

ENGINEERING  
PROCUREMENT CONSTRUCTION



GREEN POWER



TRANSMISSION

**Niche**  
DRIVES VALUE



Techno Electric & Engineering Company Limited



# Techno Electric & Engineering Company Limited (Techno) is focusing on helping accelerate India's march towards being a power-surplus economy.

At Techno, our emphasis on niche business opportunities and fostering relationships with industry bellwethers will pave the way for our level-next growth. India's socio-economic optimism depends to a very large extent on how effectively and efficiently its power sector performs. Techno with its presence across a

wide spectrum of the country's power sector (generation, transmission and distribution) is poised to participate in the nation's new-age optimism.

We are electrified and empowered to help make a difference to India's rapidly evolving power sector.

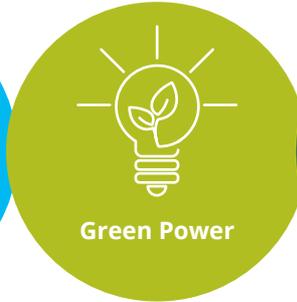




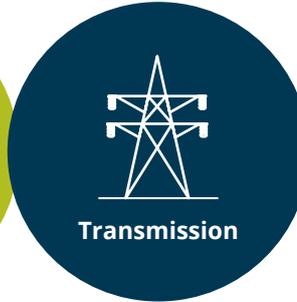
# Engineered to Perform



Engineering  
Procurement  
Construction



Green Power



Transmission

Established in 1963, Techno is one of the most attractive proxies of India's power sector. We are one of the leading players in the country's power-infrastructure space. We are engaged in three business types --- EPC, Asset Ownership and Operations and Maintenance. As a leading engineering, procurement and construction (EPC) company, we have grown our business to include Green Power and Build Own Operate and Transfer (BOOT) and Build Own Operate and Maintain (BOOM) Project segments as well.

35+ years



Rich experience in the power sector EPC

340+



Projects completed since inception

500+



Team of professionals driving the Company's progress

25+ years



Average experience of core engineering team

AA-



Long-Term Credit Rating by CRISIL & ICRA for the preceding two years

A1+



Short-Term Credit Rating by CRISIL & ICRA for the preceding two years



# Our Vision and Mission

Techno was established with a mission to provide comprehensive EPC services to core sector industries in India. The Company has assumed a leadership position on the back of association with state-of-the-art technology manufacturers and high standards of quality management, competent human resources, and resourceful financing.

## OUR BUSINESS DIVISIONS

### EPC

- Providing engineering, procurement and construction services to all three sectors of India's power sector. In addition, we also serve the metallurgical and petrochemical sectors, among many others.
- We offer solutions for a wide range of projects - right from complete power generation plants to plant packages customised and complement larger systems supplied by others.
- We also provide complete solutions for EHV Substations and Distribution System.

### Generation

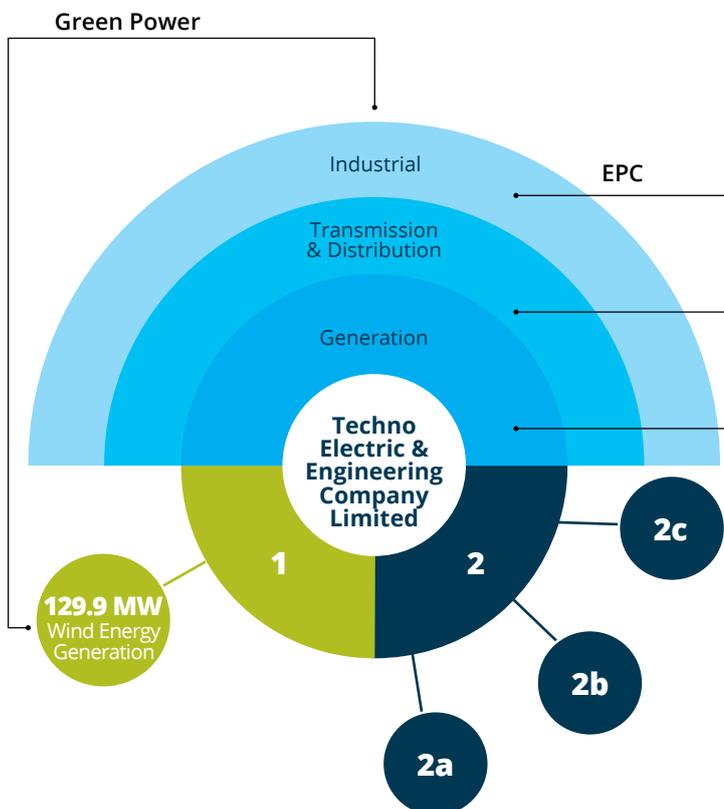
We are an independent renewable energy producer with 129.9 MW wind energy capacity.

