Dashboard Design

Date	31st July 2025
Team ID	xxxxxx
Project Name	Global Energy Trends: A Comprehensive Analysis of Key Regions and Generation Modes using Power BI
Maximum Marks	5 Marks

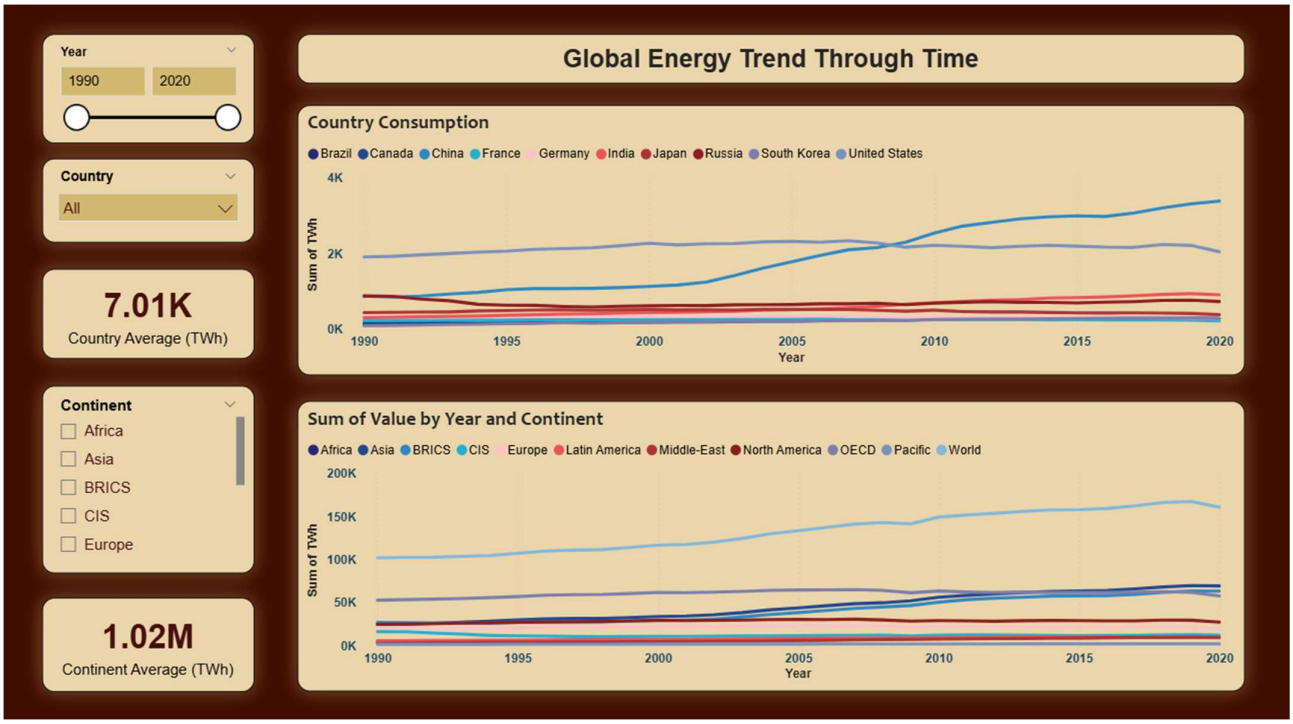
Creating an effective dashboard involves thoughtful design to ensure that the presented information is clear, relevant, and easily understandable for the intended audience. Here are some key principles and best practices for dashboard design

Activity 1: Interactive and visually appealing dashboards

Creating interactive and visually appealing dashboards involves a combination of thoughtful design, effective use of visual elements, and the incorporation of interactive features. Here are some tips to help you design dashboards that are both visually appealing and engaging for users so take care of below points

- Clear and Intuitive Layout
- Use Appropriate Visualizations
- Colour and Theming
- Interactive Filters and Slicers
- Drill-Down Capabilities
- Responsive Design
- Custom Visuals and Icons
- Use of Infographics

