<u>Project Description</u>

Presently, there are three dispatching centers each located at North Bangkok, Khon Kaen and Lam Poo Ra Substations. Region 1 and Region 4 are under control of North Bangkok dispatching center while Region 2 and Region 3 are under control of Khon Kaen and Lam Poo Ra dispatching centers respectively. However, the scope of the upgrading of system control center project will only cover the NCC and the RCC for Region 1 and Region 4 only.

The NCC, located at North Bangkok Power Plant, will control all generating units not less than 100 MW, the 500 kV and 230 kV transmission systems as well as all capacitor banks and reactors rated above 60 MVAr. The functions of the NCC are :

a) Real time control of load, generation, power and energy transfer between regions and utilities, reserve of generation and transmission network including production control.

b) Follow up efficiency, recording historical data for use in scheduling and compilation of ststistics, reporting, monitoring, recording of disturbance for subsequent analysis.

c) Operational planning including load prediction and generation schedules, power balance, co-ordination of overhauls and operation reserves.

d) Co-ordinate functions of all RCCs including interchange management for establishing and monitoring power transfers between regions and utilities.

e) Optimization of reactive power transfer.

f) System security assessment including state estimator, contingency analysis, static and dynamic security monitor and on-line dispatching of load flow analysis.

g) Performing the economic load dispatch program.

h) Providing for system simulation and operator training.

The RCC-1 and RCC-4 will be located in the vicinity of the existing dispatching centers of North Bangkok Power Plant and Phitsanulok 2 Substation respectively. The RCC-1 and RCC-4 will control all small generating units under 100 MW, supervisory control all 115 kV and 69 kV transmission systems as well as all capacitor banks and reactors rated under 60 MVAr in Region 1 and Region 4. Also they will accept operational control form NCC. The functions of the RCC-1 and RCC-4 are :