

> Thailand Economy Updates: Energy Efficiency and Digitalization

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กระทรวงพลังงาน MINISTRY OF ENERGY



Outlines

Energy Situation in Thailand

Energy Efficiency and Digitalization Policies

Related Upcoming Projects





Energy Situation in Thailand



Thailand's Energy Situation

Energy Efficiency Progress

Final Energy Consumption 2020 by Fuel



Source: Thailand's Energy Situation Report 2020, DEDE



Energy Efficiency and Digitalization

Policies



Policy Direction to National Energy Plan





Energy Efficiency Target (EEP2018)

Long-term Energy Efficiency Implementation 2018 - 2037

Goal: Energy Intensity reduction by 30%

(approx. 49,064 ktoe) by 2037 - base year 2010

Compulsory Voluntary

- Energy Management
 Standards
- Energy Codes

 (Industrial, Buildings, Residential)
- Energy Efficiency
 Resource Standard
 (EERS)
- Demand Response
- Excise Tax (Eco-Sticker)

Equipment Standards and Labeling

- Financial Supports
 - Grants and Subsidy
 - Soft loan
 - Tax incentive
 - Credit Guarantee
- Innovations (IOT, Smart Building, Big Data)

Complement Human Resources

- Development (HRD)
- Energy Manager
- Energy Auditor
- Technologies
- Public

Relation/Awareness

Research and
 Development



Final Energy Consumption Projection



Energy Saving by Sector

Sector	Total	Percentage	
1. Industrial	21,137	43	
2. Commercial	6,418	13	
3. Residential	3,300	7	
4. Agricultural	527	1	
5. Transportation	17,682	36	
รวม	49,064	100	

Source: DEDE



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Subsidy Program: 20 – 80 program

Measure Overview

- Subsidize equipment and machinery replacement (with approved high-efficiency ones) or innovative energy-efficient equipment
- Subsidize for equipment and installation cost
 - 20% for Designated buildings and factories when replacing with efficient equipment and machinery
 - 30% for Designated buildings and factories when replacing with efficient equipment and machinery with approved innovative technologies
 - 30% for non-designated buildings and factories, community enterprise, start-ups, or agriculturers
- Supports up to 3 million baht per applicant
- Payback period no longer than 7 years

Examples measures

- Installing variable speed motors used with the machine.
- * Replacement air compressors, high efficiency
- ***** To improve the power factor.
- * Replacing high-performance electric motor
- * Insulation
- The use of heat pumps

Application is opened! Deadline 21 January 2022





4D1E Policy

	DIGITALIZATION	Distributed energy resources enabled by big data-driven alignment of supply and demand	Data-driven asset strategies including preventative and condition-based maintenance and predictive outage	Smart grid and smart pipes allow automated controls to improve network resiliency, safety, and efficiency	Customer inter- actions governed by analysis of customer journeys, segmentation, and personalized communication	Platform supports distributed energy resources and marketplaces		
	DECARBONIZATION	4D1E supporting the Energy Transformation toward Carbon Neutrality						
Í¢	ELECTRIFICATION				Ť.	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
	DECENTRALIZATION							
÷	D E-REGULATION	Back-office automation and data-driven decision making	Field wor access to manager real-time	kforce with mobile maps, data, work- nent tools, and expertise	High level of situational awareness to enable energy balancing			

Source: Energy Policy and Planning Office (EPPO)



Related Upcoming Projects



Digitalization of Energy Conservation



Digital Finance

FinTech

(Encourage direct engagement of citizens)

- ICOs
- P2P funding via crowd funding platforms (equity, lending, donation)
- Digital green bond
- Other digitalization of conventional finances
- Bundling EE projects into new digital green asset class etc.

Green Investment Validators

- Automated validation of green investment and use of proceed ex. Stockholm Green Asset Wallet
- AI-base scoring

MRV as a proof of revenue stream for financing

Global investment trend:



+

Bridging funding gap for EE projects :

Pooled Financing Vehicles (to pool financing sources and EE projects) SPFMs, Mutual Funds etc.

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Green Validators To score green investment and validate the use of proceed



Energy Efficiency Coin/Token







Leveraging Private Sector Investment via Energy Efficiency Platform





Not included in EE Platform



1. To build confidence for investor and reduce the cost of fundraising

- 2. To oversee technical aspects of energy efficiency projects and MRV process
- 3. Other technical matters

Thank You

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