### Transmission Linkages

We are associated with building transmission linkages.

- The business includes: A 25-year concession in consortium with Kalpataru Power for a transmission link at Jhajjar, Haryana.
- A 35-year concession for transmission network at Patran, Punjab.
- A 35-year concession for transmission network at New Kohima, Nagaland.

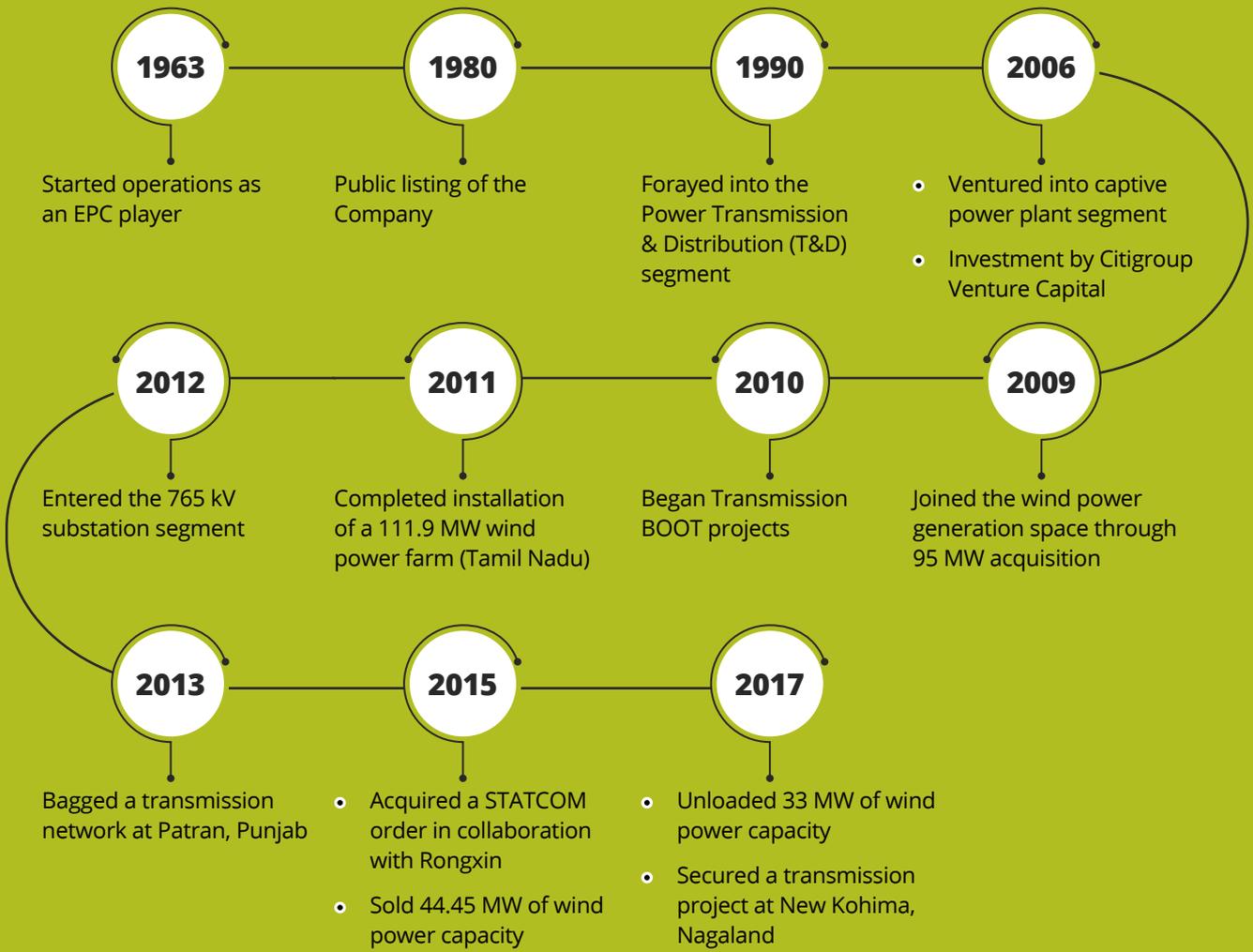
## Our Operating Architecture



<b>1</b>	Simran Wind Projects Limited	<u>100%</u>
<b>2a</b>	Jhajjar KT Transco Private Limited	<u>49%</u>
	Design, Build, Finance, Operate and Transfer a 400kV/1500 MVA Transmission Network in Haryana capable of transferring 2,430 MW	
<b>2b</b>	Patran Transmission Company Limited	<u>49%</u>
	Build a transmission network at Patran, Punjab on Build, Own Operate And Maintain (BOOM) basis for 35 years	
<b>2c</b>	Kohima-Mariani Transmission Limited	<u>24%</u>
	Build a transmission network at New Kohima, Nagaland on Build, Own Operate And Maintain (BOOM) basis for 35 years	



# Our Growth Story



## Our Achievements

- National award for meritorious performance from Ministry of Power, 2014
- Best Performance and Safety Award from Power Grid Corporation Limited, 2013, 2014, 2016 and 2017
- Certificate of Appreciation for Safety Award from NTPC Kudgi, 2016-17
- Best Performance - Safety Award from NTPC Kudgi, 2015 and 2016
- Conferred with Best Sub-station Performance Award from Power Grid Corporation Limited, 2017
- IEI Industry Excellence Award from The Institution of Engineers (India) for demonstrating Highest Order of Business Excellence, 2016
- Mr. P.P. Gupta recognised as top 100 Indian CEO's by Business Today – PWC, 2016-17
- Timely Performance Award from Bihar State Power Holding Company Limited, 2016
- Honored as 'Best Under a Billion' among 200 small and mid-cap companies, by Forbes, 2008
