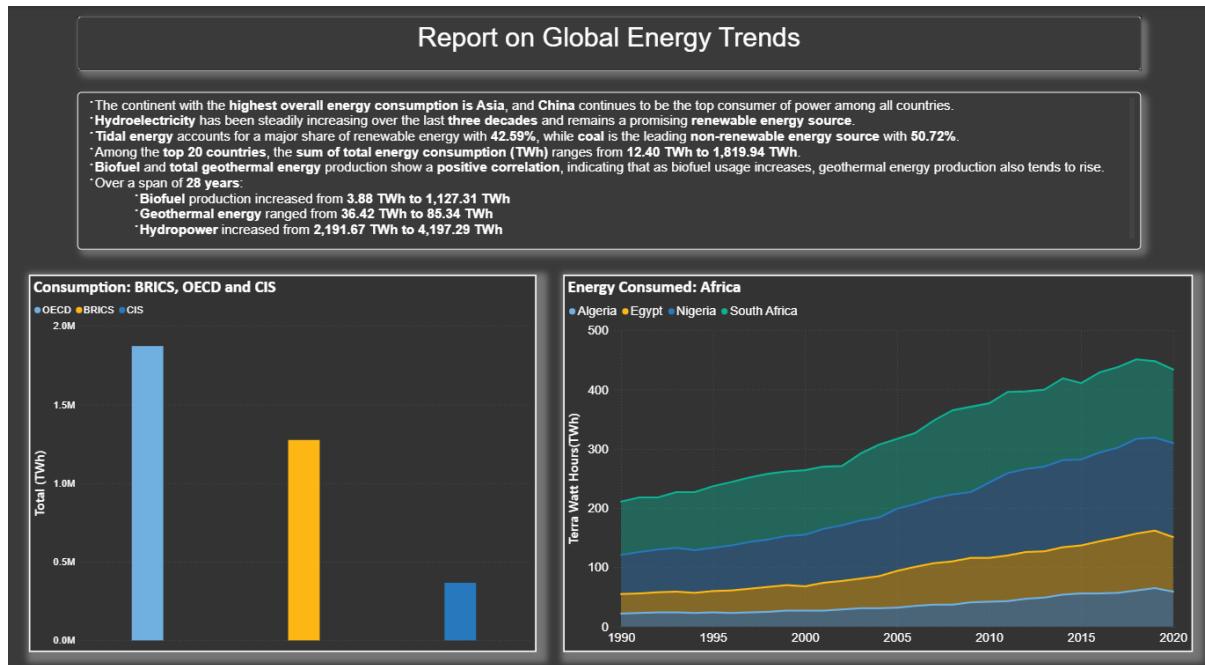


Report

Date	17 Dec 2025
Team ID	PNT2022TMIDxxxxxx
Project Name	Global Energy Trends
Maximum Marks	5 Marks

A report is a comprehensive document that provides a detailed and structured account of data analysis, findings, and insights. It is typically used for in-depth analysis, documentation, and communication of results. Reports are suitable for a diverse audience, including decision-makers, analysts, and stakeholders who need a comprehensive understanding of the data.

Designing a report in Power BI involves connecting to data sources, creating visualizations like charts and graphs, customizing their appearance and interactivity, organizing them logically on the canvas, formatting elements for consistency and clarity, and optionally creating dashboards for a summarized view. Throughout the process, it's essential to consider the audience's needs and ensure the report effectively communicates insights from the data. Finally, iterate based on feedback to continually improve the report's design and usefulness.



Observations from the Global Energy Trends Dashboard.

1. Trends Over Time:

Hydropower Growth:

Hydroelectric energy generation has shown a steady and consistent increase over the past three decades, rising from **2,191.67 TWh** to **4,197.29 TWh**, highlighting its growing importance as a sustainable renewable energy source.

Biofuel and Geothermal Expansion:

Biofuel production increased significantly from **3.88 TWh** to **1,127.31 TWh**, while geothermal energy grew from **36.42 TWh** to **85.34 TWh** over a span of 28 years, indicating long-term investment in alternative energy sources.

African Energy Consumption Trend:

Energy consumption in African countries such as **South Africa, Egypt, Nigeria, and Algeria** has increased steadily since 1990, reflecting population growth, urbanization, and industrial development.

2. Performance Comparisons:

Regional Energy Consumption:

Among major economic groups, **OECD countries consume the highest total energy**, followed by **BRICS**, while **CIS** countries show comparatively lower consumption levels.

Continent-Level Insights:

Asia emerges as the continent with the highest overall energy consumption, with **China being the single largest energy consumer globally**, driven by rapid industrialization and economic growth.

Africa Country Comparison:

South Africa consistently records the highest energy consumption among African nations in the dashboard, indicating its relatively advanced industrial base.

3. Energy Source Distribution:

- Renewable vs Non-Renewable Energy:**

Renewable energy sources contribute significantly to global energy production, with **tidal energy accounting for 42.59%** of renewable energy usage.

- Coal Dominance:**

Coal remains the leading **non-renewable energy source**, contributing **50.72%**, highlighting continued dependence on fossil fuels despite the growth of renewables.

- Correlation Between Energy Types:**

A positive correlation is observed between **biofuel and geothermal energy production**, suggesting that countries investing in biofuels are also likely to expand geothermal energy capacity.

4. Key Insights and Implications:

Sustainable Energy Shift:

The consistent rise in renewable energy sources such as hydropower, biofuel, and geothermal energy indicates a gradual global shift toward cleaner energy alternatives.

Regional Development Opportunities:

Increasing energy demand in Africa presents opportunities for renewable energy investments to support sustainable development.

Policy and Strategy Focus:

Countries with high energy consumption should prioritize renewable energy adoption to reduce reliance on coal and minimize environmental impact.

