Energy Regulatory Commission
and Office of the Energy Regulatory Commission

ANNUAL REPORT 2024

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Annual Report 2024

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and Office of the Energy Regulatory Commission

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Message from Chairman of the Energy Regulatory Commission

Mr. Samerjai Suksumek

"Regulate Energy Industry to Attain Sustainable Development and Promote Proper and Fair Competition," *in line with Thailand's National Strategy, the 13th National Economic and Social Development Plan (2023 - 2027), Sustainable Development Goals (SDGs) of the United Nations, and energy policies of the government.*

Given the experience in regulating the energy industry that I myself and the other ERC Commissioners have acquired while in office for over the past six years, we have encountered various factors affecting the energy sector, such as the COVID-19 pandemic during 2020 - 2022; changes in the dimensions of social and global economic recession caused by the COVID-19 pandemic; and spiraling energy price crisis in the world market due to the Russian-Ukrainian conflict, which caused energy price levels, both oil and natural gas, to spiral upwards to their record highs and hence affecting the security and adequacy of fuels used for electricity generation—Thailand had to import liquefied natural gas to be substituted for the declining amount of natural gas from the Gulf of Thailand towards the end of the concession period at a more expensive price when compared with that before the conflicts. Moreover, government policies have been laid down to drive greenhouse gas reduction in order to achieve Carbon Neutrality by 2050, as pledged by Thailand at COP26, and to respond to the EU's Carbon Border Adjustment Mechanism (CBAM). In this connection, the government has set an urgent policy framework to manage prices of energy, which is an important factor in the country's livelihoods and economic development, and to restructure the country's energy utilization during the energy transition towards the use of clean energy. Also devised are policies to increase access to clean energy for the commercial and industrial sectors at reasonable prices in order to increase the overall competitiveness of the country and to support continuous and sustainable economic growth. All of these factors have impacts on the regulation of energy industry.

In addition, there are trends in technological changes that will contribute to the development of clean energy

and help expand new energy businesses to be more efficient in the future, for example, the application of artificial intelligence (AI) technology and Big Data analysis, which are expected to play a substantially important role in increasing the efficiency of energy production, energy consumption and energy industry development.

The changing global energy landscape and trends due to the aforesaid factors have become an inevitable challenge for Thailand. Therefore, it is necessary that Thailand level up energy development and energy industry regulation to be efficient so as to reinforce security in terms of both technical aspects of the energy system and the stability of domestic energy prices. The implementation in this respect will result in a change in the country's energy landscape although the main energy policy of the country, i.e. the National Energy Plan, has already set the targets to achieve Carbon Neutrality and Net-Zero Greenhouse Gas Emissions by increasing the share of renewable energy generation, planning for the use of Small Modular Nuclear Reactor (SMR), including revisions to energy efficiency targets.

Finally, the Energy Regulatory Commission has given importance to the reinforcement of preparedness and improvement of regulatory guidelines to be in line with rapid changes in the energy sector. The operational success in pursuance of various programs and projects in Fiscal Year 2024 could be achieved owing to excellent cooperation from all parties concerned. On behalf of the Energy Regulatory Commission, I would like to thank all relevant agencies, including OERC executives and staff members, for having supported the execution of our mandated missions to reach the ultimate goals, that is, to create sustainable energy security and to ensure that energy procurement is efficient and eco-friendly.

(Mr. Samerjai Suksumek)
Chairman
Energy Regulatory Commission

Message from Secretary General of the Office of the Energy Regulatory Commission

Mr. Khomgrich Tantravanich

The Office of the Energy Regulatory Commission (OERC) is a state agency with the status of a juristic person under the supervision of the Energy Regulatory Commission (ERC) and provides support to the duty execution of the ERC so as to achieve the objectives under the Action Plan for Energy Industry Regulation, which involve the roles of regulation, licensing, protecting energy consumers and stakeholders against adverse impacts resulting from energy industry operation, including conducting other activities pursuant to the government policy and missions as prescribed under the Energy Industry Act B.E. 2550 (2007).

The OERC's operations are under the Action Plan for Energy Industry Regulation, Phase 5 (2023 - 2027), **with the objectives "to develop the regulatory framework for promoting competition and regulating energy industry operation during the energy transition, with due consideration of Energy Security, Energy Affordability and Environmental Sustainability, and to take part in mobilizing a low-carbon economy and society as well as to apply digital technology to level up energy industry regulation to be more efficient and to enable service provision that is convenient, rapid, transparent and accountable, including developing necessary skills of the personnel to be used for energy industry regulation."** In addition, the OERC remains committed to place importance on energy industry regulation with social responsibility, creation of good relationships, building up confidence among stakeholders in all sectors, as well as providing knowledge and creating understanding of the public about energy situations which are vulnerable to the global situations, geopolitical conflicts and constraints of existing natural resources. In this connection, under the said Action Plan, the OERC has set our operational targets as follows:

(1) Regulate the procurement of electricity generated from renewable energy pursuant to the Thailand Power Development Plan and the government policy to support the industrial sector which is in need of Green Energy so as to facilitate their exports as well as to open up opportunities and encourage Green Energy generation and utilization freely behind the meter ("Prosumers") under energy security and connection restrictions. In addition, rules and regulations have been improved to promote the trading of electricity generated from renewable energy to be in line and to keep up with market changes in the energy transition era, and also in compliance with the National Energy Plan framework, for instance, the development of a Green Energy trading mechanism via the Utility Green Tariff (UGT) systems —both UGT1 and UGT2. This is to support Thailand in moving towards clean energy in order to accommodate the increasing demand for electricity from renewable energy of the commercial and industrial sectors without creating any adverse impact on the energy security but still maintaining the capability to expand the networks and to ensure that

vulnerable populations can have access to electricity, which is a basic public utility, at a reasonable and fair price.

(2) Provide policy recommendations on the revision of guidelines for promoting competition in the natural gas industry, and revise relevant regulations to be in line with the changing structure and business models of the natural gas industry with due consideration of efficiency and security of the natural gas industry, including opening up opportunities for new players to have reasonable and fair access to the natural gas infrastructure. This is aimed at creating fair competition in the natural gas industry, with price security and capability to respond to varying situations in the world market in the long run.

(3) Gather information and develop rules and regulations to accommodate the promotion of competition in the electricity industry to be in line with possible changes in the model and structure of the electricity industry, by using lessons learned from other countries as guidelines which are adjusted to suit Thailand's environments. Importance has been given to the structure of existing natural resources, income of the general public who are power users and the energy price structure of various business segments so as to be in compliance with the objectives of the Energy Industry Act 2007 under the policy framework of the government.

(4) Regulate energy tariffs to be appropriate and fair, with due consideration of competitiveness, and to reflect the cost of energy industry operations in the long term. In addition, determination has been made of the criteria for considering electricity tariff on island areas so that populations in remote areas could have access to electricity at a reasonable price. In this connection, it is essential that the OERC intensify building up understanding and explain facts about the energy transition and global energy price situations which may affect fuel prices and hence creating impact on certain groups of energy consumers.

(5) Improve the licensing for energy industry operations to be efficient to enable the submission of applications, sending in documents, tracking the consideration status and paying fees via the online system, which facilitates the licensees. Moreover, a system has been developed for regulating and monitoring energy industry operation facilities, requiring entrepreneurs to submit, via the online system, information about their implementation of safety standards, environmental standards and service quality standards; this is aimed at enhancing regulatory efficiency.

(6) Explore and consider applying innovative technologies, such as AI, to the analysis, projection and inspection so as to increase regulatory efficiency, and may consider applying such technologies to the Power Development Fund and complaint management in the future so as to increase efficiency of the management to be fast and accountable.

Furthermore, the OERC has improved the conditions for placing deposits for electricity usage (Customer Guarantee Deposit: CGD) for large power consumers, pursuant to the ERC policy, by giving the right to receive a reduction in the CGD amount based on the record of electricity bill payments, and has upgraded the regulatory tasks of energy consumer protection to widely reach energy consumers in all regions, by organizing meetings with relevant local agencies to exchange knowledge, brainstorm ideas and exchange information; a target is set to create alliance networks to protect energy consumers efficiently and extensively, covering all regions of the country by the year 2027.

Apart from the above-mentioned, the ERC has promoted electricity generation from renewable energy via a strategic grant, with financial support from the Power Development Fund under Section 97(4). An allocation of the Fund money has been approved for the installation of solar-PV generation systems for public health agencies and educational institutions at 73 locations nationwide. This helps reduce the burden of electricity costs on government agencies that are beneficial to the people, with a view to commemorating His Majesty King Maha Vajiralongkorn Phra Vajiraklaochaoyuhua on the auspicious occasion of his 72nd Birthday Anniversary.

Lastly, in my capacity as Secretary General of the OERC, I would like to thank all of the OERC executives, staff members and employees for the determination to perform duties with utmost effort to cope with changes and developments in energy technologies, which will lead to efficient energy transition in accordance with the targets and in response to major energy policies of the country for optimum benefits in terms of the economy, society, environment, industrial sector and people sector, and thus fostering the development of a balanced and sustainable energy industry.

(Mr. Khomgrich Tantravanich)
Secretary General
Office of the Energy Regulatory Commission

Overview Information

Energy Regulatory Commission and Authority & Duties

Energy Industry Act 2007

Under the Energy Industry Act 2007 (the Act), it is stipulated that there shall be the Energy Regulatory Commission (ERC), comprising seven members, to regulate the electricity and natural gas industry operation to ensure compliance with the objectives of the Act under the policy framework of the government, with the support of the Office of the Energy Regulatory Commission (OERC), which is a state agency, functioning as the secretariat to the ERC in their duty execution.

On 1 October 2018 and 30 November 2021, the ERC Commissioners were graciously appointed, pursuant to Section 15 of the Act, having the following composition:

1. Mr. Samerjai Suksumek	Chairman of the Energy Regulatory Commission
2. Mr. Sudharma Yoonaidharma	Commissioner
3. Mr. Buntoon Srethasirote	Commissioner
4. Mr. Sahust Pratuknukul	Commissioner
5. Mr. Narin Opamuratawongse	Commissioner
6. Mr. Pitak Janyapong	Commissioner
7. Mr. Worawit Srianunraksa	Commissioner

Under Section 11 of the Act, the ERC has the following authority and duties:

1. regulate energy industry operation to ensure compliance with the objectives of this Act under the policy framework of the government;

2. issue a notification determining types of licenses for energy industry operation, and propose the issuance of a Royal Decree to determine the categories, capacities and characteristics of energy industry which are exempt from license requirement;

3. impose measures to ensure security and reliability of electricity system;

4. impose the regulations and criteria of the electricity procurement and the issuance of Requests for Proposals for the purchase of electricity as well as monitor the selection procedures to ensure fairness to all parties;

5. provide opinions on the power development plan, the investment plan of the electricity industry, the natural gas procurement plan and the energy network system expansion plan, for submission to the Minister *[of Energy]* under Section 9(3);

6. inspect the energy industry operation of the licensees to ensure efficiency and transparency;

7. issue regulations or notifications and regulate the customer service standards and quality, including measures to protect energy consumers against adverse impacts resulting from energy industry operation;

8. propose the rules and Codes of Conduct of the Commissioners and the competent officials to the Minister under Section 9(10);

9. issue regulations or notifications on policy and guidelines with regard to the holding of interests or conflict of interests of the Commissioners and the competent officials;

10. issue regulations or notifications on criteria, method and conditions of the contribution sending to the Fund and the Fund utilization to be in line with the policy of the National Energy Policy Council pursuant to Section 9(8);

11. issue orders and prescribe the administrative fines pursuant to Division 8: Administrative Enforcement;

12. provide opinions or recommendations on energy industry operation to the Minister and the cabinet;

13. promote and support study and research on energy industry operation;

14. promote and encourage the general public to have energy knowledge and awareness;

15. promote and support human resource development in order to increase efficiency in energy industry operation;

16. promote economical and efficient use of energy, renewable energy and energy that has minimal impact on the environment, with due consideration of efficiency of electricity industry operation and balance of natural resources;

17. coordinate with other agencies in relation to the execution of the duties stipulated in this Act; and

18. perform any other task as stipulated in this Act or in other laws as part of the ERC's authority and duties.

Vision, Mission and Corporate Values

Vision

"Regulate Energy Industry to Attain Sustainable Development and Promote Proper and Fair Competition"

Mission

1. Regulate energy industry operation to be in compliance with the objectives of the Energy Industry Act 2007 and the state policy framework.
2. Regulate energy industry to ensure safety standards, to be eco-friendly, and promote fair competition in the energy industry, with reasonable tariffs.
3. Promote participation and support study and research so as to enhance energy industry regulation and efficiency of energy industry operation as well as to promote renewable energy utilization.
4. Increase knowledge and awareness of the public about management and inspection of energy-related operations.
5. Develop institutional capability with good governance and enhance human resource potential in energy industry regulation.

Corporate Values

Trust

Stakeholders can be confident in the ERC's decisions and action.

Reliability and Consistency

The ERC will execute its duties without prejudice and the ERC's decisions will be consistent over time.

Unity

The duty execution will be in harmony, with unity, happiness and common goals.

Social Accountability

The operation and decisions will be accountable and open to public.

Transparency and Independence

The operation, decisions, appeal process and complaint-handling will be transparent and in compliance with the law, with high relevance to stakeholders and financial independence.

Action Plan for Energy Industry Regulation, Phase 5 (2023 - 2027)

At its meeting on 27 December 2022, the cabinet passed a resolution acknowledging the Action Plan for Energy Industry Regulation, Phase 5 (2023 - 2027) of the OERC ("the Action Plan") to serve as the operational framework for a 5-year period so as to achieve the objectives stipulated under the Energy Industry Act B.E. 2550 (2007). The Action Plan is in line with Thailand's 20-Year National Strategy and the Master Plan under the National Strategy, the National Energy Reform Plan, the national reform activities that will create significant changes and impacts on the general public (Big Rock), as well as the 13th National Economic and Social Development Plan (2023 - 2027), the United Nations Sustainable Development Goals (SDGs), and energy policy of the government. Focus will be placed on **"the development of rules and regulations to promote competition and to be prepared for the energy transition in order to develop sustainable and eco-friendly energy industry and to create participatory mechanisms to mobilize a low-carbon economy and society, including the disruption of energy industry regulation and service provision via digital technology."** The objectives and targets to be accomplished by 2027 are illustrated in the following:

Interconnection between Energy Industry Regulation and 3-Tier Plans, Energy Policy and Other Relevant Policies

	20-Year National Strategy	**Strategy 2** Competitiveness Enhancement	**Strategy 5** Eco-Friendly Development and Growth	**Strategy 6** Public Sector Rebalancing and Development
	Master Plan under National Strategy	**Issue 7:** Infrastructure, Logistics and Digital Systems	**Issue 20:** Public Services and Public Sector Efficiency	**Issue 21:** Resistance to Corruption and Malfeasance
	National Energy Reform Plan & Big Rock	Genuine One Stop Service Licensing for electricity industry	Restructuring the electricity industry and natural gas businesses to increase competition	
	13th NESDP	**Milestone 3:** Thailand is the world's major EV manufacturing base	**Milestone 10:** Thailand is circular economy and low carbon society	**Milestone 13:** Public sector is modern and access to public services is upgraded
	SDG7	"Ensure access to affordable, reliable, sustainable and modern energy for all"		
	COP26-28	CO_2 emission reduction by 40% by 2030	Carbon Neutrality by 2050	Net Zero GHG Emission by 2065
	National Energy Plan	"Thailand achieves stable and sustainable growth for the quality of life improvement via Energy Transition"		
		Boost RE ≥ 50%	Transform the transport fuel to Green Energy, via EV promotion —30% share in 2030	Energy sector restructuring to accommodate Energy Transition as per 4D1E framework
	Competition in Natural Gas Industry Phase 2 (Revision)	Criteria for gas procurement, demand-supply management, contract preparation, LNG Terminal service provision, and third-party access to network system utilization, gas quality, gas tariff structure		
	Digital Govt. Development Plan 2023 - 2027	"digital government, open, connected, and cooperating on creating valuable services for the citizens"		
		Paradigm shift in work operations and service provision with digital technologies which are convenient, fast and accurate and deploy data to enhance work execution to be transparent, efficient and effective		Develop HR potential to acquire skills of digital literacy

Action Plan for Energy Industry Regulation, Phase 5 (2023 - 2027)

Objective 1

To promote sufficient, secure and extensive energy service provision, while ensuring fairness to both energy consumers and licensees

Target

1. Energy procurement is sufficient, extensive and secure to accommodate the Energy Transition.

Objective 2

To promote fair competition in the energy industry, with reasonable tariffs that reflect the cost of efficient energy business operation

Targets

1. Phase 2 of competition in the natural gas industry is implemened, and the trading of electricity generated from RE is enhanced.

2. Have reasonable and fair energy tariffs that reflect the cost of efficient energy industry operation.

Objective 3

To regulate energy industry operation to be efficient, safe and eco-friendly

Targets

1. Licenses can be issued within the specified timeframe.
2. Energy industry operation facilities meet safety, environmental and service quality standards.
3. Energy consumption in energy industry operations is economical and efficient, with the use of RE and technologies for electricity industry operation that have minimal impact on the environment.

Objective 4

To protect rights & liberty of energy consumers, local community, general public and licensees to take part in, have access to, use and manage energy matters

Targets

1. Stakeholders are satisfied with energy industry regulation.
2. Strong alliance networks are established, covering all 77 provinces.
3. Quality of life of the public and local communities is improved and the Power Development Fund management system is modernized.

Objective 5

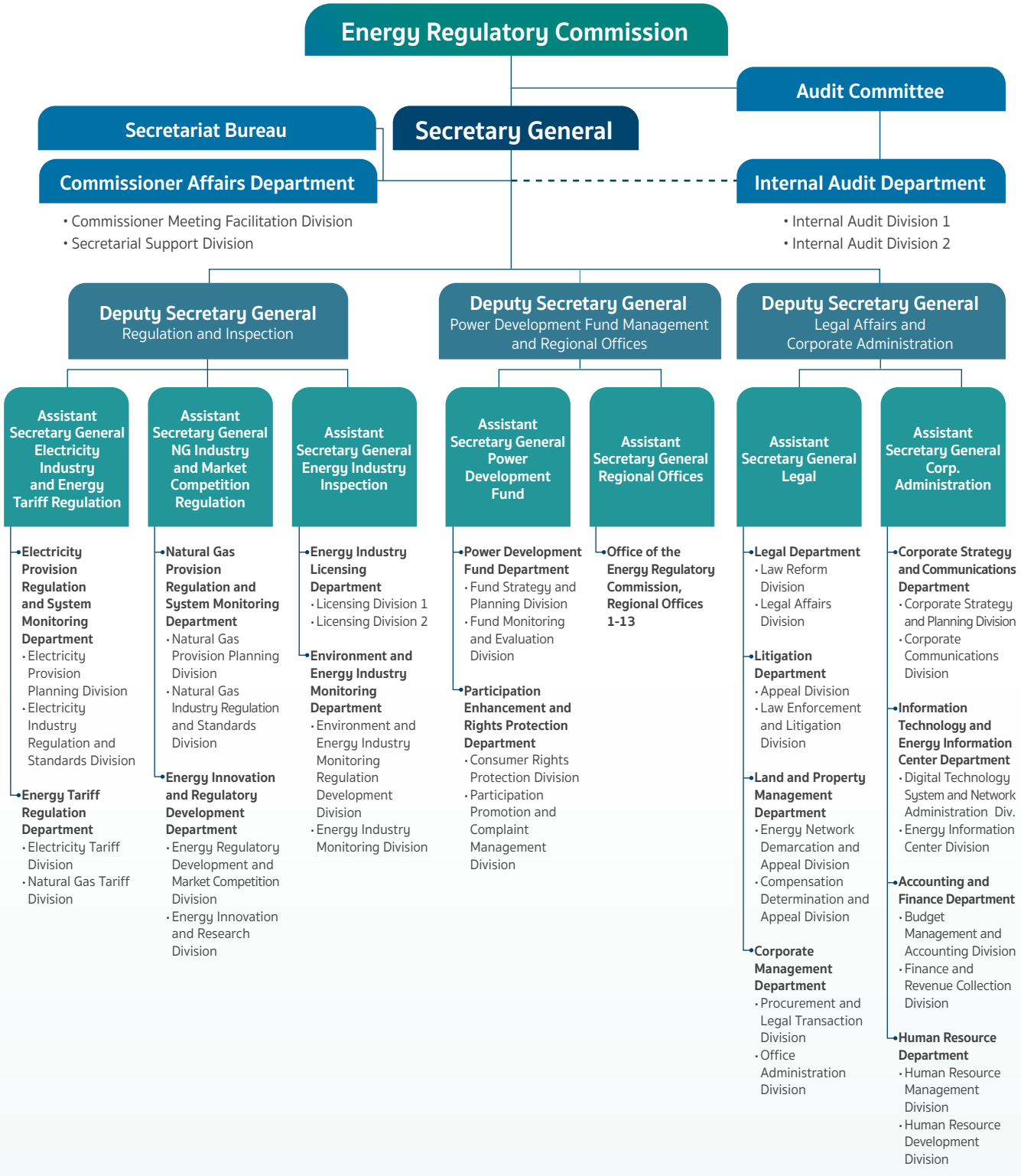
To administer the organization to have good governance and meet international standards

Targets

1. The organization achieves ITA score at AA level by 2025 and maintains the management quality system as per the ISO 9001 standards and keeps developing to meet other ISO standards in 2027.
2. An Information Center on Energy Industry Regulation is established by 2024.
3. Develop HR to have learning and management capability so as to achieve the organization's goals.

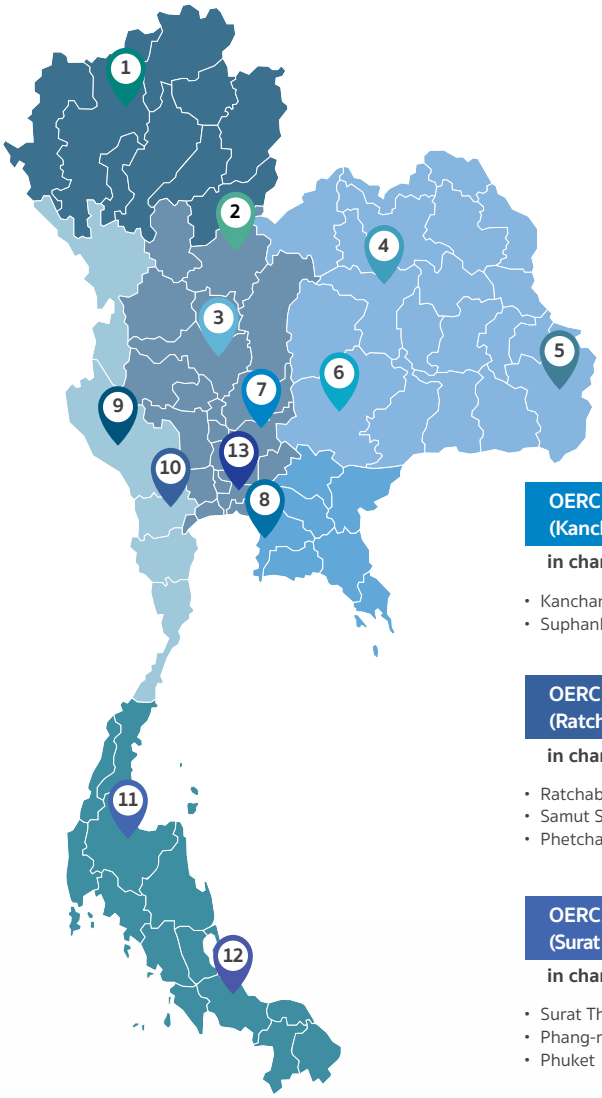
Organizational Structure of the Office of the Energy Regulatory Commission

The internal organizational structure of the Office of the Energy Regulatory Commission is in compliance with the Regulation on the Organization of the Office of the Energy Regulatory Commission B.E. 2564 (2021), and as amended, with the work administration divided into three main functions, comprising 31 Departments, of which 18 Departments are at the OERC Head Office and 13 Departments are the OERC Regional Offices.



