

Construction of the Gehe Yan dam would raise the upstream water level from a natural low water level of about 78 m to the selected reservoir full supply level of 200 m. The dam would provide a narrow reservoir that would extend about 80 km upstream. The design elevation for the reservoir was selected after taking into consideration power generation, flood control, navigation, relocation, the value of submerged lands and resources, site geology and cost.

The power installation will consist of four 300 MW units to provide a total capacity of 1,200 MW operating at a net head of 99 m. Proposed new transmission associated with the Gehe Yan project consists of 360 km of new 500 kV line linking the plant with the existing Gezhouba project, with Wuhan and with Hunnan province. The project incorporates a shiplift capable of handling vessels of up to 300 tons. The general arrangement of the dam, powerhouse, spillway and shiplift facilities from the feasibility report is reproduced herein at Figure 5.

The project is expected to provide some measure of flood control on the lower Qian Jiang and to facilitate the development of a commercial fishery in the reservoir and irrigation of some agricultural lands surrounding the reservoir. Offsetting project benefits is a need to relocate and resettle some 19,600 people. The project will also flood some small mines and existing infrastructure and approximately 980 hectares of agricultural land.

4.2.2 Case Studies

For the purpose of examining the application of equity participation to the development of Gehe Yan the full feasibility study of this project completed in October, 1985 by the Yangtze Valley Planning Office (YVPO) in collaboration with Hydro Quebec International and Canadian International Project Managers Ltd. was made available.* This feasibility report provides a detailed cost estimate for the project separated into foreign exchange and domestic funding

* Op. cit. 3/.