

D I G I T A L

AND

G R E E N G R I D



Provincial Electricity Authority
Annual Report 2023



DIGITAL AND GREEN GRID



Smart Grid



AMI (Advance Metering
Infrastucture)



ESCO Model



PEA Volta



PEA Solar



PEA Smart Plus



EPC Model



Onward to a Sustainable Future

Managing electrical power with efficiency, PEA harnesses smart, eco-friendly processes in advocating energy innovation and development. Its digital systems accommodate clean energy in parallel with the drive toward Net-Zero.

Simultaneously, through integrated energy services provided with cutting-edge technology and socio-environmental responsibility, PEA improves lives for society and communities.



A nighttime photograph of a city waterfront. In the foreground, a large, illuminated fountain with concentric blue and white rings is the central focus. To its right, a road with light trails from cars and buses curves through the scene. The background shows a dense urban skyline with various buildings and lights reflecting on the water. The sky is dark, and there are some light flares from the city lights.

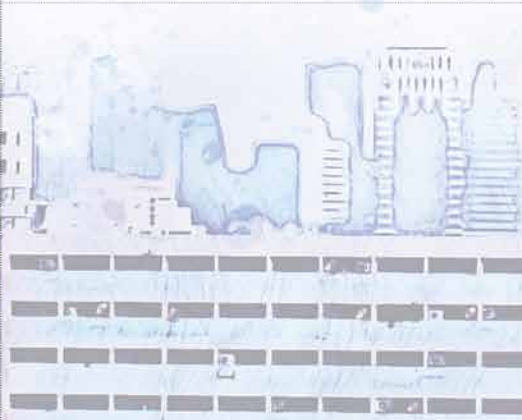
Vision

Smart Energy for Better Life and Sustainability

Mission

PEA is responsible for the generation and provision of standardized electricity services together with related businesses to attain customers' satisfaction with products and services through PEA's continual corporate development plans together with the recognition of socio-environmental responsibility.

Core Value
Modernization, Excellent Service,
Good Governance



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Message from the Chairman

“

On behalf of the Board of Directors, may I assure you of our resolve to jointly supervise PEA's operations consistent with our core mission of providing power services in a stable, safe, and reliable way under good governance, transparency, and fairness to all stakeholders in a sustainable way.

”

With the emphasis of the 13th National Economic and Social Development Plan (2023-2027) laid on improving domestic infrastructure for energy transition, together with the public policy defining Carbon Neutrality target achievement by 2050 and Net Zero by 2065, the Provincial Electricity Authority (PEA) has stepped up its efforts by leveraging advancements in technology and innovation to support its power system operations for greater efficiency, stressing consumption of clean energy and renewable energy in the transmission and distribution of power, promoting electric vehicles (EVs), and upgrading grid modernization. All these drive such policies to lower greenhouse gas (GHG) emissions in parallel with ESG (Environment, Social, Governance) management.

The Board, management, and employees have jointly supervised and driven PEA's operations to concretely achieve our common mission and essential national targets—whether it be power service from solar power generation systems (PEA Clean Energy for Communities), installation and service of EV charging stations, or evolution of the PEA One-Stop Service. In addition, PEA commands ongoing social and community projects, including projects developing power systems for remote areas, electrification of households and agricultural areas, and PEA LED for cultural tourism. Today, PEA is widely recognized by domestic and international entities alike, evident in our SOE Awards for 2023, 11th NACC Integrity Awards, Public Sector Excellence for 2023 (Public Service Category), National Innovation Award for 2023, Sustainability Disclosure Award for 2023, and Asia Responsible Enterprise Awards (AREA) 2023.

On behalf of the Board of Directors, may I assure you of our resolve to jointly supervise PEA's operations consistent with our core mission of providing power services in a stable, safe, and reliable way under good governance, transparency, and fairness to all stakeholders in a sustainable way. Finally, I am grateful not only to all members of the PEA management and workforce for their selfless devotion, but to all other stakeholders for their marvelous support that has given us excellent progress to date.

(Unsit Sampuntharat)

Chairman



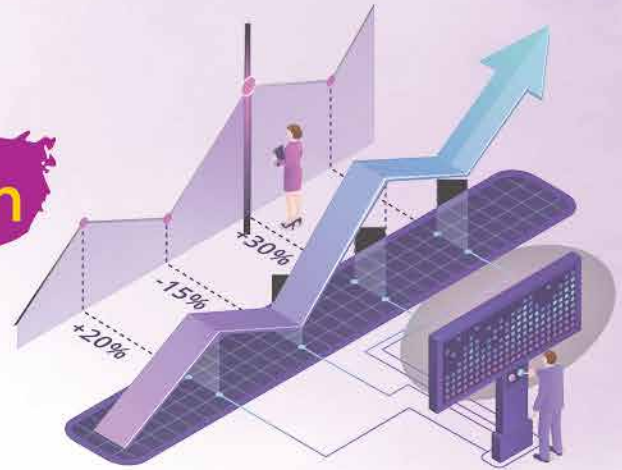


Summary of Key Financial Information

2023

Net Profits

14,574 Million Baht



Financial Information

(Unit: Million Baht)

Item	2023	2022	2021
Total Income	690,463	606,600	509,487
Total Expenses	675,889	595,032	495,466
Net Profits	14,574	11,568	14,021
Total Assets	543,560	523,006	484,478
Total Liabilities	348,963	334,595	299,242
Equity	194,597	188,411	185,236

Financial Ratios

Item	2023	2022	2021
Current Ratio (Times)	1.22	1.22	1.46
Liquidity Ratio (Times)	1.19	1.21	1.43
Debt-to-Equity Ratio (D/E Ratio) (Times)	0.83	0.77	0.70
Return on Assets (ROA)(Percent)	2.73	2.30	2.98
Debt Service Coverage Ratio (Times)	2.77	2.94	1.87





Board of Directors



Mr. Unsit Sampuntharat

Chairman

(4 January 2022 - 8 September 2023)



Mr. Danucha Pichayanan

Director

(28 October 2020 - 8 September 2023)



Mr. Yodphot Wongrukmit

Director

(28 October 2020 - 8 September 2023)



Mr. Thongchai Chawalitpicheat

Director

(28 October 2020 - 17 February 2023)





Mr. Sak Segkhoonthod

Director

(28 October 2020 – 8 September 2023)



Pol. Maj. Gen. Wiwat Chaisangkha

Director

(28 October 2020 – 8 September 2023)



Flg. Off. Kamolnai Chaixanien

Director

(28 October 2020 – 16 March 2023)



Mr. Panit Dhirapharbwongse

Director

(28 October 2020 – 8 September 2023)



Mr. Chavang Thaiying

Director

(28 October 2020 – 8 September 2023)



Assoc. Prof. Thira Jearsiripongkul

Director

(20 July 2021 – 8 September 2023)



Assoc. Prof. Pornanong Budsaratragoon

Director

(20 July 2021 – 8 September 2023)



Col. Sarunyu Viriyavejakul

Director

(20 July 2021 – 8 September 2023)



Miss Tidarat Thanapakpawin

Director

(4 January 2022 – 8 September 2023)



Mr. Supachai Ek-Un

Governor, Director and Secretary

(In office since 17 August 2021)



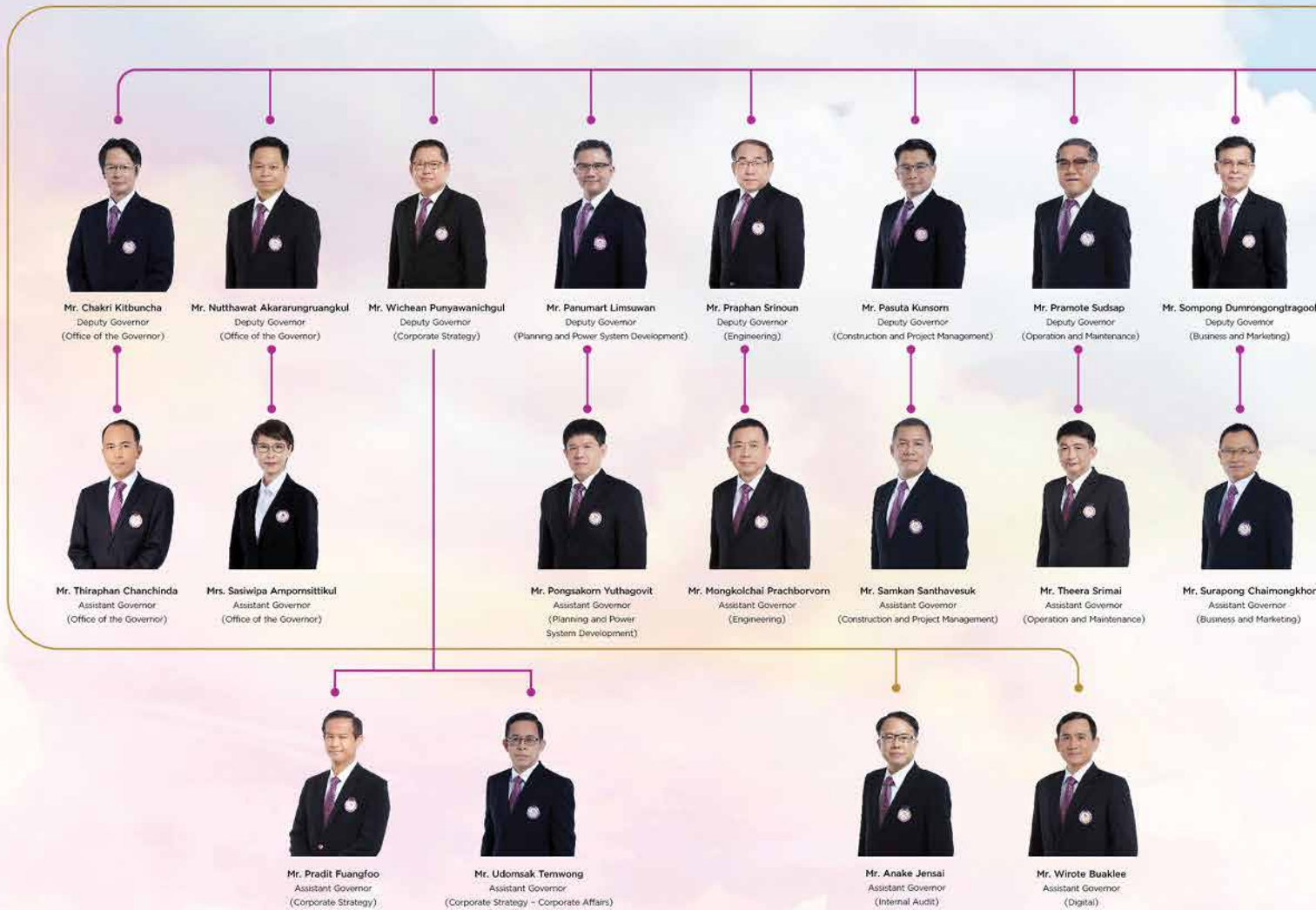
Management Structure of Provincial Electricity Authority





Management of Provincial Electricity Authority 2023

1 October 2022 - 30 September 2023





Mr. Supachai Ek-Un
Governor



Mr. Cheewin Phatthanakhuha
Deputy Governor
(Electricity Authority Region 1)



Mr. Junya Wattanakul
Deputy Governor
(Electricity Authority Region 2)



Mr. Chardchai Poomrin
Deputy Governor
(Electricity Authority Region 3)



Mr. Sumlit Chotibun
Deputy Governor
(Electricity Authority Region 4)



Mr. Kriengsak Kittipras
Deputy Governor
(ICT)



Mr. Isares Chensupakarn
Deputy Governor
(Accounting and Finance)



Mr. Pinyo Thongjerm
Deputy Governor
(Organization Management)



Mr. Mongkol Treekijanon
Deputy Governor
(Logistics and Organization Support)



Mr. Dusit Wiyaporn
Assistant Governor
(Provincial Electricity Authority
Area 1 (North), Chiang Mai Province)



Mr. Wijarn Klungboonkrong
Assistant Governor
(Provincial Electricity
Authority Area 1 (Northeast),
Udon Thani Province)



Mr. Khajorn Prongfa
Assistant Governor
(Provincial Electricity Authority
Area 1 (Central), Phra Nakhon
Si Ayutthaya Province)



Mr. Phaitool Rattanakorn
Assistant Governor
(Provincial Electricity
Authority Area 1 (South),
Phetchaburi Province)



Mrs. Thitirat Plasarn
Assistant Governor
(ICT)



M. R. Siriwan Kasemsan Na Ayutthaya
Assistant Governor
(Accounting and Finance)



Mr. Gromsak Kanttong
Assistant Governor
(Logistics and Organization Support)



Mr. Prasert Jaichareonsub
Assistant Governor
(Provincial Electricity Authority
Area 2 (North), Phitsanulok Province)



Mr. Perapon Puranachot
Assistant Governor
(Provincial Electricity
Authority Area 2 (Northeast),
Ubon Ratchathani Province)



Mr. Montre Yantrawattana
Assistant Governor
(Provincial Electricity
Authority Area 2 (Central),
Chon Buri Province)



Mr. Jumnian Boonkaew
Assistant Governor
(Provincial Electricity
Authority Area 2 (South),
Nakhon Si Thammarat Province)



Mr. Songkran Chutitanateerakul
Assistant Governor
(Provincial Electricity Authority
Area 3 (North), Lop Buri Province)



Mr. Prasit Junprasit
Assistant Governor
(Provincial Electricity
Authority Area 3 (Northeast),
Nakhon Ratchasima Province)



Mr. Pukdee Wongsaporn
Assistant Governor
(Provincial Electricity
Authority Area 3 (Central),
Nakhon Pathom Province)



Mr. Suparp Kasiwong
Assistant Governor
(Provincial Electricity
Authority Area 3 (South),
Yala Province)



Mr. Monchai Danuphoboriboon
Assistant Governor
(Organization Management -
Human Resource)



Mrs. Nudthaya Lumdupwong
Assistant Governor
(Organization Management - Laws)



Management of Provincial Electricity Authority in 2023

from 1 October 2023



Mr. Chakri Kitbuncha
Deputy Governor (Office of the Governor)
Acting Deputy Governor (North and Northeast)



Mr. Mongkol Treekijjanon
Deputy Governor (Logistics and Organization Support)
Acting Deputy Governor (Corporate Strategy)
Acting Deputy Governor (Organization Management)



Mr. Panumart Limsuwan
Acting Deputy Governor (Planning and Engineering)
Acting Deputy Governor (Business and Marketing)



Mrs. Sasiwipa Ampornsittikul
Assistant Governor
(Office of the Governor)



Mr. Suphoj Khamlueang
Acting Assistant Governor
(Provincial Electricity Authority Area 1 (North), Chiang Mai Province)



Mr. Pradit Fuangfoo
Assistant Governor
(Corporate Strategy)



Mr. Monchai Danuphoboriboon
Assistant Governor (Organization Management - Human Resource)



Mr. Gromasak Kanitong
Assistant Governor
(Logistics and Organization Management)



Mr. Pongsakorn Yuthagovit
Acting Assistant Governor (Planning and Engineering - Planning and Power System Development)
Acting Assistant Governor (Planning and Engineering - Engineering)



Mr. Surapong Chaimongkhon
Acting Assistant Governor (Business and Marketing - Customer and Marketing)
Acting Assistant Governor (Business and Marketing - Engineering Business)



Mr. Thiraphan Chanchinda
Assistant Governor
(Office of the Governor)



Mr. Methee Bunphrom
Acting Assistant Governor
(Provincial Electricity Authority Area 2 (North), Phitsanulok Province)



Mr. Udomsak Temwong
Assistant Governor
(Corporate Strategy - Corporate Affairs)



Mrs. Sanyalak Sukkasem
Acting Assistant Governor
(Organization Management - Laws)



Mr. Jaroonsak Nakklam
Acting Assistant Governor
(Provincial Electricity Authority Area 3 (North), Lop Buri Province)



Mr. Wijarn Klungboonkrong
Assistant Governor
(Provincial Electricity Authority Area 1 (Northeast), Udon Thani Province)



Mr. Perapon Puranachot
Assistant Governor
(Provincial Electricity Authority Area 2 (Northeast), Ubon Ratchathani Province)



Mr. Prasit Junprasit
Assistant Governor
(Provincial Electricity Authority Area 3 (Northeast), Nakhon Ratchasima Province)



Mr. Supachai Ek-Un
Governor



Mr. Kriengsak Kittiprapas
Acting Deputy Governor (Power System Operation)
Acting Deputy Governor (Digital and Communication)



Mr. Chardchai Poomrin
Acting Deputy Governor (Central and South)
Acting Deputy Governor (Accounting and Finance)
Acting Assistant Governor (PEA Area 3 (Central), Nakhon Pathom Province)



Mr. Theera Srimai
Acting Assistant Governor (Power System Operation - Power Grid Operation)
Acting Assistant Governor (Power System Operation - Power Grid Asset Management)



Mr. Wirote Buaklee
Acting Assistant Governor
(Digital and Communication - Digital)



Mr. Khajorn Prongfa
Assistant Governor
(Provincial Electricity Authority Area 1 (Central), Phra Nakhon Si Ayutthaya Province)



M. R. Siriwan Kasemsan Na Ayutthaya
Assistant Governor
(Accounting and Finance)



Mr. Samkan Santhavesuk
Acting Assistant Governor
(Power System Operation - Power Grid Construction)



Mrs. Thitirat Plasarn
Acting Assistant Governor
(Digital and Communication - Infrastructure)



Mr. Montre Yantrawattana
Assistant Governor
(Provincial Electricity Authority Area 2 (Central), Chon Buri Province)



Mr. Thana Chokphrasombat
Acting Assistant Governor
(Provincial Electricity Authority Area 1 (South), Phetchaburi Province)



Mr. Jumnian Boonkaew
Assistant Governor
(Provincial Electricity Authority Area 2 (South), Nakhon Si Thammarat Province)



Mr. Suparp Kasiwong
Assistant Governor
(Provincial Electricity Authority Area 3 (South), Yala Province)



Business Directions



Overall State Enterprise Strategic Plan

Adoption of, as the strategic development framework, the Sufficiency Economy Philosophy, essences of the 20-Year National Strategy, 13th National Economic and Social Development Plan, Sustainable Development Goals (SDGs), Thailand 4.0 Economic Model, Digital Economic Plan, Renewable Energy Plan, and other circumstances related to PEA's operations.





Energy Strategy

Strengthen national energy security, foster infrastructure leading to a better quality of life for people, develop energy elements suitable for economic growth, support the private sector's competition under proper price structures, and support consumption of eco-friendly renewable energy.

Vision

Smart Energy for Better Life and Sustainability

Mission

PEA is responsible for the generation and provision of standardized electricity services and related businesses to attain customers' satisfaction with products and services through PEA's continual corporate development plans together with the recognition of socio-environmental responsibility.

Core Value

Modernization, Excellent Service, Good Governance





Strategic Objectives and Operational Strategies

Strategic Positioning





Strategic Objectives, Goals, and Strategy

Strategic Objective	Goal	Strategy
1. To lead power distribution with digital technology, innovation, and human capital	<ol style="list-style-type: none"> 1. Value addition in core regulated businesses through management and operational efficiency 2. Partnership with start-up networks or technology firms for application of digital technology to business processes 3. Evolution of personnel caliber for business application of digital-use cases 4. Greater employee satisfaction and engagement as well as overall organizational development consistent with changes 	<p>Strategy 1</p> <p>Evolve business efficiency and services through technology to cut costs and expenses in parallel with evolution of organization's digital caliber and human capital</p> <p>Strategy 2</p> <p>Manage change and upgrade employee satisfaction and engagement</p>
2. To upgrade downstream business returns and scale up to new undertakings	<ol style="list-style-type: none"> 1. Greater proportion of income from emerging or downstream businesses 2. Fostering of human relations with retail customers, with burgeoning monthly platform user total 3. Greater skills through suitable courses for various functions to sustain new businesses 	<p>Strategy 3</p> <p>Grow income from downstream undertakings</p>
3. To be prepared for domestic transformation and challenges for sustainability	<ol style="list-style-type: none"> 1. Business-case improvement in investment efficiency under Grid Modernization Plan for next year 2. Readiness for Third-Party Access (TPA) and RE100 service provision under national energy and energy security policy 3. Planning of Green Tech Fund to bolster investment returns in parallel with technological application to PEA's operations 4. Eased adverse business impacts on society and the environment and eased GHG emissions 	<p>Strategy 4</p> <p>Ready the system for future transformation in energy consumption</p> <p>Strategy 5</p> <p>Evolution of sustainable organizational growth in pursuit of carbon neutrality</p>



Nature of Business





Nature of Business

Background

The Provincial Electricity Authority (PEA) was founded as an individual organization under the Royal Decree issued on 6 March 1954, as published in the Government Gazette on 16 March 1954. Its Board of Directors was appointed to steer business management under the oversight of the Department of Public and Municipal Works, Ministry of Interior, and the government, with the Minister of Interior holding general governing authority. The then Provincial Electricity Organization commanded an initial capital of 5 million baht, with 117 electricity authorities within its purview. Subsequently, PEA was established under the Provincial Electricity Authority Act B.E. 2503 (1960) on 28 September 1960 and inherited the ongoing mission from the Provincial Electricity Organization.

Objectives

PEA's objectives were stated by Section 6 of the Provincial Electricity Authority Act B.E. 2503 (1960) as follows

- Generate, procure, distribute, and sell electricity
- Operate an electricity business and related (downstream) businesses or those that supplement PEA.

Products and Services

• **The core business** is supply and distribution of electricity to customers in 74 provinces except Bangkok, Nonthaburi, and Samut Prakan.

• **Related Businesses:** Businesses or operations concerning electricity distribution. They are downstream businesses, some of which are regulated (Regulated Business) and others not regulated (Non-Regulated Business) by the Energy Regulatory Commission (ERC). These businesses provide additional or optional services apart from electricity distribution, leveraging PEA's resources and expertise. They are developed in response to future trends and directions in the country or globally. Businesses in this group arise from potential (Competitive Advantage) and various resources of PEA or its affiliates, in collaboration with partners, or through using innovation to create new businesses in the future (New S-Curve), including:

Construction and installation of power systems

Construction and installation of power systems contribute to better service integration. The business, directly aimed at customer satisfaction, comprises construction, installation of communication tools, and connection of power grids.



Power system repair and maintenance

PEA provides six services on power system repair and maintenance, namely hotline and high-voltage cable connection; transformer inspection and maintenance; transformer installation, removal, and repair; power system installation, inspection, and maintenance; integrated services for power system maintenance; and inspection and maintenance of underground cables.

Expertise service

Supported by its own experts and their extensive experience, PEA applies knowhow, technology, as well as modern tools and equipment to four services, namely electrical equipment testing, engineering, training, and concrete product testing services.

Electrical appliance/equipment sale and rental

PEA offers electrical appliance/equipment sales and rental service in nine areas, namely transformer rental; transformer installation, decommissioning, and repair; power generator rental; transformer sale; sale of other electrical equipment; power meter sale; capacitor sale; and power pole sale.

Energy management

PEA provides energy management services to third parties, such as energy efficiency enhancement projects in the public sector and solar rooftop installation service for residences.

Asset management

PEA provides efficient asset management to grow its income. The services include power pole rental service, fiber optic rental service, rental or use of other assets, and real-estate rental.

New businesses

PEA has introduced new businesses to provide customers with more comprehensive services aligned with global needs and trends. At present, PEA has operated EV charging stations via the PEA VOLTA Platform that will be able to provide more types of services, including EV roaming to enable charging across different networks, VOLTA CONNEXT services for EV charging station operators and EV charging service for corporate customers, which is now underway. In addition, PEA has distributed innovative products developed by its employees, and a digital platform is being developed to support nationwide sales expansion.

• Affiliates

Following the Cabinet resolution of 3 June 2009, PEA ENCOM International Co., Ltd., was established as PEA's wholly owned subsidiary to engage in energy investments and providing training in power systems for public and private sectors, in Thailand and abroad.

Wholly owned by PEA, PEA ENCOM was registered as a juristic person on 14 October 2009 and occupies the fourth floor of the LED Building, 200 Ngam Wong Wan Road, Lat Yao, Chatuchak, Bangkok. As of 31 December 2022, it commanded a paid-up capital of 5,110,621,250 baht, represented by 511,062,125 shares, priced at 10 baht per share.



Vision

Smart Energy and Innovation for Sustainability

Mission

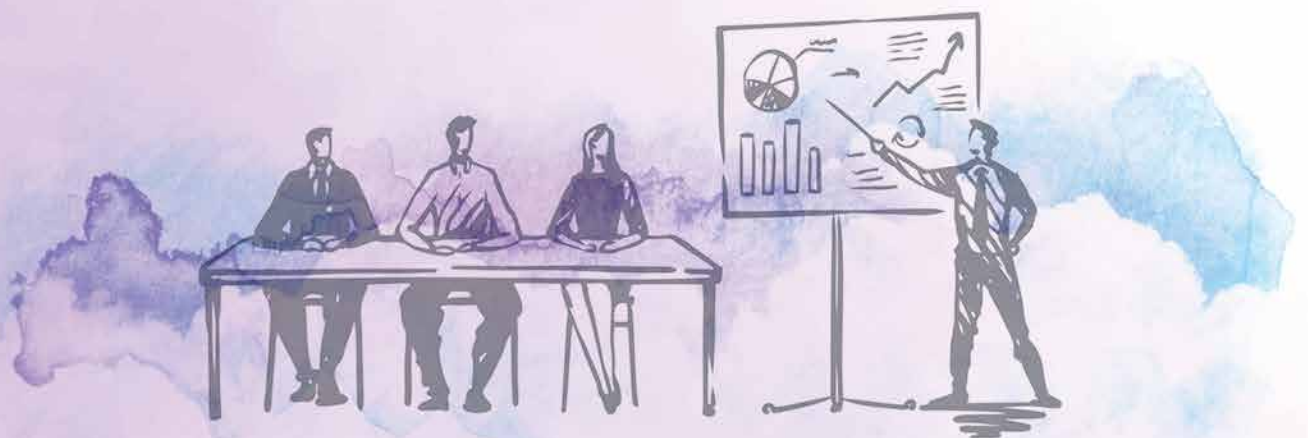
1. Invest in and develop a fully integrated domestic electrical power and energy conservation business
2. Serve as a mechanism for PEA's business operations
3. Expand investment in electric power and innovation businesses in the region
4. Upgrade operations to prepare for listing on the Stock Exchange of Thailand (SET).

Capital and Shareholding Structure

PEA is wholly owned by the Ministry of Finance, with the shareholding structure as shown below:

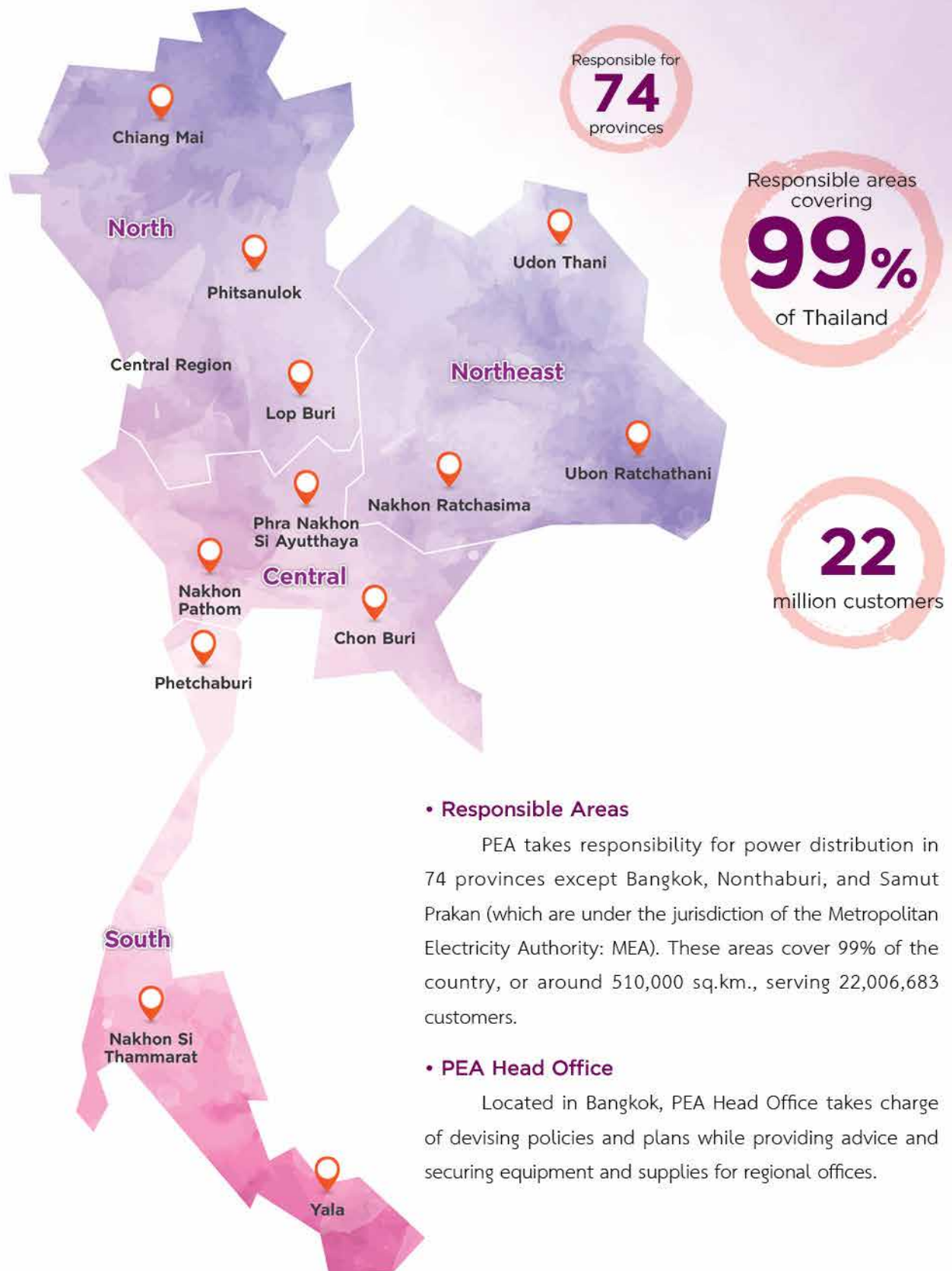
(Unit: Million Baht)

Item	As of 31 December 2023	As of 31 December 2022	As of 31 December 2021
Initial capital	87	87	87
Fiscal Budget	4,803	4,803	4,803





PEA's responsible areas and offices



• Responsible Areas

PEA takes responsibility for power distribution in 74 provinces except Bangkok, Nonthaburi, and Samut Prakan (which are under the jurisdiction of the Metropolitan Electricity Authority: MEA). These areas cover 99% of the country, or around 510,000 sq.km., serving 22,006,683 customers.

• PEA Head Office

Located in Bangkok, PEA Head Office takes charge of devising policies and plans while providing advice and securing equipment and supplies for regional offices.



• PEA Regional Offices

Categories	Number of Offices in 2023			
	Provincial Electricity Authority Grade 1-3	Provincial Electricity Authority Branch	Provincial Electricity Authority Subbranch	Total
Provincial Electricity Authority Area 1 (North), Chiang Mai Province	18	31	43	92
Provincial Electricity Authority Area 2 (North), Phitsanulok Province	12	30	45	87
Provincial Electricity Authority Area 3 (North), Lop Buri Province	13	25	31	69
North Region	43	86	119	248
Provincial Electricity Authority Area 1 (Northeast), Udon Thani Province	16	27	73	116
Provincial Electricity Authority Area 2 (Northeast), Ubon Ratchathani Province	14	28	77	119
Provincial Electricity Authority Area 3 (Northeast), Nakhon Ratchasima Province	15	32	39	86
Northeastern Region	45	87	189	321
Provincial Electricity Authority Area 1 (Central), Phra Nakhon Si Ayutthaya Province	26	18	25	69
Provincial Electricity Authority Area 2 (Central), Chon Buri Province	23	15	24	62
Provincial Electricity Authority Area 3 (Central), Nakhon Pathom Province	18	16	15	49
Central Region	67	49	64	180
Provincial Electricity Authority Area 1 (South), Phetchaburi Province	14	15	23	52
Provincial Electricity Authority Area 2 (South), Nakhon Si Thammarat Province	17	26	36	79
Provincial Electricity Authority Area 3 (South), Yala Province	13	21	34	68
Southern Region	44	62	93	199
Total	199	284	465	948

Remarks The number does not include PEA Head Office and 12 PEA Regional Offices.



PEA Offices

Bangkok

- **Provincial Electricity Authority
Head Office**

200 Ngam Wong Wan Road, Lat Yao
Subdistrict, Chatuchak District,
Bangkok 10900

Northern region

- **Provincial Electricity Authority Area 1
(North), Chiang Mai Province**

208 Chiang Mai - Lamphun Road,
Wat Ket Subdistrict, Mueang Chiang Mai
District, Chiang Mai 50000

Supervises electricity operations in six
provinces, namely Chiang Mai, Mae Hong Son,
Lamphun, Lampang, Chiang Rai, and Phayao

- **Provincial Electricity Authority Area 2
(North), Phitsanulok Province**

350/9 Moo 7, Mittraphap Road,
Samo Khae Subdistrict, Mueang Phitsanulok
District, Phitsanulok 65000

Supervises electricity operations in eight
provinces, namely Phitsanulok, Phichit, Tak,
Kamphaeng Phet, Sukhothai, Phrae, Nan,
and Uttaradit

- **Provincial Electricity Authority Area 3
(North), Lop Buri Province**

13 Phahon Yothin Road, Thale Chup Son
Subdistrict, Mueang Lop Buri District,
Lop Buri 15000

Supervises electricity operations in six
provinces, namely Lop Buri, Sing Buri,
Phetchabun, Nakhon Sawan, Uthai Thani
and Chainat

Northeastern region

- **Provincial Electricity Authority Area 1
(Northeast), Udon Thani Province**

123 Moo 5, Ban Nong Hua Mu, Na Di
Subdistrict, Mueang Udon Thani District,
Udon Thani 41000

Supervises electricity operations in eight
provinces, namely Udon Thani, Nong Khai,
Khon Kaen, Loei, Sakon Nakhon,
Nakhon Phanom, Nong Bua Lam Phu,
and Bueng Kan

- **Provincial Electricity Authority Area 2
(Northeast), Ubon Ratchathani Province**

195 Moo 7, Liang Mueang Road, Chaeramae
Subdistrict, Mueang Ubon Ratchathani
District, Ubon Ratchathani 34000

Supervises electricity operations in eight
provinces, namely Ubon Ratchathani, Yasothon,
Roi Et, Kalasin, Maha Sarakham, Si Sa Ket,
Mukdahan, and Amnat Charoen

- **Provincial Electricity Authority Area 3
(Northeast), Nakhon Ratchasima Province**

3 Moo 2, Mittraphap Road, Ban Mai Subdistrict,
Mueang Nakhon Ratchasima District,
Nakhon Ratchasima 30000

Supervises electricity operations in four provinces,
namely Nakhon Ratchasima, Chaiyaphum, Buriram,
and Surin





Central region

- **Provincial Electricity Authority Area 1 (Central), Phra Nakhon Si Ayutthaya Province**

46 Moo 6, Asian Highway, Hantra Subdistrict, Mueang Phra Nakhon Si Ayutthaya District, Phra Nakhon Si Ayutthaya 13000

Supervises electricity operations in seven provinces, namely Phra Nakhon Si Ayutthaya, Ang Thong, Pathum Thani, Saraburi, Nakhon Nayok, Prachin Buri, and Sa Kaeo

- **Provincial Electricity Authority Area 2 (Central), Chon Buri Province**

47/1 Moo 3, Samet Subdistrict, Mueang Chon Buri District, Chon Buri Province 20000

Supervises electricity operations in five provinces, namely Chon Buri, Chachoengsao, Rayong, Chanthaburi, and Trat

- **Provincial Electricity Authority Area 3 (Central), Nakhon Pathom Province**

9/1 Moo 1, Thaiyawat Subdistrict, Nakhon Chai Si District, Nakhon Pathom 73120

Supervises electricity operations in four provinces, namely Nakhon Pathom, Samut Sakhon, Suphan Buri, Kanchanaburi, and Ratchaburi (covering only Ban Pong District of Ratchaburi Province)

Southern region

- **Provincial Electricity Authority Area 1 (South), Phetchaburi Province**

86 Moo 5, Phetchaburi - Hat Chao Samran Road, Pho Rai Wan Subdistrict, Mueang Phetchaburi District, Phetchaburi 76000

Supervises electricity operations in six provinces, namely Phetchaburi, Prachuap Khiri Khan, Ratchaburi, Samut Songkhram, Chumphon, and Ranong

- **Provincial Electricity Authority Area 2 (South), Nakhon Si Thammarat Province**

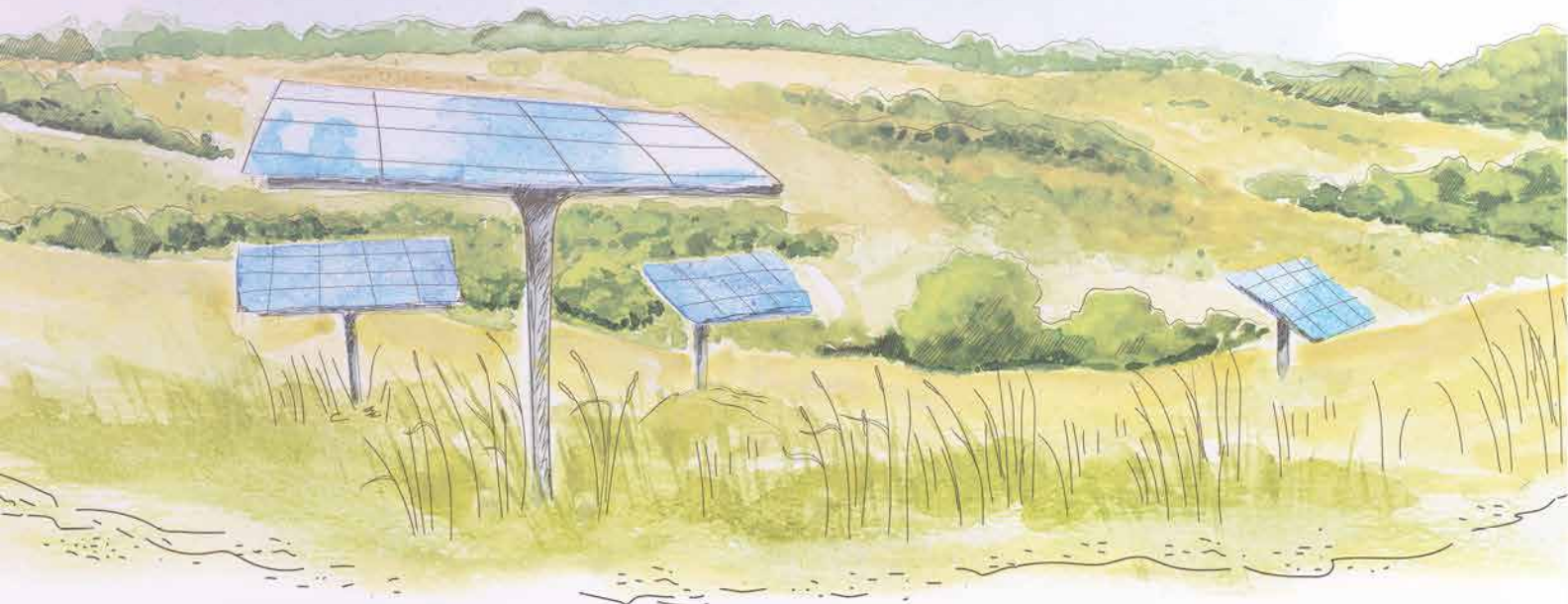
167 Asian Highway, Na San Subdistrict, Phra Phrom District, Nakhon Si Thammarat 80000

Supervises electricity operations in six provinces, namely Nakhon Si Thammarat, Trang, Krabi, Surat Thani, Phuket, and Phang-nga

- **Provincial Electricity Authority Area 3 (South), Yala Province**

59/27 Yala-Pattani Road, Khao Tum Subdistrict, Yarang District, Pattani 94160

Supervises electricity operations in six provinces, namely Yala, Pattani, Narathiwat, Songkhla, Satun, and Phatthalung.



Business Overview

Influencing Factors

Today's power industry and energy industry are affected by megatrends, whether social, economic, political, environmental, or technological, all of which dictate future businesses. Below are the essences of such trends.

1. Energy crisis trends

Energy consumption has shifted from fossil energy consumption to renewable energy (renewables) consumption and consumption of low-carbon energy. One now expects the ratio of clean energy to rise to 40 percent by 2045. Natural gas demand will likely remain high, as its consumption will continue during energy transition. In addition, the Russia – Ukraine war of 2022 catapulted worldwide gas prices to record highs that year and limited volumes of LNG, since Russia was ending LNG transmission to European countries; more LNG imports were therefore necessary. It is expected that Thailand would continue to pose greater natural gas demand until 2032, which would increase domestic commodity prices.

2. Preparation for future power business structure shift and unclear laws and regulations

The chief target for power industry regulation is efficient operation in four aspects: power security, power accessibility at affordable prices, environmental sustainability, and financial sustainability. The Thai power sector boasts remarkable performance in all four aspects. Therefore, PEA should stress energy transition while maintaining its operations at decent levels. Deregulation of the power sector in APEC countries is limited to the Philippines and Australia, where privatization exists, as does full-scale liberalization. One notes, however, more of such liberalization trends in APEC, including Thailand. It is therefore well-advised to get ready for such change.