Map Showing Locations of the 13 OERC Regional Offices

"To enhance extensive energy industry regulation and energy consumer protection, the ERC has directed to have OERC Regional Offices established in all 13 energy consumer regions nationwide to be a supportive mechanism in carrying out the work pertaining to energy industry operation licensing, audits of energy industry operation facilities, energy consumer protection and the implementation pertaining to the Power Development Fund."



Addresses of OERC Regional Offices

OERC Regional Office 1 (Chiang Mai)

in charge of 6 provinces:

- Chiang Rai
- Phayao
- Lampang
- Lampoon
- Chiang Mai
- Mae Hong Son

OERC Regional Office 2 (Phitsanulok)

in charge of 8 provinces:

- Nan
- Phrae
- Uttaradit
- Sukhothai
- Tak
- Kamphaeng Phet
- Phitsanulok
- Phichit

OERC Regional Office 3 (Nakhon Sawan)

in charge of 6 provinces:

- Phetchabun
- Nakhon Sawan
- Uthai Thani
- Chai Nat
- Sing Buri
- Lopburi

OERC Regional Office 4 (Khon Kaen)

in charge of 8 provinces:

- Nongkhai
- Nakhon Phanom
- Sakon Nakhon
- Udon Thani
- Nong Bua Lam Phu
- Loei
- Khon Kaen
- Bueng Kan

OERC Regional Office 5 (Ubon Ratchathani)

in charge of 8 provinces:

- Mukdahan
- Kalasin
- Maha Sarakham
- Roi-et
- Yasothorn
- Amnatcharoen
- Ubon Ratchathani
- Si Sa Ket

OERC Regional Office 6 (Nakhon Ratchasima)

in charge of 4 provinces:

- Chaiyaphum
- Nakhon Ratchasima
- Buriram
- Surin

OERC Regional Office 7 (Saraburi)

in charge of 7 provinces:

- Ang Thong
- Phra Nakorn Si Ayutthaya
- Saraburi
- Pathum Thani
- Nakorn Nayok
- Prachinburi
- Sa Kaeo

OERC Regional Office 8 (Chonburi)

in charge of 5 provinces:

- Chachoengsao
- Chonburi
- Rayong
- Chanthaburi
- Trad

OERC Regional Office 9 (Kanchanaburi)

in charge of 4 provinces:

- Kanchanaburi
- Suphanburi
- Nakhon Pathom
- Samut Sakhon

OERC Regional Office 10 (Ratchaburi)

in charge of 6 provinces:

- Ratchaburi
- Samut Songkhram
- Phetchaburi
- Prachuap Khiri Khan
- Chumphon
- Ranong

OERC Regional Office 11 (Surat Thani)

in charge of 6 provinces:

- Surat Thani
- Phang-nga
- Phuket
- Krabi
- Nakorn Si Thammarat
- Trang

OERC Regional Office 12 (Songkhla)

in charge of 6 provinces:

- Phatthalung
- Satun
- Songkhla
- Pattani
- Yala
- Narathiwat

OERC Regional Office 13 (Bangkok)

in charge of 3 provinces:

- Bangkok
- Samut Prakan
- Nonthaburi

Production and Distribution of Electricity and Natural Gas by Licensees in 2024

Data as at 31 December 2024

Electricity Generation in the Utilities' System [EGAT, PEA and MEA] Classified by Fuel Type

- **58.19%** Natural Gas | 135,004.66
- **6.68%** Lignite | 15,502.98
- **15.51%** Import | 35,985.05
- **2.68%** Hydro | 6,225.03
- **10.01%** Renewable | 23,232.24
- **0.02%** Oil | 34.93 (Fuel Oil | 34.29 + Diesel Oil | 0.64)
- **6.91%** Coal | 16,024.13

Total **232,009.03 GWh**

Renewable Energy Generation in the Utilities' System [EGAT, PEA and MEA] Classified by Renewable Fuel

- **49.93%** Biomass | 11,599.39
- **3.14%** Biogas | 729.10
- **21.01%** Solar | 4,880.84
- **0.84%** Hydro | 195.56
- **14.69%** Wind | 3,412.95
- **0.14%** Waste Heat | 33.50
- **10.24%** Waste | 2,379.76
- **0.00%** Geothermal | 1.14

Total **23,232.24 GWh**

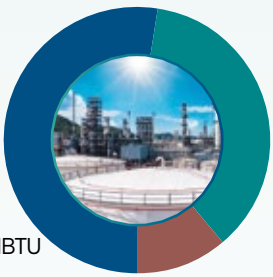
Gas Supply (BBTU)

Gulf of Thailand

		Offshore	Pipeline
Benjamas Tantaman	20,945.56		
G1/61 C5 & G4/48	235,921.80		
G2/61*	257,577.55		
G12/48	2,637.55		
Arthit	105,577.97		
Pailin	141,421.49		
JDA A18	103,202.93		
JDA B17	21,645.41		

*Formerly were GBN and GBS fields, of which the concession contracts expired in 2022 and 2023 respectively.

Natural Gas Supply



- **53.55%** Gulf Gas | 888,930,274.08 MMBTU
- **35.53%** LNG | 589,799,601.66 MMBTU
- **10.92%** Myanmar Gas | 181,189,563.14 MMBTU

Total **1,659,919,438.88 MMBTU**

Electricity Supply (GWh)

Gas Demand

Direct Customer 1,194.54
Direct Customer 2,195.00
Term LNG 340,953.85
Nam Phong/Phuhom 37,037.45
Spot LNG 248,845.75
LNG Truck Loading 5,163.33
Yadana 90,345.39
Yetagun 10,318.96
Zawtika 80,525.21
Fuel Oil 0.00

SPP/RE 11,017.51
SPP (Non Gas) 1,110.36
EGAT RE 6,582.72
EGAT/IPP (Non Gas) 30,426.01
Import-Non Hydro 13,892.27
Import-Hydro 22,092.78

37,037.45	EGAT Nam Phong	4,353.15
40,714.18	EGAT Chana	6,075.28
35,235.58	IPP Khanom	5,237.05
228,482.03	EGAT Central	34,186.32
287,391.88	IPP	44,152.71
439,030.08	SPP	40,973.25
	NGV	
322,077.00	Retail	

Direct Customer 11,024.90

GULF GAS

Bypass

Sale gas

POOL GAS

INDUSTRY

Gas Separation Plant

LPG & Petrochemical

PTT Operation

Natural Gas Demand in the Electricity and Industrial Sectors [excluding GSP Consumption]

- 31.59 % **SPP** | 439,030,078.00 MMBTU
- 23.21% **IPP** | 322,627,466.94 MMBTU
- 23.17% **Industry** | 322,076,996.00 MMBTU
- 22.03% **EGAT** | 306,233,637.00 MMBTU

Total 1,389,968,177.94 MMBTU

Data as at 31 December 2024

Export 615.66
EGAT Direct Customer 1,289.12

TRANSMISSION

System Operation (EGAT) 220,099.41

PEA Gen.
DEDE Gen.

TRANSMISSION

DISTRIBUTION

VSPP/non RE 31.23
VSPP/RE 11,526.87

Residential	44,374.54
Small General Service	15,996.90
Medium General Service	25,024.27
Large General Service	59,103.83
Specific Business Service	4,998.70
Non-profit Organization	84.93
Agricultural Water Pumping	476.15
Temporary Power User	1,115.50
Standby	108.46
Interruptible Power User	1,330.07
EV Charging Station	125.49
Public Lighting	4,095.87
On-site Use	0.00
Export	0.00

156,834.71

IPS/RE* 7,120.44
Behind-the-Meter Connection
IPS/Non RE* 8,770.32

TRANSMISSION

DISTRIBUTION

VSPP/RE 330.18
VSPP/non RE 21.34

Residential	17,812.97
Small General Service	7,963.41
Medium General Service	9,078.01
Large General Service	17,939.39
Specific Business Service	2,247.55
Non-profit Organization	163.76
Agricultural Water Pumping	0.00
Temporary Power User	412.34
Standby	14.49
Interruptible Power User	224.41
EV Charging Station	162.81
Public Lighting	517.14
On-site Use	48.14
Export	0.00

56,584.42

Electricity Generation Classified by Producer Category [including IPS]

- 25.44% **EGAT** | 66,735.38
- 24.50% **IPP** | 64,277.86
- 20.24% **SPP** | 53,101.12
- 13.72% **Import** | 35,985.04
- 5.50% **SPP Direct** | 14,414.45
- 6.06% **IPS*** | 15,890.76
- 4.54% **VSPP** | 11,909.62

Total 262,314.23 GWh

*Part of IPS figure was estimated.

Data as at 31 December 2024

Summary of Energy Situation in 2024

1. Overview of the World Economic and Energy Situation

The world economic situation in 2024 showed signs of recovery and stability, with rather stable energy prices although there were still trade barrier measures and conflicts in many regions around the world. Many central governments lowered policy interest rates to stimulate the economy as inflation rates began to decline. The global economy in 2024 had been driven by the widespread application of artificial intelligence (AI) technology and data center business, hence the increase in demand for electronic devices and computer chips. In addition, global energy demand increased as the economic situation had improved. Many countries, therefore, increased energy procurement from renewable energy sources to meet national targets of greenhouse gas (GHG) emissions reduction along with driving the economic growth.

The International Monetary Fund (IMF) has provided its outlook through the World Economic Outlook document (information as at October 2024), expecting that the global economy throughout 2024 would grow at 3.2%, divided into advanced economies and developing economies, growing at 1.8% and 4.2% respectively. The IMF forecasts that the global economic growth rate in the next five years will be at 3.1%, compared with the COVID-19 pandemic period, and that the world's average inflation rate will continue to decline from 6.7% in 2023 to 5.8% in 2024 and is projected to drop to 4.3% in 2025 due to the economic recovery of developed countries.

The Office of the National Economic and Social Development Council (NESDC) has reported that the global economic situation in Q4/2024 still increased, continuing from the preceding quarter, following the continued expansion of major economies, i.e. the United States and the Eurozone, including the Chinese economy which accelerated at the highest rate in 6 quarters, with the main driving force being the favorable expansion of domestic consumption in line with the expansion of the service sector amidst a still strong labor market and an increase in real wages, together with the continuous reduction of policy interest rates in many countries. Meanwhile, the manufacturing sector continued to slow down, particularly in major economies. The Purchasing Managers' Index (Composite PMI) for the manufacturing sector in the 4th quarter was at an average of 49.7, which was at a level below 50 for two consecutive quarters. Economies in the newly industrialized economies and ASEAN economies continued to expand in line with exports that favorably expanded. This was partly a result of accelerating exports to major economies ahead of the implementation of trade barrier measures by increasing import tariffs that are expected to be enforced after the new US president takes office in early 2025. This corresponded to the increase in inventories in major economies, while inflationary pressures had decreased in many countries, causing many central banks to continuously reduce policy interest rates.

However, the world economy in 2025 is likely to slow down, following the slowdown of the US economy due to the slowdown in the equipment and machine investment, which is consistent with the deceleration in goods exports. Likewise, the Chinese economy has slowed down following the domestic consumption and investment in the real estate sector. Meanwhile, the Eurozone and Japanese economies are likely to recover from low growth rates in 2024, with a driving force from the domestic demand recovery due to

real wage growth and a strong labor market. As for the developing economies and emerging markets, their economies are likely to expand continuously due to the increase in domestic demand and the goods export sector. The direction of monetary policy of major economies is likely to vary widely in 2025. It is expected that the US Federal Reserve will consider reducing interest rates carefully and at a slower pace when compared to its implementation in 2024 amid inflationary pressures that are likely to be more persistent (Sticky Inflation) as a result of a tight labor market combined with the implementation of measures to increase import taxes, which will affect production costs. Meanwhile, the European Central Bank is likely to continue lowering its policy interest rate to stimulate the domestic economy. The Bank of Japan is likely to raise the policy interest rate to reduce inflationary pressures that are likely to remain high as a result of rising wages and the depreciation of the yen. The uncertainty of economic situations resulting from the implementation of economic policies and different directions of monetary policy adjustments of major economies may create volatility affecting the global financial market and increase pressure on exchange rates and economic stability of developing economies and emerging markets.

Following the world's efforts to mobilize GHG emission reduction at the 28th Conference of the Parties, or COP28, the target has been set via clear Nationally Determined Contributions (NDCs) to limit the global temperature rise to no more than 1.5 degrees Celsius by tripling the world's renewable energy capacity and doubling energy efficiency improvements by 2030, without leaving anyone behind. For COP29, held in November 2024, it was defined as "Financial COP" as it would provide an opportunity to adjust financial support for climate change activities to be in line with global needs, with the New Collective Quantified Goal

on Climate Finance (NCQG) that aims to mobilize climate change projects together, by emphasizing the issues of funding, increasing role of the Green Climate Fund (GCF), closing the financing gap, implementing sustainable transition strategies, and compensation for damage caused by climate change impacts.

The global energy transition has been continuously implemented for over a decade. Despite momentum showing significant progress, the energy transition, in the short term, has been hindered by such emergencies as the COVID-19 pandemic, economic factors and supply chain limitations which cause challenges in investment capacity, lack of resources, and widespread power outages as a consequence of the energy crisis following geopolitical conflict, which is considered the most severe crisis in decades, leading to the highest level of inflation in decades, cost of living crisis and macroeconomic instability. However, investment in a variety of renewable energy types has outpaced investment in fossil fuels. Also, energy policy and climate change have become key issues for various implementations, both domestic and overseas. The geopolitical balance towards energy issues has changed dramatically—new energy businesses have emerged and have become a large-scale industry, drawing interest and participation of thousands of entrepreneurs to invest in such businesses as manufacturing of renewable energy technology components, production of important mineral resources, clean technology development and the trading of Renewable Energy Certificates (RECs); as a result, the boundary of energy innovation and business has been diversely redefined.

New alternative energy technologies and innovations, such as the use of hydrogen fuel in combination with fossil fuels, Small Modular Nuclear Reactor (SMR), energy storage system, demand response technology, and Carbon Capture, Utilization and Storage (CCUS) technology, will play an important role in increasing the proportion of electricity generation with low carbon emissions and increasing energy efficiency in response to the intention of achieving the goal of GHG reduction. Therefore, importance has been given by many countries to increasing the proportion of renewable energy generation and energy efficiency improvement, which will have impacts on the economy, society and environment.

2. Thailand's Economic Situation and Energy Direction

The Bank of Thailand (BoT) has reported the economic and inflation projection (as at 18 December 2024) that the economic growth rate is estimated at 2.7% in 2024, an increase when compared with 1.9% in 2023, and that the economy will continue to grow slightly at 2.9% in 2025. As for the general inflation rate, it is estimated at 0.4% in 2024 and is expected to increase to 1.1% in 2025.

The Office of the National Economic and Social Development Council (NESDC) has reported that the gross domestic product (GDP) in Q4/2024 increased by 3.2%, continuing from an increase of 3.0% in Q3/2024. Major factors were the accelerating agricultural production together with the increase in non-agricultural production aligning with the expansion of the service sector, especially the construction, accommodation & food services, and wholesale & retail trade sectors. Meanwhile, the manufactoring sector slowed down. On the expenditure side, export of goods & services and investment accelerated. Private final consumption continued to expand, while government final consumption slowed down. On 16 October 2024, the BoT reduced Thailand's policy interest rate from 2.50% per year to 2.25% per year, which was the first policy interest rate cut in 4 years.

The production of electricity, gas, steam and air-conditioning systems increased by 3.1%, accelerating from an expansion of 2.5% in Q3/2024, as a result of the increase in the electricity segment by 2.9%, accelerating from the preceding quarter, in line with the overall electricity consumption which increased by 2.4%, accelerating from the expansion of 2.1% in the previous quarter, pursuant to electricity consumption in the Residential, Medium General

Service and Small General Service categories, while the consumption of Large General Service decelerated. As for the gas separation plant segment, the production increased by 8.7%.

According to the Energy Transition Index (ETI) prepared on 6 November 2024 by the World Economic Forum, which is a benchmark that evaluates a country's energy system by looking at factors like energy equity, security and sustainability, Thailand is ranked the 60th in the world out of 120 countries. When compared with countries in Southeast Asia, Thailand ranks lower than Vietnam, Malaysia and Indonesia, which are ranked the 32nd, 40th and 54th respectively. This signals that Thailand should accelerate the energy transition, in terms of preparedness, development and application of energy innovations, infrastructure improvements and personnel knowledge, to increase the country's competitiveness to be comparable to others in the region and to be attractive for international investment.

Currently, the Energy Policy and Planning Office (EPPO) is preparing the National Energy Plan (NEP) that is consistent with the national target of GHG emission reduction and the global energy trends. Focus is placed on the electricity system security, reasonable electricity costs and environmental impact reduction, which poses a great challenge to proactively drive the energy balance (Energy Trilemma) along with the Just Transition so that Thailand would have the infrastructure readiness to support the energy transition on par with other countries.

At present, the EU's Carbon Border Adjustment Mechanism (CBAM) has been put into effect and is now in a transitional period, starting with the requirement on reporting on data on GHG emissions from the product manufacturing process before starting to impose a fine or a fee for GHG emissions occurring in the production process from importers of goods outside the EU as from 2026 onwards. Thailand, by the Excise Department, has got prepared by developing a carbon tax and negotiating with the EU to be able to deduct the carbon tax collected by the Excise Department from the EU's CBAM. In addition, the Department of Climate Change and Environment is preparing the Carbon Emissions Trading Scheme (ETS) based on the principle of setting a cap or ceiling of GHG emissions and allowance to trade the rights to emission reduction (Cap and Trade), which will be incorporated as part of the draft Climate Change Act that is expected to be enforced in 2026. Therefore, it is crucial for private manufacturers and entrepreneurs to get prepared for adjustment to enhance competitiveness of Thai businesses in the world market.

3. Natural Gas Supply and Demand Situations

Thailand's estimated natural gas supply volume in 2024 (January-December) accounted for 1,659,919,438.88 MMBTU, increasing by 5.19% when compared with the natural gas supply volume in the corresponding period in 2023, comprising natural gas from the Gulf of Thailand, 888,930,274.08 MMBTU (accounting for 53.55%); imports of liquefied natural gas (LNG), 589,799,601.66 MMBTU (35.53%); and imports of natural gas from the Republic of the Union of Myanmar, 181,189,563.14 MMBTU (10.92%).

The shares of natural gas demand in 2024 (data as at 31 December 2024) can be divided by natural gas user category as follows: SPP, decreasing by 1.96% (accounting for 31.59% share); IPP, increasing by 2.00% (23.21% share); industry, decreasing by 2.18% (23.17% share); and the Electricity Generating Authority of Thailand (EGAT), increasing by 2.13% (22.03% share).

4. Electricity Generation and Consumption Situations

In 2024, Thailand had a contractual power generating capacity of 55,831.76 MW (data as at 31 December 2024), classified by fuel type as follows: natural gas, 59.25%; hydropower, 7.14%; renewable energy, 13.92%; coal & lignite, 7.86%; and others 11.83%. If classified by type of power producers, it was found that the Independent Power Producers (IPPs) and EGAT had a combined electricity generation share of more than half of the country's electricity generation capacity, holding a generating capacity of 35.10% and 29.13% respectively.

Thailand's total electricity generation in the ultility system was 232,009.03 GWh (Jan-Dec 2024), classified by type of fuel in descending order of share as follows: natural gas, 135,004.66 GWh (accounting for a share of 58.19%); imported electricity, 35,985.05 GWh (15.51%); renewable energy, 23,232.24 GWh (10.01%); coal, 16,024.13 GWh (6.91%); lignite, 15,502.98 GWh (6.68%); hydropower, 6,225.03 GWh (2.68%); and oil, 34.93 GWh (0.02%). Given the generation shares, it reflects that Thailand still depends heavily on electricity generated from fossil fuels, which accounts for over 70% of the overall generation units from all types of fuel. Therefore, in order to increase energy stability of the country, consideration should be given to diversification of fuel sources for electricity generation, particularly renewable energy technologies which have now developed at a commercial scale.

Electricity consumption in 2024 (January-December 2024) by all electricity consumer categories increased by 7.46%, compared with the corresponding period in the previous year. The peak demand occurred in May, reaching 36,792.10 MW (on 2 May 2024), the highest in the past 5 years, accounting for an increase of 5.64% compared with the same period last year. If classified by electricity consumer category, it was found that the following categories accounted for a large share of electricity consumption, reaching 95.46% of the total consumption volume, i.e. Large General Service, increasing by 3.17% (representing a share of 36.24%); Residential Service, increasing by 7.72% (representing 28.88%); Medium General Service, increasing by 5.57% (representing 15.84%); Small General Service, increasing by 5.17% (representing 11.13%); and Specific Business Service, increasing by 12.07% (representing 3.37%), when compared with the same period in 2023. The increase in electricity consumption may be caused by two factors, i.e. rising temperatures during the summer, resulting in a greater electricity demand for air-conditioning, and the recovery of Thai economy, especially in the agricultural, industrial and service sectors.

Performance of the Energy Industry Regulation in Fiscal Year 2024

Performance Highlights in Fiscal Year 2024

1. Promoted proper and fair competition

This is a mission under the national policy which is complicated and must be considered in detail throughout the value chain in order to prevent problems in the implementation and must be completed expeditiously according to the timeframe for new shippers to enter the market. The OERC has studied guidelines to promote competition in the natural gas industry, Phase 2, pursuant to the National Energy Policy Council (NEPC) resolution of 13 February 2023 as well as analyzed and prepared a work plan and implementation duration to be in compliance with the targets specified under the mentioned policy. Major tasks can be summarized as follows:

1.1 Leveled up stringent regulation of natural gas procurement by devising regulations, notifications and criteria according to the policy on promotion of competition in the natural gas industry.

(1) Set the criteria for LNG procurement by Shippers for the Regulated Market and the Partially Regulated Market.

(2) Regulated the implementation in pursuance of the NEPC resolution designating PTT to act as Pool Manager, developed guidelines and regulated Pool Manager's operations to ensure compliance with the Ring-Fencing Guidelines.

(3) Developed the pricing criteria for LNG trading between Shippers in the Regulated Market via an Inter-Shipper/Shipper Agreement.

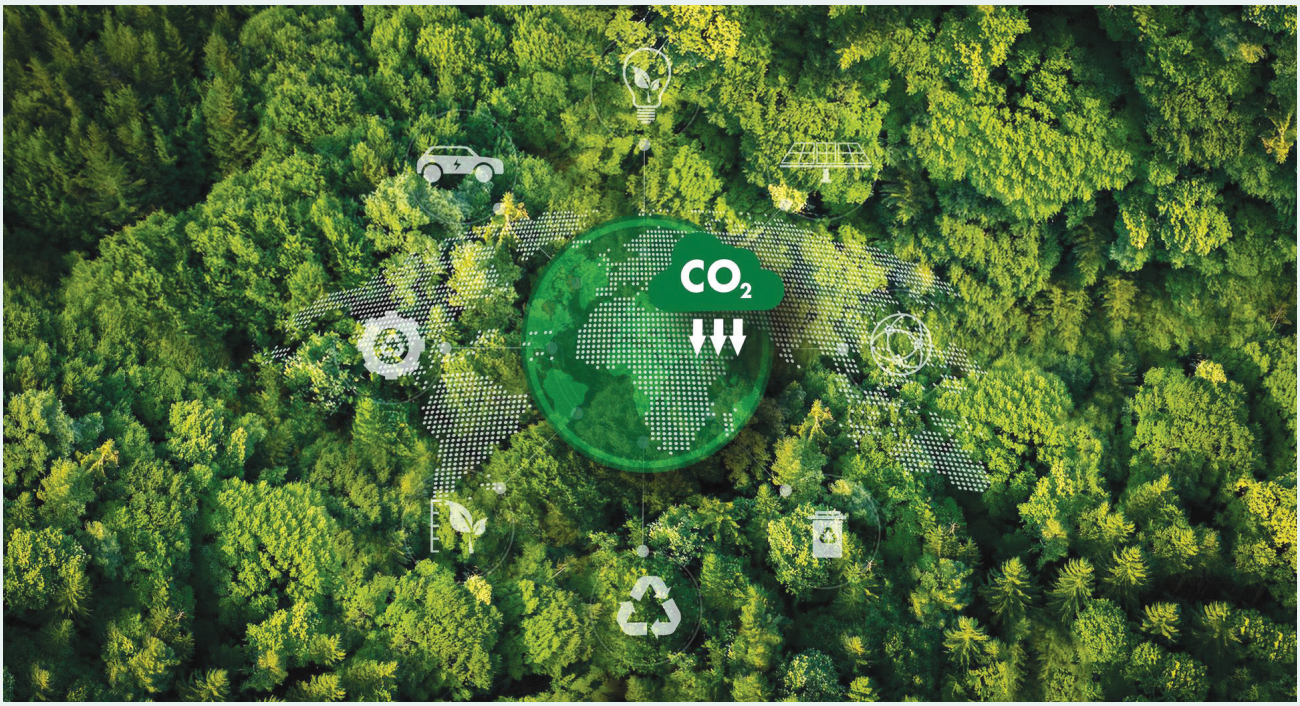
(4) Review the natural gas price structure to be consistent with the natural gas industry structure, Phase 2.

