

Nuclear energy and the philippines



**ASSIGN
BUSTER**

CHAPTER 1 THE PROBLEM AND ITS SETTING NUCLEAR ENERGY AS AN

ALTERNATIVE POWER SOURCE: THE PHILIPPINE SETTING

The study is all

about the prospects of Nuclear energy as an alternative source of power in the Philippines. The country is experiencing high-cost payment in electricity bills in the past years and tend to even grow more costly. Since the topic is Nuclear energy, the study as well will take up the future perspectives of the Bataan Nuclear Power Plant as the main reactor or will just resemble an unfinished business. Interview with the Philippine Nuclear Research Institute (PNRI), Department of Energy (DOE), Department of Environment and Natural Resources (DENR), Energy Regulatory Commission, and National Disaster and Risk Reduction Management Council will be the prime sources of the information for the stated questions below.

STATEMENT OF THE PROBLEM

Specifically, the study aims to answer the following questions: 1.

What are the advantages and disadvantages of having a nuclear energy in the Philippines? 2. Is nuclear energy suitable for alternative energy source for a developing country like the Philippines? 3. How would the nuclear wastes be managed? 4. What are the prospects of the Bataan Nuclear Power Plant? 5. What precautionary measures should be done to prevent disasters related to nuclear energy? 6. How suitable is Nuclear energy to the Philippine setting?

SIGNIFICANCE OF THE STUDY

This study aims to find out alternative solution for the uncontrollable electricity cost in the country by giving a back-up source of energy, nuclear energy. Also, the study wants to determine the suitability of the said energy to a country like the Philippines.

Another idea is that to give a clearer view of the advantages and disadvantages of the said energy source. On the case of the Bataan Nuclear Power Plant, this study will somehow give some prospects of its possible use

in the future. **SCOPE AND LIMITATION OF THE STUDY** The study focuses in characterizing and defining nuclear energy, its application to the Philippine setting. The advantages and disadvantages of nuclear energy are also being focused in the study. Also, the prospects of the nuclear energy being an alternative source of energy are cited here. On the part of the precautionary measures, the study will provide some nuclear-related disasters already occurred. Some of the questions are to be answered by an interview in the various government agencies as the proximity of the office to the researchers is very near. Bataan Nuclear Power Plant cited here is just a pure description and the sources of information will be, as mentioned earlier, the Philippine Nuclear Research Institute, Department of Energy, Department of Environment and Natural Resources, Energy Regulatory Commission, National Disaster and Risk Reduction Management Council, books, and some newspaper clippings. There will be a 5-month research period and most of the substance of this will be from the interview. Because of the appropinquity of the researchers to the Bataan Nuclear Power Plant, the researchers will not be able to go there as also the time and location of the said power plant will be time consuming and can cause the delay. Also, this study will not tackle anything about the nuclear energy as a weapon of mass destruction. The laws governing the said topic, the events, and the current issues are not part of the study. **DEFINITION OF TERMS** The following terms are used in the study: **NUCLEAR ENERGY** - The energy released by the nucleus of an atom as the result of nuclear fission, nuclear fusion, or radioactive decay. The amount of energy released by the nuclear fission of a given mass of uranium is about 2, 500, 000 times greater than that released by the combustion of an equal mass of carbon. And the amount of energy

released by the nuclear fusion of a given mass of deuterium is about 400 times greater than released by the nuclear fission of an equal mass of uranium. Also called atomic energy. (Mifflin, 2005) NUCLEAR WASTES - wastes that contain radioactive material. Radioactive wastes are usually by-products of nuclear power generation and other applications of nuclear fission or nuclear technology, such as research and medicine. Radioactive waste is hazardous to most forms of life and the environment, and is regulated by government agencies in order to protect human health and the environment. (Goldberg, 2000) NUCLEAR POWER PLANT - a thermal power station in which the heat source is one or more nuclear reactors. As in a conventional thermal power station the heat is used to generate steam which drives a steam turbine connected to a generator which produces electricity. (West, 2008) BATAAN NUCLEAR POWER PLANT - a nuclear power plant, completed but never fueled, on Bataan Peninsula, 100 kilometres (62 mi) west of Manila in the Philippines. It is located on a 3.57 square kilometre government reservation at Napot Point in Morong, Bataan. (Lopez, 1987) POWER SHORTAGE - a condition that occurs in an electric power system when the total real or reactive power of the power plants in the system is insufficient to supply all consumers with electric power of the required quality. (Gale, 1998)