Data Collection and Preprocessing Phase

Date	24 July 2025
Project Title	Global Energy Trends: A Comprehensive Analysis of Key Regions and Generation Modes using Power BI
Maximum Marks	2 Marks

Data Collection Plan & Raw Data Sources Identification.

Data Collection Plan

Section	Description
Project Overview	The project aims to analyze and visualize global energy generation trends across different regions and energy sources using Power BI. It supports sustainable energy planning by revealing patterns in renewable vs. non-renewable use.
Data Collection Plan	Data was collected from reputable open data sources such as Kaggle and Our World in Data. These sources offer historical energy consumption and generation figures categorized by country, continent, and energy mode.
Raw Data Sources Identified	The raw data consists of six datasets covering continent-level and country-level energy consumption (in TWh), breakdowns by renewable and non-renewable modes, renewables Total Power Generation and top 20 Countries in Power Generation.

Raw Data Sources

Source Name	Description	Location/URL	Format	Size	Access Permissions
Continent Consumption TWH	Annual energy consumption by continent (OECD, Asia, Africa, etc.)	Global Energy Consumption & Renewable Generation	CSV	5 KB	Public
Country Consumption TWH	Country-wise energy usage data (e.g., China, India, US, Germany, etc.)	Global Energy Consumption & Renewable Generation	CSV	9 KB	Public
Non-Renewable Total Power Generation	Total generation by coal, gas, nuclear, etc. with TWH contribution	Global Energy Consumption & Renewable Generation	CSV	1 KB	Public
Renewable Power Generation	Year-wise contribution of solar, hydro, geothermal, and bio-fuel from 1997 to 2017	Global Energy Consumption & Renewable Generation	CSV	1 KB	Public

Global renewable power generation (TWh) (2017)	Contains total global renewable energy contribution by mode (Hydro, Wind, Biofuel, Solar PV, Geothermal)	Global Energy Consumption & Renewable Generation	CSV	1 KB	Public
Top 20 countries generating the most power with renewables (2017)	Ranked data for top energy-producing countries by energy type	Global Energy Consumption & Renewable Generation	CSV	1 KB	Public