- Certificate of appreciation from North Bihar Power Distribution Company Limited
- Excellence Award from North Bihar Power Distribution Company Limited, 2014
- Excellence award for Safety from Power Grid Corporation Limited, 2014
- Excellence award for Sub-station construction from Power Grid Corporation Limited, 2013
- Named 'Best Vendor in Eastern India' by Bharat Heavy Electricals Limited, 2010-11



# What Differentiates Us?

## Relevant Experience

We possess a rich experience of more than three decades in India's challenging EPC space, strengthening competencies across regions, markets and customers.

## Timeline Driven

We have demonstrated capabilities by delivering projects across shrinking timelines that have now become industry benchmarks in terms of project delivery. This has helped commission more projects on schedule and generate quicker investment returns for the customers.

## Robust Portfolio

We have successfully executed over 340 pan-India projects; associated in some capacity or other in more than 50% of India's National Power Grid and over 50% of National Thermal Power Corporation's projects.

## Committed to Compliance

Our quality commitment is accredited with ISO 9001:2008, ISO 14001:2004 and BS OHSAS 18001:2007. This ensures unmatched

quality commitment, environmental management and employee safety.

## Competent Team

Our 175-member engineering team possesses an average industry experience of over 25 years. Our areas of competence comprise design, construction, project management, procurement, quality assurance, business development and marketing and financial management.

## Asset-light Model

Our asset light, lean organisation structure has helped us control our overheads. We do not subcontract our projects unlike peers. Our fixed overhead structure has enabled us to have a margin advantage over our peers.

