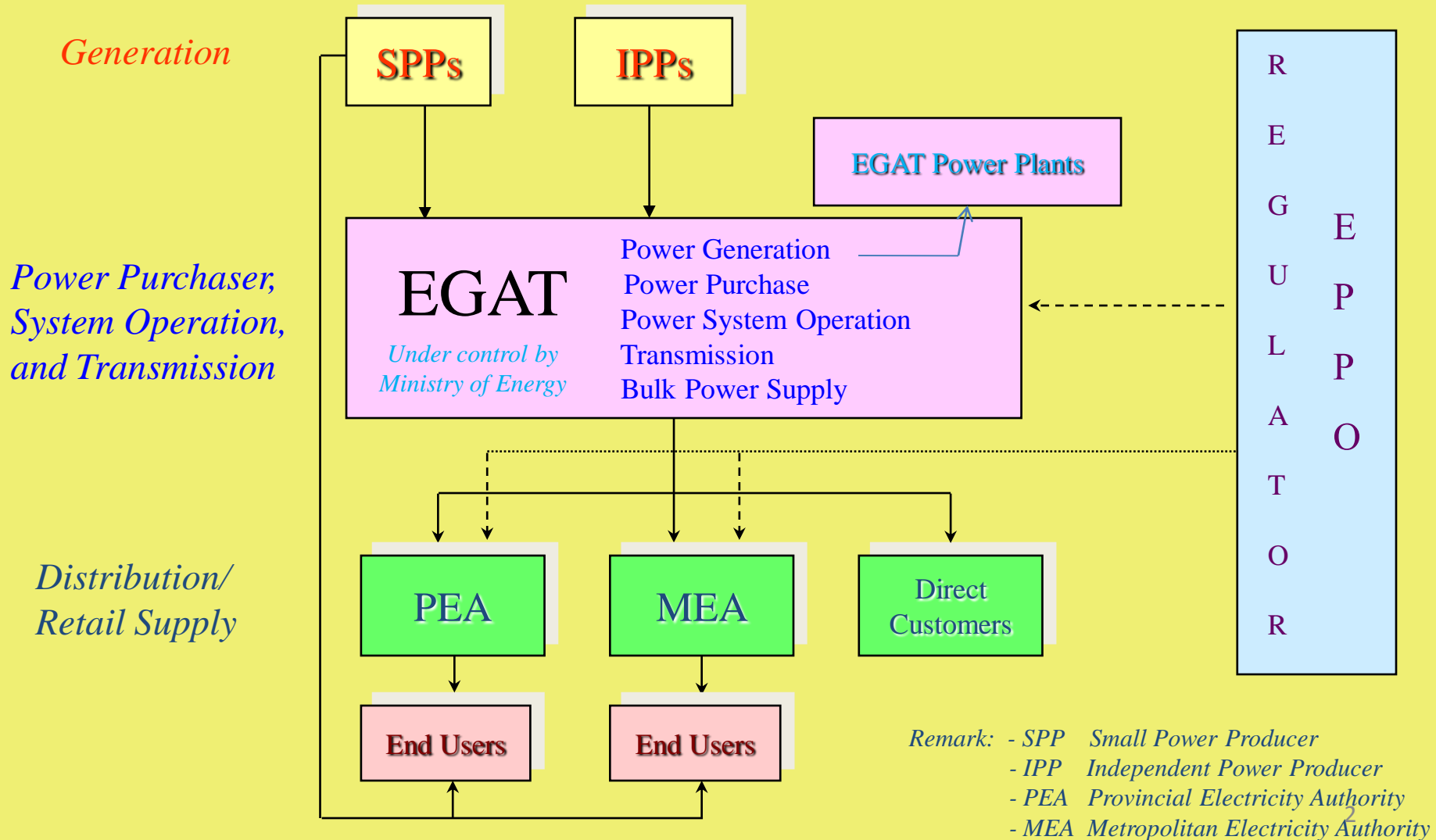


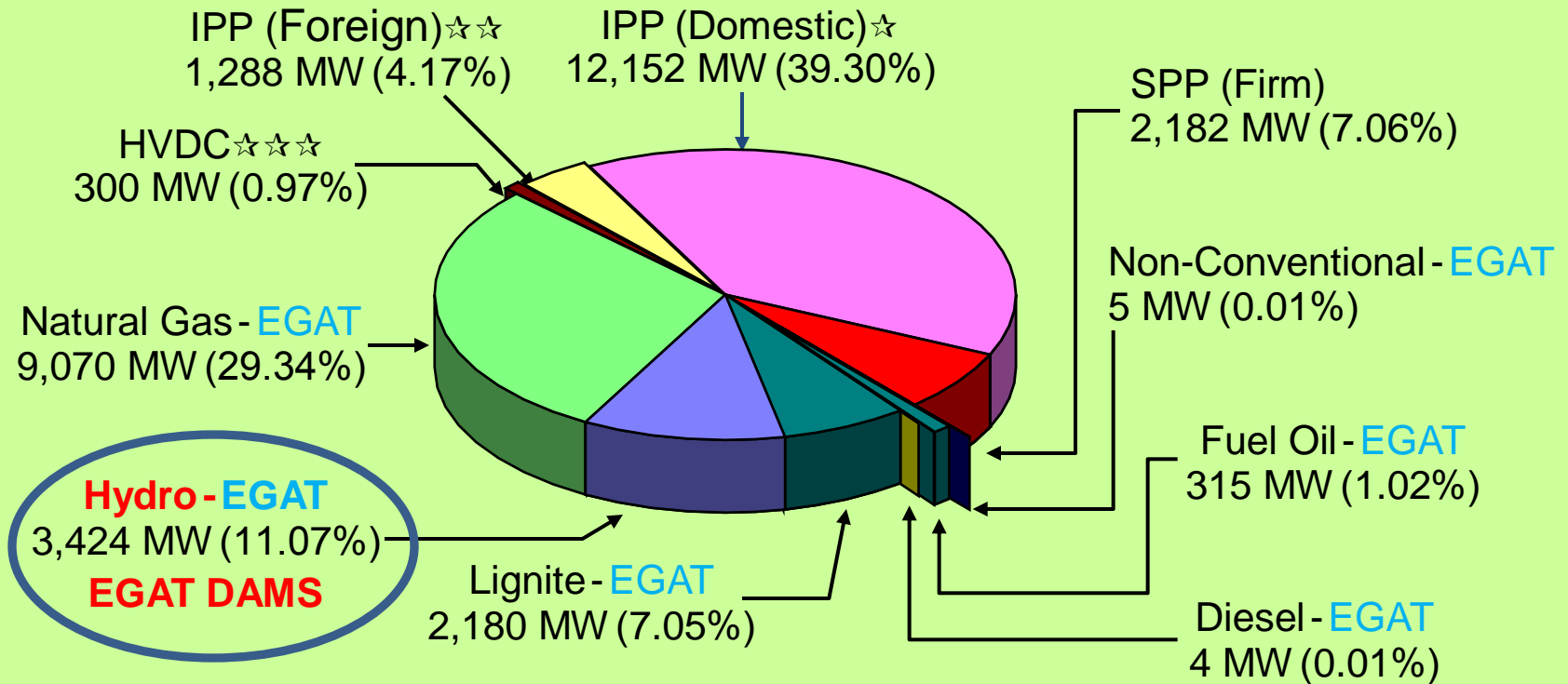
EGAT-NECTEC

- Introduction to EGAT: Electricity Generating Authority of Thailand
- Biodiversity in Reservoirs
- Possible Collaborations

