Final Report – Global Energy Trends (1980–2020)

➢ Introduction

The world is undergoing a major shift in how energy is produced and consumed. The urgency to reduce carbon emissions and transition to clean energy sources is evident in global policies and investment trends. This report summarizes the key findings from a Power BI analysis project that visualizes energy data from 1980 to 2020 using the OWID dataset.

➢ Objective

To analyze country-wise energy production and consumption, distinguish between renewable and non-renewable sources, and derive actionable insights from global trends using visualizations and KPIs.

➢ Dataset Summary

📦 Source: Our World in Data (OWID)

⏳ Duration: 1980 to 2020

🏷️ Fields: Country, Year, Energy Type, TWh Produced, CO_2, GDP, Population

✅ Cleaned and categorized into Renewable and Non-Renewable

📁 Final dataset stored in:
2_Data_Collection_and_Preprocessing/Preprocessed_Data.csv

➢ Visual Insights

🌐 Total Global Energy (1997–2017): ~45.28K TWh

🔋 Renewable Energy: ~12.8K TWh

🔥 Non-Renewable Energy: ~32.4K TWh

➢ Key Observations:

China, the United States, and India are the top energy consumers.

Solar and wind energy have seen exponential growth after 2005.

Coal and gas continue to dominate in many industrial countries.

The global trend shows steady growth in renewable investments, but dependency on fossil fuels remains high.