## Prudent working capital management

We typically don't have more than 20 open sites and are unlikely to undertake more than one distribution contract. This enables strong managerial and supervisory control over the execution pace, working capital management and cost control.

Moreover, we tend to take projects in hard-to-operate regions like Bihar to protect our margins. Our exemplary track record in terms of working capital and margins demonstrates this reality.

## Best-in-class Technology

Our business model gives us the flexibility to partner with the best vendors from around the world and source state-of-the-art technology not available in India. We enjoy enduring relationships with 1,500+ vendors, facilitating timely execution of projects.

## Bidding Expertise

Our strategic bidding enables us to compete in relatively high-margin, low-competition segments. Our strong growth over the last 20 years with limited balance sheet risk and consistent profitability indicate high bidding discipline. We are selective in our pursuit of projects and focus on our core area of expertise, bidding aggressively only if we are familiar with the package or region. We are constantly looking for new technology (like STATCOM, HVDC) and avenues that would enable us to participate in less-crowded projects.



# Our Value Paradigm



# 1

## Shareholders

- Shareholders are updated about our financial performance, annual performance and new projects through various platforms.
- Annual general meeting, annual report, shareholder meetings and sustainability report make them aware of the changes in the Company's governance and triple bottom line performance.
- Creating value through efficient working capital management.
- Reported consistent profitability for the last twenty years.

# 2

## Employees

- Organise training programmes for employee skills upgradation, which help them improve their performance.
- Training programmes are also conducted on occupational health and safety.
- Focus on prevention of accidents, health-hazards and overall employee safety.
- Developed a high-performing culture that celebrates excellence.

# 3

## Clients

- Timely execution of high-quality projects for our clients.
- Effective management of contractual obligations.
- Follow 'once a customer, always a customer' policy.
- Increased direct contact with customers.

# 4

## Vendor Partners

- Treated channel partners as a part of the Techno family.
- Helped improve their processes, efficiencies and quality through regular inputs and training.
- Maintained transparent pricing policies.
- Minimised their inventory costs through on-time supplies.

# 5

## Regulators and Statutory Bodies

- Comply with the standards set by regulatory bodies and the government.
- In line with compliance management, we publish regular compliance reports.
- Conduct statutory and internal audits to ensure compliance.
- Our health and safety management system in place is well equipped to manage hazards and mitigate risks for better performance.

# 6

## Society

- We take the society along in our progress. We are committed to operate in an efficient and sustainable manner.
- Corporate Social Responsibility Committee is responsible for monitoring, formulating and recommending CSR policies from time to time.
- Our realm of social intervention encompasses education, healthcare and livelihood projects.



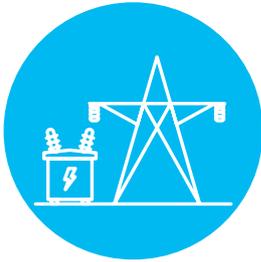
# Business Segments

We have widespread presence across three business segments – the contracting business, wind power-generation assets and transmission BOOT assets.





# Business Segment 1: EPC



Our EPC business provides solutions to a large number of India's installed thermal and inter-regional transmission capacity.

EPC services for Transmission and Distribution sector represents our key strength and is the primary source of revenue generation.

## OUR EPC COMPETITIVENESS

- Partnership with large international manufacturers
- Good management of customer expectations and contractual obligations
- Continuous graduation to industry-next technology and ability to embrace challenges
- Robust vendor eco-system
- Pioneered power distribution solutions for aluminium smelters (360 kA busbar systems, 2013)
- Quicker project completion than industry standard
- Owns 60% share of 765 kV EhV substation segment
- Efficient working capital management

## 1

### Power Sector

Techno provides complete solutions for captive power plants, balance of plant (BOP) for thermal and hydro power projects and utilities for power projects. Our services are primarily related to basic engineering, design, detailed engineering, civil and structural works, commissioning, and stabilisation, among others. As an extension of our presence in the power segment, we provide construction services for both air-insulated and gas-insulated substations. Besides, we install overhead lines for transmission projects for captive power plant projects.

