



## Thailand

# 1 Transmission System and Substation Development Project (1-1), (4), (5)

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This project's objective was to cope with sharply increasing power demand and securing a stable power supply in the central, north, and northeast Thailand, by constructing power transmission lines, substations etc., and thereby contributes to economic development, employment creation, and promotion of electrification in the regions.

**Loan Amount/Disbursed Amount:** 21,012 million yen/20,321 million yen

**Loan Agreement:** September 1991-September 1995

**Terms and Conditions:** Interest rate 2.7-3.0%; Repayment period 25 years (grace period 7 years); General untied

**Final Disbursement Date:** July 2000-April 2002

**Executing Agency:** Provincial Electricity Authority



**External Evaluator:** Atsushi Fujino (KRI International Corp.)

**Field Survey:** December 2004

## Evaluation Result

In this project, construction of transmission lines and substations was conducted almost as planned. The project plan was much longer than planned due to the time required for coordination with the authorities concerned, changes in planned sites for the construction of substations and transmission lines, and the decrease in the cash position of contractors resulting from the Asian economic crisis. However, the project cost was lower than planned.

Maximum power in 2003 exceeded the planned level to reach 5,906MW in the central region, 1,760MW in the north region, and 1,847MW in the northeast region. The number of beneficiaries is 6.93 million people (population of Chiba Prefecture: 6.02 million). The number of power failures per user was reduced from 15 cases/year (in the central region) before the project to 10cases/year in 2004. Duration of power failures and the transmission and distribution loss rate are also on the decline; thus the reliability of the power supply has improved.

Companies in industrial estates in the eastern coastal area expressed their view that improvement and expansion of power supply facilities including that of this project supports

economic development in the eastern coastal area. The economic growth rate of this area is around 8%, which exceeds the national average. During the period from 1991 to 2004, the village electrification rate increased from 97.4% to 99.7% in the central region, from 92.2% to 97.9% in the north, and from 95.8% to 99.9% in the northeast.

There is no problem with technical capacity or the operation and maintenance system of Provincial Electricity Authority, and its financial status is stable.

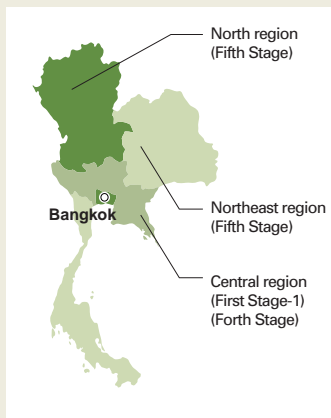
## Third-Party Evaluator's Opinion

This project helped improve the livelihoods of many people through electrification, and promoted development of the regional economy and creation of employment opportunities, thus contributing to solving social problems in the metropolitan area.

**Third-Party Evaluator:** Mr. Sumeth Vongpanitlerd (academia)

Obtained a doctoral degree from the University of Newcastle. Presently holds the post of Research Director for Telecommunications, Science and Technology Development Program, Thailand Development Research Institute (TDRI). Specializes in telecommunications.

### Project Area



Laem Chabang Substation



Control room in substation

### Effect of the project: changes in power failures

As a result of this project, the number of power failures was reduced and stable power supply was secured.

#### Number of power failures

