

## For Further Information:

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TATA POWER

TRANSMISSION \& DISTRIBUTION BUSINESS
powering dreams for better tomorrow



## CORPORATE SUSTAINABILITY

TATA Power strongly believes in resource conservation, energy efficiency, habitat protection and the enrichment and development of local communities in and around our areas of operations. TATA Power understands that it must function in tandem with its stakeholders to make significant progress on sustainability. Our track record - a century of innovation and leadership in the energy industry - gives us the confidence to find ways that address sustainability issues in a manner that will deliver benefits to our customers, our shareholders and to society.
Sustainability being our core philosophy, TATA Power leads the way in generation of non-emitting sources of energy that provide low-cost electricity and help reduce carbon emissions. With a $36 \%$ clean energy portfolio and with an aim to be $40-50 \%$ by 2025, TATA Po
the world.
TATA Power has partnered with the International Union for Conservation of Nature (IUCN), the world's oldest \& largest global environmental organization for Biodiversity Management.
POWER HER UP - Majority of the house-helps are females who are bread earners for their own families. TATA Power as an organisation has been supporting indirectly through various initiatives such as education, supporting the SHGs, vocational raining etc.
TATA Power has a pivotal role to play in the global efforts to achieve the United Nation's Sustainable Development Goals (SDGs), as we understand our contribution is indispensable to the success of SDGs' and are the biggest contributors for a sustainable world.
We deploy development initiatives to incubate, implement and multiply diverse community-based projects and interventions, to help build a better and sustainable society through TATA Power Community Development Trust (TPCDT) The efforts are directed towards inclusive growth to transform the lives of the community.

## FROM CEO \& MD‘S DESK

The TATA Power Company Limited is among the oldest and most iconic company in the TATA group and its journey as a leader in India's energy sector has been truly transformational in nation building. What started as a hydropower company more han a century ago is one of India's leading energy companies today, a feat achieved by constantly reinventing itself to serve the needs of its customers and staying 10957 MW in India and a presence in all the segments of power sector, viz. Fuel \& Logistics, Generation (thermal, hydro, solar and wind), Transmission, Distribution and Trading. It has successful public-private partnerships in Generation, Transmission and Distribution in India. TATA Power is also fast emerging as a leader in the renewable energy sector covering the entire spectrum of application including rooftop sola solutions \& solar micro-grids and a growing national network of charging stations for electric vehicles.
We're also looking at home automation, like an loT (Internet of Things) platform, so consumers can take advantage to minimize electricity consumption and increase energy efficiency of appliances used at home. TATA Power will not just be suppliers of energy but an Energy Solutions Company. The entire business of power is getting digitalized and decentralized and the opportunity is in empowering he consumer.
At TATA Power, good corporate governance is a way of life and the way we do our business, encompassing every day's activities and is enshrined in our way of working. The Company is focused on the enhancement of long-term value creation for all stakeholders without compromising on integrity, societal obligations, environmen and regulatory compliances.
At TATA Power, we help clients across our value chain to anticipate and respond to complex market challenges and their resulting opportunities by offering an unparalieled range of services, innovation, and critical thinking. We believe in keeping customer's requirement ahead of everything else and have never failed to cross the sty and Qualine our wish Praveer Sinha
Chief Executive Officer \& Managing Director


## THE TATA POWER COMPANY LIMITED

Since 1915 - A company belonging to the world-renowned TATA Group, India's largest private-power utility

TATA Power, together with its subsidiaries and joint entities, is present across the entire power value chain of conventional \& renewable energy and next-generation customer solutions.