### Capabilities

- Building captive power plants upto 100MW on a turnkey basis.
- Serves both Government/PSU and private customers.



## KEY PROJECTS

<b>Client</b>	Jharkhand Bijli Vitran Nigam Limited
<b>Project</b>	Rural Electrification Work at Dhanbad and Chatra under Deendayal Upadhyay Gram Jyoti Yojana
<b>Scope</b>	Rural Electrification Work of Dhanbad and Package comprising Dhanbad, Bokaro and Ramgarh districts in Jharkhand under Deendayal Upadhyay Gram Jyoti Yojana
<b>Project Value</b>	₹ 485 Crores
<b>Date of Completion</b>	Under execution



- Parts of the Balance of Plant (BoP) contracts such as fuel oil handling system, comprehensive electrical systems, piping, power evacuation systems and others.
- Executed over 280 T&D projects.
- Building sub-stations and switch yards, specialised in building substations ranging between 132 kV and 765 kV.
- STATCOM installation up to 250 MVaR.
- Services largely PGCIL and multi-laterally funded state projects.
- Rural electrification and distribution management systems under Central Government programmes.
- Primarily works with state distribution companies.

## KEY PROJECTS

Client	North Bihar Power Distribution Co. Ltd., Patna, Bihar
<b>Project</b>	Rajiv Gandhi Grameen Vidyutikaran Yojana
<b>Scope</b>	Execution of Rural Electricity Infrastructure and Household Electrification including associated Civil Works in Gopalganj Dist. of Bihar including 2 Nos. 33/11 KV S/S, 37 KM of 33 KV Line, 2,000 KM of 11 KV Line, 4,462 Nos. of DTR, 2,14,000 consumers on EPC basis
<b>Project Value</b>	₹ 387.26 Crores
<b>Date of Completion</b>	December, 2017

Client	Power Grid Corporation of India Ltd., Gurgaon
<b>Project</b>	STATCOM installation at Solapur, Satna & Aurangabad substations
<b>Scope</b>	Substation Package for STATCOM Installations of 400 kV at Solapur, Satna and Aurangabad substations under Global Competitive Bidding
<b>Project Value</b>	₹ 345.75 Crores
<b>Date of Completion</b>	December, 2017

Client	Power Grid Corporation Of India Ltd., Gurgaon
<b>Project</b>	Green Energy Corridor: Inter State Transmission Scheme (ISTS) – Part D
<b>Scope</b>	Construction of 765/400 kV Substation at Bikaner and extension of 765 kV substation at Ajmer and Moga substation associated with ADB funded Green Energy Corridor: Inter State Transmission Scheme (ISTS) – Part A under KfW, Germany funded International Competitive Bidding
<b>Project Value</b>	₹ 227.2 Crores
<b>Date of Completion</b>	Under execution

Client	Power Grid Corporation Of India Ltd., Gurgaon
<b>Project</b>	NER Power System Improvement Project
<b>Scope</b>	400 kV GIS Substation Package at Assam under World Bank funded NER Power System Improvement Project
<b>Project Value</b>	₹ 169.65 Crores
<b>Date of Completion</b>	Under execution

Client	NTPC Limited
<b>Project</b>	Tanda Thermal Power Project, Stage-II (2x660MW)
<b>Scope</b>	Supply of Switchyard Package for Tanda Thermal Power Project, Stage-II (2x660MW)
<b>Project Value</b>	₹ 180 Crores
<b>Date of Completion</b>	Under execution



# 2

## Industrial Sector

We forayed into the industrial sector with various EPC-based projects. This strategic move helped us reap the benefits of attractive opportunities available in this segment.

### Capabilities

We have executed numerous successful EPC projects in the industrial sector for power intensive industries, aluminium smelters and refineries.