1.2 Reviewed and developed the ERC regulations on engineering and safety standards in natural gas industry operations for regulating the natural gas infrastructure which consists of the natural gas transmission pipeline system, the natural gas distribution pipeline system and LNG Terminals throughout the life cycle of individual infrastructure—from design, construction, system testing, operation & maintenance to suspension or termination of utilization—including reporting of relevant matters, under both normal and emergency situations, to ensure that the natural gas infrastructure meets international standards and is safe for business operations.

1.3 Regulated the natural gas network efficiently by developing/reviewing the manual for natural gas network system expansion plan so that natural gas retail through distribution pipeline system licensees could prepare information correctly and comprehensively, which will reduce errors and help reduce the working time of the licensees.

1.4 Reviewed the natural gas price structure to be consistent with the natural gas industry structure, Phase 2, by improving the formula for calculating natural gas prices in accordance with the NEPC resolution, stipulating the establishment of a natural gas manager (Pool Manager) to be consistent with the new market structure which is more competitive. Such preparation will help promote competition in the natural gas market, reduce monopoly and enhance efficiency of energy management as a whole. This will not only reduce energy cost for the country but also create energy security and result in fairer and more transparent energy prices for the people.

2. Supported the mobilization of Thailand towards clean energy according to the National Energy Plan framework and to accommodate the increasing demand for electricity from renewable energy from the commercial and industrial sectors.



2.1 Regulated power purchase from renewable energy generation to be supplied to the grid in compliance with the plan to increase electricity generation from clean energy under the policy prescribed by the NEPC and the Committee on Energy Policy Administration (CEPA). This aims to reduce greenhouse gas emissions pursuant to the policy to achieve Carbon Neutrality by 2050 and Net-zero Emissions by 2065. The implementation in this regard included the issuance of regulations and notifications as well as the regulation of power purchase from renewable energy generation in a fair and transparent manner, without discrimination, including strictly overseeing the selection to comply with the power purchase regulations and notifications as well as regulating the selection process with fairness and transparency, giving confidence to the public that the ERC will strictly regulate and monitor impacts from business operations in accordance with the rules and laws for the benefit of the people as a whole.

2.2 Determined the Utility Green Tariff (UGT) to provide an alternative for electricity consumers in the retail electricity tariff structure. This aims to accommodate the demand for electricity generated from renewable energy of the commercial and industrial sectors, in particular the businesses that are required to comply with the conditions under the Carbon Border Adjustment Mechanism (CBAM) measure of the European Union.

2.3 Regulated the development of the draft Third Party Access Code for the Use of an Electricity Network System (TPA Code) to be ready to support the promotion of competition in the electricity industry according to the target set in the National Energy Reform Plan and the government policy, pursuant to the NEPC resolution of 25 June 2024, approving the measure allowing the private sector to execute a Direct Power Purchase Agreement (Direct PPA).

2.4 Revised the criteria for receiving notification of the commencement of business operation for Solar Rooftop projects. An OERC notification was issued on 28 November 2023 regarding the receipt of notification of the commencement of electricity generation business for solar rooftop power projects via the online channel, together with the design of a Self-Declaration Report. Concurrently, the authority for receiving notifications from Solar Rooftop projects has been decentralized to

all 13 OERC Regional Offices nationwide in order to reduce procedures and create greater flexibility in operations so as to facilitate this category of licensees to be able to start COD more quickly, reduce operating costs for both the government and entrepreneurs, respond to the government policy that encourages the public sector, the private sector and the general public to use clean energy, especially solar-PV systems installed on the rooftops, which will lead to GHG reduction and eventually to Carbon Neutrality.

2.5 Promoted the use of renewable energy and technologies for electricity industry operation that have minimal impact on the environment according to Section 97(4). The ERC approved a budget allocation to support the installation of solar-PV generation systems for 73 public health agencies and social development and human security agencies under the Project on Promotion of Electricity Generation from Renewable Energy—Strategic Grant, with connection to the electricity network system (On-grid). In 2024, the OERC implemented the Project on Promotion of Electricity Generation from Solar Energy in 73 Locations to commemorate the auspicious occasion of His Majesty the King's 6th Cycle (72nd) Birthday Anniversary. The ERC and the OERC supported the budget for installation of solar-PV generation systems for 73 public hospitals, accounting for a total budget of 457,192,500.00 Baht and a total installed capacity of 15,597 kilowatts peak. It is expected that carbon dioxide emissions can be reduced by a total of 11,872 tons of carbon dioxide equivalent per year and the burden of electricity bills on these government agencies can be reduced, in total, by 86,213,686 Baht per year.

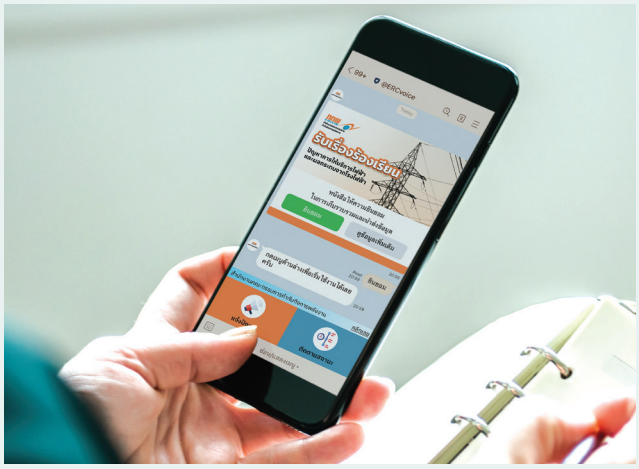
3. Supported extensive electricity services pursuant to the government policy.

The ERC issued the Notification on Criteria for Determining Electricity Tariff on Island Areas B.E. 2567 (2024), already published in the Government Gazette on 12 June 2024, aiming at extensive expansion of electrification to various areas according to the policy on determination of the electricity tariff structure for 2021 - 2025, approved by the NEPC on 1 April 2021.

4. Regulated energy industry operation to be efficient, safe and eco-friendly.

Revised the regulation on hearing and creating understanding of the public and stakeholders about license granting for solar-rooftop power plants. The installation of solar panels on rooftops of a small project, of which the impact is low, is not required to arrange a hearing, except for the case where such a project is located on an area surrounded by high buildings, which may create impact of light reflection on the community in the project vicinity. The revision aims to reduce unnecessary processes and procedures so as to support electricity generation from solar energy.

5. Leveled up the protection of energy consumers' rights.



5.1 Created a new channel for receiving complaints about electricity service problems for the public through Line Official "ERC Receives Complaints" or Line ID @ERCvoice, which is on the Fondue Manager Application, so as to provide people who are energy users with a more convenient and quicker channel to notify problems and to create cooperation with the Electricity Distribution Utilities in solving problems of the people. The system has been put into operation since 28 May 2024.

5.2 Revised the conditions for placing a customer guarantee deposit (CGD) for large power consumers. The ERC has approved the proposed guidelines for revising the conditions for placing a CGD for large power consumers under Schedule 3: Medium General Service, Schedule 4: Large General Service, and Schedule 5: Specific Business Service, with a good record of electricity bill payments. In this connection, the power distribution utilities, i.e. the Metropolitan Electricity Authority (MEA), the Provincial Electricity Authority (PEA) and the Sattahip Electricity Authority—the Royal Thai Navy Welfare Concession (SEA), have been instructed to revise the conditions for placing a CGD for large power consumers who have a good record of electricity bill payment. This will be effective as from the billing round in early 2025 onwards.

6. Managed the Power Development Fund for sustainable development.

Developed or rehabilitated localities affected by power plant operation, pursuant to Section 97(3). The ERC approved a budget allocation of 2,872.84 million Baht for carrying out community projects in designated areas, divided into an administration budget of 312.82 million Baht and a community project budget of 2,560.02 million Baht for implementing 6,703 projects in the following aspects: public health, education, community economy, environment, public utilities, community energy and others which contribute to community development.

In addition, the OERC continuously increases efficiency and standards of the operations of local Power Development Funds in designated area, by organizing training to increase relevant knowledge of the Community Development Committee for areas surrounding a power plant (CDC) and the local Power Development Funds officials to be ready to manage and motivate realization of community projects that are effective and beneficial to the communities in areas surrounding a power plant according to the objectives.

Performance of the Energy Industry Regulation in Fiscal Year 2024

In regulating the energy industry in Fiscal Year 2024, the ERC emphasized the execution of its mission as mandated under the Act, by conducting operations pursuant to the Annual Work Plan for Fiscal Year 2024 under the Action Plan for Energy Industry Regulation, Phase 5 (2023 - 2027). The Fiscal Year 2024 performance in compliance with the five objectives can be summarized as follows.

Objective 1

To promote sufficient, secure and extensive energy service provision, while ensuring fairness to both energy consumers and licensees

Target 1: Regulated energy procurement to be sufficient, extensive and secure to accommodate the energy transition

1.1 In order to support the mobilization of Thailand towards clean energy according to the National Energy Plan (NEP) framework and to accommodate increasing demand for electricity generated from renewable energy of the commercial and industrial sectors, the OERC has carried out operations and accomplished the defined targets and work plans, as detailed in the following.

The status of power procurement from renewable energy generation as at 30 September 2024 can be summarized as follows. There are 22,799 power producers from renewable energy that have committed to supply electricity to the utility grid system, with a combined contracted capacity of 13,141 MW, classified into: (1) 19,083 projects that are commercially supplying electricity to the grid, i.e. commercial operation date (COD) started, with a contracted capacity of 7,554 MW; (2) 2,315 projects with Power Purchase Agreements (PPAs) signed, pending COD, with a contracted capacity of 2,739 MW; and (3) 1,401 projects having been notified of power purchase acceptance, with a contracted capacity of 2,848 MW. In addition, there are 30,181 projects generating electricity from renewable energy for one's own use and selling to direct customers, with a combined installed capacity of 4,986 MW.

Status of Power Generation from Renewable Energy

Fuel	RE generation producers having committed to supply electricity to the grid[1/]		Power Producers, using renewable energy as fuel, for one's own use and sale to direct customers	
	No. of Projects	Contracted Capacity (MW)	No. of Projects	Installed Capacity (MW)
(1) Waste	**83**	**675**	**-**	**-**
- Municipal Solid Waste	62	535	-	-
- Industrial Waste	21	140	-	-
(2) Biomass	**282**	**2,401**	**48**	**1,016**
(3) Biogas	**234**	**494**	**61**	**169**
(4) Hydropower	**84**	**172**	**2**	**1**
(5) Wind Energy	**62**	**2,995**	**-**	**-**
(6) Solar Energy	**22,049**	**6,385**	**30,054**	**3,541**
- Solar Farm	666	5,686	276	226
- Solar Rooftop	6,149	131	29,719	3,103
- Floating Solar	2	70	59	211
- Solar—Government/Agricultural coop. (Phases 1 & 2)	98	422	-	-
- Solar PV Rooftop—People Sector	15,134	76	-	-
(7) Other REs[2/]	**5**	**19**	**16**	**259**
Total	**22,799**	**13,141**	**30,181**	**4,986**

Source: Power purchase of EGAT, MEA and PEA.
Remarks: Data as at 30 September 2024
[1/] RE generation producers having committed to supply electricity to the grid mean projects that are commercially supplying electricity to the grid, projects with PPAs signed, and projects having been notified of power purchase acceptance.
[2/] Other REs refer to electricity generation using waste heat from the manufacturing process and geothermal energy.

In Fiscal Year 2024, the ERC issued regulations and notifications as well as regulated power purchase from renewable energy generation according to the policies prescribed by the National Energy Policy Council (NEPC) and the Committee on Energy Policy Administration (CEPA), comprising five programs as follows:

(1) Program on Power Purchase from Renewable Energy Generation under the Feed-in Tariff (FiT) Scheme for the Period 2022 - 2030, pursuant to the NEPC resolution of 6 May 2022. The objective is to purchase electricity generated from renewable energy of projects which have no fuel cost, with a targeted purchase volume of 5,203 MW, divided into four fuel types: (1) biogas (wastewater/waste), (2) wind energy, (3) ground-mounted solar energy (solar farms), and (4) solar farms combined with battery energy storage systems (solar farms+BESS). On 5 April 2023 the OERC announced the name list of 175 selected projects, with a combined proposed sale capacity of 4,852.26 MW, as detailed below.

Fuel Type	Target (MW)	Awarded Projects	
		No. of Projects	Proposed Sale Capacity (MW)
Biogas (wastewater/waste)	335	-	-
Wind Energy	1,500	22	1,490.20
Ground-mounted Solar Farms + BESS: Small Power Producers (SPPs)	1,000	24	994.06
Ground-mounted Solar Farms	2,368	129	2,368.00
Total	5,203	175	4,852.26

Currently, all 28 projects of renewable energy generation, under the type of Ground-mounted Solar Energy (Solar Farm) and that of Solar Farm combined with Battery Energy Storage System (solar farms+BESS), with a scheduled commercial operation date (SCOD) during 2024 - 2025, have already signed PPAs.

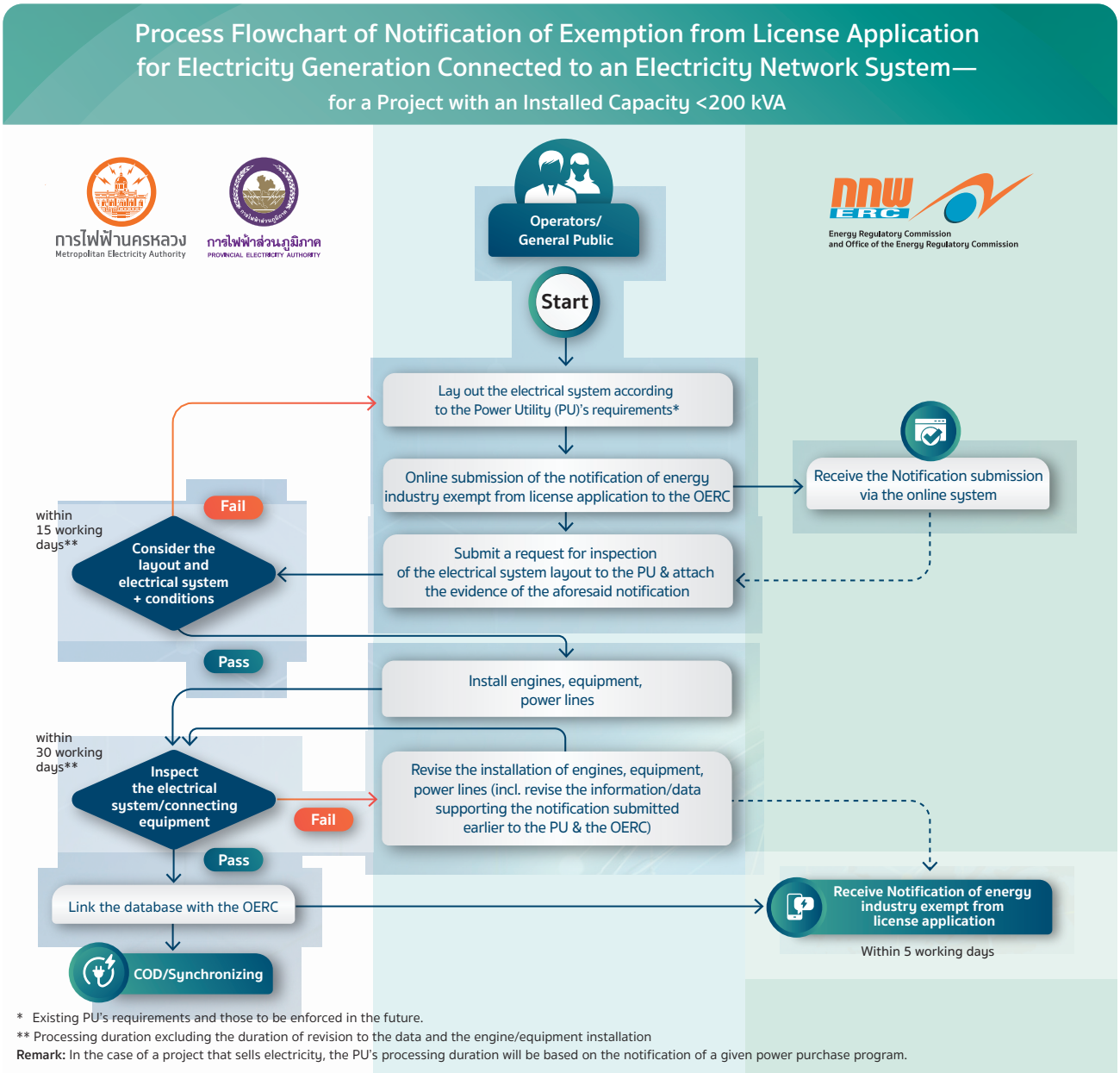
(2) Program on Power Purchase from Renewable Energy Generation under the Feed-in Tariff (FiT) Scheme for the Period 2022 - 2030 (Addition), pursuant to the NEPC resolution at its Meeting No. 2/2023 (165th) on 9 March 2023, directing to open up additional power purchase from renewable energy generation, with a total purchase capacity of 3,668.50 MW, comprising the following fuel types: (1) Solar Farm: 2,632 MW, (2) Wind Energy: 1,000 MW, (3) Biogas (wastewater/waste): 6.50 MW; and (4) Industrial Waste: 30 MW. Accordingly, the ERC issued the ERC Regulation on Procurement of Power from Renewable Energy Generation under the Feed-in Tariff (FiT) Scheme during 2022 - 2030 for Projects with No Fuel Cost B.E. 2565 (2022), (Addition) B.E. 2567 (2024), and then the Notification on Solicitation for Power Purchase from Renewable Energy Generation under the Feed-in Tariff (FiT) Scheme during 2022 - 2030 for Projects with No Fuel Cost B.E. 2565 (2022), (Addition) B.E. 2567 (2024), in order to select additional power projects, pursuant to the NEPC principle, from the applicants to generate electricity who passed the consideration criteria, i.e. the Minimum Technical Readiness (Pass/Fail Basis) and the Readiness Assessment Scoring but were not selected in the previous round because the procurement quota had already been fulfilled, with a targeted purchase capacity from Wind Energy projects at 600 MW and from Solar Farm projects at 1,580 MW. The implementation is currently underway.

(3) Program on Power Purchase from Renewable Energy Generation under the FiT Scheme for Industrial Waste, pursuant to the NEPC resolution of 22 June 2022, with the SCOD in 2026. A total sale capacity of 100 MW was proposed, and all 13 projects have already signed PPAs, with a total proposed sale capacity of 100 MW as targeted.

(4) Program on Purchase of Power from Municipal Solid Waste under the FiT Scheme, pursuant to the NEPC resolutions of 5 November 2021 and 6 May 2022, with the SCOD set during 2025 - 2026. To date, 29 projects have applied to sell electricity, with a total proposed sale capacity of 239.08 MW. Of these, 20 projects have already signed PPAs, accounting for a total sale capacity of 184.08 MW.

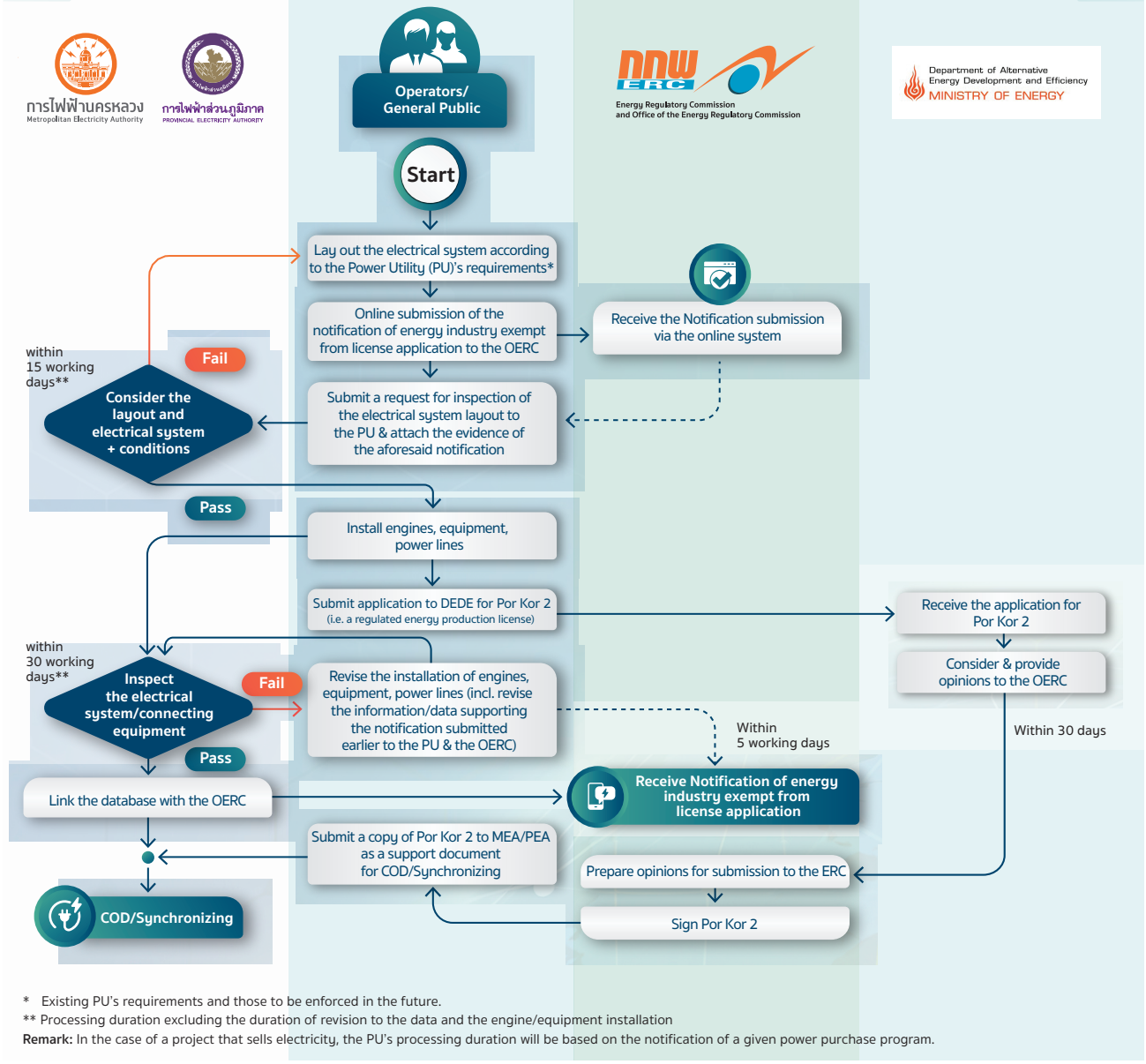
(5) Program on Solar PV Rooftops for the People Sector, pursuant to the NEPC resolution of 9 March 2022, aiming to encourage people to generate electricity for their own use and to be able to sell excess capacity to the grid. According to the data as at 30 September 2024, 16,342 applicants have signed PPAs, with a combined installed capacity of 89,490 kWp and 12,362 prosumers have commercially supplied electricity to the grid, with a combined installed capacity of 68,237 kWp.

