CHAPTER II

REPORT PROPER

This chapter is composed of the report proper and design calculations considered in the proposed 500 MW Coal-Fired Power Plant.

1. Methodology

The main objective of this project is to design a coal-fired power plant with a plant capacity of 500 MW located at Brgy. Lumaniag, Lian, Batangas. This project also aims to:

* 1. Present and evaluate the design and development of the projected 500 MW coal-fired power plant by considering the energy balance, the overall efficiency, and the work output.
  2. Present the proper data for the plant calculations, schematic diagrams, plant lay-out, process flow diagrams, and specific type of plant components considering the required engineering codes, standards and appropriate specifications to be utilized as a part of the development of the proposed coal-fired power plant and also to provide technical design specifications for the different components of the coal-fired power plant,
  3. Evaluate the economic viability of the proposed design options as well as the comparison of equipment through calculations of economic indicators.
  4. Evaluate the proposed design by considering the environmental impact and detailing the socio-economic benefits and outcomes of the project.
  5. Establish a detailed project construction execution plan of the selected best design.