





For the World, For the People

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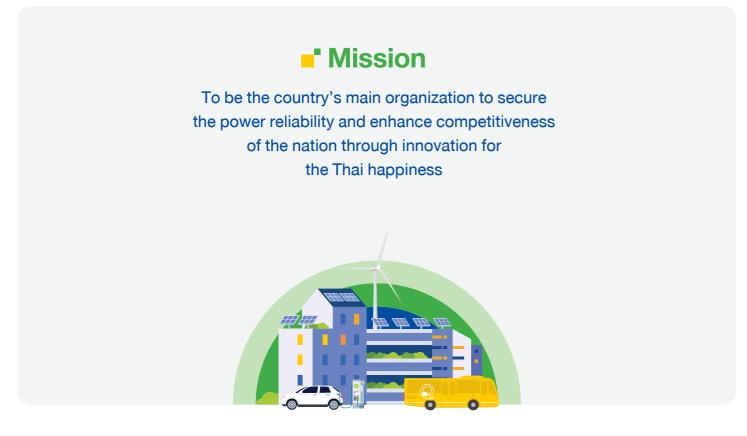
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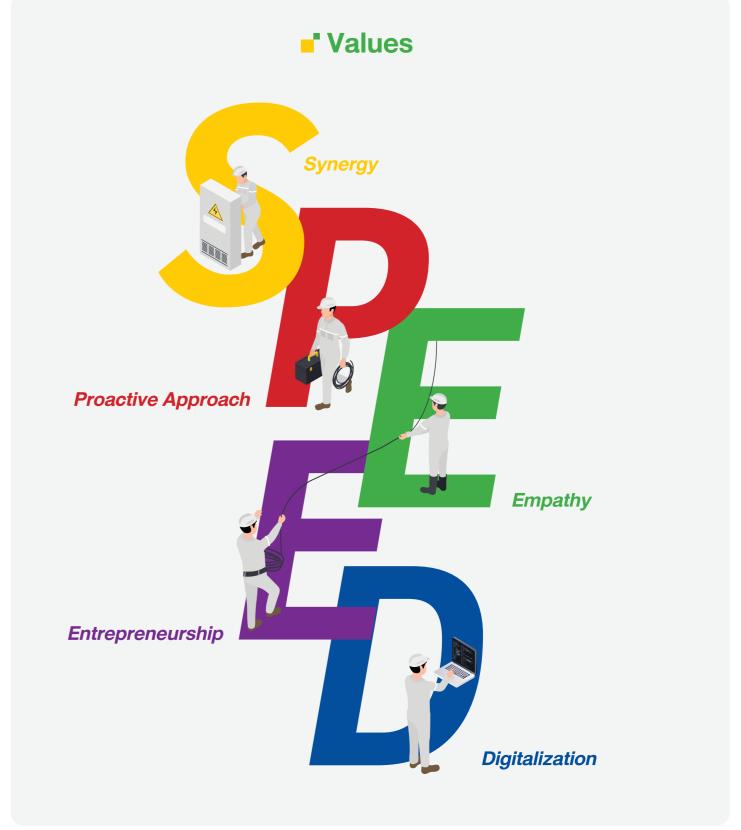
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Assurance Statement













EGAT is committed to carrying out the mission of sustainability by maintaining the energy security, enhancing the growth of EGAT Green Business and creating sustainable shared value with stakeholders. EGAT's endeavor is reflected by the significant operations throughout the year 2024 as follows:

Mission for energy security

As the energy landscape evolves, it is essential for EGAT, a state enterprise in the energy sector, to strike a balance between the rising demand for clean energy and increasing overall energy consumption. For this purpose, EGAT has developed Grid Modernization, the Renewable Energy Forecast Center (REFC) and the Demand Response Control Center (DRCC) to enhance efficiency and support the growing share of renewable energy in electricity generation. At the same time, EGAT has been looking for new alternative energy sources such as studying both in terms of engineering and economic aspect on the use of hydrogen in electricity generation in combination with natural gas. Additionally, EGAT has been conducting a feasibility study, exploring potential area, searching for appropriate technology and developing experts to get ready for the project of Small Modular Reactor (SMR) which is regarded as an important step in the clean energy development and responding to the demand of the country in an environmentally friendly energy as well as energy security.

