



## Case Study

# Improved Load Forecasting Accuracy for Indian Power Company

**LTMindtree helps state-run power distribution company save million dollars through advance analytics.**

## Client

Our client is an India-based power distribution company.

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## Challenges

The client was struggling with poor forecasting accuracy resulting in inaccurate projections, unintended real-time power purchase (hence high cost), and non-profitable sales.

The client needed a better predictive mechanism area-wise and a process-oriented approach for centralized control.

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## LTIMindtree Solution

At the first step, LTIMindtree engaged all the factors affecting the short-term load and planned to write algorithms to develop a model that could encompass all the factors. We developed an Artificial Neural Network (ANN) - based forecasting model, considering all the identified factors such as area-wise heat index, seasonality, average rainfall of all districts, unrestricted load, Special day index, etc.

We provided a complete solution for accurate short-term, medium-term and long-term electrical forecasting using heuristic, neural and statistical models. In addition, we have also proposed to leverage this experience of electrical power forecasting to build similar forecasting model for Solar power.

## Business Benefits

- **97% improvement in forecasting accuracy.**
- **Accuracy improvement of 10% in load forecasting helped in revenue maximization by USD 1 million per month.**
- **Made Area-based Forecasting (Urban/Rural) for applicable categories possible.**
- **Multiple iterations made possible with different user inputs, with various parameters like YoY growth rate and CAGR .**
- **All the three DISCOMS can independently forecast demand.**

# Technology

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