# Report

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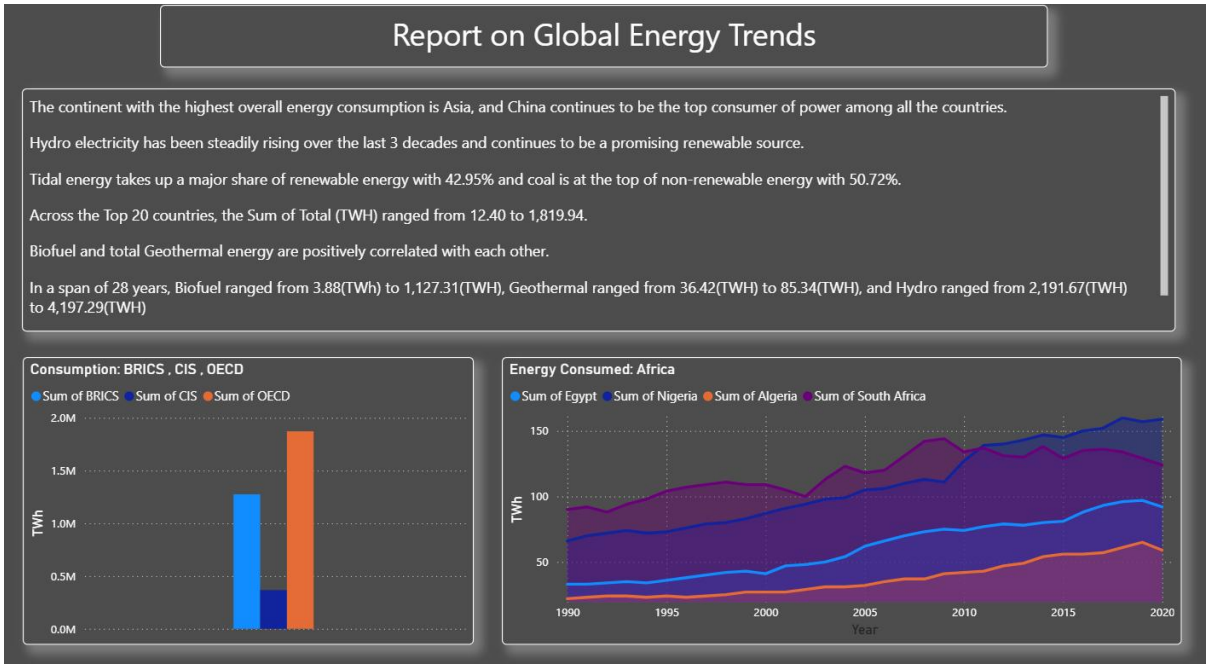
| Date | 02 August 2025 |
| Team ID | xxxxxx |
| Project Name | **Global Energy Trends**: A Data-Driven Analysis of Consumption Patterns & Renewable Transition (1990-2020) |
| Maximum Marks | 5 Marks |

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. **Dominance of Asia in Energy Consumption**:

- Asia, led by China, is the top energy-consuming continent, highlighting its significant role in global energy demand and economic activity.

2. **Growth of Hydroelectric Power**:

- Hydroelectricity has shown consistent growth over the past 30 years, reinforcing its importance as a reliable renewable energy source.

3. **Leading Renewable and Non-Renewable Sources**:

- Tidal energy dominates renewable energy with a **42.95% share**, while coal remains the primary non-renewable source at **50.72%**, indicating a continued reliance on fossil fuels despite renewable advancements.

4. **Wide Disparity in Energy Consumption Among Top 20 Countries**:

- The total energy consumption (TWH) varies drastically across the top 20 countries, ranging from **12.40 to 1,819.94 TWH**, reflecting differing industrialization levels and energy policies.

**Example:**

- **BRICS vs. OECD Energy Consumption**:

  The **BRICS nations** collectively consume **1.8M TWH**, slightly lower than the **OECD's 2.0M TWH**, indicating rapid industrialization in emerging economies.

- **Hydroelectric Power Growth**:

  Hydro energy production surged from **2,191.67 TWH in 1990 to 4,197.29 TWH in 2020**, demonstrating its scalability as a clean energy solution.

- **Africa's Energy Trends**:

  **South Africa** leads energy consumption in Africa, peaking at **120 TWH in 2020**, while **Nigeria** shows the steepest growth trajectory, suggesting rising energy demands in populous nations.

- **Coal's Persistent Dominance**:

Despite global shifts toward renewables, coal retains a **50.72% share** in non-renewable energy, underscoring challenges in transitioning to greener alternatives.

- **Biofuel Expansion**:

  Biofuel production skyrocketed from **3.88 TWH to 1,127.31 TWH** over 28 years, driven by policy incentives and technological advancements.