



ENERGY UTILITY PARTNERSHIP PROGRAM

CASE STUDY



Tata Power Delhi Distribution Limited (Tata Power-DDL), a joint venture between Tata Power and the Government of NCT of Delhi, has been the leader in implementing distribution reforms in New Delhi, India



1.9 million
Customers



2074 MW
Peak Load



510 Sq. Km.
Distribution Area



6.39%
AT&C Losses
(as of FY 2023)

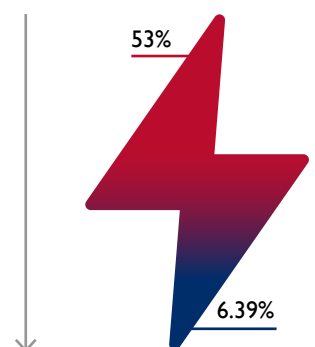


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EXECUTIVE SUMMARY

Power distribution systems play a vital role in ensuring steady supply of electricity to homes, businesses, and industries. Developing countries including India can harness the power of more than half of the world's renewable energy capacity with future ready power distribution companies. Tata Power Delhi Distribution Limited (Tata Power-DDL) a joint venture between Tata Power and the Government of New Delhi distributes electricity to north and northwest parts of Delhi, keeping the light on for a population of about seven million. This case study tracks how the North Delhi Power Limited (NDPL) now Tata Power-DDL demonstrated a utility's ability to be nurtured back to a financially vibrant world-class utility that boasts sectoral leadership.

Tata Power AT&C Losses reduced to 6.39% in 2023 from 53% in 1990s



CHALLENGES

In the 1990s, NDPL was suffering from a vicious cycle of unsustainability and was a dysfunctional utility. The organization's aggregate technical and commercial (AT&C) and theft losses ranged between 53% to 60% of input and the utility required nearly \$300 million per year in Government of India subsidies. This resulted in India's capital city of Delhi enduring frequent power cuts and outages that disrupted civic life. The organization lacked schemes for employee training - technical, behavioral, quality or computer which had the workforce ill-equipped to effectively communicate with customers on power interruptions or load shedding.

EUPP PART OF NDPL'S TRANSFORMATIONAL AGENDA

The Delhi Electricity Regulation Act of 2000 initiated India's power sector reforms, followed by NDPL's partial privatization and the Electricity Act of 2003. These were major forward strides in India's Power Sector reform agenda. Around this time, NDPL partnered with the USAID-funded Energy Utility Partnership Program requesting a custom peer-to-peer training program. The United States Energy Association from 2003-2006 helped facilitate the training with Baltimore Gas and Electric (BGE) Maryland, United States' largest gas and electricity utility. Working on a system-wide overhaul together they introduced the concept of 'ideal zones' fortifying distribution lines and resultant service area upgrades including more upgraded cables and splices. These zones included commercial, government, and residential areas. As a result, it became harder to "tap" the lines and steal power and reduced losses as well as blackout instances in Delhi from electrical cable failures. The collaboration set a new standard for efficiency and security in the city's electricity distribution.

Results & Milestones

- ✓ Today, TPDDL's losses are less than 6.39%.
- ✓ EUPP now calls upon experts from TPDDL to assist other countries in Asia and Africa on a regular basis. USEA over the past decade has regularly recruited Tata Power DDL trainers for change management, energy mix diversification, business management, loss reduction and more for USAID-assisted countries in Africa including Tanzania, Uganda and Ethiopia as some notable examples.

CENTER FOR POWER EFFICIENCY DISTRIBUTION (CENPIED)

EUPP hosted an executive exchange with Washington's electric utility, Tacoma Power at its training Center, seeding the concept of Centre for Power Efficiency in Distribution (CENPEID) later established by Tata Power DDL to impart training. The delegation received diagrams, entire training manuals and courses, and other critical information needed to construct a training program. The delegation returned to India and created a proposal using the photos and information received from this exchange to successfully lobby the government for money to build a training center. This center got the accreditation of the Ministry of Power, Government of India and was partly funded by USAID. It had three wings: the HRD Institute (Delhi), the Skill Training Institute and Policy and Research. Today it's a world class state-of-art learning center with a demo room of distribution equipment, metering R&D center, solar plants, transformer workshops and a hands-on technical training center.

Results & Milestones

- ✓ The CENPIED has delivered more than 60,000 training days for both internal TPDDL employees and participants from overseas utilities.
- ✓ Has a gold award for outstanding Achievement in Training Excellence
- ✓ National Award for Innovative Training Practices
- ✓ Excellence in Learning and Development Award
- ✓ Won Confederation of Indian Industry (CII) National HR Excellence Award in Performance Management, Training & Development

POWER OF PARTNERSHIPS

Over the past 30+ years, EUPP has seen tremendous advances and maturity in India's power sector, including the fact that some of the organizations that we helped train, such as Central Electricity Regulatory Commission (CERC), PTC India, India Energy Exchange Ltd (IEX), Tata Power, and more, are now helping us to train other USAID partner countries.