- Generation: Commissioned India's first 4,000 MW Ultra Mega Power Project in Mundra, Gujarat based on Super- Critical Technology
Generation: Installed India's first 500 MW generating unit with multi-fuel burning capability at Trombay, Mumbai.
Generation: Commissioned the first 126 MW cross-border hydro power project at Dagachhu.
Renewable Generation: India's \#1 Solar Rooftop EPC Company for 4 Years in a row.
Transmission: Importing $1,550 \mathrm{MW}$ of power for various states of India from Bhutan through their own dedicated transmission lines.
Distribution: Power Distribution in various parts of India like National Capital Delhi, Financial Capital Mumbai, Ajmer \& Central Distribution Company of Odisha.
TATA Power, Delhi has achieved the distinction of being the first success story of Public Private Partnership in Power with a reduction of more than $87 \%$ in the Technical \& Commercial losses. Next Gen Power Solution: TATA Power has also invested into the new rising technologies like developing EV Charging Stations, Home Automation, Smart Lighting, Clean Energy etc.
Trading: With an intensifying track record of Performance, Customer Care and Sustain Growth, the trading wing has also emerged as a pioneer in shaping India's vibrant power trading market.
TATA Power's latest business integrated solutions, focusing on mobility and lifestyle, is poised for multi-fold growth.


## POWER GENERATION BUSINESS

Gujarat | Mundra Thermal | 4150 MW

Karnataka | Pavagafa Solar | 150 MW

Maharashtra | Bhira Hydro | 300 MW
Orissa | Kalinganagar Waste | 135 MW


## FROM PRESIDENT T\&D'S DESK

The TATA Power Company Limited is a front runner in implementing the Smart Grid vision in India \& to cater the needs of our industry partners for end-to-end solutions in areas of IT and Grid Modernization Consultancy \& Implementation, Project Management Service, Building Transmission Lines and Distribuio Mrastreture, Operaion \& Mais Revenue Management System, Value-added Services, Business Process Reengineering, Capacity Building \& Energy Management Services both within the country as well as on international terrain, and also handhold utilities for adopting and deploying state-of-the-art technologies present across the entire power value chain of conventional \& renewable energy services and offers next-generation customer solutions.
Worldwide our large presence has created the niche in the market for our brand value, where safety \& quality are the key parameters for us. We have also collaborated with a number of academia \& industry partners to offer customized solutions to make our clients future ready.
We are gearing towards being future ready and our efforts are aimed at improving the healthiness of Power Transmission \& Distribution sector by leading the change 1 am proud to share with you this information brochure which speaks volumes on our rich experiences, capabilities and achievements of TATA Power in Transmission \& Distribution sector business.

Sanjay Kumar Banga
President - Transmission \& Distribution


THE TATA POWER COMPANY LIMITED, MUMBAI -TRANSMISSION BUSINESS
Transmission Operations of TATA Power in Mumbai License is spread over the entire city of Mumbai and its suburbs, with more than 1,125 CKT KM of transmission Mumbai and in helping the city achieve and retain its premium status of the commercial capital of India.
The entire transmission system is centrally controlled from The entire transmission system is centrally controlled from ower System Control Centre (PSCC) through the Key Strengths
TATA Power Transmission operates with grid availability of $99.75 \%$, supply availability of $99.99 \%$ Expertise in constructing transmission lines with Multi Circuit Narrow Base Towers in densely populated cities and hutments
Expertise in constructing transmission lines in creek areas, mangroves and forests
Innovative methods for voltage upgradation of Transmission Lines within the urban areas.

OOWERLINKS TRANSMISSION LIMITED
POWERLINKS TRANSMISSION LIMITED (PTL) is a join venture between the TATA Power Company Limited (51\%) the testim ${ }^{\text {f }}$ porering Public-Private Partership (PPP) in the transmission sector in India Bership

## Core Competencies

Statutory Clearences, Fund Raising
Project Commissioning, Realistic Cost Estimation Construction \& Warehouse Management
Environmental Impact Assessment
Supply Chain Manageemnt \& Procuremen
Detailed Engineering Designs \& Reviews
Site Supervision \& Project Management
Strong Feasibility Studies
Key Strengths
Skilled \& Trained Manpower
Strong Project Management Skills Accreditation to quality standards

