

## **APPENDIX 10-2-1**

### **Agenda of the first workshop**

**AGENDA FOR THE 1<sup>ST</sup> WORKSHOP**  
**ON THE MASTER PLAN STUDY ON PUMPED STORAGE POWER PROJECT**  
**AND OPTIMIZATION FOR PEAKING POWER GENERATION**

Venue: Fuji A, 2<sup>nd</sup> floor, Hotel NIKKO HANOI

23 January, Thursday

<i>Time</i>	<i>Content/Activity</i>	<i>Person</i>
8:45 ÷ 9:00	<i>Register for participants</i>	
9:00 ÷ 9:30	- <i>Welcome address of EVN</i>	<i>Mr. Pham Le Thanh, Vice General Director of EVN</i>
	- <i>Welcome address of JICA Study Team</i>	<i>Mr. Masayuki ITO</i>
9:30 ÷ 10:15	- <i>Background of the Study</i>	<i>Mr. Masayuki ITO</i>
	- <i>General approach of the Study</i>	<i>Mr. Masayuki ITO</i>
10:15 ÷ 10:30	<i>Tea break</i>	
10:30 ÷ 11:30	- <i>Method and tools for optimization study</i>	<i>Mr. Masaharu YOGO</i>
	- <i>Preliminary optimization study</i>	<i>Mr. Kazuhiko SHIBA</i>
11:30 ÷ 12:00	<i>Q &amp; A</i>	<i>Study Team members</i>
12:00 ÷ 13:30	<i>Lunch (at the hotel)</i>	<i>Participants</i>
13:30 ÷ 14:45	- <i>Potential study for peaking power sources</i>	<i>Mr. Hitoshi FUROKOSHI</i>
	- <i>Environmental considerations</i>	<i>Mr. Shunji USUI</i>
14:45 ÷ 15:00	<i>Tea break</i>	
15:00 ÷ 15:30	<i>Approach for the financial evaluation</i>	<i>Mr. Muneo KAWAGUCHI</i>
15:30 ÷ 16:00	<i>Q &amp; A</i>	<i>Study Team members</i>
16:00 ÷ 16:15	<i>Closing comment</i>	<i>Mr. Luu The Bieu, SlaPMB</i>

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*OK*

## **APPENDIX 10-2-2**

### **Handout of the first workshop**

## Session 1

### Approach of the Study

Japan International Cooperation Agency (JICA)

## Presentation outline

- Background of the Study
- General approach of the Study

## Background of the Study

## Power Sources Optimization

- For achieving economic power supply
- For securing reliable system operation



**ideal composition of power sources  
for *peak*, middle, and base supply**



## Particular conditions in Vietnam

1. Slender geography
2. Rapid increase in demand
3. Demand profile changes
4. Fluctuation of supply capability
5. International electricity trade

