Business Question and Visualization Report

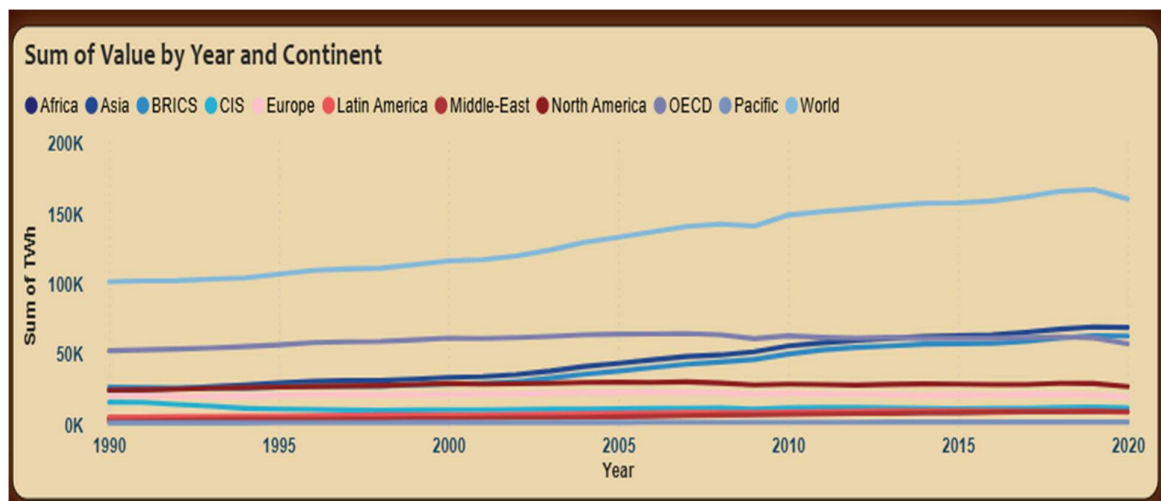| Date	31st July 2025
Team ID	xxxxxx
Project Name	Global Energy Trends: A Comprehensive Analysis of Key Regions and Generation Modes using Power BI
Maximum Marks	5 Marks

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.
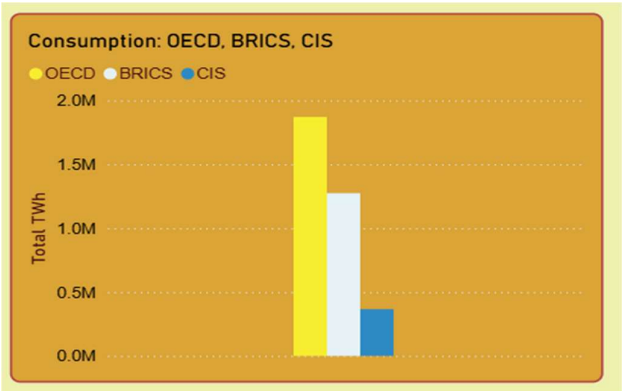
1. Which continent consumes the most energy over time?

- **Visualization**: Line Chart - Continent-wise energy consumption over the years

2. How does energy consumption differ across BRICS, OECD, and CIS regions?

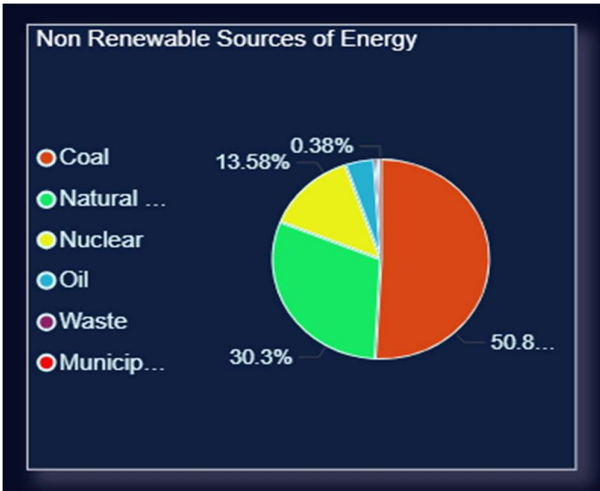- **Visualization**: Bar Chart - Consumption: OECD, BRICS and CIS Comparison"

3. What is the average energy consumption of countries and continents globally?

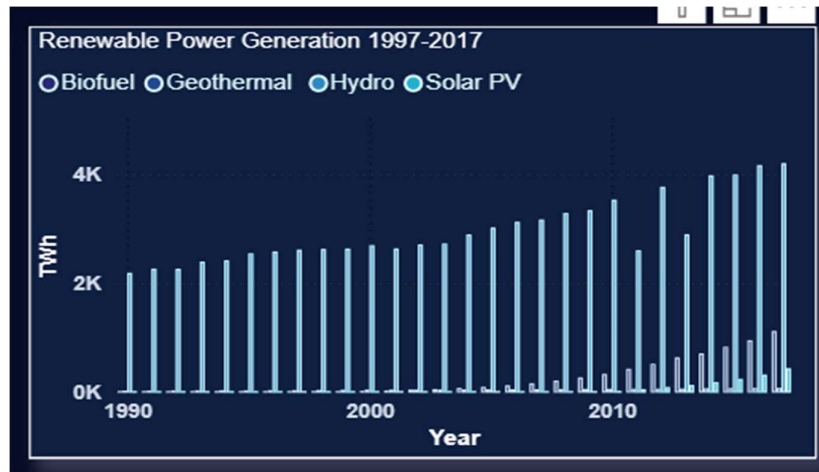- **Visualization**: KPI Cards - Country/Continent Average (TWh)