3. Industry 4.0 Model

The factors influencing Industry 4.0 are data connectivity and the capability of computers for rapidly compiling massive volumes of data, application of automatic technology to data analytics, technological/machine application for working alongside human beings, including collaborative robots and AGVs, and application of advanced production methods, including 3D printing. For successful strides into the Technology 4.0 age, one needs triple transformation. First, business transformation represents digital technological application for greater business efficiency while growing businesses with clear targets and development of customer-back solutions related to core business processes. Second, technological transformation represents structuring of technological development with advanced innovations; business partners are also formed to scale up technological development for organizational application. Finally, human capital transformation represents novel work-related values, which encourages learning, adds digital-adept positions, and enhances digital caliber for personnel.

4. Drive for sustainability

Today's energy entrepreneurs face four problems, namely GHG reduction, access to affordable power, power security and stability, and competitiveness. Thailand is no exception to this statement. Since Thai business operators' access to renewables is limited, they have borne the brunt of Ft rises, which have affected residential users. Domestic LNG, in the meantime, is dwindling, thus necessitating imports—which implies more expensive LNG. PEA can pursue new opportunities in the shift of the energy sector toward sustainability and technological advancement in the Industry 4.0 age. The main considerations are the ability to capture such opportunities and business attractiveness.

5. Increased competitors

Incumbent business groups and startups represent PEA's major rivals when it comes to energy transition businesses and carbon emission reduction, including PTT Plc, Evolt Technology Co., Ltd., and Bangchak Corporation Plc. One notes fierce competition among non-regulated power business groups and new energy business groups in Thailand, whether major or small-scale operators, or foreign operators. In the B2B sector, there exist new operators (in the energy sector and others) in the RE100 grouping designed to identify approaches to renewables. In the B2C sector, one has seen solar rooftop installation turn into general commodities, with proposals received from local SMEs and financial support from commercial banks and the EV industry. One also notes a fast influx of operators, some with remarkable market shares.

6. Technological colonialism

Today, there exist more than half of the technologies essential for the achievement of the Net Zero target by 2065. These technologies cannot yet attain the mature stage, including the CCUS technology, Low Carbon Shipping, and Direct Air Capture (DAC). Couple this fact with the investment in GreenTech in 2022, which commanded 40 billion US dollars in market size, whereas other industrial groups post a CAGR of about 28 percent.



Industry Outlook and Trends

At present, the business sector has adopted an approach for sustainable organizational development, leveraging the ESG approach: Environment (E), Social (S), and Governance (G). Environment deals with the most cost-effective natural resource consumption with the least adverse effects on the environment. This is appraised from environmental indicators like GHG reduction. Social denotes the relationship between a given organization and stakeholders, internal and external. Governance refers to business transparency. Today the ESG concept has gained popularity among worldwide investors, who recognize climate change crisis and have adopted this concept as an essential investment consideration factor. This change is most conspicuous in the energy sector, where adjustments have become evident in the consumption of coal or fossil fuels in power generation, giving way to renewables or clean energy.

For the world and Thailand, the energy direction is transitioning to renewable energy (RE) as the staple energy. According to the outcomes of COP26 and COP27, Thailand has announced its participation in lowering GHG emissions, striving to achieve carbon neutrality by 2050 and net zero GHG emissions by 2065. In addition, the EU has publicized a draft CBAM law on cross-border adjustment mechanism; this implies cost adjustment for certain imported goods to echo actual carbon emissions and prevent imports into EU products of higher GHG emissions than EU standards. Enforcement partly began on 1 October 2023, with full enforcement due to begin on 1 January 2026. Importers of seven items are affected (iron and steel, aluminum, cement, fertilizers, electricity, hydrogen, and certain downstream items, including iron and steel nuts and screws); they are required to prepare reports on their indirect emissions. Other countries are likewise expected to introduce similar measures, resulting in power users, notably those in export industries that need electrical power obtained from renewables, also needing to declare GHG emissions by the methods and standards consistent with these measures to prevent CBAM charging while maintaining their competitiveness.

Recognizing impacts on industrial operators that engage in exports, the government has speeded up its promotion of installed electricity sources from renewables, including sunlight, wind turbines, biomass, and biofuels, and defined various criteria and policies to make it easier to access renewables. PEA has prepared itself for supporting various measures, including the service to locate Renewable Energy Certificates (RECs), Utility Green Tariff (UGT), Sleeved (Direct) PPA, and installation of renewables-based power generation for self-consumption.





Performance Results

Below are PEA's performance results for 2023.

Performance Analysis

Management Discussion and Analysis (MD&A)

PEA is committed to becoming a digital utility to upgrade its power service quality, standard, security, reliability, and customer centricity. To this end, its emphasis is on nurturing and managing customer relationship to meet their expectations and providing integrated electrical power service on a digital platform by applying digital technology to raise the existing system's efficiency while evolving new businesses and achieving sustainable organizational development in parallel with socio-environmental responsibility.

Worldwide, the power industry is in a transition of structure and business operations. Mushrooming are new entrepreneurs amid liberalization of the power sector. Due to disruptive technologies, users now have higher expectations for grid stability and services. Below are three aspects of the current sector:

- 1. Electrification:** In the transformation of energy consumption formats seen in the transport sector, heat generation is turning from fossil fuels into electrical energy, including EVs and heat pump application
- 2. Decentralization:** One is increasingly witnessing decentralization of power generation, including distributed generation, microgrids, and prosumers
- 3. Digitalization:** One notes more common digital technological application to power systems, including real-time communication and operation systems, smart meters, smart sensors, and automation systems.

For Thailand, PEA is also impacted by such transformation, and so it is feeling various drives, including a need for higher quality and reliability of power systems, a rise in renewables connected to PEA's grids, GHG reduction and evolution into carbon neutrality, the births of community power plants, energy-saving technologies and efficient energy consumption, the evolution of EVs, a need for charging stations and energy storage, the power industry structure being transformed from power users into prosumers, and peer-to-peer energy trading (peer-to-peer commerce). In addition, artificial intelligence (AI) or machine learning is increasingly visible, as is the employment of compilation and analytical systems for big data and data analytics for the development of various services—these will in turn transform how services are provided and how businesses are operated. In short, PEA's organizational drive toward a digital utility is essential.

These factors then provide opportunities and challenges for PEA to transform the organization, improve organizational management more efficiently, and evolve new businesses and services for sustainable growth to sustain the power industry's transformation as well as radically changing customers' needs and expectations.





Under its ongoing investment plans and those for the next three years, PEA has mapped out action plans in keeping with surging power demand forecasts as well as changes in the power industry. Below are salient management and milestone moves.

1. Power System Management

1.1 Transmission and Distribution Development Project – 2nd Stage: The project develops power systems and constructs a substation automation system consistent with the IEC 61850 standard to achieve sufficient power distribution, command reliable and secure power supply to meet growing needs, minimize operation and maintenance problems, and cut distribution losses. The project also installs power transformers and equipment of higher quality and standards to improve and connect distribution systems in business and industrial zones, industrial estates, and critical zones for higher system security.

1.2 Agricultural Electrification Project – 2nd Stage: The project extends power service to agricultural zones, including integrated farming plots, and agricultural gardens to support livelihoods and strengthen the grassroots economy.

1.3 New Rural Household Electrification Project – 2nd Stage: The project extends power systems for new households for full access to power under public policy.

2. Digital Technology Management

2.1 Upgrading power systems with digital technology (Smart Grid)

- Project to investigate and evolve a prototype for distributed energy resource (DER) management on PEA's distribution system by means of virtual power plants (VPPs) for optimal energy management
- Cooperation agreement on the Smart Operating System Project for Low-Voltage VPPs for power management.

Both projects represent PEA's approach to grid management where DERs are connected, including solar rooftops, batteries, and EVs. Harnessed is the VPP concept to manage asset utilization for maximum efficiency, grid flexibility, power quality, efficiency, reliability, and investment deferral of infrastructural improvement for growing DERs and future shifts in the power industrial structure.





- **Project to manage power demand response and Automated Demand Response**

This project designs and evolves a load aggregator management system based on PEA's sub-architecture, recognizing PEA as the first load aggregator. The system must align with all elements of the demand response process. This means the demand response control center, load aggregator, and demand response resources connect to measure outcomes of power consumption reduction under the load response measure under Thailand's measure for its smart-grid activities, where load responses are essential to lowered operation of high-cost power plants. The exercise is intended to define targets for load responses in Thailand's power development plan (PDP).

- **Long-term plan to supply a battery energy storage system (BESS) for Ko Samui, Surat Thani Province**

This plan was designed to increase the security and resolve power shortages of Ko Samui, Ko Pha-ngan, and Ko Tao in Surat Thani Province, all power systems currently linked, by lowering the burden and risk of reliance on the single-circuit underground cable of Ko Samui Power Substation 2. To this end, PEA will engage in BESS rental, whereby BESS operation control and maintenance is done on Ko Samui, Surat Thani Province. Operation will total 25 MW, and total application capacity will be no less than 50 MWh. The system will distribute no less than 50,000 units daily, consistent with the approach to promote evolution of energy storage systems (ESSs). This would form a prototype for raising system security for remote areas. It breeds learning and development of smart ESSs that can promptly respond to system demand, are capable of islanding, and lend themselves to the learning, evolution, and scaling-up of energy storage technology for application with renewable energy. Finally, this represents solutions to future power systems and is extensively applicable in the commercial sector.

- **Microgrid system improvement, Mueang District, Mae Hong Son Province**

This plan develops microgrid controllers for Mueang District, Mae Hong Son Province, a move designed to plan and operate systems containing various small-scale power generation sources to maximize power system capability. This would enhance the security, reliability, and quality of power systems as a whole; lower the time and expenses required for operation and maintenance; cut losses in the generation system and distribution to remote locations; and address the public policy to evolve remote power systems into smart grids, generate power with renewables, and cut GHG emissions—thus benefiting the environment.



• Geographic Information System Development Plan, Phase 3 (GIS 3), for power systems

This plan raises the GIS efficiency for power systems while growing the user service scopes to fully cover the growing needs of various systems. In place is centralized data compilation to address overall analyses of nationwide power systems; to be set up is a data recovery center (DRC) for greater security and availability for application should the main system have problems. Existing applications are improved, with new ones added for mobile applications. Sophisticated aerial photos are obtained for higher analytical efficiency in parallel with operation and connection with assorted work systems. These moves integrate power system map information for field work, covering users nationwide, and supports aspects of PEA's operations, namely

- Power system planning, design, and construction
- Power interruption fixing
- Power system maintenance
- Electrical engineering analyses of power systems
- Customer services.

Therefore, PEA's GIS is a step toward power system stability enhancement and upgrading of customer services through new modes of service for greater customer satisfaction. It also trims expenses as well as the work time needed by employees—all contributing to lower costs of system development planning.

2.2 Digital technology-enabled customer connection

At PEA, we have developed an IT system for both our work processes and customers' application outside PEA to accommodate customer services through online channels conveniently and promptly while giving customers remarkable service experience.

PEA's announcement on the electronics channels for PEA contacts, B.E. 2566 (2023), defines electronics channels for the public to file requests to PEA at

- 1) www.pea.co.th
- 2) PEA Smart Plus application (iOS or Android).

Via these online channels, PEA has evolved popular services to minimize personal contacts at its offices. The available services are applications for new power connections, applications for using tap water concurrently with new power connections, extension of electricity zones, payment of electricity bills, revocation of power connections, applications for larger/smaller meter sizes, transfer of ownership, applications for amendment to customers' records, notification of power interruption, downloading of electricity invoices, electricity bills, and electronics tax invoices.

For greater confidence in the efficiency of various service channels, PEA has set service level agreements (SLAs) and regular customer satisfaction surveys. In addition, the voice of customers (VOC) is analyzed and summarized for customers' needs and expectations to upgrade work on service channels to serve them. PEA also focuses on integrating and enhancing its efficiency for properly evolving overall digital channels to achieve integrated digital services for its core business and downstream businesses.



2.3 Organizational modernization

• Work-D Super App and Capital Project Management (CPM) software

PEA has developed the Work-D Super App for job-site employees' use as the main enabler of convenient, prompt, and efficient performance. In 2023 this application saw capability upgrading on the part of customer service. To elaborate, data are now connected to the customers' application-handling system, particularly that of applications for engineering services like transformer testing or for Third Party Access (TPA) usage under the ERC Sandbox project. Such connection with data of the application-handling system not only streamlines administrative documents, but also minimizes errors—thus raising engineering service efficiency for downstream businesses.

• Evolution of a data-driven organization

At PEA, we define strategic plans and values by stressing data exploitation as a data-driven organization and systematically integrating all organizational data scattered across agencies. PEA also oversees data to ensure quality and provide data analytics to scale them up for the benefit of service task quality and organizational management quality. Another purpose is to present data visualization to simplify management's decision-making. This year we selected and mastered five use cases for data analytics:

1. Customer data service, which systematizes customer master data services and other customer-related transaction data to ease the work of various units through proper and quick exploitation
2. Integration of data on power trading on the GIS Portal, which represents data connection for purchases from EGAT, SPPs, and VSPPs to data of key accounts. Analyses and displays on the GIS Portal Dashboard support decision-making on purchase and distribution planning. They also support preparation of RE and REC data as well as carbon credit between PEA and MEA.
3. Data analytics in support of PV/ESS business decisions, which lends insights into credit scoring and load profiles of key accounts, based on AMR readings. This leads to the selection of customer groups for the presentation of PV/ESS services and products, including future related services and products.
4. Data analytics to identify customer groups that need compensation for power interruptions, which identifies key accounts that suffer from power interruptions as recipients of PEA Smart Vouchers. This move maintains relationships with, and creates satisfaction among, them.
5. Customer churn prediction, which analyzes risk levels where PEA's key accounts could terminate services, thus minimizing risks of losing high-value key accounts.





- **Development of Employee Self-Service System**

Designed to help employees access individual data and manage them, and to enable PEA to provide assorted welfare services promptly, the PEA Life application was developed as a digital channel that supports employees' work while enhancing their good experiences in an integrated way. Established is a new feature consistent with PEA's Employee Experience Blueprint. This year saw the development of a feature for overtime (OT) work management, enabled by a system streamlining OT permission requests and reimbursement. Finally, the developed Feature PEA Fund+ connects data to the provident fund management system, which enables employees to conveniently and promptly manage the fund and investment.

- **Development of a center for automatic management of business processes (RPA COE)**

To grow organizational efficiency, particularly for routine, bulk work, PEA has leveraged Robotic Process Automation (RPA) in support of organizational work. A center of excellence (COE) was established in support of RPA application across the organization. This year we launched the Adhoc RPA Incubator Batch 1/2023 project to form a team of RPA developers, out of which one task has found immediate application to real work and three others need revision before actual implementation. In addition, PEA staged a performance contest on RPA, which saw contesting employees representing 12 PEA areas.

2.4 Digital Infrastructure

- **IT Infrastructure Design and Consolidation for PEA (ITIDC), Virtual Desktop Infrastructure, and Disaster Recovery Center (DRC)**

For business agility for future work volumes while systematizing to provide new services in a quick, efficient, and safe manner—apart from trimming investment and hardware maintenance and software costs—PEA has developed its Cloud infrastructure in the form of Infrastructure as a Service (IaaS), first implemented in April 2021. To make the Cloud infrastructure safer and more efficient, PEA has developed guidelines for developing secure software (DevSecOps) and investigated as well as preparing guidelines for Platform as a Service (PaaS) to grow its capability for providing services concerning the Cloud infrastructure.

Also, PEA has evolved Virtual Desktop Infrastructure (VDI) to enhance work efficiency regarding PEA's application and specialized software from anywhere, anytime, as well as various devices, including personal computers, smart phones, and tablets. Another purpose is to raise efficiency for the security of software application. VDI was rolled out in late 2022, covering 4,000 concurrent users. Finally, PEA has set up a Disaster Recovery Center (DRC) as a data backup center in case the main site collapses, to enable massive data management with secure IT and Cloud infrastructure, thus lowering the risk of information system collapse should something detrimental happen to the Data Center. The DRC is now in operation.





• Cyber Security Enhancement

By constantly developing its digital work, PEA is naturally exposed to cyber security risks. To efficiently cope with such threats and enhance security for its digital systems, PEA has formed a Security Operating Center (PEA SOC), which operates around the clock. Its surveillance scope entails IT, operating technology, data, and public deception in support of actions under laws, strategies, and standards. In addition, it conducts penetration testing and collects digital forensics for enhanced cyber security. Also, PEA has developed a cyber security system consistent with the ISO/IEC 27001:2022 standard, incorporating the major infrastructure of Head Office, all 12 area offices, and ready-made computer software for PEA's core business, 2nd Stage, by extending the scope to the WAN system of Head Office. Note that applications developed for internal use must first undergo vulnerability assessment (VA), and gaps must be closed before application implementation. Such applications then undergo gap identification every six months for safety's sake. All following moves have steadily raised security awareness among PEA employees: E-learning for all executives and the rank and file together with tests of their mastery, conducted in the form of phishing mail, whereby e-mails with ill intentions are sent to all groups to educate them about such threats, which could be camouflaged in e-mails. Also publicized are media, designed to raise awareness of information security, in various forms so that the workforce may fully understand and thus safeguard PEA's information system from cyber security.

• Enterprise Architecture Governance & Development for IT and IT Services

At PEA, oversight of IT governance has always been in place under the COBIT operation scope. In 2022, PEA underwent the first surveillance audit to maintain certification, properly termed "IT oversight for oversight of digital technological management of PEA". This certification confirms the activities under the ISO/IEC 38500:2015 international management standard. PEA also commands evolution of an IT service management system under ISO/IEC 20000-1:2008. This year it successfully underwent re-certification of six services, namely Intelligent Customer Service (ICS), computer hardware and auxiliary/network equipment service, PEA Smart Plus service, DDOC electronics correspondence system service, Bill Printing and Payment Management (BPM) service, and the PEA Service Desk, which provides IT services.

In addition, for efficient analyses and planning of organizational development—particularly digital technological development—PEA has applied Enterprise Architecture (EA) to analyze organizational transformation, which enabled it to visualize business processes, application data, to technology in a systematic and sustainable fashion. These are presented as As-is architecture and To-be architecture. Thus, PEA has managed to analyze work streamlining as well as evolution/improvement of digital technologies in support of efficient operations.





- **Guidelines for PEA DevSecOps: platform as a service**

PEA's Cloud infrastructure has since 2021 been used in the form of Infrastructure as a Service (IaaS) for business agility, the ability to handle future work volumes, and investment reduction (including hardware and software maintenance). Further, to develop applications in quick response to business needs and sudden changes with due regard for service continuity and system security, PEA has come up with the idea of applying DevSecOps to the organization. To elaborate, this technique promotes efficient collaboration among developers, service operations team, and security personnel. This year, PEA therefore prepared the PEA DevSecOps platform as a service to define collaboration processes in such form; it also designed platforms supporting DevSecOps service provision to ensure that it can quickly, safely, and efficiently develop systems for new services.

2.5 Digital Businesses

PEA engaged in emerging businesses that stress digital services, namely the PEA VOLTA Platform and PEA Care and Services Application, as summarized below:

PEA VOLTA Platform: This work was scaled up from the research undertaken by King Mongkut's Institute of Technology Ladkrabang under a research scholarship to facilitate simple, convenient, and quick EV charging at charging stations. To elaborate, service users use a map system that leads them to the nearest station, examine the status of charger heads, display charging status, units (kWh), and electrical power (kW). Thus, they can manage their charging time and pay fees through the PEA VOLTA Application. Today, PEA has developed PEA VOLTA charging stations and launched commercial services at 409 stations in 75 provinces (74 provinces under PEA's jurisdiction and Bangkok Metropolis). These satisfy the charging needs in the form of quick charge on main and secondary roads, partners' areas where charging stations are located, and major tourism sites.





PEA Care and Services Application is a platform for one-stop service through a mobile application for installation, improvement, repair work for home power systems and offices, inspection of home power systems, and air-conditioner cleaning. For these tasks, the equipment or devices used must be properly standardized, and the services must be properly certified by PEA. This application facilitates the public, business, and industrial sectors. As for service technicians, they must be properly certified professional electricians, specializing in building interior electricity, attested by the Department of Skill Development.

3. Human Resource Management and Development

3.1 Workforce Management

PEA is engaged in workforce management by laying down Recruit, Replace, Reskill, and Upskill guidelines to form a suitable workforce in keeping with the organizational drive toward a digital utility. It analyzes workforce needs, recruitment, and selection of personnel matching the organization's needs. Finally, it considers job groups needed for the future, which must be recruited further to support services regarding power systems and downstream businesses for maximum efficiency and to serve power users thoroughly.

Workforce Structure (as of 31 December 2023)

(Unit: Person)

No.	Function / Office	Employee	Contractor	Total
1	Office of the Governor	213	16	229
2	Digital Office and ICT	384	6	390
3	Business and Marketing	277	6	283
4	Organization Management	497	7	504
5	Accounting and Finance	309	14	323
6	Power System Operation	942	117	1,059
7	Corporate Strategy	322	7	329
8	Logistics and Organization Service	269	41	310
9	Planning and Engineering	518	10	528
10	Electricity Authority Region 1 and Region 2	12,073	2,757	14,830
11	Electricity Authority Region 3 and Region 4	12,082	3,022	15,104
Total		27,886	6,003	33,889





Personnel Expenditure

(Unit: Million Baht)

Description	2023	2022	2021
Employees	18,948	19,275	18,456
Contractors	1,817	1,768	1,718
Total	20,765	21,043	20,174

3.2 Organizational Restructuring

PEA's dynamic organizational restructuring sustains changes due to internal and external factors alike, consistent with public policy, power industry structure, business trends, digital technology, innovation, shifts in customer behavior, and stakeholders' needs and expectations.

Underlying the restructuring are

1. Lean Organization
2. Energy Disruption
3. Enhancement.

Continually improved are the organization structure and job descriptions in line with PEA's context, strategic plans, and overall work system. Management, employees, and all related sectors were involved. Also, change management plays a part in employees' recognition, endorsement, and change and improvement of internal work systems. At the same time, employees are groomed for new technologies and tasks.

PEA values compliance with good governance, sustainable development, and organizational development across the value chain, striving for a smart power grid that is secure and reliable. It also strives to heighten business competitiveness and efficient customer service to achieve sustainable organization growth and meet stakeholders' needs. Therefore, to prepare for future business shifts, it has restructured itself and made the organization leaner, decentralizing administrative power for agility by assigning work units and amending job descriptions, including those for GRC, sustainability management, stakeholder relations, digital technology, downstream businesses and affiliate management, marketing and customer relationship management, and power system asset management.

3.3 Performance Management

At PEA, we have implemented human capital management, which values the performance management system—a critical tool enabling efficient work, thus creating value at the individual, departmental, and organizational levels. Today, the developed system (PEATA-PMS) accommodates the new structure, and both employees and contractors can undertake performance assessment on an online platform anytime, anywhere for supporting annual pay adjustment, appointment, selection of high-caliber personnel, and personnel development.



3.4 Raising Employee Satisfaction and Engagement

PEA annually surveys employee satisfaction and engagement to apply survey findings to the improvement and strategic planning, thus providing personnel with work inspiration, utmost dedication, and the ability to continually provide quality work and deliver excellent services to customers.

3.5 Personnel Promotion and Development

Recognizing the significance of personnel, which are priceless resources for sustainable growth, PEA maps out policies and guidelines for human capital resource management and development to optimize personnel capability. In place are various forms of systematic self-development through upskilling and reskilling of all personnel. That way, PEA enhances their capability while closing workskill gaps in keeping with business changes and new technologies, including technical aspects that concern the core knowhow and skills specific to PEA.

In planning long-term personnel development, PEA has applied the HRD Blueprint as guidelines for the desired PEA Competency Model for all its personnel. In place is personnel development promotion through assorted means, all focused on continuing learning, participation, and responsibility for self-development with individual development plans (IDPs) for each person. In developing each IDP, the 70:20:10 development model prevails. At the same time, development activities groom specialized personnel in engineering and management, including electricity quality, reliability of power systems, system protection, system maintenance, renewable energy, and Hotline. In addition, assorted skills are developed, including soft skills, digital mindset, and digital skills. Promoting and staging forums for knowledge and experience-sharing, PEA advocates personnel's research and development (R&D) caliber by staging technical conferences, contests, and seminars, including PEACON & Innovation 2023, innovation and invention contests, PEA Work Skills Competition 2023, and selection of outstanding PEA offices. Lifelong learning promotion includes master's degree and doctoral degree scholarships in Thailand and abroad, support for training in Thailand and abroad, and encouragement of personnel capability by presenting technical papers at international forums to accommodate future business change and growth.

3.6 Cultivation of Learning Culture

PEA's KM Vision for knowledge management appears below:

"PEA leverages knowledge management as a vital tool for value supplementation to products, services, and work processes. It advocates organizational strategy to make PEA a leading modern organization and a knowledge-based organization."

This year saw implementation of the 2023-2024 Knowledge Management Master Plan, the outcomes of which were reported to the Executive Committee and the Board of Directors every quarter. Below are the details.





1) Management are now the role models for each level of management (senior, middle, and junior) through drivers of PEA's values. Executives now play a part in knowledge management activities, including development of skills and mindsets relevant to the nurturing of a learning ambience through the PEA KM Lighthouse Project. KM activities are staged across all functions, where all executives are engaged in learning and sharing with employees through the KM Implementation Project.

2) Defined is knowledge as a tool for IDP preparation. Prizes were handed out to employees who share knowledge the most and to those whose knowledge panels are viewed the most. Such presentation was held at PEACON & Innovation 2023. Finally, this year saw the Lessons Learned Plan, involving VIPs, experts, and others near retirement. The lessons learned this year numbered 217.

3) All functions have received training on the standard of knowledge management, as reviewed by internal auditors, and have completely conformed to ISO 30401 in addition to producing innovations for the organization. PEA takes it most seriously to promote individual and organizational learning. To this end, guidelines for promoting learning and knowledge sharing have been defined as part of process development and innovation through key processes, including PEA VOLTA, PEA Smart Plus, and Pupaplug.

4) In place are compilation and classification of such knowledge into both electronics forms and hard copies. Dissemination of knowledge has been done through the process of job instruction, training/seminars, and through the organization's KM information system at www.km-si.pea.co.th. New knowledge items have been created and the Knowledge Management System Integration (KMSi) scaled up through organized technical conferences, seminars with various agencies, cooperation with ASEAN electricity authorities, knowledge-sharing manuals, and various routine technical cooperation projects. The goal is for PEA to command a knowledge platform, ready for scaling up for sustainable innovations.

4. Supply Management

Supply Management

In view of various challenges facing its supply management, including assorted hindrances to procurement procedures and the value control of reserve inventory last year, this year PEA has taken steps to apply its information system to raise the efficiency of procurement and hiring, shorten the time, and cut expenses as well as procurement costs and supply management—ranging from supply planning, supply procurement and hiring, contracting, delivery, to inspection, apart from data cleansing. The continuing project from 2022 was the PEA e-Procurement and Material Planning Project, to be completed in 2024. Completed in 2023 was the launch of projects to support operators, namely a project to develop the Vendor Master Management System and the Last Price System.





Planning to upgrade the efficiency of supply management began this year, and the project kickoff is expected in 2024. It consists of a project to upgrade the efficiency of spend analytics and another on integrated demand planning with AI algorithms. The outcomes would enable PEA to overcome various challenges facing its supply management.

5. Services

5.1 Electricity-Related Businesses

PEA's core responsibility is to transmit, distribute, and provide electricity-related services to customers. Four service regions consist of the North, Northeast, Central, and South. Each region consists of three provincial electricity offices, thus a total of 12 offices. In place are customer service centers and PEA offices, totaling 948 in 74 provinces except Bangkok Metropolis, Nonthaburi Province, and Samut Prakan Province, which are under MEA's jurisdiction.

PEA has grown comprehensive service channels catering to the needs of all groups of customers, with proper regard for customer touch points (digital and physical touch points) through the customer journey. The intention is to satisfy customers with increasing changes in desire to access digital services. Therefore, PEA has developed the PEA Smart Plus application and the PEA e-Service system to provide services covering all transactions as if they physically came to our office. In addition, the 1129 PEA Contact Center receives notification about power interruptions and provides around-the-clock information. As for office contact, PEA has improved its services by following the Government Easy Contact Center (GECC) and encouraged its internal units to file for certification. This year, 145 of these units have successfully been certified.

The emphasis of PEA's customer service is on service speed and standard efficiency. Ongoing moves to improve our service quality, including the introduction of the One Touch Service process, which improves work processes by applying modern technology to improve the efficiency of power system inspection while specifying meter installation coordination with the GIS map system, in addition to improved actions taken to fix power interruptions. To elaborate, improvements were made to the OMS system, GIS map system, and weather forecast data along with SCADA, which has enabled PEA to track repair updates sooner. Improvement was also made to electricity bills, whereby a barcode system allows users to pay through ATM as an additional public payment channel. Then there are the e-Tax Invoice and e-Receipt. In filling out users' applications, link-up is made to the Civil Registration database under the Department of Local Administration's information system, using a Smart Card Reader. The ThalID application represented a move to add a digital identification process to the usual hard-copy ID process, thus streamlining, cutting expenses, and shortening waiting time in addition to meeting customers' needs in a short period of time. This year, PEA ran the "Prompt PEA Meter Installation Project" to install low-voltage (up to 30 ampere) meters with the new standard for meter installation in communities within one day (down from two days) and outside communities within three days (down from five days). This has grown into a PEA project to expand distribution zones, where 10 days are required. Under this project, a service standard is upgraded such that PEA can expand its power distribution in communities in 10 workdays, which electrifies communities sooner. These two projects are continuing today.





For the public, business operators, and farmers, PEA has eased their expenses for power system access by foregoing the first 140 meters of construction costs for expanding power system zones and undertaking similar projects for new households, in addition to planning to accelerate expansion of power system zones for agricultural areas under the specified criteria.

For industrial customers, PEA has evolved a service process for applications for using 115-kV power of the one-stop service variety. This entails the inclusion of all service processes at a single service point to facilitate users, serve them sooner, and streamline their contacts with PEA. A central unit coordinates matters to notify concerned internal units of relevant data.

In addition, PEA has addressed the public policy on EV promotion by supporting the development of public charging stations under the low-priority management terms specified by the Energy Regulatory Commission (ERC) to promote domestic use of EVs.

To elaborate, PEA has addressed the public policy by launching 409 PEA VOLTA charging stations in 75 provinces and modified the criteria of installing a second home meter for EV users to cut the expenses incurred in an enlarged power cord into their residences. PEA also catered to users of charging stations by allowing them to use the power tariffs for EV charging stations under ERC's low-priority management terms. For this and other information, customers can follow PEA news and announcements through the social media at

Facebook: <http://www.facebook.com/Provincial.Electricity.Authority>

Twitter: https://twitter.com/pea_thailand

Facebook: <https://www.facebook.com/peavolta/>

Line OA: @PEAVOLTA

Website: www.peavoltaev.pea.co.th

5.2 Downstream business services

PEA has provided auxiliary business as well as new business services in support of its customers or in support of provision of electrical power in Thailand and abroad, building on its business of resource consumption capability and skills in various disciplines, namely the power system construction and installation group, power system repair and maintenance group, expertise service group, equipment sales and rental group, energy management service group, asset management business group, and new ventures. Customers can find information on downstream business services at www.pea.co.th. This year saw PEA's income from downstream businesses valued at 8,605.95 million baht.





5.3 Affiliates

1. Supply generation businesses

To date, PEA ENCOM International Co., Ltd. (PEA ENCOM) has jointly invested with supply generation partners in 11 projects, namely

- Solar farm – with Solar Power Co., Ltd., at four sites, namely Surin 1, Surin 2, Loei 2, and Khon Kaen 10, each with an installed capacity of 7.5 MW. Commercial transmission to the grid has already begun.
- Bacho Biogas – with Thai Serm Suk Energy Co., Ltd., at Tambon Khok Khian, Mueang District, Narathiwat Province, with an installed capacity of 2 MW. Wastewater and organic waste discharged from a palm oil extraction process fuel power generation. Commercial power link-up began on 16 July 2019.
- A joint investment with ENCOM Waste-to-Energy (Phra Nakhon Si Ayutthaya) Co., Ltd., in using waste power generation.
- Pracharath (civil-state) power plants for three southernmost provinces under a biomass community power plant plan involving two projects, one in Mae Lan (Pattani Province) and another in Bannang Sata (Yala Province).
- A joint venture in the IPS power plant in R E N Korat Energy Co., Ltd., with Ratch Group Plc and Navanakorn Plc to supply electricity and steam to plants in the Navanakorn Industrial Zone in Nakhon Ratchasima Province.
- Investment in B.Grimm Power (AIE-MPT) (an SPP) with B.Grimm Power Service (Laem Chabang) Co., Ltd., and Asia Industrial Estate Co., Ltd., with an installed capacity of 280 MW. The SPP lies in Asia Industrial Estate, Rayong Province.
- A joint-venture SPP Replacement Project with B.Grimm Power (Laem Chabang) 1 Co., Ltd., in Laem Chabang Industrial Estate, Chon Buri Province, with an installed capacity of 145 MW. A total of 30 MW of electricity is distributed to EGAT, and the rest to plants in the estate. Commercial distribution began on 16 July 2022.

2. Customer solutions businesses

Over the years, PEA ENCOM has jointly invested in six projects with customer solutions business partners:

- A venture with Siam Electrail Co., Ltd., for the development of a stable, integrated power system to support rail transport's uninterrupted power supply
- A venture with Thai Digital Energy Development Co., Ltd., for a digital energy platform business, renewable energy, and other energy management businesses
- A venture with Solar Finland Investment Co. and Finnish Fund for Industrial Cooperation (Finnfund) for the manufacturing of solar panels
- A venture in PEA Intelligent Technology Co., Ltd., to run the behind-meter business
- A venture in PEA ENCOM Smart Solutions Co., Ltd., for the solar energy business: installing people-sector solar cells and retail businesses, organizing training on solar-cell systems, and installing solar farms, solar floating panels, and smart-home equipment



- A venture in ENCOM Charge Utility Services Co., Ltd., to engage in the sale of EV chargers and installation at residences (homes and condominiums) in provinces nationwide.

For 2023, PEA ENCOM's performance on customer solutions is listed below:

- Five-year (2017-2023) investment plan for power generation systems from solar rooftops: The plan saw completion of the construction and power link-up (COD) of 62 projects totaling 50.99 MWp in installed capacity. Service contracts for 84 projects with a total of 79.68 MWp have been signed, worth 2,578.88 million baht.

- A plan for BESS, whereby PEA ENCOM serves as a BESS rental service provider on Ko Samui, Surat Thani Province, to PEA, involving installed capacity of 25 MW and a total working capacity of 50 MWh. PEA ENCOM International signed an agreement with PEA on 21 February 2023. Construction is ongoing, set for COD by June 2024.

- Consultation of engineering and power management by securing energy-saving equipment of various systems for industrial works, business facilities, and residences. This year saw service provision to the PEA LED Project, installed at Thai culture tourism sites. Cases in point include the PEA Project Clean Energy for Communities, which supplies clean energy with a solar power generation system at Ban Mae Long Tai, Chiang Mai Province; another project is the PEA LED Project at Wat Phra Si Ratanamahathat Woramahawihan, Mueang District, Phitsanulok Province, Wat Mongkhon Kowitharam, Ubon Ratchathani Province; Wat Khun Phum, Phichit Province; Wat Thepnimit, at the Chiang Rai national border; Wat Chedi Laem So, Surat Thani Province, and Wat Chekajetiayaram (Royal Temple), Bung Kan Province.

- Construction and renovation of power substation and transmission lines. To date, PEA ENCOM has supplied and designed the construction project for a 115/22-kV power substation for the IPS power plant of R E N Khorat Energy Co., Ltd., located in Navanakorn Industrial Zone, Nakhon Ratchasima Province.

3. Support PEA Businesses

The performance of PEA ENCOM International in 2023 in the Support PEA business is highlighted below:

- Training: Domestic and international training in engineering, designed to supplement knowledge of power and energy systems to various agencies, covering theoretical and practical aspects. Training is conducted by specialty engineer teams from PEA and other units. Diverse curricula included "Work Involving Transmission Lines of Third-Party on PEA's Poles", "Power System Work Safety", and "Standards for Installing and Maintaining Power Systems".





Below are PEA ENCOM International's current courses:

1. Work Involving Third-Party Transmission Lines on PEA Poles Nationwide
2. EV Expert Certification
3. EV Home Charger
4. Construction Standard for 115-kV Underground Cable System
5. Work Safety Involving Power Systems and Installation Standard for Meters with CT & VT (Large Operator) for PEA Power System Workers
6. Relay Protection for PEA Power Substation and Other Power Plants and Maintenance
7. Standard for Installation and Work Involving 22-kV Power.





Awards of Pride

National Awards



1. Outstanding State-Owned Enterprise (SOE) Awards 2023, organized by the State Enterprise Policy Office. PEA earned a total of three awards:

1. Digital State Enterprise Development Award demonstrates the outstanding ability to create and utilize digital technology to develop the organization in various aspects and accommodate efficient and rapid changes by promoting and driving PEA to become a digital state enterprise, reflecting the organization's direction toward "Smart Energy for Better Life and Sustainability".

2. Outstanding Services Award reflects the quality of services provided to electricity users and stakeholders and related missions, focusing on responding to the needs and expectations of customers and the public over short and long terms, based on balance, efficiency, flexibility, and alignment with international standards. PEA presents the "PEA Smart Service" project to meet the needs of customers and achieve satisfaction in quality and services by continuously developing the organization and increasing product efficiency and customer services. To this end, PEA focuses on its commitment to respond to the needs of customer groups and provide public services to service users with equality and fairness to ensure convenience, speed, and easy access for the public.

3. Outstanding Creativity and Innovation Award, Innovation Category, Honorable Mention, with the presentation by PEA on the innovation of the "Cable Termination Steel Support for 115-kV Riser Pole", an innovation that designs and develops steel frames to support oil-free cable terminations. The electrical equipment support structure is lighter and smaller, making it easier to construct 115-kV underground cable poles, saving construction time, and making construction more efficient.





2. 11th NACC Integrity Awards: Honor with Morality, Ethics, and Integrity, organized by the National Anti-Corruption Commission, which demonstrates PEA's commitment to valuing responses to customers' needs through operations based on good governance and responsibility toward community, society, and the environment.

3. Public Sector Excellence Awards 2023, Public Service Category, organized by the Office of the Public Sector Development Commission (OPDC). PEA was honored with the Service Innovation Award from the work "Quick to Know, Quick to Fix, Quick to Return: 3Qs".



4. Bronze Award at the 18th "Thailand Research Expo 2023", organized by the National Research Council of Thailand, Ministry of Higher Education, Science, Research and Innovation. PEA was recognized for the innovation of the "Robotic Solar Cleaner".



5. Plaque and Certification Mark from the Government Easy Contact Center (GECC) Awards 2023, organized by the Office of the Public Sector Development Commission (OPDC) and the Office of the Prime Minister. PEA with its 145 offices under its jurisdiction was certified and awarded with plaques. Four offices achieved the Excellence Level, namely Ubon Ratchathani, Pattaya City, Nang Rong District, and Khun Han District Provincial Electricity Authority; 36 offices, the Advanced Level; and 105 offices, the Fundamental Level.



6. Best Contact Center Awards 2023, Corporate Category, organized by the Thai Contact Center Trade Association. PEA earned three Silver Medals under the Corporate Category:

1. Best Workflow Contact Center - Outstanding International Standard Process Award.
2. Best Professional Management Contact Center - Outstanding Contact Center Management and Administration Award.
3. Best Customer Satisfaction Contact Center - Outstanding Customer Satisfaction Award.



7. National Innovation Awards at the 2023 National Innovation Day event, organized by the National Innovation Agency (Public Organization), Ministry of Higher Education, Science, Research and Innovation. PEA won a National Innovation Award for Outstanding Innovative Organization, State Enterprise Category, Merit Prize.

8. Thailand Energy Awards 2023, organized by the Department of Alternative Energy Development and Efficiency (DEDE), Ministry of Energy. PEA won the Outstanding Energy Conservation Award in the Zero Energy Building Category for the renovation of "Building D of the High-Voltage Training Center", located at the Provincial Electricity Authority, Nakhon Chaisi District, Nakhon Pathom Province.



9. Sustainability Disclosure Award 2023, organized by Thaipat Institute. PEA won an award at the Sustainability Disclosure Community 2023.



International Awards



1. Asia Responsible Enterprise Awards (AREA) 2023, organized by Enterprise Asia, a leading NGO that promotes the potential of responsible entrepreneurship in Asia:

1. Social Empowerment Award from the “Clean Energy for Sustainability of Remote Communities Project”.

2. Corporate Sustainability Reporting Award from the “Provincial Electricity Authority’s 2021 Sustainability Report”.



2. Innovation Awards from the “Seoul International Invention Fair 2023” (SIIF 2023), held in Seoul, Republic of Korea:

1. Gold Prize and Distinguished Innovation Award from King Abdulaziz University, Kingdom of Saudi Arabia, for the “185-Square-Millimeter Hotline Electric Cable Stripper”.

2. Gold Prize for the “Pin Post Insulator Holder Tool”.

3. Silver Prize and Special Prize from the Vietnam Fund for Supporting Technological Creation (VIFOTEC), Socialist Republic of Vietnam, for the “Multipurpose Safety Hook”.



3. Innovation Awards at the “2023 Kaohsiung International Invention and Design Expo (KIDE 2023)”, held in Kaohsiung, Taiwan:

1. Gold Medal and Special Award from the Macao Innovation and Invention Association, Macao Special Administrative Region, People’s Republic of China, for the “Low-Voltage Wiring Tool”.

2. Gold Medal and Gold Award from the Bramunastyaits Team, Indonesia, and Special Award from the Dubai Invention Show, Dubai, for the “HRC Fuse Test”.

3. Silver Medal and Ace Gold Award from the University of Malaysia Perlis, Malaysia, for the “Crawler Cart for Climbing Stairs with an Electric Motor”.



