

## Data Collection and Preprocessing Phase

Date	22 July 2025
Skillwallet ID	SWUID20250176043
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 Template

### Data Collection Plan Template

Section	Description
Project Overview	This project analyzes global energy trends using Power BI. The datasets include energy generation, consumption, modes of production, and regional breakdowns. The objective is to transform raw data into insightful dashboards that help evaluate sustainable energy development.
Data Collection Plan	Data was collected in CSV format from SmartInternz (originally sourced from Kaggle). Six different datasets were selected based on relevance to global energy generation and consumption metrics. The data was imported into Power BI using the "Get Data" feature and prepared using Power Query.
Raw Data Sources Identified	Six raw datasets were identified covering: <ol style="list-style-type: none"><li>1. Generation by Region</li><li>2. Generation by Mode</li><li>3. Energy Use by Region</li><li>4. Per Capita Energy Use</li></ol>

	<p>5. Renewable vs Non-Renewable Energy</p> <p>6. Global Energy Summary. These datasets were stored locally and used for analysis.</p>
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## Raw Data Sources Template

Source Name	Description	Location/URL	Format	Size	Access Permissions
Continent_Consumption_TWH.csv	Energy consumption (in TWh) categorized by continent and year	<a href="https://www.kaggle.com/datasets/jamesvandenbergh/renewable-power-generation">https://www.kaggle.com/datasets/jamesvandenbergh/renewable-power-generation</a>	CSV	~1 MB	Public
Country_Consumption_TWH.csv	Country-wise total energy consumption (TWh) for various years	<a href="https://www.kaggle.com/datasets/jamesvandenbergh/renewable-power-generation">https://www.kaggle.com/datasets/jamesvandenbergh/renewable-power-generation</a>	CSV	~1 MB	Public
renewablesTotalPowerGeneration.csv	Aggregated total power generation using all renewable sources	<a href="https://www.kaggle.com/datasets/jamesvandenbergh/renewable-power-generation">https://www.kaggle.com/datasets/jamesvandenbergh/renewable-power-generation</a>	CSV	~500 KB	Public

		newable-power-generation			
nonRenewablesTotalPowerGeneration.csv	Total energy generated using fossil fuels and other non-renewable sources	<a href="https://www.kaggle.com/datasets/jamesvandenbergh/newable-power-generation">https://www.kaggle.com/datasets/jamesvandenbergh/newable-power-generation</a>	CSV	~500 KB	Public
top20CountriesPowerGeneration.csv	Power generation performance of the top 20 countries globally	<a href="https://www.kaggle.com/datasets/jamesvandenbergh/newable-power-generation">https://www.kaggle.com/datasets/jamesvandenbergh/newable-power-generation</a>	CSV	~1 MB	Public
renewablePowerGeneration97-17.csv	Renewable power generation (detailed year-wise, 1997–2017) segmented by source types	<a href="https://www.kaggle.com/datasets/jamesvandenbergh/newable-power-generation">https://www.kaggle.com/datasets/jamesvandenbergh/newable-power-generation</a>	CSV	~1 MB	Public