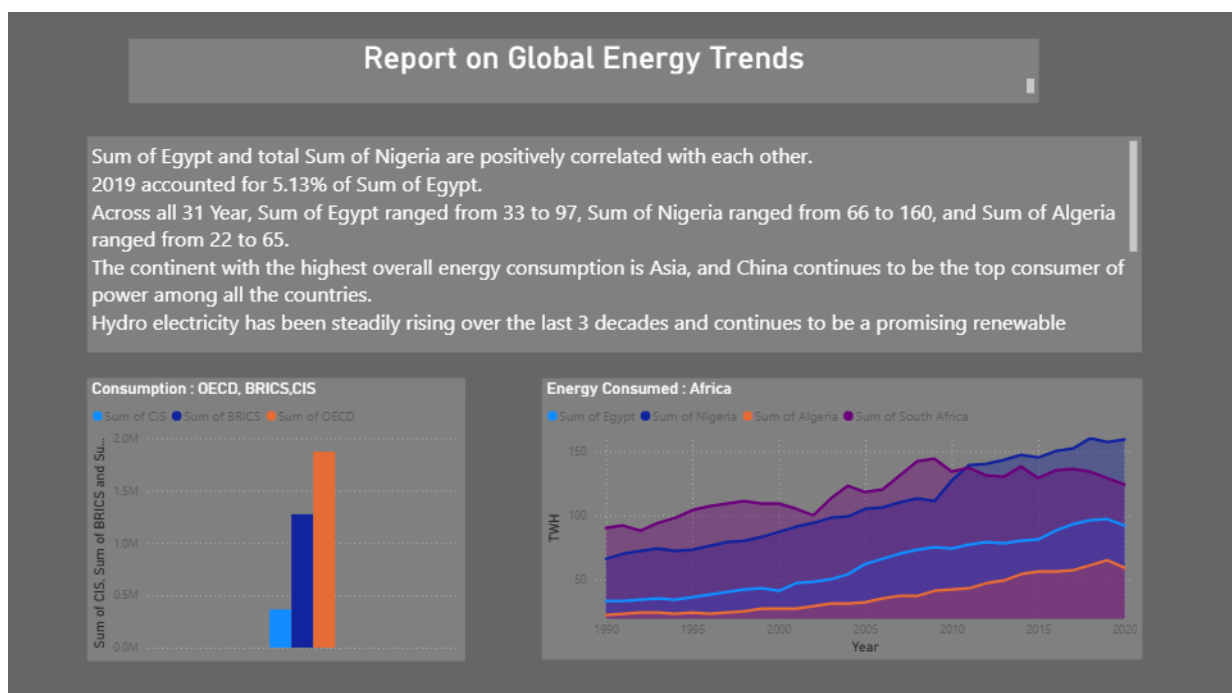


Report

Date	5 October 2025
Team ID	SWUID20250206509
Project Name	Global Energy Trends: A Comprehensive Analysis of Key Regions and Generation Mode
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 drawn from reports in Power BI can provide valuable insights into business performance and trends.

1. Trends Over Time:

- The annual energy consumption of Egypt and Nigeria shows a strong positive correlation, indicating similar growth patterns in both countries over the years.

- Hydro power generation has steadily increased over the last three decades, highlighting its growing role as a renewable energy source.

2. Performance Comparisons:

- In 2019, Egypt's energy consumption accounted for 5.13% of its total cumulative usage over the analysis period.
- Asia is the continent with the highest overall energy consumption, with China leading as the largest power consumer.

3. Regional and Country Analysis:

- Over the past 31 years, Egypt's annual energy consumption ranged from 33 to 97 TWh, Nigeria's from 66 to 160 TWh, and Algeria's from 22 to 65 TWh, reflecting steady growth and periodic fluctuations.
- South Africa leads among African countries in total energy consumption, while Egypt and Nigeria display gradual increases.

4. Mode of Generation Insights:

- Coal remains the dominant non-renewable source of electricity generation globally, followed by natural gas and nuclear power.
- Renewable sources, especially hydro, are showing consistent growth, indicating a shift towards cleaner energy.

Visual Analysis

- Consumption by Country Groups (Bar Chart):
 - Compares total energy consumption among OECD, BRICS, and CIS country groups, with OECD having the largest share.
- Energy Consumed in Africa (Line Chart):
 - Tracks annual energy consumption of Egypt, Nigeria, Algeria, and South Africa from 1990 to 2020, highlighting regional leaders and growth patterns.
- Hydro Power Generation (Bar Chart):
 - Displays the top countries by hydroelectric power generation, emphasizing the global leaders in renewable energy.

Conclusion

This report highlights key trends and performance metrics in global energy consumption and generation. Asia and China are the leaders in consumption, coal remains the primary non-renewable source, and hydro power is on the rise. These insights can inform policy decisions, investment strategies, and future research into sustainable energy development.