Thai's Existing Electricity Supply Industry



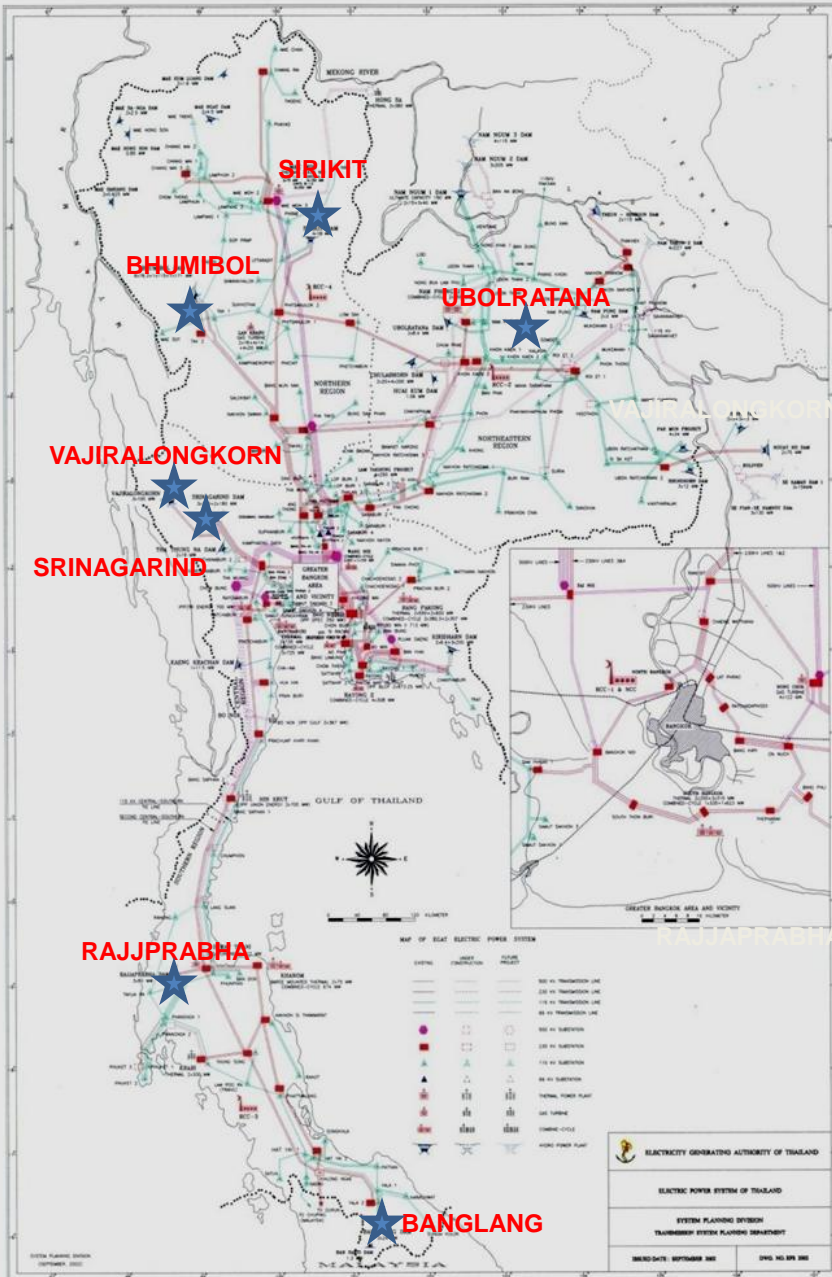
Contracted Capacity Type of Fuel Year 2010



Capacity of EGAT = 14,998 MW or 48.50%
 Capacity of Independent = 15,922 MW or 51.50%
 Total Capacity = 30,920 MW

- ★ REGCO, KEGCO, RGCO, IPT, TECO, GLW, EPEC, BLCF, GPG And RPCL
- ★★ THPL, HHPC, NTN-2, and NNG-2
- ★★★ HVDC (High Voltage Direct Current Transmission) - Thailand - Malaysia

