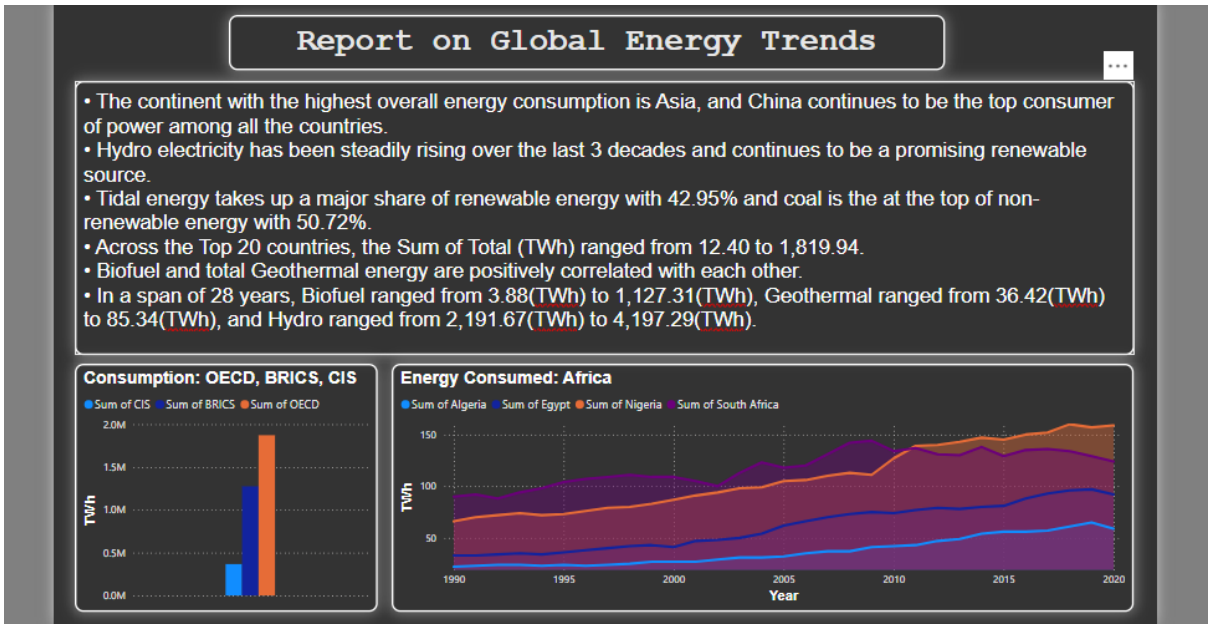
Report

Date	24 July 2025
Skillwallet ID	SWUID20250176043
Project Name	Global Energy Trends: A Comprehensive Analysis of Key Regions and Generation Modes using Power BI
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 energy datasets, building relevant visualizations (such as line charts, maps, donut charts, and KPIs), customizing their appearance for readability, and logically organizing them across report pages. Filters and slicers help viewers focus on specific regions or energy types. The aim is to effectively communicate insights while allowing for exploration and deep dives into specific trends.



Observations Drawn from the Report

1. **Continental Energy Consumption:**

- The report shows that **Asia** leads in overall energy consumption compared to all other continents. This emphasizes the growing industrial and population energy demands in the region.

2. **Top Country-Level Power Consumers:**

- **China** emerges as the highest energy-consuming country, with significantly higher TWh values than other nations, as per the Top 20 Countries visual.

3. **Hydroelectric Growth Trend:**

- Hydroelectric energy shows a **consistent increase over 28 years**, growing from 2,191.67 TWh to 4,197.29 TWh, indicating its reliability and long-term sustainability among renewable sources.

4. **Renewable Energy Share Breakdown:**

- Among renewables, **tidal energy** accounts for the **largest share at 42.95%**, followed by hydro, biofuel, and geothermal. This helps stakeholders identify where investment is concentrated.

5. **Dominant Non-Renewable Source:**

- **Coal remains the top non-renewable source**, contributing **50.72%** of total non-renewable power generation globally — a key factor in ongoing climate discussions.

6. **Country-Level Generation Variance:**

- Within the top 20 countries, the **sum of total energy generation (TWh)** ranges from as low as **12.40 TWh to 1,819.94 TWh**, highlighting disparities in energy production capabilities.

7. **Correlation in Renewable Sources:**

- A **positive correlation is observed between biofuel and geothermal energy** over the years, suggesting similar growth patterns or investment trends.

8. **Balanced Global Insights:**

- The Power BI visuals collectively provide a **comprehensive and balanced view** of energy patterns across time, geography, and source types, enabling policy-makers to evaluate both energy demand and sustainability efforts.