4. Innovation Awards at The 48th International Exhibition of Inventions Geneva, held in Geneva, Switzerland:

1. Gold Medal and Special Award from the Research Institute of Creative Education (RICE), Vietnam, for “Mini AVR”.
2. Silver Medal and Special Award from the Research Institute of Creative Education (RICE), Vietnam, for “Cable Termination Steel Support for 115-kV Riser Pole”.
3. Silver Medal and Distinguished Innovation Award from King Abdulaziz University, for “Super Wire Stripper”.
4. Silver Medal Award for “Pump as Impulse Turbine”
5. Bronze Medal and CAI Award Invention & Innovation from China, for “Cable Pusher with Auto Lubricant”.



5. Innovation Awards at “The International Trade Fair-Ideas, Inventions and New Products (IENA 2023)”, held in Nuremberg, Federal Republic of Germany:

1. Silver Medal and Special Prize on Stage for the Best Invention from The First Institute of Researchers and Inventors in I.R. IRAN (FIRI), Islamic Republic of Iran, for “Easy Guard”.
2. Bronze Medal and Special Award from the Taiwan Prominent Inventor League, Republic of China, for “IEC 61850 Based Substation Control and Protection System (SCPS) Simulator”.



6. Innovation Awards at “The 16th International Invention and Innovation Show” (INTARG 2023), held in Katowice, Poland:

1. Gold Medal and WIIPA Special Award from the World Invention Intellectual Property Associations, Republic of China (Taiwan), for “Robotic Saw for Tree Trimming (RST)”.
2. Gold Medal for “Robotic Solar Cleaner”.
3. Silver Medal for “All-Voltage Multifunction (ATM)”.

PEA
PEA คราว 2 รางวัลนวัตกรรม จาก 2 ผลงาน นวัตกรรมนานาชาติ
“The 48th International Convention on Quality Control Circles” (ICQCC 2023)
 ณ เมืองปักกิ่ง สาธารณรัฐประชาชนจีน
 ระหว่างวันที่ 31 ตุลาคม - 1 พฤศจิกายน 2566
 ภายในงานมีผลงานนวัตกรรมเข้าประกวดประมาณกว่า 500 ผลงาน จากกว่า 60 ประเทศ

รางวัลระดับเหรียญทอง (GOLD Award)
 - ผลงาน นวัตกรรม: “ตรวจสอบการบันทึกการปฏิบัติงาน (Time Confirm) ในงานติดตั้ง - สัมผัสแบบไดเรกต์ (ZW01 - ZW02)”
 - เจ้าของผลงาน: กลุ่ม T-5
 - นักประดิษฐ์หลัก: ทพ.ผสม.ทพ.น.1
 เป็นการปรับปรุงกระบวนการทำงาน เรื่อง การบันทึกเวลาการปฏิบัติงาน (Time Confirm) สำหรับงาน ติดตั้ง - สัมผัสแบบไดเรกต์ (ZW01 - ZW02) ด้วยกระบวนการจัดทำแบบอัตโนมัติ

รางวัลระดับเหรียญทอง (GOLD Award)
 - ผลงาน นวัตกรรม: “Lack of Materials Delivery” (LMD)
 - เจ้าของผลงาน: กลุ่ม The Chai-Sri
 - นักประดิษฐ์หลัก: ทพ.น.ทพ.น.ทพ.น.3
 เป็นการปรับปรุงงานด้านวัสดุให้มีความคล่องตัว ลดต้นทุน ลดผลกระทบ ลดค่าใช้จ่ายในการเดินทาง ได้ระบบบริหารจัดการวัสดุคงคลัง เพื่อกำหนดตามความเหมาะสมและตรวจสอบการไหลของวัสดุคงคลัง ได้อย่างมีประสิทธิภาพ

48th ICQCC 2023
 48th International Convention on Quality Control Circles

f เฟซบุ๊ก: PEA.Official | ไลน์: PEA.Official | เว็บไซต์: www.pea.co.th

7. Innovation Awards at “The 48th International Convention on Quality Control Circles” (ICQCC 2023), held in Beijing, People’s Republic of China:

1. Gold Award for the innovation of “Time Confirmation in Meter Installation - Exchange (ZW01 - ZW02)”.
2. Gold Award for the innovation of “Lack of Materials Delivery (LMD)”.

Analysis of Financial Position



For 2023, the Provincial Electrical Authority (PEA) grossed 690,463 million baht in income, the bulk of which (660,041 million baht) was derived from power distribution. It posted 675,889 million baht in expenditure, the bulk of which (601,676 million baht) went into electricity purchase, and posted 14,574 million baht in net profit, about 3,006 million baht over last year.

PEA's assets totaled 543,560 million baht, a rise of 20,554 million baht (3.9 percent). This consisted of 110,829 million baht in current assets and 432,731 million baht in non-current assets, most of which (22,888 million baht or 6.9 percent) represented gains in property, plant, and equipment. Total liabilities amounted to 348,963 million baht, about 14,368 million baht (4.3 percent) up from last year. This total consisted of 91,112 million baht in current liabilities and 257,851 million baht in non-current liabilities. Finally, equity in 2023 amounted to 194,597 million baht, a rise of 6,186 million baht (3.3 percent).

PEA borrowed from domestic sources for investment in assorted plans/projects to meet rising power demand, raise the efficiency and security of power systems, minimize losses in such systems, and preserve the surroundings and scenery under public policy. Its approach was to primarily borrow from domestic sources in baht through bond issuance, which resulted in domestic loans as of 31 December 2023, of 158,315 million baht.





Key Current and Future Investments

Power System Development

Due to the lower cost of power generation from renewable energy, the higher capacity of digital technologies, such as Cloud, Big Data, Blockchain, IoT, Storage, Artificial Intelligence, and disruptive innovation, as well as customers' shifting behavior that prompt speedier access to data and services, electricity demand in the household and transport sectors is on a rise. Simultaneously, the market as well as the energy and power generation industrial structure has shifted from "centralized generation" by electricity authorities or major producers to "distributed generation" from renewables. Meanwhile, more and more retail customers have emerged. Power consumers have switched their roles to "prosumers", who act as both power producers and consumers. Therefore, accurate data and prompt responses have become vital to efficient power management.

PEA has mapped out a customer-centric investment plan, under which digital technology and advanced innovation have transformed PEA into a "Digital Utility" with a more intelligent distribution network. PEA must be capable of rapidly receiving and dispatching information, while sources of power distribution and loading must be well managed to rapidly maintain a balance of electricity load and supply. The organization must also be able to process Big Data.

To drive PEA's development of power systems in line with its own vision and policies as well as those of the government, the Ministry of Interior, the Ministry of Energy, and related power agencies, PEA has defined three aspects of power system development:

1. Full coverage of services to all areas
2. Upgraded power grids to meet stakeholders' needs
3. Striving for carbon neutrality.

Power System Investment Planning

In view of the visions and policies of PEA, the government, the Ministry of Interior, the Ministry of Energy, and other agencies involving electrical power, and with due regard for PEA's financial status, an investment plan based on the power system development scope was mapped out. These were essential, ongoing projects and investment plans, those already completed this year, and those planned to be launched over the next three years. There were a total of 29 projects and eight work plans under a total investment budget of 293,322.26 million baht, as described below.





1. Sixteen projects and five work plans, in progress and completed in 2023

Project / Work Plan	Investmen Budget (Million Baht)	Status
1. Transmission System and Substation Development Project – 9 th Stage (Phase 1)	7,060.00	93.57% completed
2. Transmission System and Substation Development Project – 9 th Stage (Phase 2)	4,540.00	93.85% completed
3. Transmission System and Substation Development Project – 9 th Stage (Phase 3)	15,085.00	95.88% completed
4. Transmission System and Substation Development Project – 9 th Stage (Phase 4)	4,485.00	81.30% completed
5. Distribution System Reliability Enhancement Project – 3 rd Stage	15,155.00	100% completed
6. Distribution System Dispatching Center Improvement Project	4,530.00	100% completed
7. Transmission and Distribution Development Project – 1 st Stage	62,678.71	60.18% completed
8. Transmission and Distribution Development Project – 2 nd Stage	77,334.00	34.52% completed
9. Major Cities Power System Development Project – 1 st Stage	11,668.56	78.87% completed
10. Power System Development for Special Economic Zone Project – 1 st Stage: Tak, Sa Kaeo, Trat, Mukdahan, Songkhla, and Nong Khai Provinces	3,140.00	55.10% completed
11. Power System Development for Special Economic Zone Project – 2 nd Stage: Chiang Rai, Narathiwat, Nakhon Phanom, and Kanchanaburi Provinces	4,000.00	66.50% completed
12. New Rural Household Electrification Project – 2 nd Stage	6,565.00	100% completed
13. 115-kV Submarine Cables for Ko Samui, Surat Thani Province, Project	2,130.00	33.30% completed



Project / Work Plan	Investmen Budget (Million Baht)	Status
14. Electrification Extension for Islands at Ko Pan Yi, Phang-nga Province, Project	221.00	100% completed
15. Submarine Cables for Ko Tao, Surat Thani Province, Project	1,776.00	79.93% completed
16. Microgrid Development Project at Ko Pha-Luai, Surat Thani Province, Project	172.00	82.35% completed
17. Geographic Information System Plan - Phase 3	2,090.00	100% completed
18. A Long-Term Plan for Construction of Underground Cables	1,350.00	23.30% completed
19. A Long-Term Plan for Construction of Underground Cables – Phase 2	2,050.00	25.05% completed
20. Development Plan for Power Interruption Analysis and Solution Center	22.44	Phase 1 (12 centers) 100% completed
	128.30	Phase 2 (24 centers) 100% completed
	705.00	Phase 3 (150 centers), 100% completed
21. One Province, One Road Underground Power Cable System Improvement Plan to Commemorate H.M. the King	4,300.00	86.14% completed
Total investment budget for projects and plans, both in progress and accomplished, during 2023		231,186.01





2. Thirteen projects and three work plans scheduled for the next three years (2024-2026)

Project/Work Plan	Investment Budget (Million Baht)	Status
1: Nationwide electrification		
1. Agriculture Electrification Project – 3 rd Stage	2,500.00	Views being sought from related organizations before submission to the Cabinet for approval
2. New Rural Household Electrification Project – 3 rd Stage	6,500.00	Views being sought from related organizations before submission to the Cabinet for approval
3. Power System Development Project on Islands Project	3,365.00	
• Ko Kraten (Taen), Surat Thani Province		Views being sought from related organizations before submission to the Cabinet for approval
• Ko Jik, Chanthaburi Province; Ko Kham Yai, Chon Buri Province; Ko Phayam & Ko Chang, Ranong Province; Ko Mak Noi & Ko Mai Phai, Phang-nga Province; Ko Lone, Phuket Province		FS in progress
4. Rural Household Electrification with Renewable Energy Project – 1 st Stage	1,685.00	FS in progress
2: Grid Upgrade in Response to Stakeholders' Needs		
5. Power System Security Upgrade to Smart Grid Project - 1 st Stage	9,000.00	FS in progress
6. Improvement of Low-Voltage Power Distribution System in Preparation for Power Industry Transformation Project - 1 st Stage	11,250.00	FS in progress
7. Development of Energy Storage Systems to Accommodate Power and Renewables Demand Management Project - 1 st Stage	13,678.00	FS in progress



Project/Work Plan	Investment Budget (Million Baht)	Status
8. Improvement of Distribution Capability for Ko Samet, Rayong Province, Project	347.00	FS in progress
9. Pilot Development of Microgrid System for Industrial Areas Project	400.00	FS in progress
10. Plan to Increase Power System Geoinformation Efficiency	2,570.25	FS in progress
11. Long-term Plan on Underground Cables - Phase 3	2,500.00	Submission to PEA Board in progress
3: Moving toward Carbon Neutrality		
12. Smart Meter System Project – 1 st Stage	7,120.00	FS in progress
13. Management of Decentralized Power Generation in PEA's Grid System Project - 1 st Stage	656.00	FS in progress
14. Microgrid for Ko Samui, Surat Thani Province Project - 1 st Stage	227.00	FS in progress
15. Power System Development with Renewable Energy Project for Ko Nok Taphao, Surat Thani Province, Project	60.00	FS in progress
16. Microgrid Improvement in Mueang District, Mae Hong Son Province, Plan	278.00	FS in progress
Total investment budget for projects/ plans for implementation in the next three years	62,136.25	





Expected outcomes

Below are the expected benefits of these power system development plans:

1. Complete electrification of all service areas

PEA envisions its power supply system expanded across all its service areas to accommodate upcoming households and businesses, leading to social parity

2. Quality upgrade of power distribution security

PEA envisions efficient, international-standard power service provision, improved efficiency of smart-grid management, and fewer problems related to operation and maintenance of power systems, thus leading to reliable power distribution, fewer brownouts, blackouts, and power system losses. Also, PEA envisions the ability to connect to renewable energy sources, thus greater reliability and a better job of sustaining power users' needs, whether the business, industrial, or tourism sector, with PEA's smart grid competently accommodating EVs.

3. Economy and society

- 1) Less social disparity
- 2) Greater competitiveness in tourism
- 3) Regional investment and economic credibility
- 4) Readiness of power systems to sustain power business liberalization
- 5) Efficient energy management
- 6) Higher proportion of renewables consumption to trim carbon emissions and pursue carbon neutrality
- 7) Power users' ability to cost-effectively choose to consume electricity within households, offices, or facilities as desired
- 8) Support to the development of economic performance and upgraded quality of life through broad decentralization of infrastructural services to provincial and rural areas
- 9) Promotion of EVs
- 10) Support to town and city development into smart ones that are liveable and safe, with sustainable growth through power system development, resulting in improved scenery
- 11) Support to rural job creation, made possible by industrial development to provide more local jobs, higher income, and less migration into urban areas
- 12) Energy development with due regard for impacts on natural resources and the environment, thus giving the population decent living conditions together with good health.





Key Information

Item		2023	2022	Increment/(Decrement) 2023-2022	
				Amount	Percent
Sales and rendering of services	(Million Baht, MB)	676,373	592,766	83,607	14.10
Other income	(MB)	14,090	13,834	256	1.85
Operating expenses	(MB)	671,573	590,709	80,864	13.69
Other expenses	(MB)	4,316	4,323	(7)	(0.16)
Net profit	(MB)	14,574	11,568	3,006	25.99
Investment in property	(MB)	52,527	53,578	(1,051)	(1.96)
Loans	(MB)	158,315	141,664	16,651	11.75
Net assets	(MB)	543,560	523,006	20,554	3.93
Number of customers		22,006,683	21,670,057	336,626	1.55
Total electricity sales units, incl. free-of-charge electricity	(Million units)	148,976	144,579	4,397	3.04
Average distribution unit	(Units/customer)	6,770	6,672	98	1.47
Peak demand of electrical power	(MW)	24,239	22,714	1,525	6.71
Electricity purchase	(Million units)	157,420	152,518	4,902	3.21
• Purchase		157,324	152,417	4,907	3.22
• Self-generation		96	101	(5)	(4.95)
Transmission system	(Circuit-km)	15,842	15,282	560	3.66
High-voltage distribution system	(Circuit-km)	343,663	336,868	6,795	2.02
Low-voltage distribution system	(Circuit-km)	531,837	519,347	12,490	2.40
PEA offices		948	948	0	0
PEA employees		27,886	28,090	(204)	(0.73)
PEA contractors		6,003	5,685	318	5.59
Number of villages nationwide		74,792	74,317	475	0.64
Number of electrified villages		74,775	74,245	530	0.71
Percentage of electrified villages		100	99.90	0.1	0.1

Remarks: There are 17 remaining villages without access to electricity, located in restricted areas, such as Level 1 watershed zones.





Electricity Customers

(Unit: Cases)

Category	2023	2022	2021	2020	2019
Residential (<150 kWh)	9,480,246	9,841,277	9,510,131	9,821,425	9,992,167
Residential (>150 kWh)	9,884,069	9,266,109	9,247,681	8,487,467	7,824,239
Small General Service	1,793,575	1,746,341	1,720,379	1,681,395	1,665,138
Medium General Service	92,643	85,768	83,111	82,605	80,928
Large General Service	7,866	7,635	7,511	7,351	7,043
Specific Business Service	14,815	13,034	11,941	13,688	14,152
Non-Profit Organization	1,047	1,042	1,000	1,063	1,076
Agricultural Pumping	5,714	5,618	5,627	5,871	5,879
Temporary Service	433,868	423,012	397,788	371,422	352,046
Standby Rate	106	103	99	98	95
Interruptible Rate	4	4	4	4	4
EV Low Priority	205	-	-	-	-
EVs	151	36	11	1	-
Free- of- charge electricity*	292,374	280,078	272,249	262,327	251,098
Total	22,006,683	21,670,057	21,257,532	20,734,717	20,193,865
Customer increment (%)	1.55	1.94	2.52	2.68	2.15
Increment index (2019 = 100%)	108.98	107.31	105.27	102.68	100.00

Remarks: * Free-of-charge electricity consists of electricity for 1) PEA's office buildings and power substations, 2) highways and public utilization, 3) veteran affairs' utilization, 4) guesthouses, and 5) others, including sports grounds, security and safety purposes, disaster relief, and royal events.





Distribution Units

Distribution units by customer type:

(Unit: Million Units)

Category	2023	2022	2021	2020	2019
Residential (<150 kWh)	7,902	7,738	8,104	8,942	8,088
Residential (>150 kWh)	33,210	30,526	30,415	28,225	26,817
Small General Service	15,214	14,512	13,964	13,911	14,075
Medium General Service	23,557	22,456	21,708	21,554	22,409
Large General Service	57,214	58,389	56,522	53,115	56,151
Specific Business Service	4,400	3,507	2,530	3,094	4,533
Non-Profit Organization	82	77	71	71	77
Agricultural Pumping	485	335	398	417	468
Temporary Service	1,008	923	896	925	976
Standby Rate	389	679	153	109	176
Interruptible Rate	1,561	1,858	1,635	1,487	1,540
EV Low Priority	14	-	-	-	-
EVs	8	1	0	-	-
Free- of- charge electricity*	3,932	3,578	3,291	3,018	2,869
Total	148,976	144,579	139,687	134,868	138,179
Distribution unit increment (%)	3.04	3.50	3.57	(2.40)	2.60
Increment index (2019 = 100%)	107.81	104.63	101.09	97.60	100.00

Remarks: * Free-of-charge electricity consists of electricity for 1) PEA's office buildings and power substations, 2) highways and public utilization, 3) veteran affairs' utilization, 4) guesthouses, and 5) others, including sports ground, security and safety purposes, disaster relief, and royal events.





Distribution Units

Distribution Units by Type (Excluding Free-of-Charge Electricity)

(Unit: Million Units)

Type	2023	2022	2021	2020	2019
Commercial and industrial	102,357	101,402	96,512	93,270	98,884
Residential and other tariff rates	42,687	39,599	39,884	38,580	36,426
Total	145,044	141,001	136,396	131,850	135,310
Distribution unit increment (%)	2.87	3.38	3.45	(2.56)	2.56
Increment index (2019 = 100%)	107.19	104.21	100.80	97.44	100.00

Fiscal Year	Commercial and Industrial		Residential and other tariff rates		Total	
	Million Units	%	Million Units	%	Million Units	%
2019	98,884	73.08	36,426	26.92	135,310	100.00
2020	93,270	70.74	38,580	29.26	131,850	100.00
2021	96,512	70.76	39,884	29.24	136,396	100.00
2022	101,402	71.92	39,599	28.08	141,001	100.00
2023	102,357	70.57	42,687	29.43	145,044	100.00

Remarks: Commercial and industrial customers include small, medium, and large general services, specific business services, standby rates, and interruptible rates.

Residential and other tariff rates include residential (≤ 150 kWh), residential (> 150 kWh), government sector and non-profit organizations, electricity for agricultural pumping, and temporary services.





Purchase Unit and Self-Generation

Power Generation and Purchase

(Unit: Million Units)

Source	2023	2022	2021	2020	2019
PEA-generated	96	101	87	90	85
Power purchased from EGAT	145,381	140,684	136,255	131,558	134,602
Power purchased from Department of Alternative Energy Development and Efficiency (DEDE)	54	87	71	47	73
Power purchased from Very Small Power Producers (VSPPs)	11,794	11,554	11,232	10,887	11,159
Power purchased from Solar PV Rooftops	95	92	92	94	98
Total	157,420	152,518	147,737	142,676	146,017

Employees by Educational Accomplishment

(Unit: Persons)

Degree	2023	2022	2021	2020	2019
Bachelor and higher degrees	9,676	9,485	9,232	9,219	9,190
Diploma - high vocational certificate	16,153	16,232	16,238	15,939	16,006
Vocational certificate - Grade 12	1,876	2,038	2,286	2,687	3,232
Others	181	335	412	527	657
Total	27,886	28,090	28,168	28,372	29,085





Board of Directors Structure and Responsibility

The structure of PEA's Board of Directors is consistent with the Provincial Electricity Authority Act B.E. 2503 (1960), and its amendment, Chapter 2, Section 20, which stipulates that PEA's Board of Directors shall consist of the Chairman, the Governor as a Director ex-officio, and no less than five but no more than 13 other directors. In addition, according to the Standard Qualifications of Directors and State Enterprise Employees Act B.E. 2518 (1975), and its amendments, Section 12/1, the directors who are not directors ex-offici, must be listed in the Directors' Pool of the Ministry of Finance and must constitute at least one-third of the number of other directors of that state enterprise. Furthermore, the Regulations on State Enterprise Finance and Accounting B.E. 2520 (1977) stipulate that a representative of the Ministry of Finance shall be a member of the board of every state enterprise.

The PEA's Board of Directors, according to the Provincial Electricity Authority Act B.E. 2503 (1960), and its amendments, has the following authority and duties:

1. Establish policies and supervise PEA's affairs, including prescribing regulations on various operations, setting electricity rates and service fees, and determining employees' salary rates
2. Serve as competent officials in accordance with the Criminal Code
3. Determine PEA's reserves
4. Define the regulations for opening PEA's bank accounts
5. Submit matters to the Minister for further submission to the Cabinet
6. Consider the appointment of the Governor according to the specified qualifications, salary, and removal from office
7. Give approval or ratification to the juristic acts executed by the Governor
8. Approve the employment, appointment, removal, promotion, demotion, or salary deduction, and set working conditions for employees at the advisor, expert, or department director levels
9. Appoint an employee as the Acting Governor while the Governor is unable to perform duties or the Governor's position becomes vacant
10. Decide on complaints of owners of property or holders of property or other rights regarding the use of land within 15 days from the date of receipt of the complaint letter.





Profiles of Board of Directors





Mr. Unsit Sampuntharat

(Chairman)

(State Enterprise Director's Pool 2020)

Age: 52

Position: Director General, Department of Provincial Administration

Key work experience:

1. Director General, Community Development Department
2. Deputy Permanent Secretary, Ministry of Interior
3. Governor, Tak Province

Education:

1. Master of Public Administration (Public Administration), National Institute of Development Administration (NIDA)
2. Bachelor of Political Science (Government), Chulalongkorn University

Directorship of other organizations:

Director, Tourism Authority of Thailand

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Connected transactions (accounting year 2021):

None

Remarks - Appointed by the Cabinet Resolution as Chairman of the PEA Board of Directors with effect from 4 January 2022 to 8 September 2023



Mr. Danucha Pichayanan

(State Enterprise Directors' Pool 2020)

Age: 53

Position: Secretary General, Office of the National Economic and Social Development Council

Key work experience:

1. Deputy Secretary General, Office of the National Economic and Social Development Council
2. Policy and Plan Advisor, Office of the National Economic and Social Development Council

Education:

1. Master of Science in Engineering Management, George Washington University, USA
2. Bachelor of Engineering, Chulalongkorn University

Directorship of other organizations:

1. Director, PTT Public Company Limited
2. Director, Bank of Thailand

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Connected transactions (accounting year 2023):

None

Remarks - Appointed by the Cabinet Resolution to the PEA Board of Directors with effect from 28 October 2020 to 8 September 2023



Mr. Yodphot Wongrukmit

(State Enterprise Directors' Pool 2020)

Age: 64

Position: Retired

Key work experience:

1. Advisory Chairman, Nakhonchai Air Company Limited
2. Senior Executive Advisor, Bangchak Corporation Public Company Limited

Education:

1. Master of Business Administration, Middle Tennessee State University, USA
2. Bachelor of Economics, University of the Thai Chamber of Commerce (2nd Class Honors)

Directorship of other organizations:

1. Chairman, PEA ENCOM International Company Limited
2. Independent Director, Bless Asset Group

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Connected transactions (accounting year 2023):

None

Remarks - Appointed by the Cabinet Resolution to the PEA Board of Directors with effect from 28 October 2020 to 8 September 2023



Mr. Thongchai Chawalitpicheat

(State Enterprise Directors' Pool 2020)

Age: 61

Position: Retired Government Official

Key work experience:

1. Director General, Office of Industrial Economics, Ministry of Industry
2. Deputy Permanent Secretary, Ministry of Industry

Education:

Bachelor of Engineering, Chiang Mai University

Directorship of other organizations:

Director, Export-Import Bank of Thailand

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Connected transactions (accounting year 2023):

None

Remarks - Appointed by the Cabinet Resolution to the PEA Board of Directors with effect from 28 October 2020 to 17 February 2023



Mr. Sak Segkhoonthod

(State Enterprise Directors' Pool 2018)

Age: 57

Position: Consultant on Digital Transformation, Electronic Transactions Development Agency

Key work experience:

1. President & CEO, Digital Government Development Agency
2. Executive Vice President, Government Information Technology Services (GITS), National Science and Technology Development Agency (NSTDA)

Education:

1. Doctor of Philosophy (Electronic Systems Engineering), Essex University, UK
2. Master of Computer Studies, Essex University, UK
3. Bachelor of Industrial Technology (Electronics), King Mongkut's Institute of Technology Ladkrabang

Directorship of other organizations:

1. Director, PEA ENCOM International Company Limited
2. Director, Payment System Committee, Bank of Thailand

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Connected transactions (accounting year 2023):

None

Remarks - Appointed by the Cabinet Resolution to the PEA Board of Directors with effect from 28 October 2020 to 8 September 2023



Pol. Maj. Gen. Wiwat Chaisangkha

(State Enterprise Directors' Pool 2021)

Age: 57

Position: Deputy Commander,
Central Investigation Bureau,
Royal Thai Police

Key work experience:

1. Commander, Natural Resources and Environment Crime Suppression Division
2. Commander, Consumer Protection Police Division

Education:

1. Master of Public and Private Management, National Institute of Development Administration (NIDA)
2. Bachelor of Public Administration, Royal Police Cadet Academy

Directorship of other organizations:

Director, Forest Industry Organization

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Connected transactions (accounting year 2023):

None

Remarks - Appointed by the Cabinet Resolution to the PEA Board of Directors with effect from 28 October 2020 to 8 September 2023



Flg. Off. Kamolnai Chaixanien

(State Enterprise Directors' Pool 2020)

Age: 65

Position: Deputy Managing Director,
TCC Assets (Thailand) Company Limited

Key work experience:

1. Senior Vice President, Thai Beverage Public Company Limited
2. Deputy Managing Director, Asset Management for International Hotels Group, TCC Assets (Thailand) Company Limited

Education:

1. Master of Business Administration, Cornell University, USA
2. Master of Engineering (Operations Research and Industrial Engineering), Cornell University, USA
3. Bachelor of Science in Chemical Engineering, University of New Hampshire, USA

Directorship of other organizations:

1. Director, ASM International Limited
2. Director, ThaiBev Marketing Company Limited
3. Director, Amarin Printing and Publishing Public Company Limited

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Connected transactions (accounting year 2023):

None

Remarks - Appointed by the Cabinet Resolution to the PEA Board of Directors with effect from 28 October 2020 to 16 March 2023



Mr. Panit Dhirapharbwongse

(State Enterprise Directors' Pool 2018)

Age: 56

Position: Legal advisor,
Office of the Permanent Secretary,
Ministry of Finance

Key work experience:

1. Director, Legal Affairs Group, Office of the Permanent Secretary, Ministry of Finance
2. Head, Legal Affairs Group, Legal Bureau, Revenue Department

Education:

1. Doctor of Philosophy (Law), Thai Government Scholarship, Queen Mary College, University of London, UK
2. Master of International Economic Law, University of Warwick, UK
3. Bachelor of Laws, Thammasat University

Directorship of other organizations:

1. Director, Dhanarak Asset Development Co., Ltd.
2. Director, Islamic Bank Asset Management
3. Director, KTB Law Company Limited

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Connected transactions (accounting year 2023):

None

Remarks - Appointed by the Cabinet Resolution to the PEA Board of Directors with effect from 28 October 2020 to 8 September 2023



Mr. Chavang Thaiying

(State Enterprise Directors' Pool 2021)

Age: 61

Position: Retired Government Official

Key work experience:

1. Director, Common Legal Information Center, Office of the Council of State
2. Director, Public Law Training and Development Institute

Education:

1. Master of Laws, Chulalongkorn University
2. Bachelor of Laws, Ramkhamhaeng University
3. Bachelor of Education, Chulalongkorn University

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Connected transactions (accounting year 2023):

None

Remarks - Appointed by the Cabinet Resolution to the PEA Board of Directors with effect from 28 October 2020 to 8 September 2023



Assoc. Prof. Thira Jearsiripongkul

(State Enterprise Directors' Pool 2018)

Age: 48

Position: Dean, Faculty of Engineering,
Thammasat University

Key work experience:

1. Director, Office of the Registrar, Thammasat University
2. Assistant President, Rangsit Campus Management Development, Physical Division, Thammasat University

Education:

1. Doctor of Engineering in Applied Mechanics (Dynamics), Technische Universität Darmstadt, Germany
2. Master of Engineering in Mechatronics, School of Advanced Technologies (Exchanged Program), Asian Institute of Technology, Bangkok Thailand, Hamburg University of Technology, Hamburg, Germany
3. Bachelor of Mechanical Engineering, King Mongkut's University of Technology Thonburi

Directorship of other organizations:

1. Independent Director, Audit Committee, Airports of Thailand Public Company Limited
2. Director, Dhanarak Asset Development Co., Ltd.

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Connected transactions (accounting year 2023):

None

Remarks - Appointed by the Cabinet Resolution to the PEA Board of Directors with effect from 20 July 2021 to 8 September 2023



Assoc. Prof. Pornanong Budsaratragoon

(State Enterprise Directors' Pool 2022)

Age: 55

Position: Head, Department of Banking and Finance, Faculty of Commerce and Accountancy, Chulalongkorn University

Key work experience:

1. Working Group on Provident Fund Capability Development, Securities and Exchange Commission (SEC)
2. Expert, Senate Commission on Economics, Finance, and Treasury

Education:

1. Doctor of Business Administration (Finance), Chulalongkorn University
2. Master of Business Administration (MIS), University of Dallas, USA
3. Bachelor of Business Administration (Quantitative Management), Chulalongkorn University

Directorship of other organizations:

Thai-Nichi Institute of Technology Council,
Office of the Higher Education Commission

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Connected transactions (accounting year 2023):

None

Remarks - Appointed by the Cabinet Resolution to the PEA Board of Directors with effect from 20 July 2021 to 8 September 2023



Col. Sarunyu Viriyavejakul

(State Enterprise Directors' Pool 2019)

Age: 54
Position: Vice President, Neighboring Countries Economic Development Cooperation Agency (Public Organization)

Key work experience:

1. Deputy Director, Peace Operations Center, Directorate of Joint Operations, Royal Thai Armed Forces Headquarters
2. Director, Projects and Budget Division, Directorate of Joint Intelligence

Education:

1. Doctor of Science (Technology of Environmental Management), Mahidol University
2. Master of Science (Structural Engineering), Stanford University, USA
3. Master of Science (Environmental Engineering), University of California Los Angeles (UCLA), USA
4. Bachelor of Science (Honors) (Double Majors in Civil Engineering and Nuclear Engineering), United States Military Academy (USMA: West Point), USA

Directorship of other organizations:

Executive Director, United Thai-Sweden 1897 Foundation

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Connected transactions (accounting year 2023):

None

Remarks - Appointed by the Cabinet Resolution to the PEA Board of Directors with effect from 20 July 2021 to 8 September 2023



Miss Tidarat Thanapakpawin

(State Enterprise Directors' Pool 2021)

Age: 44
Position: Vice President and Chairperson of the Standards and Indicators Mission, Digital Council of Thailand

Key work experience:

1. Director, Information Technology Business and Communication, Thai Chamber of Commerce
2. President, Thai Game Software Industry Association

Education:

1. Master of Finance/Marketing, Willmette University, USA
2. Bachelor of Science (Computer Science), Chulalongkorn University

Directorship of other organizations:

Director, Government Savings Bank

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Connected transactions (accounting year 2023):

None

Remarks - Appointed by the Cabinet Resolution to the PEA Board of Directors with effect from 4 January 2022 to 8 September 2023



Mr. Supachai Ek-Un

(State Enterprise Directors' Pool 2021)

Age: 58

Position: Governor, Provincial Electricity Authority
(since 17 August 2021)

Key work experience:

1. Deputy Governor (Engineering)
2. Deputy Governor (Electricity Authority Region 3)

Education:

1. Master of Engineering (Safety Engineering), Kasetsart University
2. Master of Business Administration, Khon Kaen University
3. Bachelor of Science in Technical Education (Electrical Engineering), King Mongkut's Institute of Technology North Bangkok

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Connected transactions (accounting year 2023):

None

Remarks - Appointed by the Cabinet Resolution to the PEA Board of Directors with effect from 17 August 2021



Profiles of Management





Mr. Supachai Ek-Un

Age: 58
Position: Governor

Education:

1. Kasetsart University
 - Master of Engineering (Safety Engineering)
2. Khon Kaen University
 - Master of Public Administration
3. King Mongkut's Institute of Technology North Bangkok
 - Bachelor of Science in Technical Education (Electrical Engineering)

Key work experience:

- 17 Aug. 2021 Governor
- 1 Oct. 2020 Deputy Governor (Engineering)
- 1 Oct. 2019 Deputy Governor (Electricity Authority Region 3)
- 12 Nov. 2018 Executive Director, PEA Area 1 (Phra Nakhon Si Ayutthaya Province), Region 3

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):

None



Mr. Chakri Kitbuncha

Age: 56
Position: Deputy Governor
 (Office of the Governor)
 and Acting Deputy Governor
 (North and Northeast)

Education:

1. Ramkhamhaeng University
 - Master of Business Administration
 (Executive Management)
2. Sripatum University
 - Bachelor of Industrial Education
 (Electrical Engineering)

Key work experience:

- 1 Oct. 2023 Acting Deputy Governor
 (North and Northeast)
- 1 Oct. 2022 Deputy Governor
 (Office of the Governor)
- 1 Oct. 2021 Assistant Governor
 (Office of the Governor)
- 1 Oct. 2020 Director, Power System Department

Directorship of other organizations:

Acting President, PEA ENCOM International Co., Ltd

**Shareholding in energy-related companies
 and businesses of over 5% of all voting shares:**

None

**Procurement/hiring agreement with PEA for a starting
 amount of 100 million baht (including service as nominee
 of the company as a director or shareholder):**

None



Mr. Panumart Limsuwan

Age: 59
Position: Acting Deputy Governor
 (Planning and Engineering) and
 Acting Deputy Governor
 (Business and Marketing)

Education:

1. Ramkhamhaeng University
 - Master of Business Administration
2. Rajamangala University of Technology
 - Bachelor of Engineering (Power Engineering)

Key work experience:

- 1 Oct. 2023 Acting Deputy Governor (Planning
 and Engineering) and Acting Deputy
 Governor (Business and Marketing)
- 1 Oct. 2022 Deputy Governor (Planning and
 Power System Development)
- 1 Oct. 2020 Deputy Governor (Corporate Strategy)
- 1 Oct. 2019 Deputy Governor (General Service)
- 12 Nov. 2018 Deputy Governor (Corporate Social
 Responsibility)

Directorship of other organizations:

None

**Shareholding in energy-related companies
 and businesses of over 5% of all voting shares:**

None

**Procurement/hiring agreement with PEA for a starting
 amount of 100 million baht (including service as nominee
 of the company as a director or shareholder):**

None


Mr. Chardchai Poomrin

Age: 59

Position: Acting Deputy Governor (Central and South), Acting Deputy Governor (Accounting and Finance), and Acting Assistant Governor (PEA Area 3 (Central), Nakhon Pathom Province)

Education:

1. National Institute of Development Administration
 - Master of Public Administration (Public Administration)
2. King Mongkut's Institute of Technology North Bangkok
 - Bachelor of Science in Technical Education (Electrical Engineering)

Key work experience:

- 1 Oct. 2023 Acting Deputy Governor (Central and South), Acting Deputy Governor (Accounting and Finance) and Acting Assistant Governor (PEA Area 3 (Central), Nakhon Pathom Province)
- 1 May 2022 Deputy Governor (Electricity Authority Region 3)
- 1 Oct. 2020 Deputy Governor (Business and Marketing)
- 1 Oct. 2019 Deputy Governor (Corporate Strategy)

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):

None


Mr. Kriengsak Kittiprapas

Age: 60

Position: Acting Deputy Governor (Digital and Communication) and Acting Deputy Governor (Power System Operation)

Education:

1. Kasetsart University
 - Master of Business Administration
2. College of Technology and Vocational Education
 - Bachelor of Business Administration (Information System)

Key work experience:

- 1 Oct. 2023 Acting Deputy Governor (ICT) and Acting Deputy Governor (Power System Operation)
- 1 Oct. 2021 Deputy Governor (ICT)
- 1 Oct. 2020 Assistant Governor (ICT)
- 1 Oct. 2019 Expert Level 13, Office of the Deputy Governor (ICT)

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):

None



Mr. Mongkol Treekiijanon

Age: 56
Position: Deputy Governor (Logistics and Organization Support), Acting Deputy Governor (Corporate Strategy), and Acting Deputy Governor (Organization Management)

Education:

1. Suranaree University of Technology
 - Doctor of Engineering (Energy Management)
 - Master of Engineering (Environmental)
2. Rajamangala University of Technology
 - Bachelor of Science in Technical Education (Power Engineering)

ประวัติการทำงาน:

- 1 Oct. 2023 Acting Deputy Governor (Corporate Strategy) and Acting Deputy Governor (Organization Management)
- 1 Oct. 2022 Deputy Governor (Logistics and Organization Support)
- 1 Oct. 2021 Assistant Governor (Business and Marketing)
- 1 Oct. 2020 Assistant Governor (PEA Area 2 (Northeast), Ubon Ratchathani Province)

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):

None



Mrs. Sasiwipa Ampornsittikul

Age: 58
Position: Assistant Governor (Office of the Governor)

Education:

Kasetsart University
 - Bachelor of Science (Accounting)

Key work experience:

- 1 Oct. 2020 Assistant Governor (Office of the Governor)
- 1 Oct. 2019 Director, Office of the Governor
- 1 Oct. 2017 Director, Governor Affairs Department
- 1 Oct. 2016 Deputy Director, Governor's Affairs Department

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):

None


Mr. Thiraphan Chanchinda

Age: 54
Position: Assistant Governor
 (Office of the Governor)

Education:

1. National Institute of Development Administration
 - Master of Business Administration
2. Rajamangala University of Technology Lanna,
 Payap Campus
 - Bachelor of Science in Technical Education
 (Electrical Communications Engineering)

Key work experience:

- 1 Oct. 2022 Assistant Governor
 (Office of the Governor)
- 1 Oct. 2020 Director, Customer and Marketing
 Department
- 1 Oct. 2019 Director, Social and Environment
 Department
- 1 Oct. 2015 Deputy Director, Business Planning
 Department, Region 3

Directorship of other organizations:

Director, PEA ENCOM International Co., Ltd.