Mission to achieve carbon neutrality

EGAT develops green energy innovations to support Thailand's goal of achieving net-zero emissions and to promote the sustainable use of clean energy. The goal of EGAT's Carbon Neutrality is within 2050. This year, EGAT has an increased proportion of renewable energy from the 24 MW Hydro Floating Solar Hybrid of Ubol Ratana Dam, Block 1 which has successfully supplied electricity to the commercial operation. In addition, EGAT is in the process of implementing the same project with other EGAT dams. Furthermore, EGAT Green Business is being developed as new energy solutions such as ENZY Platform, an energy management system which displays the results, controls and recommends the energy use for maximum efficiency will respond to the changing way of life of consumers in the present time.





EGAT is committed to carrying out the mission of sustainability by maintaining the energy security, enhancing the growth of EGAT Green Business and creating sustainable shared value with stakeholders.

Mission for sustainable society

Recognizing the importance of organizational management grounded in good governance, environmental and social responsibility, and shared value creation with stakeholders, EGAT has implemented social and community development initiatives such as development of a smart city model in Mae Moh District, Lampang Province in Mae Moh Smart City Project. Focusing on the participation of community, the project promotes three types of community development around EGAT's area, namely, Smart Environment, Smart Energy and Smart Economy. Smart Environment consists of the activities such as development of database as online platform to prevent, mitigate, warn and prepare for coping with the problems concerning energy and environment. Smart Energy deals with the activity of purchasing biomass waste

from agriculture to process as fuel for biomass pellets. Smart Economy promotes agriculture which uses technology and innovation in the management to create occupation and generate income for the community.

Moreover, to celebrate His Majesty the King's 6th Cycle Birthday Anniversary, EGAT implemented 10 projects to continue the royal wish such as the project to support the Crown Prince Hospitals and Kanchanabaramee Foundation, the project of No.5 solar cells installation in the areas of the Royal Projects and Khok Nong Na Model which is a continued support to the owners of 72 agricultural plots who have attended the Agri-Nature training course. Moreover, EGAT signed a memorandum with the Chaipatana Foundation and Utokapat Foundation under the royal patronage on the 100th Anniversary of His Majesty's Birth: Upholding His Royal Aspirations for the Community – Chaipattana

& EGAT Project. The objectives of the MoU are to enhance community development by transferring appropriate knowledge in natural resources and environmental management, agricultural and social development, and water and energy management to communities surrounding EGAT's operational areas. This aims to promote well-being, self-reliance, and sustainable economic, social, and environmental development.

From the commitment to conduct the mission in sustainability, EGAT has received significant awards such as Outstanding State Enterprise Award 2024 in the category of outstanding social responsibility from the project of smart grid in Pa Bong Sub-district, Muang District, Mae Hong Son Province and in the category of outstanding creativity and innovation from the project of energy management system for the future electricity generation, ERC Sandbox and ENZY Platform. Moreover, EGAT was

awarded top state enterprise CEO in the category of environment, Model of Human Rights Organization 2024, CSR Awards 2024, EIA Monitoring Awards 2024, CSR DPIM Continuous Award 2024 and CSR DIW Continuous Award 2024. The awards reflect EGAT's success in maintaining the security of electricity system as well as responsibility for society and community.

Meanwhile, EGAT continues to advance its organizational development in response to the challenges of the energy transition. Its short- and mid-term goals (2025–2027) focus on creating energy innovations to support the country's major energy shift, guided by the principles of energy security, fairness, and environmental conservation. For the long-term goal (2028–2029), EGAT aims to become a creator of energy innovation, ensuring energy security and delivering sustainable green energy value to Thai society.

On behalf of the executives and employees of EGAT, I wish to thank stakeholders of all sectors for their trust and support to EGAT's operations throughout the past 55 years. EGAT is committed to maintaining security of electricity system of the country by innovation development in keeping an equilibrium of environment and society.



