

Business Question and Visualization Report

Date	23 December 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

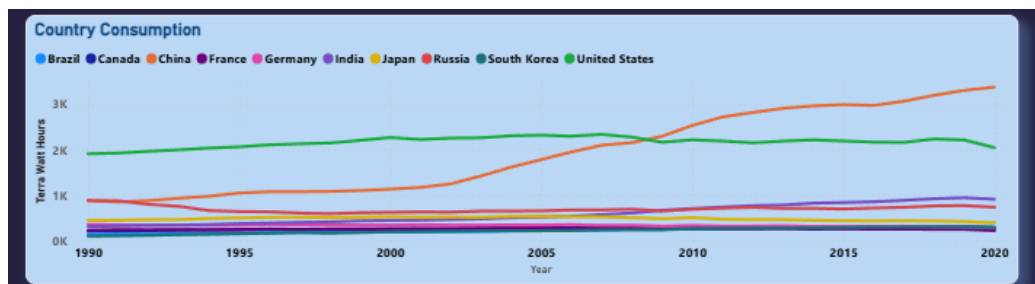
Visualization development refers to the process of creating graphical representations of data to facilitate understanding, analysis, and decision-making. The goal is to transform complex datasets into visual formats that are easy to interpret, enabling users to gain insights and make informed decisions. Visualization development involves selecting appropriate visual elements, designing layouts, and using interactive features to enhance the user experience. This process is commonly associated with data visualization tools and platforms, and it plays a crucial role in business intelligence, analytics, and reporting.

Business Questions and Visualisation

The process involves defining specific business questions to guide the creation of meaningful and actionable visualizations in Power BI. Well-framed questions help in identifying key metrics, selecting relevant data, and building visualisation that provide insights.

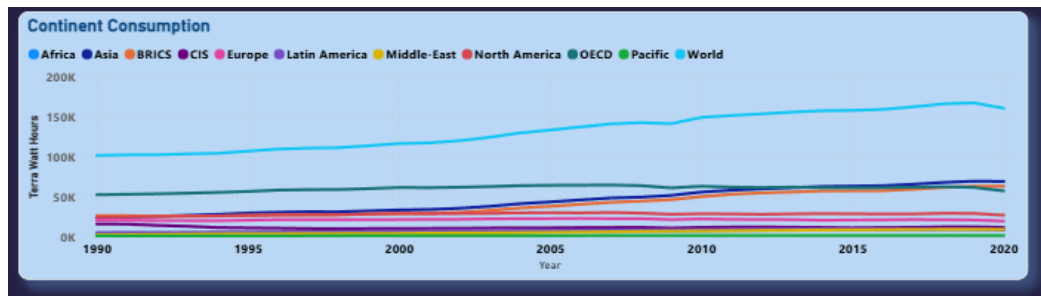
1. Which countries consume the most energy over the years?

- *Visualization:* Line chart showing energy consumption for year 1990 to 2020



2. How does energy consumption vary across different continents?

- *Visualization:* Line chart shows the energy consumption across different continents



3. What is the average energy consumption of continent?

- *Visualization:* Card visual showcasing the Average consumption of continent



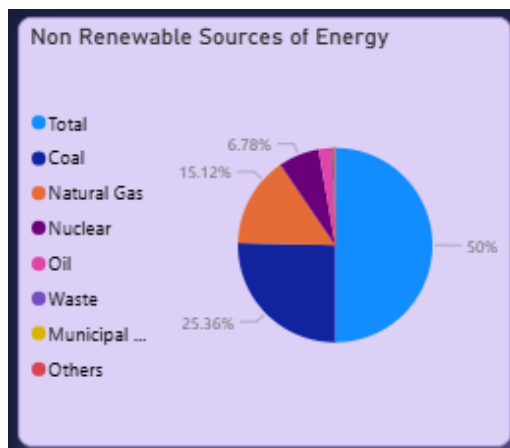
4. What is the average energy consumption of selected countries?

