

COMMENTS*

Emmanuel Tamesis**

I would like to comment on the 10-year energy development plan of the government. This was prepared by the Ministry of Energy and envisions the development of both conventional and nonconventional sources of energy. In this plan, the Ministry of Energy expresses the hope that by the year 1988, the country's dependence on oil would be brought down to something like 62½ percent. This is like saying that we still cannot get away from dependency on oil as a source of energy. Hoping to find a solution to this problem, the government has taken an interest in the development of other possible sources of energy, specifically hydrogeothermal and coal. I think this is also one of the underlying reasons why they want to push through the Chico River Development Project. This project has been delayed because so many people will be affected by its construction. Fortunately, in the case of oil, drillings have been made in offshore areas and people do not have to be bothered in the process, except of course when an accident, like an oil spill takes place, affecting the fishes upon which a lot of people in the Palawan area depend for their livelihood and subsistence. However, even if oil had been discovered on land, it would still not greatly affect too many people because our engineers now are so concerned with the protection of the environment that they have designed proper production systems and structures that will minimize the harmful effects both to the land and to the inhabitants. I would say the same thing for the geothermal project and I believe the government has taken the proper safeguards regarding its development. And so with coal. I will not dwell too much on the nonconventional sources of energy, but I will touch on the hydroelectric power projects.

As you know, there is normally a period of some eight to ten years of technical feasibility studies before a dam can actually be constructed. It is during this period that decision points are set up, so before going on to the next phase of the study, all requirements for the safety of the dam should first be fully satisfied. I mention this because I recall that in the case of the Magat River Project, I was called upon to make a study of the environmental impact of the construction of the dam. This was in 1967. Feasibility studies were still going on as of 1977 and they were able to discover a lot of holes at the damsite. It has to be determined if these holes are of recent origin.

In connection with the Chico River Project, a lot of specialists, one of them being an engineering geologist from the California Institute of Technology, have been brought in. And they have consulted us. In our search for oil

*This paper is a reconstruction from the tapes of the author's extemporaneous comments.

**Professor, Department of Geography and Geology, College of Arts and Sciences, University of the Philippines.

in the Cagayan Valley, for example, we have discovered certain structures which tend to show some faults. Such a discovery, however, does not have to mean that the project will have to be dropped. Rather, the main concern is to determine whether the fault is of recent origin, specially since in 1948 there was a very strong earthquake of magnitude 8 in the Richter scale. It will be noted that no one has been able to pinpoint where the epicenter was even after going up and down the Cagayan Valley. At any rate, it was very strong and this has to be considered especially by the people involved in the technical feasibility studies of this project. I would like to show the relevance of these observations to our present discussion. Remember that there is sufficient time to undertake feasibility studies for this project. I have the impression that in connection with the Chico River Project this has been carefully considered. Perhaps some of the NPC people can say a few things about this. However, from discussions and from reading available literature, I have not come across studies which consider the problems of moving people away from the areas despite the fact that the records of the government especially in connection with the Pantabangan project and I understand the Ambuklao project have not been very good. In discussions with people regarding this problem, I have been told that in one case in Taiwan in one relocation site, I don't recall whether this involved the construction of a dam, the government went ahead and spent money to prepare the site for relocation of the people. So by the time the dam or the project was completed, the people were already settled and were about to continue with their livelihood. In like manner, why does the government have to delay the relocation of the people? Why wait, let us say 5 years from now and let these people settle in one place if they can make a living in this place? Perhaps questions of this nature should be raised especially to the people in the NPC.

The ambitious program of the government to develop energy resources will involve the construction of many more dams. In the Cagayan Valley, for example, they are also considering the construction of a dam in Abulog River, and about two years ago there was a group of Japanese engineering geologists who were studying the possibility of constructing a dam in the upper part of the Chico River and others in the eastern side or along the Sierra Madre. I think its about time that these programs which are being prepared by the government take these into consideration and start anticipating problems of the same nature as those we have been talking about in this conference.

In closing, I would like to reiterate that the government has a 10-year energy resource development program which will involve the construction of many, many dams. Because of this, the government should be made aware of the problems discussed today, so that they can plan out the effective relocation of people.