Mr. Thepparat TheppitakEGAT Governor

About this Report



Background

The EGAT Sustainability Report 2024 is the 16th edition of the series. The Report has been prepared in accordance with the GRI Universal Standards of the Global Reporting Initiative (GRI) to disclose annual information on sustainability concerning EGAT's operations in economic, social and environmental aspect during the period of 1 January - 31 December 2024 which is the same period covered by EGAT Annual Report. For general disclosures, the Report uses the GRI Universal Standards 2021: 'in accordance' requirement and

Electric Utility Sector Supplement (EU) for Electric Utility Sector—specific disclosure. Moreover, the Report also includes Coal Business—specific disclosure according to GRI Universal Standards 12: Coal Sector 2022 in order to make the Report complete and cover all important business activities of EGAT.

Furthermore, to ensure EGAT's commitment to conduct its business to achieve sustainability, the Report has linked significant operations with the Sustainable Development Goals of the United Nations.



Scope

The reporting scope covers EGAT's operations only and does not include operating activities conducted by 7 companies in EGAT Group which are Ratch Group PLC, EGAT International Co., Ltd, EGAT Diamond Service Co., Ltd, INNOPOWER Co., Ltd, Electricity Generating Public Co., Ltd, District Cooling System and Power Plant Co., Ltd. and InnoSpace (Thailand) Co., Ltd. It is different from EGAT Annual Report which includes financial statements of 3 EGAT's subsidiaries, namely Ratch Group PLC, EGAT International Co., Ltd. and EGAT Diamond Service Co., Ltd.

Assurance

In preparing this Report, EGAT has a process of identifying, reviewing, monitoring, giving advice and verifying material topics of sustainability. The Sustainability Strategy Division worked together with relevant Divisions and executives as well as EGAT senior executives to ensure that the content of the Report is complete, accurate and reliable covering all responses to relevant stakeholders and complies with GRI Global Reporting Guidelines.

Moreover, with the approval of EGAT senior executives, the Report has been assessed on its reliability by an external assurance team independent from EGAT. The Report was provided with a limited assurance conclusion detailed on page...

With due care for society and environment in every process of its operations, EGAT has publicized this Report in electronic format in order to reduce the use of resources. The Report will be available on EGAT's website from 30 April 2025.

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Please scan to give feedback regarding the EGAT Sustainability Report 2024.

About EGAT



The Electricity Generating Authority of Thailand (EGAT) was established by virtue of the EGAT Act, B.E.2511 (1968) on 1 May 1969. The Ministry of Finance has 100% shareholding of EGAT. Being a state enterprise in the area of energy under the supervision of Ministry of Energy and Ministry of Finance, EGAT is responsible for generating, acquiring and supplying electricity to the Metropolitan Electricity Authority (MEA), the Provincial Electricity Authority (PEA), legal power users and neighboring countries such as Lao PDR and Malaysia. EGAT is also responsible for power-related business and services, producing and selling lignite and its by-products under EGAT Act, B.E.2511 (1968) and its amendments.

At present, the operations of EGAT are in accordance with the Electricity Supply Industry whereby, under the supervision of the Energy Regulatory Commission, EGAT is a producer and supplier of electricity and controls the electricity production and distribution throughout the country to be efficient and adequate for the demand in parallel with environmental management for community and society.

Address

EGAT Headquarters is situated at No. 53, Moo 2, Charansanitwong Road, Bang Kruai District, Nonthaburi Province 11130. The Transmission System Operations has five offices; two are in Nonthaburi Province, the others are in Phitsanulok, Khon Kaen, and Krabi Provinces.

EGAT's Business

1. Electricity Generation Business

Electricity Generation Business comprises the following:

1.1 Electricity Generation

Electricity is generated by EGAT's 53 power plants located in different parts of the country. With a total installed capacity of 16,237.02 MW, EGAT's power plants consists of 3 thermal power plants, 6 combined cycle power plants, 30 renewable power plants (hydropower plants), 9 renewable power plants (wind, solar and geothermal), 4 diesel power plants and 1 other power plant.

1.2 Electricity Purchase

EGAT purchases bulk electricity from 12 Independent Power Producers totaling 17,648.50 MW, from Small Power Producers totaling 9,483.37 MW and from neighboring countries, namely Lao PDR and Malaysia totaling 6,234.90 MW.

