Project Initialization and Planning Phase

Date	23 June 2025
Team ID	N.A
Project Title	Global Energy Trends: a comprehensive analysis of key regions and generation modes using Power BI.
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) template

This project proposal outlines a solution to address a specific problem. With a clear objective, defined scope, and a concise problem statement, the proposed solution details the approach, key features, and resource requirements, including hardware, software, and personnel.

Project Overview	
Objective	The objective of this project is to **analyze and visualize global energy consumption patterns** across key regions and energy generation modes using Power BI. It aims to provide decision-makers—like sustainability consultants or infrastructure analysts—with **interactive, data-driven insights** on regional disparities, renewable growth, and long-term trends, helping them **formulate effective energy transition strategies** and policy recommendations.
Scope	The scope of this project is to analyze **continental energy consumption trends from 1990 to 2020** using Power BI. It focuses on comparing consumption across regions like OECD, BRICS, Asia, Africa, and others, based on the uploaded dataset. The project highlights key patterns in global energy demand, aiding stakeholders in identifying regional shifts and opportunities for sustainable development.
Problem Statement	
Description	This project addresses the challenge of **fragmented and inconsistent global energy consumption data** across regions. It seeks to create an intuitive Power BI dashboard that consolidates long-term trends from 1990 to 2020, enabling analysts to compare regional energy patterns, monitor shifts toward renewables, and support data-driven energy planning worldwide.

Impact	Solving this problem will enable energy analysts and decision-makers to gain a **clear, data-driven understanding of regional energy consumption patterns**, helping them identify imbalances, forecast demand, and support sustainable planning. It empowers smarter investments in renewable infrastructure, fosters global collaboration on energy policy, and contributes to a more equitable and efficient transition toward clean energy across continents.
Proposed Solution	
Approach	• Import and clean the dataset (1990–2020, by region). • Load it into Power BI for modeling and time-series structure. • Create visuals (line charts, stacked bars, slicers) for trends and comparisons. • Generate insights from patterns like regional growth or renewable shifts.
Key Features	• **Longitudinal Analysis**: Covers 31 years (1990–2020) of global energy consumption, offering a rich historical perspective. • **Regional Comparison**: Allows side-by-side insights across OECD, BRICS, Asia, Africa, and more. • **Interactive Visuals**: Empowers users to filter by region or year, making exploration intuitive and dynamic. • **Focus on Sustainability**: Highlights renewable growth and regional transitions toward cleaner energy. • **Decision Support**: Delivers clear insights to guide policy recommendations and infrastructure planning.

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		

Computing Resources	CPU/GPU specifications, number of cores	e.g.,intel core i3 processor
Memory	RAM specifications	e.g., 8 GB
Storage	Disk space for data, models, and logs	e.g., 516 GB SSD
Software		
Frameworks	NA	NA
Libraries	NA	NA
Development Environment	IDE, version control	e.g.Power BI desktop
Data		
Data	Source, size, format	e.g., Kaggle dataset,31x11=341 datasets,csv