Project Initialization and Planning Phase

Date	22 December 2025
Team ID	xxxxxx
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 main objective of this project is to analyze global energy trends across different regions and energy generation modes using Power BI. The project aims to present energy data in a clear and visual manner to help understand patterns, compare renewable and non-renewable energy sources, and support better decision-making for sustainable energy planning.
Scope	The scope of this project includes collecting and analyzing global energy data related to various regions and energy generation sources such as coal, oil, gas, solar, wind, and hydro. The analysis is performed using Power BI to create interactive dashboards and reports.
Problem Statement	
Description	Understanding global energy trends is difficult because energy data is large, complex, and spread across different regions and sources. Without proper analysis and visualization, it becomes hard to identify patterns, compare renewable and non-renewable energy usage, and understand regional differences. This lack of clarity makes energy planning and sustainability decisions challenging.
Impact	If this problem is addressed, decision-makers will gain a clear understanding of energy trends and generation patterns. It will help governments, organizations, and analysts make informed decisions,

	promote renewable energy adoption, reduce environmental impact, and plan sustainable energy strategies more effectively.
Proposed Solution	
Approach	The proposed solution uses Power BI to analyze and visualize global energy data. The data will be cleaned, processed, and modeled to ensure accuracy. Interactive dashboards and reports will be created to show energy generation trends, regional comparisons, and the share of different energy sources. This approach makes complex data easy to understand.
Key Features	• Interactive dashboards for easy exploration of energy data • Clear comparison between renewable and non-renewable energy sources • Region-wise analysis of energy generation and consumption • Visual charts and filters for better insights and decision-making

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	e.g., 2 x NVIDIA V100 GPUs
Memory	RAM specifications	e.g., 16 GB
Storage	Disk space for data, models, and logs	e.g., 1 TB SSD
Software		
Frameworks	Power Bi	Power Bi Desktop
Development Environment	Power Bi	Power BI Desktop, Power Query Editor
Data		
Data	Source, size, format	Kaggle dataset, 6 CSV files containing approximately 130+ records , CSV format