**CHAPTER IV**

**OBSERVATIONS, COMMENTS AND RECOMMENDATIONS**

This chapter presents the observations, comments and recommendations on the selected design and equipment for the proposed 500 MW Coal-Fired Power Plant.

**Observation**

Once all the data obtained have been processed and reviewed, the following results are listed:

After analyzing and examining all the data gathered, the following results are reported: the proposed 500 MW Coal-Fired Power Plant site at Barangay Lumaniag, Lian, Batangas was found to be plausible and favorable for the construction and operation of the proposed power plant. The transmission of the electricity produced from the proposed Luzon Grid power plant will be the responsibility of the Philippines National Grid Company (NGCP) and will supply the electricity generated to the customers of the Batangas provincial electrical cooperatives, namely; BATELEC I, BATELEC II, First Bay Power Company (FBPC) and Ibaan Electrical Engineering Corporation (IEEC).

**Comments**

Based on the data and findings from the above analysis and evaluation of the proposed 500 MW Coal-Fired Power Plant, the following comments were made:

1. The calculation results of the proposed coal-fired power plant appeared to be within the range of the power plant components and machineries that are available in market. It is also acceptable in the aspects needed in designing a power plant.
2. Plant factors considered in designing the proposed power plant are satisfactory viable to be accepted.
3. The equipment, plant machineries, utilities, auxiliaries and miscellaneous were carefully selected and satisfactorily evaluated.
4. In terms of economic aspects, the proposed coal-fired power plant is economically feasible since the economic factors were considered as the assets for the commissioning of the power plant are limited.
5. Designing a coal-fired plant requires a broad background and technical knowledge about this in order to have an efficient and acceptable design for the community and environment.
6. Through the use of related references and availability of internet, technical information about the design has been gathered. These sources provided the equipment catalogue that includes the specifications suited for the selection parameters of the design to have the best possible design. The load demand data was also accessed and provided as basis for the consumers of the proposed power plant.

**Recommendations**

For the improvement of the proposed 500 MW Coal-Fired Power Plant, the following must be considered:

1. Further research and evaluation of modern technology, equipment, and operation of existing power plants are essential to come up with a more advanced and efficient design.
2. The proponents should familiarize each of the equipment specifications and their functions which are needed in the design and construction of a power plant.
3. The environmental impacts of the power plant should be assessed by complying with the guidelines presented by the power sector development program of the national energy policy.
4. Consultation from different experts and concerned persons can provide additional information and advice and can help improve the design of the power plant.
5. The design of the power plant must have an economic analysis for a better presentation of profits and to be able to come up with the most economical yet efficient design.