- Power distribution systems to power intensive industries
- Offsite piping systems
- Naphtha and diesel system for turbine-based power plant
- Oil handling plant for power station and process industries
- Water and allied systems
- Fire protection systems
- Plant electrical and illumination systems



### KEY PROJECTS

<b>Client</b>	<b>Mitsubishi Chemicals Corporation PTA India Corp. (P) Ltd. Haldia, West Bengal</b>
<b>Project</b>	Coal fired Hot Oil Heater Project at Sutahata, Haldia, WB
<b>Scope</b>	Design, Engineering, Supply, Erection, Testing and Commissioning of Balance of Plant comprising Cooling Water System, Compressed Air System, Fire Fighting, Coal /Bed Material/ Limestone Handling, Ash Handling, Chimney, Silos, Air Conditioning and Ventilation System, PA System, 6.6 kV/415V Power Distribution System, Illumination, Cabling, Earthing, Instrumentation with PLC among others, Civil Works including piling along with Erection & Commissioning of Coal fired Hot Thermic Fluid Heaters for Chemical Process Plant
<b>Project Value</b>	₹ 106 Crores
<b>Date of Completion</b>	June, 2017
<b>Client</b>	<b>Hindalco Industries Ltd., Singrauli</b>
<b>Project</b>	Mahan Smelter Project, Bargawan, Dist. Singrauli
<b>Scope</b>	360 kA DC Power Distribution System with Technology from M/s. Rio Tinto Alcan (Aluminium Pechiney, France) for pot lines. The job calls for high precision fabrication and machining that involves 16,000 MT of EC Grade Aluminium Busbar work, and 30,000 Nos. Bi-metallic Clad welding at Mahan, for 360 Pots
<b>Project Value</b>	₹ 57.03 Crores
<b>Date of Completion</b>	April, 2014
<b>Client</b>	<b>Indian Oil Corporation Limited</b>
<b>Project</b>	Paradip Oil Refinery Project
<b>Scope</b>	Development and construction of Power Distribution Infrastructure at Paradip Refinery
<b>Project Value</b>	₹ 49 Crores
<b>Date of Completion</b>	May, 2011



## ROAD AHEAD

- Capitalise on emerging opportunities in the segment and acquire more orders under the Green Energy Corridor project and STATCOM.
- Manage customer expectations and contractual obligations effectively.
- Execute around 3-5% of solar power installations by central PSUs through EPC services over the next 5 years.
- Increase value of the Company by focusing on intellectual property and bringing in technological advancements.
- Re-build the EPC business by launching new types of projects.
- Develop a robust vendor ecosystem.
- Build and leverage long-term partnerships.

# Business Segment 2: Green Power



We are an independent renewable energy producer with 129.9 MW wind energy capacity.

We entered the renewable energy generation space through the acquisition of two wind power generating companies in 2009 – Simran Wind Project Private Limited (Simran) and Super Wind Project Limited (Techno Electric). We had set up a 111.9 MW wind farm in Tamil Nadu through our IFC-funded subsidiary – Simran Wind Project Ltd.

## KEY DEVELOPMENTS

- Bought back 3.38% stake held by IFC in Simran in 2015.
- During FY 2014-15, we sold 44.45 MW of wind power assets at an effective valuation of ₹ 215 Crores.
- We sold another 33 MW of wind energy assets at an effective valuation of ₹ 165 Crores in FY 2016-17.

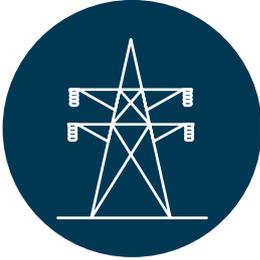
## ROAD AHEAD

We intend to divest the balance portfolio of 129.9 MW wind assets. This will serve to improve strength for bidding in more PPP projects in transmission sector and focus on core EPC vertical.





# Business Segment 3: BOOT and BOOM Projects



With rich knowhow of the EPC space, we made inroads into the BOOT and BOOM segment to provide transmission network solutions. This has helped us create transmission assets in our books. Besides, we aimed to generate one-off EPC revenues during project commissioning, while delivering annuity income from project maintenance.