1.3 Electricity Transmission

EGAT transmits electricity generated by its own power plants and purchased from other power producers through its own power grid covering all parts of the country. EGAT's transmission lines comprise different voltages ranging from 500 kV,





230 kV, 132 kV, 115 kV and 69 kV. EGAT sells electricity to its direct customers, to the Metropolitan Electricity Authority (MEA) and Provincial Electricity Authority (PEA) to distribute to their retail customers countrywide. Moreover, EGAT also sells electricity to the power utilities of neighboring countries, namely Lao PDR at 115 kV and 22 kV lines and Malaysia at 300 kV HVDC lines.

2. Other Business

2.1 Related Business

Engineering and Construction of Power Plant and Transmission System Business In 2024, EGAT provided successful engineering consulting service to the combined cycle power plants of 2,500 MW and 1,400 MW to their commercial operation dates. Moreover, EGAT provided technical consulting service and engineering consulting service to solar farm project, solar farm in combination with Battery Energy Storage System (BESS) project, hydropower plant in Lao PDR, technical consulting for company merger or acquisition, consulting service of power purchase agreement (PPA) and consulting service of connecting agreement (CA) to overseas companies as well as specialized study concerning electricity generation projects.

Power Plant Operation and Maintenance Business
In 2024, EGAT continued to provide power plant operation and maintenance service to leading local

and overseas power plants. Contracts of power plant operation and maintenance of local power plants which were expired have been renewed.

Moreover, EGAT signed memorandum of cooperation with several business allies. Marketing activities were organized for the groups of customers in search of opportunity for related businesses. Furthermore, EGAT conducted development of human resource in order to increase their capability in providing power plant operation and maintenance service to renewable power plants which will be an alternative energy in the future.

Transmission System Maintenance Business EGAT provides technical consulting service to the power plants to be linked with the new electricity system and the power plant with improved connection system. Moreover, EGAT provides scheduled maintenance service for transmission lines, substation equipment, equipment of communication system and prevention of private power plants, transformer oil collecting and testing for groups of power plant customer and industrial plant customer. Other related service includes predictive maintenance and preventive and corrective maintenance.

<u>By-product Innovation Business</u> EGAT has conducted its by-product innovation business in line with EGAT's strategic plan on circular economy. The objective of

the business is to achieve the goal of transformation to be a Circular Economy Organization to increase sustainable competitiveness.

In aiming at carbon neutrality, EGAT promotes the maximum use of resource with a focus on zero waste to landfill by making use of the by-product from electricity generation of Mae Moh Power Plant.

EGAT has developed, for example, fly ash for use in substitution of cement which has reduced the carbon dioxide emissions of approximately 690,000 Mt per year and is equivalent to planting 57 million trees. Furthermore, from lignite fly ash, EGAT has developed synthetic gypsum which is used in the production of cement, fiber cement, wood plastic composite and soil reboot. Lastly, from the by-product of Mae Moh mining, EGAT has developed humic which is a new product to add nutrient to the soil so as to increase productivity, to save cost and create sustainability in agriculture.

In cooperation with the leading educational institutions and related experts, EGAT continues to developed innovative products from the by-product of electricity generation. In 2024, there were 3 research projects as follows:

1. Study of concrete property with the mixture of high calcium fly ash and fly ash contaminated with ammonia and determination of free lime

- and the maximum SO₂ in concrete
- 2. Development of innovation of pollution-free ceiling board from FGD gypsum
- 3. Development of innovation of environmentallyfriendly pervious geopolymer to be used in substitution of thermal insulation and sound insulation by synthetic fly ash and pigment residue

<u>Telecommunications Business</u> EGAT has provided telecommunication service through its fiber optic networking in the high voltage system. EGAT has been granted license by the National Broadcasting and Telecommunications Commission (NBTC) to operate telecommunications business of Type 3 and International Private Leased Circuit (IPLC).

EGAT's optical network covers more than 22,000 kilometers countrywide with more than 260 stations. The optical network has been designed to run between the tops of high-voltage transmission towers. The optical ground wire (OPGW) cable contains a tubular structure with one or more optical fiber in it and surrounded by layers of steel and aluminum wires. The network of EGAT has high reliability and stability.

