

Tab 1

Here are well-structured **Tableau assignment topics** for an exploration of electricity consumption patterns. These are suitable for dashboards, storyboards, and analytical reports.

1) Regional Electricity Consumption Trends

Focus: Compare electricity usage across states, cities, or countries over time.

Key Analyses:

- * Year-over-year growth
- * Seasonal consumption patterns
- * Urban vs rural consumption differences

Tableau Features: Line charts, maps, filters, forecasting, trend lines

2) Household vs Industrial Electricity Usage

Focus: Analyze consumption by sector (residential, commercial, industrial, agricultural).

Key Analyses:

- * Sector-wise contribution to total consumption
- * Peak demand comparison
- * Growth rate by sector

Visuals: Stacked bar charts, area charts, pie charts, heat maps

3) Seasonal and Weather Impact on Electricity Consumption

Focus: Relationship between temperature and electricity demand.

Key Analyses:

- * Summer vs winter demand spikes
- * Correlation between temperature and usage
- * Extreme weather impact

Visuals: Dual-axis charts, scatter plots with trend lines, heat maps

4) Peak Load Analysis and Demand Forecasting

****Focus:**** Identify peak usage hours and forecast future demand.

****Key Analyses:****

- * Hourly/daily load patterns
 - * Forecasting future electricity needs
 - * Identifying overload risks
- **Tableau Tools:**** Forecasting, calculated fields, time-series analysis

5) Renewable vs Non-Renewable Energy Consumption Patterns

****Focus:**** Compare electricity generated from renewable sources vs fossil fuels.

****Key Analyses:****

- * Growth of solar/wind energy
 - * Percentage share over time
 - * Carbon emission implications
- **Visuals:**** Area charts, stacked bars, sustainability dashboards

6) Electricity Consumption and Economic Growth

****Focus:**** Relationship between GDP and electricity usage.

****Key Analyses:****

- * Correlation analysis
 - * Per capita consumption trends
 - * Developing vs developed country comparison
- **Visuals:**** Scatter plots, bubble charts, regression lines

7) Smart Meter Data Analysis

****Focus:**** Analyze granular household electricity usage.

****Key Analyses:****

- * Hourly consumption patterns
 - * Behavioral trends
 - * Energy-saving opportunities
- **Visuals:**** Heat maps, time-series charts, box plots

8) Electricity Pricing and Consumption Behavior

Focus: Study how tariff changes affect consumption.

Key Analyses:

- * Price elasticity of demand
 - * Peak vs off-peak pricing impact
 - * Cost forecasting
- **Visuals:** Dual-axis charts, calculated fields, parameter controls

9) Carbon Emissions Linked to Electricity Usage

Focus: Environmental impact of electricity consumption.

Key Analyses:

- * Emissions per sector
 - * Reduction trends over time
 - * Clean energy adoption rate
- **Visuals:** KPI dashboards, trend lines, geographic maps

10) Power Outage and Reliability Analysis

Focus: Examine outage frequency and duration.

Key Analyses:

- * SAIDI & SAIFI metrics
 - * Regional reliability comparison
 - * Seasonal outage trends
- **Visuals:** Bar charts, maps, performance dashboards

If you'd like, I can also:

- * Provide a **complete Tableau project outline (problem statement, objectives, dataset suggestions, KPIs, dashboard layout)**
- * Suggest **public datasets** (like from the World Bank, IEA, or government open data portals)
- * Create a **sample project report structure** for submission

Tell me your education level (undergraduate/postgraduate) and I'll tailor it accordingly.

Tab 2

