

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