The service provided are dark fiber, domestic and international bandwidth and Internet Protocol Multiprotocol Label Switching (IP MPLS) to public and privates sectors.



EGAT is ready to support the country development in expanding the 5G IoT (Internet of Things) network and other future fundamental telecommunication network. EGAT also supports the government policy of digital economy in integrating the network infrastructure such as Internet of Things (IoT) and Internet Data Center (IDC), Big Data Analytics and Cloud Edge data processing system in digital platform in moving to the future and 5G with Artificial Intelligence (AI).

EGAT Smart Energy Solutions Business In 2024, EGAT has implemented the project and activity to promote efficient and sustainable energy use. EGAT cooperated with the Zoological Park Organization of Thailand in launching the project "EGAT Energy Solutions" as a model of energy management at Chiang Mai Zoo focusing on the use of renewable energy and reduction of carbon dioxide emissions. Another project is the installation of solar system in 100 branches of the Government Saving Bank all over the country.

Moreover, EGAT signed a memorandum of cooperation with Krungsri Bank in promoting the Smart Energy Solutions by providing knowledge and financial support to business sector in increasing the efficiency in energy use and cost reduction by clean energy. Lastly, EGAT cooperated with the Industrial Estate Authority of Thailand in organizing a lecture on "Sustainable Industrial Future" to promote sustainable energy use in industry.

EGAT EV Business Solutions EGAT EV Business Solutions is undertaken based on EGAT's strategy of low carbon society which aims at the transition to the use of electric vehicle with a focus on strengthening the country's EV ecosystem in full range. EGAT supports and participates in the development of EV charging infrastructure by providing service of EV charging stations, EV Applications and EV charging stations management system.

In 2024, EGAT EV business solutions included the following:

- 1. Increase the service of EV charging stations "Elex by EGAT" countrywide and EV charging stations which EGAT jointly operates with the alliances such as PT gasoline stations, Sahapat Group, HomePro Co., Ltd., BMW (Thailand) Co., Ltd., Sathorn Thani Building, Central Patana Co., Ltd. to be totally 289 stations.
- 2. Provide service of the Application "EleXA" which facilitates the EV users in finding and reserving EV charging stations, charging order and payment of service. The Application can also provide other additional services such as trip planner. Moreover, the Application "EleXA" is linked with MEA EV (MEA), PEA VOLTA (PEA), EV Station PluZ (OR), EV Anywhere and GWM. The payment network is also linked with MEA EV (MEA) and PEA VOLTA (PEA).

- 3. Provide service of the management system "BackEN EV" of the EV charging station which enables the private sector/investors which have commercial EV charging station to manage convenient and fast operations. The system "BackEN EV" supports management of the EV charging stations, charging order and payment of service. Presently, the main customer group of "BackEN EV" are approximately 100 users such as hotels, apartments, restaurants, department stores, etc.
- 4. Launch the one-stop service of "EGAT EV Total Solution" consisting of a survey of location, consulting, design and planning and installation of the EV charging stations, EV charging stations management and customer service.



2.2 EGAT Group

EGAT invests in electricity generation and related business through the companies in EGAT Group as follows:

Company	Abbreviation	Registered Capital (Million Baht)	Shareholding Proportion (%)	Status
Ratch Group PCL	RATCH	22,192.23	45	Subsidiary
EGAT International Co., Ltd.	EGATi	12,197.4	99.99	Subsidiary
EGAT Diamond Service Co., Ltd.	EDS	623	45	Subsidiary
INNOPOWER Co., Ltd.	INNOPOWER	1,900	40	Joint venture
Electricity Generating PCL	EGCO	5,300	25.41	Associate
District Cooling System and Power Plant Co., Ltd.	DCAP	1,670	35	Joint venture
InnoSpace (Thailand) Co., Ltd.	InnoSpace	735.01	13.605	Investment