**Shareholding in energy-related companies and
 businesses of over 5% of all voting shares:**

None

**Procurement/hiring agreement with PEA for a starting
 amount of 100 million baht (including service as nominee
 of the company as a director or shareholder):**

None


Mr. Wirote Buaklee

Age: 51
Position: Acting Assistant Governor
 (Digital and Communication - Digital)

Education:

1. Kasetsart University
 - Doctor of Engineering (Electrical Engineering)
2. Chulalongkorn University
 - Master of Engineering (Electrical Engineering)
3. King Mongkut's Institute of Technology Thonburi
 - Bachelor of Engineering (Electrical Engineering)

Key work experience:

- 1 Oct. 2023 Acting Assistant Governor
 (Digital and Communication - Digital)
- 1 Oct. 2020 Assistant Governor (Digital)
- 1 Oct. 2019 Assistant Governor
 (Corporate Strategy)
- 12 Nov. 2018 Director, Power System Research and
 Development Department

Directorship of other organizations:

None

**Shareholding in energy-related companies and
 businesses of over 5% of all voting shares:**

None

**Procurement/hiring agreement with PEA for a starting
 amount of 100 million baht (including service as nominee
 of the company as a director or shareholder):**

None



Mr. Pongsakorn Yuthagovit

Age: 48
Position: Acting Assistant Governor
 (Planning and Engineering - Planning and Power System Development) and Acting Assistant Governor (Planning and Engineering - Engineering)

Education:

1. Sasin Graduate Institute of Business Administration, Chulalongkorn University
 - Master of Business Administration (Executive)
2. Chulalongkorn University
 - Master of Engineering (Electrical Engineering)

Key work experience:

- 1 Oct. 2023 Acting Assistant Governor (Planning and Engineering - Planning and Power System Development) and Acting Assistant Governor (Planning and Engineering - Engineering)
- 1 Oct. 2019 Assistant Governor (Planning and Power System Development)
- 1 Oct. 2017 Director, Power System Planning Department

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):

None



Mr. Pradit Fuangfoo

Age: 51
Position: Assistant Governor
 (Corporate Strategy)

Education:

1. University of Texas at Arlington
 - Doctor of Philosophy (Electrical Engineering)
2. Chulalongkorn University
 - Master of Engineering (Electrical Engineering)
3. Kasetsart University
 - Bachelor of Engineering (Electrical Engineering)

Key work experience:

- 1 Oct. 2020 Assistant Governor (Corporate Strategy)
- 1 Oct. 2019 Assistant Governor (Human Resources)
- 23 Jan. 2018 Director, Human Resource Development Department
- 1 April 2015 Deputy Director, Human Resource Development Department

Directorship of other organizations:

- Committee, Center of Excellence in Electrical Power Technology

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):

None


Mr. Udomsak Temwong

Age: 56
Position: Assistant Governor (Corporate Strategy - Corporate Affairs)

Education:

1. Thepsatri Rajabhat University
 - Master of Business Administration (General Management)
2. King Mongkut's Institute of Technology North Bangkok
 - Bachelor of Industrial Education (Electrical Engineering)

Key work experience:

- 1 Oct. 2021 Assistant Governor (Corporate Strategy - Corporate Affairs)
- 12 Nov. 2018 Director, Operation and Maintenance Department, PEA Area 3 (Lop Buri Province), Region 1
- 1 Oct. 2015 Deputy Director, Operation and Maintenance Department, PEA Area 3 (Lop Buri Province), Region 1

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):

None


Mr. Perapon Puranachot

Age: 57
Position: Assistant Governor (PEA Area 2 (Northeast), Ubon Ratchathani Province)

Education:

- College of Technology and Vocational Education
- Bachelor of Industrial Education (Electrical Engineering)

Key work experience:

- 1 Oct. 2023 Acting Assistant Governor (PEA Area 2 (Northeast), Ubon Ratchathani Province)
- 1 Oct. 2021 Assistant Governor (PEA Area 2 (Northeast), Ubon Ratchathani Province)
- 1 Oct. 2020 Director, Operation and Maintenance Department, PEA Area 2 (Central), Chon Buri Province

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):

None



Mr. Prasit Junprasit

Age: 58 ปี
Position: Assistant Governor
(PEA Area 3 (Northeast),
Nakhon Ratchasima Province)

Education:

King Mongkut's Institute of Technology
North Bangkok
- Bachelor of Industrial Education
(Electrical Engineering)

Key work experience:

- 1 Oct. 2023 Acting Assistant Governor
(PEA Area 3 (Northeast),
Nakhon Ratchasima Province)
- 1 Oct. 2021 Assistant Governor
(PEA Area 3 (Northeast),
Nakhon Ratchasima Province)
- 1 Oct. 2020 Director, Engineering and Service
Department, PEA Area 3 (Northeast),
Nakhon Ratchasima Province
- 12 Nov. 2018 Director, Engineering and Service
Department, PEA Area 1
(Udon Thani Province), Region 2

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):

None



Mr. Khajorn Prongfa

Age: 57
Position: Assistant Governor
(PEA Area 1 (Central),
Phra Nakhon Si Ayutthaya Province)

Education:

1. Kasetsart University
- Master of Business Administration
2. Mahanakorn University of Technology
- Bachelor of Industry (Power Engineering)

Key work experience:

- 1 Oct. 2023 Acting Assistant Governor
(PEA Area 1 (Central),
Phra Nakhon Si Ayutthaya Province)
- 1 Oct. 2020 Assistant Governor (PEA Area 1
(Central), Phra Nakhon Si Ayutthaya
Province)
- 1 Oct. 2019 Executive Director, PEA Area 1
(Phra Nakhon Si Ayutthaya Province),
Region 3
- 12 Nov. 2018 Director, Operation and Maintenance
Department, PEA Area 3
(Nakhon Pathom Province), Region 3

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):

None



Mr. Montre Yantrawattana

Age: 59
Position: Assistant Governor (PEA Area 2 (Central), Chon Buri Province)

Education:

1. Burapha University
 - Master of Public Administration (Public Policy)
2. College of Technology and Vocational Education
 - Bachelor of Industrial Education (Electrical Engineering)

Key work experience:

- 1 Oct. 2023 Acting Assistant Governor (PEA Area 2 (Central), Chon Buri Province)
- 1 Oct. 2021 Assistant Governor (PEA Area 2 (Central), Chon Buri Province)
- 1 Oct. 2020 Assistant Governor (PEA Area 3 (Northeast), Nakhon Ratchasima Province)
- 1 Oct. 2019 Director, Operation and Maintenance Department, PEA Area 2 (Chon Buri Province), Region 3

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):

None



Mr. Pukdee Wongsaporm

Age: 59
Position: Acting Assistant Governor (Office of the Governor)

Education:

- Khon Kaen University
 - Bachelor of Engineering (Electrical Engineering)

Key work experience:

- 1 Oct. 2023 Acting Assistant Governor (Office of the Governor)
- 1 Oct. 2020 Assistant Governor (PEA Area 3 (Central), Nakhon Pathom Province)
- 12 Nov. 2018 Executive Director, PEA Area 1 (Udon Thani Province), Region 2
- 1 Oct. 2016 Director, Operation and Maintenance Department, PEA Area 2 (Phitsanulok Province), Region 1

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):

None



Mr. Jumnian Boonkaew

Age: 59
Position: Assistant Governor
 (PEA Area 2 (South),
 Nakhon Si Thammarat Province)

Education:
 King Mongkut's Institute of Technology North Bangkok
 - Bachelor of Industrial Education
 (Electrical Engineering)

- Key work experience:**
- 1 Oct. 2023 Acting Assistant Governor
 (PEA Area 2 (South),
 Nakhon Si Thammarat Province)
 - 1 Oct. 2021 Assistant Governor (PEA Area 2
 (South), Nakhon Si Thammarat Province)
 - 1 Oct. 2020 Director, Engineering and Service
 Department, PEA Area 3 (South),
 Yala Province
 - 1 Oct. 2016 Manager, PEA Hat Yai District Class 1

Directorship of other organizations:
 None

**Shareholding in energy-related companies and
 businesses of over 5% of all voting shares:**
 None

**Procurement/hiring agreement with PEA for a starting
 amount of 100 million baht (including service as nominee
 of the company as a director or shareholder):**
 None



Mr. Suparp Kasiwong

Age: 60
Position: Assistant Governor (PEA Area 3
 (South), Yala Province)

Education:

1. Prince of Songkla University
 - Bachelor of Engineering (Electrical Engineering)
2. Sukhothai Thammathirat Open University
 - Bachelor of Public Administration
 (Public Administration)
 - Bachelor of Economics

- Key work experience:**
- 1 Oct. 2023 Acting Assistant Governor
 (PEA Area 3 (South), Yala Province)
 - 1 Oct. 2020 Assistant Governor (PEA Area 3
 (South), Yala Province)
 - 23 Jan. 2018 Director, Operation and Maintenance
 Department, PEA Area 3
 (Yala Province), Region 4
 - 1 Oct. 2016 Director, Engineering and Service
 Department, PEA 2
 (Nakhon Si Thammarat Province),
 Region 4

Directorship of other organizations:
 None

**Shareholding in energy-related companies and
 businesses of over 5% of all voting shares:**
 None

**Procurement/hiring agreement with PEA for a starting
 amount of 100 million baht (including service as nominee
 of the company as a director or shareholder):**
 None


Mrs. Thitirat Plasarn

Age: 56
Position: Acting Assistant Governor
 (Digital and Communication -
 Infrastructure)

Education:

1. Dhurakij Pundit University
 - Master of Science (Telecommunication Management)
2. Rangsit University
 - Bachelor of Business Administration
 (Business Computer)

Key work experience:

- 1 Oct. 2023 Acting Assistant Governor
 (Digital and Communication -
 Infrastructure)
- 1 Oct. 2021 Assistant Governor (ICT)
- 1 Oct. 2019 Director, IT Department
- 1 Oct. 2017 Deputy Director, IT Department

Directorship of other organizations:

None

**Shareholding in energy-related companies and
 businesses of over 5% of all voting shares:**

None

**Procurement/hiring agreement with PEA for a starting
 amount of 100 million baht (including service as nominee
 of the company as a director or shareholder):**

None


Mr. Samkan Santhavesuk

Age: 59
Position: Acting Assistant Governor
 (Power System Operation -
 Power Grid Construction)

Education:

1. Ramkhamhaeng University
 - Master of Business Administration
2. King Mongkut's Institute of Technology Ladkrabang
 - Bachelor of Engineering (Electrical Engineering)

Key work experience:

- 1 Oct. 2023 Acting Assistant Governor
 (Power System Operation -
 Power Grid Construction)
- 1 Oct. 2021 Assistant Governor (Construction and
 Project Management)
- 12 Nov. 2018 Director, Power System Construction
 Department

Directorship of other organizations:

None

**Shareholding in energy-related companies and
 businesses of over 5% of all voting shares:**

None

**Procurement/hiring agreement with PEA for a starting
 amount of 100 million baht (including service as nominee
 of the company as a director or shareholder):**

None



Mr. Theera Srimai

Age: 55
Position: Acting Assistant Governor (Power System Operation - Power Grid Operation) and Acting Assistant Governor (Power System Operation - Power Grid Asset Management)

Education:
 Southeast Asia University
 - Bachelor of Engineering (Electronic Engineering)

Key work experience:

- 1 Oct. 2023 Acting Assistant Governor (Power System Operation - Power Grid Operation) and Acting Assistant Governor (Power System Operation - Power Grid Asset Management)
- 1 Oct. 2020 Assistant Governor (Operation and Maintenance)
- 1 Oct. 2019 Expert Level 13, Office of the Deputy Governor (Operation and Maintenance)

Directorship of other organizations:
 None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:
 None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):
 None



Mr. Gromasak Kanttong

Age: 57
Position: Assistant Governor (Logistics and Organization Support)

Education:
 Ramkhamhaeng University
 - Master of Business Administration (Logistics Management)
 - Bachelor of Arts (Political Science)

Key work experience:

- 1 Oct. 2022 Assistant Governor (Logistics and Organization Support)
- 1 Oct. 2020 Assistant Governor (Organization Support)
- 1 Oct. 2019 Assistant Governor (General Service)
- 1 Oct. 2016 Director, Administration Department

Directorship of other organizations:
 None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:
 None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):
 None



M.R. Siriwan Kasemsan Na Ayutthaya

Age: 59
Position: Assistant Governor
 (Accounting and Finance)

Education:

1. North Bangkok College
 - Master of Business Administration
2. Chulalongkorn University
 - Bachelor of Political Science (Public Administration)

Key work experience:

- 1 Oct. 2022 Assistant Governor
(Accounting and Finance)
- 20 Mar. 2018 Director, Budget Department
- 1 Jan. 2014 Deputy Director, Budget Department
- 1 Nov. 2013 Assistant Director, Budget Department

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):

None



Mr. Monchai Danuphoboriboon

Age: 56
Position: Assistant Governor
 (Organization Management -
 Human Resource)

Education:

1. National Institute of Development Administration
 - Master of Arts (Social Development)
2. Prince of Songkla University
 - Bachelor of Arts (Social Development)

Key work experience:

- 1 Oct. 2020 Assistant Governor (Organization
Management - Human Resource)
- 12 Nov. 2018 Director, Human Resource Strategy
Department
- 1 Oct. 2017 Deputy Director, Human Resource
Strategy Department

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):

None



Mr. Surapong Chaimongkhon

Age: 60
Position: Acting Assistant Governor
 (Business and Marketing - Customer and Marketing) and Assistant Governor, (Business and Marketing - Engineering Business)

Education:

1. National Institute of Development Administration
 - Master of Public Administration
 (Public Administration)
2. King Mongkut's Institute of Technology North Bangkok
 - Bachelor of Industrial Education (Electrical Engineering)

Key work experience:

- 1 Oct. 2023 Acting Assistant Governor
 (Business and Marketing - Customer and Marketing) and Assistant Governor (Business and Marketing - Engineering Business)
- 1 Oct. 2022 Assistant Governor
 (Business and Marketing)
- 1 Oct. 2021 Assistant Governor
 (Office of the Governor)
- 1 Oct. 2020 Director, Engineering and Service Department, PEA Area 1 (North), Chiang Mai Province

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):

None



Mr. Wijarn Klungboonkrong

Age: 59
Position: Assistant Governor (PEA Area 1
 (Northeast), Udon Thani Province)

Education:

Khon Kaen University
 - Bachelor of Engineering (Electrical Engineering)

Key work experience:

- 1 Oct. 2023 Acting Assistant Governor
 (PEA Area 1 (Northeast), Udon Thani Province)
- 1 Oct. 2020 Assistant Governor (PEA Area 1
 (Northeast), Udon Thani Province)
- 1 Oct. 2015 Director, Engineering and Service Department, PEA Area 3
 (Nakhon Ratchasima Province), Region 2

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):

None



Mrs. Sanyalak Sukkasem

Age: 59
Position: Director, Legal Proceedings Department, Acting Assistant Governor (Organization Management - Laws)

Education:
 Thammasat University
 - Bachelor of Laws

Key work experience:

- 1 Oct. 2023 Acting Assistant Governor (Organization Management - Laws)
- 1 Oct. 2021 Director, Legal Proceedings Department
- 1 Feb. 2021 Deputy Director, Litigation and Investigation Department
- 1 Jun. 2017 Deputy Director, Legal Proceedings Department

Directorship of other organizations:
 None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:
 None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):
 None



Mr. Jaroonsak Nakklam

Age: 57
Position: Director, Operation and Maintenance Department, PEA Area 3 (North), Lop Buri Province, Acting Assistant Governor (PEA Area 3 (North), Lop Buri Province)

Education:
 1. Ramkhamhaeng University
 - Master of Business Administration
 2. College of Technology and Vocational Education
 - Bachelor of Industrial Education (Electrical Engineering)

Key work experience:

- 1 Oct. 2023 Acting Assistant Governor (PEA Area 3 (North), Lop Buri Province) and Director, Operation and Maintenance Department, PEA Area 3 (North), Lop Buri Province
- 1 Oct. 2021 Director, Operation and Maintenance Department, PEA Area 3 (North), Lop Buri Province
- 1 Oct. 2020 Director, Operation, Engineering, and Service Department, PEA Area 3 (North), Lop Buri Province
- 1 Oct. 2015 Deputy Director, Operation and Maintenance Department, PEA Area 2 (Phitsanulok Province)

Directorship of other organizations:
 None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:
 None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):
 None



Mr. Suphoj Khamlueang

Age: 57
Position: Director, Operation and Maintenance Department, PEA Area 1 (North), Chiang Mai Province, Acting Assistant Governor (PEA Area 1 (North), Chiang Mai Province)

Education:

1. Naresuan University
 - Master of Industrial Education
2. College of Technology and Vocational Education
 - Bachelor of Industrial Education (Power Engineering)

Key work experience:

- 1 Oct. 2023 Acting Assistant Governor (PEA Area 1 (North), Chiang Mai Province) and Director, Operation and Maintenance Department, PEA Area 1 (North), Chiang Mai Province
- 1 Oct. 2019 Director, Operation and Maintenance Department, PEA Area 1 (Chiang Mai Province), Region 1
- 12 Nov. 2018 Manager, PEA Class 1, PEA (Chiang Mai Province) Class 1, PEA Area 1 (Chiang Mai Province), Region 1
- 1 Oct. 2015 Deputy Director, Operation and Maintenance Management, PEA Area 1 (Chiang Mai Province), Region 1

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):

None



Mr. Methee Bunphrom

Age: 57
Position: Director, Engineering and Service Department, PEA Area 2 (North), Phitsanulok Province, Acting Assistant Governor (PEA Area 2 (North), Phitsanulok Province)

Education:

- College of Technology and Vocational Education
 - Bachelor of Industrial Education (Power Engineering)

Key work experience:

- 1 Oct. 2023 Acting Assistant Governor (PEA Area 2 (North), Phitsanulok Province), and Director, Engineering and Service Department, PEA Area 2 (North), Phitsanulok Province
- 1 Oct. 2021 Director, Engineering and Service Department, PEA Area 2 (North), Phitsanulok Province
- 1 Oct. 2019 Deputy Director, Engineering and Service Department, PEA Area 1 (Chiang Mai Province), Region 1
- 11 Dec. 2018 Deputy Director, Operation and Maintenance Department, PEA area 1 (Chiang Mai Province), Region 1

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):

None



Mr. Thana Chokphrasombat

Age: 56
Position: Director, Operation and Maintenance Department, PEA Area 1 (South), Phetchaburi Province and Acting Assistant Governor (PEA Area 1 (South), Phetchaburi Province)

Education:

1. Rajamangala University of Technology
- Bachelor of Industrial Education (Power Engineering)
2. Chiang Mai University
- Master of Business Administration

Key work experience:

- 1 Oct. 2023 Acting Assistant Governor (PEA Area 1 (South), Phetchaburi Province) and Director, Operation and Maintenance Department, PEA Area 1 (South), Phetchaburi Province
- 1 Oct. 2020 Director, Operation and Maintenance Department, PEA Area 1 (South), Phetchaburi Province
- 1 Oct. 2019 Director, Operation and Maintenance Department, PEA Area 1 (Phra Nakhon Si Ayutthaya Province), Region 3
- 1 Oct. 2017 Deputy Director, Operation and Maintenance Department, PEA Area 1 (Phetchaburi Province), Region 4

Directorship of other organizations:

None

Shareholding in energy-related companies and businesses of over 5% of all voting shares:

None

Procurement/hiring agreement with PEA for a starting amount of 100 million baht (including service as nominee of the company as a director or shareholder):

None





Corporate Governance, Risk Management, and Compliance (GRC)





Corporate Governance

PEA satisfies the public policy that promotes public administration with good governance, transparency, and accountability by declaring a policy on administration and development of “Good Governance”. Corporate Governance, Risk Management, and Compliance (GRC) principles are applied to support an efficient organizational management system under a good governance code, with transparency, fairness, and accountability to enhance the confidence of stakeholders in all sectors as follows:

1. Setting directions as well as financial and non-financial goals as could be expected from the establishment of PEA

2. Overseeing management to ensure their utmost management capability with ethics to achieve expectations of regulators

3. Upholding operational excellence underlined by business ethics for successful outcomes under the scope set by the Board

4. Working with full potential and ethics under the management of the PEA Governor and the management team

5. Sharing views and monitoring PEA's operations with potential economic, community, social and environmental impacts





PEA is committed to developing its organization under a good governance framework, concepts, and guidelines that are on a par with international standards for sustainable growth. To command competitiveness and performance with a long-term perspective and operate an ethical and responsible business toward good corporate citizenship with “corporate resilience”, PEA has formulated its Corporate Governance and Code of Business Ethics Handbook (CG Handbook), consisting of 7 measures and 20 guidelines for its Board of Directors, management, and the workforce for transparency and corruption prevention.

- 1) Disclosure of information:** PEA must disclose its financial and non-financial data in a transparent, accurate, complete, timely, and auditable manner. It must also value and treat all stakeholders equitably and fairly.
- 2) Stakeholder engagement:** PEA must advocate systems, measures, or guidelines for stakeholders’ monitoring and expressing views of its operations and services.
- 3) Advocacy of transparency:** Hiring, procurement, and supply sourcing must be in strict compliance with applicable laws and regulations. Hiring and procurement details must be announced through all legally required channels.
- 4) Whistleblowing management:** PEA must provide channels for complaints, comments, leads, or whistleblowing for incidents suspected of fraud or breach of business ethics. It must assure whistleblowers of protection, fair treatment, and cooperation, keeping them from any threat or unfair action.
- 5) Prevention of bribery:** PEA must not give or receive bribes, engage in direct or indirect conflicts of interest, or ignore any action perceived as fraud. This forms part of the responsibility of the Board, management, and workforce.
- 6) Prevention of conflicts of interest between personal gain and the common good:** PEA must institute regulations and guidelines as well as an IT system to prevent conflicts of interest.
- 7) Audit of discretionary exercise:** PEA must set out guidelines to ensure employees’ compliance with manuals and standards to minimize subjective decisions.





Ethics for Stakeholder Treatment

Issuing guidelines for business ethics and corporate governance, PEA ensures understanding and adherence among the directors, management, and workforce together with their uniform performance. PEA has also provided channels to handle complaints on violation of business ethics, and the defined guidelines.

Core Values of Business Ethics

1. Compliance with the Ethical Standard Act B.E. 2562 (2019), Chapter 1 (Ethical Standard and Code of Ethics), Section 5 (Ethical Standard and Code of Ethics), of state officials, which consist of:





2. Stakeholder treatment

PEA is responsible for power supply that is efficient, stable, safe, and reliable by performing its duties with honesty and efficiency with due regard for the interests of all stakeholders, as summarized below:

1. Guidelines for treatment of regulators and the public sector

- Managing PEA with integrity, consistent with the vision and code of good governance
- Strictly complying or overseeing compliance with applicable laws and regulations
- Valuing transparency and integrity when conducting transactions with government officials/agencies

2. Guidelines for treatment of customers and power users

- Delivering quality products and services
- Steadily creating and developing innovation, technology, and research
- Disclosing product/service information accurately, adequately, and completely in a timely manner without any distortion of facts
- Storing customers' data and uphold their confidentiality systematically, free from data abuses

3. Guidelines for treatment of communities and society

- Supporting activities/giving proper help to communities and society, especially those in PEA's operating areas
- Promoting energy efficiency and energy conservation for public benefit and future generations
- Engaging communities in activities/projects, and heeding their opinions, recommendations, or complaints on PEA's operations

4. Guidelines for treatment of the media

- Communicating with the media to ensure understanding of PEA's operations, policies, and projects so that stakeholders and the public may be accurately informed
- Releasing accurate, clear, and applicable information to the media in a fast, timely, and equal manner
- Maintaining good relationship with the media, for example, by supporting their CSR projects

5. Guidelines for treatment of business partners

- Complying with power purchase agreements (PPAs) signed by PEA and partners
- Cooperating with and engaging in the improvement of power distribution systems in line with public policies
- Encouraging the exchange of opinions/recommendations on power transmission system development
- Determining fair and reasonable prices, with due regard for prices, quality, and service factors
- Not demanding or accepting any asset/benefit from partners. If acceptance of property/benefit is identified, promptly disclosing details to applicable partners and jointly resolving the issue
- Conducting business in a sustainable and transparent manner consistent with the terms and conditions and practices clearly and fairly set out in contracts

6. Guidelines for treatment of management, employees, and contract employees

- Ensuring fair, efficient recruitment and employment terms
- Conducting performance assessment, managing compensation, and providing welfare, including rewards and punishment, in a fair and equitable manner.
- Heeding the opinions/recommendations of the workforce equally and inclusively, and engaging employees in the formulation of work directions and solutions to common units' problems
- Respecting and protecting individual freedom and rights of the workforce while supporting freedom of expression
- Providing comprehensive, sufficient, and continuous human resource development for the entire workforce as well as nurturing their awareness of ethics.

**7. Guidelines for treatment of the Board**

- Ensuring that the Board is equipped with competence and skills (Skill Matrix) and specific qualifications required for steering PEA's businesses toward key goals and missions
- Formulating a systematic process to select directors from SEPO's Directors' Pool properly, and completely defining the power, duties, and responsibility of the PEA Board as well as each committee
- Promoting all PEA committees' compliance with the regulations on PEA Board of Directors' Meetings B.E. 2566 (2023), the Charter, and the Manual of the Board of Directors, with the Board/all committees of PEA and their members subject to individual and group performance assessments year-round

8. Guidelines for treatment of affiliates

- Defining clear short-term and long-term business directions for affiliates as well as their financial and non-financial goals
- Ensuring that affiliates command uniform operational standards and achieve business objectives in support of their and PEA's sustainability
- Supporting affiliates' compliance with PEA's Way of Conduct (WOC) and systematically pushing for uniform compliance standards
- Overseeing affiliates' operations and heeding their views to continually improve PEA's Way of Conduct (WOC) for effectiveness and efficiency

9. Guidelines for treatment of competitors

- Conducting business in an equitable manner under applicable laws on trade competition and the international framework on free and fair competition
- Maintaining a right balance and relationships with a focus on common interests
- Developing existing businesses while continuously creating new opportunities, welcoming new partners and steadily exploring ways to develop and upgrade businesses for further growth
- Advocating the sharing of recommendations and opinions to improve guidelines for doing businesses together

3. Compliance with laws and public policies

PEA cooperates with the government by complying with applicable policies, laws, regulations, and ordinances.





Promotion of Corporate Governance

In place is a Master Plan for Corporate Governance and Prevention and Suppression of Fraud and Corruption B.E. 2566 - 2570 (2023 - 2027), designed to scope its CG execution. Under the master plan, CG strategies and execution plans are defined for the prevention and suppression of fraud and corruption, properly analyzed for compatibility with prevailing indicated scopes. The master plan consists of three strategies:



CG Performance Outcomes

Strategy 1: Upgrading operation under good governance and Core Business Enabler 1: Good Governance and Leadership and GRC process

This year, PEA conducted training for its Board of Directors and committees to enhance their knowledge and efficiency in the oversight and communication of its operations under the Core Business Enablers (Enabler 1). PEA also expanded its inter-organizational CG collaboration, for example, the signing a memorandum of understanding (MOU) on Good Governance Driving between PEA and the Office of the National Anti-Corruption Commission (NACC), State Enterprise Policy Office (SEPO), Securities and Exchange Commission (SEC), Thai Institute of Directors (IOD), and state enterprises, MOU on “PEA Moral and Integrity Enhancement” between PEA and the Anti-Corruption Foundation (under PEA’s Clean Villages), and a seminar between PEA and the Anti-Corruption Organization of Thailand. Finally, PEA promotes management’s role on good governance by promoting ongoing participation among management and employees under the GRC Excellence Awards project.



Strategy 2: Enhancing behaviors on good governance, culture, and integrity

This year, PEA participated in the Integrity and Transparency Assessment (ITA), scoring 99.35 percent (considered excellence) and topping state enterprises with excellence in the ITA AWARDS 2023, thus ongoing result-based corporate competency enhancement.

Also, PEA promotes capacity enhancement of its personnel in good governance, culture, and integrity by upgrading its activities to promote CG, supportive culture, integrity, morality, ethics, transparency, and anti-corruption in its operations, collectively known as soft control, by expanding them to the PEA Electric Vocational School's students, who would form an essential foundation for PEA's future growth. The speakers were from NACC. The Anti-Corruption Education training was conducted for all students at the school. Moreover, PEA organized soft-control activities for its 57,551 executives and employees nationwide. These activities focused on the Sufficiency Economy, code of good governance, conflict-of-interest prevention, applicable laws, STRONG Model, etc. In addition, PEA conducted CG Testing among its management and staff to determine their awareness and application of CG, morality, ethics standards, transparency, and anti-corruption knowledge. A total of 26,844 executives and staff took part in the assessment. The response rate was 98.50 percent, and their CG awareness score was 98.43% percent.

Finally, PEA's Outstanding People Award (OPA) honored CG role models in its organization, with recognition given to outstanding management and staff that proved exemplary, based on applicable criteria. Such tributes aimed to promote role models and create engagement of employees with innovation or outstanding performance that can be developed to benefit the organization.

Strategy 3: Promoting sustainability through the fraud and corruption prevention and suppression system for fairness, transparency, and non-discrimination

This year, PEA has developed a corruption and suppression surveillance mechanism to prevent, monitor, and investigate potential corruption and punishment for corruption of all forms by enhancing the efficiency of the whistleblowing management of the PEA Anti-Corruption Operation Center, both in whistleblowing database systems and in the development of the Data Analytic process on the PEA-VOC system platform.

An AI system for procurement (Act AI) was also developed, and procurement auditing was conducted by using the system through CSA and CSAS systems. A study was conducted, data analyzed, and an approach identified to enhance implementation of anti-bribery management under ISO 37001. PEA's management and the workforce were informed of the anti-bribery management as well as punishment for acts of corruption and monetary compensation (lawsuits) to institute an anti-corruption process in the organization. Finally, PEA has integrated its standard of transparency and sustainability with a control self-assessment system (CSAS).





Policy on Conflicts of Interest

PEA's regulation on Conflicts of Interest B.E. 2564 (2021) prevents internal fraud more efficiently and effectively in line with the criteria for transparency assessment of NACC. It requires management, employees, and contract employees (with two-year employment contracts) to steer clear of conflicts of interest.

1. Never accept or collude with relatives in accepting any benefits, whether assets, gifts, discount offers, entertainment, services, training, or the likes, which may influence decision-making
2. Never take part in any contract that one's company or a company of one's relatives made with PEA
3. Never spend time otherwise designed for PEA's causes to seek personal or others' gain
4. Never exploit PEA's inside information to seek benefit either by oneself or in collaboration with others
5. Never exploit PEA's assets for personal or others' advantage
6. Never abuse one's authority to influence decision-making by other PEA personnel, thus compromising PEA's interests
7. Never abuse one's position to seek benefit for oneself or one's relatives or associates, or accept employment as an adviser to projects involving one's responsibility.

Guidelines for Preventing Conflicts of Interest

- Increase process efficiency to prevent conflicts of interest to ensure alignment with laws, regulations, and international standards while improving PEA's regulation on Prevention of Conflicts of Interest B.E. 2564 (2021) for use as guidelines by senior management, executives, employees, and contract employees (with two-year employment contracts). The aim is to ensure mastery and adherence to integrity, transparency, and fairness, which support reliable decision-making and behavior that values the common good rather than personal interests or those of friends and relatives.
- Apply risk management, internal control, and internal audit systems to minimize risk, while regularly monitoring issues concerning conflicts of interest every year.
- Define values and ethical behaviors that recognize organizational interests rather than personal interests, while organizing activities promoting moral awareness to avoid conflicts of interest.
- File a written report on conflicts of interest – a rule that directors of the Board, senior management, executives, employees, and contract employees (with two-year employment contracts) must adhere to and strictly follow. Such a report must be complete, accurate, reliable, and timely.
- Regarding transactions connected to those inside PEA, the Board will closely monitor such engagement to ensure their transparency and fairness on an arm's length basis. Directors, management, and employees involved with such engagement must refrain from the approval process related to such transactions.
- Publicize policies, principles, guidelines, and outcomes of conflict-of-interest prevention every year through various channels, such as www.pea.co.th and the annual report.

Conflicts of Interest Reporting Process

PEA's regulation on Prevention of Conflicts of Interest between Personal Interests and the Common Good B.E. 2564 (2021), dated 1 October 2021, requires senior management, executives, employees, and contract employees (with two-year employment contracts) to file a report on conflicts of interest (COI Reporting) as follows:

- 1) Senior management, executives, employees, and contract employees (with two-year employment contracts) are required for COI Reporting in three cases:

Case 1: Annual reporting

Case 2: With each appointment, transfer, promotion, and recruitment

Case 3: With each conflict of interest that happens during the year.

An exception is made only for such reasonable causes as when the person is on study leave, suspension from the job, or ordination leave.

- 2) Senior management is also required to file a report on related-party transactions in addition to that concerning conflicts of interest.
- 3) Senior management, executives, employees, and contract employees (with two-year employment contracts) that have accepted an asset, gift, discount offer (except a sales promotion or marketing privileges equally offered to the public), entertainment, service, training (except training favoring the organizer), or the likes, worth over 3,000 baht, must report such advantage of possible monetary value.
- 4) Those involved in PEA's key processes, which means work groups with risks of fraud or conflicts of interest, are to file an additional report as required by PEA's guidelines by using the specified form.

COI Reporting is a proactive measure to prevent conflicts of interest. When an employee or a contract employee (with two-year employment contracts) is found to engage in a conflict of interest, the supervisor must exclude that person from the approval process or his/her involvement in the process with risk of conflicts of interest, such as the procurement process of a project or an activity of his/her own, family members, relatives and/or friends.





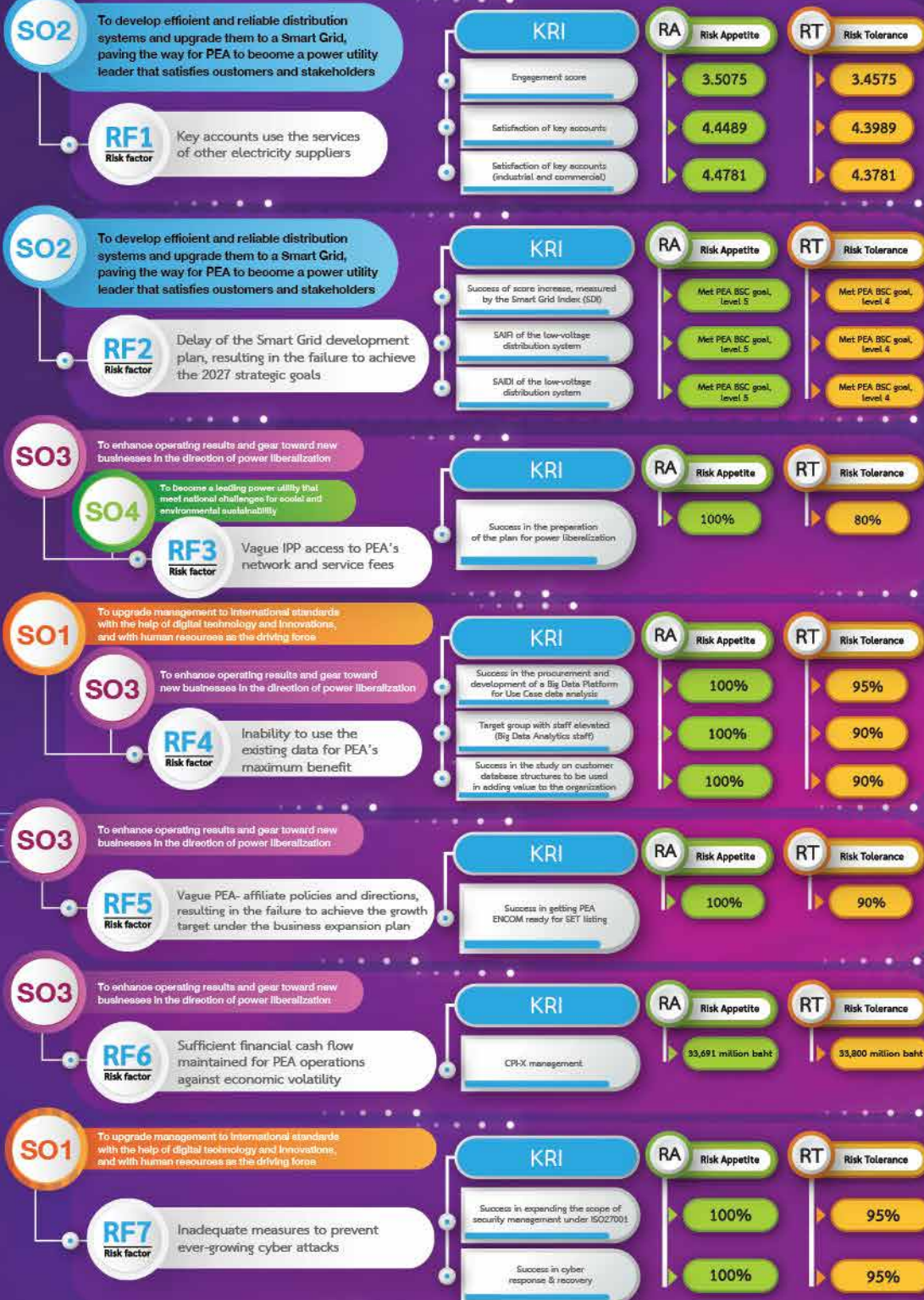
Risk Management

PEA's Risk Management and Internal Control Committee aligns risk management practices with COSO-ERM 2017 and the State Enterprise Policy Office (SEPO) guidelines. Such practices also conform to PEA's strategy, which identifies enterprise risk factors by considering internal and external factors that influence organizational objectives and goals. PEA also commands an information system that supports risk analysis and impact reporting, as well as an early warning system of impending incidents or hazards that may severely affect the organization. In addition, each responsible party for risk management must assess and report risk management outcomes to the Risk Management and Internal Control Committee every quarter. Should any risk assessment outcome miss its target, or should any factor cause PEA to miss its objectives, the committee is to provide suggestions and recommendations that PEA's Risk Management function and the risk owner must follow and duly adjust risk management strategies to maintain PEA's risk appetite.





Enterprise Risk Management Plan 2023





In 2023, PEA posted seven risk factors based on the evaluation of risk control efficiency. These factors are detailed below:

2023 Risk Factor	Strategic Objective	Risk Type	KRI	Risk Appetite	Risk Tolerance
1. Key accounts use the services of other electricity suppliers	SO2: To develop efficient and reliable distribution systems and upgrade them to a Smart Grid, paving the way for PEA to become a power utility leader that satisfies customers and stakeholders	S/F	1. Engagement score	3.5075	3.4575
			2. Satisfaction of key accounts	4.4489	4.3989
			3. Satisfaction of key accounts (industrial and commercial)	4.4781	4.4281
2. Delay of the Smart Grid development plan, resulting in the failure to achieve the 2027 strategic goals	SO2: To develop efficient and reliable distribution systems, and upgrade them to a Smart Grid, paving the way for PEA to become a power utility leader that satisfies customers and stakeholders	S/O	1. Success of the microgrid system development plan, Mueang District, Mae Hong Son Province	90%	70%
			2. System Average Interruption Frequency Index (SAIFI) of the low- voltage distribution system	0.739	0.809
			3. System Average Interruption Duration Index (SAIDI) of the low- voltage distribution system	68.594	77.547
3. Vague IPP access to PEA's network and service fees	SO3: To enhance operating results and gear toward new businesses in the direction of power liberalization SO4: To become a leading power utility that meet national challenges for social and environmental sustainability	S/C	1. Success in the preparation of the plan for power liberalization	100%	80%



2023 Risk Factor	Strategic Objective	Risk Type	KRI	Risk Appetite	Risk Tolerance
4. Inability to use the existing data for PEA's maximum benefit	SO1: To upgrade management to international standards with the help of digital technology and innovations, and with human resources as the driving force SO3: To enhance operating results and gear toward new businesses in the direction of power liberalization	S/O	1. Success in the procurement and development of a Big Data Platform for Use Case data analysis	100%	95%
			2. Target group with staff elevated (Big Data Analytics staff)	100%	90%
			3. Success in the study on customer database structures to be used in adding value to the organization	100%	90%
5. Vague PEA-affiliate policies and directions, resulting in the failure to achieve the growth target under the business expansion plan	SO3: To enhance operating results and gear toward new businesses in the direction of power liberalization	S/F	1. Success in getting PEA ENCOM ready for SET listing	100%	90%
6. Sufficient financial cash flow maintained for PEA operations against economic volatility	SO3: To enhance operating results and gear toward new businesses in the direction of power liberalization	F	1. CPI-X management	30,203 million baht	30,260 million baht





2023 Risk Factor	Strategic Objective	Risk Type	KRI	Risk Appetite	Risk Tolerance
7. Inadequate measures to prevent ever-growing cyber attacks	SO1: To upgrade management to international standards with the help of digital technology and innovations, and with human resources as the driving force	S/O/C	1. Success in expanding the scope of security management under ISO27001	100%	95%
			2. Success in cyber response & recovery	100%	95%





Outcomes

SO 1

To upgrade management to international standards with the help of digital technology and innovations, and with human resources as driving force

Enterprise Risks

RF4: Inability to use the existing data for PEA's maximum benefit

RF7: Inadequate measures to prevent ever-growing cyber attacks

2023 Performance

Amid current business growth and high competition, PEA must adapt itself for drastic changes in the power business due to changing technology and industrial structure of power systems. Also, its main income derives from its core business of power distribution to many consumers, since its service areas cover 74 provinces except Bangkok, Nonthaburi, and Samut Prakan. Information on these consumers can help improve its customer services as well as development of downstream businesses, and the use of in-depth information on Smart Grid Analytics for efficiency improvement. In maximizing the existing information, it needs good data management, cleansing, as well as skilled personnel in the analysis of the information as well as proper regard for the protection of personal data (Data Privacy).

With its commitment to becoming a digital utility, driven by technology, innovation, and new businesses, PEA values the enhancement of security and confidence in digital technology among stakeholders across all sectors. The move covers standards and cyber security to boost confidence in online communication and transactions, such as an efficient and safe system for the payment of service fees, fully staffed Security Operation Center (SOC), appropriate and international standard measures to monitor and handle cyber threats, in particular, to protect critical infrastructure such as SCADA (supervisory control and data acquisition), which receives special emphasis because it must be stable and secure for PEA's operations. Under this strategy, PEA promotes networking, in which anti-cyberthreat information and awareness, including knowledge on cyber threats that needs continuous actions, are shared.





SO 2

To develop efficient and reliable distribution systems, and upgrade them to a Smart Grid, paving the way for PEA to become a power utility leader that satisfies customers and stakeholders

Enterprise Risks

RF1: Key accounts use the services of other electricity suppliers

RF2: Delay of the Smart Grid development plan, resulting in the failure to achieve the 2027 strategic goals

2023 Performance

Presently, many private entities besides PEA have been providing public power utility services. To ensure that their needs and expectations are met, key customers will consider factors concerning prices, services, and stability of networks. Since it cannot compete with the private sector in prices, PEA harnesses its advantage in expertise in power services, stable power distribution, and speedy problem solving. Thus, it values services and stability of network systems to fulfill key customers' needs and expectations. Data and information were reviewed, working processes and service standards developed in alignment with their needs, service standards maintained, and service efficiency enhanced through digital technology to give customers good experience. PEA has defined clear strategies for taking care of its key accounts in various aspects, such as products, services, and management of whistleblowing complaints to boost their satisfaction and ensure their continual use of PEA's services.

