Session 1: 10.00 - 10.30 hrs.

“A New Age of Energy Regulation: Moving Towards Smart Regulation”

Mr. Viraphol Jirapraditkul, Commissioner of the Energy Regulatory Commission of Thailand
Moving Towards SMART Regulation

Energy regulators’ outlook and policy towards smart regulation: from Energy 4.0 to ERC 4.0 (Smart Regulation)

RE policy and trends in the next 20 years: Experiences, targets and challenges

ERC’s roles to the new age of energy regulation: Key factors to smart regulation in a digital paradigm
Thailand’s Development according to “Thailand 4.0”

Goal
To get out of middle-income trap
(Increase the per capita income from 190,000 to 450,000 baht/year)

Driving mechanisms of “Thailand 4.0”

“Productive Growth Engine”
Using Innovation and Technologies
High-income Country

“Inclusive Growth Engine”
Economic development
Distributing income, opportunity and wealth to the community

“Green Growth Engine”
Using environment-friendly technology
Focusing on renewable energy and “Green” Manufacturing Process

“Security, Prosperity, Sustainability”
Thailand 4.0: a value-based and innovation-driven economy

Energy 4.0

- Electric Vehicle
- Energy Storage
- Smart grid
- Renewables hybrid

ERC 4.0

- Energy Industry Operation Excellence
- Regulatory Development
- Communications & Participation
- Professionalism and Quality Assurance
Setting rates for EV Charring and regulating the EV charging station standards

Enforce the use of Energy Storage to secure the power system

Issue relevant regulations for the purchase of power generated from RE hybrid

Promoting R&D and applying ICT to develop “Smart Grid”

Determine rates to reduce peak demand and monitor the load balance (Demand Response Program) “Customer Participation”
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Energy Policy

Prime Minister’s Statement

✓ Secure Thailand’s Energy Supply
  • Exploration and production of natural gas and crude oil, both offshore and onshore
  • More new power plants by government agencies and private organizations
  • Increase the use of renewable energy
  • International energy cooperation

✓ Fair Energy Pricing
  • Energy price restructuring
  • Appropriate tax imposed on different types of oil

✓ Energy Conservation
  • More efficient use of energy
  • Awareness of consumers

Ministry of Energy: Energy Policy Formulation

- Security
- Ecology
- Economy
Principles underlying Energy Policy

Environment:
- Renewable Energy
- Cogeneration Plants
- Energy Efficiency

Social & Economic:
- Affordability
- Vulnerable consumers
- Public participation

Effective Regulation:
- Competitive bidding
- Price control

Domestic Supply:
- Fuel Diversification
- Adequacy
- Quality of Supply

ASEAN and GMS Interconnection:
- Harmonised rules
- International energy cooperation
Thailand Integrated Energy Blueprint (TIEB)

National Agenda: 2015-2036

Key Drivers

Security
Economy
Ecology

In 2015

Power Development Plan (PDP 2015)
Energy Efficiency Plan (EEP 2015)
Alternative Energy Development Plan (AEDP 2015)
Gas Plan
Oil Plan

Integrated regulation & monitoring

In 2036
### RE Target under AEDP 2015 and Current Status

#### Status as of May 2017

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<th>Type</th>
<th>Existing</th>
<th>Target (MW)*</th>
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<td>Rooftop</td>
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- **RE Target under AEDP 2015**: 16,778 MW
- **Remaining Ins. Cap.** 7,555 MW
- **Install Cap. (existing)** 9,223 MW
Better Regulation of Renewable Energy

• Promote development and deployment of **WTE and bio-based energy** (biogas, biomass, energy crop) as first priority

• Promote PV and Wind energy for power generation once their cost can compete with LNG cost

• Provide incentive scheme with **Feed-in Tariff (FiT)** to drive RE development

• Use **competitive bidding** in conjunction with the FiT scheme to ensure efficient investment

• “Right Amount and Right Location” (**RE Zoning**) to ensure security of supply and loss optimization
Moving Towards SMART Regulation

1. Energy regulators’ outlook and policy towards smart regulation: from Energy 4.0 to ERC 4.0 (Smart Regulation)

2. RE policy and trends in the next 20 years: Experiences, targets and challenges

3. ERC’s roles to the new age of energy regulation: Key factors to smart regulation in a digital paradigm
SMART Regulation: Vision of ERC 4.0

- Regulating Energy Sector
  - Local
  - National (Energy Security)
  - Regional (ASEAN Hub)

- Regulating Competition/RE Scenario Planning
  - Solar Government/Agricultural Cooperatives
  - FiT Bidding
  - FiT
    - Biogas/Biomass
    - MSW/Industrial Waste
    - Solar-PV Rooftop

- Information Access for Home-users
  - Energy Application NRT
  - Real-time database for home-users
  - EV-Guidance
  - Energy R&D

- Audit/Analyze/Suggest Operators for performance improvement
  - Smart Grid/Smart City
  - RIA
  - Post Audit

NRT: Near Real Time
RIA: Regulatory Impact Assessment
Thank you