

Thailand Energy Security



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29 March 2018



Overview of Energy Situation



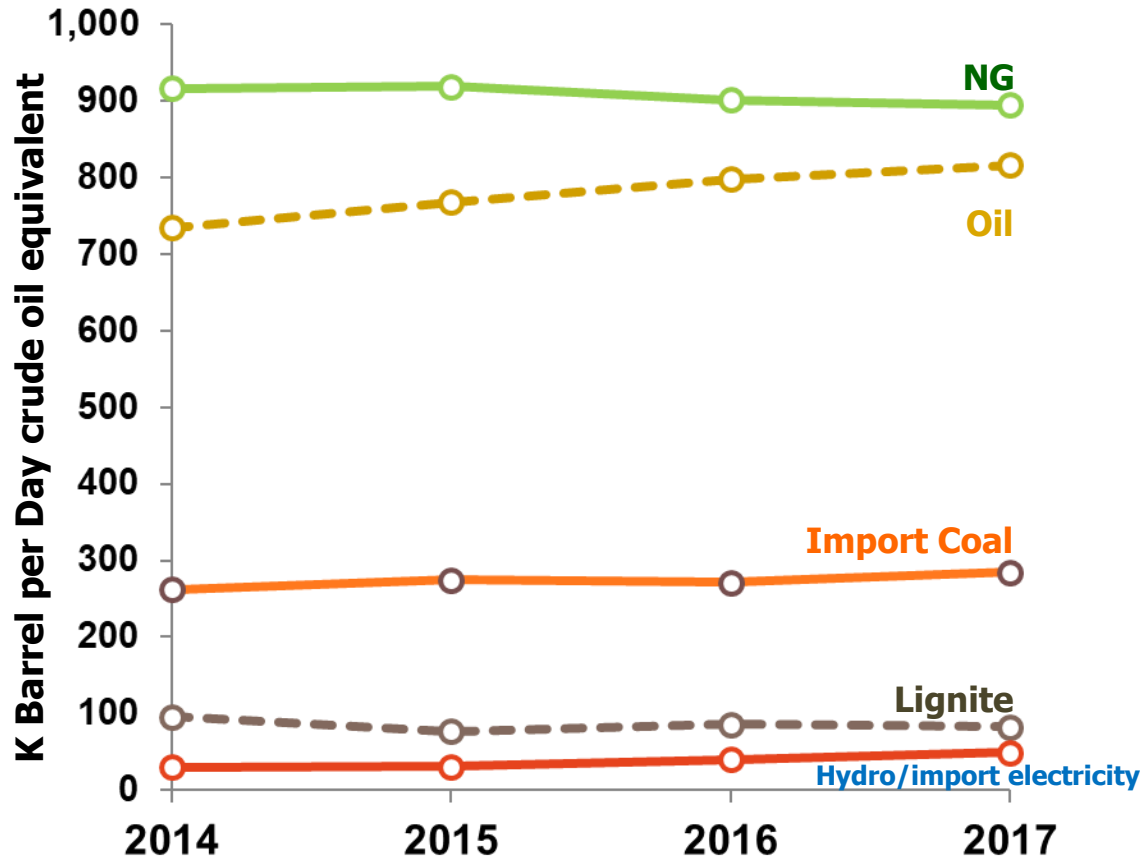
Energy System



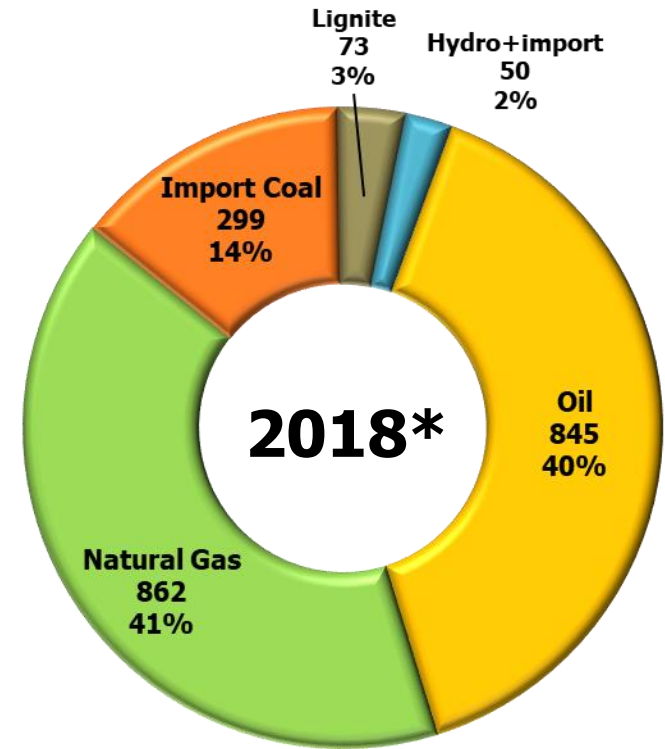
Energy Security



Summary