1.2 Revised the criteria for acceptance of the business commencement notification for solar-rooftop power projects. The ERC approved the review of procedures and criteria for acceptance of the business commencement notification for solar-rooftop power projects. This is aimed to facilitate this category of licensees to be able to start COD more quickly and to reduce operating costs of both the government and the operators, which responds to the government policy to encourage the public sector, the private sector and the general public to use clean energy, especially solar energy by installing solar-PV systems on the rooftops. In this connection, an OERC notification dated 28 November 2023 was issued regarding the acceptance of notification of the commencement of electricity business operation for solar-rooftop power projects, via the online channel (e-License), including devising a Self-Declaration Report form to cover information of all dimensions required for consideration of acceptance of the notification of business commencement, similar to the existing practice; the form has already been publicized on the OERC website to inform the operators and those involved to comply with. At the same time, the OERC has decentralized the authority to accept notifications of solar-rooftop projects to all 13 OERC Regional Offices in order to reduce procedures and create greater flexibility in the operation.



* Existing PU's requirements and those to be enforced in the future.
** Processing duration excluding the duration of revision to the data and the engine/equipment installation
Remark: In the case of a project that sells electricity, the PU's processing duration will be based on the notification of a given power purchase program.

Process Flowchart of Notification of Exemption from License Application for Electricity Generation Connected to an Electricity Network System— for a Project with an Installed Capacity ≥200 kVA and <1,000 kVA



* Existing PU's requirements and those to be enforced in the future.
** Processing duration excluding the duration of revision to the data and the engine/equipment installation
Remark: In the case of a project that sells electricity, the PU's processing duration will be based on the notification of a given power purchase program.

"ERC" supports the government policy promoting the use of solar energy to reduce electricity bills, create Green business opportunities and mitigate global warming

On 26 - 27 October 2023, Mr. Samerjai Suksumek, ERC Chairman, presided over the opening ceremony of a seminar to create knowledge and understanding of "Licensing Criteria for Solar Energy Power Plants" at the Queen Sirikit National Convention Center to build up understanding of comprehensive procedures for applying for a license and the regulation that governs solar project operations—Day 1 for energy industry licensees and relevant business associations; Day 2 for government agencies, service providers or those interested in installing solar power generation systems, with over 350 participants each day. At the event, participants' questions were addressed and consultancy was given regarding the application for solar cell installation.

1.3 Regulated electricity services to ensure extensive electrification pursuant to the government policy. The OERC has carried out the following:

(1) Compensated and subsidized electricity industry licensees who have provided services for underprivileged power consumers or to enhance extensive electrification according to the government policy on development decentralization to provincial areas, via the Power Development Fund under Section 97(1), accounting for 14,250 million Baht (data as at September 2024).

(2) In order to act in pursuance of the policy on determining the electricity tariff structure for 2021 - 2025, which was approved by the NEPC on 1 April 2021, the ERC has issued the Notification on Criteria for Determining Electricity Tariff for Electrification Expansion to Island Areas B.E. 2567 (2024) to serve as guidelines for determining electricity tariff for electrification expansion to extensively reach various locations.

1.4 Promoted the use of renewable energy. The ERC together with the OERC provided budget for installing solar-PV generation systems at government agencies under the Project on Promotion of Electricity Generation from Renewable Energy—Strategic Grant, via the financial support from the Power Development Fund under Section 97(4). In 2024, the ERC approved a budget allocation to support the installation of solar-PV generation systems for public health agencies and social development and human security agencies under the Project on Promotion of Electricity Generation from Renewable Energy—Strategic Grant, with connection to an electricity network system (On-grid). In particular, for the **Project on Promotion of Electricity Generation from Solar Energy at 73 Locations to Commemorate the Auspicious Occasion of His Majesty the King's 6th Cycle (72nd) Birthday Anniversary,** the ERC together with the OERC has supported a budget from the Power Development Fund under Section 97(4) for installation of solar-PV generation systems for 73 government hospitals, within a total budget of 457,192,500 Baht and a total installed capacity of 15,597 kWp, aiming to reduce electricity expenses of those hospitals and expecting that their electricity bills can be reduced by 86,213,686 Baht per year. Moreover, the hospitals can use the amount of money saved to improve medical and public health services for the general public. Such project implementation can reduce carbon emissions by a total of 11,872 tons of carbon dioxide equivalent per year.

Ministry of Energy, ERC and state-owned enterprises under the supervision of the Ministry of Energy jointly responded to the royal wish by implementing a project to improve the quality of life for the Thai people to celebrate the auspicious occasion of HM the King's 6th Cycle (72nd) Birthday Anniversary, 28 July 2024.

On 24 July 2024, Mr. Pirapan Salirathavibhaga, Deputy Prime Minister and Minister of Energy, along with the ERC, senior executives of government agencies as well as EGAT and PTT, jointly paid homage to His Majesty the King and held a press conference, "The Celebrations in honor of HM the King on the auspicious occasion of HM the King's 6th Cycle Birthday Anniversary, 28 July 2024," at Baan Pibultham, on the premises of the Department of Alternative Energy Development and Efficiency, Bangkok.

Target 2: Increase efficiency of the energy management system

The OERC has reinforced energy management efficiency, which can be summarized as follows:

2.1 Examined power system investment projects of the Power Utilities and the data on power dispatching orders of EGAT in order to examine the planning of investment in the power system in the aspects of power demand, security and service quality, including guidelines for improving the power dispatching order so that the regulation of the System Operator's dispatching orders and consideration of the plans for investment in the power system would be more efficient.

2.2 Developed an information system for regulating the natural gas industry so as to achieve efficient natural gas management.

2.3 Developed the electricity procurement system to ensure compliance with the Thailand Power Development Plan or the National Energy Plan and government policies in order to accommodate proposals to sell electricity and to monitor the outcome of power purchase via a digital system, and linked the system with the licensing and Power Development Fund information systems.

Objective 2

To promote fair competition in the energy industry, with reasonable tariffs that reflect the cost of efficient energy industry operation

Target 1: Improving the natural gas industry regulation to enhance fair competition.

The OERC has improved and developed regulations, notifications and criteria to enhance competition in the natural gas procurement and wholesale business and to provide opportunities for natural gas procurement and wholesale licensees (Shippers) to access the natural gas infrastructure on an equal and fair basis. The implementation can be summarized as follows.

1.1 Regulated the operation in pursuance of the NEPC resolution designating PTT to act as Pool Manager:

(1) Issuance of the ERC Notification on Determination of Types and Tenure of Licenses for Energy Industry (No. 2) B.E. 2566 (2023), and on 29 November 2023 the ERC issued the Pool Gas Management license to PTT, with a five-year tenure as from the date of license issuance.

(2) Issuance of the Notification on Framework for Regulating the Pool Gas Management Licensee (Pool Manager) B.E. 2566 (2023), and on 14 February 2024 the ERC approved the Ring-fencing Guidelines for the Pool Manager. Currently, the OERC is pursuing the development of the Pool Manager's ring-fencing to be accomplished within the specified timeframe.

(3) On 27 March 2024 the ERC approved in principle the manual for calculating natural gas price in the part of the method for calculating a gas purchasing price, the invoice and the payment method so that it could be used by the Pool Manager for calculating the Pool Gas price for the month of March 2024 and onwards.

1.2 Set the criteria for LNG procurement by Shippers for the Regulated Market and the Partially Regulated Market. The ERC passed a resolution stipulating the use of light-handed criteria for LNG procurement according to the business-as-usual practice in Thailand. The criteria was trialled by EGAT Shipper and the trial outcome was reported to the ERC. The OERC finalized reviewing the criteria for use as practice guidelines on LNG procurement for all Shippers and prepared the ERC Regulation on Liquefied Natural Gas Procurement for the Regulated Market and the Partially Regulated Market, which has already been published in the Governmant Gazette since 30 October 2024. Moreover, the ERC has approved the draft regulatory framework for LNG procurement for the LNG Truck Loading business to be used for regulating business operations in the Partially Regulated Market, and the draft regulatory framework for LNG procurement in the form of Co-loading to be an alternative to encourage small Shippers' participation in LNG imports without contradicting the LNG Terminal rules and causing no substantial impact on the inventory of the power generation sector. The draft regulatory frameworks are to be implemented, on a trial basis, for six months.

1.3 Set guidelines for considering prices for LNG procurement. On 5 July 2023, the ERC approved the guidelines for considering prices for LNG procurement under a short-term contract and spot LNG with reference to the Japan-Korea Marker (JKM) price for all Shippers to use as a basis for considering prices of spot LNG and short-term contract LNG so that price consideration would be reliable and consistent with current market conditions, including the setting of the JKM price framework, adjusted with the constant value of X equal to "0", so as to allow greater price competition. However, in the event that market conditions alter, the OERC will propose adjustment to the X value, as deemed appropriate.

1.4 Evaluated the utilization of natural gas pipelines and LNG terminals as well as examined guidelines for managing natural gas pipelines and LNG terminals with multiple Terminal Operators to maximize the benefits. The OERC, together with PTT TSO, has developed recommendations on the guidelines to reduce constraints in the management of natural gas pipelines and LNG terminals to solve the problem of inequality of access to the gas pipeline system and the congestion of the LNG terminal capacity reservation.

Target 2: Improving rules and regulations for overseeing the trading of electricity generated from renewable energy

In order to encourage energy users and the commercial and industrial sectors to have access to and to use clean energy at a reasonable price and also to be prepared to accommodate the growth in the private sector demand for renewable energy generation and the policy on the trading of electricity generated from renewable energy according to the National Energy Plan framework, the OERC has developed rules and regulations to accommodate Green Energy, which can be summarized as follows.

2.1 The ERC issued the Notification on Criteria for Providing Green Electricity and Setting Green Electricity Tariff (Utility Green Tariff: UGT) B.E. 2566 (2023), which was published in the Government Gazette on 8 January 2024. Subsequently, on 28 February 2024, the ERC approved the proposed UGT1 rate (unspecified source of electricity) of the Electricity Generating Authority of Thailand, the Metropolitan Electricity Authority and the Provincial Electricity Authority, inclusive of a retail premium rate, at 0.0594 Baht/unit. The Power Utilities were then assigned to announce their UGT1 rate and to prepare an Electricity Supply Agreement (ESA) for this service provision.

Forging ahead with "Clean Energy" via Utility Green Tariff to Drive the Industrial Sector, Economy and Investment

On 15 January 2024, at Baan Pibultham on the presmises of the Department of Alternative Energy Development and Efficiency, Mr. Pirapan Salirathavibhaga, Deputy Prime Minister and Minister of Energy, and Ms. Pimpattra Wichaikul, Minister of Industry, along with Mr. Samerjai Suksumek, ERC Chairman; Mr. Prasert Sinsukprasert, Permanent Secretary of the Ministry of Energy; and Mr. Yuthasak Supasorn, Chairman of the Industrial Estate Authority of Thailand, attended a press conference—Forging ahead with "Clean Energy" via Utility Green Tariff—which supports the government policy to speed up and welcome greater foreign direct investments (FDI) to Thailand, which is a key factor to drive Thailand's economic growth.

OERC shared experience in developing "Green Electricity" at an IEA forum

On 7 June 2024, Mr. Phuwanart Choonhapran, Assistant Secretary General of the OERC, attended an international forum, comprising representatives of national energy industry regulatory organizations and representatives of industry stakeholders and policy-making agencies, organized in Singapore by the International Energy Agency (IEA) in collaboration with the Energy Market Authority (EMA) of Singapore. More than 160 participants from 19 countries joined the event. The OERC delegate was honored to deliver Thailand's experience in regulatory development for the Utility Green Tariff (UGT) management; he also joined a panel discussion to exchange views on the ASEAN Interconnection Master Plan Study and

presented Thailand's vision of the development and promotion of cross-border power trade, including operational strategies of the OERC, to the benefit of IEA and IEA member countries.

2.2 Developed the Third Party Access Code for the Use of an Electricity Network System to be prepared to support the policy on promotion of competition in the electricity industry in the future, pursuant to the NEPC resolution of 25 June 2024, approving the guidelines for implementing a pilot project on purchase of electricity generated from renewable energy in the form of Direct Power Purchase Agreement (Direct PPA), via a request to use electricity network system facilities by a third person (Third Party Access: TPA) so as to encourage foreign investment in the industrial sector, especially in establishing a Data Center, with a target framework of no more than 2,000 MW, including the determination of the TPA tariff (Wheeling Charge).

2.3 Examined and analyzed data on the implementation of the program on trials of technological innovations to support energy service provision (Energy Regulatory Commission Sandbox: ERC Sandbox). The OERC announced an additional name list of 29 projects selected to participate in the ERC Sandbox Program, divided into three groups: 1) renewable energy generation trading via platforms, 23 projects; 2) new power purchase agreement (PPA) models: 1 project; and 3) technologies to enhance the power grid's flexibility to support increasing renewable energy generation, 5 projects. Trials would be carried out to examine the technical, commercial, regulatory framework and network system aspects and to collect data for further analysis of the impact, advantages and constraints with a view to improving rules, regulations/criteria to support the policy on promotion of competition in the electricity industry in the future.

2.4 Created academic cooperation with energy regulatory agencies and organizations at the ASEAN and international levels so as to exchange energy knowledge and experience, which will be beneficial to the enhancement of energy industry regulation during the energy transition. On 16 - 17 May 2024 the OERC organized an international academic forum on energy, "the ERC Forum 2024: Renewable and Sustainable Energy Transition," at the Queen Sirikit National Convention Center (QSNCC). The event was attended by representatives of energy regulatory agencies from ASEAN member states, international energy-related organizations from both public and private sectors, and member countries of the Energy Regulators Regional Association (ERRA). In addition, the OERC co-hosted with ERRA "The 21st ERRA Annual Conference," which was organized at the same venue concurrently with the Future Energy Asia 2024—an energy transition conference in Asia, including exhibition and showcases of energy businesses to move towards achievement of the goal of net-zero GHG emissions, with participation of energy-related agencies—policy makers, global energy leaders, project developers, investors and foreign organizations.

OERC organized ERC Forum 2024 to mobilize clean, sustainable energy

On 17 May 2024, at the international academic forum on energy, "the ERC Forum 2024: Renewable and Sustainable Energy Transition," organized by the OERC at the Queen Sirikit National Convention Center, the event was honored by Ms. Supamas Isarabhakdi, Minister of Higher Education, Science, Research and Innovation of Thailand, who gave a special lecture on "Science and Technology for Energy Transition" to communicate the government policy and to exchange knowledge, technology as well as the development of related infrastructure to support the electric vehicle (EV) industry in Thailand, along with vigorous implementation with the aim of establishing adequate and extensive EV charging stations that can be accessed by the public, in line with the goal of the government under PM Srettha Thavisin's administration, to push Thailand to be the EV Hub in the Asia-Pacific region.

Target 3: Having reasonable and fair energy tariffs that reflect the cost of efficient energy industry operation

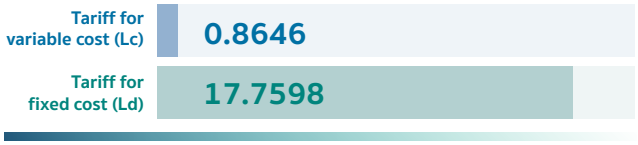
In Fiscal Year 2024, the OERC managed the increasing costs of electricity generation during the energy price crisis and revised the criteria for determining energy tariffs so that the tariffs would be reasonable and fair and reflect the cost of efficient energy industry operation, in compliance with specified targets and work plans, which can be summarized as follows.

3.1 Reviewed the natural gas price structure to be consistent with the Natural Gas Industry Structure, Phase 2, by revising the natural gas price calculation formula, pursuant to the NEPC resolution of 13 February 2023, to be consistent with the natural gas price structure to accommodate competition in the natural gas industry in Phase 2, which requires that an entity be established and tasked with natural gas management (Pool Manager) and the management of natural gas supply to gas separation plants, according to the NEPC resolution of 13 December 2023.

3.2 Regulated tariffs in the natural gas industry to be reasonable and reflect the cost and efficiency of natural gas industry operation, in compliance with the guidelines prescribed under Section 65 of the Act. The ERC considered the proposed calculated tariffs in the natural gas industry pursuant to the regulatory round as follows:

(1) Adjusted the tariff for LNG terminals in the part of variable cost (Lc) for the year 2024 for Map Ta Phut LNG Terminal 1 (LMPT1) and Map Ta Phut LNG Terminal 2 (LMPT2) of PTT LNG Company Limited at the rate of 0.8646 Baht per MMBTU, effective from 1 April to 31 December 2024.

LNG Receiving Terminal Tariffs (Baht/MMBTU)



(2) Adjusted the tariff for LNG terminals in the part of fixed cost (Ld) for the regulatory round of 2023 - 2027 for LMPT1 and LMPT2 of PTT LNG Company Limited at the rate of 17.7598 Baht per MMBTU, which is the price ceiling for the company to charge to customers, effective as from March 2024 onwards.

(3) Approved the tariffs of natural gas procurement and wholesale operators (Shippers) for the period 2024 - 2028 at a level that will not affect the electricity price, to be used as the service charge rates at the initial stage to promote competition in the natural gas procurement and wholesale business in 2024, effective as from March 2024 onwards. That is, the rate for power plants of EGAT, Independent Power Producers (IPPs) and District Cooling System and Power Plant Co., Ltd. (DCAP) is 4.9400 Baht/MMBTU; and that for Small Power Producers (SPPs) is 5.4660 Baht/MMBTU. As for natural gas users under the groups of Distributors, natural gas for vehicles (NGV), gas separation plants (GSPs), licensees for natural gas transmission via the natural gas transmission pipeline system (Transmission System Operator: TSO) and power plants that generate electricity for one's own use and direct sale (Independent Power Supply: IPS), the tariff calculation shall be based on the existing averaged gas price method, exclusive of the offshore pipeline throughput cost, until the consideration of tariff adjustment according to the criteria stipulated by the ERC is finalized.

(4) Approved natural gas tariffs in the part of fixed cost (Td) and that of variable cost (Tc) of the licensee operating natural gas transportation through the natural gas transmission pipeline system.

Tariffs for Natural Gas Transmission through the Natural Gas Transmission Pipeline System

Zone	Tariff Charged (Baht/MMBTU)
1) Td tariffs*	
Zone 1 : Offshore natural gas transmission pipeline, including TTM	12.8869
Zone 2 : Onshore natural gas transmission pipeline, at Khanom	2.1135
Zone 3 : Onshore natural gas transmission pipeline	11.6894
Zone 4 : Onshore natural gas transmission pipeline, at Chana	1.0061
Zone 5 : Onshore natural gas transmission pipeline, at Namphong	0.2693
2) Tc tariffs**	
Zone 1 : Offshore natural gas transmission pipeline, including TTM	0.2207
Zone 2 : Onshore natural gas transmission pipeline, at Khanom	0.0248
Zone 3 : Onshore natural gas transmission pipeline	1.9304
Zone 4 : Onshore natural gas transmission pipeline, at Chana	0.0806
Zone 5 : Onshore natural gas transmission pipeline, at Namphong	0.0000

Remarks: Data as at 30 September 2024.
* Td tariffs, effective as from August 2022 onwards, or until the tariff adjustment is approved by the ERC.
** Tc tariffs, effective from 1 October 2023 to 30 September 2024, or until the tariff adjustment is approved by the ERC.

3.3 Considered the adjustment of power tariffs according to the Automatic Power Tariff Adjustment (F_t) Formula every four months pursuant to the ERC Notification on the Process and Procedures for Using the Automatic Power Tariff Adjustment Formula B.E. 2565 (2022) so as to ensure that power tariffs would be appropriate, reflecting the costs and efficiency of electricity industry operations in compliance with the guidelines prescribed under Section 65 of the Act and to implement the policy on review of the power tariff structure for residential consumers with power consumption over 500 units/month for determining the Base Tariff, according to the NEPC resolution of 9 March 2023. Details can be illustrated in the following table:

F_t Adjustment Round	Result of Retail F_t Calculation[1/] (Satang/unit)	Retail F_t Charged (Satang/unit)	Retail Power Tariff Charged[2/] (Baht/unit)	Management
Sep - Dec 2023	249.81	20.48	3.99	1. On 5 May 2023, the ERC passed a resolution acknowledging the result of F_t calculation, equal to 249.81 Satangs/unit, and directing that a hearing be arranged on the mentioned F_t calculation result as well as the F_t adjustment with repayment of the accrued cost burden (Accumulated Factor: AF) to EGAT under two scenarios. Later, on 26 July 2023 the ERC approved the F_t Charged for the round of September-December 2023 at 66.89 Satangs/unit, resulting in a decrease in the averaged power tariff to 4.45 Baht/unit from initially 4.70 Baht/unit. 2. On 18 September 2023 the cabinet approved electricity bill relief measures, by having EGAT bear the AF burden instead of the public for the time being, and instructed concerned state-owned enterprises to calculate the natural gas price at no more than 304.79 Baht/MMBTU to keep the power tariff at 3.99 Baht/unit. Then, on 5 October 2023 the ERC approved the F_t downwards adjustment to 20.48 Satangs/unit, resulting in the averaged power tariff at 3.99 Baht/unit (excluding VAT). Moreover, EGAT, MEA and PEA were notified to pay back to power consumers the power tariff rebate in the billing round of October 2023 so as to comply with the government policy.
Jan - Apr 2024	216.42	39.72	4.18	On 19 December 2023, the Cabinet approved the natural gas management guidelines and electricity bill relief measures to mitigate impact of spiraling energy prices. Consequently, the ERC passed a resolution approving the F_t rate at 39.72 Satangs/unit, hence the averaged power tariff at 4.18 Baht/unit, via the following management: (1) EGAT was requested to bear the AF burden of 15,963 M. Baht, which could reduce the F_t by 25.37 Satangs/unit, hence the power tariff could be reduced to 4.43 Baht/unit; (2) Adjusted the estimated Spot LNG price from 16.9 to 14.3 USD/MMBTU, which could reduce the F_t by 9.98 Satangs/unit and hence the power tariff reduced to 4.34 Baht/unit; (3) Adjusted the natural gas price for gas separation plants by applying the Pool Gas price, which could reduce the F_t by 10.01 Satangs/unit and hence the power tariff reduced to 4.23 Baht/unit; and (4) Managed a clawback of the Shortfall from PTT, accounting for 4,300 M. Baht, which could reduce the F_t by 4.47 Satangs/unit and hence the power tariff reduced to 4.18 Baht/unit.
May - Aug 2024	165.24	39.72	4.18	On 6 March 2024, the ERC passed a resolution acknowledging the result of F_t calculation, equal to 165.24 Satangs/unit, and directing that a hearing be arranged on the mentioned F_t calculation result as well as the F_t adjustment with AF repayment to EGAT under two scenarios. Later, on 27 March 2024, the ERC approved the F_t rate to be charged to power consumers at 39.72 Satangs/unit; when combined with the Base Tariff, the averaged power tariff was at 4.18 Baht/unit. The resolution had taken into consideration declining trends of LNG prices both in the world market and in the Asian market, which would result in a decrease in energy cost for the round of May - August 2024, together with the impacts on power consumers and EGAT's financial status constraints which would still allow its secure and uninterrupted operations as well as its ability to maintain fiscal and financial disciplines in loan repayments on schedule, by gradually paying back to EGAT the AF amount in about 7 rounds, at 14,000 M Baht each.
Sep - Dec 2024	222.71	39.72	4.18	On 10 July 2024, the ERC passed a resolution acknowledging the result of F_t calculation, equal to 222.71 Satangs/unit, and directing that a hearing be arranged on the mentioned F_t calculation result as well as the F_t adjustment with AF repayment to EGAT under two scenarios. Later, on 31 July 2024, the ERC approved the retail F_t rate for September-December 2024 at 39.72 Satangs/unit. As a result, the averaged power tariff remained unchanged at 4.18 Baht/unit, and EGAT would gradually receive back the AF burden at 5.42 Satangs/unit, or around 3,267 M Baht. However, the balance of AF burden that EGAT had to further shoulder was 95,227 M Baht, and the concerned state-owned enterprises had to bear the burden of natural gas price difference instead of the public, at 15,083.79 M Baht.