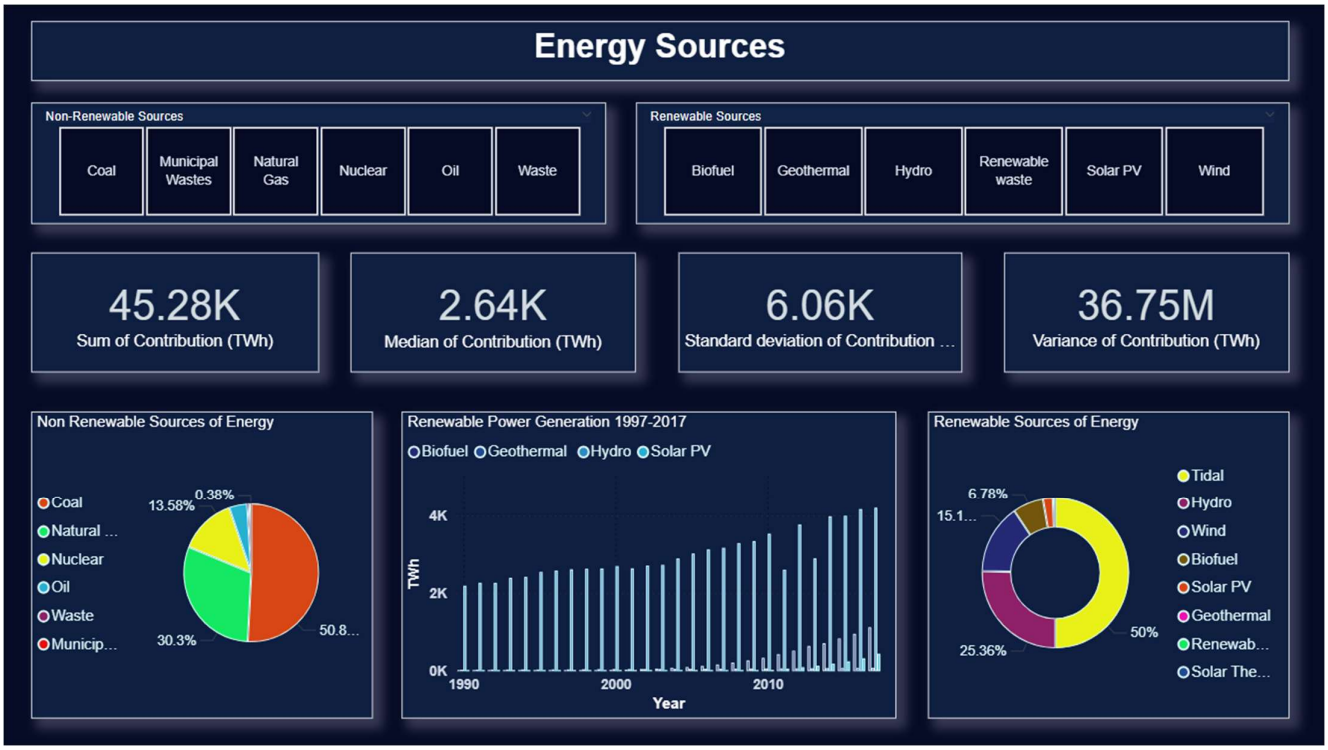
Dashboard 1: Global Energy Trend Through Time



Outcomes:

1. **Asia leads in overall energy consumption**, driven by rapid industrialization and population growth.
2. **North America and Europe show steady consumption**, indicating energy-efficient practices or economic maturity.
3. **Country-wise**, the **United States remains the highest energy consumer** consistently.
4. **India and China show strong upward trends**, signaling growing industrial and urban energy needs.
5. **Africa's consumption is low but gradually increasing**, reflecting developmental energy access initiatives.