Primary Energy Consumption

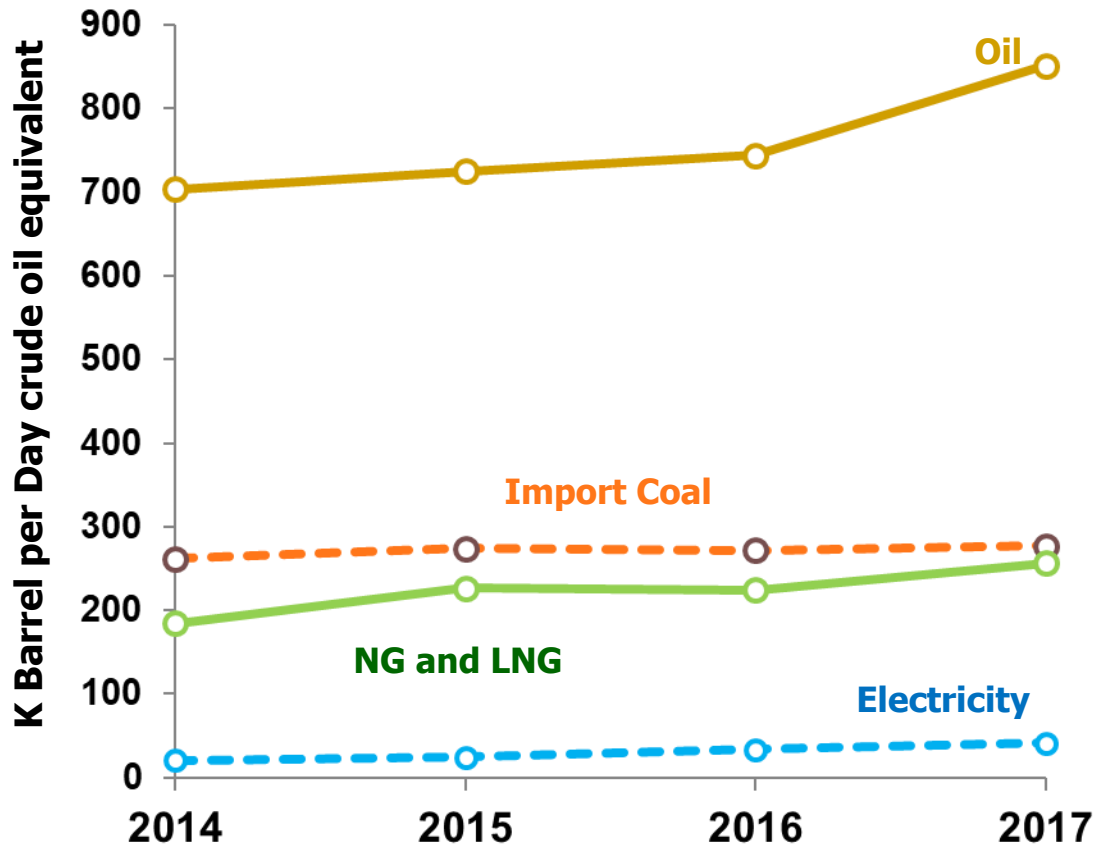


Total 2,131
KBD crude oil equivalent

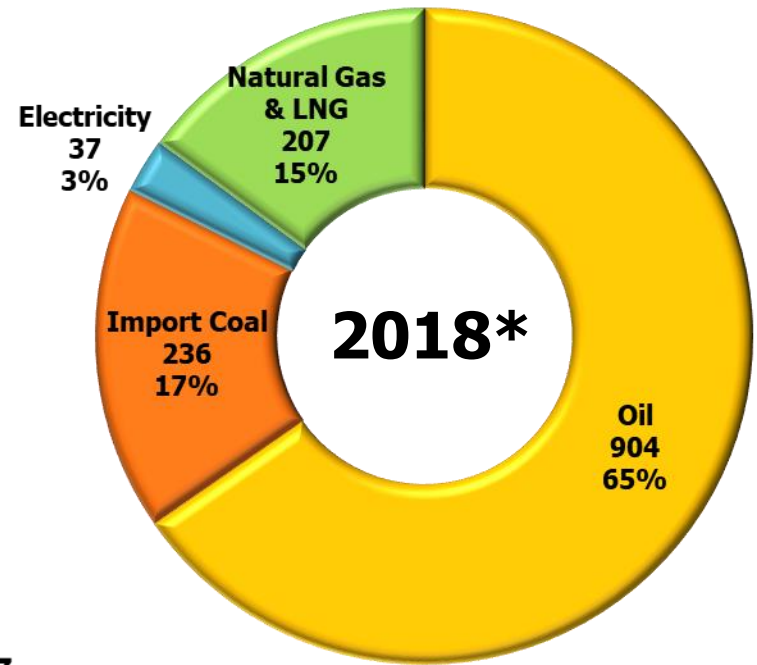


Net Import Country

*Jan 2018



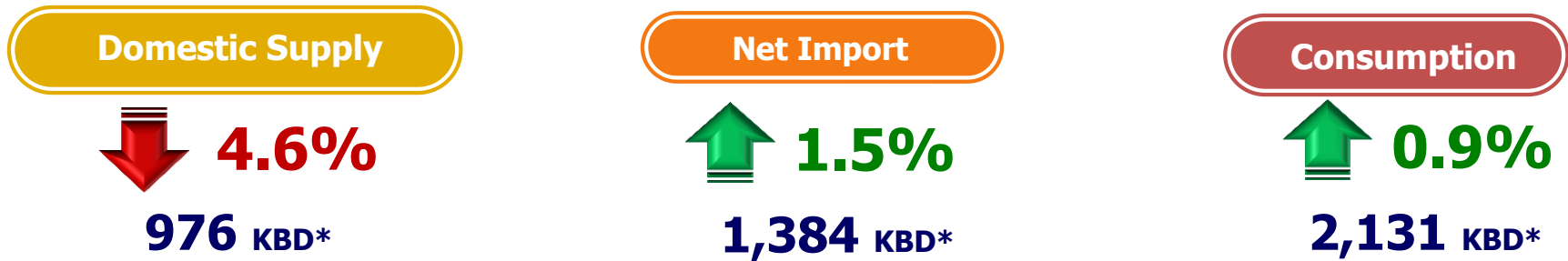
Net Import of Primary and Secondary Energy



Total 1,384
KBD crude oil equivalent



Net Import Growth  1.5%



- Decreasing of indigenous energy resource:
Natural gas
- High depends on external supply sources:
more than 65% mainly **crude oil (85%) and LNG (20%)**
- Supply shortage could affect enormously to Thailand economy