Remarks: [1/] Result of Retail F_t Calculation according to the F_t Formula, as calculated by EGAT.
[2/] Retail Power Tariff Charged comprises the Base Tariff, averaged at 3.78 Baht/unit, and the F_t Charged according to the F_t adjustment round.

Summary of the Power Tariffs Charged to Power Consumers from 2017 to 2024

Billing Round	Base Tariff (Baht/unit)	F_t Rate (Satang/unit)		Total Power Tariff (Baht/unit) (excluding VAT)	% Difference
		Charged	Difference		
Jan - Apr 2017	3.76	-37.29	-4.00	3.39	-1.17%
May - Aug 2017		-24.77	12.52	3.51	3.54%
Sep - Dec 2017		-15.90	8.87	3.60	2.56%
Jan - Apr 2018		-15.90	0.00	3.60	0.00%
May - Aug 2018		-15.90	0.00	3.60	0.00%
Sep - Dec 2018		-15.90	0.00	3.60	0.00%
Jan - Apr 2019		-11.60	4.30	3.64	1.11%
May - Aug 2019		-11.60	0.00	3.64	0.00%
Sep - Dec 2019		-11.60	0.00	3.64	0.00%
Jan - Apr 2020		-11.60	0.00	3.64	0.00%
May - Aug 2020		-11.60	0.00	3.64	0.00%
Sep - Dec 2020		-12.43	-0.83	3.63	-0.28%
Jan - Apr 2021		-15.32	-2.89	3.61	-0.55%
May - Aug 2021		-15.32	0.00	3.61	0.00%
Sep - Dec 2021		-15.32	0.00	3.61	0.00%
Jan - Apr 2022		+1.39	+16.71	3.78	+4.43%
May - Aug 2022		+24.77	+23.38	4.00	+5.82%
Sep - Dec 2022	3.78	+93.43	+68.66	4.72	+18.00%
Jan - Apr 2023		(Residential: 93.43) (Others: 154.92)	(Residential: 0.00) (Others: +61.49)	(Residential: 4.72) (Others: 5.33)	(Residential: 0.00%) (Others: +12.92%)
May - Aug 2023		+91.19	(Residential: -2.14) (Others: -63.63)	4.70	(Residential: -0.42%) (Others: 11.82%)
Sep - Dec 2023		+20.48	-70.71	3.99	-0.71%
Jan - Apr 2024		+39.72	+19.24	4.18	+4.76%
May - Aug 2024		+39.72	0.00	4.18	0.00%
Sep - Dec 2024		**+39.72**	**0.00**	**4.18**	**0.00%**

3.4 **Developed a mechanism for regulating electricity tariffs and enhanced the potential to analyze data on energy service cost.** The OERC has got prepared by developing an information system for reporting accounting and financial information according to the international standards (Uniform System of Accounts: USOA) for regulating electricity tariffs and has established the accounting and financial information report for natural gas industry regulation, pursuant to the international standards, which is expected to complete by the 2nd quarter of Fiscal Year 2025.

Objective 3 To regulate energy industry operation to be efficient, safe and eco-friendly

Target 1: Energy industry operation facilities meet the prescribed safety standards, environmental standards and service quality standards.

1.1 **Issued licenses for electricity and natural gas industry operation within the specified timeframe,** totaling 282 licenses; for regulated energy production under the law on energy development and promotion, 1,134 licenses; and for power generation facility operation under the law on factories, 100 licenses. In addition, permits for building construction or modification for the purpose of energy industry operation, and building construction certificates were issued, totaling 153 permits/certificates.

Summary of the Issuance of Energy Industry Licenses, Licenses for Regulated Energy Production and Licenses for Power Generation Facility Operation in Fiscal Year 2024

Unit: License

License Type	Application for Licenses	Licenses Granted within Specified Timeframe
1. Issuance of Energy Industry Licenses under Section 47	**282**	**282**
1.1 Electricity Industry Licenses:	**278**	**278**
(1) Electricity Generation License	185	185
(2) Electricity Transmission System License	-	-
(3) Electricity Distribution System License	11	11
(4) Electricity Retail License	82	82
(5) Electricity System Operation License	-	-
1.2 Natural Gas Industry Licenses:	**4**	**4**
(1) Natural Gas Transmission through Transmission Pipeline System License	-	-
(2) Natural Gas Procurement and Wholesale License	1	1
(3) Natural Gas Retail through Distribution Pipeline System License	2	2
(4) Natural Gas Storage and Transformation of Liquid to Gas License	-	-
(5) Natural Gas Management (Pool Manager)	1	1
2. Licenses for Regulated Energy Production under the Law on Energy Development and Production under Section 48	**1,134**	**1,134**
3. Licenses for Power Generation Facility Operation under the Law on Factories under Section 48	**102**	**100**

Remark: Data as at 31 December 2024

Summary of the Issuance of Permits for Building Construction or Modification for Energy Industry Operation, and Building Construction Certificates in Fiscal Year 2024

Unit: Permit/Certificate

Permission Type	Application for Permits/Certificates		Permits/Certificates Granted within Specified Timeframe	
	Construct	Modify	Construct	Modify
1. Permits for Building Construction or Modification under Section 48	**92**	**18**	**92**	**18**
1.1 New Permits	86	14	86	14
1.2 Permit Renewal	6	4	6	4
2. Certificates for Building Construction under Section 48	**39**	**4**	**39**	**4**
Total	**131**	**22**	**131**	**22**

Remark: Data as at 30 September 2024

1.2 Inspected electricity generation facilities to ensure that the operators comply with the prescribed environmental standards. The OERC made field visits to inspect electricity generation facilities, according to the inspection and monitoring plan, totaling 628 facilities, comprising: (1) Close Inspection Group, 38 facilities; (2) Surveillance Group by fuel type and those falling under the category required to prepare an EHIA report, 71 facilities; and (3) General Group, 519 facilities. Following the inspection outcome in 2024, administrative orders were issued to eight (8) facilities to suspend their electricity generation licenses and order them to improve their facilities to solve problems related to the management of solid waste, from which bad odours affected nearby communities, and particulate matter pollution, wastewater pollution as well as the incident of a wind-turbine tower collapse.

In order to establish the standards for proactive regulation & monitoring and to set guidelines for assessing environmental impacts and safety as from the stage of project preparation, the following were carried out by the OERC:

(1) Compiled guidelines and measures to support the disposal of deteriorated or expired solar panels according to the law on energy industry and other related laws.

(2) Summarized the consideration guidelines of the Office of Natural Resources and Environmental Policy and Planning (ONEP), which has the care and charge of the law on promotion and preservation of national environmental quality, in the case of two or more thermal power plant projects, each having a generating capacity less than 10 MW, with adjacent project locations and with a combined generating capacity of all projects as from 10 MW upwards. In this regard, the ERC has set a requirement that a spatial impact assessment be conducted covering various environmental aspects, e.g. air quality by using mathematical models to assess the spread of air pollution from stacks of the project cluster; noise and vibration; water use and wastewater treatment, etc., and indicate such details in the Code of Practice (CoP) report as well as consider setting up relevant measures in consistent with the results of the above-mentioned assessment.

(3) Revised the Regulation of the ERC on Criteria for Preparing a Code of Practice Report and a Performance Report in Compliance with the Code of Practice for the Electricity Generation Business B.E. 2565 (2022) for solar power plants using the rooftop photovoltaic technology. This aims to respond to the government policy on renewable energy promotion, which is one of the implementations to achieve the goals of Carbon Neutrality by 2050 and Net Zero GHG Emission in 2065. In addition, the installation of solar-PV generation systems on rooftops (Solar Rooftop) has been promoted, which is aimed at moving towards the policy on deregulating electricity generation from solar rooftops (for self-consumption). Consequently, the Regulation of the ERC on Criteria for Preparing a Code of Practice Report and a Performance Report in Compliance with the Code of Practice for the Electricity Generation Business, No. 2, B.E. 2567 (2024), was issued and published in the Government Gazette, coming into effect on 27 August 2024.

The OERC is also aware of and attaches importance to creating understanding and communicating information to both government agencies and licensees to emphasize the inspection and monitoring of energy industry operations and compliance with environmental measures of both electricity and natural gas industry licensees. In this regard, seminars were organized jointly with various departments, in both Bangkok and regional areas, including enhancement of the potential of officials, at both central and regional offices, so as to provide opportunities to exchange knowledge with relevant agencies, such as the Department of Industrial Works, Office of Natural Resources and Environmental Policy and Planning, Thailand Environment Institute Foundation, the United States Agency for International Development (USAID), under such courses as “Air Pollution Supervisor,” “Treatment and Management of Pollution from Electricity Generation Operations” and “Workshop on the Trend of Wind Energy Development,” etc.

Target 2: Energy consumption in energy industry operations is economical and efficient, and there is the use of renewable energy and technologies for electricity industry operations that have minimal impact on the environment.

The OERC has promoted electricity generation using technologies that increase power generation efficiency and reduce environmental impacts, according to the specified targets. The implementation in Fiscal Year 2024 can be summarized as follows.

The OERC has completed the study and developed Thailand’s power plant sustainability indicators, encompassing five aspects, i.e. environmental, financial and economic, technical, social & community, and long-term plan. A pilot project was carried out on the application of the sustainability indicators to 34 state-owned and private power plants. On 26 April 2024, the OERC presented plaques of honor to participating power plants, and the pilot project results would be used to improve the sustainability indicators of power plants and to further develop regulations/criteria and guidelines for providing support and regulating power plant operations on a large scale.

OERC presented plaques of honor to power plants participating in the pilot project under the Program on Development of Thailand’s Power Plant Sustainability Indicators

On 26 April 2024, at the Queen Sirikit National Convention Center, Mr. Khomgrich Tantravanich, OERC Secretary General, presided over the ceremony to present plaques of honor to 34 public and private power plants that participated in the pilot project in order to develop Thailand’s power plant sustainability indicators.

Part of the program activities included the selection and request for cooperation from power plants to participate in the pilot project to test the indicators that had been developed, covering all types of power plants inThailand and with a variety of generating capacities, i.e. natural gas power plants, coal-fired power plants, other fossil fuel power plants, biomass power plants, waste-energy power plants, biogas power plants, hydropower plants, solar power plants and wind power plants.

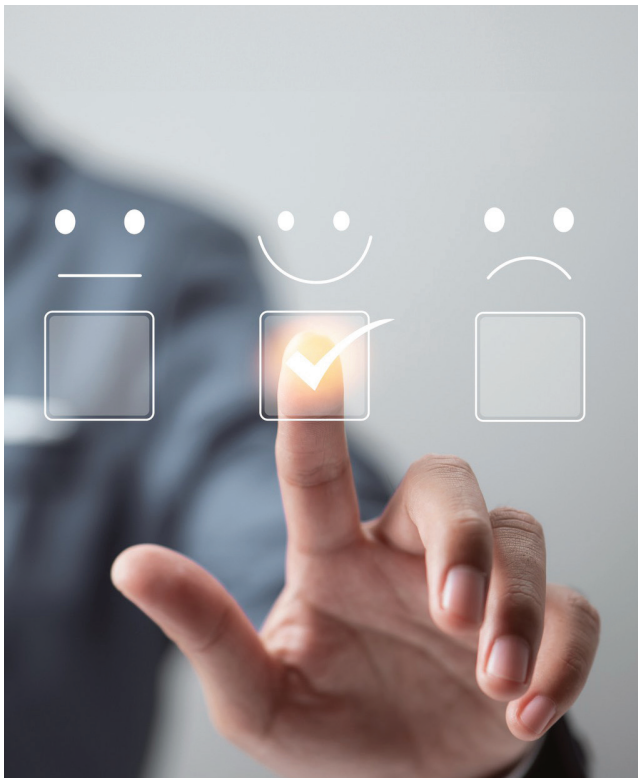
Objective 4

To protect rights and liberty of energy consumers, local communities, the general public and licensees in terms of participation, accessibility, utilization and energy management under fair criteria to all parties

Target 1: Stakeholders are satisfied with energy industry regulation.

Achievements were made by the OERC as targeted. In Fiscal Year 2024, a systematic participatory process was developed so that energy consumers, local communities, the general public and licensees could take part in all stages, which can be summarized as follows:

1.1 Developed a complaint management system via a digital platform. In order to provide an additional communication channel and facilitate the general public to participate in energy industry regulation, especially complaint submissions of energy users, and in response to the government policy that aims to become a digital government, to be able to provide services to the public with greater efficiency and convenience and to solve problems right to the point, the OERC has developed a channel for receiving people's complaints/problems about electricity services through Line Official "ERC Attends to Complaints" or Line ID @ERCvoice, which would be on the Fondue Manager Application, so as to provide people who are energy users with a more convenient and quicker channel to notify problems and to create cooperation with the Electricity Distribution Utilities in solving problems of the people. The system has been put into operation since 28 May 2024. In this connection, a meeting was arranged to explain the operational guidelines (addition) to concerned officials of the OERC Regional Offices 1-13, the three Power Distribution Utilities (MEA, PEA and the Sattahip Electricity Authority—the Royal Thai Navy Welfare Concession (SEA)) to create understanding and encourage greater use of the system. Moreover, written notifications have been issued to all Provincial PEA Offices to publicize this communication channel to the public and to print on the electricity receipts the QR Code as well as the information about how to access to the system.



Details and how to use the complaint management channel

Notify problems via Line Official "ERC Attends to Complaints" or Line ID @ERCvoice

ERC launched Line @ERCvoice—an additional complaint channel for power users

The OERC has developed a channel for attending to complaints about electricity services for the public via Line Official, or "Line @ERCvoice," so that power users could notify problems more conveniently and faster, by integrating the operations with the Power Distribution Utilities participating in this Line Official, thereby the Utilities can solve the notified service problems for the public. The Line Official has been in operation since 28 May 2024.

1.2 Increased knowledge, awareness and participation of the public in power-related issues. On 3 May 2024 the OERC issued a notification on money allocation from the Power Development Fund pursuant to Section 97(5) for Fiscal Year 2024, with a budget framework of 600 million Baht, under the communication theme "Clean Energy for Life." The communication topics comprised: (1) creating knowledge and awareness about electricity and energy industry regulation, (2) enhancing personnel knowledge and creating participation in electricity-related issues, and (3) trends and directions towards sustainable energy.

Target 2: Enhance rights protection and create alliances to improve the task of energy consumer protection

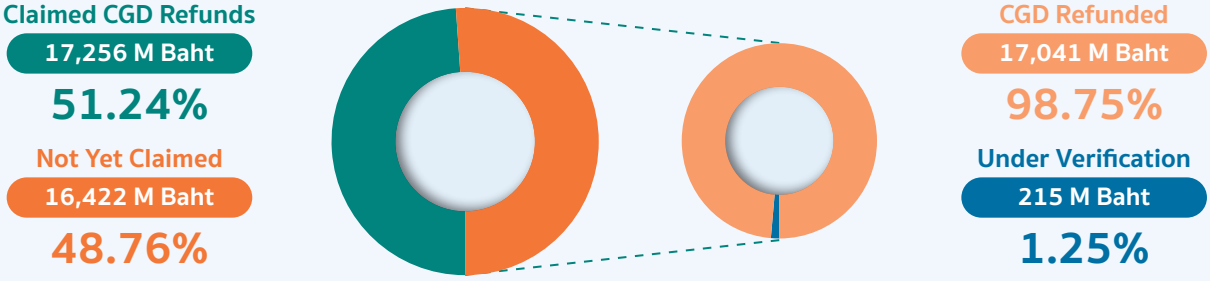
In order to enhance rights protection and create alliances to improve the task of energy consumer protection, the OERC has established alliance networks on energy consumer protection and has pursued the mission of energy consumer protection, which can be summarized as follows.

2.1 Created alliance networks on energy consumer protection in 15 provinces. The OERC has given importance to the creation of alliance networks on energy consumer protection so that the protection could widely reach consumers in every region and that there would be convenient, fast and efficient channels for communication and receiving complaints and for disseminating knowledge about energy industry regulation, rights and duties of energy consumers. In this respect, meetings were organized with concerned local agencies to exchange knowledge, brainstorm ideas and exchange information beneficial to energy consumer protection. Also organized were public relations forums, at the provincial level, to publicize the creation of networks of alliances on energy consumer protection, with participation of such agencies as District/Provincial Offices of the Power Distribution Utilities, Provincial Damrongdhama Centers, provincial administrative agencies, Provincial Offices of the Consumer Protection Board, the National Broadcasting and Telecommunication Commission (NBTC) Regional Offices/ Office Areas, the Federation of Thai Industries, Provincial Chamber of Commerce, and mass media, in the RECC meetings in all 13 consumer regions, encompassing 15 provinces.

2.2 Set guidelines for expanding network building of the Regional Energy Consumer Committees (RECCs) to the district level. The OERC Regional Offices 1-13 held consultations with the RECCs and concerned executives at district-level Damrongdhama Centers to set guidelines/ preparation of forums to build up alliance networks on energy consumer protection at district level.

2.3 Regulated the implementation of the measure on customer guarantee deposit (CGD) refunds, on a continuous basis, so as to protect energy consumers in accordance with the ERC Notification on Criteria for Refunds of Customer Guarantee Deposit to Power Consumers under Schedule 1: Residential Customers and Schedule 2: Small General Service, B.E. 2563 (2020), effective since 20 March 2020. This aims to oversee that the MEA, the PEA and the Sattahip Electricity Authority—the Royal Thai Navy Welfare Concession (SEA) pay back the CGD to power consumers who have placed the CGD based on the type and capacity of their power meters, involving a total of 23.99 million cases nationwide that are eligible to claim for the CGD refunds, accounting for a budget of over 33,678 million Baht. As at 30 September 2024, 8.70 million cases have registered for CGD refunds, accounting for a budget of 17,256 million Baht; CGD refunds have already been made to 8.49 million cases, accounting for a budget of 17,041 million Baht; and information of 0.21 million cases is still under verification, accounting for a total budget of 215 million Baht.

Status of Applications for Customer Guarantee Deposit (CGD) Refunds
Eligible Consumers for CGD Refunds: 23.99 million cases; Total Budget: 33,678 million Baht



Remark : Data as at 30 September 2024

2.4 Revised the conditions for placing a CGD for large power consumers. On 23 September 2024, the ERC approved the proposed guidelines for improving the conditions for placing a CGD for large power consumers, i.e. those under Schedule 3: Medium General Service, Schedule 4: Large General Service, and Schedule 5: Specific Business Service, with a good record of electricity bill payment. In this connection, the MEA, PEA and SEA have been instructed to revise the conditions for placing a CGD for large power consumers who have a good record of electricity bill payment, and this will take effect as from the billing in early 2025 onwards. The guarantee amount will be determined according to the nature of electricity bill payment as follows:

Large Power Consumer	Former Conditions for Placing a CGD	Revised Conditions for Placing a CGD
Schedule 3: Medium General Service **Schedule 4:** Large General Service **Schedule 5:** Specific Business Service	1. Not more than one time for power consumers who have paid the bills as scheduled in a one-year round.	(1) Not more than one time of the average electricity bill in the past year for power consumers who have paid the bills as scheduled in a one-year round. (2) Not more than 0.8 time of the average electricity bill for the past year for power consumers who have paid the bills as scheduled for two years or more. For power consumers who have defaulted on a payment and whose electricity supply is disconnected in any case, or who have violated electricity use, the CGD rate under the former conditions shall be applied.
	2. Not more than 1.25 times for power consumers who have defaulted on payments not exceeding 4 billing rounds in a year.	No change.
	3. Not more than 1.50 times for power consumers who have defaulted on payments more than 4 billing rounds in a year.	No change.
	4. Not more than 2 times for power consumers whose electricity supply is disconnected in any case, or who have violated electricity use.	No change.

2.5 Considered complaints from energy consumers regarding the difficulties and damage affecting them as a result of service provision of licensees, such as power dips, power outages, incorrect or unfair service charges due to incorrect meter reading, power meter inaccuracy or other unfair service charges, including objections to power plant construction, totaling 270 cases within the specified timeframe. In addition, the OERC is developing a digital complaint management system to enable comprehensive evaluation of participation and tracking of the status of complaint handling, which will be completed in 2025.

Summary of the Performance on Complaint Handling

Type of Complaints	Status of Complaint Handling (case)		
	Total Number of Complaints	Complaint Consideration	
		Finalized within Specified Timeframe	Under Process
1. Complaints under Sections 100 and 103—where energy consumers have difficulties as a result of service provision of licensees and unfair collection of service charges	282	255	27
2. Complaints under Section 90—where electrification expansion is requested or where the service exists but is inadequate to meet energy consumers' demand	-	-	-
3. Complaints opposing power plant construction	6	6	-
4. Complaints against operators regarding wastewater disposal and soot emission	2	2	-
5. Other complaints[1/]	7	7	-
Total	**297**	**270**	**27**

Remark: [1/] Other complaints, e.g. the variable power tariff (F_t) and complaints under the law on consumer protection.
Data as at 30 September 2024

OERC field visits to address complaints

OERC Regional Office 3 (Nakhon Sawan) in collaboration with Lopburi Provincial Electricity Authority and concerned agencies investigated complaints regarding messy telecommunications lines which could be harmful to people in front of Wat Mai Champathong School, Lopburi Province.

On 13 March 2024, after learning the matter from media reports, the OERC Regional Office 3 (Nakhon Sawan), which is responsible for energy consumers in 6 provinces, i.e. Nakhon Sawan, Phetchabun, Uthai Thani, Chainat, Singburi and Lopburi, investigated the complaints about loose telecommunications lines hanging down from distribution network poles to the sidewalk, which might cause danger to the public in front of Wat Mai Champathong School, Nikhom Sang Ton Eng Subdistrict, Mueang District, Lopburi Province. The investigation results revealed no injuries or deaths reported, and later the PEA took steps to make the telecommunications lines tidy and raise them to a distance that would not pose a danger. However, such a problem occurred in many areas and could be a danger to people passing by. Therefore, the OERC has notified the PEA that, if this kind of incident occurs, quick coordination with concerned parties has to be made to solve the problem.

OERC Regional Office 12 (Songkhla) and RECC Region 12 participated in a consultation to seek solutions to problems of electricity utilization in Songkhla Province.

On 9 January 2024, the OERC Regional Office 12 (Songkhla) along with Mr. Wan Abdullah Latimah, Chairman of the RECC Region 12, and concerned agencies, such as PEA Rattaphum District Branch, Representative of the Forest Management Office Region 13, Representative of Songkhla Provincial Land Reform Office, Rattaphum Deputy District Chief, Representatives of Kamphaeng Phet Subdistrict Municipality, subdistrict headmen, village headmen, and affected local people, participated in a consultation to seek solutions to problems of electricity utilization in the areas of Villages No. 9, No. 10, No. 11 in Kamphaeng Phet Subdistrict, Rattaphum District, Songkhla Province, organized at the Ban Huai Oan Mosque meeting room in the aforesaid Village No. 9.

2.6 Regulated energy network system demarcation and appeals about utilization of immovable property, pursuant to the specified timeframe, totaling 617 cases. Approvals were granted to the following: notifications on demarcation of areas to be surveyed for energy network systems, totaling 3 networks; and notifications on demarcation of energy network system areas, totaling 28 networks. Consideration was also made of the determination of compensation prices for land and assets for 15 cases; appeals against energy network system boundaries, objections to construction and objections to installation locations of electric poles, totaling 237 cases, and appeals on compensation for property covered by energy network system boundaries, totaling 334 cases.