## OUR TRANSMISSION COMPETENCIES

- Higher strike rate in bagging projects.
- Active solutions orientation in the 400 kVA to 765 kVA substations range.
- Extensive vendor ecosystem with timely project delivery, excellent negotiation ability and quality control.
- Low gearing, high credit rating and low-cost debt.
- Delivered most EPC and BOOT/BOOM projects on or before schedule.

***We are India's first company to enter a PPP agreement with Haryana for setting up a transmission network.***

## THE BUSINESS INCLUDES

### Jhajjar Kalpataru, Haryana

Jhajjar KT Transco was commissioned in 2012 and is a joint venture between Techno (49%) and Kalpataru Power Transmission Limited (51%). It is a 400 kV intrastate power transmission project in Haryana. It was the first transmission project to receive a viability gap funding support from the Government of India.

- Includes two substations of 400/200 kV of 24 bays each at Rohtak and Sonapat.
- Comprises double circuit quad moose line that extends from Jharli to Rohtak and extends to Sonapat.
- Designed to evacuate 2,400 MW.
- DBFOT arrangement spanning 25 years (extendable by 10 years). If the contract is not extended, the terminal value derived from this project will be 60 months of revenue (following 25 years of concession period).

### Patran, Punjab

In 2013, we received a concession from PFC Consulting Limited to build a transmission network at Patran, Punjab. The ₹ 2 billion project under the BOOM transmission network is estimated to have a total revenue of ₹ 10 billion over the entire concession period of 35 years.

- 400 kV transmission system commissioned in June 2016
- Comprises LIL0 of both circuits
- 1,000 MVA evacuation capacity
- 400/220kV substation with 14 bays in Patran
- Patiala-Kaithal 400 kV double circuit triple snow bird line at Patran

### New Kohima, Nagaland

In 2017, we bagged a concession with Kalpataru Power Transmission Ltd (26 :74) for 35 years to build a transmission network at New Kohima in Nagaland under Transmission System for North-eastern Region Strengthening Scheme (NRESS -VI). Project will have an Annual Levellised Tariff of ₹ 2 billion and will give us O&M revenue over the concession period.

## ROAD AHEAD

- Execute 1-2 project/s annually.
- Generate increasing insourcing of EPC contracts.
- Increasing expertise and focus in setting up substations.
- Projected portfolio of 4-5 projects by 2020.
- From 20% of EPC orders from PPP projects in 2012 to 10% in 2015 to 20% (est.) by 2020.
- Increased competitiveness is translating into project selectivity (high IRR).
- Building efficient evacuation facilities for the nation.



# Opportunity Landscape

India's power sector is undergoing a significant change. Sustained economic growth and the growing urbanisation continue to drive electricity demand in India. The Central Government has a multi-pronged approach to resolve the power sector problems in the country. Initiatives have been taken right from improving coal production and linkages, reviving the T&D segment, and pushing renewable energy in recent years.

The government targets capacity addition of 88.5 GW under the 12th Five-Year Plan (2012-17) and around 100 GW under the 13th Five-Year Plan (2017-22). The Government of India in the Union Budget 2016-17 has set the target of achieving 100% rural electrification by May 2018. This coupled with higher funding under Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) and Integrated Power Development Scheme (IPDS) is likely to expand the energy demand.

**Techno is attractively poised and geared to address the sizeable opportunity in the forthcoming 13<sup>th</sup> Plan.**