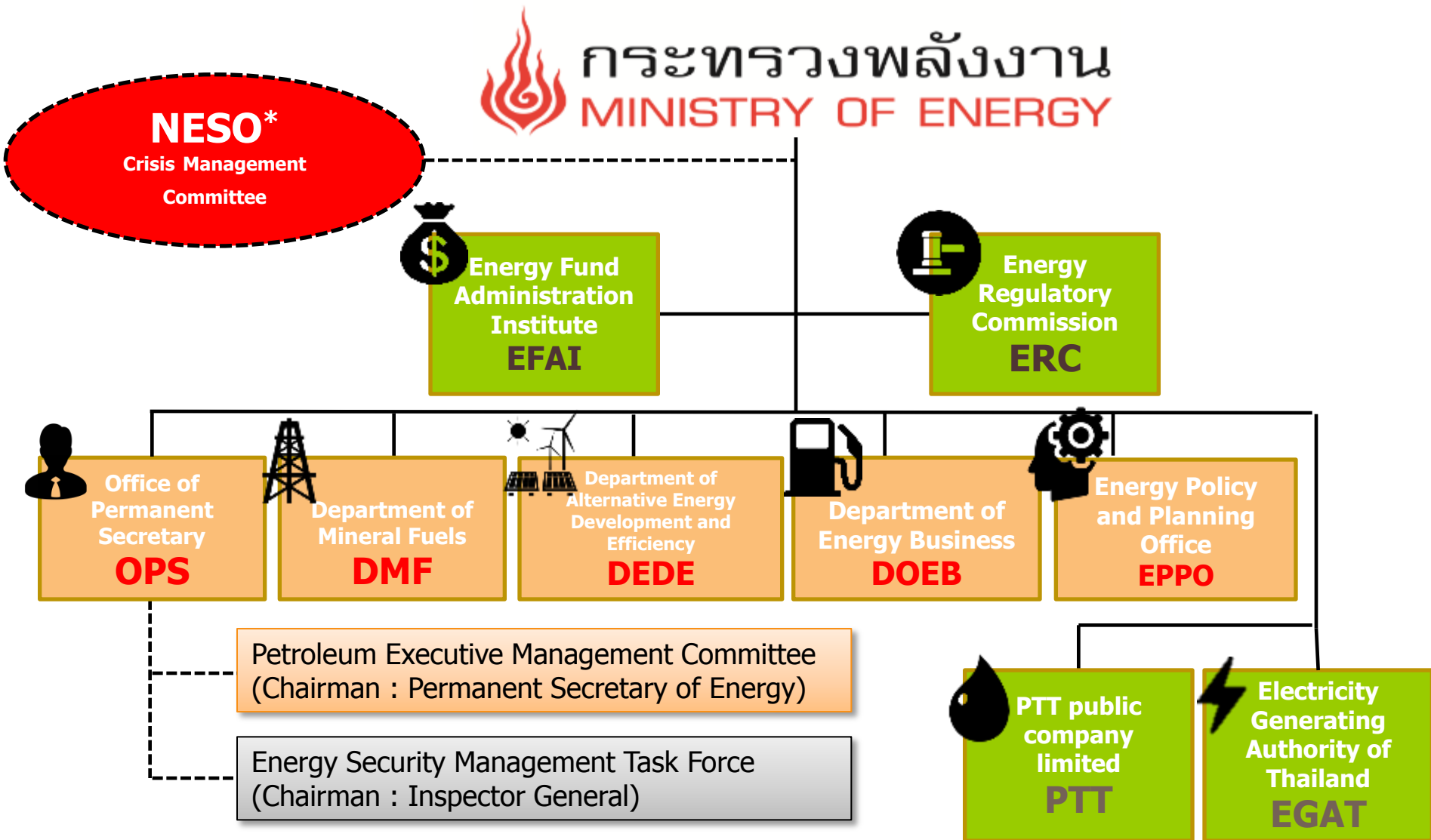
Thailand Integrated Energy Blueprint 20-year masterplan (2015-2036)

- ↓ **Import dependency**
- ✓ **Energy cost**
- ↑ **Energy security**



- **Fuel diversification**
 - Reduce Natural gas for Electricity from 64% to 37%
- **Renewable and Alternative energy**
 - Increase RE to 30%
- **Energy Efficiency**
 - Reduce energy intensity (EI) 30%

Intuitional Arrangement: NESO



*National Emergency Strategy Organization (NESO) is a working group setup by Ministry of Energy (MOEN) chaired by Minister of Energy to prepare and manage Thailand's energy emergency situation. NESO members consist of representatives from departments under Ministry of Energy and related organizations, including PTT and EGAT.