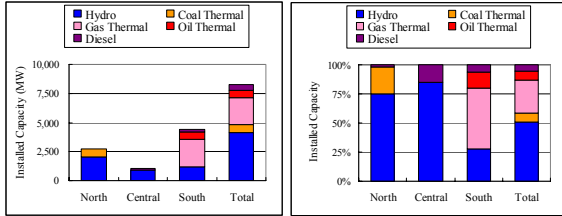
## (1) Slender geography



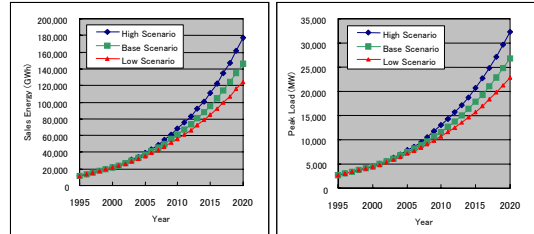
### Regional differences

- Demand scale and profiles 
- Power sources composition 

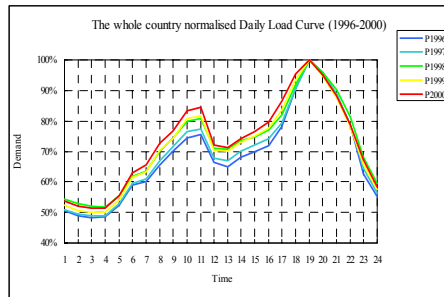
## Power sources composition



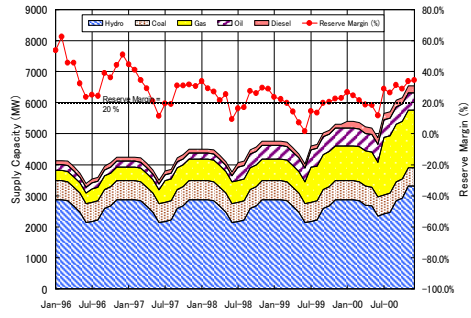
## (2) Rapid increase in demand



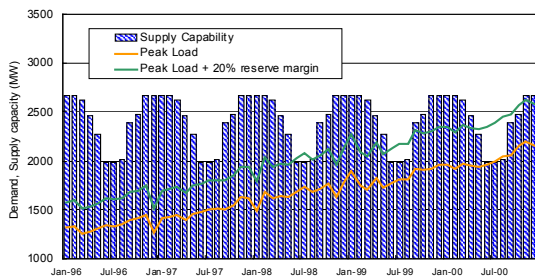
## (3) Demand profile changes



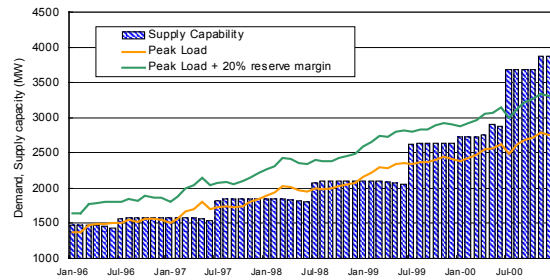
## (4) Fluctuation of supply capability



## North Region



## Central/South Regions



## (5) International electricity trade

1. Electricity export markets between Thailand and Vietnam
2. Electricity import from Laos
3. Interconnection with Cambodia and Yunan province (China)

## General approach of the Study

## Objectives of the JICA Study

1. Optimization of Peaking power sources development
2. Formulation of Master Plan of peaking power sources
3. Contribution to balancing of electricity demand and supply in Vietnam

## Study area and Scope (1)

Study area :

**whole country**

Scope of Study :

**3 stages**

<Based on S/W and M/M on July 16,2002>

## STAGE1: Preliminary assessment

- Review of Master plan
  - Based on
    - Energy policy of Vietnam
    - Distribution of primary energy
    - Demand
- Actual situation survey
  - Hydropower plants
  - Thermal power plants
  - Load dispatching centers

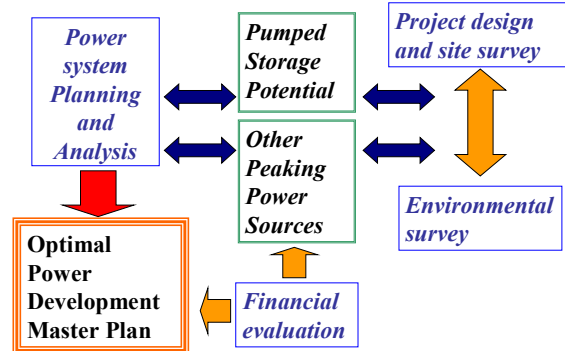
## STAGE2: Project Identification

- ◆ Criteria for finding pumped storage potential sites
- ◆ The pumped storage candidate sites selection
- ◆ Preferential candidate sites selection

### STAGE3: System optimization

- ◆ Economic viability of alternatives of peaking power supply
- ◆ Environmental viability
- ◆ Optimal power sources composition
- ◆ Master plan of peaking power source development

### Study Flow



Underground Power House Cavern