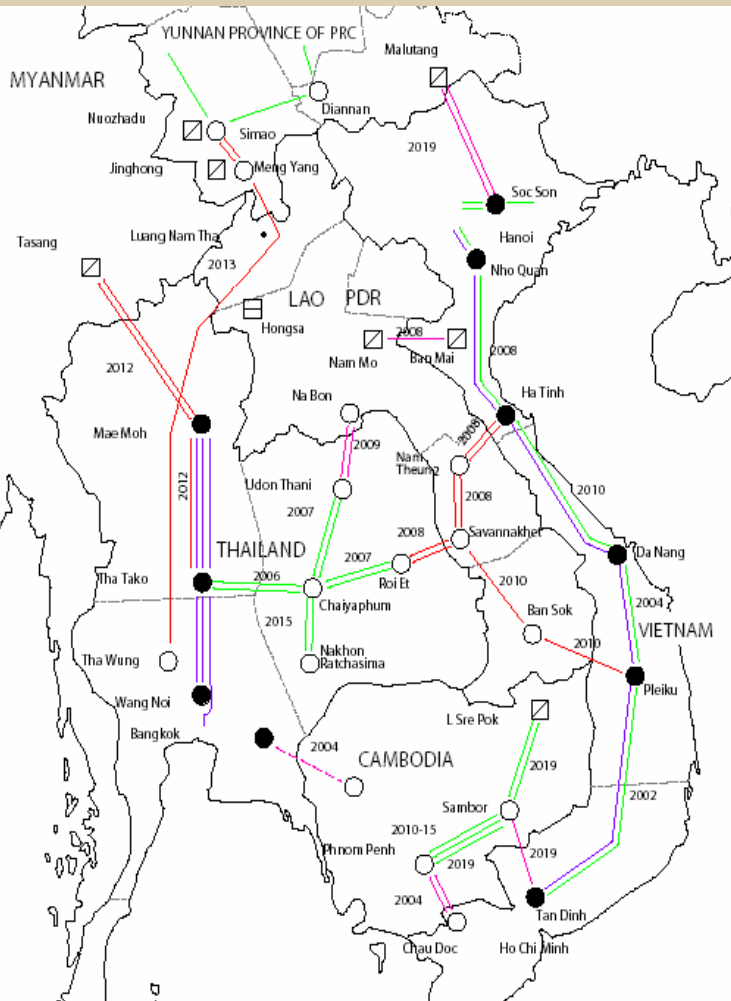
EGAT'S MAIN DAM



large	EGAT	Royal Irrigation Department (RID)
North	3	3
Central region.	-	3
Northeastern.	7	8
East	-	5
West	2	-
South	2	2
Total	14	21
small & medium		
North	16	51
Central region.	-	9
Northeastern.	1	222
East	-	47
West	2	7 -
South	1	31
Total	20	367
Total	34	388

BANG LANG

International Collaborations



- Agriculture is the main sector in ASEAN

* Dam is an important tool for water resource management

- Hydro power generation

- Flood control

- Irrigation

- Industrial and domestic water supply

- Sufficient energy supply is an urgent issue:

* Hydro power is cheap and plentiful for the main power source in this region

* 6 countries met in Greater Mekong Sub-region summit in Kuming (July 2005) for bilateral power trade between countries

* 15 large hydro power dams with 7950 MWh capacity is under EGAT responsibility

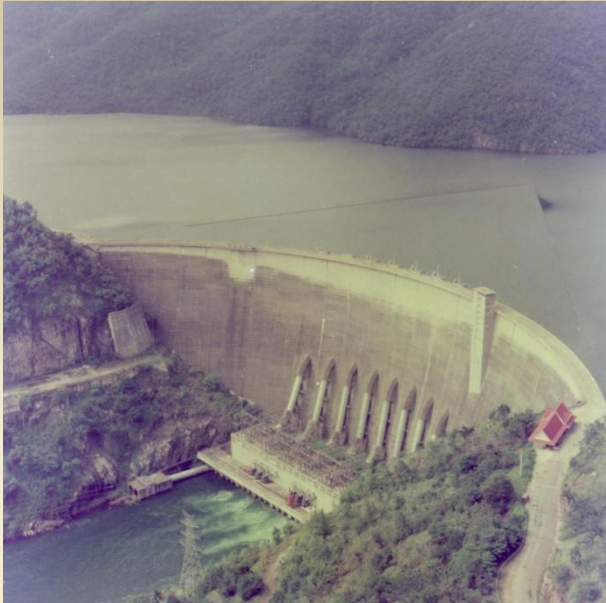
* Many dam sites in Laos, Indonesia, Burma, the Philippines and other countries in ASEAN

