**Project Initialization and Planning Phase**

| Date | 24 July 2025 |
| --- | --- |
| Team ID | xxxxxx |
| Project Title | Exploring Global Energy Generation |
| Maximum Marks | 3 Marks |

**Project Proposal**

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

| **Project Overview** | |
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| Objective | To analyze, compare, and visualize electricity consumption trend across different continents and countries over time using historical data (in Terawatt-hours). The goal is to extract insights on growth patterns, regional disparities, and global energy demands to support informed decision - making and policy formulation. |
| Scope | * Comparative analysis of energy consumption at continental vs country levels. * Time series trend analysis to observe changes over the years. * Identification of top consumers. * Regional share of total global consumption. * Share of different sources of energy. |
| **Problem Statement** | |
| Description | Despite growing concerns around energy demand, sustainability, and climate change, there is a **lack of accessible and clear insights**  into how electricity consumption varies across different agencies need data-driven insights to:   * Monitor energy growth patterns. * Compare regional energy use. * Make informed decisions for future energy policies |
| Impact | A clear visual and analytical breakdown of energy usage can enable:   * Better policy formulation. * More sustainable infrastructure planning. * Increased awareness and accountability at national and continental level. |
| **Proposed Solution** | |
| Approach | Build an **interactive dashboard** for real-time exploration using tool like **Power BI**. |
| Key Features | * Continent Wise Consumption over Year * Non-Renewable Sources * Top 20 Countries * Energy Produced by Renewable Sources over year * Renewable sources contribution * Country wise Consumption |

**Resource Requirements**

| **Resource Type** | **Description** | **Specification/Allocation** |
| --- | --- | --- |
| **Hardware** | | |
| Computing Resources | CPU/GPU specifications, number of cores | Intel CORE i5 |
| Memory | RAM specifications | 8 GB |
| Storage | Disk space for data, models, and logs | 512 GB SSD |
| **Software** | | |
| Software used | Business Intelligence Tool | Power BI |
| **Data** | | |
| Data | Source, size, format | Kaggle dataset |