program Implementation, Department of Telecom, and other departments, Central Electricity Regulatory Commission, Appellate Tribunal for Electricity, Regional Power Committees, Statutory Auditors, Comptroller and Auditor General of India, Securities and Exchange Board of India, National Stock Exchange of India Ltd., BSE Ltd., all State Governments/ power utilities & departments and our partners for their help and guidance.

I thank my colleagues on the Board for their advice and support in guiding the Company through a sustainable business landscape. Especially, I would like to thank the Government Directors and Independent Directors for bringing in their vast experience in diversified areas and providing invaluable inputs and support.

On behalf of the Board, and on my behalf, I acknowledge the dedication, commitment and tireless efforts our employees and unstinted support by their family members, which has helped the Company to reach at this pinnacle of performance and achievements. Your Company re-iterates its commitment to professionalism, business ethics & Corporate Governance to excel in all its endeavors and look for your continued support and guidance.

Thank you, Ladies and Gentlemen.

Angar. (R.N. Nayak)

Chairman & Managing Director

Place: New Delhi







# (A Government of India Enterprise)

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# पावर ग्रिड कारपोरेशन ऑफ इंडिया लिमिटेड

(भारत सरकार का उद्यम)

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