Bidirectional power trade

Main EGAT's Dam Features

NO.	NAME	TYPE	HEIGHT (M.)	CREST LENGTH (M.)	STORAGE (MCM)	INSTALLED CAPACITY (MW)	COMPLETION YEAR	AGE OF DAM
1	BHUMIBOL	Concrete arch	154	486	13,462	744	1964	45
2	SRINAGARIND	Rockfill w/clay core	140	610	17,745	720	1980	29
3	SIRIKIT	Earthfill	114	810	9,510	500	1972	37
4	VAJIRALONGKORN	Rockfill w/concrete face	92	1,019	8,860	300	1985	24
5	RAJJAPRABHA	Rockfill w/clay core	94	909	5,639	240	1987	22
6	BANG LANG	Rockfill w/clay core	85	422	1,404	72	1981	28
7	UBOLRATANA	Rockfill w/clay core	35	885	2,264	25.2	1966	43
8	SIRINDHORN	Rockfill w/clay core	42	940	1,966	36	1971	38
9	CHULABHORN	Rockfill w/clay core	70	700	188	40	1972	37
10	PAK MUN	Concrete RCC	17	324	225	136	1994	15
11	LAM TA KHONG PUMP STORAGE	Rockfill w/HDPE asphalt face	50	2,170	10.3	500	2002	7

Bhumibol Dam



Year of Completion : 1964

Dam Location : Tak

Dam Features

Type : Rockfill w/Impervious Core

Height : 154 m.

Crest Elevation : +261.00 m.MSL.

Crest Length : 486 m.

Spillway

Type : Open Chute w/Gate

Capacity : 6,000 cms.

Reservoir

Catchment Area : 26,386 sq.km.

NHWL : +260.00 m.MSL.

Storage at NHWL : 13,462 MCM

Annual Inflow : 6,826.10 MCM

Design Earthquake : 0.1G

Sirikit Dam



Year of Completion : 1972

Dam Location : Uttaradit

Dam Features

Type : Earthfill

Height : 113.6 m.

Crest Elevation : +169.00 m.MSL.

Crest Length : 810 m.

Spillway

Type : Radial Gate

Capacity : 3,250 cms.

Reservoir

Catchment Area : 13,130 sq.km.

NHWL : +162.00 m.MSL.

Storage at NHWL : 9,510 MCM

Annual Inflow : 5,529 MCM

Design Earthquake : 0.1G

NECTEC

- NSTDA – National Science and Technology Development Agency
 - NECTEC – National Electronics and Computer Technology Center
 - AAERU – Advanced Automation and Electronics Research Unit



Biodiversity in Reservoirs

- Are dams the destroyer of biodiversity?
 - Geographical changes
 - Lost/disappeared species
 - Community relocations
- Conflicting objectives
 - Steep increase in demand for energy
 - Community's economic demands
 - Fish breeding: limited species
 - Forest restoration
 - Water quality monitoring
 - Land usage around reservoirs

Biodiversity in Reservoirs (2)

- Systematic ecological studies for reservoirs
 - Data collection before and after the effort to increase the biodiversity
 - More research to effectively increase the biodiversity in reservoirs
 - Benefits to the local community with sustainable development

Possible Collaborations

- GLEON (Global Lake Ecological Observatory Network)
 - Benefits of joining GLEON?
 - How to include EGAT's reservoirs to GLEON?
 - How to link/contact with existing researchers relating to other reservoirs for a jump start?
- Capacity building: Existing platform in PRAGMA to assist/tackle this problems?
- Other suggestions?