Energy Security Preparedness



Import Oil



**Oil Stockpiling
Pipeline Extension**



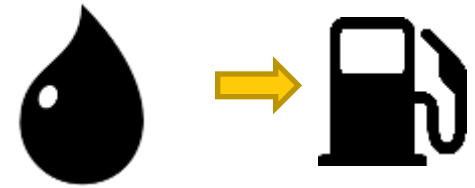
Domestic NG

Myanmar NG

LNG



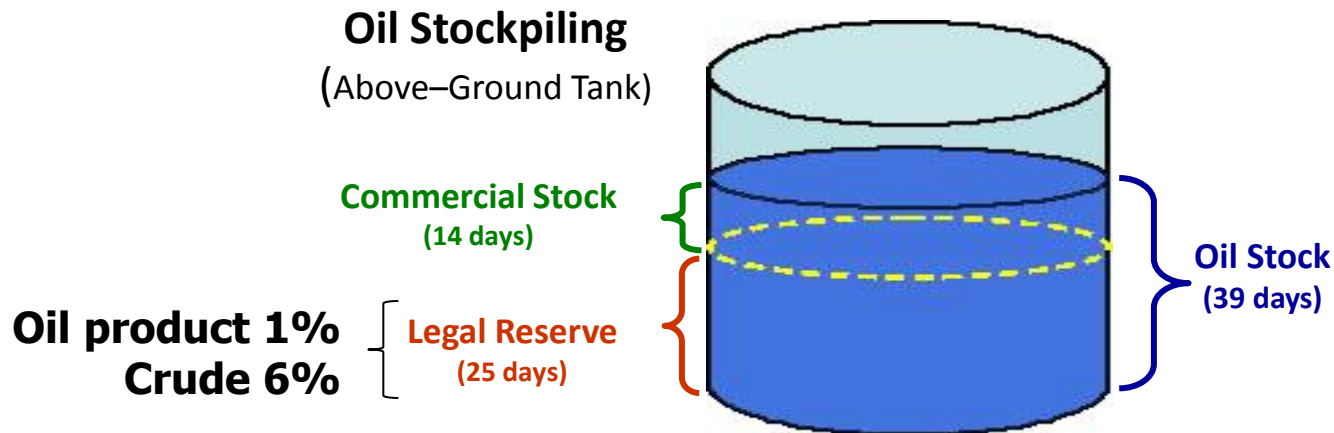
**Fuel switching
Demand Response
Exercise**