In view of PEA's strategic positioning for 2027 for Smart Energy Solution, and the Ministry of Energy's Master Plan for Thailand Smart Grid Network System Development B.E. 2558 - 2579 (2015- 2036) as a framework in the development of Smart Grids in Thailand, the Energy Policy and Planning Office (EPPO) thus defined a vision in the Smart Grid development to "promote sufficient electricity supply, with efficient, sustainable, good service quality and optimal benefit to the country". This also supports the future power industry with rising demand in line with EV promotion, together with Distributed Energy Resources (DERs) as well as innovation and technology, to promote power consumption, including Battery Energy Storage System (BESS), and other alternatives for power consumers, such as renewable energy. In short, Smart Grid is crucial for managing the power grid for greater efficiency.





SO 3

To enhance operating results and gear toward new businesses in the direction of power liberalization

Enterprise Risks

RF3: Vague IPP access to PEA's network and service fees

RF4: Inability to use the existing data for PEA's maximum benefit

RF5: Vague PEA-affiliate policies and directions, resulting in the failure to achieve the growth target under the business expansion plan

RF6: Sufficient financial cash flow maintained for PEA operations against economic volatility

2023 Performance

With transformation in power system structure and technology, business growth, and its current income from its core business, namely power distribution, PEA's core competency and resources have given it business opportunities and advantages over other private operators. Such elements include power system business services for industrial customers, solar rooftop business management, and power system design. These downstream businesses are essential in strengthening its competency for creating overall future income. Performance of its affiliates will support promotion of business opportunities, thus agility in conducting affiliates' business is crucial. Moreover, it is essential that PEA and its affiliates must together define business directions and good monitoring mechanisms to ensure appropriate returns.

Higher costs because of the Russia-Ukraine war, including impacts of Covid-19, economic problems, recession, and higher Ft, all resulted in payment default or late payment by its consumers, which affected PEA's cash flow. Monitoring and management of operational expenses was essential to prevent any impact on its operations.



**SO 4****To be a leading power utility that meet national challenges for social and environmental sustainability****Enterprise Risks**

RF3: Vague IPP access to PEA's network and service fees

2023 Performance

The government has a policy on electricity market liberalization with responsibility of DSO and Retail clearly separated, and a full competitive market mechanism was to be applied. PEA has prepared for market liberalization as follows:

- Preparation for the establishment of the Market Operator Center (MO) and the Distribution System Operator center (DSO)
- Development of IT and software architecture of the energy trading platform to be ready for PEA operation under power liberalization
- Preparation for organization and workforce restructuring / business process design
- IT system including applicable laws and regulations.

The Energy Regulatory Commission (ERC) has announced requirements on third-party access (TPA) for the use of EGAT's, MEA's and PEA's power grids in power trading. PEA must thus be prepared to support future TPA, for example, through a process for the application of power grid system service, consideration and approval periods, wheeling charges, support of operational information systems, accounting and financial readiness, preparation of account unbundling, billing, metering, and related SAP systems. All these are planned to present PEA's clear role as the DSO leader using the advantages of its human resources and distribution systems as well as retailing business leadership with the advantages of massive customers nationwide, leading to the defining of the changing Business Model.





Stakeholder Management

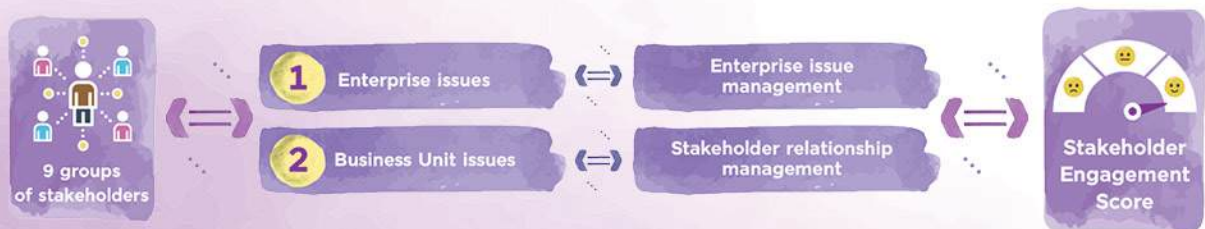
Stakeholder Management Strategy

PEA conducts its business with due regard for external and internal stakeholders, with emphasis on efficient stakeholder management, regular review, and improvement of work processes, support of stakeholder engagement on significant issues, and responses to their needs, expectations, and concerns appropriately for the sustainable growth of PEA together with communities and society.

In view of such commitment, PEA has defined its strategy for stakeholder management to gain their trust in doing business together and support its operations aiming to elevate relations between PEA and stakeholders to achieve its strategic goals which covers key stakeholders under the enterprise architecture.

Stakeholder Engagement Management Process

PEA's Stakeholder Engagement Management Process follows international standards based on AA1000 Stakeholder Engagement Standard (AA1000SES) and assessment criteria under the State Enterprise Assessment Model (SE-AM), ranging from defining stakeholder groups, key enterprise and business unit issues, to the management of those issues to raise the stakeholder engagement score.



Those responsible for stakeholder management are:

1. The Board of Directors and the Governance and Sustainability Development Committee monitor the policy and strategy of stakeholder management and ensure performance compliance on a quarterly basis.
2. Engagement and Corporate Communication for Sustainability, Corporate Strategy, compiles all stakeholder opinions from surveys and summarizes them into issues at enterprise and business unit levels, linking them to PEA operations under the strategy. This department also defines guidelines in response to the policy and strategy on implementation for stakeholder management and monitors as well as assessing the performance on a quarterly basis.





3. All PEA divisions/units manage issues at the business unit level and pass the policy and strategy on stakeholder management to their responsible personnel of each unit to forge relations with stakeholders, including following up on relations with applicable stakeholders.

Key Stakeholders

PEA divides its stakeholders who have been affected or gained/lost from its core business operations, whether directly or indirectly, into nine key groups and 17 sub-groups as follows:

Key Stakeholders: Nine groups

1. Regulators and the public sector:

- 1.1 Government sector / independent entities that define or monitor policy and business directions:

Units which influence business directions at the policy level, assessment, overall operations, and audit legal compliance performance

- 1.2 Government sector / independent entities that grant approval or permission for the operations:

Units responsible for laws related to PEA's core business, particularly power pole and line installation, and expansion of power distribution service

- 1.3 Government sector / independent entities, which cooperate, support, or concern PEA operations:

Units which can cooperate or support PEA's efficient operations and activities

2. Customers and power users

- 2.1 Power users in the distribution business

All power users in the distribution business

- 2.2 Customers in other businesses

All customers in other businesses (excluding the power distribution business)

3. Communities and society

- 3.1 Communities and community leaders

All communities and their leaders in the areas surrounding PEA's operating areas

- 3.2 Public

The entire population of Thailand

4. Media

All conventional and online media



5. Partners

5.1 Electricity Suppliers

All electricity suppliers in PEA's power distribution business

5.2 Material Suppliers

All PEA's material suppliers

5.3 Service Providers

All PEA's service providers, for example, system, construction, power unit recording, metering, consulting services, including IT systems supporting the operations

5.4 Partners in PEA's supporting or other missions

All partners in supporting or other missions which conduct business interdependence with PEA, for example, electricity bill payment agents, communication companies seeking approval for electric cable laying, and parties under MOUs

6. Board of Directors

The entire Board of Directors of PEA

7. Employees

7.1 Management, employees, and contract employees

All PEA management, employees, and contract employees

7.2 Internal units / working groups

All PEA's internal units / working groups

8. Affiliates

All PEA's affiliates

9. Benchmark



























9.1 Benchmark in the energy business, either power distribution or downstream/related businesses

Competitors, manufacturers of substitute products, benchmark in the energy business (power distribution and related business, and future businesses), other service businesses (besides the energy business), and best practices in various aspects.

Enterprise Issue Management

PEA has conducted a study and review of international sustainability practices, stakeholders' needs and expectations, and environmental reports that have impacts on its operations, in conjunction with PEA's business directions. Essential issues at the enterprise level consist of 15 issues on ESG (Environmental, Social, and Governance) related to PEA's value chain as seen below:



Issue	Electricity Distribution System				Customer Service and Marketing	Governance and Strategic	Innovation and New-businesses Management	Resources and Service Management System			Digital Technology Management System	SDGs
	Planning and Energy Procurement	Construction and Maintenance	Distribution	Logistics Management				Budgeting, Accounting and Finance	Human Resource Development and Management			
Environmental												
Energy Management	●	●	●								●	 
Climate Change	●	●	●			●			●			 
Circular Economy	●	●	●			●			●			 
Social												
CRM			●	●	●	●						 
Community Safety		●	●	●	●	●						
Human Capital							●			●		
Reliability	●	●	●	●	●	●						  
Supply Chain	●	●	●	●	●	●			●	●		  
Access and Affordable	●	●	●	●	●	●						 
OHS							●				●	 
Stakeholder Engagement						●	●		●			
Governance												
Transformation							●	●			●	  
Innovation							●	●			●	 



Issue	Electricity Distribution System			Customer Service and Marketing	Governance and Strategic	Innovation and New-business Management	Resources and Service Management System			Digital Technology Management System	SDGs	
	Planning and Energy Procurement	Construction and Maintenance	Distribution				Logistics Management	Budgeting, Accounting and Finance	Human Resource Development and Management			
Data Security											 	
GRC											 	
Stakeholder												



Item	Meaning
CRM	Customer Relationship Management
Transformation	Preparation for business transformation
Innovation	Management of innovation, research, and digital technology development to enhance business operation capability
Community Safety	Community health and safety
Human Capital	Human capital management
Reliability	Security of stability and availability of electricity supply
Data Security	Data & IT system security and client confidentiality
GRC	Governance, Risk, and Compliance
Supply Chain	Supply chain management
Energy Management	Energy and asset management
Access and Affordable	Access to electricity of affordable prices
OHS	Occupational health and safety of the PEA workforce
Stakeholder Engagement	Stakeholder Engagement
Climate Change	Greenhouse gas emissions and climate change strategy
Circular Economy	Circular Economy and environmental management

Business-Unit Issue Management

PEA has improved its operations in response to stakeholders' needs and expectations at the business-unit level and communicated with them through activities concerning stakeholder relations, including discussions, activities, seminars, or meetings with stakeholders. Communication guidelines and channels have been defined to communicate appropriate activities and information with groups of stakeholders, such as the website, E-mail, annual report, and communication through the workforce. The responsible persons for managing each group of stakeholders are summarized below:





PEA's unit	Regulators and public sector	Customers and power users	Communities and society	Media	Business partners	Board of Director	Personnel	Affiliates	Competitors
Power System Operation	●		●		●				
Electricity Authority Northern and Northeastern Regions	●		●		●				
Electricity Authority Central and Southern Regions	●				●				
Business and Marketing	●	●			●				
Organization Management	●						●		
Accounting and Finance	●				●				
Corporate Strategy	●		●	●	●			●	●
Planning and Engineering	●				●				
ICT	●				●				
Internal Audit Bureau	●				●				
Logistics and Organization Service					●				
Organization Secretary						●			



Stakeholder Engagement Score

PEA has defined targets for its stakeholder engagement. The target score has been gradually raised and this year, for three consecutive years, the actual stakeholder engagement score has risen over 76.50% and performance score to 86.10%, reflecting our efficiency in stakeholder management.

Stakeholder Engagement Index	2021	2022	2023
Target (percent)	≥ 75.00	≥ 76.00	≥ 76.50
Performance (percent)	76.90	80.20	86.10







Corporate Socio-Environmental Responsibility



Committed to providing electricity-related services and extending power distribution to remote areas for full electrification, PEA is keenly aware of its socio-environmental responsibility, internally and externally. This year it revised and integrated the formulation of socio-environmental action plans by stressing clearer stakeholder management so that PEA may meet their needs and expectations more relevantly and consistently with ISO 26000. The efforts fall into seven core subjects as seen below.



1. Organizational Governance

PEA ensures that its social and environmental operations conform to laws, regulations, and proper ethics and codes of practice. It pays due attention to the National Strategy, the 13th National Economic and Social Development Plan, the policies of the Ministry of Interior, the Corporate Governance and Sustainable Development Committee, the PEA Governor, PEA's strategic plans, and the BCG Economic Model under Thailand's strategy for national development, and the ESG concept that focuses on the environmental, social, and governance aspects, consistent with the Sustainable Development Goals (SDGs). Also taken into account are the Sufficiency Economy Philosophy (SEP) and Systematic Inventive Thinking (SIT), which are adopted as guidelines for driving PEA's socio-environmental plans and projects as well as underlining the formulation of its socio-environmental responsibility plan for 2023.





2. Human Rights

With due respect for human rights, PEA abides by the organizational management guidelines and commands activities consistent with the national action plan on business and human rights, Phase 2 (2023-2027), as the national policy framework defining guidelines for various sectors. The intent is to safeguard the public and communities from human rights violations due to business operations, prevent, ease, or resolve problems or negative impacts due to business activities. Finally, PEA strives to promote responsible business operations while honoring human rights across the supply chain. Our hope is for sustainable economic growth. To this end, PEA follows the principles under the national action plan on business and human rights as described below:

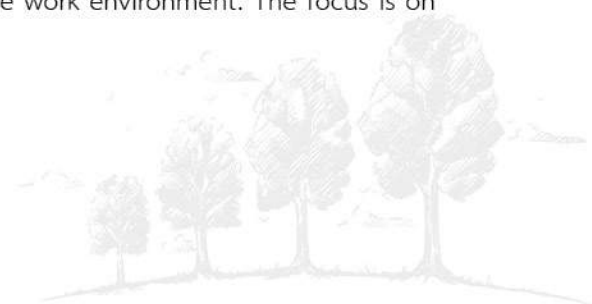
1. In providing the supply and distribution of electricity to all sectors of society and all service areas, PEA must provide access to services without discrimination of race, religious belief, or different political views. This concerns service quality, safety, and price determination. PEA must abide by the public sector's policy and regulations.
2. PEA advocates human rights activities internally and involving stakeholders. It keeps an open mind in hearing inputs from all sectors for improving services and determination of measures to ease operation impact.
3. PEA supports various public service activities under its strategic plans without discrimination.
4. PEA does not support activities violating human rights and resists them.

3. Labor Practices

Planning to look after competent and proficient personnel so that they may efficiently advance in their careers, PEA assists and supports them by instituting rights, privileges, and welfare for them. Also, it establishes channels for them to communicate and convey needs as well as views for their satisfaction and engagement with PEA. At the same time, it reviews survey outcomes of their needs and expectations, which may differ due to their nature of work and performance, to improve policies on personnel rights, privileges, and welfare to more relevantly meet their needs and expectations.

A safety unit is responsible for PEA's compliance with policies on safety, health, and work environment. In place is a proactive occupational health process, whereby PEA institutes health risk assessment for those exposed to chemicals or toxic materials, hazard control at different work sites, and regular inspections to monitor work environments.

PEA has defined a policy on safety, health, and the work environment to upgrade its own safety management system to a standard across the organization as well as for public safety. It develops safety work while striving to become an organization with an international-standard safety management system. At the same time, it forges cooperation with safety networks, upgrades innovations, and applies digital technologies to activities concerning safety, health, and the work environment. The focus is on zero accidents together with fewer risks of work illness.



4. The Environment

To avert impacts on communities and the environment, PEA recognizes its environmental responsibility for all work processes. It stages discussions on community engagement, defines guidelines, and set out measures for controlling and monitoring possible environmental impacts. As for such impacts that could prove severe, PEA prepares an environmental impact assessment (EIA), which must be approved by the Cabinet and applicable government agencies, namely the National Environment Board, Ministry of Natural Resources and Environment.

PEA is engaged in nurturing economic eco-efficiency, whereby growth in the values of goods and services is compared with reduced resource consumption and reduced environmental impact. To this end, it defines guidelines for greater internal efficiency and cuts activities' costs, including energy and resource consumption. PEA devises guidelines for environmental impact mitigation, promotes all units' conscientious resource consumption and eco-friendliness, reduces GHG emissions, prepares to become an international-standard eco-friendly office, and joins Thailand's voluntary GHG reduction programs. PEA is committed to employees' and contractors' behavioral change and sustainable recognition of environmental impacts through the likes of electricity, fuel, and water saving under the Circular Economy, part of the BCG Economic Model. Finding application in the remedy of resource degradation, waste pollution, and garbage volumes, this aids in the management of refuse and waste reduction by stressing resource consumption most cost-effectively (zero waste)—ranging from design, least-waste production, to reuse-refurbish-sharing (an upcycling method designed to supplement value). Finally, PEA stresses the discontinuation of hazardous products or chemicals in offices to cut the release of pollutants to the environment while also trimming GHG emissions from its operations. As a result, at the end of 2023, PEA garnered Green Office awards for its 372 offices: 420 Excellent (Gold G), 13 Very Good (Silver G), and one Good (Bronze G) from the Department of Climate Change and Environment. It is PEA's goal to expand the Green Office Project coverage nationwide by 2025.

5. Fair Operating Practices

Committed to the development and advocacy of internationalized good governance, PEA stresses efficiency in parallel with fair treatment of stakeholders, disclosure of information, transparency, management's and personnel's righteousness and ethics, suppression of corrupt practices, ethical standard and professional code of conduct while abiding by the Sufficiency Economy Philosophy as management guidance for organizational sustainability. To this end, PEA applies digital technology to the establishment of governance and anti-corrupt practice processes as well as collaboration with external stakeholders.

This year, PEA reviewed its master plan on organizational governance, prevention, and suppression of corrupt practices, organizational governance (2023-2027), and its action plan concerning organizational governance, prevention, and suppression of corrupt practices of 2023. Three key strategies were defined under the master plan, namely upgrading of actions under organizational governance and the first appraisal aspect of core business enablers (organizational governance, leadership, and GRC process), behavior upgrading on governance, culture, and behavior with integrity, and promotion of sustainability with a system to prevent and suppress corrupt practices so that fairness, transparency, and non-discrimination may prevail.



6. Consumer Issues

Treating consumers or customers as its critical stakeholders, PEA has defined a master plan on customer service and marketing, 2021-2025 (Rev. 2, 2023), to guide customer relationship management (CRM). This was done through a customer grouping process, listening to their needs and expectations, appraisal of satisfaction and dissatisfaction, customer engagement, and management of complaints under PEA's strategic plans, which focus on addressing strategic objectives. Valued is the Voice of Customers (VOC) process, which yields findings, which are then analyzed for customers' needs and expectations. These outcomes then translate into activities / plans / projects to systemically cater to the needs of all customer groups—current, past, competitors' customers, and prospective high-potential customers. The VOC process falls into five channels.

Here are the five VOC channels under PEA's Customer Journey:

1. Voice of the Digital Customer Group, namely
 - PEA Mobile Shop
 - PEA e-Service
 - PEA Smart Plus application
 - PEA - Email
 - PEA - Live Chat
 - PEA - V care
 - Social network
2. Service points, namely
 - Direct contact at office
 - Office phone
 - Executives
 - Reception of documents, letters, facsimiles
 - PEA Shop/PEA Mobile Shop
 - PEA Contact Center
3. Customer relationship activities, namely
 - Visits
 - KAMR officers (key accounts)
 - Key account seminars
 - Discussion groups
4. Surveys, namely
 - Survey project for learning of customers, market, and organizational image
 - Satisfaction survey after receiving services through various channels
 - Smile Box & Smart Queue



5. Other groups, namely

- Regulatory agencies
- IA/IR Chat
- Websites of external agencies
- The press.

PEA has eased customers' access to its data, including services like the PEA Smart Plus application, which simplifies various services, including notification of electricity billing, computation of electricity charges, payment through credit cards and online banks, application to hook up electricity, expansion, reduction of meter sizes, and meter re-installation in case of non-payment, notification about power interruption, mailing of suggestions/complaints, search for service points, and public relations.

7. Community Involvement and Development

By playing a part in advocating knowledge and understanding of the application of renewables by communities, PEA enables them to fulfill their greater needs for power in the future, fitting the vision of "Smart Energy for Better Life and Sustainability". This is achieved through the following socio-environmental projects:

7.1 Environmental conservation and rehabilitation

1) The PEA Planting, Stewardship, Conservation of Forests Project organized tree planting and caring jointly with communities on 1 June 2023 at the community forest of Ban Lao Phatthana, Moo 22, Pa Daet Subdistrict, Mae Suai District, Chiang Rai Province. The objective is to revive degraded forest resources and restore fertility while cutting carbon dioxide emissions. The activity was undertaken with the Pa Daet community, residents of nearby communities, and local administrative agencies. To date, 29,500 trees have been planted, which equates to 897.24 tCO₂eq of sequestered and trapped gas. (Note the trapped GHG of 0.95 tCO₂eq/tree/rai at a density of 150 trees.)

2) Assessment of eco-efficiency to come up with a proportion of economic value to resource consumption, including electricity, water, paper, and fuels, enables evaluation of PEA activities' efficiency of cost-effective resource management.

3) The project to improve PEA offices into Green Offices represents the cultivation of awareness and the advocacy for executives' and employees' engagement in fostering a nice environment. The tools consist of conscientious consumption of resources and energy; guidance for efficiently managing waste; choice of eco-friendly materials, machinery, and office supplies; and reduction of activities contributing to greenhouse gases. The project goal is continuity and efficiency (at Head Office and regional offices) to cut GHG emissions into the atmosphere by all sectors and support the Carbon Neutrality goal of PEA by 2037. In 2023, PEA earned certification from the Department of Environmental Quality Promotion covering Green Offices, Green Areas, and Green Residences.



7.2 Promotion of community economy

1) The PEA LED Project for Thai Cultural Tourism Sites advocates and supports safety and energy saving through LED installation. Since 2013, 71 sites have joined the project, with over 30,096 units/year saving in electricity consumption, worth 132,420 baht/year. Besides, CO₂ reduction has exceeded 486 tCO₂eq/year, which eases global warming, promotes energy saving at religious venues, promotes scenery, induces Thai cultural tourism nationwide, and decentralizes income to rural areas.

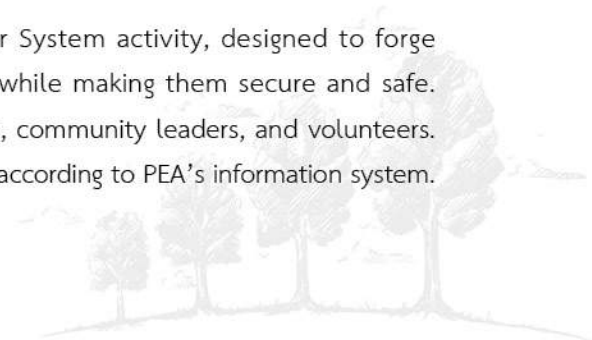
2) The 1 Subdistrict, 1 Electrician Project has seen PEA solve the shortage of local electricians, upgrades electricians' quality within subdistricts to the national standard, advocates and develops the profession for sustainability, and forges networks while steadily raising the efficiency of distributing electricity to the public. The project ran from 2017 to 2023, as detailed below:

- Training of subdistrict electricians on theoretical and practical aspects at the level of internal electrician, level 1; PEA saw 8,214 successful trainees
- Training in "Installation and Maintenance of Solar Rooftop Systems"; PEA saw 79 successful trainees
- Training in "Installation of EV Charging Station"; PEA saw 55 successful trainees.

3) The PEA Clean Energy for Communities supplied solar-powered boats by designing and installing five prototype engines designed for long-tailed boats for Damnoen Saduak District communities in Ratchaburi Province each year from 2021 to 2025 to promote sustainable canal lifestyle tourism as well as promoting renewables to cut carbon dioxide emissions, which cause global warming. Comparison between diesel-engine boats and solar-powered boats shows a reduction in noise pollution from 85.5-113 dBA to 87 dBA and that in direct GHG emissions from 0.041 tCO₂eq to just 0.003 tCO₂eq. The switch also promoted community engagement in managing and developing tourism sites while upgrading their images to quality tourism sites that are eco-friendly as well as community-friendly.

4) The Safe Community Use PEA Electricity Project related to PEA's core mission of providing quality service to power systems and looking after public safety in power consumption. Below are descriptions of three activities organized from 2017 to 2023:

- Junior Journals, which imparted knowledge of safe and economical power consumption to over 6,500 youths at the primary and secondary levels
- Knowledge activities for ordinary and higher vocational students, in which PEA staged training in theoretical and practical aspects to electrical power students from vocational institutes (ordinary and higher). PEA trainees were taken on site with employees to inspect and fix electrical appliances in households or public venues including temples, schools, and hospitals. Over 30,000 trainees took part to benefit over 1,000,000 households.
- The PEA – Public Joined Hands for Secure Power System activity, designed to forge community networks to strengthen power distribution systems while making them secure and safe. To this end, knowledge is imparted to local administrative officers, community leaders, and volunteers. An external network showed registration of over 13,000 volunteers, according to PEA's information system.



7.3 Social Improvement

1) A project to aid members of the public facing crises, under which PEA promptly supplied survival bags to members of the public

2) Save Your Life: Stroke Prevention Project, conducted in conjunction with the Neurological Research Foundation under Royal Patronage and its network. PEA organized this project for its management and employees as well as the public and power users to master methods for preventing stroke, its severity, prevention, and cure of paralysis for a better quality of life

3) PEA for Youths Project

- National Children's Day, under which PEA delivered happiness to youths under the jurisdiction of PEA regional offices nationwide

- Tips from National Volleyball Team, under which members of the national team with international experience visited PEA's provincial regions to encourage enjoyment in sports for health and for staying away from narcotics

- PEA Share Smiles and Joy of Giving for Social Happiness, under which PEA donated educational equipment, sports gear, and inspected as well as improving power systems at Border Patrol Police Schools; electrical appliances and RCD electrical devices were installed for greater safety.

4) The PEA Cares for Life Project, under which blood donation drives took place on site at PEA's offices nationwide. A total of 10 million cc was donated to the National Blood Center, Thai Red Cross Society, and provincial hospitals each year to aid those that needed blood. PEA advocated collective assistance by employees, contractors, employees' family members, and the public; it also advocated righteousness, ethics, and public service.





Report of the Audit Committee

The Audit Committee of PEA was appointed by the Board of Directors from the ranks of directors that are experts with competency suiting the Skill Matrix of the PEA Board. The three current members consisted of

- | | | |
|--------------------------|------------------|----------|
| 1. Pol.Maj.Gen. Wiwat | Chaisangkha | Chairman |
| 2. Mr. Panit | Dhirapharbwongse | Member |
| 3. Assoc.Prof. Pornanong | Budsaratagoon | Member |

Mr. Anake Jensai, Assistant Governor (Internal Audit), serves as secretary to the committee.

This year the committee held a total of nine meetings with perfect attendance by all members. Management team members, the internal auditor, and the external auditor (EY Office Co., Ltd.) were in attendance on applicable agenda items. All outcomes were reported to the Board of Directors each time. In addition, the Audit Committee visited job sites and personnel in regional areas to acknowledge first-hand information, problems, and obstacles in their courses of work. It provided views and policy recommendations leading to work improvement for greater efficiency and effectiveness as well as value addition to PEA's operations.

Essential performance summaries:

1. Review of Financial Reports

Each month the committee reviewed PEA's financial information in a meeting with management team members of applicable functions. It examined key issues and provided useful comments, thus ensuring that PEA's financial reports were properly prepared in material aspects, conformed to legal requirements and financial report standards, complete with accurate, comprehensive, and reliable disclosure of material data that proved useful to users of financial statements.

Also, the committee held a private session with the external auditor (EY Office Co., Ltd.) for consultation on the scope, guidelines, and outcomes of its audit in addition to performance freedom and expression of views.

2. Review of Risk Management, Internal Control, and Good Governance

The committee oversaw PEA's operations by reviewing the effectiveness of PEA's internal control, risk management, and governance processes. It provided comments and recommendations for upgrading work processes to ensure that risk management embraced PEA's key risks and that PEA commanded good governance to support goal achievement under PEA's governance code.





3. Oversight of Internal Audit

Supervising the Internal Audit Bureau for a sound internal audit system, freedom, and fair performance, the committee approved the five-year internal audit plan as well as the annual internal audit plan. Every quarter it reviewed audit outcomes and monitored corrective actions as advised by the Internal Audit Bureau. It examined the PEA regulations concerning the bureau's charter, internal audit manual, annual operating budget, together with training and development plans. The committee advocated the bureau's allocation of sufficient resources for efficient and effective job performance on a par with international standards. It advocated self-development to internal auditors to earn professional internal audit certification. In a sustainable manner, the bureau conformed to the PEA standard for transparent, fair, and accountable practices without conflicts of interest and with fair treatment of internal as well as external stakeholders.

4. Quality Work Assurance

The committee conformed to the manual of the audit committees of state enterprises 2023 of the State Enterprise Policy Office, Ministry of Finance. To elaborate, it conducted amendment and prepared an Audit Committee charter, including a manual and a comprehensive action plan, reviewed the Skill Matrix, evaluated the components and qualifications, and conducted self-assessment against the guidelines of the State Enterprise Policy Office. Such assessment earned a full (5) mark, regarded as "Outstanding Efficiency".

In summary, the Audit Committee performed its duties according to the roles and responsibility specified in its own charter and manual, which also conformed to best practices. To achieve this, it leveraged knowledge and prudence together with useful views and recommendations helpful to PEA. It is the Audit Committee's view that PEA's financial reports were materially accurate in keeping with financial report standards, with proper and sufficient disclosure of information. Such reports fully conformed to applicable laws and regulations. PEA therefore commanded sound organizational governance, sufficient risk management, and a proper as well as an efficient internal control system.

(Pol.Maj.Gen. Wiwat Chaisangkha)

Chairman of the Audit Committee



Provincial Electricity Authority and its subsidiary Report and consolidated financial statements



Independent Auditor's Report

To the Board of Directors of Provincial Electricity Authority

Opinion

I have audited the accompanying consolidated financial statements of Provincial Electricity Authority and its subsidiary (the Group), which comprise the consolidated statement of financial position as at 31 December 2023, and the related consolidated statements of comprehensive income, changes in equity and cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies, and have also audited the separate financial statements of Provincial Electricity Authority for the same period.

In my opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Provincial Electricity Authority and its subsidiary and of Provincial Electricity Authority as at 31 December 2023, their financial performance and cash flows for the year then ended in accordance with Thai Financial Reporting Standards.

Basis for Opinion

I conducted my audit in accordance with the State Audit Standards and Thai Standards on Auditing. My responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of my report. I am independent of the Group in accordance with the *State Audit Standards* issued by the State Audit Commission and the *Code of Ethics for Professional Accountants including Independence Standards* issued by the Federation of Accounting Professions (Code of Ethics for Professional Accountants) that are relevant to my audit of the financial statements, and I have fulfilled my other ethical responsibilities in accordance with the State Audit Standards and the Code of Ethics for Professional Accountants. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Other Matter

The State Audit Standards as described in the *Basis for Opinion* section and the *Auditor's Responsibilities for the Audit of the Financial Statements* section are relevant only to the audit of the financial statements, which are prepared by management in accordance with Thai Financial Reporting Standards.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Thai Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.





Auditor's Responsibilities for the Audit of the Financial Statements

My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the State Audit standards and Thai Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with the State Audit standards and Thai Standards on Auditing, I exercise professional judgement and maintain professional skepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I am responsible for the audit resulting in this independent auditor's report.

Gingkarn Atsawarangsalit
 Certified Public Accountant (Thailand) No. 4496
 EY Office Limited
 Bangkok: 21 March 2024

Provincial Electricity Authority and its subsidiary

Statements of financial position

As at 31 December 2023

(Unit: Thousand Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2023	2022	2023	2022
Assets					
Current assets					
Cash and cash equivalents	7	8,213,931	9,689,324	7,227,366	8,559,848
Trade and other receivables	6, 8	54,206,744	62,506,381	53,956,338	62,091,946
Inventories	9	1,993,497	1,634,793	1,989,346	1,628,764
Specific-purpose deposits at financial institutions	10	42,383,253	37,957,206	42,383,253	37,957,206
Undue input VAT		2,993,909	3,588,256	2,990,234	3,584,363
Advance payments to suppliers	6	2,157,920	1,966,807	2,156,509	1,959,366
Other current assets	6	144,084	108,298	125,347	89,869
Total current assets		112,093,338	117,451,065	110,828,393	115,871,362
Non-current assets					
Restricted bank deposits		50,000	50,000	-	-
Investments in subsidiary	11	-	-	5,110,621	4,010,621
Investments in associates	12	2,858,214	1,678,069	-	-
Investments in joint venture	13	-	-	-	-
Other non-current financial assets	14	283,415	256,641	1,415	1,641
Other non-current receivables	15	2,527,700	1,728,877	744,889	344,585
Constructions in progress	16	67,615,245	66,630,652	66,918,269	65,752,838
Investment properties	17	468,203	461,859	468,203	461,859
Property, plant and equipment	18	354,290,805	331,418,440	354,314,089	331,426,449
Right-of-use assets	22.1.1	1,917,662	2,018,142	1,909,969	2,004,784
Intangible assets	19	3,031,717	2,988,625	3,029,524	2,985,378
Other non-current assets		327,703	193,983	234,225	146,970
Total non-current assets		433,370,664	407,425,288	432,731,204	407,135,125
Total assets		545,464,002	524,876,353	543,559,597	523,006,487

The accompanying notes are an integral part of the financial statements.



Provincial Electricity Authority and its subsidiary

Statements of financial position (continued)

As at 31 December 2023

(Unit: Thousand Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2023	2022	2023	2022
Liabilities and equity					
Current liabilities					
Trade and other payables	6, 20	58,116,790	66,590,583	57,906,523	66,379,287
Current portion of long-term loans	21	11,578,132	9,451,180	11,516,367	9,352,242
Current portion of lease liabilities	22.1.2	908,151	913,955	895,832	907,499
Accrued remittance to the Ministry of Finance	23	15,069,621	10,229,231	15,069,621	10,229,231
Advance received per contract		1,274,942	1,352,746	1,274,942	1,352,746
Deposits payable	24	570,706	381,796	570,706	381,796
Other current liabilities	6, 25	3,888,100	6,233,774	3,877,622	6,203,415
Total current liabilities		91,406,442	95,153,265	91,111,613	94,806,216
Non-current liabilities					
Long-term loans, net of current portion	21	147,643,999	133,161,473	146,799,117	132,311,707
Lease liabilities, net of current portion	22.1.2	1,833,416	1,592,048	1,825,344	1,566,159
Other non-current payables		32,345	14,665	32,345	14,665
Provisions for litigations	26	150,176	268,284	150,176	268,284
Provisions for service contracts		393,245	276,484	-	-
Construction obligations	6, 27	6,810,948	6,501,739	6,810,948	6,503,473
Deferred revenues	6, 28	56,715,886	56,633,265	56,717,533	56,653,265
Electricity usage guarantee	29	26,144,264	24,468,344	26,144,294	24,468,374
Sales and service guarantee	6	3,066,637	2,197,733	3,078,605	2,190,002
Provision for long-term employee benefits	30	16,168,477	15,731,603	16,164,280	15,728,167
Other non-current liabilities		128,250	84,525	128,250	84,525
Total non-current liabilities		259,087,643	240,950,163	257,850,892	239,788,621
Total liabilities		350,494,085	336,103,428	348,962,505	334,594,837

The accompanying notes are an integral part of the financial statements.

Provincial Electricity Authority and its subsidiary
Statements of financial position (continued)

As at 31 December 2023

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Equity				
Initial capital	87,004	87,004	87,004	87,004
Contributions from the government	4,802,501	4,802,501	4,802,501	4,802,501
Retained earnings				
Appropriated-statutory reserve - subsidiary	13,244	11,653	-	-
Unappropriated	190,075,505	183,873,667	189,709,713	183,524,045
Other components of equity	(8,337)	(1,900)	(2,126)	(1,900)
Total equity	194,969,917	188,772,925	194,597,092	188,411,650
Total liabilities and equity	545,464,002	924,876,353	543,559,597	523,006,487

The accompanying notes are an integral part of the financial statements.



(Mr. Supachai Ek-un)
 Director and Governor



(M.R. Sirivan Kasemsant Na Ayuthaya)
 Deputy Governor
 (Accounting and Finance)





Provincial Electricity Authority and its subsidiary

Statement of comprehensive income

For the year ended 31 December 2023

(Unit: Thousand Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2023	2022	2023	2022
Profit or loss:					
Revenues					
Sales and rendering of services	6, 31	676,511,194	593,217,478	676,372,992	592,765,549
Revenue compensations	32	12,000,000	12,000,000	12,000,000	12,000,000
Dividend income	6.11.1	-	-	4,262	19,618
Other income	6	1,082,305	1,326,826	1,075,629	1,324,442
Total revenues		689,593,499	606,544,304	689,452,883	606,109,609
Expenses					
Cost of electricity	6	601,676,058	524,523,945	601,676,058	524,523,945
Employee compensations		20,805,061	21,077,845	20,765,436	21,042,690
Employee benefit expenses		1,529,090	1,960,793	1,528,220	1,960,010
Directors and management's benefits		115,004	125,233	111,525	121,669
Preventive, repair and maintenance, and construction expenses	6	8,258,268	7,930,454	8,175,878	7,533,084
Depreciation and amortisation expenses		28,274,494	26,490,604	28,265,188	26,477,196
Other operating expenses	6	11,102,621	9,154,012	11,050,313	9,049,939
Other expenses		389,997	695,370	390,172	695,370
Total expenses		672,150,593	591,958,256	671,962,790	591,403,903
Operating profit		17,442,906	14,586,048	17,490,093	14,705,706
Share of profit from investments in associates	12.2	59,859	62,729	-	-
Finance income		1,019,705	496,153	1,010,017	490,527
Finance cost	33	(3,934,227)	(3,637,154)	(3,926,068)	(3,628,432)
Profit before income tax		14,588,243	11,507,776	14,574,042	11,567,801
Tax income (income tax expenses)		3,472	(755)	-	-
Profit for the year		14,591,715	11,507,021	14,574,042	11,567,801
Other comprehensive income:					
<i>Other comprehensive income to be reclassified to profit or loss in subsequent periods</i>					
Share of other comprehensive income from investments in associates	12.2	(6,211)	-	-	-
Total other comprehensive income to be reclassified to profit or loss in subsequent periods - net of income tax		(6,211)	-	-	-
<i>Other comprehensive income not to be reclassified to profit or loss in subsequent periods</i>					
Actuarial gain (loss) - net of income tax	30	(242,286)	963,189	(242,374)	963,189
Loss on changes in value of equity investments designated at fair value through other comprehensive income		(226)	(255)	(226)	(255)
Total other comprehensive income not to be reclassified to profit or loss in subsequent periods - net of income tax		(242,512)	962,934	(242,600)	962,934
Other comprehensive income for the year		(248,723)	962,934	(242,600)	962,934
Total comprehensive income for the year		14,342,992	12,469,955	14,331,442	12,530,735

The accompanying notes are an integral part of the financial statements.



Provincial Electricity Authority and its subsidiary

Statement of changes in equity

For the year ended 31 December 2023

(Unit: Thousand Baht)

Consolidated financial statements										
	Other components of equity									
	Initial capital and contributions from the government	Retained earnings		Investment in equity designated at fair value through other comprehensive income	Other comprehensive income		Share of other comprehensive income from investments in associates	Total other components of equity	Total equity	
		Appropriated	Unappropriated		Loss on	Income				
Balance as at 1 January 2022	4,889,505	10,801	180,759,159	(1,645)	-	-	(1,645)	185,657,820		
Profit for the year	-	-	11,507,021	-	-	-	-	11,507,021		
Other comprehensive income for the year	-	-	963,189	(255)	-	-	(255)	962,934		
Total comprehensive income for the year	-	-	12,470,210	(255)	-	-	(255)	12,469,955		
Transfer unappropriated to statutory reserve - subsidiary	-	852	(852)	-	-	-	-	-		
Adjusted remittance to the Ministry of Finance for the year 2021 (Note 23)	-	-	150	-	-	-	-	150		
Remittance to the Ministry of Finance for the year (Note 23)	-	-	(9,355,000)	-	-	-	-	(9,355,000)		
Balance as at 31 December 2022	4,889,505	11,653	183,873,667	(1,900)	-	-	(1,900)	188,772,925		
Balance as at 1 January 2023	4,889,505	11,653	183,873,667	(1,900)	-	-	(1,900)	188,772,925		
Profit for the year	-	-	14,591,715	-	-	-	-	14,591,715		
Other comprehensive income for the year	-	-	(242,286)	(226)	-	(6,211)	(6,437)	(248,723)		
Total comprehensive income for the year	-	-	14,349,429	(226)	-	(6,211)	(6,437)	14,342,992		
Transfer unappropriated to statutory reserve - subsidiary	-	1,591	(1,591)	-	-	0-	-	-		
Remittance to the Ministry of Finance for the year (Note 23)	-	-	(8,146,000)	-	-	-	0-	(8,146,000)		
Balance as at 31 December 2023	4,889,505	13,244	190,075,505	(2,126)	-	(6,211)	(8,337)	194,969,917		

The accompanying notes are an integral part of the financial statements.

Statement of changes in equity (continued)

For the year ended 31 December 2023

(Unit: Thousand Baht)

	Separate financial statements				
	Other components of equity				Total equity
	Initial capital and contributions from the government	Unappropriated retained earnings	Other comprehensive income	Total other components of equity	
			Loss on investment in equity designated at fair value through other comprehensive income		
Balance as at 1 January 2022	4,889,505	180,347,905	(1,645)	(1,645)	185,235,765
Profit for the year	-	11,567,801	-	-	11,567,801
Other comprehensive income for the year	-	963,189	(255)	(255)	962,934
Total comprehensive income for the year	-	12,530,990	(255)	(255)	12,530,735
Adjusted remittance to the Ministry of Finance for the year 2021 (Note 23)	-	150	-	-	150
Remittance to the Ministry of Finance for the year (Note 23)	-	(9,355,000)	-	-	(9,355,000)
Balance as at 31 December 2022	4,889,505	183,524,045	(1,900)	(1,900)	188,411,650
Balance as at 1 January 2023	4,889,505	183,524,045	(1,900)	(1,900)	188,411,650
Profit for the year	-	14,574,042	-	8-	14,574,042
Other comprehensive income for the year	-	(242,374)	(226)	(226)	(242,600)
Total comprehensive income for the year	-	14,331,668	(226)	(226)	14,331,442
Remittance to the Ministry of Finance for the year (Note 23)	-	(8,146,000)	-	8-	(8,146,000)
Balance as at 31 December 2023	4,889,505	189,709,713	(2,126)	(2,126)	194,597,092

The accompanying notes are an integral part of the financial statements.