## TALA Transmission - A SAGA of SUCCESS

The Transmission Project involved construction of the transmission lines ( 1166 kms ) from Siliguri in West Bengal via Bihar to Mandola in Uttar Pradesh.
The beneficiaries of the projects are:
Eastern Region: West Bengal, Bihar,
Jharkhand, Orissa and Sikkim.
Northern Region: Haryana, Punjab, Rajasthan,
U.P., J\&K, Himachal Pradesh, Uttarakhand, Delhi

TATA Power-DDL has been a forerunner in the adoption of state-of-the-art technologies and is a hub of all technological solutions, built its core competencies in utility management and is using these competencies to expand its footprints in different geographies both footprints in different geographies both nationally and internationally, providing perations rela sentes comercial peratom in magement integration of information and operations technologies for smater nd intelligent functioning of distrbution , e-engineering, capacity building etc.
TATA POWER DELHI DISTRIBUTION LIMITED (TATA POWER-DDL) Model: Public Private Partnership (PPP)

| PARAMETERS | Time of Inception (2002) | Present Situation (2020) |
| :---: | :---: | :---: |
| Consumers Base | 0.71 million | 1.76 million |
| Peak Demand | 930 MW | 2069 MW |
| AT\&C Losses | 53.10\% | 7.89\% |
| Network Length | 6,750 Km | $13,065 \mathrm{Km}$ |
| ASAI -Availability Index | 70\% | 99.70\% |
| Street Light Functionality | 40\% | 99.64\% |
| Number of Employees | 5600 | 3380 |
| Estimated Billing | 15\% | 0.40\% |
| New Connection Time | 51.80 days | 2 days |
| Consumer Satisfaction Index | - | 94\% |


|  | TP AJMER DISTRIBUTION LIMITED (TP-ADL) | THE TATA POWER COMPANY LIMITED (TPCL) | TP CENTRAL ODISHA DISTRIBUTION LIMITED (TPCODL) |
| :---: | :---: | :---: | :---: |
| Model | Distribution Franchisee Agreement | Multiple Distribution Licensee | Public Private Partnership (PPP) |
| Area | 190 sq. Km | 485 sq. Km | 29,354 sq. Km |
| Parameters | Present Situation (2020) | Present Situation (2020) | Present Situation (2020) |
| Customer Base | 0.15 million | 0.72 million | 2.7 million |
| Peak Demand | 128 MW | 908 MW | 1482 MW |
| AT\&C Losses | 9.96\% | 1.48\% | 30.44\% |
| Network Length | $2700+\mathrm{Km}$ | 4562.4 Km | HT-40631 Ckt/KM |
|  |  |  | LT-55197 Ckt/KM |
| Collection Efficiency | 99.81\% | 99.56\% | 90\% |
| New Connection Time | 1.45 Days | 2 Days | 5 Days |
| Number of Employees | 135 | 377 | 5359 |

GRID MORDERNIZATION INFRASTRUCTURE
Unmanned Grids
Network Expansion Planning

- Network Modelling - DMS / SCADA

Network Modeling - DMS/ SCADA
Ribre Communication Infrastru
Readiness of ADMS Solution
Substation Automation \&
Substation Automation \&
Distribution Automation
Distributed Energy Resources (DER) Solutions
Other in-house developed software to improve operational efficiency of
the system.
it INFRASTRUCTURE
State-of-the-art IT Infrastructure Data Integration \& SAP-ISU and ERP Enterpris
Enterprise Resource Planning
Solution
solution Distribution
Readiness
Seconday Dat Cent
$24^{* 7}$ Cyber Sata Centre (SDC)
$24^{*} 7$ Cyber Security Control Room.

SMART TECHNOLOGICAL ADVANCES Business Analytics \& Intelligence Advanced Metering Infrastructure 10 MWh Battery Energy Storage System
Enterprise Service Bus
Field Force Automation
Penetration of EV and its associated
Infrastructure
Renewable Energy Management \& its Integration
Rooftop Solar, Demand Side Management and Energy Efficiency Initiatives.

digitalization

- Digital Grid Solutions

Touch based Distributed Digital Control Remote Meter Reading \& Integrated Billing Solution
Power Management Portfolio
Solution.