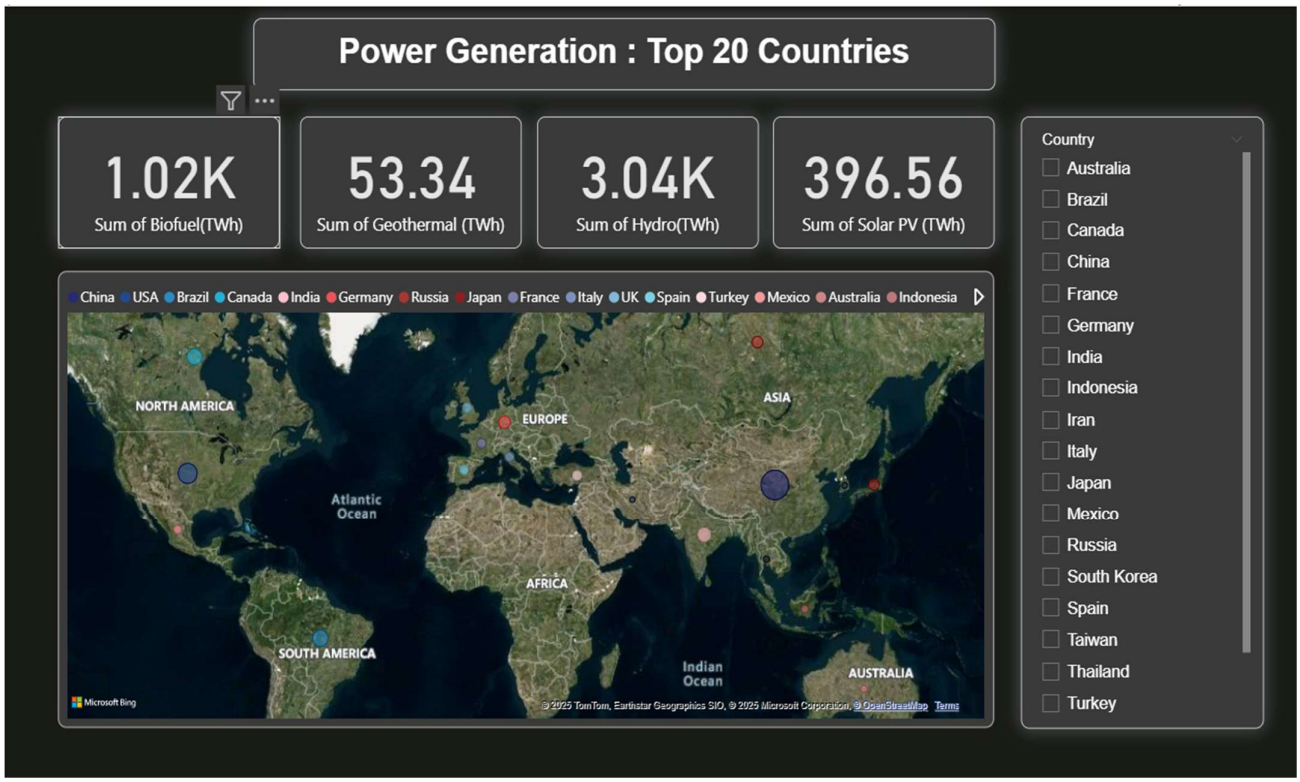
Dashboard 2: Energy Sources



Outcomes:

1. **Coal dominates non-renewable energy**, contributing over 50% of total non-renewable production.
2. **Hydro and Solar PV are the most significant renewable sources**, showing rapid growth post-2000.
3. **Standard deviation and variance values indicate a wide disparity** in energy production across sources, requiring balancing policies.
4. **Solar PV and Biofuel are scaling up**, hinting at diversification in renewable strategy.
5. **Natural Gas and Oil remain key transitional fuels**, though renewable shares are closing the gap.