Provincial Electricity Authority and its subsidiary

Cash flow statement

For the year ended 31 December 2023

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Cash flows from operating activities				
Profit before tax	14,588,243	11,507,776	14,574,042	11,567,801
Adjustments to reconcile profit before tax to				
net cash provided by (paid from) operating activities:				
Depreciation and amortisation	28,274,494	26,490,604	28,265,188	26,477,196
Expected credit losses (reversal)	371,417	(683,931)	370,491	(659,858)
Loss from obsolete materials (reversal)	(9,585)	32,726	(11,096)	30,370
Amortisation of deferred revenues	(5,488,400)	(4,921,782)	(5,488,400)	(4,921,782)
Revenues from donations	(11,096)	(30,905)	(11,096)	(29,720)
Loss on sales and write-off of assets	1,130,010	1,195,932	1,129,792	1,195,473
Loss on write-off of intangible assets	11	17	11	17
Loss on write-off of materials	10,770	1,527	10,770	1,527
Loss from terminated leases	2,336	2,900	2,336	2,437
Provision for long-term employee benefits	1,529,090	1,960,793	1,528,220	1,960,010
Reversal of provisions for litigations	(96,048)	(154,700)	(96,048)	(154,700)
Impairment loss on investments in associates	17,937	-	-	-
Unrealised loss (gain) on foreign exchange	1,721	(4,208)	1,721	(4,208)
Amortisation premium on loans	3	149	-	-
Loss on amendment of loan agreement	255	-	-	-
Revenues from receive scrap materials	(995,836)	(745,581)	(995,443)	(745,124)
Dividend income	-	-	(4,262)	(19,618)
Share of profit from investments in associates	(59,859)	(62,729)	-	-
Finance income	(1,019,705)	(496,153)	(1,010,017)	(490,527)
Finance cost	3,934,227	3,637,154	3,926,068	3,628,432
Profit from operating activities before				
changes in operating assets and liabilities	42,179,985	37,729,589	42,192,103	37,837,726
Operating assets (increase) decrease				
Trade and other receivables	7,925,970	(15,332,117)	7,762,278	(15,395,630)
Inventories	635,947	1,562,627	635,361	1,561,776
Specific-purpose deposits at financial institutions	(4,426,047)	2,894,964	(4,426,047)	2,894,964
Undue input VAT	594,347	(1,260,762)	594,129	(1,259,770)
Advance payments to suppliers	(191,113)	(46,764)	(197,143)	(81,794)
Other current assets	(172,545)	(25)	(35,478)	(5,136)
Other non-current receivables	(373,738)	(147,782)	(400,304)	(305,638)
Other non-current assets	(116,739)	(50,448)	(87,255)	(42,169)
Operating liabilities increase (decrease)				
Trade and other payables	(9,553,432)	18,116,319	(9,527,330)	18,366,870
Advance received per contract	(77,804)	327,887	(77,804)	331,337
Deposits payable	188,910	35,014	188,910	35,014
Other current liabilities	(2,345,674)	2,839,426	(2,325,793)	2,815,951
Other non-current payables	16,649	(3,113)	16,649	(3,113)
Provisions for service contracts	116,761	99,816	-	-
Construction obligations	309,209	503,186	307,475	503,186
Deferred revenues	5,340,373	4,809,159	5,342,019	4,809,159

The accompanying notes are an integral part of the financial statements.



Provincial Electricity Authority and its subsidiary

Cash flow statement (continued)

For the year ended 31 December 2023

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Operating liabilities increase (decrease) (continued)				
Electricity usage guarantee	1,675,920	883,748	1,675,920	883,748
Sales and service guarantee	868,904	316,999	888,603	316,688
Other non-current liabilities	43,725	24,873	43,725	24,874
Cash paid for provisions for litigations	(22,060)	(5,660)	(22,066)	(5,660)
Cash paid for long-term employee benefits	(1,338,643)	(1,515,412)	(1,338,643)	(1,515,412)
Cash flows from operating activities	41,278,905	51,781,524	41,209,315	51,766,971
Cash received from interest income	1,021,955	446,531	1,012,856	440,848
Cash received from VAT refund	136,759	-	-	-
Cash paid for income tax	(13,530)	(21,161)	-	-
Net cash flows from operating activities	42,424,089	52,206,894	42,222,171	52,207,819
Cash flows from investing activities				
Cash paid for other non-current financial assets	(27,000)	-	-	-
Cash received from short-term loans to related parties	-	49,237	-	-
Cash paid for investments in subsidiary	-	-	(1,100,000)	(715,337)
Cash paid for investments in associates	(1,215,651)	(276,830)	-	-
Cash received from dividends from investments in subsidiary	-	-	4,262	19,618
Cash received from dividends from investments in associates	71,218	49,294	-	-
Cash paid for constructions in progress	(47,920,401)	(50,183,592)	(47,726,442)	(49,591,181)
Cash paid for purchase of investment properties	(28,587)	(52,612)	(28,587)	-
Cash paid for purchase of property, plant and equipment	(2,799,074)	(2,701,569)	(2,810,996)	(2,701,416)
Cash received from disposal of property, plant and equipment	141,168	155,278	141,168	155,278
Cash paid for purchase of intangible asset	(245,811)	(255,025)	(245,811)	(255,025)
Interest expense capitalised to constructions in progress	(786,250)	(504,822)	(761,034)	(489,557)
Net cash flows used in investing activities	(52,810,388)	(53,720,641)	(52,527,440)	(53,577,620)
Cash flows from financing activities				
Cash received from long-term loans	26,000,000	20,000,000	26,000,000	20,000,000
Repayment of long-term loans	(9,396,096)	(5,637,848)	(9,353,781)	(5,555,283)
Interest paid	(3,815,622)	(3,521,907)	(3,809,377)	(3,516,021)
Repayment of lease liabilities	(571,766)	(588,988)	(558,445)	(568,598)
Cash paid for remittance to the Ministry of Finance	(3,305,610)	(11,288,258)	(3,305,610)	(11,288,258)
Net cash flows from (used in) financing activities	8,910,906	(1,037,001)	8,972,787	(928,160)
Net decrease in cash and cash equivalents	(1,475,393)	(2,550,748)	(1,332,482)	(2,297,961)
Cash and cash equivalents at beginning of year	9,689,324	12,240,072	8,559,848	10,857,809
Cash and cash equivalents at end of year (Note 7)	8,213,931	9,689,324	7,227,366	8,559,848

The accompanying notes are an integral part of the financial statements.



Provincial Electricity Authority and its subsidiary

Cash flow statement (continued)

For the year ended 31 December 2023

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Supplemental cash flows information				
Non-cash items consist of:				
Payables from purchase of property, plant and equipment	136,909	72,884	136,909	72,884
Payables from constructions in progress	2,054,125	1,074,679	1,972,861	1,006,761
Transfer constructions in progress to investment in property	-	392	-	392
Transfer constructions in progress to property, plant and equipment	47,607,123	38,610,528	47,607,123	38,610,528
Transfer constructions in progress to intangible asset	1,008,545	1,166,673	1,008,545	1,166,673
Transfer constructions in progress to other non-current receivables	425,085	455,544	-	-
Transfer investment property to other non-current receivables	-	101,120	-	-
Transfer investment property to property, plant and equipment	9,470	6,735	9,470	6,735
Transfer property, plant and equipment to investment properties	369	31,082	369	31,082
Transfer property, plant and equipment to intangible assets	1,206	-	1,206	-
Transfer intangible assets to inventories	-	119	-	-
Transfer right-of-use assets to other non-current receivables	-	24,881	-	-
Acquisitions of equipment under lease agreements	723,061	914,397	723,061	914,397
Received assets from donations	221,186	136,003	221,186	134,817
Interest expense capitalised	786,250	504,822	761,034	489,557

The accompanying notes are an integral part of the financial statements.





Notes to consolidated financial statements

Provincial Electricity Authority and its subsidiary

Notes to consolidated financial statements

For the year ended 31 December 2023

1. General information

1.1 General information of Provincial Electricity Authority

Provincial Electricity Authority was established as a state enterprise for public utility under Provincial Electricity Authority Act, B.E. 2503 and is located at 200 Ngamwongwan Road, Ladyao, Chatuchak, Bangkok 10900. The main objective of Provincial Electricity Authority is to generate, obtain, distribute and sell electricity energy to people, businesses and industrial sectors in 74 provinces throughout Thailand, with the exception of Bangkok, Nonthaburi, and Samut Prakan province.

1.2 Financial Criteria

According to the policy on determining the electricity tariff structure, the Energy Regulatory Commission (ERC) has established financial criteria with objectives to supervise the operational performance of Provincial Electricity Authority in order to bring about appropriate investments with a financial rate of return that reflects the weighted average cost of capital, efficiently control costs, monitor the investments and establish operating principles. In the event that the operational investing of Provincial Electricity Authority do not comply with the investment plan, the ERC will consider a clawback as stipulated in the criteria and conditions set forth by the ERC. Moreover, the ERC will consider restoring/recovering the financial position so that Provincial Electricity Authority is able to maintain financial position in accordance with the specified criteria and conditions (Return On Investment Capital: ROIC).

1.3 The rising energy price situation

The rising energy price situation has resulted in higher commodity and energy prices.

Therefore, the cabinet approved measures to assist people who has been affected, the related measures that Provincial Electricity Authority provided are as follows:

- 1.3.1 Measure to reduce Ft for residential user type 1: a residential user with electricity consumption not exceeding 300 units per month for 4 months, for the monthly electricity bills from January 2023 to April 2023.
- 1.3.2 Measure to reduce Ft for residential user type 1: a residential user with electricity consumption not exceeding 300 units per month for 4 months, for the monthly electricity bills from May 2023 to August 2023. Additionally, measure to reduce Ft for residential user type 1: a residential user with electricity consumption not exceeding 500 units per month, amounting to Baht 150 per user before VAT, for the monthly electricity bills for May 2023.
- 1.3.3 Measure to reduce electricity tariff for residential user type 1: a residential user with electricity consumption not exceeding 300 units per month for 4 months, for the monthly electricity bills from January 2024 to April 2024.



According to measure No. 1.3.1, funds from the Annual Budget Expenditure Act, Budget B.E. 2566, the central fund appropriation and reserves for emergencies or necessities, and cooperation sought from a state-owned enterprise to allocate financial support in accordance with the resolution of the National Energy Policy Council dated 25 November 2022. Subsequently, Provincial Electricity Authority received financial support through another state-owned enterprise, according to the letter dated 14 November 2023. Measure No. 1.3.2, funds from the Annual Budget Expenditure Act, Budget B.E. 2566, the central fund appropriation and reserves for emergencies or necessities. Measure No. 1.3.3, source of funds is currently under submission to the Cabinet for consideration and approval regarding the utilisation of budgetary resources.

2. Basis of preparation

2.1 The financial statements have been prepared in accordance with Thai Financial Reporting Standards enunciated under the Accounting Professions Act B.E. 2547 and their presentation has been made in compliance with the stipulations of the Notification of the Department of Business Development, issued under the Accounting Act B.E. 2543.

The financial statements in Thai language are the official statutory financial statements of Provincial Electricity Authority. The financial statements in English language have been translated from the Thai language financial statements.

The financial statements have been prepared on a historical cost basis except where otherwise disclosed in the accounting policies.

2.2 Basis of consolidation

- a) The consolidated financial statements include the financial statements of Provincial Electricity Authority and the following subsidiary company (“the subsidiary”) (collectively as “the Group”):

Company's name	Nature of business	Country of incorporation	Percentage of shareholding	
			2023 (%)	2022 (%)
PEA ENCOM International Company Limited	Investing in electricity-related businesses and conducting training services concerning electricity systems	Thailand	100	100

- b) Provincial Electricity Authority is deemed to have control over an investee or subsidiary if it has rights, or is exposed, to variable returns from its involvement with the investee, and it has the ability to direct the activities that affect the amount of its returns.
- c) Subsidiary is fully consolidated, being the date on which Provincial Electricity Authority obtains control, and continue to be consolidated until the date when such control ceases.
- d) The financial statements of the subsidiary are prepared using the same significant accounting policies as Provincial Electricity Authority.
- e) Material balances and transactions between the Group have been eliminated from the consolidated financial statements.

2.3 The separate financial statements present investments in subsidiary under the cost method.





3. New financial reporting standards

3.1 Financial reporting standards that became effective in the current year

During the year, the Group has adopted the revised financial reporting standards which are effective for fiscal years beginning on or after 1 January 2023. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards clarifying accounting treatment and providing accounting guidance for users of the standards.

The adoption of these financial reporting standards does not have any significant impact on the Group's financial statements.

3.2 Financial reporting standards that will become effective for fiscal years beginning on or after 1 January 2024

The Federation of Accounting Professions issued a number of revised financial reporting standards, which are effective for fiscal years beginning on or after 1 January 2024. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards clarifying accounting treatment and providing accounting guidance for users of the standards.

The management of the Group believes that adoption of these amendments will not have any significant impact on the Group's financial statements.

4. Significant accounting policies

4.1 Revenue and expense recognition

Sales

Revenue from sale of goods is recognised at the point in time when control of the asset is transferred to the customer, generally upon delivery of the goods. Revenue is measured at the amount of the consideration received or receivable, excluding value added tax, of goods supplied after deducting returns, discounts, allowances and price promotions to customers.

Rendering of services

Service revenue is recognised at a point in time upon completion of the service.

Construction service revenue is recognised over time when services have been rendered taking into account the stage of completion, measuring based on comparison of actual construction costs incurred up to the end of the period and total anticipated construction costs to be incurred to completion.

The recognised revenue which is not yet due per the contracts. The amounts recognised as are reclassified to trade receivables when the Group's right to consideration is unconditional such as upon completion of services and acceptance by the customer.

The obligation to transfer goods or services to a customer for which the Group has received consideration (or an amount of consideration is due) from the customer is presented under the caption of "Advance received per contract / Deferred revenues" in the statement of financial position are recognised as revenue when the Group performs under the contract.



Contributions for constructing electricity distributing systems

Contributions for constructing electricity distributing systems represent cash collected from people who request to use the electricity in order to reduce the cost of Provincial Electricity Authority for construction of the electricity distributing systems. Ownership of the systems, including responsibility for maintenance and repair belongs to Provincial Electricity Authority. Such contributions are presented as “Deferred revenues” in the statements of financial position and recognised as revenues at the rate of 5 percent per annum when the construction is completed (the rate is equal to the depreciation rate of Provincial Electricity Authority’s electricity distributing system assets).

Revenues from transferring of operating assets

Revenues from transferring of operating assets represent assets received from donations which are used in operations. Most of such assets are electricity distribution systems that the electricity users donate to Provincial Electricity Authority, which Provincial Electricity Authority is responsible for maintenance. Such assets are presented as deferred revenues from transferring of operating assets in the statements of financial position and recognised as revenues at the rate in accordance with depreciation rates of such assets over their useful lives.

Assets received from donations, which are not used in operations are recognised as other non-operating revenues in the statements of comprehensive income in the period of acquisitions.

Contribution revenues from foreign financial institutions

Contribution revenues from foreign financial institutions represent contributions in forms of interest discount to be used for various purposes of Provincial Electricity Authority. Such revenues are presented as deferred revenues in the statements of financial position and recognised as revenues based on the actual amount of expenses incurred.

Revenue compensations

Revenue compensations received in accordance with resolution of regulators are recognised when the Group obtains the right to receive the revenue compensations.

Interest income

Interest income is calculated using the effective interest method and recognised on an accrual basis. The effective interest rate is applied to the gross carrying amount of a financial asset, unless the financial assets subsequently become credit-impaired when it is applied to the net carrying amount of the financial asset (net of the expected credit loss allowance).

Finance cost

Interest expense from financial liabilities at amortised cost is calculated using the effective interest method and recognised on an accrual basis.

Dividends

Dividends are recognised when the right to receive the dividends is established.

4.2 Cash and cash equivalents

Cash and cash equivalents consist of cash in hand and at banks, and all highly liquid investments with an original maturity of three months or less and not subject to withdrawal restrictions.



4.3 Inventories

Inventories which consist of spare parts and supplies, are valued at the lower of cost (under the weighted average method) and net realisable value. Allowance is made in full for obsolete spare parts and supplies and for spare parts and supplies pending for improvement.

4.4 Specific-purpose deposits at financial institutions

4.4.1 Specific-purpose deposits at financial institutions, which are presented as current assets in statements of financial position, are deposits to be used within one accounting period and with the specific purposes and conditions. Special-purpose deposits comprises of electricity usage guarantee fund, sinking fund for repayment of bonds, and restricted cash. All of which can be used in Provincial Electricity Authority's activities in case of Provincial Electricity Authority having the deficits in working capital. Interest from electricity usage guarantee fund is used for benefits of electricity users and KFW special fund is used for scholarships, training, analysis and research.

4.4.2 Special-purpose deposits at financial institutions, which are presented as non-current assets in the statements of financial position, are deposits to be used longer than one accounting period and cannot be used for operating activities i.e. PEA Employee Gratuity Fund.

4.5 Investments in subsidiary, joint venture and associates

Investments in joint venture and associates are accounted for in the consolidated financial statements using the equity method.

Investments in subsidiary is accounted for in the separate financial statements using the cost method.

4.6 Investment properties

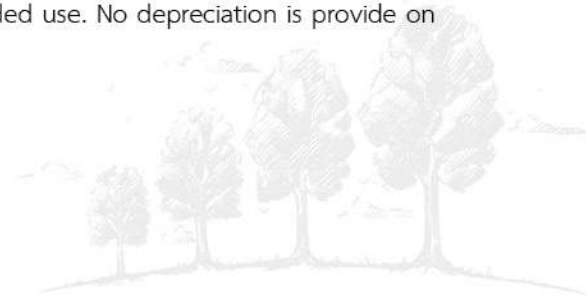
Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are stated at cost less accumulated depreciation and allowance for loss on impairment (if any).

Depreciation of investment properties is calculated by reference to their costs on the straight-line basis over estimated economic useful lives of 33 years. No depreciation is provided on land. Depreciation of the investment properties is included in determining income.

On disposal of investment properties, the difference between the net disposal proceeds and the carrying amount of the asset is recognised in profit or loss in the period when the asset is derecognised.

4.7 Constructions in progress

Constructions in progress include construction costs, borrowing costs incurred on direct costs associated with the borrowing of funds used for the construction, and other costs which are directly related to construction or preparation of the property for its intended use. No depreciation is provide on constructions in progress.



4.8 Property, plant and equipment/Depreciation

Land is stated at cost. Buildings and equipment are stated at cost less accumulated depreciation and allowance for loss on impairment of assets (if any).

Depreciation of plant and equipment is calculated by reference to their costs on the straight-line basis over the following estimated useful lives:

Land improvement	16 - 33 years
Buildings and construction	16 - 33 years
Electricity generating systems	5 - 33 years
Electricity distributing systems	5 - 25 years
Furniture, tools and equipment	5 - 25 years
Vehicles	5 - 10 years

Depreciation is included in determining income.

No depreciation is provided on land.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on disposal of an asset is included in profit or loss when the asset is derecognised.

4.9 Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the respective assets. All other borrowing costs are expensed in the period they are incurred. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

4.10 Intangible assets

Intangible assets are carried at cost less accumulated amortisation and any accumulated impairment losses (if any).

Intangible assets with finite lives are amortised on the straight-line basis over the economic useful life and tested for impairment whenever there is an indication that the intangible asset may be impaired. The amortisation period and the amortisation method of such intangible assets are reviewed at least at each financial year end. The amortisation expense is charged to profit or loss.

A summary of the intangible assets with finite useful lives is as follows:

	<u>Useful lives</u>
Computer software licenses	5 years
Computer software	5 years



4.11 Leases

At inception of contract, the Group assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

The Group as a lessee

The Group applied a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. As at the commencement date of the lease (i.e. the date the underlying asset is available for use), the Group recognises right-of-use assets representing the right to use underlying assets and lease liabilities based on lease payments.

Right-of-use assets

Right-of-use assets are measured at cost, less accumulated depreciation, any accumulated impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities initially recognised, initial direct costs incurred and lease payments made at or before the commencement date of the lease less any lease incentives received.

Depreciation of right-of-use assets are calculated by reference to their on the straight-line basis over the shorter of their estimated useful lives and the lease term.

Land and Land improvement	1 - 30	years
Buildings and construction	1 - 3	years
Electricity generating systems	2	years
Furniture, tools and equipment	5	years
Vehicles	3 - 5	years
Intangible assets	5 - 6	years

If ownership of the leased asset is transferred to the Group at the end of the lease term or the cost reflects the exercise of a purchase option, depreciation is calculated using the estimated useful life of the asset.

Lease liabilities

Lease liabilities are measured at the present value of the lease payments to be made over the lease term. The lease payments include fixed payments less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be payable under residual value guarantees. Moreover, the lease payments include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for terminating the lease, if the lease term reflects the Group exercising an option to terminate. Variable lease payments that do not depend on an index or a rate are recognised as expenses in the period in which the event or condition that triggers the payment occurs.

The Group discounted the present value of the lease payments by the interest rate implicit in the lease or the Group's incremental borrowing rate. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a change in the lease term, a change in the lease payments or a change in the assessment of an option to purchase the underlying asset.

Short-term leases and leases of low-value assets

A lease that has a lease term less than or equal to 12 months from commencement date or a lease of low-value assets is recognised as expenses on a straight-line basis over the lease term.

The Group as a lessor

A lease that transfers substantially all the risks and rewards incidental to ownership of an underlying asset to a lessee is classified as finance leases. As at the commencement date, an asset held under a finance lease is recognised as a receivable at an amount equal to the net investment in the lease or the present value of the lease payments receivable and any unguaranteed residual value. Subsequently, finance income is recognised over the lease term to reflect a constant periodic rate of return on the net investment in the lease.

A lease is classified as an operating lease if it does not transfer substantially all the risks and rewards incidental to ownership of an underlying asset to a lessee. Lease receivables from operating leases is recognised as income in profit or loss on a straight-line basis over the lease term. Initial direct costs incurred in obtaining an operating lease are added to the carrying amount of the underlying assets and recognised as an expense over the lease term on the same basis as the lease income.

4.12 Related party transactions

Related parties comprise individuals or enterprises that control, or are controlled by, Provincial Electricity Authority, whether directly or indirectly, or which are under common control with Provincial Electricity Authority.

They also include associates, and individuals or enterprises which directly or indirectly own a voting interest in Provincial Electricity Authority that gives them significant influence over Provincial Electricity Authority, key management personnel, directors, and officers with authority in the planning and direction of Provincial Electricity Authority's operations.

4.13 Foreign currencies

The consolidated and separate financial statements are presented in Baht, which is also Provincial Electricity Authority's functional currency.

Transactions in foreign currencies are translated into Baht at the exchange rate ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated into Baht at the exchange rate ruling at the end of reporting period.

Gains and losses on exchange are included in determining income.

4.14 Impairment of non-financial assets

At the end of each reporting period, the Group performs impairment reviews in respect of the property, plant and equipment, right-of-use assets, investment properties and other intangible assets whenever events or changes in circumstances indicate that an asset may be impaired. An impairment loss is recognised when the recoverable amount of an asset, which is the higher of the asset's fair value less costs to sell and its value in use, is less than the carrying amount.

An impairment loss is recognised in profit or loss.



In the assessment of asset impairment, if there is any indication that previously recognised impairment losses may no longer exist or may have decreased, the Group estimates the asset's recoverable amount. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The increased carrying amount of the asset attributable to a reversal of an impairment loss shall not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in profit or loss.

4.15 Employee benefits

Short-term employee benefits

Salaries, wages, overtimes, bonuses, contributions to the social security fund, compensated absences and other short-term benefits in accordance with the contract of employment are recognised as expenses when incurred.

Post-employment benefits and other long-term employee benefits

Defined contribution plans

The Group and its employees have jointly established a provident fund. The fund is monthly contributed by employees and by the Group. The fund's assets are held in a separate trust fund and the Group's contributions are recognised as expenses when incurred.

Defined benefit plan and other long-term employee benefits

The Group has obligations in respect of the severance payments it must make to employees upon retirement under State Enterprise Labor Relations Act, B.E. 2543, compensation under Labor Law, compensated absences of employees who are dismissed without committing an offense under the law, unused portion of personal leaves of employees, souvenir for retired employees and other employee benefit plans in accordance with the contract of employment. In addition, The Group has other long-term employee benefit welfare for employees who are due in accordance with the conditions.

The obligation under the defined benefit plan and other long-term employee benefit plans is determined by a professionally qualified independent actuary based on actuarial techniques, using the projected unit credit method.

Actuarial gains and losses arising from defined benefit plans are recognised immediately in other comprehensive income.

Actuarial gains and losses arising from other long-term benefits are recognised immediately in profit and loss.

Past service costs are recognised in profit or loss on the earlier of the date of the plan amendment or curtailment and the date that the Group recognises restructuring-related costs.

4.16 Provisions

Provisions are recognised when the Group has a present obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

4.17 Income tax

Income tax expense represents the sum of corporate income tax currently payable and deferred tax.

Current tax

For subsidiary, current income is provided in the accounts at the amount expected to be paid to the taxation authorities, based on taxable profits determined in accordance with tax legislation.

Deferred tax

For subsidiary, deferred income tax is provided on temporary differences between the tax bases of assets and liabilities and their carrying amounts at the end of each reporting period, using the tax rates enacted at the end of the reporting period.

The Subsidiary recognises deferred tax liabilities for all taxable temporary differences while it recognises deferred tax assets for all deductible temporary differences and tax losses carried forward to the extent that it is probable that future taxable profit will be available against which such deductible temporary differences and tax losses carried forward can be utilised.

At each reporting date, the Subsidiary reviews and reduces the carrying amount of deferred tax assets to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised.

The Subsidiary records deferred tax directly to shareholders' equity if the tax relates to items that are recorded directly to equity.

4.18 Financial instruments

The Group initially measures financial assets at its fair value plus, in the case of financial assets that are not measured at fair value through profit or loss, transaction costs. However, trade receivables, that do not contain a significant financing component, are measured at the transaction price as disclosed in the accounting policy relating to revenue recognition.

Classification and measurement of financial assets

Financial assets are classified, at initial recognition, as to be subsequently measured at amortised cost, fair value through other comprehensive income ("FVOCI"), or fair value through profit or loss ("FVTPL"). The classification of financial assets at initial recognition is driven by the Group's business model for managing the financial assets and the contractual cash flows characteristics of the financial assets.

Financial assets at amortised cost

The Group measures financial assets at amortised cost if the financial asset is held in order to collect contractual cash flows and the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.





Financial assets at amortised cost are subsequently measured using the effective interest rate (“EIR”) method and are subject to impairment. Gains and losses are recognised in profit or loss when the asset is derecognised, modified or impaired.

Financial assets designated at FVOCI (equity instruments)

Upon initial recognition, the Group can elect to irrevocably classify its equity investments which are not held for trading as equity instruments designated at FVOCI. The classification is determined on an instrument-by-instrument basis.

Gains and losses recognised in other comprehensive income on these financial assets are never recycled to profit or loss.

Dividends are recognised as other income in profit or loss, except when the dividends clearly represent a recovery of part of the cost of the financial asset, in which case, the gains are recognised in other comprehensive income.

Equity instruments designated at FVOCI are not subject to impairment assessment.

Classification and measurement of financial liabilities

At initial recognition the Group’s financial liabilities are recognised at fair value net of transaction costs and classified as liabilities to be subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in profit or loss when the liabilities are derecognised as well as through the EIR amortisation process. In determining amortised cost, the Group takes into account any discounts or premiums on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included in finance costs in profit or loss.

Derecognition of financial instruments

A financial asset is primarily derecognised when the rights to receive cash flows from the asset have expired or have been transferred and either the Group has transferred substantially all the risks and rewards of the asset, or the Group has transferred control of the asset.

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in profit or loss.

Impairment of financial assets

The Group recognises an allowance for expected credit losses (“ECLs”) for all debt instruments not held at FVTPL. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate.

For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12-months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure (a lifetime ECL).

The Group considers a significant increase in credit risk to have occurred when contractual payments are more than 30 days past due and considers a financial asset as credit impaired or default when contractual payments are 90 days past due. However, in certain cases, the Group may also consider a financial asset to have a significant increase in credit risk and to be in default using other internal or external information, such as credit rating of issuers.

For trade receivables, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognises a loss allowance based on lifetime ECLs at each reporting date.

ECLs are calculated based on its historical credit loss experience and adjusted for forward-looking factors specific to the debtors and the economic environment.

A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

Offsetting of financial instruments

Financial assets and financial liabilities are offset, and the net amount is reported in the statement of financial position if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

4.19 Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between buyer and seller (market participants) at the measurement date. The Group applies a quoted market price in an active market to measure their assets and liabilities that are required to be measured at fair value by relevant financial reporting standards. Except in case of no active market of an identical asset or liability or when a quoted market price is not available, the Group measures fair value using valuation technique that are appropriate in the circumstances and maximises the use of relevant observable inputs related to assets and liabilities that are required to be measured at fair value.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy into three levels based on categorise of input to be used in fair value measurement as follows:

Level 1 - Use of quoted market prices in an active market for such assets or liabilities

Level 2 - Use of other observable inputs for such assets or liabilities, whether directly or indirectly

Level 3 - Use of unobservable inputs such as estimates of future cash flows

At the end of each reporting period, the Group determines whether transfers have occurred between levels within the fair value hierarchy for assets and liabilities held at the end of the reporting period that are measured at fair value on a recurring basis.



5. Significant accounting judgements and estimates

The preparation of financial statements in conformity with financial reporting standards at times requires management to make subjective judgements and estimates regarding matters that are inherently uncertain. These judgements and estimates affect reported amounts and disclosures; and actual results could differ from these estimates. Significant judgements and estimates are as follows:

Allowance for expected credit losses of trade receivables

In determining an allowance for expected credit losses of trade, the management needs to make judgement and estimates based upon, among other things, past collection history, aging profile of outstanding debts and the forecast economic condition for groupings of various customer segments with similar credit risks. The Group's historical credit loss experience and forecast economic conditions may also not be representative of whether a customer will actually default in the future.

Post-employment benefits under defined benefit plans and other long-term employee benefits

The obligation under the defined benefit plan and other long-term employee benefit plans is determined based on actuarial techniques. Such determination is made based on various assumptions, including discount rate, inflation rate, future salary increase rate, mortality rate and staff turnover rate.

Provisions and contingent liabilities in relation to litigations

The Group has contingent liabilities as a result of litigation. The Group's management has used judgement to assess of the results of the litigation and believes that loss incurred will not exceed the record amounts as at the end of reporting period.

Property, plant and equipment/Depreciation

In determining depreciation of plant and equipment, the management is required to make estimates of the useful lives and residual values of the plant and equipment and to review estimate useful lives and residual values when there are any changes.

In addition, the management is required to review property, plant and equipment for impairment on a periodical basis and record impairment losses when it is determined that their recoverable amount is lower than the carrying amount. This requires judgements regarding forecast of future revenues and expenses relating to the assets subject to the review.

6. Related party transactions

During the years, the Group had significant business transactions with person or related parties. Such transactions, which are summarised below, arose in the ordinary course of business and were concluded on commercial terms and bases agreed upon between Provincial Electricity Authority and those related parties.



(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
<u>Transactions with subsidiary company</u>				
(eliminated from the consolidated financial statements)				
Sales and rendering of services	-	-	15	12
Dividend income	-	-	4	20
Construction and purchase of fixed asset	-	-	10	37
Other operating expenses	-	-	2	23
<u>Transactions with associates</u>				
Sales and rendering of services	287	166	276	110
Dividend income	71	49	-	-
Other income	3	-	3	-
Cost of electricity	636	526	636	526
Preventive, repair and maintenance, and construction expenses	54	11	46	-
Other operating expenses	6	16	6	16

As at 31 December 2023 and 2022, the balances of the accounts between Provincial Electricity Authority and those related companies are as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Trade and other receivables - related parties (Note 8)				
Subsidiary	-	-	14	5
Associates	22	21	17	14
Total	22	21	31	19
Advance payments to suppliers				
Subsidiary	-	-	2	-
Other current assets				
Associates	19	18	-	-
Trade and other payables - related parties (Note 20)				
Subsidiary	-	-	1	12
Associates	113	109	112	101
Total	113	109	113	113
Other current liabilities				
Associates	1	1	-	-
Construction obligations				
Subsidiary	-	-	-	1
Associates	2	-	2	-
Total	2	-	2	1
Deferred revenues				
Subsidiary	-	-	2	-
Sales and service guarantee				
Subsidiary	-	-	30	2
Associates	2	1	2	1
Total	2	1	32	3

Transactions with related parties as mentioned above do not include government agencies and state enterprises, except PEA ENCOM International Company Limited, a subsidiary of Provincial Electricity Authority.



Directors and management's benefits

During the years ended 31 December 2023 and 2022, the Group had employee benefit expenses payable to their directors and management as below.

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Short-term employee benefits	115	125	112	122
Post-employment benefits	4	4	3	4
Total	119	129	115	126

7. Cash and cash equivalents

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Cash	56	53	56	53
Bank deposits - Current	8	4	2	4
Bank deposits - Saving	7,394	6,613	7,169	6,503
Bank deposits - Fixed	756	3,019	-	2,000
Total	8,214	9,689	7,227	8,560

As at 31 December 2023, bank deposits in saving accounts and fixed deposits carried interests between 0.15 and 1.70 percent per annum (2022: between 0.10 and 1.00 percent per annum).



8. Trade and other receivables

The balance of trade and other receivables as at 31 December 2023 and 2022, aged on the basis of due dates, can be summarised as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Trade receivables - related parties (Note 6)				
Aged on the basis of due dates				
Not yet due	22	14	16	14
Past due				
3 - 6 เดือน	-	-	5	-
Total trade receivables - related parties	22	14	21	14
Trade receivables - unrelated parties				
Aged on the basis of due dates				
Not yet due	38,497	43,012	38,320	42,832
Past due				
Up to 3 months	7,424	7,673	7,424	7,673
3 - 6 months	770	456	770	456
6 - 12 months	867	383	867	383
Over 12 months	1,484	1,291	1,478	1,286
Total trade receivables - unrelated parties	49,042	52,815	48,859	52,630
Less: Allowance for expected credit losses	(1,748)	(1,405)	(1,743)	(1,399)
Total trade receivables - net	47,316	51,424	47,137	51,245
Other receivables				
Other receivables - unrelated parties	2,199	2,167	2,187	2,005
Other receivables - related parties (Note 6)	-	1	1	-
Prepaid expenses	51	29	21	26
Interest receivable	55	58	54	57
Accrued revenues from the Power Development Fund	4,494	4,023	4,494	4,023
Other accrued revenues - unrelated parties	375	5,059	326	4,983
Other accrued income - related parties (Note 6)	-	6	9	5
Total	7,174	11,343	7,092	11,099
Less: Allowance for expected credit losses	(283)	(261)	(273)	(252)
Total other receivables - net	6,891	11,082	6,819	10,847
Trade and other receivables - net	54,207	62,506	53,956	62,092

Set out below is the movements in the allowance for expected credit losses of trade and other receivables.

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Beginning balance	1,666	2,365	1,651	2,326
Provision for expected credit losses (reversal)	371	(684)	371	(660)
Amount written off	(6)	(15)	(6)	(15)
Ending balance	2,031	1,666	2,016	1,651

The normal credit term is 10 to 30 days (Provincial Electricity Authority only: 10 to 18 days).



9. Inventories

(Unit: Million Baht)

	Consolidated financial statements					
	Cost		Reduce cost to net realisable value		Inventories - net	
	2023	2022	2023	2022	2023	2022
Operating materials and supplies	49	46	-	-	49	46
Materials and supplies for construction and maintenance	785	563	(2)	(2)	783	561
Materials and supplies for repair	599	526	-	-	599	526
Demolition materials and supplies	571	505	(24)	(11)	547	494
Materials and supplies pending for adjustments	52	76	(52)	(76)	-	-
Cars waiting for delivery	6	6	(6)	(4)	-	2
Materials and supplies in transit	15	6	-	-	15	6
Total	2,077	1,728	(84)	(93)	1,993	1,635

(Unit: Million Baht)

	Separate financial statements					
	Cost		Reduce cost to net realisable value		Inventories - net	
	2023	2022	2023	2022	2023	2022
Operating materials and supplies	49	46	-	-	49	46
Materials and supplies for construction and maintenance	779	557	-	-	779	557
Materials and supplies for repair	599	526	-	-	599	526
Demolition materials and supplies	571	505	(24)	(11)	547	494
Materials and supplies pending for adjustments	52	76	(52)	(76)	-	-
Materials and supplies in transit	15	6	-	-	15	6
Total	2,065	1,716	(76)	(87)	1,989	1,629

During the year, the Group reduced cost of allowance by Baht 253 million (2022: Baht 226 million) (Provincial Electricity Authority only: Baht 251 million, 2022: Baht 224 million), to reflect the net realisable value. This was included in expense. In addition, the Group reversed the write-down of cost of inventories by Baht 262 million (2022: Baht 193 million) (Provincial Electricity Authority only: Baht 262 million, 2022: Baht 193 million), and reduced the amount of inventories recognised as expenses during the year.



10. Specific-purpose deposits at financial institutions

(Unit: Million Baht)

	Consolidated and separate financial statements	
	2023	2022
Electricity usage guarantee fund (Note 29)	26,045	24,329
Interest from electricity usage guarantee fund	5,348	4,991
Sinking fund for repayment of bonds	5,480	5,178
KFW special fund	188	187
Restricted deposits with banks	4,520	2,589
Funding under the energy conservation policy from Energy Policy and Planning Office and other government agencies	2	-
Deposits on incomes reimburse to users based on the Energy Regulatory Commission's directives	800	683
Total	42,383	37,957

Electricity usage guarantee fund, sinking fund for repayment of bonds and restricted cash are deposits at financial institutions that can be used in Provincial Electricity Authority's activities in case of Provincial Electricity Authority have deficits in working capital.

Sinking fund for repayment of bonds is used as Provincial Electricity Authority guarantee for repayment of bonds at the maturity date. Provincial Electricity Authority will periodically deposit to the account for repayment of bonds with maturity period within 3 years.

Interest from electricity usage guarantee fund, interest from KFW special fund, and funding under the energy conservation policy from Energy Policy are deposited at financial institutions which are restricted for specific purposes as determined by Provincial Electricity Authority.

Restricted deposits - saving accounts are used as a guarantee for Provincial Electricity Authority's employee loans. Provincial Electricity Authority has to maintain a balance of saving accounts at a monthly average of Baht 3,100 million.

Deposits on incomes reimburse to users based on the Energy Regulatory Commission's directives are deposits at financial institutions that Provincial Electricity Authority uses according to a resolution directive by the Energy Regulatory Commission.

11. Investments in subsidiary

11.1 Details of investment in subsidiary

Investment in subsidiary as at 31 December 2023 and 2022 are as follows:

	Separate financial statements			
	Paid-up capital		Shareholding percentage	
	2023 (Million Baht)	2022 (Million Baht)	2023 (%)	2022 (%)
Non-listed company				
PEA ENCOM International Company Limited	5,111	4,011	100	100



Investment in subsidiary in the separate financial statements represent the investment in PEA Encom International Company Limited. The Subsidiary is registered in Thailand with purposes of investing in electricity-related businesses and conducting training services concerning electricity systems for public organisations and private organisations both domestically and internationally. Provincial Electricity Authority has acquired 100 percent shareholding of its ordinary shares. The investments in subsidiary are recorded under the cost method.

Investments in subsidiary as presented in separate financial statements details as follows:

(Unit: Million Baht)

	Separate financial statements			
	Cost		Dividend received	
	2023	2022	2023	2022
Non-listed company				
PEA ENCOM International Company Limited	5,111	4,011	4	20

11.2 Significant changes in investment in subsidiary

On 23 June 2023, Provincial Electricity Authority paid for 110 million new shares of Baht 10 per share, totaling Baht 1,100 million. Such payment was made in accordance with the resolution of the subsidiary's Extraordinary General Meeting of Shareholders No. 1/2023 on 22 June 2023 and in alignment with the resolution approving the 2023 appropriation at the Provincial Electricity Authority Board Meeting No.3/2022 on 21 February 2022. The subsidiary registered the capital increase with the Ministry of Commerce on 25 June 2023. The shareholding percentage in the subsidiary remained unchanged.

12. Investments in associates

12.1 Details of associates

Investments in associated companies in the consolidated financial statements as a transaction of PEA ENCOM International Company Limited which is the subsidiary of Provincial Electricity Authority, has jointly invested for the equity method.