- **Legal Framework**

- The Fuel Trade Act 2000
- DOEB announcement: Oil Stockpiling 2015

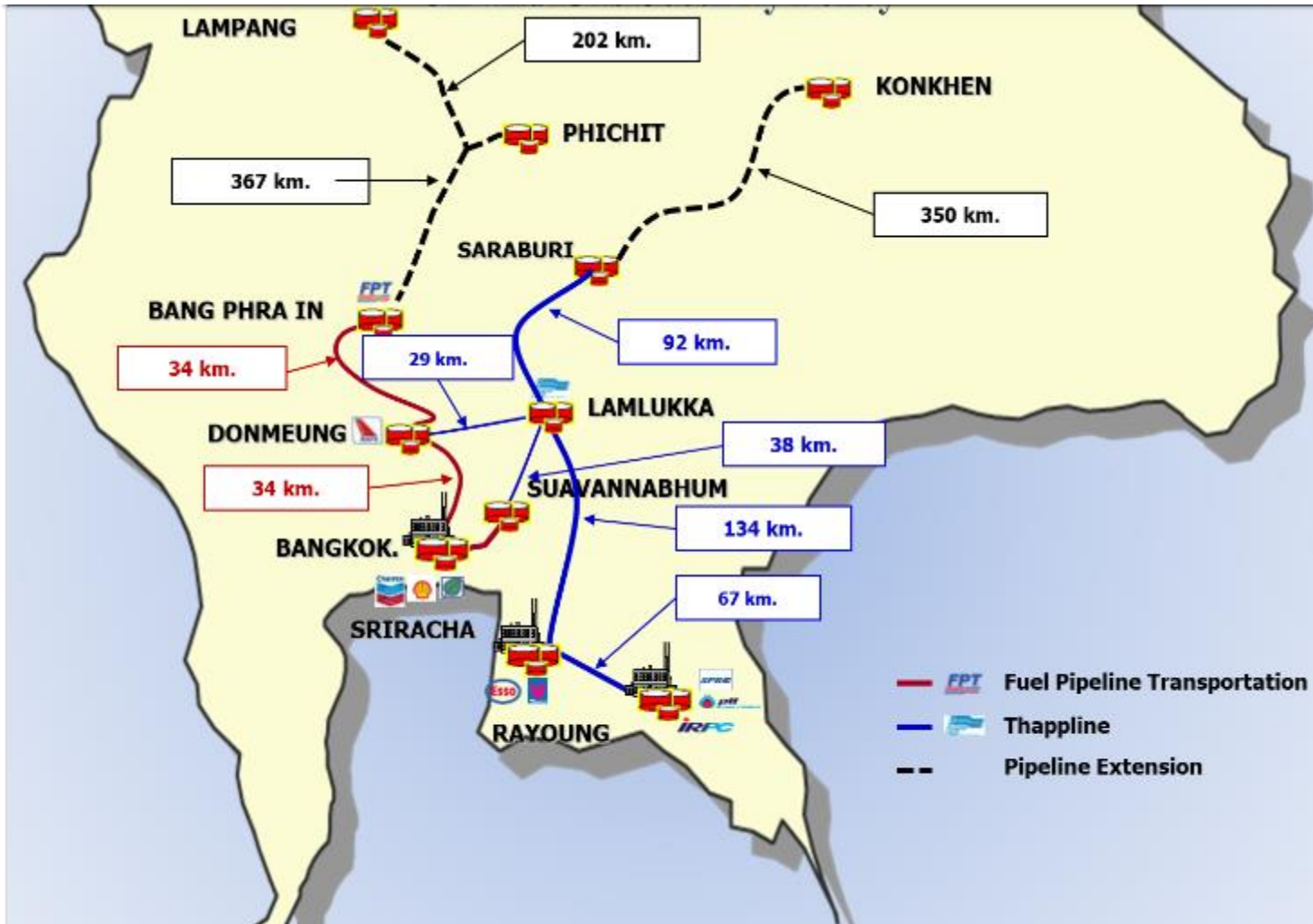
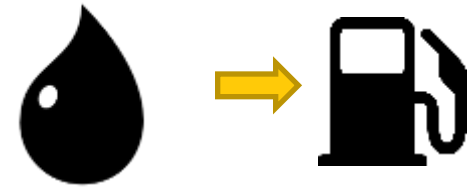
- **Private Sector Stockpiling**



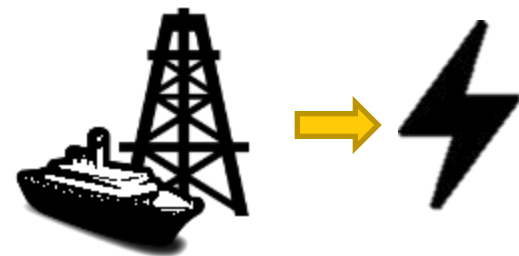
36-45 days oil reserve

Oil Pipeline Extension

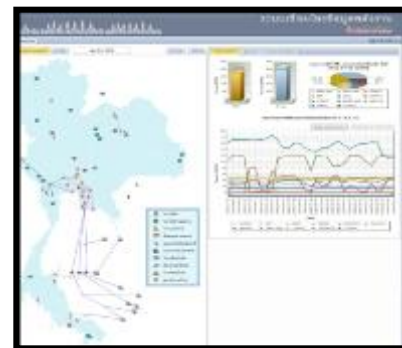
North and North East pipelines ensure
sufficient logistic capability = security of oil supply