EMPLOYEE FRIENDLY SERVICES Dedicated Employee Self-Services Platform Well Structured Learning and Development Programmes Digital Performance Management e-Learning Portals.

CUSTOMER SATISFACTION Focus on Ease of Doing Business Empowering Customer - Self Service Platform
24*7 Customer Care Centres Automated planned outage nformation
Chatbox / Video Conferencing EsCo/ Renewable Servic Digital Payment Avenue Social Media Campaigns on Energy

## Core Business

Evaluation of Public Private Partnerships, Mergers and Acquisitions betterment of power Distribution \& Transmission business


Managed Services
Data Analytics \& Energy Audit, Relay
Setting Audit - Protection Setting Setting Audit - Protection Setting
Calculations, Customer Relationship Calculations, Customer Relationship
Management, Revenue Management Services, Operation \& Maintenance Management, Smart Utility Operations, Managing Transmission Lines, GIS HV Testing - Up to 600 KV Protection System Audit, Control Distribution \&Transmission sector

Management Consultancy Management \& Technical Service, Project Management, Detailed Process Re-encinering Loss reduction Distribution Master
Plan, Quality Assurance \&
inspection, Network Planning Transmission Planning, etc.


Capacity Building (T\&D) Benchmark Practices in Loss Reduction, Best Practices in Distribution \& Transmission sector, Best Commercial Practices, and Safety Practices, Change Management Services, Preparing
for Future Technologies, Theft Detection at our training centres

Integrated Services Integrated Services such as Meter Management, Meter Reading, Billing \& Collection and sharing of Common Infrastructure fo Electricity and Water

## NATIONAL PRESENCE

With increasing impetus from Gol in terms of several power sector reform initiatives, timely \& qualitatively completion of capital investment projects is becoming a priority. With this background, TATA Power is providing services in more than 22 states across the nation with project outlay of approx. 3.6 billion USD

ARKHAN
Project Management
位 Lights - Project Management and
Annual Maintenance
T Project Management Unit
SMAST \& Smart Grid Roadmap (JUSNL) Power System Improvement Project (JUSNL) UTTAR PRADESH
Sarthi - Energy Audit \& Analysis and IT Support Services (5 discoms)
DPR Preparation \& Project Management for
PVVNL*, MVVNL**and DVVNL**
AMR Reading, Billing \& Data Analysis on Cloud PVVNL
Project Management for Lucknow \& Ferozabad
Town* Town ${ }^{*}$
SCADA Consultancy*
Call centre and consumer care centre
consultancy for deployment of CRM
haryana
Supply, Implement, Operate and Maintain Power ortfolio Solution
DPR Preparation \& Project Managemen Consultancy for Distribution Retail \& Sup Functions
IT Consultancy*
SCADA Consultancy*
Establish Monitoring and Evaluation Framework or Agricultural Consumers
Managotement and Por Energy Audit, Load DPRagement and Power Procurement Practias Kurukshetra, Karnal and Kaitahal
ChHATtISGARH
DPR Preparation \& Project Management*
IT Consultancy*
LED Street Lights - Project Management and Annual Maintenance

- Advisory Services for Performance Improvement of CSEB successor Entities VEST BENGAL
DPR Preparation \& Project Management* Development of $1,166 \mathrm{Kms}$ of $E$ HV Transmission Uttar Pradesh
GOA
TImplementation Works*
DPR Preparation \& Project Management*
- IT Support Cell for Goa Electricity Department
- Project Monitoring Consultancy for Transmission Network Strengthening Projec
karnataka
- Project Management Services for all 5 DISCOMs*
activities of services for pre-commissioning activities of 400 kV D/C (QUAD) Cuddalore Nagapattinam Transmission
Chandigarh
Smart Grid Pilot (NSGM) LED Street Lights - Annual Maintenance IT Consultancy
JAMMU \& KASHMIR
PIA for Strengthening of Distribution Network Smart Metering*
SCADA Consultancy
MAHARASHTRA
Consultancy for construction of 400 kV D/C Supply, Installation \& Commissioning two circuits of 110 KV cables for NMIA Project
DELHI
LED Street Lights (North MCD) - Management \& Annual Maintenance
508 KWp Rooftop Solar at Rashtrapati Bhawan Punjab
LED Street Lights - Project Management and Annual Maintenance


