Energy Efficiency Policies for Southeast Asia Region

Thailand 20 year Energy Efficiency Development Plan

PHONGJAROON SRISOVANNA
The Energy Conservation Center of Thailand

11 – 12 December, 2013
Shangri-La Hotel  Jakarta, Indonesia
Thailand’s Energy situation in 2011

Energy consumption 2011

- Petroleum products: 36.20%
- Natural gas: 17.00%
- Coal/lignite: 43.90%
- Hydro/import elec.: 2.90%

Total Energy Use: 1.87 million barrels (oil equivalent) per day = 5,610 million Baht/day

Final energy consumption by economic sector

- Industry: 36.0%
- Transportation: 15.5%
- Residential: 35.7%
- Business: 7.6%
- Agriculture: 5.2%
Government policy @ 23rd AUG 2011 aims to reduce Energy Intensity 25% within 20 years

**Expected outcome in 2030**
- Reduce final energy consumption at least 38,200 ktoe by 2030
- Reduce CO2 emission 130 M. tons
- Reduce Energy cost 707,000 M.Baht

**Average Growth rate/year (2010-2030)**

| GDP (2011) | 4.3% |
| Population | 0.3% |

*GDP$_{2030}$ at constant price 1988 = 10,650 billion Baht

**Target Groups**
- Industrial sector
- Transportation sector
- Business Building
- Small Business and Residential Building

**With EE Plan**

**Energy usage reduced not less than 38,200 ktoe by 2030**

**Final Energy Consumption (ktoe)**

- **EI (2010)** 15.6 kton/billion baht
- **EI (2030)** 11.7 kton/billion baht

**Reduce 25%**
Scheme & Strategy to promote EE

- ESCO Fund
- Tax Incentives
- Direct Subsidy
- Revolving Fund

Administration (Financial)

Knowledge

- Research & Development
- Knowledge & Know-how

Social

- Public Relation through Media
- Creating Awareness
- Thailand Energy Awards
- Personal Development
- EE Display Center
- EE Networking / Voluntary Agreement

Law & Regulation

- Energy Management for Designated Buildings and Factories under ECP ACT
- Building Code
- Standard and Labelling for equipments & material (MEPS & HEPS)
Legal Framework to promote EE

Energy Conservation and Promotion Act.
B.E. 2535 (revision B.E. 2550)

- Decree on designated building
  Effective from 12/12/1995

- Decree on designated factory
  Effective from 17/07/1997

Ministerial Regulations

- Energy Management in designated buildings and factories
  Effective from 20/11/2009

- Persons Responsible for Energy (PRE)
  Effective from 31/07/2009

- Energy Management Auditors*

- Building Energy Code
  Effective from 20/06/2009

- High Energy Efficiency Standard for Equipments and Machinery
  Effective from 08/04/2009

* Waiting for approval from the Council of State
Standards and Regulations

- Energy Management for Designated Buildings and Factories under ECP ACT
- Building Energy Codes for New constructed Buildings
- Standard and Labeling for equipments & material (MEPS & HEPS)
Incentive Mechanism

Financial Incentives

- Gov. co-investment program (ESCO Fund)
- Revolving Fund Program for EE&RE Projects
- Tax Incentives
- Other Incentives
1. **Gov. Co-Investing Scheme** ➔ **ESCO Fund**

- **1,500 million Baht** allocated from Gov’s ENCON FUND
- **2 Fund Managers** assigned & given 2 years window of investment
- **5-7 years of investment** with mutual agreed exit clause
- **10-50% equity** holding with max. of 50 million Baht

**Equipment Leasing**
- 100% of total cost with max. 10 mill. Baht
- Interest rate 4-6 % (negotiable)
- Max. leasing period 5 years
- Apply for ESCO with share saving contract
2. Soft Loans ➔ Revolving Fund

- **7,000 mill.Baht** allocated from Gov’s **ENCON FUND**
- 2-Stepped Loan **mix w/ Bank’s Money (approx. 1:1)**
- **Max. Interest Fix at 4%** (Bank pay 0.5% Int. to Encon Fund)
- **Max. 7 yr. loan period**
- **Max. 50 Mill.Baht / project**
- 11 major banks are participating
3. Tax Incentive → 2 schemes are given;

1. Tax Incentive for EE products

- Cooperation program with Revenue Dept.
- **25% tax credit** from purchasing of EE products
- 19 products are announced for tax incentive; Mostly **label 5 products**
- Terminated in Dec. 2010, Extending for two more years till **31 Dec 2012**

2. Tax Incentive for EE Investment

- Cooperation program with **Board of Investment (BOI)**
- Promotion of Energy Conservation Related Activities
- **Exemption** of corporate **income tax and import duties**
4. Direct Subsidy 20:80

• For EE measures
• **Subsidy 20% of EE measures**,
  • maximum 3 million baht
  • minimum 0.05 million baht

• To buy EE products
• Payback period < 7 years
Thank you for your attention