

Define Problem Statement

Problem Definition

Electricity demand fluctuates based on region, time, and external events. Without proper visualization and analytical insights, utility providers and policymakers struggle to:

- Predict peak demand
- Optimize energy distribution
- Reduce wastage
- Understand lockdown impact

Business Problem

Utility companies need to:

- Manage supply during peak hours
- Plan seasonal energy production
- Allocate resources efficiently
- Design region-specific policies

However, raw time-series data is complex and difficult to interpret.

Objective of the Project

To build a Tableau-based analytical dashboard that:

- Visualizes electricity consumption patterns
- Compares year-wise data
- Analyzes regional consumption
- Identifies high and low demand states
- Shows lockdown impact
- Supports data-driven decisions

Stakeholders

- Electricity Boards
- Government Policymakers
- Renewable Energy Providers

- Grid Management Teams
- Researchers
- Consumers

Social & Business Impact

Social Impact:

- Promote sustainable usage
- Support renewable energy planning
- Encourage off-peak usage

Business Impact:

- Optimize grid operations
- Reduce overload failures
- Improve energy planning strategy

Key Questions to Answer

- Which region consumes the most electricity?
- How did COVID lockdown affect consumption?
- Which states show increasing trends?
- What are seasonal peak months?
- Which year had higher overall demand?