Title: Analyzing the Impact of Fossil Fuel Investments on National Energy Security and Sustainability

1. Problem Statement Formation: The project aims to assess the relationship between a country's fossil fuel investments and its energy security, as well as the potential implications for long-term sustainability. Specifically, we will investigate how the distribution of fossil fuel resources and investments impact a country's reliance on imports, exports, and domestic consumption of oil, coal, and natural gas.

2. Context: Energy security is a critical issue for countries worldwide, as it affects their economic stability and geopolitical power. As concerns about climate change and the need for sustainable energy sources grow, understanding the dynamics of fossil fuel investments and their impact on national energy security becomes increasingly important. This analysis will provide valuable insights for policymakers, investors, and other stakeholders to make informed decisions regarding energy investments and policies.

3. Criteria for Success: The project will be considered successful if it:

   • Identifies patterns and trends in the distribution of fossil fuel investments across countries

   • Establishes relationships between fossil fuel investments and a country's energy security (i.e., reliance on imports, exports, and domestic consumption)

   • Evaluates the implications of these relationships for long-term sustainability

   • Provides actionable insights for policymakers, investors, and other stakeholders

4. Scope of Solution Space: The project will focus on analyzing the given dataset to uncover patterns and trends in fossil fuel investments and their impact on energy security. The analysis will be primarily descriptive and exploratory in nature. We may employ statistical and machine learning techniques to model relationships between variables and make predictions, but this will be contingent on the quality and relevance of the data.

5. Constraints: The main constraints for this project are:

   • The quality and completeness of the dataset: The dataset may have limitations such as missing values or inconsistencies that could affect the accuracy of our analysis.

   • Time limitations: The project needs to be completed within a specific timeframe, which may limit the scope of the analysis or the complexity of the models used.

   • Computational resources: Advanced machine learning models may require significant computational power, which could pose a challenge if resources are limited.

6. Stakeholders: The primary stakeholders for this project include:

   • Policymakers: Government officials responsible for creating and implementing energy policies.

   • Investors: Individuals and organizations looking to invest in the energy sector.

- Energy companies: Businesses involved in the production, distribution, and consumption of fossil fuels.

- Environmental organizations: Groups concerned with the environmental impact of fossil fuel investments.

- General public: Citizens who are affected by energy policies and investment decisions.

7. Data Sources: The dataset for this project is sourced from Kaggle and can be accessed through the following link:

- Fossil Fuels Distribution Across Countries: https://www.kaggle.com/datasets/sandhyakrishnan02/fossil-fuels-distribution-across-countries

The dataset provides information on various aspects of fossil fuel production, consumption, imports, exports, and reserves, as well as population data for different countries and years.