- *Visualization:* Card Visual shows the countries Average consumption



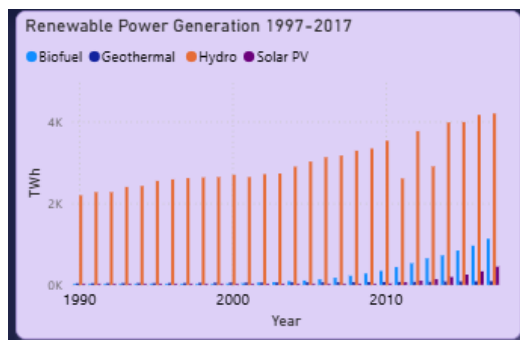
5. Which non-renewable energy source contributes the most to total power generation?

- *Visualization:* Pie chart visual shows the contribution of non-renewable power generation



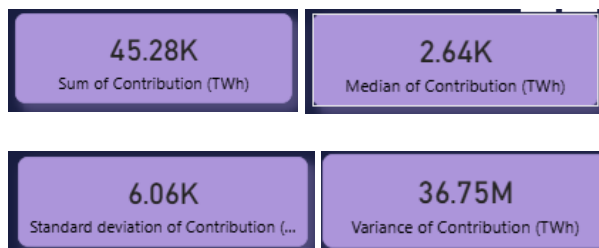
6. How has renewable power generation changed over time?

- *Visualization:* Clustered column chart shows the power generation of renewable energy over years



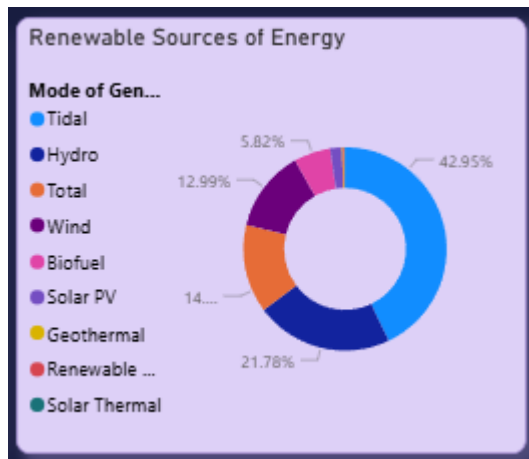
7. What are the overall statistical patterns of renewable energy contribution?

- *Visualization:* Card visual shows the statistical patterns such as Sum, Median, standard deviation and Variance of renewable total power generation



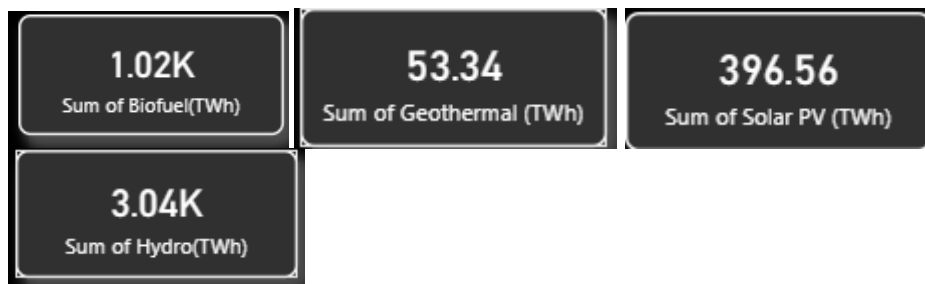
8. Which renewable energy source has the highest contribution?

- *Visualization:* Donut Chart shows the highest contribution of renewable energy source



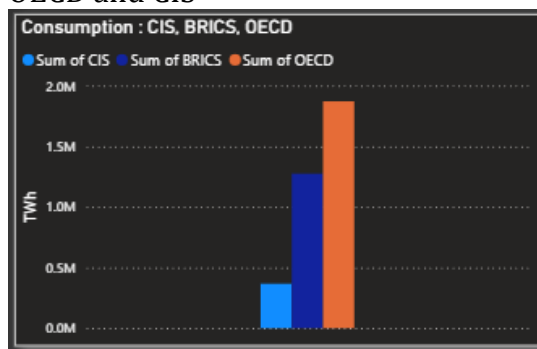
9. How do different renewable energy sources compare in terms of contribution?

- Visualization: Card visual shows the comparison of renewable sources such as biofuel, geothermal, hydro, solar pv



10. How does energy consumption differ among BRICS, OECD, and CIS regions?

- Visualization: clustered column chart shows the consumption of BRICS, OECD and CIS



11. How is energy consumption distributed among African countries?

- Visualization: Area chart shows the energy consumption of African continents by the countries such as Egypt, Nigeria, south Africa and Algeria

