Power System Development to Support Clean Energy in Thailand

Launch of Thailand System Flexibility Study
Friday 04 June 2021
The Transition of Renewable Energy and Disruptive Technology

“Design System-Friendly for RE & Rapid Change of Technology”

Phase 1. RE has no noticeable impact

Phase 2. RE has a minor to moderate impact

Phase 3. RE generation determines the operation pattern

Phase 4. RE makes up almost all generation

Higher RE penetration has effects on the power system

To have environmental-friendly energy policies and attractive incentives to all stakeholders.

The energy policies to support RE and Disruptive Technologies

Policy / Institution / Architecture

- CO₂ tax credit, Carbon price, RE certificate
- Improved system services procurement
- Integrated planning, flexible resources and cross sectoral electrification
- Power plant flexibility, improve grid infrastructure
- Storage, Demand side management
- Electrification
- Power to gas
- VRE forecast/control
- Mobilize existing flexibility

Infrastructure / Hardware

Develop the infrastructure and management system to support the policies

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- BESS Projects
- Wang Noi Power Plant
- DRCC Establishment
- Cross-border Interconnection
- REFCC Establishment
- New grid code
- Conduct the regional transmission potential
- Study the impacts of RE integration on the power system

Ref: International Energy Agency (IEA), International Renewable Energy Agency (IRENA)
Thailand Power Industry Now and Beyond
Power Development Plan 2018 rev1

- Regional Security
- Fuel Diversification
- Reduce dependence on natural gas
- Increase the flexibility of the electrical system

- Maintain appropriate cost of power generation for long-term economic competitiveness
- Energy for ALL

- Increase the proportion of generated electricity from renewable energy
- Promote the efficiency in electrical system and demand response
- Develop the Smart Grid
Thank you