4. What is the contribution of each non-renewable energy source to global energy production?

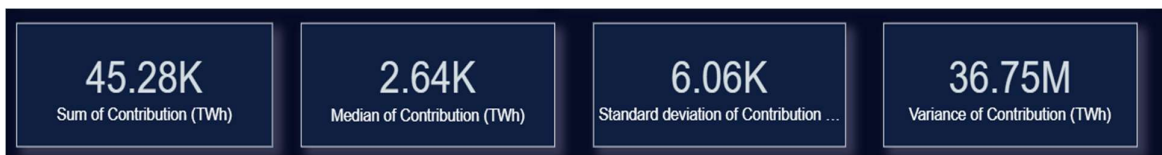- **Visualization**: Pie Chart - Non-Renewable Sources of Energy

5. How has renewable power generation evolved from 1997 to 2017?

- **Visualization**: Vertical Bar Chart - Renewable Power Generation: 1997–2017
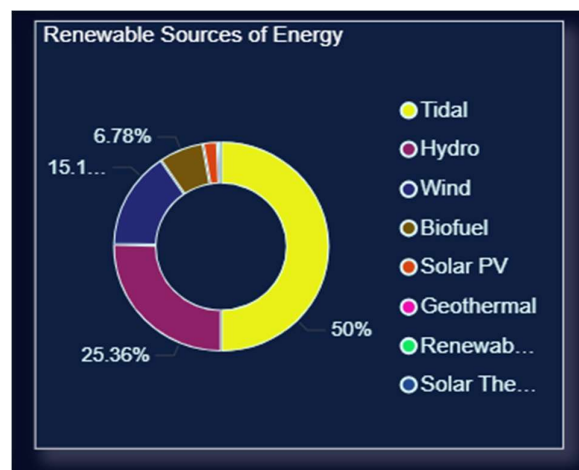

6. What is the variance and standard deviation in energy contributions across all sources?

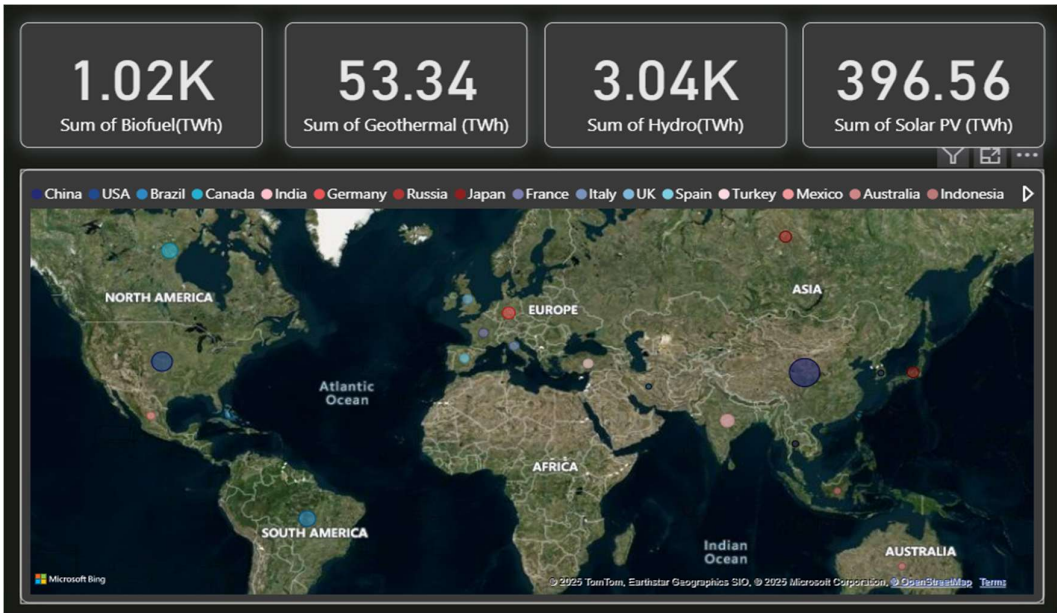- **Visualization**: KPI Cards - Cards – Variance, Std. Deviation, Median, Sum of Contribution

7. Which renewable energy source has the highest global share?

- **Visualization**: Donut Chart - Renewable Sources of Energy

8. Which top 20 countries lead in geothermal, hydro, biofuel, and solar power generation?

- **Visualization**: Cards + Geographic Map - Power Generation: Top 20 Countries

9. What are the energy consumption trends in African countries over time?

- **Visualization**: Area Chart - Energy Consumed: Africa