## - SCADA Consultancy

Ludhiana Smart City LED Street Light Project
(Installation and AMC)
MANIPUR
Capacity Building on O\&M
MADHYA PRADESH

- DPR Preparation \& Project Management* - SCADA Consultancy*
rajasthan
LED Street Lights - Project Management and Annual Maintenance
Renewable Energy Integration for RREC (ADB) ASSAM
Business Process Re-engineering ODISHA
Project Management for Puri (OPTCL)
- IT Consultancy*

SCADA Consultancy
himachal pradesh
Consultancy Services for Construction of 400KV D/C (QUAD) LILO Transmission Line
arunachal pradesh
Rural electrification of 1058 off-grid villages gujarat
ATEC Loss Reduction training to GETRI officials - meghas na

Capacity Building NER Power Sector
Improvement Project
andhra pradesh IT \& Smart Grid Roadmap

## Projects marked with * have been awarted under various schemes of Govermentof flndia such as DDUGGY (erstwhile 

## NTERNATIONAL PRESENCE

ATA Power is expanding its services to international borders and is doing significant work the African and Asian including Indian sub-continent markets.
TATA Power has been able to provide synergistic value to utilities undergoing reform process in their countries and those who want to upgrade themselves to become smarte

BANGLADESH
System Reliability Assessment and develop benchmark practices for Data Acquisition
and Distribution Network Protection
Analysis of T\&D Losses and Establishing Loss Targets Program (TAPP)
West Zone Underground Power Distribution
Expansion Plan
mozambique
Preparation of Least Cost Geospatial
Electrification Plan
KINGDOM OF ESWATINI
Operational Efficiency study
UGANDA
Study on Commercial and Distribution
Derations
afghanistan
Planning and Capacity Support Project
KURDISTAN
Advisory Services for System Improvemen
Bid Management \& Financing Plan

Advisory services to examine the current IBERIA Utility Training Consultant (UTC) for the Implementation of Training
NIGERIA
KADUNA: Technical \& Management Service provider
JOS: Technical \& Management Service Provider
KANO: Technical \& Management Service Provider
BENIN: Transaction Advisory Services for acquisition of Benin Disco
BENIN: Technical \& Management Service Provider EKO: Technical \& Management Service Provider
ABUJA: Corporate Restructuring of he Power Holdinstribution sub-sectors of (PHCN)

YEMEN
Capacity building in assessment of losses, identification of their sources and evaluation and implementation of loss reduction measures.
SOUTH ASIA

- Advanced Metering Infrastructure (AMI) and Analytics Guidance Study
SIERRA LEONE
Project Management and Operational Support for Advanced Metering rwanda
Development of Strategic Nationa Electrification to improve Energy Access zanzibar

Building program on best practices in Operation \& Maintenance.


MOVING TOWARDS SMART AND SUSTAINABLE FUTURE WITH NEXT GEN POWER SOLUTIONS
In our endeavor to tackle climate change and develop a sustainable fure, TATA Power is com fited to introduce energy sor the greater benefit of ommunity and its clients

RENEWABLE GENERATION
ATA Power is positioned at the top to deliver to the changing andscape of India's renewable top to deliver
Strong portfolio of solar generation capacity and wind plants.
Manufacturing solar cells and modules by focusing on cutting-edge technology ad world-class innovation
TATA Power Solar provides custom solutions to power remote regions that migh be cut off from regular electric grids. Installing microgrids in such areas ensures access to green power.