(Unit: Million Baht)

Company's name	Nature of business	Country of incorporation	Consolidated financial statements									
			Shareholding percentage		Cost		Carrying amounts based on equity method		Allowance for impairment of investments		Carrying amounts based on equity method - Net	
			2023	2022	2023	2022	2023	2022	2023	2022	2023	2022
			(%)	(%)								
Indirect holdings												
Solar Power (Surin 1) Company Limited	Generating electricity from solar power	Thailand	25	25	41.25	41.25	124.7	119.2	-	-	124.7	119.2
Solar Power (Surin 2) Company Limited	Generating electricity from solar power	Thailand	25	25	41.25	41.25	122.9	117.4	-	-	122.9	117.4
Solar Power (KhonKaen 10) Company Limited	Generating electricity from solar power	Thailand	25	25	41.25	41.25	121.2	118.3	-	-	121.2	118.3
Solar Power (Loei 2) Company Limited	Generating electricity from solar power	Thailand	25	25	41.25	41.25	121.6	118.3	-	-	121.6	118.3
Pracharath Biomass Narathiwat Company Limited	Generating electricity from biomass	Thailand	-	40	-	2.4	-	2.2	-	(2.2)	-	-
Pracharath Biomass Maelan Company Limited	Generating electricity from biomass	Thailand	40	40	57.8	57.8	48.0	54.4	-	-	48.0	54.4
Pracharath Biomass Bannangsata Company Limited	Generating electricity from biomass	Thailand	40	40	61.6	61.6	48.5	57.2	-	-	48.5	57.2
Thai Serm Suk Energy Company Limited	Generating electricity from biomass	Thailand	25	25	25.0	25.0	27.7	26.1	-	-	27.7	26.1
Thai Digital Energy Development Company Limited	Develop integrated digital energy products and services	Thailand	25	25	50.0	50.0	53.1	50.9	-	-	53.1	50.9
Set Energy Company Limited	Develop and invest in smart power grids	Thailand	25	23.775	861.4	808.6	835.4	789.4	-	-	835.4	789.4
Encom Waste To Energy (Phranakhon Si Ayutthaya) Company Limited	Generating electricity from refuse derived fuel	Thailand	25	25	20.6	20.6	18.0	18.2	(18.0)	-	-	18.2
Salo Tech (Thailand) Company Limited	Generating and distribution of solar panels	Thailand	25	25	69.3	62.0	56.7	56.8	-	-	56.7	56.8
Siam Electrail Company Limited	Develop electrical systems to support high-speed rail business	Thailand	25	25	3.1	3.1	1.3	-	-	-	1.3	-
R E N Korat Energy Company Limited	Generating electricity from combined heat energy	Thailand	25	25	205.5	150.0	179.2	135.9	-	-	179.2	135.9





(Unit: Million Baht)

Company's name	Nature of business	Country of incorporation	Consolidated financial statements												
			Shareholding percentage		Cost		Carrying amounts based on equity method		Allowance for impairment of investments		Carrying amounts based on equity method - Net				
			2023	2022	2023	2022	2023	2022	2023	2022	2023	2022			
			(%)	(%)											
Indirect holdings (continued)															
PEA Intelligent Technology Company Limited	Provide and sold electronic and smart devices	Thailand	25	25	1.5	1.5	1.7	1.9	-	-	1.7	1.9	-	-	1.9
THAI ENCOM Company Limited	Provide setting up a system for data analysis and research.	Thailand	25	25	6.3	6.3	5.3	5.7	-	-	5.3	5.7	-	-	5.7
PEA Encom Smart Solution Company Limited	Full services related to a solar cell system	Thailand	25	25	2.5	2.5	4.3	3.1	-	-	4.3	3.1	-	-	3.1
Encom Sharge Utility Services Company Limited	Provide power distribution grid services for electric vehicles	Thailand	25	25	5.5	5.5	11.6	5.3	-	-	11.6	5.3	-	-	5.3
B. Grimm Power (Laem Chabang) 1 Company Limited	Electricity generation by combined heat and power	Thailand	25	-	1,100.0	-	1,095.0	-	-	-	1,095.0	-	-	-	-
					2,635.1	1,421.9	2,876.2	1,680.3	(18.0)	(2.2)	2,858.2	1,678.1			



12.2 Share of comprehensive income and dividend received

During the years ended 31 December 2023 and 2022, the subsidiary of Provincial Electricity Authority has recognised its share of comprehensive income from investments in associates in the statement of comprehensive income as follows:

(Unit: Million Baht)

Associates	Consolidated financial statements					
	Share of profits (losses) from investments in associates		Share of other comprehensive income from investments in associates		Dividend received by subsidiary*	
	2023	2022	2022	2022	2023	2022
Solar Power (Surin 1) Company Limited	24.1	23.7	-	-	18.6	14.6
Solar Power (Surin 2) Company Limited	24.3	23.2	-	-	18.8	13.7
Solar Power (KhonKaen 10) Company Limited	21.4	20.6	-	-	18.5	11.5
Solar Power (Loei 2) Company Limited	18.5	18.0	-	-	15.2	9.4
Pracharath Biomass Narathiwat Company Limited	-	-	-	-	-	-
Pracharath Biomass Maelan Company Limited	(6.4)	(1.3)	-	-	-	-
Pracharath Biomass Bannangsata Company Limited	(8.7)	(1.6)	-	-	-	-
Thai Serm Suk Energy Company Limited	1.6	2.1	-	-	-	-
Thai Digital Energy Development Company Limited	2.2	1.4	-	-	-	-
Set Energy Company Limited	(6.8)	(6.4)	-	-	-	-
Encom Waste To Energy (Phranakhon Si Ayutthaya) Company Limited	(0.2)	(1.1)	-	-	-	-
Salo Tech (Thailand) Company Limited	(7.4)	(3.8)	-	-	-	-
Siam Electrail Company Limited	1.3	(2.7)	-	-	-	-
R E N Korat Energy Company Limited	(12.2)	(9.5)	-	-	-	-
PEA Intelligent Technology Company Limited	(0.1)	0.4	-	-	0.1	-
THAI ENCOM Company Limited	(0.4)	(0.6)	-	-	-	-
PEA Encom Smart Solution Company Limited	1.2	0.5	-	-	-	-
Encom Sharge Utility Services Company Limited	6.3	(0.2)	-	-	-	-
B. Grimm Power (Laem Chabang) 1 Company Limited	1.2	-	(6.2)	-	-	-
Total	59.9	62.7	(6.2)	-	71.2	49.2

* Dividend received by the subsidiary presented in the subsidiary's separate financial statements.

12.3 Significant changes in investments in associates

PEA ENCOM Smart Solution Company Limited

On 19 January 2023, PEA Encom Smart Solution Company Limited called for payment of shares in proportion to its existing shareholding in accordance with the resolution approving the capital increase from Baht 10 million, comprising 1 million shares with a par value of Baht 10 per share, to Baht 20 million, comprising 1 million shares with a par value of Baht 20 per share. On 31 January 2023, the subsidiary made payment for the new shares in proportion to its existing shareholding, totaling Baht 2.5 million, comprising 0.25 million shares with a par value of Baht 10 per share.

On 3 March 2023, the subsidiary received a refund of the full amount of the aforementioned payment for new shares because PEA Encom Smart Solution Company Limited canceled the capital increase.





R E N Korat Energy Company Limited

On 6 February 2023, R E N Korat Energy Company Limited called for payment of shares in proportion to its existing shareholding, in accordance with the resolution approving the capital increase on 13 December 2022, 20 million shares with par value of Baht 10 per share and it called for payment of shares at the rate of Baht 5 per share. On 24 February 2023, the subsidiary made payment for the shares in proportion to its existing shareholding, totaling Baht 25 million, comprising 5 million shares with a par value of Baht 5 per share.

On 4 July 2023, R E N Korat Energy Company Limited passed resolutions to approve the capital increase to Baht 122 million, comprising 12.2 million shares with a par value of Baht 10 per share. On 14 July 2023, the subsidiary made payment for the shares in proportion to its existing shareholding, totaling Baht 30.5 million, comprising 3.05 million shares with a par value of Baht 10 per share.

Set Energy Company Limited

On 20 February 2023, Set Energy Company Limited called for the remaining payment of 2.153 million shares with a par value of Baht 24.5 per share, totaling Baht 52.8 million. On 27 February 2023, the subsidiary made payment for the shares. The shareholding percentage in associate has changed from 23.775 percent to 25 percent.

Encom Waste To Energy (Phranakhon Si Ayutthaya) Company Limited

On 21 March 2023, the subsidiary's Board of Directors meeting No.3/2023 acknowledged significant uncertainty regarding the situation of requesting to extend the deadline for introducing electricity into the SCOD of the power purchase agreement of ENCOM West Two Energy (Phranakhon Si Ayutthaya) Company Limited. This is expected to impact the future business operations of the associated company. Consequently, the subsidiary determined to record a loss from impairment of investment in the associated company in the subsidiary's statement of comprehensive income for the year ended 31 December 2023, totaling Baht 18 million.

B. Grimm Power (Laem Chabang) 1 Company Limited

On 3 August 2023, the subsidiary made payment for the purchase of ordinary shares of B.Grimm Power (Laem Chabang) 1 Company Limited ("BPLC1"), following the resolution of the subsidiary's Board of Directors meeting on 18 April 2023 approving the investment in B.Grimm Power (Laem Chabang) 1 Company Limited, which operates a 140-megawatt power plant, by 37.25 million shares at of Baht 29.53 per share, totaling Baht 1,100 million. This amount is calculated as 25 percent of the total number of ordinary shares of BPLC1. As a result of the purchase of such shares, BPLC1 attains the status of an associated company of the subsidiary. BPLC1's 37.25 million shares owned by the subsidiary are pledged with the bank to guarantee credit facilities of BPLC1.

The subsidiary recognised net asset acquired based on its investment proportion as at the share acquisition date as follows:

	(Unit: Million Baht)
	Consolidated financial statements
Consideration paid for acquisition	1,100
Fair value of net identifiable assets based on acquisition proportion	(519)
Fair value of identifiable intangible assets - the power purchase agreement and others net deferred tax liabilities based on acquisition proportion	581

The subsidiary has amortised the fair value of identifiable intangible assets - the power purchase agreement, in accordance with the period of the power plant assets and power purchase agreement related to BPLC1 and recognised it as part of the share of profits (losses) from the investment in BPLC1 in the subsidiary's statement of comprehensive income.

Salo Tech (Thailand) Company Limited

On 26 October 2023, Salo Tech (Thailand) Company Limited called for payment of shares in proportion to the existing shareholding, in accordance with the resolution approving the capital increase on 19 October 2023 of Euro 0.35 million, or Baht 12 million, comprising 0.12 million ordinary shares with a value of Baht 100 per share, and called for payment of the existing shares to the full value of the shares of Euro 0.35 million, or Baht 12 million. The subsidiary paid for the shares in proportion to its existing shareholding, with the total payment of Euro 0.175, or Baht 7.3 million, on 8 November 2023.

Pracharath Biomass Narathiwat Company Limited

On 2 October 2023, the Extraordinary General Meeting of Shareholders of Pracharat Biomass Narathiwat Company Limited No. 1/2023 resolved to dissolve the business due to land problems and the inability to continue the project. The dissolution was registered with the Department of Business Development, Ministry of Commerce on 12 October 2023. The liquidation process was completed on 19 December 2023. Pracharat Biomass Narathiwat Company Limited paid for the paid the capital returned on 25 December 2023 to the subsidiary, totaling Baht 0.7 million.

12.4 Dividend received by subsidiary from associates after the reporting period

On 15 March 2024, the Board of Directors' Meeting No.1/2024 of Solar Power (Surin 1) Company Limited passed a resolution to approve a dividend payment from operating results for the fourth quarter of 2023 at the rate of Baht 2.04 per share, totaling Baht 33.7 million, representing the subsidiary's share of Baht 8.4 million. The dividend is scheduled to be paid on 27 March 2024.

On 15 March 2024, the Board of Directors' Meeting No.1/2024 of Solar Power (Surin 2) Company Limited passed a resolution to approve a dividend payment from operating results for the fourth quarter of 2023 at the rate of Baht 2.06 per share, totaling Baht 34 million, representing the subsidiary's share of Baht 8.5 million. The dividend is scheduled to be paid on 27 March 2024.

On 15 March 2024, the Board of Directors' Meeting No.1/2024 of Solar Power (Khon Kaen 10) Company Limited passed a resolution to approve a dividend payment from operating results for the fourth quarter of 2023 at the rate of Baht 1.79 per share, totaling Baht 29.5 million, representing the subsidiary's share of Baht 7.4 million. The dividend is scheduled to be paid on 27 March 2024.

On 15 March 2024, the Board of Directors' Meeting No.1/2024 of Solar Power (Loei 2) Company Limited passed a resolution to approve a dividend payment from operating results for the fourth quarter of 2023 at the rate of Baht 1.65 per share, totaling Baht 27.2 million, representing the subsidiary's share of Baht 6.8 million. The dividend is scheduled to be paid on 27 March 2024.



13. Investments in joint venture

13.1 Details of investments in joint venture

Investments in joint venture represent investments in entities which are jointly controlled by the subsidiary of Provincial Electricity Authority and other companies as at 31 December 2023 and 2022. Details of these investments are as follows:

(Unit: Million Baht)

Joint venture	Nature of business	Country of incorporation	Consolidated financial statements					
			Shareholding percentage		Cost		Carrying amounts based on cost method	
			2023	2022	2023	2022	2023	2022
			(%)	(%)				
Indirectly owned								
PEA Encom Fah Chai joint venture	install and provide service on solar power electricity generating system	Thailand	25	25	5.5	5.5	5.3	5.3
Less: Allowance for impairment of investments					(5.5)	(5.5)	(5.3)	(5.3)
Total					-	-	-	-

Investments in joint venture in the consolidated financial statements is the investment of PEA ENCOM International Company Limited, the subsidiary of Provincial Electricity Authority, which has entered into a joint venture agreement in the name of PEA Encom Fah Chai joint venture to install and provide service on solar power electricity generating system on 8 March 2017 and are accounted by using the equity method.

During the years ended 31 December 2023 and 2022, there was no share of other comprehensive income from investments in joint venture and there was no dividend received from the joint venture.

14. Other non-current financial assets

Other non-current financial assets represent the Group's investments details as follows:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
<u>Equity instruments designated at FVOCI</u>				
Listed company equity investment				
WP Energy Public Company Limited	1	2	1	2
Non-listed company equity investment				
B.Grimm Power (AIE-MTP) Company Limited	282	255	-	-
Total	283	257	1	2

On 7 August 2023, B.Grimm Power (AIE-MTP) Company Limited called for payment of shares in proportion to its existing shareholding in accordance with the resolution approving the capital increase of Baht 540 million, comprising 54 million shares with a par value of Baht 10 per share. The payment for each share was called at the par value of Baht 10. On 9 August 2023, the subsidiary made payment for the shares in proportion to its existing shareholding, totaling Baht 27 million, comprising 2.7 million shares with a par value of Baht 10 each.

**15. Other non-current receivables**

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Installment receivables	25	48	25	43
Lease receivables	67	101	-	-
Receivables under finance leases	2,436	1,580	720	302
Total	2,528	1,729	745	345

16. Constructions in progress

(Unit: Million Baht)

	Consolidated financial statements		
	The Group's capital budget	Partially funded by electricity users	Total
As at 1 January 2022	37,118	4,551	41,669
Acquisition - at cost	40,249	7,036	47,285
Transfer out	(33,558)	(6,675)	(40,233)
	43,809	4,912	48,721
Inventories			17,908
Work in progress			2
As at 31 December 2022			66,631
As at 1 January 2023	43,809	4,912	48,721
Acquisition - at cost	43,848	8,612	52,460
Transfer out	(41,231)	(7,810)	(49,041)
	46,426	5,714	52,140
Inventories			15,473
Work in progress			2
As at 31 December 2023			67,615

(Unit: Million Baht)

	Separate financial statements		
	Provincial Electricity Authority's capital budget	Partially funded by electricity users	Total
As at 1 January 2022	36,451	4,551	41,002
Acquisition - at cost	39,582	7,036	46,618
Transfer out	(33,102)	(6,675)	(39,777)
	42,931	4,912	47,843
Inventories			17,908
Work in progress			2
As at 31 December 2022			65,753
As at 1 January 2023	42,931	4,912	47,843
Acquisition - at cost	43,604	8,612	52,216
Transfer out	(40,806)	(7,810)	(48,616)
	45,729	5,714	51,443
Inventories			15,473
Work in progress			2
As at 31 December 2023			66,918



Inventories presented in constructions in progress are the materials and supplies which Provincial Electricity Authority has purchased with specific purposes for use in the projects.

The Group has borrowed specific loans to construct buildings, electricity generating and distributing systems which are eligible for qualifying assets. The borrowing costs that directly attributable to the construction of qualifying assets and incurred from loans made for specific purposes are capitalised as cost of assets at interest rates of 1.33 to 4.85 percent per annum (2022: 1.33 to 4.90 percent per annum). Interest expenses on loans for the year ended 31 December 2023 amounting to Baht 4,633 million (2022: Baht 4,075 million) (Provincial Electricity Authority only: Baht 4,602 million, 2022: Baht 4,054 million) are capitalised as part of the cost of constructions in progress amounting to Baht 786 million (2022: Baht 505 million) (Provincial Electricity Authority only: Baht 761 million, 2022: Baht 490 million) and recognised as expenses in profit or loss amounting to Baht 3,847 million (2022: Baht 3,570 million) (Provincial Electricity Authority only: Baht 3,841 million, 2022: Baht 3,564 million).

17. Investment properties

The net book value of investment properties as at 31 December 2023 and 2022 is presented below.

(Unit: Million Baht)

	Consolidated and separate financial statements		
	Land and land improvements	Building and building improvements	Total
As at 31 December 2022			
Cost	141	476	617
Less: Accumulated depreciation	-	(155)	(155)
Net book value	141	321	462
As at 31 December 2023			
Cost	160	479	639
Less: Accumulated depreciation	-	(171)	(171)
Net book value	160	308	468

A reconciliation of the net book value of investment properties for the years 2023 and 2022 is presented below.

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Net book value at beginning of year	462	501	462	452
Acquisition - at cost	28	52	28	-
Transfer	(9)	(76)	(9)	25
Depreciation for the year	(13)	(15)	(13)	(15)
Net book value at end of year	468	462	468	462

Provincial Electricity Authority had rental revenue from investment properties for the year ended 31 December 2023 of Baht 23 million (2022: Baht 22 million). As at 31 December 2023, the cost value of land for lease is Baht 42 million (2022: Baht 42 million) and the cost value of building for lease is Baht 479 million (2022: Baht 476 million).

The additional information of the investment properties as at 31 December 2023 and 2022 stated below:

(Unit: Million Baht)

	Consolidated and separate financial statements	
	2023	2022
The fair value of land and land improvements	556	558
The fair value of building and building improvements	170	172
Total	726	730

The fair value has been determined based on valuation announced by the Treasury Department.

18. Property, plant and equipment

Movements of property, plant and equipment for the years ended 31 December 2023 and 2022 are summarised below.

(Unit: Million Baht)

	Consolidated financial statements						
	Land and land improvements	Buildings and construction	Electricity generating systems	Electricity distributing systems	Furniture, tools and equipment	Vehicles	Total
Cost:							
1 January 2022	19,163	21,661	3,105	553,517	29,676	12,949	640,071
Additions	580	119	52	3	1,138	858	2,750
Received from donations	25	5	-	105	-	-	135
Transfer from construction in progress	375	659	171	35,607	1,799	-	38,611
Transfer	(18)	154	7	(107)	(56)	(5)	(25)
Disposals	(13)	(93)	(26)	(6,383)	(489)	(370)	(7,374)
31 December 2022	20,112	22,505	3,309	582,742	32,068	13,432	674,168
Additions	338	48	4	-	1,011	1,462	2,863
Received from donations	3	-	-	210	8	-	221
Transfer from construction in progress	691	2,267	84	42,855	1,710	-	47,607
Transfer	10	4	25	(232)	(34)	(1)	(228)
Disposals	(11)	(63)	(4)	(6,714)	(743)	(261)	(7,796)
31 December 2023	21,143	24,761	3,418	618,861	34,020	14,632	716,835
Accumulated depreciation:							
1 January 2022	1,973	8,142	1,590	284,769	18,496	8,833	323,803
Depreciation for the year	170	662	125	21,147	2,193	672	24,969
Transfer	1	81	3	(24)	(61)	-	-
Depreciation on disposals	(8)	(71)	(26)	(5,038)	(509)	(370)	(6,022)
31 December 2022	2,136	8,814	1,692	300,854	20,119	9,135	342,750
Depreciation for the year	191	731	129	22,390	2,375	739	26,555
Transfer	4	11	11	(213)	(48)	(1)	(236)
Depreciation on disposals	(6)	(41)	(10)	(5,471)	(737)	(260)	(6,525)
31 December 2023	2,325	9,515	1,822	317,560	21,709	9,613	362,544
Net book value:							
31 December 2022	17,976	13,691	1,617	281,888	11,949	4,297	331,418
31 December 2023	18,818	15,246	1,596	301,301	12,311	5,019	354,291
Depreciation for the year							
2022 (Baht 288 million included in construction in progress cost, and the balance in statement of profit or loss)							24,681
2023 (Baht 328 million included in construction in progress cost, and the balance in statement of profit or loss)							26,227



(Unit: Million Baht)

	Separate financial statements						Total
	Land and land improvements	Buildings and construction	Electricity generating systems	Electricity distributing systems	Furniture, tools and equipment	Vehicles	
Cost:							
1 January 2022	19,163	21,660	3,105	553,528	29,667	12,947	640,070
Additions	580	119	52	6	1,134	858	2,749
Asset received from donations	25	5	-	105	-	-	135
Transfer from construction in progress	375	659	171	35,607	1,799	-	38,611
Transfer	(18)	154	7	(107)	(56)	(5)	(25)
Disposals	(13)	(93)	(26)	(6,383)	(489)	(370)	(7,374)
31 December 2022	20,112	22,504	3,309	582,756	32,055	13,430	674,166
Additions	338	47	5	3	1,020	1,462	2,875
Asset received from donations	3	-	-	210	8	-	221
Transfer from construction in progress	691	2,267	84	42,855	1,710	-	47,607
Transfer	10	4	25	(232)	(34)	(1)	(228)
Disposals	(11)	(63)	(4)	(6,714)	(743)	(260)	(7,795)
31 December 2023	21,143	24,759	3,419	618,878	34,016	14,631	716,846
Accumulated depreciation:							
1 January 2022	1,973	8,142	1,590	284,767	18,491	8,833	323,796
Depreciation for the year	170	662	125	21,146	2,191	672	24,966
Transfer	1	81	3	(24)	(61)	-	-
Depreciation on disposals	(8)	(71)	(26)	(5,038)	(509)	(370)	(6,022)
31 December 2022	2,136	8,814	1,692	300,851	20,112	9,135	342,740
Depreciation for the year	191	731	129	22,390	2,374	738	26,553
Transfer	4	11	11	(213)	(48)	(1)	(236)
Depreciation on disposals	(6)	(41)	(10)	(5,471)	(737)	(260)	(6,525)
31 December 2023	2,325	9,515	1,822	317,557	21,701	9,612	362,532
Net book value:							
31 December 2022	17,976	13,690	1,617	281,905	11,943	4,295	331,426
31 December 2023	18,818	15,244	1,597	301,321	12,315	5,019	354,314
Depreciation for the year							
2022 (Baht 288 million included in construction in progress cost, and the balance in statement of profit or loss)							24,678
2023 (Baht 328 million included in construction in progress cost, and the balance in statement of profit or loss)							26,225

As at 31 December 2023, certain items of building and equipment were fully depreciated but are still in use. The gross carrying amount before deducting accumulated depreciation of those assets amounted to approximately Baht 124,955 million (2022: Baht 114,096 million) (Provincial Electricity Authority only: Baht 124,951 million, 2022: Baht 114,093 million).





19. Intangible assets

The net book value of intangible assets as at 31 December 2023 and 2022 is presented below.

(Unit: Million Baht)

	Consolidated financial statements			Separate financial statements		
	Computer software licenses	Computer software	Total	Computer software licenses	Computer software	Total
As at 31 December 2022:						
Cost	5,771	3,069	8,840	5,765	3,069	8,834
Less: Accumulated amortisation	(4,440)	(1,411)	(5,851)	(4,438)	(1,411)	(5,849)
Net book value	1,331	1,658	2,989	1,327	1,658	2,985
As at 31 December 2023:						
Cost	6,738	3,486	10,224	6,733	3,486	10,219
Less: Accumulated amortisation	(5,120)	(2,072)	(7,192)	(5,117)	(2,072)	(7,189)
Net book value	1,618	1,414	3,032	1,616	1,414	3,030

A reconciliation of the net book value of intangible assets for the years 2023 and 2022 is presented below.

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Net book value at beginning of year	2,989	2,591	2,985	2,587
Acquisition - cost	246	256	246	255
Transfers from construction in progress	1,009	1,166	1,009	1,166
Transfer	1	-	1	-
Amortisation for the year	(1,213)	(1,024)	(1,211)	(1,023)
Net book value at end of year	3,032	2,989	3,030	2,985

20. Trade and other payables

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Trade payables - unrelated parties	50,880	61,180	50,794	61,099
Trade payables - related parties				
(Note 6)	109	109	110	101
Other payables - unrelated parties	2,845	1,431	2,840	1,421
Other payables - related parties				
(Note 6)	3	-	3	9
Accrued interest expenses	1,012	983	1,012	983
Accrued expenses - unrelated parties	2,933	2,740	2,904	2,615
Accrued expenses - related parties				
(Note 6)	1	-	-	3
Unearned revenues	334	148	244	148
Total trade and other payables	58,117	66,591	57,907	66,379



21. Long-term loans

(Unit: Million Baht)

	Interest rate (% per annum)	Repayment schedule	Consolidated financial statements		Separate financial statements	
			2023	2022	2023	2022
<u>Domestic long-term loans</u>						
The Ministry of Finance	No interest charge	1988 - 2031	99	114	99	114
Bonds	1.33 - 4.85	2023 - 2042	149,716	138,514	149,716	138,514
Financial institutions	2.1106 - 3.0929	2022 - 2031	9,407	3,949	8,500	3,000
<u>Foreign long-term loans</u>						
Financial institutions	8.00*	2007 - 2023	-	36	-	36
Total			159,222	142,613	158,315	141,664
Less: Current portion			(11,578)	(9,451)	(11,516)	(9,352)
Long-term loans, net of current portion			147,644	133,162	146,799	132,312

* Borrowing interest rate of 8 percent per annum under the loan contract includes interest expense that Provincial Electricity Authority paid into KFW special fund at the rate of 6 percent per annum. The objective is to be used to develop the personnel of Provincial Electricity Authority. Another 2 percent per year is paid to lenders.

Movements of the long-term loan account for the years ended 31 December 2023 and 2022 summarised as follows:

(Unit: Million Baht)

	Consolidated financial statements					Balance as at 31 December 2023
	Balance as at 1 January 2023	Additions during year	Decreases during year	Unrealised loss on foreign exchange	Premium amortise	
<u>Domestic long-term loans</u>						
The Ministry of Finance	114	-	(18)	2	1	99
Bonds	138,514	18,500	(7,300)	-	2	149,716
Financial institutions	3,949	7,500	(2,042)	-	-	9,407
<u>Foreign long-term loans</u>						
Financial institutions	36	-	(36)	-	-	-
Total	142,613	26,000	(9,396)	2	3	159,222

(Unit: Million Baht)

	Consolidated financial statements					Balance as at 31 December 2022
	Balance as at 1 January 2022	Additions during year	Decreases during year	Unrealised gain on foreign exchange	Premium amortise	
<u>Domestic long-term loans</u>						
The Ministry of Finance	133	-	(18)	(2)	1	114
Bonds	127,013	17,000	(5,500)	-	1	138,514
Financial institutions	1,031	3,000	(83)	-	1	3,949
<u>Foreign long-term loans</u>						
Financial institutions	75	-	(37)	(2)	-	36
Total	128,252	20,000	(5,638)	(4)	3	142,613



(Unit: Million Baht)

	Separate financial statements					
	2023					
	Balance as at 1 January 2023	Additions during year	Decreases during year	Unrealised loss on foreign exchange	Premium amortise	Balance as at 31 December 2023
<u>Domestic long-term loans</u>						
The Ministry of Finance	114	-	(18)	2	1	99
Bonds	138,514	18,500	(7,300)	-	2	149,716
Financial institutions	3,000	7,500	(2,000)	-	-	8,500
<u>Foreign long-term loans</u>						
Financial institutions	36	-	(36)	-	-	-
Total	141,664	26,000	(9,354)	2	3	158,315

(Unit: Million Baht)

	Separate financial statements					Balance as at 31 December 2022
	Balance as at 1 January 2022	Additions during year	Decreases during year	Unrealised gain on foreign exchange	Premium amortise	
<u>Domestic long-term loans</u>						
The Ministry of Finance	133	-	(18)	(2)	1	114
Bonds	127,013	17,000	(5,500)	-	1	138,514
Financial institutions	-	3,000	-	-	-	3,000
<u>Foreign long-term loans</u>						
Financial institutions	75	-	(37)	(2)	-	36
Total	127,221	20,000	(5,555)	(4)	2	141,664

During the year, Provincial Electricity Authority issues PEA bonds B.E. 2566 and B.E. 2567, and enter into long-term loan agreements with financial institutions summarised as follows:

No.	Facility (Million Baht)	Issued date	Maturity date	Interest rate (% per annum)	Interest payment term
No.2/2566	3,000	30 March 2023	30 March 2030	2.85	Every six months
No.3/2566	5,000	30 May 2023	30 May 2028	2.87	Every six months
No.4/2566	4,000	30 May 2023	30 May 2030	3.08	Every six months
No.5/2566	3,500	31 August 2023	31 August 2033	3.35	Every six months
No.1/2567	3,000	29 November 2023	29 November 2033	3.84	Every six months

On 30 March 2023, Provincial Electricity Authority entered into a loan agreement with a domestic bank for a credit facility of Baht 3,000 million. The loan was drawn down on 30 March 2023 in the amount of Baht 2,000 million and on 27 July 2023 in the amount of Baht 1,000 million. The interest rate is based on the six-month BIBOR plus 0.1359 percent per annum. Principal repayment is due within 2 years, and interest payments are due semi-annually, with the final payment due on 30 March 2025.



On 14 September 2023, Provincial Electricity Authority entered into loan agreements with two domestic banks. The first bank provided a credit facility of Baht 1,000 million, fully drawn down. The interest rate is based on the six-month BIBOR plus 0.061 percent per annum. Principal repayment is due within 2 years, and interest payments are due semi-annually, with the final payment due on 14 September 2025. Simultaneously, the second bank provided a credit facility of Baht 2,500 million. The loan was drawn down on 14 September 2023 in the amount of Baht 1,000 million and on 31 October 2023 in the amount of Baht 1,500 million. The interest rate is based on the six-month BIBOR plus 0.180 percent per annum. Principal repayment is due within 4 years, and interest payments are due semi-annually, with the final payment due on 14 September 2027.

On 29 November 2023, Provincial Electricity Authority entered into a loan agreement with a domestic bank for a credit facility of Baht 2,000 million. The loan was drawn down on 29 November 2023 in the amount of Baht 1,000 million and on 31 January 2024 in the amount of Baht 1,000 million. The interest rate is based on the six-month BIBOR minus 0.05 percent per annum. Principal repayment is due within 1 years, and interest payments are due semi-annually, with the final payment due on 29 November 2024.

On 20 February 2023, the subsidiary entered into an agreement to amend the conditions regarding the amount of principal repayment in each installment, as well as adjust the interest rates during various periods in accordance with the conditions specified in the agreement.

Long-term loans from foreign financial institutions of Provincial Electricity Authority are guaranteed by the Ministry of Finance.

Long-term loan from a local financial institution of a subsidiary is secured by the assets of the Solar Rooftop sales and installation project, which are presented as other non-current receivables in the statement of financial position. In addition, the loan agreement contains several covenants which, among other things, require the subsidiary to maintain financial ratio at the rate prescribed in the agreement.

As at 31 December 2023, the long-term credit facilities and other credit facilities of the Group which have not yet been drawn down amounted to Baht 4,800 million (2022: Baht 3,800 million) (Provincial Electricity Authority only: Baht 4,000 million, 2022: Baht 3,000 million).

22. Leases

22.1 The Group as a lessee

The Group has lease contracts for various items of land, buildings, vehicles and others used in its operations. Leases generally have lease terms between 1 - 30 years.

22.1.1 Right-of-use assets

Movements of right-of-use assets for the years ended 31 December 2023 and 2022 are summarised below:





(Unit: Million Baht)

Consolidated financial statements							
	Land and land improvements	Buildings and construction	Electricity generating systems	Furniture, tools and equipment	Vehicles	Intangible assets	Total
As at 1 January 2022	135	91	22	4	1,641	9	1,902
Additions	35	51	34	-	794	-	914
Decrease from contract termination	-	(2)	-	-	-	-	(2)
Depreciation for the year	(56)	(68)	(24)	(3)	(618)	(2)	(771)
Transfer out	(25)	-	-	-	-	-	(25)
As at 31 December 2022	89	72	32	1	1,817	7	2,018
Additions	55	60	-	4	600	4	723
Decrease from contract termination	-	(2)	-	-	-	-	(2)
Depreciation for the year	(58)	(62)	(21)	(1)	(676)	(3)	(821)
As at 31 December 2023	86	68	11	4	1,741	8	1,918

(Unit: Million Baht)

Separate financial statements							
	Land and land improvements	Buildings and construction	Electricity generating systems	Furniture, tools and equipment	Vehicles	Intangible assets	Total
As at 1 January 2022	106	76	22	4	1,637	9	1,854
Additions	35	51	34	-	794	-	914
Decrease from contract termination	-	(2)	-	-	-	-	(2)
Depreciation for the year	(52)	(63)	(24)	(3)	(617)	(2)	(761)
As at 31 December 2022	89	62	32	1	1,814	7	2,005
Additions	55	60	-	4	600	4	723
Depreciation from contract Termination	-	(2)	-	-	-	-	(2)
Depreciation for the year	(58)	(58)	(21)	(1)	(675)	(3)	(816)
As at 31 December 2023	86	62	11	4	1,739	8	1,910

22.1.2 Lease liabilities

(Unit: Million Baht)

Consolidated financial statements		
	2023	2022
Lease payments	3,398	2,865
Less: Deferred interest expenses	(656)	(359)
Total	2,742	2,506
Less: Portion due within one year	(908)	(914)
Lease liabilities - net of current portion	1,834	1,592





(Unit: Million Baht)

	Separate financial statements	
	2023	2022
Lease payments	3,375	2,829
Less: Deferred interest expenses	(654)	(355)
Total	2,721	2,474
Less: Portion due within one year	(896)	(908)
Less: Portion due within one year	1,825	1,566

Movements of the lease liabilities account during the years ended 31 December 2023 and 2022 are summarised below:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Balance at beginning of year	2,506	2,116	2,474	2,066
Additions	723	914	723	914
Accretion of interest	85	65	83	62
Repayments	(572)	(589)	(559)	(568)
Balance at end of year	2,742	2,506	2,721	2,474

A maturity analysis of lease payments is disclosed in Note 38.1 under the liquidity risk.

22.1.3 Expenses relating to leases that are recognised in profit or loss

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Depreciation expense of right-of-use assets	821	771	816	761
Interest expense on lease liabilities	85	65	83	62
Expense relating to short-term leases	245	158	245	158
Expense relating to leases of low-value assets	2	2	2	2
Expense relating to variable lease payments that do not depend on an index or a rate	28	27	28	27

22.1.4 Others

The Group had total cash outflows for leases for the year ended 31 December 2023 of Baht 847 million (2022: Baht 776 million) (Provincial Electricity Authority only: Baht 834 million, 2022: Baht 755 million), including the cash outflow related to short-term lease, leases of low-value assets and variable lease payments that do not depend on an index or a rate.



22.2 Group as a lessor

The Group has entered into finance leases for its generating electricity from solar rooftop system of the lease terms are between 10 - 25 years.

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Undiscounted lease payments receivable under finance leases				
Within 1 year	234	142	62	26
Over 1 and up to 5 years	845	537	229	101
Over 5 years	2,655	1,633	1,012	441
Total	3,734	2,312	1,303	568
Less: Deferred interest income	(1,165)	(647)	(560)	(258)
Net investment in the finance leases	2,569	1,665	743	310

23. Accrued remittance to the Ministry of Finance

Movements of accrued remittance to the Ministry of Finance for the years ended 31 December 2023 and 2022 summarised as follows:

(Unit: Million Baht)

	Consolidated and separate financial statements	
	2023	2022
Balance at beginning of year	10,229	12,163
Adjustment for remittance to the Ministry of Finance for the year 2021	-	(1)
Reserve for remittance to public revenues	8,146	9,355
Remit to public revenues during the year	(3,305)	(11,288)
Balance at end of year	15,070	10,229

The Ministry of Finance requires that Provincial Electricity Authority allocate net profit to the Ministry of Finance as a remittance of state revenue, either in accordance with the specified rate or at the remittance amount specified in the Annual Budget Appropriation Act of the Budget Bureau, the Office of the Prime Minister.

Provincial Electricity Authority has to reserve for remittance to state revenue as considering the estimated annual income for the fiscal year.

On 12 July 2023, the State Enterprise Policy Office approved that Provincial Electricity Authority is to remit the state revenue for the year 2022 of Baht 9,355 million to the Ministry of Finance. Provincial Electricity Authority is to remit the remaining amount after deducting of the state revenue for the half-year 2022, which was Baht 3,637 million and was already remitted in 2022. During the year 2023, Provincial Electricity Authority already remitted Baht 2,838 million to the Ministry of Finance, with the remaining amount of Baht 2,880 million to be remitted within the fiscal year 2024.

On 20 October 2023, the State Enterprise Policy Office approved that Provincial Electricity Authority is to remit the state revenue for the half-year 2023 of Baht 467 million. During the year 2023, Provincial Electricity Authority already remitted the specified amount to the Ministry of Finance.



24. Deposits payable

(Unit: Million Baht)

	Consolidated and separate financial statements	
	2023	2022
Pending repayment electricity usage guarantee	303	127
Other deposits payable	268	255
Total deposits payable	571	382

25. Other current liabilities

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Retentions and deposits	541	2,670	534	2,644
Undue output tax	3,171	3,419	3,168	3,414
Suspense accounts	176	145	176	145
Total other current liabilities	3,888	6,234	3,878	6,203

26. Provisions for litigations

(Unit: Million Baht)

	Consolidated and separate financial statements	
	2023	2022
Balance at beginning of year	268	429
Increase	8	15
Decrease	(126)	(176)
Balance at end of year	150	268

As at 31 December 2023, provisions for litigations have been set up for lawsuits relates to litigation in which compensation claims have been lodged against Provincial Electricity Authority. Provincial Electricity Authority has assessed the status of these lawsuits and expects to have provision for liabilities under 62 cases (2022: 74 cases), consisting of 6 cases in which full compensation of the claims is expected to be set up and 56 cases in which the compensation is expected to be less than the claims.

During the current year, Provincial Electricity Authority concluded court proceedings by for 23 cases, totaling Baht 86 million. Among these cases, 15 cases resulted in compensatory damages of Baht 22 million. In addition, Provincial Electricity Authority reversed provisions for 35 cases, totaling Baht 40 million, comprising 12 cases where the Court of First Instance ordered payment less than the plaintiff's claimed amount, totaling Baht 32 million, and 23 cases where Provincial Electricity Authority reassessed the provision, totaling Baht 8 million. Currently, the cases are still under consideration by the Court of First Instance.





27. Construction obligations

As at 31 December 2023, The group had construction obligations of Baht 6,811 million (2022: Baht 6,502 million) (Provincial Electricity Authority only: Baht 6,811 million, 2022: Baht 6,503 million) from Provincial Electricity Authority receiving payment to expand the electricity distributing areas for electricity users which the electricity users have fully or partially funded the construction costs. The ownership of the assets belongs to Provincial Electricity Authority.

28. Deferred revenue

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statement	
	2023	2022	2023	2022
Contributions for construction	54,538	54,689	54,540	54,689
Deferred revenues from transferring of assets	1,322	1,252	1,322	1,252
Deferred revenues from rental	293	307	293	307
Deferred revenues from services	113	122	113	122
Deferred revenues from energy management	265	98	265	98
Deferred revenues from donation	185	185	185	185
Total deferred revenue	56,716	56,653	56,718	56,653

29. Electricity usage guarantee

(Unit: Million Baht)

	Consolidated and separate financial statements	
	2023	2022
Specific-purpose deposits at financial institutions (Note 10)	26,045	24,329
Suspense saving accounts	99	139
Total deferred revenue	26,144	24,468

Movements of Electricity usage guarantee for the years ended 31 December 2023 and 2022 are summarised as follows:

(Unit: Million Baht)

	Consolidated and separate financial statements	
	2023	2022
Balance at beginning of year	24,468	23,585
Increase from electricity usage guarantee	3,766	3,055
Decrease in refunding of electricity usage guarantee	(50)	(67)
Decrease in offset with unpaid electricity bills	(375)	(402)
Decrease in electricity usage cancellation or changing collateral from cash to bank guarantees	(1,607)	(1,656)
Transfer guarantees to income	(58)	(47)
Balance at end of year	26,144	24,468



Electricity usage guarantee is the money that electricity users deposit to Provincial Electricity Authority for guarantee of electricity usage. Provincial Electricity Authority deposits into the bank account named Electricity Usage Guarantee Fund to reserve fund for refunding of electricity usage guarantee to electricity users. Any interest income earned is separately deposited in the bank account named Interest from Electricity Usage Guarantee Fund. Provincial Electricity Authority will use interest of the fund to be repaid as interest on deposit for electricity usage guarantee to the electricity users according to the requirement of the Energy Regulatory Commission and will use in activities for public interests and/or beneficial activities for electricity users.

Provincial Electricity Authority has set the Regulation on Supervision of Electricity Usage Guarantee Fund, B.E.2557 and appointed the committee which is responsible for supervising and controlling an operation of Electricity Usage Guarantee Fund and interest from Electricity Usage Guarantee Fund. Provincial Electricity Authority has to made fund transfer at the amount equal to the net increase in electricity usage guarantee for each month to the Electricity Usage Guarantee Fund account. In case of working capital deficiency or liquidity difficulty, Provincial Electricity Authority can use the electricity usage guarantee fund as a working capital under consideration and approval of the Board of Directors of Provincial Electricity Authority. Then, Provincial Electricity Authority will be required to repay to electricity usage guarantee fund for not less than Baht 100 million on each month by depositing into the Electricity Usage Guarantee Fund account until the amount is fully covered. Also, Provincial Electricity Authority is required to make a payment of interest at the interest rate of saving accounts for state enterprises specified by Krung Thai Bank Public Company Limited by depositing into the Interest from Electricity Usage Guarantee Fund. In case of working capital deficiency or liquidity difficulty, the repayment can be postponed under the approval of the Governor and should be reported to the Board of Directors.