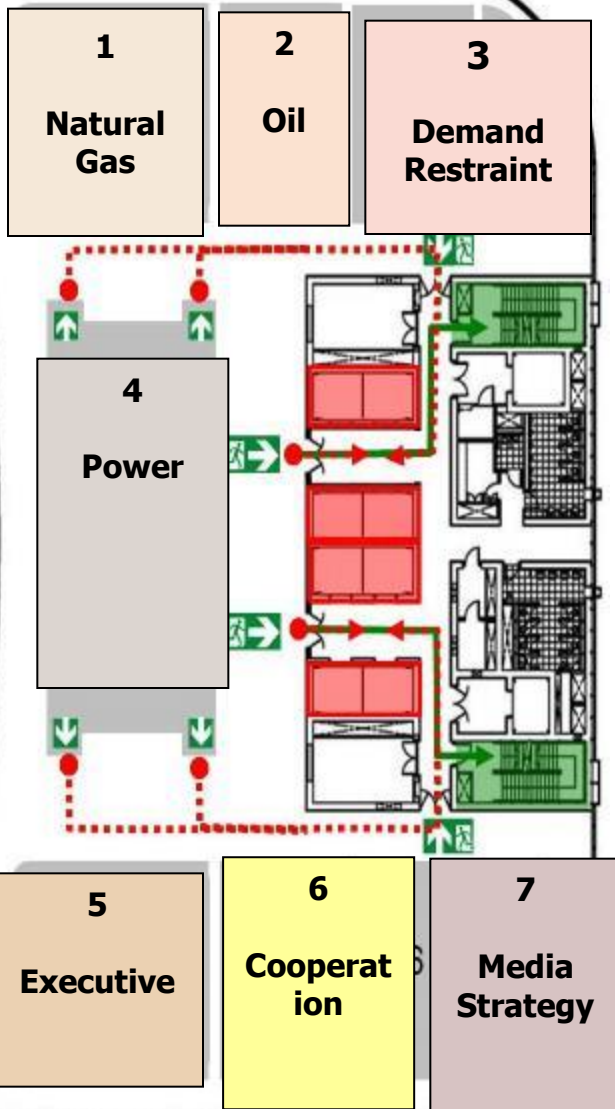
Emergency Response Exercise 1-3



- Emergency Exercise Experience **Since 2010**
- More than **250 participations/year**
- **Scenario Exercise**
 - Supply disruption
 - Infrastructure crash

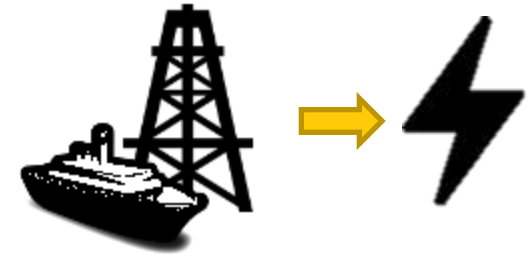


Emergency Response Exercise 2-3

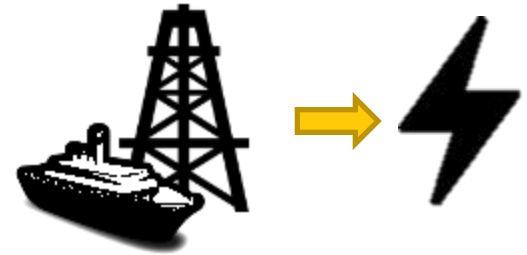


- **7 Units**

- 1 Natural Gas
- 2 Oil
- 3 Demand Restraint
- 4 Power
- 5 Executive
- 6 Cooperation
- 7 Media Strategy



Emergency Response Exercise 3-3



1 The structure and command

- NESO
- Line of Command

2. Communication

- One message
- Timely communication
- Through Media

3. Law

- The legal restriction: Environmental 's permission , Transportations permission
- The contractual agreement

4. Type of fuel switching

- ⇒Gas dependency
- ⇒Spec of power plant capacity
- ⇒Oil or gas pipeline

5. Technology

6. Capacity building

- Thailand Emergency response system is well prepared and steadily strengthened
- Thailand aware of energy resources limitation / high import dependency
- Energy security management is vital
 - Long-term : TIEB
 - Short-term : Infrastructure development ex. oil pipeline / Institutional arrangement (NESO) / Emergency preparation
- Key recommendation to ASEAN
 - Share lessons learned and experiences
 - Strengthen collaboration in energy security preparedness

ขอบคุณค่ะ
Thank you

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Thailand Energy System

