

At present (as of September 1987) EGAT has an installed capacity of 6,874.2 MW of which 2,250.1 MW is hydroelectricity, 3,607.5 MW is from conventional thermal power plants, 720 MW is from combined cycle power plants, 265 MW is from gas turbines and 31.6 MW is from small diesel units. The transmission system expands the length of 16,309 circuit-kilometers. The length of the respective 500 kV, 230 kV, 115 kV and 69 kV systems are 326; 6,122; 9,212 and 649 circuit-kilometers. EGAT's existing generating units and transmission lines and substations are shown in Table 3-1 and Table 3-2 respectively.

A long-term power development plan will be prepared and reviewed twice or three times yearly depending on the economic and energy situations of the country. The plan must be able to serve the load demand which is forecasted by the official Load Forecast Working Group, whose members are representatives from energy related agencies. The latest forecast shows that the demand during the next 15 years will grow at a rate of 5.19 % for power and 5.62 % for energy respectively. Usually, the plan covers a period of 15 years and generally includes:

- The optimum power expansion plan that can serve the electric load demand under a certain standard of reliability.

- The transmission system expansion plan which consists of the transmission system associated with the generation project and the transmission system under the Transmission System Expansion Project (TS Project) which is a package of several transmission lines and substations studied together. Currently, the TS No. 6 and No. 7 are under construction or implementation.

The latest (as of September 1987) EGAT's power expansion plan consists of those projects as shown in Table 3-3.

Futhermore, a joint study between EGAT and the National Electric Board of Malaysia is being carried out to consider a second stage interconnection of the electric systems between Thailand and Malaysia. However, it will take a lot more time before an agreement on this interconnection can be made.

3.2 Power Generation Projects

The future generation projects in the proposed plan are composed of 8 thermal power plants, 4 hydroelectric power plants and 2 additional projects to rehabilitate the performance of the existing power plants which have been in operation almost through their expected service lives.