Summary of consideration of the demarcation of energy network system areas and appeals about utilization of immovable property

Issue	Total No. of Appeals	Consideration Status	
		Finalized within Specified Timeframe	Under Process
1. Notifications on demarcation of areas to be surveyed for energy network systems, pursuant to Section 105	3	3	-
2. Notifications on demarcation of energy network system areas, pursuant to Section 106	29	28	1
3. Determination of compensation prices for land and assets	16	15	1
4. Appeals against notifications on demarcation of energy network system areas and objections to energy network system construction, pursuant to Section 106 and Section 108(1)	341	237	104
5. Appeals on compensation for property covered by energy network system boundaries, pursuant to Section 108(4)	348	334	14
Total	**737**	**617**	**120**

Remark: Data as at 30 September 2024

Target 3: Strengthen communities in the areas surrounding power plants, improve the quality of life of local people and communities, and has a modern Power Development Fund administrative system

The OERC has explored approaches to enhancing participation in spending the money granted by the Power Development Fund for community development in areas surrounding power plants. In Fiscal Year 2023, the OERC developed an Application (LINE@) for the selection of community projects, aiming to enhance participation in the selection of community projects in designated areas of local Power Development Fund (local PDF), and pilot trials were conducted with six (6) large and medium-scale local PDFs. In Fiscal Year 2024, the OERC has studied ways to modify the approach to enhance participation in community project selection, by applying the Application in combination with the Website, via linking the information of all community projects to display on the Website.

Objective 5 To administer the organization to have good governance and meet international standards

Target 1: The organization achieves the ITA score at AA level by 2025 and maintains the organizational quality management system according to the ISO standards and moves ahead to achieve other ISO standards in 2027

1.1 The ERC places importance on developing the organizational management system to meet international standards, based on the principles of good governance. A target under the Action Plan for Energy Industry Regulation, Phase 5 (2023 - 2027), requires that the OERC maintain the ISO 9001:2015 Quality Management System and apply ISO 37001: Anti-bribery Management System standards. In addition, the OERC is a state agency that is subject to an evaluation of Integrity and Transparency Assessment (ITA) of government agency performance, under the charge of the Office of the National Anti-Corruption Commission (ONACC); this complies with the National Strategy—Strategic Plan No. 6 for Public Sector Rebalancing and Development, which aims that the government sector is transparent, free from corruption and misconduct and that the government personnel adhere to the principles of morality, ethics and integrity.

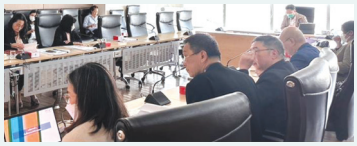
In 2024, the OERC was certified for maintaining the quality management system according to ISO 9001:2015 standards and for maintaining the operation according to the ISO 37001: Anti-bribery Management System. On 30 July 2024, the OERC was conferred an ITA Awards 2024 Plaque of Honor for being the agency with the highest improvement in evaluation results, under the category of Other State Agencies, having obtained an evaluation score of 95.92 points, out of 8,325 agencies participating in the ITA evaluation, of which an average evaluation score was 93.05 points.

Integrity & Transparency Assessment (ITA)
of government agency performance
in Fiscal Year 2024
by the Office of the National Anti-Corruption Commission

ITA

OERC obtained a score of 95.92 points

Being praised as the most developed agency under the category of Other State Agencies.



OERC meeting to clarify the Integrity and Transparency Assessment (ITA) criteria of government agency performance for Fiscal Year 2024

On 4 April 2024, at the OERC Office, Mr. Prasit Siritiprassamee, OERC Deputy Secretary-General, along with the Working Group Enhancing and Driving Morality, Ethics and Transparency of the OERC organized a meeting to brief the result of the ITA evaluation for Fiscal Year 2023 and to clarify the ITA evaluation criteria for Fiscal Year 2024 in order to get the OERC prepared for the Integrity and Transparency Assessment (ITA) of government agency performance.

OERC was conferred an ITA Awards 2024 Plaque of Honor under the category of Other State Agencies with the highest improvement in evaluation results, having obtained an evaluation score of 95.92 points

On 30 July 2024, the Office of the National Anti-Corruption Commission organized the "ITA DAY & ITA AWARDS 2024" to announce the results of the Integrity and Transparency Assessment of government agency performance for Fiscal Year 2024, under the theme of *Transparency with Quality*. In this fiscal year, there were 8,325 agencies participating in the ITA assessment, with an average evaluation score of 93.05 points.

The OERC, represented by its Secretary General, Dr. Poonpat Leesombatpiboon, along with OERC executives, attended the conferring of the ITA Awards 2024 plaque of honor, with an evaluation score of 95.92 points. The OERC was praised as the agency with the highest development under the category of Other State Agencies, which is the pride of the OERC executives and employees in having performed duties in regulating the energy industry according to the roles and duties stipulated under the Act with honesty, transparency and fairness, pursuant to the defined goals of the organization, which are set on the principle of administering the organization with good governance and international standards to create confidence of all stakeholders.

1.2 The OERC joined the internal audit quality assurance project of the Comptroller General's Department to have the quality assurance of the internal audit evaluated and to apply the results to improving the task of internal audit to be more efficient.

1.3 Amendments to the Energy Industry Act B.E. 2550 (2007). The OERC has completed hearings on the draft Energy Industry Act (No. ..) B.E. ...., by having organized seminars, focus group meetings, interviews and hearings via the Law Portal. The summary of the hearing outcomes has been presented to the ERC for further consideration of the amendments to the Act.

Target 2: Have an information center for energy industry regulation by 2024.

2.1 Developed the operation systems and service provision by using digital technology (ERC Smart Operation) to be convenient, fast, transparent and accountable. In Fiscal Year 2024, the OERC completed the development of a reporting system for inspections of energy industry operation facilities (Post-COD Audit) and a complaint management system through a digital platform (e-Petition & Traffy Fondue). Currently, the development of a system for granting licenses for energy industry operations (e-Licensing) and the Power Development Fund administration (e-Fund) are underway, which will be completed by the 3rd quarter of 2025.

2.2 Further developed the information system used for analyzing and regulating the energy industry, or the "ERC Data Sharing" platform, continuing from Fiscal Year 2023. In Fiscal Year 2024, the OERC conducted a project on Predictive Model development for energy industry operations, by applying Machine Learning and AI technology to the operations, including enhancing relevant knowledge and understanding of employees. Another one was the project on web portal development to capture signals and future trends in the energy industry, by applying digital technology in Machine Learning to enhance the visualization of the future with supporting data (Data-supported Foresight) so as to support the OERC in developing policies and implementation plans.

Target 3: Develop personnel to acquire management capability to achieve organizational goals.

Developed personnel to be prepared for carrying out energy industry regulation during the energy transition. The OERC gave importance to knowledge development of the personnel to keep up with changing energy situations and business models, developed courses on the regulation of electricity and natural gas industry on the e-Learning system, continuing from Fiscal Year 2023, and organized internal activities to provide a platform for exchanging knowledge about energy industry regulation.

Performance of the Power Development Fund in Fiscal Year 2024

Performance of the Power Development Fund in Fiscal Year 2024

"The Power Development Fund" is working capital set up under the OERC, with the objectives to be used as the capital to support extensive extension of electricity service provision to various localities so as to decentralize prosperity to provincial areas; to develop the local communities affected by power plant operation; to promote the use of renewable energy and technologies in the electricity industry operation that have minimal impact on the environment, with due consideration of the balance of natural resources and creation of fairness for power consumers. The Power Development Fund (the Fund) money shall be used for activities under Section 97 of the Energy Industry Act 2007 (the Act), as follows:

(1) to compensate and subsidize electricity industry licensees who have provided services for underprivileged power consumers or to enhance extensive electrification or to support the policy on development decentralization to provincial areas;

(2) to compensate power consumers who have to pay more expensive electricity rate as the licensee who has an electricity system operator breaches Section 87, paragraph two;

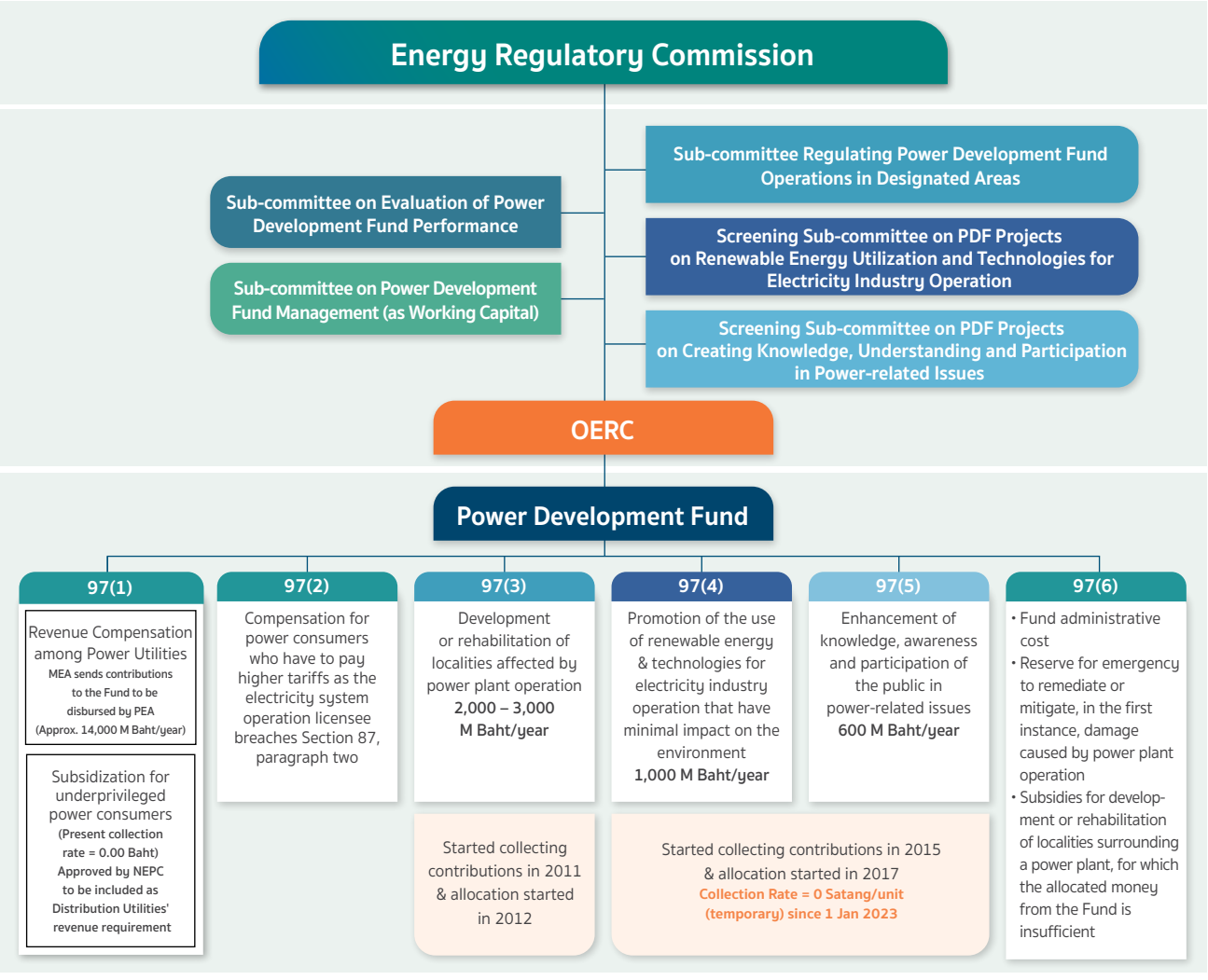
(3) to develop or rehabilitate localities affected by power plant operation;

(4) to promote the use of renewable energy and technologies for electricity industry operation that have minimal impact on the environment;

(5) to increase knowledge, awareness and participation of the public in power-related issues; and

(6) to pay for administrative cost of the Fund.

Internal Management Structure of the Power Development Fund



The Fund operations will be under the ERC regulation in accordance with the policy framework of the NEPC. The Fund money and assets are not subject to remittance to the Ministry of Finance as state revenue under the law on treasury balance and the law on budgetary procedure. The OERC is tasked with the receipt, disbursement, keeping and management of the Fund money in conformity to the regulations prescribed by the ERC, by separating the Fund money from the OERC budget. The Fund operations will be subject to an audit by the State Audit Office of the Kingdom of Thailand. In this connection, the following internal departments of the OERC are tasked with the Fund administration and mobilization of the Fund activities: the Power Development Fund Department, OERC Regional Offices, the Corporate Management Department, the Accounting and Finance Department and the Internal Audit Department.

As for the operations in Fiscal Year 2024, the OERC collected contributions to the Fund and allocated the Fund money in compliance with the objectives of the Fund money spending under Section 97 of the Act. The Fund performance can be summarized in the following.

Power Development Fund Performance under Section 97(1)

To compensate and subsidize electricity industry licensees who have provided services for underprivileged power consumers or to enhance extensive electrification or to support the policy on development decentralization to provincial areas

In Fiscal Year 2024, an order was issued by the ERC regarding the sending of contributions to and disbursement of money from the Fund under Section 97(1) for revenue compensation among the Power Utilities for having provided extensive electrification or to support the policy on development decentralization to provincial areas, accounting for a total budget of 14,250 million Baht. In this respect, it was set for the MEA to send contributions to the Fund so that the PEA could disburse money from the Fund at the amount equal to that sent in by the MEA in each month. As for the compensation to electricity industry licensees who have provided services for underprivileged power consumers, the NEPC, at its Meeting No. 2/2023 (165th) on 9 March 2023, approved the inclusion of expenses incurred on subsidization for underprivileged power consumers as part of the revenue requirement of the Power Distribution Utilities in the Utilities' financial status consideration round.

Power Development Fund Performance under Section 97(2)

To compensate power consumers who have to pay more expensive electricity rate as the licensee who has an electricity system operator breaches Section 87, paragraph two.

So far, there has been no case reported regarding an unfair power dispatch order by the electricity system operation licensee. However, the OERC will get prepared to properly handle such a situation should any case arise.

Power Development Fund Performance under Section 97(3)

To develop or rehabilitate localities affected by power plant operation.

The OERC has collected contributions from electricity generation licensees to the Fund, at different rates based on the fuel type used for electricity generation, and has allocated the Fund money in accordance with the objectives of the Fund utilization pursuant to Section 97(3) since Fiscal Year 2012. In this regard, the OERC has allocated 95% of the Fund money for development of communities surrounding power plants according to the objective of Section 97(3) and the remaining 5% for the administrative cost of the Fund pursuant to the objective of Section 97(6).

Power Development Fund Operations for development or rehabilitation of localities affected by power plant operation

Remittance to the Fund

Electricity Generation Licensees

1. **During construction: 50,000 Baht/MW/year** or no less than **50,000 Baht/year** (only those obtaining licenses as from 21 Dec 2010 when the Regulation came into force)

2. **During operation: 1-2 Satangs/unit,** based on the (monthly) amount of energy generated and fuel types used

Fuel Type	Satang/unit
Natural gas	1.0
Fuel oil, Diesel	1.5
Coal, Lignite	2.0
Waste heat	1.0
Renewable Energy	
• Wind & Solar	1.0
• Hydro	2.0
• Biogas, Biomass, Residues & Wastes, MSW, Industrial waste, etc.	1.0

Development of Communities around Power Plants pursuant to the Objective Framework of 7 Programs

1. **Public Health** to reduce or prevent health problems in the communities around power plants
2. **Education** to increase educational quality of students and teachers in government schools in areas around power plants
3. **Community Economy** to increase income of the communities around power plants
4. **Environment** to enhance or conserve the environment in areas surrounding power plants
5. **Public Utilities & Public Facilities** to increase access to or provide adequate & up-to-standard public utility/public facility services
6. **Community Energy** to promote coexistence between power plants and communities, RE use, and to reduce energy costs and increase energy efficiency
7. **Others** that contribute to development of the communities in areas surrounding power plants

The performance in Fiscal Year 2024 can be summarized in the following.

1. Determination of designated areas and appointment of the Community Development Committees for Areas Surrounding Power Plants (CDCs) according to the ERC Regulation on the Power Development Fund for Development or Rehabilitation of Localities Affected by Power Plant Operation B.E. 2563 (2020). The OERC has issued notifications on determination of designated areas which are eligible to be beneficiaries of financial support from the Fund under Section 97(3). Currently, the determination of designated areas is divided into two levels, namely: (1) the areas encompassing the level of Tambons (meaning subdistricts) surrounding a power plant (for local PDFs established before 1 October 2020), and (2) the areas encompassing the level of villages surrounding a power plant (for local PDFs established as from 1 October 2020 onwards). For both levels, the area measurement will be within a radial distance of 1 or 3 or 5 kilometers from the center of a power plant, based on the amount of annual electricity generation of the plant. From Fiscal Year 2011 to the present (Fiscal Year 2024), the OERC has issued notifications on the establishment of local Power Development Funds in designated areas (local PDFs), with the accumulated number as shown in the following table.

Local PDF Category	Annual Contributions Sent to the Fund by Power Plant(s)	Announcement of Designated Areas (No. of PDFs)
1. Large-scale PDF	For a PDF with contributions over 50 M Baht/year	14
2. Medium-scale PDF	For a PDF with contributions over 3 M Baht, but not over 50 M Baht/year	46
3. Small-scale PDF	For a PDF with contributions not over 3 M Baht/year	746
Total		**806**

Remark: Data as at 1 October 2024

For large and medium-scale PDFs, it is stipulated by the ERC that a CDC be appointed to be responsible for the Fund money management in each designated area. The CDC appointment can be summarized as follows:

Local PDF Category	Fund Management	Components	CDC Appointment (No. of PDFs)
1. Large-scale PDF	Two committees, i.e. (1) CDC[1/] (2) TDC[2/]	CDC: max. 35 persons TDC: min. 7 persons	13 *
2. Medium-scale PDF	One committee, i.e CDC	CDC: max. 35 persons	46
Total			**59**

Remarks: Data as at 1 October 2024

[1/]**CDC** means a Community Development Committee in the areas surrounding a power plant, comprising: representatives of the people's sector (the number must be no less than two thirds of the total members); public sector representatives (selected by the Provincial Governor); and one qualified person. A CDC will be appointed by the ERC.

[2/]**TDC** means a Tambon Development Committee in the areas surrounding a power plant, comprising: representatives of the people's sector (the number must be no less than two thirds—one from each village or community); and other representatives, e.g. subdistrict headman, village headman, representatives of academic institutions/youth councils, representatives of community organizations/community networks. A TDC will be appointed by the CDC.

*CDC recruitments are underway as the local PDFs have newly been established.

2. In Fiscal Year 2024, the ERC approved the Fund money allocation framework under Section 97(3) at 4,268.67 million Baht for the CDCs and local administrative organizations to spend on activities in accordance with the objectives of the development and rehabilitation of localities affected by power plant operation, by emphasizing development in seven aspects as follows: (1) Public Health, to reduce or prevent health problems in community areas surrounding power plants; (2) Education, to increase the educational quality of students and teachers in government schools in community areas surrounding power plants; (3) Community Economy, to increase income of the communities around power plants; (4) Environment, to enhance or conserve the environment in areas surrounding power plants for good quality of life; (5) Public Utilities, to increase access to and extensive provision of public utility services; (6) Community Energy, to enhance coexistence between power plants and communities; and (7) Others that contribute to community development. Results of the Fund budget approval by local PDFs in Fiscal Year 2024 can be summarized in the table below.

Local PDF Category	Budget Framework (M Baht)	Results of the Budget Approval in Fiscal Year 2024			Total (M Baht)
		Administrative Budget	Community Project Budget		
		Budget (M Baht)	No. of Projects	Budget (M Baht)	
1. Large-scale PDF	2,553.06	181.61	3,574	1,661.44	1,843.05
2. Medium-scale PDF	1,130.20	131.21	2,006	553.08	684.29
3. Small-scale PDF	585.41	-	1,123	345.50	345.50
Total	**4,268.67**	**312.82**	**6,703**	**2,560.02**	**2,872.84**

Remark: Data as at 1 October 2024

The budget approval, classified by program as prescribed by the ERC in seven aspects, can be summarized as follows.

Results of the Budget Approval in 2024 (classified by Program)				
Program	No. of Projects	% of No. of Projects	Budget (M Baht)	% of Budget
1. Public Health	758	11.31	302.34	11.81
2. Education	1,628	24.29	707.58	27.64
3. Community Economy	1,247	18.60	438.14	17.11
4. Environment	280	4.18	116.08	4.53
5. Public Utilities	1,357	20.24	637.29	24.89
6. Community Energy	279	4.16	106.04	4.14
7. Others	1,154	17.22	252.55	9.87
Total	**6,703**	**100.00**	**2,560.02**	**100.00**

Remark: Data as at 1 October 2024

3. Increasing efficiency in the Fund management under Section 97(3) on a continuous basis. The ERC has placed importance on increasing efficiency and operational standards of local PDFs in the designated areas, aiming that the Fund budget will help mobilize development of communities in areas surrounding power plants in order to improve the quality of life, based on participation of the people from all sectors. In Fiscal Year 2024, training was organized by the OERC to increase knowledge of the CDCs and local PDF officials to be ready to manage and initiate efficient community projects that would be beneficial to the communities surrounding power plants in accordance with the objectives.

OERC kept enhancing knowledge and understanding of the roles and duties of Community Development Committees for areas surrounding power plants and persons involved with local PDF operations, aiming to forge ahead with sustainable and continuous development of areas surrounding power plants.

Throughout the period of April-July 2024, the OERC organized training and seminars to enhance knowledge and understanding of the CDCs, personnel and those involved with the Power Development Fund. The contents for the CDCs focused on educating, creating understanding of the roles and missions of a CDC in the capacity as officials under the Criminal Code, including adherence to ethics, codes of conduct and good governance as well as skills necessary to manage local PDFs in compliance with regulations, notifications and criteria, so that their tasks could be performed correctly and completely under the principles of good management with transparency and accountability. As for the contents for local PDF officials, focuses were to create knowledge and understanding about the ERC, the Power Development Fund, officials' roles, responsibilities of state officers according to the code of law, preparation of an annual work plan, monitoring and evaluation, good governance principles, including enhancing knowledge of building communication power and encouraging participation. The OERC organized such activities 8 times in every region across the country (in the following provinces: Krabi, Udon Thani, Chiang Mai, Nakhon Ratchasima, Phetchaburi and Bangkok), covering target groups of more than 600 persons.