## GOVERNMENT INITIATIVES IN THE ENERGY LANDSCAPE DRIVE TECHNO'S BUSINESS OPTIMISM

Government Initiatives	Opportunity for Techno
<p><b>Green Energy Corridor</b></p> <ul style="list-style-type: none"> <li>Government plans to roll out green energy corridor project at an estimated cost of ₹ 430 billion to facilitate the flow of renewable energy into the National Grid.</li> <li>Germany has committed developmental and technical assistance of €1 billion for the project through the country's financial body, KfW.</li> <li>ADB to provide USD 1 billion loan for Green Energy Corridors for transmission lines, dedicated to carry electricity from renewable energy projects.</li> </ul>	<ul style="list-style-type: none"> <li>Techno was among the first few companies to win order worth ₹ 600 Crores for substation package at Chittorgarh, Tuticorin, Ajmer and Bikaner associated with Green Energy Corridors: Inter-State Transmission Scheme (ISTS) – Part A.</li> <li>Techno is hopeful of getting more orders under Green Energy Corridor project.</li> </ul>
<p><b>STATCOM Installation</b></p> <ul style="list-style-type: none"> <li>Government plans to install 50 STATCOM substations involving a total investment of ₹ 80 billion over a period of 3-5 years.</li> </ul>	<ul style="list-style-type: none"> <li>Techno won the first STATCOM installation at 400 kV substation at Solapur, Satna and Aurangabad in joint bidding with Chinese Company RONGXIN. Techno's scope of work is worth ₹ 268 Crores.</li> <li>Techno, being the pioneer in installation of STATCOM, will have the first mover advantage.</li> </ul>
<p><b>Sub transmission system in North Eastern states</b></p> <ul style="list-style-type: none"> <li>Power Grid Corporation of India (PGCIL) has been given mandate to build sub-transmission systems of 220/132 kV in six North East States at an estimated investment of ₹ 150 billion over a period of 3 years.</li> </ul>	<p>Techno has bagged order for ₹ 350 Crores to build GIS sub-station at Assam and Meghalaya under World Bank funded NER Power System Improvement Project.</p>
<p><b>Solar Power Installation</b></p> <ul style="list-style-type: none"> <li>Total installed capacity in India as on 31st March 2016 – 6 GW.</li> <li>Targeted Solar Capacity in India by 2022 – 100 GW. It would require a capital investment of about ₹ 6,000 billion.</li> <li>At least 25 GW installations out of said 100 GW to come through EPC route translating to an opportunity of ₹ 1,500 billion.</li> <li>NTPC alone to execute 10 GW installation in next 5 years.</li> </ul>	<p>Techno expects to execute around 3-5% of installations by central PSUs in EPC route over the next 5 years.</p>



# Our Esteemed Clients

ABB Limited  
Alstom T&D Limited  
Transmission Corporation of Andhra Pradesh Limited (APTRANSCO)  
Transmission Corporation of Telangana Limited (TSTRANSCO)  
Assam State Electricity Board  
Bengal Energy Limited  
Bharat Aluminium Company Limited  
Bharat Heavy Electricals Limited  
Bihar State Electricity Board  
Bihar State Power Transmission Company Limited  
North Bihar Power Distribution Company Limited  
Calcutta Electricity Supply Corporation  
Damodar Valley Corporation  
Delhi Vidyut Board  
Eastern Central Railway  
Electrosteel Castings Limited  
General Electric Technical Services, USA  
Haldia Petrochemicals Limited  
Himachal Pradesh State Electricity Board Limited  
Haryana Vidyut Power Nigam Limited

Hindalco Industries Limited  
Indian Oil Corporation Limited  
Indian Petrochemicals Limited  
Madhya Pradesh Power Transmission Company Limited  
Maharashtra State Electricity Board  
National Aluminium Company Limited  
National Hydro Electric Power Corporation Limited  
National Thermal Power Corporation Limited  
NTPC Tamilnadu Energy Limited  
North Eastern Electric Power Corporation Limited  
Orissa Power Generation Corporation  
Power Grid Corporation of India Limited  
Rajasthan Rajya Vidyut Prasaran Nigam Limited  
Reliance Infrastructures Limited  
TBEA Shenyang Transformers Group Company Limited  
Tamil Nadu Electricity Board  
Tata Chemicals Limited  
Thermax Limited  
Uganda Electricity Transmission Company Limited  
Uttar Pradesh State Electricity Board  
Vedanta Aluminium Limited and West  
Bengal State Electricity Transmission Company Limited





**Techno Electric & Engineering Company Limited**

Corporate Office  
1B Park Plaza, 71 Park Street, Kolkata 700 016

CIN: L40108UP2005PLC094304