

## Session 2

Power Sources Optimization  
focusing on peaking power supply

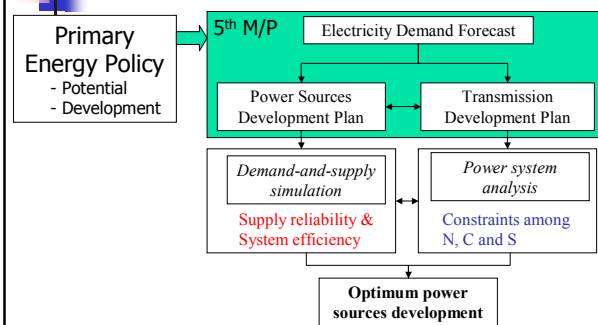
## Presentation Outline

1. Tools for power sources and power system development planning
2. Results of the preliminary power sources optimization study

## Session 2: Part 1

Tools for power sources and power system development planning

## Study Flow



## Power System of Vietnam

- Slender geography
- Historical changes in demand profile
- Seasonal fluctuation of supply capability
- International electricity trade

## Demand-and-supply simulation

### Requirements

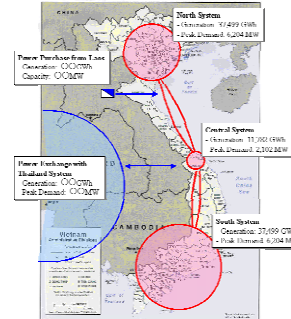
- Capable to understand the effect of the system interconnection between N,C and S.
- Easy simulation focused on the daily operation
- Easy to make power development strategy

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PDPAT-II (TEPCO has used this tool actually)

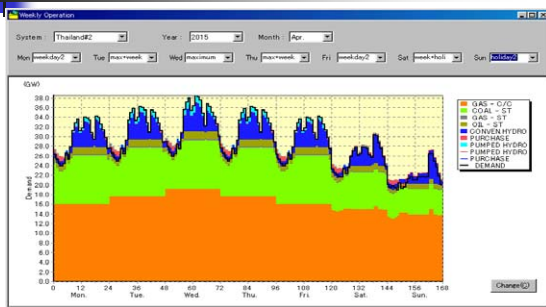
## Function of PDPAT II

	<b>PDPAT-II</b>	WASP-IV
Number of Systems	<b>Max. 10</b>	1
Unit of Simulation	<b>Daily</b>	Monthly
Simulation of PSPP	<b>Yes (daily)</b>	Yes (monthly)
Time for Simulation	<b>&lt; 1 sec</b>	< 1 hrs

## PDPAT-2 Input; Multi-system Model



## PDPAT-2 Output; Weekly Operation



## Power system analysis

To identify

- Constraints among North, Center and South through 500 kV T/L
- Due to :
  - Spec. of Transmission systems
  - Stability
  - Power supply reliability



Reflecting Demand-and-supply simulation

## Tools

- PSS/E :data-available and effective

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Main tool

- Other useful software :IMPACT (developed by Institute of TEPCO)

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Technical transfer to Vietnam  
Sub tool

## Input Images of IMPACT