BATTERY ENERGY STORAGE INFRASTRUCTURE
TATA Power has installed India's first grid-scale battery-based energy storage system, paving the way for wider adoption of grid-scale energy storage across the country
Grid Connected Battery Energy Storage System helps in achieving:
Grid Stabilization
Enhanced Reliability
Peak Load Management
Increased System Flexibility
Protection of Critical Facilities

## EV INFRASTRUCTURE

TATA Power is making India EV ready by offering energy-efficient charging infrastructure
Smart Charging with TATA Power Mobile Application
Charging EV through Clean Energy Source - Solar Power
Grid Integration and demand optimization
Supports different electric vehicles categories
and manufacturers

## Green Power <br> 回

TATA Power EV Charging Network
Public
Residential
EV Charging Charging
EV Charging

## HOME AUTOMATION SERVICES

TATA Power is developing Home Automation Solution to help consumers minimize electricity consumption and increase energy efficiency of appliances used at home.
Benefits of Home Automation

## OUR ESTABLISHMENTS

Marking better future with best infrastructures

## SMART GRID LAB

Delhi Operations of TATA Power is the frontrunner in implementing power distribution reforms in the capital city of India. The company continues to be acknowledged globally for deployment of cutting-edge technologies and its consumer-friendly practices.
The focus of these technologies is to provide improved connectivity, efficiency and effectively allowing reliability of a higher magnitude - that is both sustainable and scalable to our consumers.

## CENPEID \& DOSEC

Delhi operations of TATA Power has built a strong culture of learning, which focusses on competency building of its employees with its dedicated training Institute. This tate-of-the-art Centre for Power Efficiency in Distribution (CENPEID) institute is accredited by Power Finance Oorporation and Ministry of Power for conducting program to augment the Power Distribution sector. It boasts of state-of-the-art training rooms, hostel facilities and two large auditoriums.


A second training center was established as Distribution Operations \& Safety Excellence Center (DOSEC) at Delhi, which emphasizes safety and training as per CEA Regulations. This Institute is accredited by the Central Electricity Authority (CEA) / Ministry of Power, Government of India.
CENPEID as well as DOSEC, have imparted various training programs to its Internal and External customers, including those from various State Electricity Boards in India and utilities from abroad. Several power distribution utilities have approached our organisation to understand and learn about TATA Power-DDL's best practices and what makes the company stand out from the others in the power distribution.


TATA POWER SKILL DEVELOPMENT INSTITUTE (TPSDI)
The TATA Power Skill Development Institute (TPSDI) is an endeavour from the TATA Power Company to empower youth and others with employable skills, especially in the Power and allied sectors, and to address the skill gap challenge faced by the Indian Power Sector.
The Institute's unique training approach is designed for delivering skills with speed, scale and standards. The employability centric courses range from 2 to 12 weeks in duration and follow the TPSDI Competency Framework, which is congruous with duration and follow the TPSDI Competency Framework, which is congruous with allows participants to swiftly pick-up readily deployable skills and continue upgrading their skills after convenient intervals over a period of time.

## TESTIMONIALS

'Words we cherish



Mr Abhishek Lodha
MD, Lodha Group

TATA Power-DDL's Smart Grid Lab will not only assist them in becoming a world class utility but will also provide learning opportunities to other Indian Discoms/ Utilities to address their growing power needs through a better understanding of grid modernization, demand side management and renewable energy

Ms Leocadia I<br>Zak Director, U.S. Trade and Development, Agency (USTDA)

We thank TATA Power for taking up the challenge of installing substation on 44th which is first time in India. The job was carried out with excellent coordination, utmost safety with zero incidences.

Sheila Dikshit
Former CM, Delhi

Ithink'TATA Power-DDL' has a lot of credibility. The Company has won the confidence of consumers, took steps to make them feel welcome and also gave the feeling that it was working for the larger public good, rather than merely for profits.