30. Provision for long-term employee benefits

Provision for long-term employee benefits as at 31 December 2023 and 2022 are as follows:

	(Unit: Million Baht)			
	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Provision for long-term post employee benefits	15,154	14,754	15,150	14,750
Provision for special post employee benefits	415	413	415	413
Provision for long service year award	599	565	599	565
Total	16,168	15,732	16,164	15,728



Provision for long-term employee benefits are presented as follows:

(Unit: Million Baht)

	Consolidated financial statements					
	2023			2022		
	Post-employment benefits	Other long-term employee benefits	Total	Post-employment benefits	Other long-term employee benefits	Total
Provision for long-term employee benefits at beginning of year	15,167	565	15,732	16,103	151	16,254
Included in profit or loss:						
Current service cost	877	46	923	1,010	17	1,027
Interest cost	394	14	408	346	3	349
Past service costs and gains or losses on settlement	175	-	175	146	(1)	145
Actuarial loss	-	22	22	-	440	440
Included in other comprehensive income:						
Actuarial loss (gain) arising from Demographic assumptions changes	-	-	-	(57)	-	(57)
Financial assumptions changes	108	-	108	(1,304)	-	(1,304)
Experience adjustments	134	-	134	398	-	398
Benefits paid during the year	(1,286)	(48)	(1,334)	(1,475)	(45)	(1,520)
Provision for long-term employee benefits at end of year	<u>15,569</u>	<u>599</u>	<u>16,168</u>	<u>15,167</u>	<u>565</u>	<u>15,732</u>

(Unit: Million Baht)

	Separate financial statements					
	2023			2022		
	Post-employment benefits	Other long-term employee benefits	Total	Post-employment benefits	Other long-term employee benefits	Total
Provision for long-term employee benefits at beginning of year	15,163	565	15,728	16,101	151	16,252
Included in profit or loss:						
Current service cost	877	46	923	1,009	17	1,026
Interest cost	394	14	408	345	3	348
Past service costs and gains or losses on settlement	175	-	175	146	(1)	145
Actuarial loss	-	22	22	-	440	440
Included in other comprehensive income:						
Actuarial loss (gain) arising from Demographic assumptions changes	-	-	-	(57)	-	(57)
Financial assumptions changes	108	-	108	(1,304)	-	(1,304)
Experience adjustments	134	-	134	398	-	398
Benefits paid during the year	(1,286)	(48)	(1,334)	(1,475)	(45)	(1,520)
Provision for long-term employee benefits at end of year	<u>15,565</u>	<u>599</u>	<u>16,164</u>	<u>15,163</u>	<u>565</u>	<u>15,728</u>



During the year 2023, Provincial Electricity Authority has approved an amendment to change the annual cumulative vacation schedule for retired employees from 40 days to 45 days. The change is considered to be an amendment of the retirement benefit scheme and resulted in an increase of Baht 175 million in long-term employee benefit reserve. Provincial Electricity Authority recorded the impact of the change by recognising past service costs as an expense immediately in the statement of comprehensive income.

The Group expects to pay Baht 1,420 million of long-term employee benefits during the next year (2022: Baht 1,316 million) (Provincial Electricity Authority only: Baht 1,420 million, 2022: Baht 1,316 million).

As at 31 December 2023, the weighted average duration of the liabilities for long-term employee benefit is 21.1 years (2022: 21.2 years) (Provincial Electricity Authority only: 21.1 years, 2022: 21.2 years).

Significant actuarial assumptions are summarised below:

(Unit: percent per annum)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Discount rate	3.33 - 4.01	2.15 - 3.36	3.33	3.36
Inflation rate	2.00 - 3.00	2.00	2.00	2.00
Salary increase rate	7.00 - 8.00	7.00 - 8.00	7.00 - 8.00	7.00 - 8.00
Turnover rate	0.20 - 17.19	0.00 - 10.00	0.20 - 10.00	0.20 - 10.00
Mortality rate	Thai mortality table 2017 with 3% adjustment of mortality rate	Thai mortality table 2017 with 3% adjustment of mortality rate	Thai mortality table 2017 with 3% adjustment of mortality rate	Thai mortality table 2017 with 3% adjustment of mortality rate

The result of sensitivity analysis for significant assumptions that affect the present value of the long-term employee benefit obligation as at 31 December 2023 and 2022 are summarised below:

(Unit: Million Baht)

		2023			
		Consolidated financial statements		Separate financial statements	
	(%)	Increase	Decrease	Increase	Decrease
Discount rate	1	(1,635)	1,976	(1,634)	1,975
Inflation rate	1	115	(99)	115	(99)
Salary increase rate	1	1,924	(1,625)	1,923	(1,625)
Turnover rate	20*	(114)	119	(113)	118
Mortality rate	1	82	(96)	82	(96)

* percent of assumptions



(Unit: Million Baht)

		2022			
		Consolidated financial statements		Separate financial statements	
		(%)	Increase	Increase	Decrease
Discount rate	1	(1,507)	1,809	(1,507)	1,808
Inflation rate	1	105	(91)	105	(91)
Salary increase rate	1	1,771	(1,506)	1,771	(1,506)
Turnover rate	20*	(102)	107	(102)	106
Mortality rate	1	72	(84)	72	(84)

* percent of assumptions

31. Revenue from contracts with customers

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Type of goods or service:				
Sale of electricity	660,041	578,469	660,041	578,469
Construction service income	4,489	4,422	4,406	4,014
Rendering of services	11,981	10,326	11,926	10,283
Total revenue from contracts with customers	676,511	593,217	676,373	592,766

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Timing of revenue recognition:				
Revenue recognised at a point in time	4,064	3,436	4,060	3,393
Revenue recognised over time	672,447	589,781	672,313	589,373
Total revenue from contracts with customers	676,511	593,217	676,373	592,766

Set out below is a reconciliation of the revenue from contracts with customers with the amounts disclosed in Note 34 to the consolidated financial statements relating to the segment information:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
External customers	676,511	593,217	676,373	592,766
Inter-segment	27	73	-	-
	676,538	593,290	676,373	592,766
Adjustments and eliminations	(27)	(73)	-	-
Total revenue from contracts with customers	676,511	593,217	676,373	592,766



Assistance and support in accordance with measures to relieve impacts from the rising energy prices situation

On 10 May 2022, the Cabinet passed a resolution approving budget for urgent measures to mitigate the impacts on people from the energy price situation caused by conflicts in the European region. In the meetings held on 29 March 2022, and 19 April 2022, measures to reduce Ft for residential user type 1: a residential user and type 2: a small business user (excluding government agencies and state-owned enterprises) with electricity consumption not exceeding 300 units per month for 4 months, for monthly electricity bills from May 2022 to August 2022 by expending the funds from Annual Budget Expenditure Act, Budget B.E.2565, the central fund appropriation and reserves for emergencies or necessities. Provincial Electricity Authority is eligible for a total budget of Baht 1,485 million, and fully received such amount in the year 2022.

On 13 September 2022, the Cabinet passed a resolution approving the Ministry of Energy's proposed measures to mitigate impacts on user from the high energy price situation. The measures were established to reduce Ft for residential user type 1: a residential user with electricity consumption not exceeding 500 units per month for 4 months, for the monthly electricity bills from September 2022 to December 2022. The electricity bills for September 2022 expended the funds from Annual Budget Expenditure Act, Budget B.E. 2565, the central fund appropriation and reserves for emergencies or necessities. The electricity bills from October 2022 to December 2022 expended the funds from Annual Budget Expenditure Act, Budget B.E. 2566, the central fund appropriation and reserves for emergencies or necessities. Provincial Electricity Authority has been allocated a total budget of Baht 6,346 million, whereby it received Baht 1,601 million in the year 2022 and the remaining Baht 4,745 million in January 2023.

On 7 March 2023, the Cabinet passed a resolution approving a budget for measures to mitigate the impacts on user from the high energy price situation. During the meeting held on 24 January 2023, measures were established to reduce Ft for residential user type 1: a residential user with electricity consumption not exceeding 300 units per month for 4 months, for the monthly electricity bills from January 2023 and April 2023 by expending the funds from Annual Budget Expenditure Act, Budget B.E. 2566, the central fund appropriation and reserves for emergencies or necessities. Provincial Electricity Authority is allocated a total budget of Baht 2,674 million, whereby it received Baht 2,022 million during the year 2023, and the remaining amount was received through the allocation of financial support from a state-owned enterprise, in accordance with a letter dated 14 November 2023, whereby Baht 2,680 million was received in the year 2023.

Following the Cabinet resolution approving the budget during the meeting held on 2 May 2023 and measures aimed at reducing Ft including urgent measures dated 15 May 2023, the Election Commission passed a resolution approving a budget for measures to mitigate the impacts on user from the high energy price situation. These measures were established to reduce Ft for residential user type 1: a residential user with electricity consumption not exceeding 300 units per month for 4 months, for the monthly electricity bills from May 2023 to August 2023, and measure to reduce Ft for a residential user with electricity consumption not exceeding 500 units per month, amounting to Baht 150 per user before VAT, for the monthly electricity bills for May 2023, by expending the funds from Annual Budget Expenditure Act, Budget B.E. 2566, the central fund appropriation and reserves for emergencies or necessities. Provincial Electricity Authority and other electricity authority have been allocated a total budget of Baht 10,464 million, whereby Baht 6,838 million was received in the year 2023.



Power Development Fund subsidies to support underprivileged power consumers under Section 97(1)

In accordance with the resolution of the National Energy Policy Council on 13 August 2015, Provincial Electricity Authority is required to provide electricity subsidies to non-juristic residential households with installed meters of not exceeding 5 amps and with electricity consumption not exceeding 50 units per month, for a consecutive period of not less than 3 months. The subsidies will be disbursed from the Power Development Fund under Section 97(1). For the period from January 2023 to April 2023 amounted to Baht 1,065 million (for the year ended 31 December 2022: Baht 2,430 million).

On 7 March 2023, the Energy Regulatory Commission (ERC) approved the consideration outcome for the financial position (actual values) for the year 2021, with Provincial Electricity Authority having a return of excess benefits of Baht 695 million. The accrued revenue for 2021 of the Power Development Fund subsidies to support underprivileged power consumers under Section 97(1) of Baht 593 million will be deducted. The return of the remaining benefits will be retained by Provincial Electricity Authority as a reserve until further notice by the Energy Regulatory Commission ERC.

On 9 March 2023, in accordance with the resolution of the National Energy Policy Council, Provincial Electricity Authority is required to provide electricity subsidies to non-juristic residential households with installed meters of not exceeding 5 amps and with electricity consumption not exceeding 50 units per month, for a consecutive period of not less than 3 months. Provincial Electricity Authority has conducted inspections to ensure the avoidance of duplication of rights, and eligible electricity users have duly registered as recipients of a state welfare card. For electricity bills from May 2023 onwards, the cost of subsidising underprivileged power consumers is incorporated into the revenue requirements of the electricity distribution authority, a consideration integral to assessing the financial position of Provincial Electricity Authority.

On 15 March 2024, the Energy Regulatory Commission (ERC) approved the consideration outcome for the financial position (actual values) for the year 2022, with Provincial Electricity Authority reporting revenue lower than the desired amount in relation to the expenditure of the Power Development Fund under Section 97(1) of 2022, totaling Baht 2,430 million. Moreover, the ERC approved a directive for a state-owned enterprise to return the excess benefits for 2022 (actual values) to Provincial Electricity Authority, thereby adjusting the desired revenue for the expenditure of the Power Development Fund subsidies to support underprivileged power consumers under Section 97(1) of 2022 amounting to Baht 2,430 million (accrued revenue from the Power Development Fund for 2022 of Provincial Electricity Authority).

Rendering of services

Provincial Electricity Authority has received license to operate the third type of telecommunication business No. 3n/50/003 (fiber optic) since 1 March 2007 from Office of The National Broadcasting and Telecommunications Commission, which recognised as service income. During the years ended 31 December 2023, Provincial Electricity Authority has recognised sales and service revenues amounting to Baht 142 million (2022: Baht 140 million).

Provincial Electricity Authority has received license to operate broadcasting and television business No. B1-F22051-0004-56 in providing assistance on broadcasting and television. The service includes a rental of electric pole for putting up cable line by National Broadcasting and Telecommunications Commission beginning from 16 December 2013 to 15 December 2028. During the years ended 31 December 2023, Provincial Electricity Authority has revenues on rental of electric pole for putting up cable line from Cable TVs business amounting to Baht 13 million (2022: Baht 14 million).



32. Revenue compensation

With respect to sending contributions to and disbursement of money from the Power Development Fund under Section 97(1) and Section 97 paragraph two for revenue compensation among power utilities that are Provincial Electricity Authority, Metropolitan Electricity Authority and Electricity Generating Authority of Thailand to enhance extensive electrification and to support the policy on development decentralization to provincial areas, Metropolitan Electricity Authority is required to remit contributions to the Power Development Fund in accordance with Section 97(1) and Section 97 paragraph two on a monthly basis. The contributions are calculated based on the amount of Baht 1,000 million per month, in accordance with the Order of the Energy Regulatory Commission No.8/2023 dated 31 January 2023 (2022: Baht 1,000 million per month in accordance with the Order of the Energy Regulatory Commission No. 28/2022 dated 24 February 2022). Provincial Electricity Authority can request to disburse from the Power Development Fund in compliance with Section 97(1) and Section 97 paragraph two in the amount equal to the amount that Metropolitan Electricity Authority has contributed to the Power Development Fund each month. For the year ended 31 December 2023, the amount that Provincial Electricity Authority disbursed from the Power Development Fund in this matter was Baht 12,000 million (2022: Baht 12,000 million).

33. Finance cost

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Interest expenses on borrowings	3,848	3,572	3,842	3,566
Interest expenses on lease liabilities	85	65	83	62
Interest expenses on liabilities under installment contract	1	-	1	-
Total	3,934	3,637	3,926	3,628

34. Segment information

Operating segment information is reported in a manner consistent with Provincial Electricity Authority's internal reports that are regularly reviewed by the chief operating decision maker in order to make decisions about the allocation of resources to the segment and assess its performance.

For management purposes, the Group is organised into business units by region and have five reportable segments as follows:

- North
- Northeast
- Central region
- South
- Head office

The Group has aggregated the operating segments presented them as the reportable segment. The aggregated operating segments have similar economic characteristics and are similar in the other respects required by the standard.

The chief operating decision maker monitors the operating results of the business units separately for the purpose of making decisions about resource allocation and assessing performance. Provincial Electricity Authority segment performance is measured based on operating profit or loss and total assets and on a basis consistent with that used to measure operating profit or loss and total assets in the financial statements.

The basis of accounting for any transactions between reportable segments is consistent with that for third party transactions.

The following tables present revenue and profit and total assets/total liabilities information regarding the Group's operating segments.



Total assets/total liabilities information regarding operating segments as at 31 December 2023 and 2022 are as follows:

(Unit: Million Baht)

	Northern		Northeastern		Central		Southern		Head office		Elimination		Consolidated financial statement	
	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022
Assets														
Trade receivables	8,231	8,666	9,217	9,501	23,909	26,886	9,239	9,563	3,626	7,908	(15)	(18)	54,207	62,506
Other current assets	353	299	433	295	883	531	562	438	55,658	53,383	(2)	(1)	57,887	54,945
Property, plant and equipment	76,158	70,579	81,820	74,888	113,345	107,749	76,748	72,397	6,250	5,822	(30)	(17)	354,291	331,418
Other non-current assets	13,197	12,811	14,253	15,643	18,298	15,666	15,071	14,026	23,158	21,627	(4,898)	(3,766)	79,079	76,007
Total Assets	97,939	92,355	105,723	100,327	156,435	150,832	101,620	96,424	88,692	88,740	(4,945)	(3,802)	545,464	524,876
Liabilities and equity														
Current liabilities	81,994	75,115	96,145	88,938	(326,290)	(300,991)	44,183	39,375	183,814	183,283	(18)	(18)	79,828	85,702
Long-term loans	-	-	-	-	-	-	-	-	159,222	142,613	-	-	159,222	142,613
Other non-current liabilities	18,851	18,566	25,263	25,044	40,807	39,142	19,649	19,575	6,905	5,465	(31)	(4)	111,444	107,788
Total Liabilities	100,845	93,681	121,408	113,982	(285,483)	(261,849)	63,832	58,950	349,941	331,361	(49)	(22)	350,494	336,103
Equity	(2,906)	(1,326)	(15,685)	(13,655)	441,918	412,681	37,788	37,474	(261,249)	(242,621)	(4,896)	(3,780)	194,970	188,773
Total Liabilities and equity	97,939	92,355	105,723	100,327	156,435	150,832	101,620	96,424	88,692	88,740	(4,945)	(3,802)	545,464	524,876



Total assets/total liabilities information regarding operating segments as at 31 December 2023 and 2022 are as follows:

(Unit: Million Baht)

	Northern		Northeastern		Central		Southern		Head office		Eliminations		Consolidated financial statement	
	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022
Statement of comprehensive income														
Sales and rendering of services	102,232	88,799	115,240	100,274	344,549	305,537	113,775	97,762	742	918	(27)	(73)	676,511	593,217
Revenue compensations	1,803	1,769	2,038	2,012	6,155	6,267	2,004	1,952	-	-	-	-	12,000	12,000
Other income	143	177	197	164	212	289	349	403	256	363	(75)	(69)	1,082	1,327
Total revenues	104,178	90,745	117,475	102,450	350,916	312,093	116,128	100,117	998	1,281	(102)	(142)	689,593	606,544
Cost of electricity	92,599	80,095	104,161	90,621	303,194	266,849	101,722	86,959	-	-	-	-	601,676	524,524
Employee compensations	3,935	3,943	4,654	4,817	4,742	4,784	3,666	3,653	3,813	3,887	(5)	(6)	20,805	21,078
Employee benefit expenses	296	379	360	455	358	470	280	359	235	298	-	-	1,529	1,961
Directors and management's benefits	5	6	7	7	6	6	7	6	90	100	-	-	115	125
Preventive, repair and maintenance, and construction expenses	1,192	1,159	1,512	1,347	2,439	2,094	1,668	1,650	1,464	1,690	(17)	(10)	8,258	7,930
Depreciation and amortisation expenses	5,659	5,307	6,175	5,732	8,341	7,815	5,995	5,767	2,104	1,870	-	-	28,274	26,491
Other operating expenses	2,004	1,189	2,526	2,280	2,531	2,144	2,271	1,964	1,777	1,622	(6)	(45)	11,103	9,154
Other expenses	8	15	94	82	57	317	156	224	75	57	-	-	390	695
Total expenses	105,698	92,093	119,489	105,341	321,668	284,479	115,765	100,582	9,558	9,524	(28)	(61)	672,150	591,958
Share of profit from investments in associates	-	-	-	-	-	-	-	-	-	-	60	63	60	63
Finance income	18	20	18	14	56	36	23	19	905	407	-	-	1,020	496
Finance cost	(11)	(10)	(11)	(9)	(15)	(13)	(13)	(13)	(3,885)	(3,592)	-	-	(3,935)	(3,637)
Profit (loss) before income tax	(1,513)	(1,338)	(2,007)	(2,886)	29,289	27,637	373	(459)	(11,540)	(11,428)	(14)	(18)	14,588	11,508
Tax income (income tax expenses)	-	-	-	-	-	-	-	-	4	(1)	-	-	4	(1)
Profit (loss) for the year	(1,513)	(1,338)	(2,007)	(2,886)	29,289	27,637	373	(459)	(11,536)	(11,429)	(14)	(18)	14,592	11,507
Other comprehensive income	-	-	-	-	-	-	-	-	(243)	963	(6)	-	(249)	963
Total comprehensive income for the year	(1,513)	(1,338)	(2,007)	(2,886)	29,289	27,637	373	(459)	(11,779)	(10,466)	(20)	(18)	14,343	12,470

Major customers

For the years 2023 and 2022, the Group has no major customer with revenue of 10 percent or more of an entity's revenues.

35. Provident fund

The Group and its employees have jointly established a provident fund in accordance with the Provident Fund Act B.E. 2530 which employees have option to pay into the fund accumulated at the rate of 3 - 20 percent of the salary of each and Provincial Electricity Authority will pay into the fund at the rate of 9 - 11 percent of salary of members. The fund, which is managed by MFC Asset Management Public Company Limited, will be paid to employees upon termination in accordance with the fund rules. The contributions for the year 2023 amounting to approximately Baht 1,245 million (2022: Baht 1,279 million) (Provincial Electricity Authority only: Baht 1,243 million 2022: Baht 1,277 million) were recognised as expenses.

36. Commitments and contingent liabilities

36.1 Capital commitments

As at 31 December 2023, the Group had capital commitments of approximately Baht 29,991 million (2022: Baht 30,233 million) (Provincial Electricity Authority only: Baht 29,896 million 2022: Baht 30,023 million), mainly relating to purchase materials and supplies for construction.

36.2 Lease commitments

As at 31 December 2023 and 2022, the Group has future lease payments for land, buildings, equipment and vehicles required under these non-cancellable leases contracts that have not yet commenced as follows:

	Consolidated financial statements		Separate financial statements	
	2023	2022	2023	2022
Payable:				
Within 1 year	229	245	229	245
Over 1 and up to 5 years	129	333	129	333

36.3 Significant long-term agreement commitments

As at 31 December 2023, Provincial Electricity Authority has commitment under the Power Purchase Agreement with the Very Small Power Producer (VSPP) amounting to 963 contracts (2022: 953 contracts). The performance obligations are in accordance with the terms and conditions, specified in the contracts. The purchase of electricity consists of the base electricity cost, electricity bill according to the formula for automatically adjusting the electricity rate, adder on the purchase price of electricity and deduction of the operating fee of 2 percent (if any). The purchase prices will vary according to the contractual sales volume and the type of fuel that each VSPP has contracted with Provincial Electricity Authority.



36.4 Contributions to the Power Development Fund commitments

According to the Energy Business Act B.E. 2550, Sections 97(4) and 97(5) (Act), Provincial Electricity Authority must remit money to the Power Development Fund to promote the use of renewable energy and the technology used in the electricity business that has less impact on the environment, and to promote society and people to have knowledge, awareness and participation in electricity use. The amount delivered is based on calculation from Provincial Electricity Authority's distribution unit each month and other relevant information in accordance with the rules and conditions specified in the said Act.

On 29 December 2022, the Energy Regulatory Commission issued announcements regarding the contribution to the Power Development Fund for electricity distribution licensees to promote the use of renewable energy and the technology used that has less impact on the environment, and the contribution to the Power Development Fund for electricity distribution licensees to promote society and people to have knowledge, awareness and involvement in electricity use. These announcements requires that Provincial Electricity Authority make contribution to the funds at a rate of Baht 0.00 per unit of net distribution in the month in which the electricity bill is charged, effective from 1 January 2023 onwards.

During the current year, Provincial Electricity Authority recognised the transactions based on the specified rates and recorded such no expenses in profit or loss (2022: Baht 953 million).

36.5 Litigations

As at 31 December 2023, Provincial Electricity Authority was being sued in 243 cases with claims totaling Baht 20,930 million, which are under judicial proceedings. Provincial Electricity Authority expects to have full compensation of the claims for 6 cases. The remaining cases, 181 cases are not expected to the results in significant losses, and in 56 cases the compensation is expected to be less than the claims.

A summary of the lawsuits that are not expected to the results of significant losses and that may result in monetary damages less than the claims are as follows:

1. A total of 9 cases in which Provincial Electricity Authority was accused of breaching civil contracts, with the amount in dispute totalling Baht 68 million.
2. A total of 50 cases in which Provincial Electricity Authority was accused of committing infringement or negligence that caused damage to another person, with the amount in dispute totalling Baht 256 million.
3. A total of 13 cases in which Provincial Electricity Authority is in dispute regarding employment and employee benefits, with the amount in dispute totalling Baht 51 million.
4. A total of 93 cases in which the Provincial Electricity Authority was accused of committing infringement or negligence in the use of administrative power, with the amount in dispute totalling Baht 222 million.
5. A total of 26 cases in which Provincial Electricity Authority is required to revoke the rule and administrative act, with the amount in dispute totalling Baht 230 million.
6. A total of 12 cases in which Provincial Electricity Authority was accused breaching an administrative agreement, with the amount in dispute totalling Baht 6,972 million.
7. A total of 34 cases in which Provincial Electricity Authority is in dispute with Very Small Power Producer (VSPP), with the amount in dispute totalling Baht 12,981 million.

36.6 Loan guarantee obligation

Thai Digital Energy Development Company Limited (associated company)

As of 31 December 2023, the subsidiary has a guarantee obligation related to a long-term loan obtained by Thai Digital Energy Development Company Limited from a bank. This obligation resulted from entering into a guarantee agreement with the bank, which includes a principal amount not exceeding Baht 240 million, compound interest and others, as specified in the agreements (In the event of a default, the subsidiary's liability will be calculated proportionally to its shareholding in the associated company.) The Company is required to comply with the conditions stipulated in the said guarantee agreement, including the maintenance of financial ratios. However, on 13 December 2023, the subsidiary received a notifying of waiver of non-compliance with the conditions of maintaining the financial ratio as at 31 December 2023 from the lending bank of the associated company.

R E N Korat Energy Company Limited (associated company)

On 15 September 2023, the subsidiary entered into a financial support agreement with R E N Korat Energy Co., Ltd., an associated company, whereby the subsidiary pledged ordinary shares of the associated company owned by subsidiary as collateral for long-term loans, revolving credit lines, and guarantees provided to the associated company. Additionally, the subsidiary is obligated to provide financial support in proportion to its shareholding if the associated company incurs cost overruns, up to a maximum of Baht 9.5 million. This obligation extends to covering cash deficiencies on debt reserve requirements, up to a maximum of Baht 100 million, and responding to requests from the lending bank for a guarantee, not exceeding Baht 50 million.

37. Fair value hierarchy

As at 31 December 2023 and 2022, the Group had the assets and liabilities that were measured at fair value or for which fair value was disclosed using different levels of inputs as follows:

(Unit: Million Baht)

	Consolidated financial statements			
	2023			
	Level 1	Level 2	Level 3	Total
Assets measured at fair value				
Financial assets measured at FVOCI				
Listed company equity investment	1	-	-	1
Non-listed company equity investment	-	-	282	282
Assets for which fair value are disclosed				
Investment properties	-	-	726	726
Liabilities for which fair value are disclosed				
Long-term loans	-	147,548	94	147,642





(Unit: Million Baht)

Consolidated financial statements				
2022				
	Level 1	Level 2	Level 3	Total
Assets measured at fair value				
Financial assets measured at FVOCI				
Listed company equity investment	2	-	-	2
Non-listed company equity investment	-	-	255	255
Assets for which fair value are disclosed				
Investment properties	-	-	730	730
Liabilities for which fair value are disclosed				
Long-term loans	-	136,220	143	136,363

(Unit: Million Baht)

Separate financial statements				
2023				
	Level 1	Level 2	Level 3	Total
Assets measured at fair value				
Financial assets measured at FVOCI				
Listed company equity investment	1	-	-	1
Assets for which fair value are disclosed				
Investment properties	-	-	726	726
Liabilities for which fair value are disclosed				
Long-term loans	-	147,548	94	147,642

(Unit: Million Baht)

Separate financial statements				
2022				
	Level 1	Level 2	Level 3	Total
Assets measured at fair value				
Financial assets measured at FVOCI				
Listed company equity investment	2	-	-	2
Assets for which fair value are disclosed				
Investment properties	-	-	730	730
Liabilities for which fair value are disclosed				
Long-term Loans	-	136,220	143	136,363

During the current year, the Group has no change in methods and assumptions used in measured the fair value of financial instruments and, there were no transfers within the fair value hierarchy.



38. Financial instruments

38.1 Financial risk management objectives and policies

The Group's financial instruments principally comprise cash and cash equivalents, trade and other receivable, specific-purpose deposits at financial institution, restricted bank deposits, other non-current financial assets, trade and other payables, long-term loans, lease liabilities, and other non-current payables. The financial risks associated with these financial instruments and how they are managed is described below.

Credit risk

The Group is exposed to credit risk primarily with respect to trade and other receivable, specific-purpose deposits at financial institution, restricted bank deposits, bank deposits, deposits at financial institution, other non-current financial assets, and other financial instruments, the maximum exposure to credit risk is limited to the carrying amounts as stated in the statement of financial position.

Trade receivables

The Group manages the risk by adopting appropriate credit control policies and procedures and therefore does not expect to incur material financial losses. Outstanding trade receivables are regularly monitored. Most of the electricity debtors of Provincial Electricity Authority are juristic persons and natural persons. There may be a risk arising from the debtor's failure to comply with the terms of the contract, which may cause damage to Provincial Electricity Authority and there may be a risk of credit concentration. However, there has been no significant losses that effect to Provincial Electricity Authority in the past.

An impairment analysis is performed at each reporting date to measure expected credit losses. The provision rates are based on days past due for groupings of various customer segments with similar credit risks. The Group classifies customer segments by revenues type and customer type. The calculation reflects the probability-weighted outcome, the time value of money and reasonable and supportable information that is available at the reporting date about past events, current conditions and forecasts of future economic conditions.

Financial instruments and cash deposits

The Group manages the credit risk from balances with banks and financial institutions by making investments only with approved counterparties and within credit limits assigned to each counterparty. Counterparty credit limits are reviewed. The limits are set to minimise the concentration of risks and therefore mitigate financial loss through a counterparty's potential failure to make payments.





Market risk

There are two types of market risk comprising foreign currency risk and interest rate risk.

Foreign currency risk

The Group's exposure to the foreign currency risk relates primarily to loans that are denominated in foreign currencies. Exchange rate risk arises from changes in foreign currency exchange rates, which caused an impact on Provincial Electricity Authority in the current period and in the following years, which the Group It is expected that the effect of exchange rate changes is insignificant on the Group's foreign-denominated financial assets and liabilities. Because most of the group's transactions are made in Thai baht.

Interest rate risk

The Group's exposure to interest rate risk relates primarily to its banks deposits, trade and other receivable, specific-purpose deposits at financial institution, restricted bank deposits, other non-current receivables, trade and other payables, long-term loans, lease liabilities, and other non-current payables. Most of the Group's financial assets and liabilities bear floating interest rates or fixed interest rates which are close to the market rate.

As at 31 December 2023 and 2022, significant financial assets and liabilities classified by type of interest rate are summarised in the table below, with those financial assets and liabilities that carry fixed interest rates further classified based on the maturity date, or the repricing date if this occurs before the maturity date.

(Unit: Million Baht)

Consolidated financial statements							
2023							
	Fixed interest rates			Floating interest rate	Non-interest bearing	Total	Effective interest rate (% per annum)
	Within 1 year	1-5 year	Over 5 years				
Financial assets							
Cash and cash equivalents	756	-	-	7,394	64	8,214	0.150 - 1.700
Trade and other receivables	184	-	-	-	54,023	54,207	0.000 - 13.403
Specific-purpose deposits at financial institutions	36,859	-	-	5,524	-	42,383	0.150 - 2.825
Restricted bank deposits	50	-	-	-	-	50	1.100
Other non-current receivables	-	572	1,955	-	1	2,528	0.000 - 13.403
	37,849	572	1,955	12,918	54,088	107,382	
Financial liabilities							
Trade and other payables	15	-	-	-	58,102	58,117	1.440 - 2.361
Long-term loans	11,499	51,280	95,432	907	104	159,222	1.330 - 4.850
Lease liabilities	908	1,291	543	-	-	2,742	0.872 - 6.998
Other non-current payables	-	31	-	-	1	32	1.440 - 2.361
	12,422	52,602	95,975	907	58,207	220,113	

(Unit: Million Baht)

Consolidated financial statements							
2022							
	Fixed interest rates			Floating interest rate	Non-interest bearing	Total	Effective interest rate (% per annum)
	Within 1 year	1-5 year	Over 5 year				
Financial assets							
Cash and cash equivalents	3,019	-	-	6,613	57	9,689	0.100 - 1.000
Trade and other receivables	134	-	-	-	62,372	62,506	0.000 - 10.162
Specific-purpose deposits at financial institutions	33,869	-	-	4,088	-	37,957	0.100 - 2.100
Restricted bank deposits	50	-	-	-	-	50	0.250
Other non-current receivables	-	481	1,247	-	1	1,729	0.000 - 10.162
	37,072	481	1,247	10,701	62,430	111,931	
Financial liabilities							
Trade and other payables	10	-	-	-	66,581	66,591	1.440 - 2.361
Long-term loans	9,335	45,080	87,129	949	120	142,613	1.330 - 4.900
Lease liabilities	914	1,351	241	-	-	2,506	0.825 - 11.744
Other non-current payables	-	14	-	-	1	15	1.440 - 2.361
	10,259	46,445	87,370	949	66,702	211,725	

(Unit: Million Baht)

Separate financial statements							
2023							
	Fixed interest rates			Floating interest rate	Non-interest bearing	Total	Effective interest rate (% per annum)
	Within 1 year	1-5 year	Over 5 year				
Financial assets							
Cash and cash equivalents	-	-	-	7,169	58	7,227	0.150 - 0.700
Trade and other receivables	42	-	-	-	53,914	53,956	2.667 - 13.403
Specific-purpose deposits at financial institutions	36,859	-	-	5,524	-	42,383	0.150 - 2.825
Other non-current receivables	-	105	639	-	1	745	2.667 - 13.403
	36,901	105	639	12,693	53,973	104,311	
Financial liabilities							
Trade and other payables	15	-	-	-	57,892	57,907	1.440 - 2.361
Long-term loans	11,499	51,280	95,432	-	104	158,315	1.330 - 4.850
Lease liabilities	896	1,282	543	-	-	2,721	0.872 - 6.998
Other non-current payables	-	31	-	-	1	32	1.440 - 2.361
	12,410	52,593	95,975	-	57,997	218,975	





(Unit: Million Baht)

	Separate financial statements						
	2022						
	Fixed interest rates			Floating interest rate	Non-interest bearing	Total	Effective interest rate (% per annum)
Within 1 year	1-5 year	Over 5 year					
Financial assets							
Cash and cash equivalents	2,000	-	-	6,503	57	8,560	0.100 - 1.000
Trade and other receivables	27	-	-	-	62,065	62,092	2.667 - 10.162
Specific-purpose deposits at financial institutions	33,869	-	-	4,088	-	37,957	0.100 - 2.100
Other non-current receivables	-	79	265	-	1	345	2.667 - 10.162
	35,896	79	265	10,591	62,123	108,954	
Financial liabilities							
Trade and other payables	10	-	-	-	66,369	66,379	1.440 - 2.361
Long-term loans	9,335	45,080	87,129	-	120	141,664	1.330 - 4.900
Lease liabilities	908	1,325	241	-	-	2,474	0.825 - 11.744
Other non-current payables	-	14	-	-	1	15	1.440 - 2.361
	10,253	46,419	87,370	-	66,490	210,532	

Liquidity risk

The Group monitors the risk of a shortage of liquidity by maintaining sufficient cash and cash equivalents to support the Group's operations and reduce the risks that may arise from the effects of fluctuations in cash flow. Approximately 32.08 percent of the Group's debt will mature in less than one year at 31 December 2023 (2022: 36.37 percent) (Provincial Electricity Authority only: 32.15 percent, 2022: 36.43 percent) based on the carrying value of borrowings reflected in the financial statements. The Group has assessed the concentration of risk with respect to refinancing its debt and concluded it to be low. The Group has access to a sufficient variety of sources of funding.

The table below summarises the maturity profile of the Group's financial liabilities as at 31 December 2023 and 2022 based on contractual undiscounted cash flows:

(Unit: Million Baht)

Consolidated financial statements				
2023				
	Less than 1 year	1 - 5 year	Over 5 year	Total
Financial liabilities				
Trade and other payables	57,783	-	-	57,783
Deposits payable	571	-	-	571
Long-term loans	11,580	51,746	95,966	159,292
Lease liabilities	993	1,490	915	3,398
Other non-current payables	-	33	-	33
Total financial liabilities	70,927	53,269	96,881	221,077

(Unit: Million Baht)

	Consolidated financial statements			
	2022			
	Less than 1 year	1 - 5 year	Over 5 year	Total
Financial liabilities				
Trade and other payables	66,442	-	-	66,442
Deposits payable	382	-	-	382
Long-term loans	9,470	45,703	87,600	142,773
Lease liabilities	978	1,468	419	2,865
Other non-current payables	-	16	-	16
Total financial liabilities	77,272	47,187	88,019	212,478

(Unit: Million Baht)

	Separate financial statements			
	2023			
	Less than 1 year	1 - 5 year	Over 5 year	Total
Financial liabilities				
Trade and other payables	57,663	-	-	57,663
Deposits payable	571	-	-	571
Long-term loans	11,518	51,350	95,516	158,384
Lease liabilities	979	1,481	915	3,375
Other non-current payables	-	33	-	33
Total financial liabilities	70,731	52,864	96,431	220,026

(Unit: Million Baht)

	Separate financial statements			
	2022			
	Less than 1 year	1 - 5 year	Over 5 year	Total
Financial liabilities				
Trade and other payables	66,231	-	-	66,231
Deposits payable	382	-	-	382
Long-term loans	9,354	45,158	87,225	141,737
Lease liabilities	969	1,440	419	2,828
Other non-current payables	-	16	-	16
Total financial liabilities	76,936	46,614	87,644	211,194

38.2 Fair values of financial instruments

Since the majority of the Group's financial instruments are short-term in nature or carrying interest at rates close to the market interest rates, their fair value is not expected to be materially different from the amounts presented in the statement of financial position.

The estimated fair value of financial instruments, in comparison with the related amounts carried in the statement of financial position, is as follows:



(Unit: Million Baht)

	Consolidated and separate financial statements			
	2023		2022	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial liabilities				
Long-term loans	149,815	147,642	138,664	139,363

The methods and assumptions used by the Grouping estimating the fair value of financial instruments are as follows:

- The fair value of equity securities is generally derived from quoted market prices, or based on generally accepted pricing models when no market price is available.
- The fair value of fixed rate debentures and long-term loans is estimated by discounting expected future cash flow by the current market interest rate of loans with similar terms and conditions.
- The carrying amounts of debentures and long-term loans carrying interest at rates approximating the market rate, in the statement of financial position approximates their fair value.

39. Capital management

The primary objective of the Group's capital management is to ensure that it has appropriate capital structure in order to support its business and maximise value, and subsidiary meets financial covenants attached to the loan agreements of subsidiary. The subsidiary has complied with these covenants throughout the reporting periods.

As at 31 December 2023, the Group's debt-to-equity ratio was 1.80:1 (2022: 1.78:1) and Provincial Electricity Authority only was 1.79:1 (2022: 1.78:1).

40. Approval of financial statements

These financial statements were authorised for issue by Provincial Electricity Authority's Governor on 21 March 2024.





10-Year Profile

Item	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Sales and rendering of service (Million Baht, MB)	676,373	592,766	497,247	473,168	502,784	482,681	461,324	454,262	463,419	462,732
Other income (MB)	14,090	13,834	12,240	16,942	17,035	16,634	21,639	21,439	17,777	16,742
Operating expenses (MB)	671,573	590,709	491,565	476,195	503,185	475,650	452,105	446,548	456,528	455,647
Other expenses (MB)	4,316	4,323	3,901	3,970	3,317	3,049	3,406	3,265	3,595	3,430
Net profit (MB)	14,574	11,568	14,021	9,945	13,317	20,616	27,452	25,888	21,073	20,397
Investment property (MB)	52,527	53,578	50,132	48,622	23,206	34,356	29,517	37,457	37,230	27,154
Loans (MB)	158,315	141,664	127,221	107,439	75,651	71,580	76,151	78,075	84,283	82,254
Net assets (MB)	543,560	523,006	484,478	455,639	426,960	417,452	400,783	380,417	369,391	350,881
Customers	22,006,683	21,670,057	21,257,532	20,734,717	20,193,865	19,768,754	19,360,779	18,894,637	18,391,443	17,890,494
Total electricity sales, including free-of-charge electricity (Million Units)	148,976	144,579	139,687	134,868	138,179	134,674	132,401	129,674	123,212	118,632
Average distribution (Units/Customer)	6,770	6,672	6,571	6,504	6,843	6,812	6,839	6,863	6,699	6,631
Peak demand of electric power (MW)	24,239	22,714	21,282	20,001	20,952	19,475	19,721	20,439	18,597	17,724
Electricity purchase (Million Units)	157,420	152,518	147,737	142,676	146,017	142,296	139,548	137,078	130,390	125,484
- Purchase (Million Units)	157,324	152,417	147,650	142,586	145,932	142,191	139,443	136,974	130,299	125,380
- Self-generation (Million Units)	96	101	87	90	85	105	105	104	91	104
Transmission system (Circuit-Km)	15,842	15,282	14,719	13,527	13,097	12,765	12,258	11,776	11,564	11,414
High-voltage distribution system (Circuit-Km)	343,663	336,868	331,889	323,898	318,349	313,424	308,988	304,450	299,865	296,809
Low-voltage distribution system (Circuit-Km)	531,837	519,347	507,211	493,105	480,477	472,464	462,786	453,836	460,721	442,348
Number of PEA offices	948	948	946	946	946	945	933	933	933	933
Number of PEA employees	27,886	28,090	28,168	28,372	29,085	29,659	29,835	30,114	29,093	28,109





PEA
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