Power Development Fund Management in Fiscal Year 2024

under Section 97(3) — for development or rehabilitation of localities affected by power plant operation

Power Plants

Total

261
plants

Local PDFs

Total

59
PDFs

Budget Framework (Admin. + Projects)

Total

3,683.26
M Baht

Approved Budget (Projects)

Total

2,214.52
M Baht

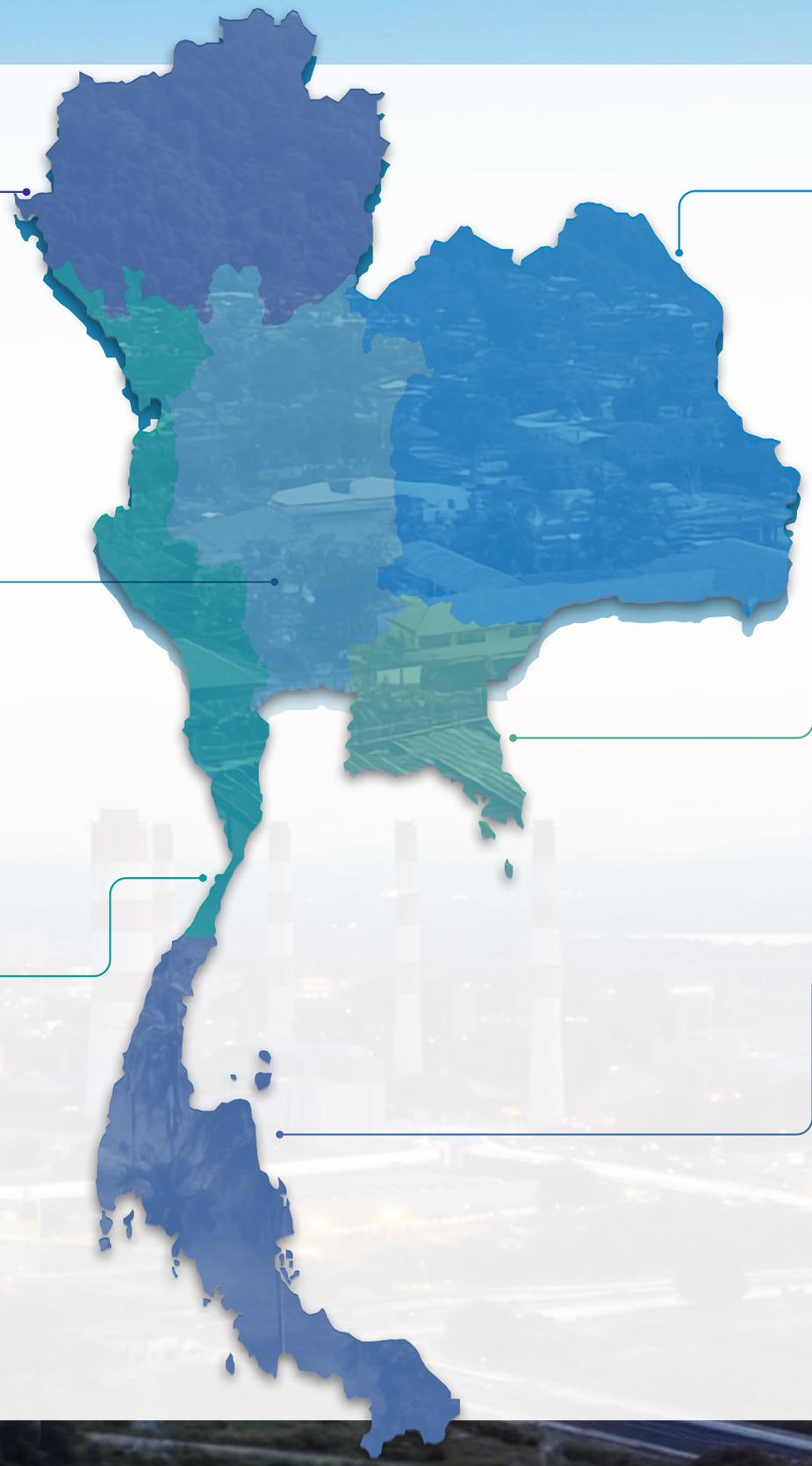
Remark: Data of the management of Large and Medium-scale PDFs

Northern Region

No. of Power Plants:	2	
No. of PDFs:	2	
Budget Framework:	368.43	M Baht
Approved Budget:	299.00	M Baht

Northeastern Region

No. of Power Plants:	19	
No. of PDFs:	7	
Budget Framework:	106.91	M Baht
Approved Budget:	52.44	M Baht



Central Region

No. of Power Plants:	94	
No. of PDFs:	21	
Budget Framework:	981.48	M Baht
Approved Budget:	523.04	M Baht

Eastern Region

No. of Power Plants:	105	
No. of PDFs:	16	
Budget Framework:	1,527.22	M Baht
Approved Budget:	893.40	M Baht

Western Region

No. of Power Plants:	32	
No. of PDFs:	9	
Budget Framework:	529.04	M Baht
Approved Budget:	319.51	M Baht

Southern Region

No. of Power Plants:	9	
No. of PDFs:	4	
Budget Framework:	170.18	M Baht
Approved Budget:	127.13	M Baht

Remark: Data of the management of Large and Medium-scale PDFs

Power Development Fund Performance under Section 97(4)

To promote the use of renewable energy and technologies for electricity industry operation that have minimal impact on the environment.

The OERC had collected money from electricity retail licensees for spending on the Fund operations under Section 97(4), pursuant to the NEPC policy framework, at a rate of 0.005 Baht/net retail unit. Later, in 2022 the ERC reviewed the contribution rate to the Fund under Section 97(4) and issued the ERC Notification on Sending Contributions to Power Development Fund for Electricity Retail Licensees to Promote the Use of Renewable Energy and Technologies for Electricity Industry Operation that Render Minimal Impact on the Environment (No. 2) on 29 December 2022, pursuant to the NEPC resolution at its Meeting No. 7/2022 (162nd) on 7 November 2022 and the ERC resolution at its Meeting No. 61/2022 (828th) on 28 December 2022, according to which the contribution rate collected from electricity retail licensees was adjusted to a rate of 0.00 Baht/net retail unit to reduce electricity tariff burden on the general public due to the crisis of spiraling energy prices at present. This can help alleviate the electricity tariff burden by about one billion Baht/year; this adjusted rate has taken effect as from the electricity billing round of January 2023 onwards until a notification is issued to revise, amend or terminate this rate. Notwithstanding, the implementation according to the objective of the Fund money allocation under Section 97(4) can still proceed without interruption owing to the accumulated balance of budget from the operations during Fiscal Years 2017 - 2022.

Sending of Contributions to the Power Development Fund under Section 97(4)

Electricity Industry Licensees

การไฟฟ้านครหลวง Metropolitan Electricity Authority

การไฟฟ้าส่วนภูมิภาค PROVINCIAL ELECTRICITY AUTHORITY

EGAT

Power Development Fund for sustainable community development

Energy Regulatory Commission and Office of the Energy Regulatory Commission

1,000 M Baht/year

Contribution rate to the Fund:

0.5 Satang/retail unit
Former rate: effective Jan 2015

0 Satang/retail unit
New rate: effective Jan 2023

Spending of the Fund Money

OERC issued Request for Proposals for Fund allocation according to ERC Regulations

1. **Program on promotion & demonstration**
of renewable energy utilization in the electricity industry operation

2. **Program on development & improvement**
of technologies for electricity industry operation that are efficient and create minimal impact on the environment

3. **Program on study & research**
on renewable energy and technologies for electricity industry operation that are efficient and create minimal impact on the environment

4. **Program on administration**
—expenses in support of the operation

5. **Other programs**
relevant to the Fund objectives under Section 93 or Section 97(4) as stipulated by the ERC

The ERC has given importance to the promotion of electricity generation from renewable energy for educational and public health agencies to help with the improvement of the quality of life of the public by providing access to quality public health services, to ensure that quality education is extensive and equitable for all and that everyone has access to modern, sustainable energy, via the installation of electricity generation systems using renewable energy, which is in line with one of the 17 Sustainable Development Goals (SDGs) of the United Nations, i.e. SDG 7: Affordable and Clean Energy. In addition, promotion has been made of integration between the Power Development Fund, of which a mission is to promote research and innovation overseen by the OERC, and Thailand Science Research and Innovation (TSRI). In this connection, support has been given via the Fund budget allocation under Section 97(4), i.e. for research and development that is in line with the National Strategy for the energy sector and the Science Research and Innovation Plan, and cooperation in developing research results and innovations so that they could be applied to the enhancement of capabilities, efficiency and effectiveness of the promotion and research, including encouraging the application of such results to the benefit of policy determination pertaining to the electricity industry regulation, utilization at both commercial and community levels in response to the needs of the country according to the National Strategy and the National Research and Innovation Policy.

In Fiscal Year 2024, the OERC issued a Notification on Power Development Fund Money Allocation under Section 97(4) for Fiscal Year 2024, with a total budget framework of 1,950 million Baht, comprising: (1) Project on Promotion of Electricity Generation from Renewable Energy—Strategic Grant: installation of electricity generation systems from renewable energy, both on-grid and off-grid, for government agencies; (2) Support Projects through cooperation with agencies having executed Memorandums of Understanding with the OERC; and (3) Projects that support the OERC operations, as detailed in the following.

1. Project on Promotion of Electricity Generation from Renewable Energy—Strategic Grant: installation of electricity generation systems from renewable energy, both on-grid and off-grid, for government agencies.

As for the operations in 2024, the ERC approved money allocation to support the installation of electricity generation systems using solar energy (solar PV systems) for public health agencies as well as social development and human security agencies under the Project on Promotion of Electricity Generation from Renewable Energy—Strategic Grant, with connection to an electricity network system (On-grid), the details of which can be summarized as follows:

Fiscal Year 2023

Projects approved to have FY2023 budget disbursed in the following year

Royal Thai Army Medical Department

Number	16 hospitals	Installed capacity	1,590 kWp	CO_2 emission reduction	1,338 t CO_2e/year
Budget	47,700,000 Baht	Generated power	2,350,955 kWh/year	Power bill reduction	9,899,059 Baht/year

Fiscal Year 2024

195 Locations | **Total Budget: 1,131.55** M Baht

Installed Capacity	Generated Energy	Expected CO_2 Reduction	Expected Power Bill Reduction
38,417 kWp	**55,357,243** kWh/year	**29,081** t CO_2e/year	**251,399,865** Baht/year

Agency	Number (Locations)	Budget (Baht)	Installed capacity (kWp)	Generated power (kWh/year)	CO_2 emission reduction (t CO_2e/year)	Power bill reduction (Baht/year)
Agencies under the Ministry of Public Health						
1. Department of Health	7	28,050,000	935	1,372,800	721	7,660,612
2. Department of Medical Services	14	150,030,000	5,140	7,289,718	3,828	35,648,369
3. Office of the Permanent Secretary	114	781,492,500	26,570	38,303,541	20,113	172,305,962
4. Department of Mental Health	18	101,400,000	3,380	4,889,069	2,567	21,189,964
5. Faculties of Medicine of universities under Ministry of Higher Education, Science, Research and Innovation	2	34,072,500	1,175	1,768,068	929	7,348,591
6. Medical Service Department, Bangkok Metropolitan Administration	1	6,300,000	210	292,720	167	1,170,880
Agencies under the Ministry of Social Development and Human Security						
7. Department of Empowerment of Persons with Disabilities	6	7,110,000	237	338,737	178	1,539,032
8. Office of the Permanent Secretary	8	4,230,000	141	204,123	107	869,657
9. Department of Older Persons	11	8,460,000	282	401,442	211	1,664,432
10. Department of Social Development and Welfare	14	10,410,000	347	497,025	261	2,002,367

Approval outcomes as at September 2024

Remark: From Fiscal Year 2021 to 2024, the ERC approved money allocation to support the installation of solar-PV generation systems at a total of 455 locations.

1.1 Public health agencies

(1) Under the Royal Thai Army Medical Department, 16 locations, with a budget of 47.70 million Baht, which can reduce carbon dioxide emissions by a total of 1,338 tons of carbon dioxide equivalent per year (tCO_2e/year) and is expected to reduce the electricity bill burden by 9.89 million Baht/year (projects that have got approval to set aside the 2023 budget for outstanding disbursement in the following fiscal year).

(2) Agencies under the Ministry of Public Health

(2.1) Under the Department of Health, 7 locations, with a combined budget of 28.05 million Baht, which can reduce carbon dioxide emissions by a total of 721 tCO_2e/year and is expected to reduce the electricity bill burden by 7.66 million Baht/year.

(2.2) Under the Department of Medical Services, 14 locations, with a combined budget of 150.03 million Baht, which can reduce carbon dioxide emissions by a total of 3,828 tCO_2e/year and is expected to reduce the electricity bill burden by 35.65 million Baht/year.

(2.3) Under the Office of the Permanent Secretary, 114 locations, with a combined budget of 781.49 million Baht, which can reduce carbon dioxide emissions by a total of 20,113 tCO_2e/year and is expected to reduce the electricity bill burden by 172.31 million Baht/year.

(2.4) Under the Department of Mental Health, 18 locations, with a combined budget of 101.40 million Baht, which can reduce carbon dioxide emissions by a total of 2,567 tCO_2e/year and is expected to reduce the electricity bill burden by 21.19 million Baht/year.

(3) Faculties of Medicine under state universities, 2 locations, with a budget of 34.07 million Baht, which can reduce carbon dioxide emissions by a total of 929 tCO_2e/year and is expected to reduce the electricity bill burden by 7.35 million Baht/year.

(4) Under the Medical Service Department of the Bangkok Metropolitan Administration (BMA), 1 location, with a budget of 6.3 million Baht, which can reduce carbon dioxide emissions by a total of 167 tCO_2e/year and is expected to reduce the electricity bill burden by 1.17 million Baht/year.

1.2 Social development and human security agencies (agencies under the Ministry of Social Development and Human Security)

(1) Under the Department of Empowerment of Persons with Disabilities, 6 locations, with a budget of 7.11 million Baht, which can reduce carbon dioxide emissions by a total of 178 tCO_2e/year and is expected to reduce the electricity bill burden by 1.54 million Baht/year.

(2) Under the Office of the Permanent Secretary, MSDHS, 8 locations, with a budget of 4.23 million Baht, which can reduce carbon dioxide emissions by a total of 107 tCO_2e/year and is expected to reduce the electricity bill burden by 0.87 million Baht/year.

(3) Under the Department of Older Persons, 11 locations, with a budget of 8.46 million Baht, which can reduce carbon dioxide emissions by a total of 211 tCO_2e/year and is expected to reduce the electricity bill burden by 1.66 million Baht/year.

(4) Under the Department of Social Development and Welfare, 14 locations, with a budget of 10.41 million Baht, which can reduce carbon dioxide emissions by a total of 261 tCO_2e/year and is expected to reduce the electricity bill burden by 2 million Baht/year.

OERC supports the Royal Thai Police (RTP) with a "Solar cell" installation budget for the Border Patrol Police Schools and hospitals under the RTP

On 7 December 2023, at Chaichinda Room, Sriyanon Building of the Border Patrol Police Headquarters, the OERC and the Royal Thai Police (RTP) held a signing ceremony of a Memorandum of Understanding on Cooperation in Promoting Electricity Generation from Renewable Energy between the OERC and the RTP (MoU) by Mr. Khomgrich Tantravanich—OERC Secretary General—and Police General Torsak Sukvimol—RTP Commissioner-General. The signing ceremony was witnessed by Miss Tidarat Suwannachaikosit—OERC Deputy Secretary General, Mr. Narumitr Sawangphol—OERC Assistant Secretary General, Police Lieutenant General Yongkiat Monpraneet—Commissioner of Border Patrol Police, and Police Lieutenant General Thaweesilp Wechavitarn—Surgeon General of Police General Hospital. The MOU is aimed at creating cooperation between the OERC and the RTP in promoting electricity generation from renewable energy for Border Patrol Police (BPP) schools and hospitals under the RTP to promote the procurement of renewable energy and improve the quality of life of students to have comprehensive and equitable access to education and to reduce the burden of electricity expenses. Presently, the OERC is considering support for the installation of solar-PV systems for two hospitals under the RTP, with a total budget of 49.95 million Baht and an installed capacity of 1.66 MW, which can reduce GHG emissions by more than 1,429 tCO_2e/year and is expected to reduce the electricity bill burden for the mentioned hospitals by 10 million Baht/year. For the BPP schools, the OERC is in the process of surveying the demand for electricity and estimating the volume of installed capacity as well as the capacity of energy storage systems to be suitable for the activities of the involved BPP schools.

ERC made a field visit to observe the project implementation under the Project on Promotion of Electricity Generation from Renewable Energy—Strategic Grant (Public Health Agencies), funded by the Power Development Fund under Section 97(4)

On 1 March 2024, Mr. Samerjai Suksumek, ERC Chairman, together with ERC commissioners and OERC executives, made a field visit to observe the implementation and follow up on the Project on Promotion of Electricity Generation from Renewable Energy—Strategic Grant (Public Health Agencies), funded by the Power Development Fund under Section 97(4) in Fiscal Year 2021, at Sanpatong Hospital, Yu Wa Subdistrict, San Pa Tong District, Chiang Mai Province, under the category of electricity generation from rooftop solar installation, with a total inverters' installed generating capacity of 100.00 kVA and a total solar panels' installed generating capacity of 100.10 kWp, in order to promote the use of renewable energy within the hospital.

2. Support Projects through cooperation with agencies having executed Memorandums of Understanding with the OERC

Currently, the OERC is considering details of the project proposal according to the implementation under the MOU on cooperation to support implementations related to the Fund under Section 97(4) of 18 January 2023 between the OERC and the Ministry of Energy. Based on the scope of cooperation, it is specified that the Ministry of Energy devise the operational plan and the framework for research and promotion of the use of renewable energy in electricity industry operations. Also to be set are key targets and achievements, the budget disbursement plan and the framework for project screening In accordance with the promotion of the use of renewable energy and technologies for electricity industry operation that render minimal impact on the environment in pursuance of the National Energy Reform Plan and the Strategic Plan of the Ministry of Energy.

3. Projects that support the OERC operations

The OERC is currently preparing the (draft) Terms of Reference and scope of work for a project linking information of renewable energy generation systems under the Project on Promotion of Electricity Generation from Renewable Energy—Strategic Grant, with the following objectives:

(1) To develop a system linking the information of renewable energy generation systems, for which the OERC has granted budget from the Fund under Section 97(4), to the OERC, acting as the focal point for gathering the status of electricity generation from solar PV systems in a digital format, which enables tracking of the solar-PV system operations and evaluating the generation efficiency of the solar-PV systems; the information obtained can be used to analyze guidelines for solar-PV system maintenance to be sustainable.

(2) To equip the Fund with an information system that accommodates the information linking of renewable energy generation systems, that can be disseminated to other relevant information systems.

(3) To support the work of OERC officials in monitoring the operations of solar-PV systems and to be able to alert the OERC of abnormalities in case the systems are encountered with any problems.

Power Development Fund Performance under Section 97(5)

To increase knowledge, awareness and participation of the public in power-related issues.

The OERC had collected money from electricity retail licensees for spending on the Fund operations under Section 97(5), pursuant to the NEPC policy framework, at a rate of 0.002 Baht/net retail unit. Later, in 2022 the ERC reviewed the contribution rate to the Fund under Section 97(5) and issued the ERC Notification on Sending Contributions to Power Development Fund for Electricity Retail Licensees to Increase Knowledge, Awareness and Participation of the Public in Power-related Issues (No. 2) on 29 December 2022, pursuant to the NEPC resolution at its Meeting No. 3/2011 (136th) on 27 April 2011 and the ERC resolution at its Meeting No. 61/2022 (828th) on 28 December 2022, according to which the contribution rate collected from electricity retail licensees was adjusted to a rate of 0.00 Baht/net retail unit to reduce electricity bill burden on the general public due to the crisis of spiraling energy prices at present. This can help alleviate the electricity bill burden by about 400 million Baht/year; the adjusted rate has taken effect as from the electricity billing round of January 2023 onwards until a notification is issued to revise, amend or terminate this rate. Notwithstanding, the implementation according to the objective of the Fund money allocation under Section 97(5) can still proceed, without interruption owing to the accumulated balance of budget from the operations during Fiscal Years 2017 - 2022.

The Power Development Fund operations to promote public awareness, knowledge, and participation in electricity.

Remittance to the Fund

Public & Private Electricity Retail Licensees

การไฟฟ้านครหลวง Metropolitan Electricity Authority
การไฟฟ้าส่วนภูมิภาค PROVINCIAL ELECTRICITY AUTHORITY
EGAT

Contribution rate to the Fund:

0.2 Satang/retail unit
Former rate effective Jan 2015

0 Satang/retail unit
New rate effective Jan 2023

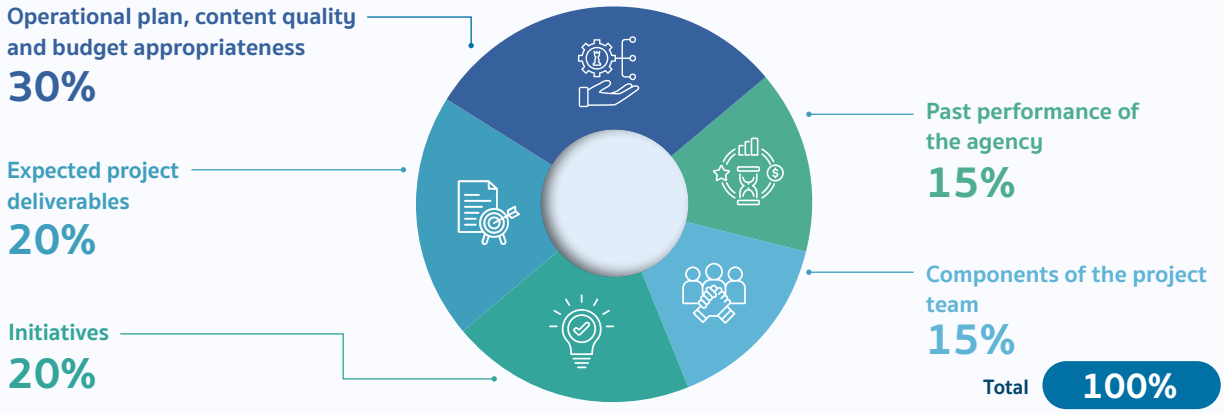
Spending of the Fund

OERC issued a Request for Proposals for Fund Allocation as per the ERC Regulations

1. Program on enhancement of competency, role and knowledge about power-related issues of the public or concerned persons
2. Program on public relations to create awareness and foster consciousness, understanding & positive attitude towards power-related issues
3. Program on promotion of participation in power-related issues, e.g. development of networking or creation of participatory networks of the public or power-related agencies
4. Program on enhancement of power supply security and preparedness for electricity incidents
5. Program on administration – expenses in support of the operation
6. Other programs relevant to the Fund objectives under Section 93 or Section 97(5) as stipulated by the ERC

In Fiscal Year 2024, the OERC issued a Notification on Allocation of Power Development Fund Money to Increase Knowledge, Awareness and Participation of the Public in Power-related Issues for Fiscal Year 2024, with a budget framework of 600 million Baht, under the communication theme "Clean Energy for Life." Eligible applicants for the money allocation can submit one project per applicant, except for government agencies and educational institutions. The communication topics comprised: (1) Increase Knowledge and Awareness of Power-related Issues and Energy Industry Regulation; (2) Human Resource Capacity Building and Creation of Participation in Power-related Issues; and (3) Sustainable Energy Trends and Directions. Subsequently, on 15 May 2024 the OERC issued three Notifications on Requests for Proposals of Local PDF Projects on Activities under Section 97(5) for Fiscal Year 2024 (Requests for Proposals), i.e. (1) Request for Proposals under the communication topic, "Increase Knowledge and Awareness of Power-related Issues and Energy Industry Regulation," with a budget allocation framework of 100 million Baht and a maximum of 15 million Baht per project; (2) Request for Proposals under the communication topic, "Human Resource Capacity Building and Creation of Participation in Power-related Issues," with a budget allocation framework of 50 million Baht and a maximum of 10 million Baht per project; and (3) Request for Proposals under the communication topic, "Sustainable Energy Trends and Directions," with a budget allocation framework of 100 million Baht and a maximum of 20 million Baht per project. The Screening Sub-committee on PDF Projects on Creating Knowledge, Understanding and Participation in Power-related Issues (the Sub-committee) screened the project proposals and passed a resolution approving eight (8) projects that meet the consideration criteria, having obtained scores of no less than 70% of the project proposal consideration criteria pursuant to the Requests for Proposals, as detailed in the following.

Consideration Criteria for Project Proposals under Section 97(5)



The ERC passed a resolution at its Meeting No. 41/2024 (926th) on 25 September 2024, approving the Fund money allocation under Section 97(5), with a total budget of 95,539,580 Baht for the implementation of eight (8) projects according to the screening results of the Sub-committee, as shown in the following:

Approval of PDF Projects under Section 97(5) for Fiscal Year 2024

Project Name	Agency Granted Money Allocation	Budget Framework (Baht)
Communication Topic "Increase Knowledge and Awareness of Power-related Issues and Energy Industry Regulation"		
Clean Energy Communication Toolkit for Thais	Thai Public Broadcasting Service	13,756,000.00
PangPond: Energy Awareness Saves the World with ERC	Vithita Animation Company Limited	11,500,000.00
Communication Topic "Human Resource Capacity Building and Creation of Participation in Power-related Issues"		
Energy Knowledge Network Creation to Get Prepared for Energy Transition	Federation of Thai Industries	7,291,100.00
Energy Transition Schools	Arsom Silp Institute	9,957,000.00
Communication Topic "Sustainable Energy Trends and Directions"		
Leadership Program on Energy Transition Policy	Thailand Development Research Institute (TDRI)	7,274,280.00
Young Change, World Change (New generation changes the world)	Chulalongkorn University by Chula Unisearch	18,986,200.00
Mission for Sustainable Energy	Media Heart Company Limited	17,000,000.00
Raise the Power of Change towards a Sustainable Future	King Mongkut's University of Technology Thonburi	9,775,000.00

Fund Performance under Section 97(6)

To pay for administrative cost of the Fund.