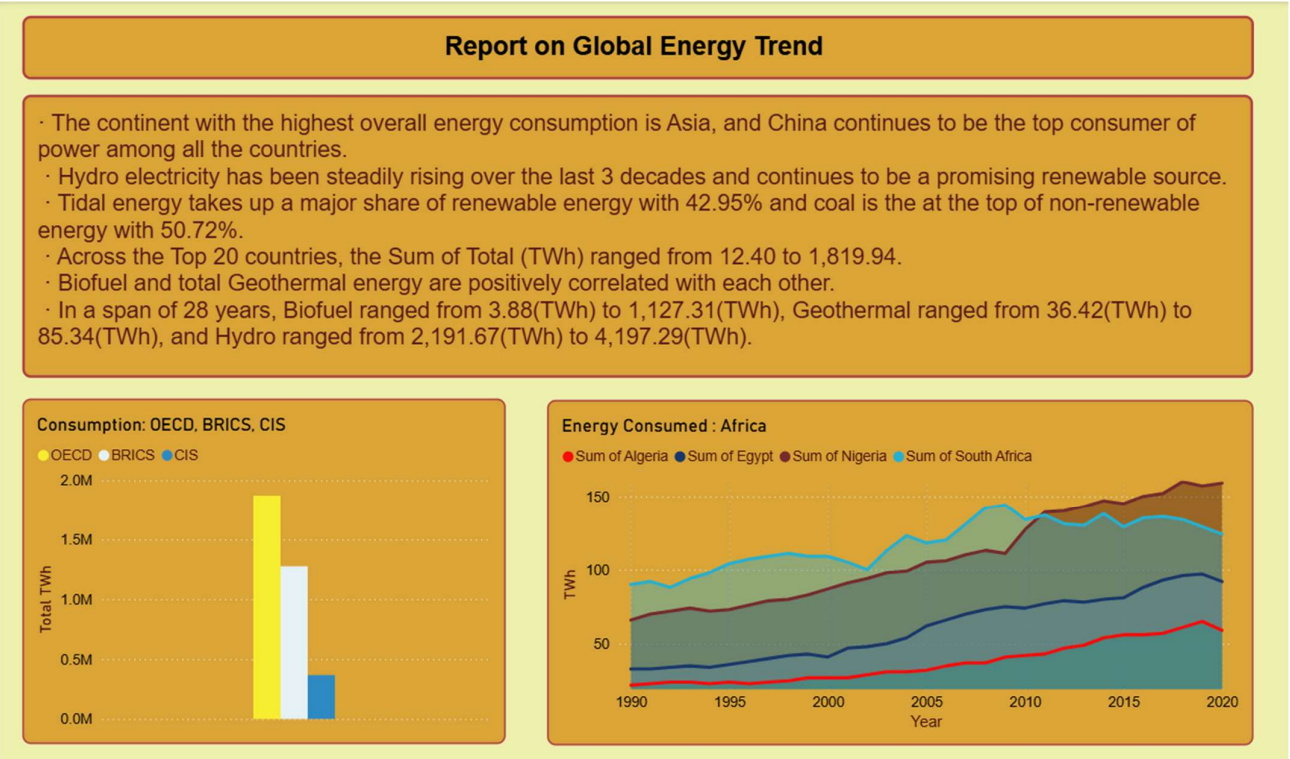
Dashboard 3: Power Generation - Top 20 Countries



Outcomes:

1. **China and the USA dominate solar, hydro, and geothermal energy production**, indicating strong infrastructure and investment.
2. **Germany and Japan are notable contributors to solar energy**, aligning with their national sustainability goals.
3. **Emerging economies like Brazil and India are catching up** in renewable generation, mainly hydro.
4. **Geographic clustering shows renewable energy is concentrated** in technologically advanced and high-resource countries.
5. **Geothermal energy is limited**, suggesting potential for exploration in underutilized regions.

Dashboard 4: Report on Global Energy Trends



Outcomes:

1. **Asia is confirmed as the highest energy-consuming continent**, with China being the top consumer globally.
2. **Coal and Hydro are the dominant energy types**, reflecting both legacy systems and renewable focus.
3. **Geothermal and Biofuel show positive correlation**, which may inform future integrated renewable projects.
4. **Tidal energy accounts for 42.95% of renewable generation share**, highlighting its untapped potential.
5. **Africa's consumption remains low but is steadily increasing**, offering investment opportunities in rural electrification.