The OERC will present an expense plan to the ERC for approval of the implementation in the following three matters: (1) the Fund administrative cost; (2) a reserve in the case of emergency to remediate or mitigate, in the first instance, damage caused by power plant operation; and (3) subsidies for development or rehabilitation of localities which are affected by power plant operation but for which the allocated money from the Fund is insufficient for such implementation.

Evaluation of the Power Development Fund Performance (as Working Capital)

The Power Development Fund is considered as working capital and hence it is required to have a performance evaluation system that is up to international standard, by applying the Balanced Scorecard (BSC) principles, as prescribed by the Ministry of Finance, or an equivalent tool. Moreover, a Third Party must be appointed to conduct the evaluation and report the performance evaluation outcome to the Comptroller General's Department (CGD) so that the CGD could collect the information and prepare a report summarizing the overall evaluation outcome of this working capital for presentation to the cabinet at the end of each fiscal year. In this connection, the OERC has conducted the evaluation of the Fund performance as working capital since Fiscal Year 2014 onwards.

In Fiscal Year 2024, the evaluation of the Fund performance in a 12-month round resulted in an average score of 4.68 points from the full score of 5 points, or equal to 93.60%. The score obtained in each aspect was as follows:

(1) Finance, with a score of 5.00, due to the optimal performance with respect to the operating expense and personnel expense in relation to the Fund's total revenue in Fiscal Year 2024, which was rated "Very Good."

(2) Response to Stakeholders' Benefits, with a score of 3.00, based on the Fund operations that could respond to the needs and expectations of stakeholders in terms of the ability to carry out activities as planned, complaint handling, outcome of community project evaluation and outcome of satisfaction evaluation.

(3) Operations, with a score of 4.96, based on efficiency of the Fund operations, via evaluation of the following aspects: the establishment of the criteria for concerned Fund officials, project monitoring and evaluation, submission of financial statements and implementation according to relevant work plans.

(4) Power Development Fund Administration/ Development, with a score of 4.96, based on the Fund management to be systematic, which involves the internal control and risk management, the internal audit as well as the information and digital management.

(5) Performance of the Management Committee, the Fund Administrator, Staff & Employees, with a score of 5.00, based on the performance and development of the Fund's personnel at all levels, which involved the performance according to the roles of the Sub-committee on Power Development Fund Management (as Working Capital) and the human resource management.

(6) Implementation pursuant to Policies of the Government/Ministry of Finance, with a score of 5.00, based on the disbursement of money pursuant to the approved expense plans and cabinet resolutions.

Summary of the Evaluation Outcome of the Power Development Fund Performance (as Working Capital)

Evaluation Criteria	Fiscal Year 2023		Fiscal Year 2024	
	Weight	Score	Weight	Score
1. Finance	10	1.00	5	5.00
2. Response to Stakeholders' Benefits	20	4.21	20	3.00
3. Operations	35	4.59	30	4.96
4. Power Development Fund Administration/Development	15	4.92	20	4.96
5. Performance of the Management Committee, the Fund (Working Capital) Administrator, Staff & Employees	10	5.00	20	5.00
6. Implementation pursuant to Policies of the Government/Ministry of Finance	10	5.00	5	5.00
Total Score	**100**	**4.29**	**100**	**4.68**

Operational Plan of the Office of the Energy Regulatory Commission in Fiscal Year 2025

The development of this operational plan for Fiscal Year 2025 is the development of a 3rd-tier plan in which the OERC has analyzed external environments that have impacts on the OERC operations. With the application of the PESTEL Analysis framework, it is found that an influential factor affecting Thailand's energy situation is the geopolitical conflict situations causing energy price crisis and affecting the security and sufficiency of fuel supply used for electricity generation as Thailand has to import expensive liquefied natural gas to substitute diminishing natural gas volume from the Gulf of Thailand towards the end of the concession period, thus making it crucial to manage the rising cost of electricity generation. In addition, pressing factors with regard to the mobilization of GHG reduction to move towards Carbon Neutrality by 2050, as pledged by Thailand at COP26, and the response to the Carbon Border Adjustment Mechanism (CBAM) measure necessitate the government to set up an urgent policy framework for managing prices of energy, which is an important factor in the livelihoods and economic development of the country, including restructuring the country's energy utilization during the energy transition towards the use of clean energy as well as devising policies to increase access to clean energy for the commercial and industrial sectors at reasonable prices in order to increase the overall competitiveness of the country and support continuous and sustainable economic growth. In addition, the OERC has considered expectations and satisfaction with the OERC's regulation of the energy industry.

At its meeting No. 24/2024 (909th) on 12 June 2024 and No. 26/2024 (911th) on 26 June 2024, the ERC approved the OERC's operational plan, expense budget and estimated revenue for Fiscal Year 2025 (Operational Plan and others), placing emphasis on "the development of regulations to enhance competition and energy industry regulation during the energy transition, taking into account Energy Security, Energy Affordability, and Environmental Sustainability, as well as public engagement in driving a low-carbon economy and society. Importance is also placed on the application of digital technology to enhance energy industry regulation to be more efficient and able to provide services that are convenient, fast, transparent and accountable, and to develop necessary skills of the personnel for conducting the tasks of energy industry regulation."

The OERC's Operational Plan and others are in compliance with the missions stipulated in the Act under the government policy and in line with the 3-tier plan, namely, 1st tier: **Thailand's 20-Year National Strategy—** under Strategy 2: Competitiveness Enhancement, Strategy 5: Eco-Friendly Development and Growth, and Strategy 6: Public Sector Rebalancing & Development; 2nd tier: **the Master Plan under the National Strategy—**Issue No. 7: Infrastructure, Logistics and Digital Systems; Issue No. 20: Public Services and Public Service Efficiency; and Issue No. 21: Resistance to Corruption and Malfeasance; **the National Energy Reform Plan** (Revised Edition) regarding the national reform activities that will create significant changes and impacts on the general public (Big Rock), i.e. the materialization of One Stop Service Center for electricity industry licensing and the restructuring of the electricity industry and natural gas industry to enhance competition; **the 13th National Economic and Social Development Plan (2023 - 2027)—**Milestone 3: Thailand is the ASEAN's electric vehicle manufacturing hub, Milestone 10: Thailand is a circular economy and low-carbon society, and Milestone 13: Thailand has a modern, efficient and responsive public sector; and 3rd tier: **Thailand Digital Government Development Plan (2023 - 2027)**; **Energy Policy** pursuant to the Policy Statement of the Cabinet, addressed to the Parliament on 11 September 2023; the **National Energy Plan Framework;** and the 5-year Action Plan (2023 - 2027) of the Ministry of Energy, including having consistency with the **United Nations Sustainable Development Goals (SDGs).**

Highlights of the Operational Plan in Fiscal Year 2025

under the Objectives, Targets, Development Guidelines and Key Performance Indicators (KPIs) under the Action Plan for Energy Industry Regulation, Phase 5 (2023 - 2027) can be summarized as follows.

Objective 1

To promote sufficient, secure and extensive energy service provision, while ensuring fairness to both energy consumers and licensees

Target: Regulate energy procurement to be sufficient, extensive and secure to accommodate the energy transition.

Development guidelines: Support the development towards clean energy.
KPI: Power purchase from renewable energy generation is in line with prescribed plans and policies.

Major tasks/projects

1. Issue regulations and notifications on power purchase from renewable energy generation according to the plan to increase electricity generation from clean energy under the Thailand Power Development Plan and policies set forth by the National Energy Policy Council.
2. Promote the installation of solar-PV generation systems or other appropriate renewable energy generation technologies via the Power Development Fund under Section 97(4).

Objective 2

To promote fair competition in the energy industry, with reasonable tariffs that reflect the cost of efficient energy industry operation

Target 1: Embarking upon competition in the natural gas industry, Phase 2.

Development guidelines: Enhance the natural gas industry regulation to ensure fair competition.
KPI: Policy recommendations are proposed to create concrete competition in the natural gas industry.

Major tasks/projects

1. Make recommendations to the policy maker to review policies or NEPC resolutions related to the natural gas procurement plan, the investment plan in natural gas infrastructure, and the natural gas network system expansion plan.
2. Study and analyze the feasibility of opening up for the use of or connection to an offshore natural gas transmission pipeline system, in accordance with the NEPC resolution, and oversee the drafting of Third Party Access Code for the use of or connection to a natural gas distribution pipeline system.

Target 2: Embarking upon the trading of electricity generated from renewable energy.

Development guidelines: Enhance the electricity industry regulation to support the policy on promoting competition in the electricity industry as well as new technologies and business models.
KPI: An electricity industry regulatory framework is in place to support the 4D1E policy.

Major tasks/projects

1. Develop a regulatory framework to accommodate the electricity industry restructuring and promotion of competition.
2. Preparedness for the opening-up for the use of an electricity network system to support the implementation of the policy on promoting competition in the electricity industry, by supporting the development of the Power Utilities' TPA Platform and reviewing the Framework Guidelines for Developing Third Party Access Code for the Use of an Electricity Network System (TPA Framework Guidelines) and relevant TPA Codes for the use of electricity network system facilities.
3. Develop the energy industry regulation or activities related to the implementation of government energy policies and important or urgent policies during the energy transition, such as the trading of electricity generated from renewable energy, promotion of competition in the electricity industry, and others.

Target 3: Having reasonable and fair energy tariffs that reflect the cost of efficient energy industry operation.

Development guidelines: Regulate energy tariffs and build up the capacity to analyze energy service cost data.
KPI: Criteria for tariff setting to be prepared for promotion of competition in the electricity industry.

Major tasks/projects

1. Prepare guidelines for setting electricity tariffs to be prepared for operations according to the government policy on promotion of competition in the electricity industry, such as a wheeling charge for the use of an electricity network system.
2. Prepare a manual for reporting the accounting and financial information for the natural gas industry regulation, in accordance with international standards (Uniform System of Account: USOA).

Objective 3

To grant licenses and regulate energy industry operation to be efficient, safe and eco-friendly

Target 1: Granting licenses within the specified timeframe.

Development guidelines: Modernize the licensing to be more efficient.
KPI: Licenses issued within the specified timeframe.

Major task/project

Amend the Royal Decree to determine the categories, capacities and characteristics of energy industry which are exempt from license requirement in order to exempt businesses of certain categories/capacities appropriate to energy policy and to facilitate entrepreneurs.

Target 2: Energy industry operation facilities meet the prescribed safety standards, environmental standards and service quality standards.

Development guidelines: Review the energy industry operation standards to be up to date and regulate the operators to ensure compliance with safety, environmental and service quality standards.

KPI: Energy industry operation facilities meet the prescribed standards.

Major tasks/projects

1. Establish engineering and service quality standards for electric vehicle charging stations.
2. Surveille and inspect electricity generation facilities to meet safety standards and environmental standards as prescribed by law, follow up on the development of improvement plans and carry out law enforcement in accordance with the administrative order guidelines, including using AI technology to assist with the processing, verification of measurement results and compliance with environmental measures stipulated in the environmental reports.

Objective 4

To protect rights and liberty of energy consumers, local communities, the general public and licensees in terms of participation, accessibility, utilization and energy management under fair criteria to all parties

Target 1: Stakeholders are satisfied with energy industry regulation.

Development guidelines: Develop a systematic participatory process so that energy consumers, local communities, the general public and licensees could take part in all stages.

KPI: Satisfaction with energy industry regulation is more than 85%.

Major tasks/projects

1. Develop a platform to promote participation and manage complaints via the digital system in Phase 2.
2. Increase knowledge, awareness and participation of the public in power-related issues via the Power Development Fund under Section 97(5).
3. Create knowledge and understanding about energy industry regulation and enhance corporate image.

Target 2: Strengthen communities in the areas surrounding power plants, improve the quality of life of local people and communities, and has a modern Power Development Fund administrative system

Development guidelines: Modernize the administration and encourage participation in the Power Develoment Fund operations for sustainable improvement of the quality of life of local people and communities.

KPI: The Power Development Fund administrative structure.

Major task/project

Review regulations related to the restructuring of the Power Development Fund administration.

Objective 5

To administer the organization to have good governance and meet international standards

Target 1: Develop personnel to have the ability to acquire knowledge and managerial skills to achieve organizational goals.

Development guidelines: Develop the personnel potential to have multi-skills to be professional and have necessary competencies to keep up with changing situations.

KPI: 100% of the target personnel receive training.

Major task/project

Review training courses and develop e-Learning courses, as well as arrange training to develop skills necessary for duty execution, organize activities to exchange knowledge about energy industry regulation and conduct a Secondment Program.

Target 2: The organization achieves the ITA score at AA level and maintains the organizational management quality system according to the ISO standards.

Development guidelines: Develop the organization with the quality management system and in accordance with good governance principles.

KPI: Maintain the quality management system and anti-bribery management system according to ISO standards, and the organization achieves an ITA assessment at AA level.

Major tasks/projects

1. Improve the quality management according to ISO 9001:2015 standards.
2. Enhance morality, ethics and good governance of the organization, according to the Integrity and Transparency Assessment (ITA) criteria of government agencies, and the anti-bribery management, according to the ISO 37001 standards.
3. Review the 5-year Action Plan for Energy Industry Regulation in order to increase efficiency of the energy industry regulation and to keep up with the situations during the energy transition.

Target 3: Have an information center for energy industry regulation.

Development guidelines: Increase the organizational capacity via digital technology.

KPI: Development of the spatial data analysis to support energy industry regulation.

Major tasks/projects

1. Improve and enhance efficiency of the energy data warehouse by creating a data set for developing a reporting system for executives (CEO Dashboard), creating Data Catalog standards together with Data Governance, and developing the website for disseminating energy-related information.
2. Develop the Geo for Regulation (GFR) system for regulating the energy network systems.

Operational Plan of the Power Development Fund in Fiscal Year 2025

The Power Development Fund (the Fund) is set up under the OERC with objectives to be used for activities pursuant to the objectives stipulated under Section 97 of the Energy Industry Act 2007. The spending of the Fund money complies with the regulations imposed by the ERC under the policy framework of the National Energy Policy Council (NEPC). The Fund performance must be reported to the NEPC, the Minister of Energy, the cabinet, the House of Representatives and the Senate and must be made public; it is also subject to an audit by the State Audit Office of the Kingdom of Thailand. In this regard, the OERC has received the Fund revenue and spent the Fund money since Fiscal Year 2011 onwards.

The OERC administers the Fund operations, classified by objective under Section 97 of the Energy Industry Act 2007, which can be summarized as follows:

1. The Fund operations under Section 97(1)

To compensate and subsidize electricity industry licensees who have provided services for underprivileged power consumers or to enhance extensive electrification or to support the policy on development decentralization to provincial areas.

In Fiscal Year 2025, the ERC will regulate the sending of contributions to the Fund and disbursement of the Fund money under Section 97(1) for compensation of revenue between the Power Utilities for the extensive provision of electricity service. In this connection, the Distribution Power Utilities are allowed to include the expense incurred on subsidizing underprivileged power consumers in their revenue requirements when considering their financial status, according to the guidelines approved by the NEPC.

2. The Fund operations under Section 97(2)

To compensate power consumers who have to pay a more expensive electricity rate because the licensee who has an electricity system operator breaches Section 87, paragraph two.

So far, there has been no case reported regarding an unfair power dispatch order by the electricity system operation licensee. However, the OERC will get prepared to properly handle such a situation should any case arise.

3. The Fund operations under Section 97(3)

To develop and rehabilitate localities affected by power plant operation.

In Fiscal Year 2025, the OERC will allocate budget for development of communities in the areas surrounding power plants, according to the objective framework and project categories in seven aspects as follows: (1) Public Health, to reduce or prevent health problems in community areas surrounding power plants; (2) Education, to increase the educational quality of students and teachers in government schools in community areas surrounding power plants; (3) Community Economy, to increase income of the communities around power plants; (4) Environment, to enhance or conserve the environment in community areas surrounding power plants for good quality of life; (5) Public Utilities, to increase accessibility to and extension of public utility services, i.e. water resources, roads, tap water supply and electricity, to be sufficient for communities in the areas surrounding power plants; (6) Community Energy, to enhance coexistence between power plants and communities in areas surrounding power plants, the use of renewable energy to reduce energy cost and increase energy efficiency; and (7) Other Programs that contribute to community development.

In addition, the OERC has devised an operational plan to improve the process and level up operations of local Power Development Funds in designated areas to be more efficient for optimal benefits to community development in areas surrounding power plants, including consideration and analysis of the feasibility to apply technology to accommodate participation of the people in those areas.

4. The Fund operations under Section 97(4)

To promote the use of renewable energy and technologies for electricity industry operation that render minimal impact on the environment.

In Fiscal Year 2025, the OERC is in the process of drafting a notification on requests for proposals for the Fund allocation to promote the use of renewable energy and technologies for electricity industry operation that render minimal impact on the environment for Fiscal Year 2025. Focus is placed on operations to expand the results of the Project on Promotion of Electricity Generation from Renewable Energy—Strategic Grant, as detailed in the following:

(1) Projects related to the promotion of electricity generation from renewable energy in remote areas with no access to the grid (Off-grid). The OERC has undertaken operations pursuant to the intention of the 2017 Constitution of the Kingdom of Thailand, under Section 56, paragraph one, which stipulates that the State shall undertake or ensure that the basic utility services which are essential for the subsistence of the people be provided in a comprehensive manner in accordance with sustainable development. This is to ensure that everyone has comprehensive and equitable quality education and also to improve the quality of life of the people in terms of

accessibility to quality education. Two target groups are involved: (1) educational agencies, consisting of schools under the Ministry of Education, and Border Patrol Police Schools; and (2) public health agencies, i.e. Subdistrict Health Promotion Hospitals.

(2) Projects related to the promotion of electricity generation from renewable energy with connection to an electricity network system (On-grid). There are two target groups: 1) public health service units of government agencies, consisting of public health service units under the Ministry of Public Health, i.e. the Department of Medical Services, Department of Disease Control, and Department of Thai Traditional Medicine; public health service units under the Royal Thai Army, Royal Thai Navy and Royal Thai Police; 2) social development and human security agencies under the following departments of the Ministry of Social Development and Human Security: the Department of Children and Youth, the Department of Empowerment of Persons with Disabilities, and the Department of Women's Affairs and Family Development.

Operational Plan of the Power Development Fund for activities under Section 97(4)

Government Agency

Targeted number
455
hospitals/locations

Total budget
2,585.15
M Baht

Generated Energy	**127,851,455** kWh/year
Installed Capacity	**87,924** kWp
Expected CO_2 reduction	**70,288** tCO_2e/year
Expected electricity bill reduction	**534,383,867** Baht/year

Target Groups for Expanded Operations in Fiscal Year 2025

Areas with access to the grid (On-grid)

Public health agencies
1. Departments under the Ministry of Public Health (MOPH), i.e.
   - Office of the Permanent Secretary, MOPH
   - Department of Medical Services
   - Department of Disease Control
   - Department of Thai Traditional Medicine
2. Hospitals under the Medical Department, Royal Thai Army
3. Hospitals under the Naval Medical Department, Royal Thai Navy
4. Hospitals under the Royal Thai Police

Social development and human security agencies under the Ministry of Social Development and Human Security
1. Department of Empowerment of Persons with Disabilities
2. Department of Children and Youth
3. Department of Women's Affairs and Family Development

Areas with no access to the grid (Off-grid)

Educational agencies
1. Border Patrol Police Schools under the Border Patrol Police Headquarters, Royal Thai Police
2. Schools under the Ministry of Education

Public health agencies
1. Subdistrict Health Promotion Hospitals under the MOPH

5. The Fund operations under Section 97(5)

To increase knowledge, awareness and participation of the public in power-related issues.

In Fiscal Year 2025, the OERC will monitor the projects that have received the Fund money allocation under the communication theme, "Clean Energy for Life," to ensure that the project implementation could achieve the objectives and bring about benefits to the society and people in all sectors.

6. The Fund operations under Section 97(6)

To use the Fund money for the administrative cost of the Fund.

The OERC has prepared, for submission to the ERC for approval, the expense plan for the following three matters: (1) the Fund administrative cost; (2) a reserve in the case of emergency to remediate or mitigate, in the first instance, damage caused by power plant operation; and (3) subsidies for development or rehabilitation of localities which are affected by power plant operation but for which the allocated money from the Fund is insufficient for such implementation. Moreover, a Third Party has been appointed to conduct the evaluation of the Fund performance (as working capital) and report the evaluation outcome to the Comptroller General's Department.

Abbreviations

Act, The	Energy Industry Act B.E. 2550 (A.D. 2007)
BBTU	Billion British Thermal Unit—a measurement unit of the heat content of fuels or energy sources, equal to 1,000,000,000 BTU
CDC	Community Development Committee for areas surrounding a power plant
CEPA	Committee on Energy Policy Administration
COD	Commercial Operation Date
CoP Report	Report on implementation pursuant to the relevant Code of Practice
EGAT	Electricity Generating Authority of Thailand
EHIA Report	Environmental and Health Impact Assessment Report—for projects or activities which may seriously affect community with respect to quality of environment, natural resources and health
EIA Report	Environmental Impact Assessment Report
EPPO	Energy Policy and Planning Office
ERC	Energy Regulatory Commission
ERC Sandbox	Energy Regulatory Commission Sandbox—a program on trials on technological innovations to support energy service provision
F_t	Electricity Tariff according to the Automatic Power Tariff Adjustment Mechanism
FiT	Feed-in Tariff—a fixed power purchasing price throughout the lifetime of a power project, which is a measure to promote renewable energy generation
Fund, The	Power Development Fund
GW	Gigawatt—a unit of electric power equal to 1,000 megawatts, or 1,000,000 kilowatts or 1,000,000,000 watts
GWh	Gigawatt hour—a unit of energy representing 1,000 megawatt hours, or 1,000,000 kilowatt hours or 1,000,000,000 watt hours
IPP	Independent Power Producer—a large-scale private power producer
IPS	Independent Power Supply—the generation of power for one's own use
kVA	Kilovolt Ampere—a unit of apparent power, or the total power flowing, in an electric circuit equal to 1,000 volt-amperes

kWp	Kilowatt Peak—a unit of maximum electricity generation from solar cells, e.g. 10-kWp solar cells will generate maximum electricity at 10 kW or 10,000 watts
Lc	Liquefied Natural Gas Commodity Charge—service fees for the use of natural gas storage and transformation of liquid to gas, in the part of variable costs, of an LNG Terminal
Ld	Liquefied Natural Gas Demand Charge—service fees for the use of natural gas storage and transformation of liquid to gas, in the part of fixed costs, of an LNG Terminal
Managing Committee	Managing Committee on Power Generation from Renewable Energy Promotion
MEA	Metropolitan Electricity Authority
MMBTU	Million British Thermal Unit— a measurement unit of the heat content of fuels or energy sources, equal to 1,000,000 BTU
MW	Megawatt—a unit of electric power equal to 1,000 kilowatts or 1,000,000 watts
NEPC	National Energy Policy Council
OERC	Office of the Energy Regulatory Commission
PDP	Thailand Power Development Plan
PEA	Provincial Electricity Authority
PPA	Power Purchase Agreement
PTT	PTT Public Company Limited
RECC	Regional Energy Consumer Committee
SEA	Sattahip Electricity Authority—the Royal Thai Navy Welfare Concession
Spot LNG	Spot Liquefied Natural Gas
SPP	Small Power Producer
Tc	Transmission Commodity Charge—a service fee, in the part of variable costs, for natural gas transmission through a natural gas transmission pipeline system
tCO_2e	Ton of carbon dioxide equivalent—a measurement unit of greenhouse gas emission
Td	Transmission Demand Charge—a service fee, in the part of fixed costs, for natural gas transmission through a natural gas transmission pipeline system
TSO	Transmission System Operator—an entity entrusted with management of the natural gas transmission pipeline system
VSPP	Very Small Power Producer