EGAT's Membership

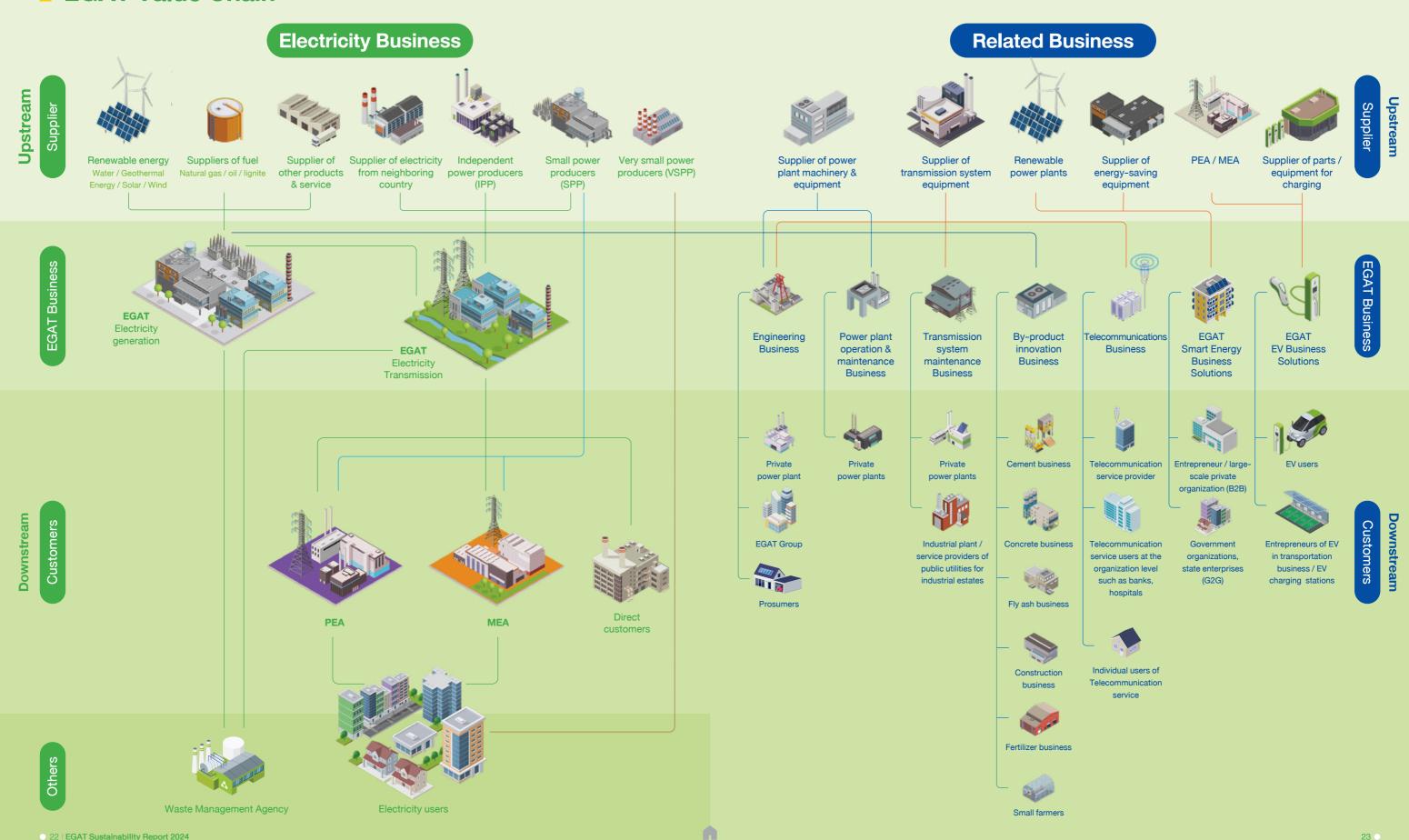
EGAT is a member of important local and foreign organizations and associations such as the following:

- Thailand Business Council for Sustainable Development (TBCSD) TBCSD has the objective of promoting
 the concept of Sustainable Development in business leaders, promoting the role of business sector in
 formulating environment policy which leads to Sustainable Development and in protecting and solving
 environmental problems of the country.
- Cooperation of ASEAN Power Utilities (Meeting of Heads of ASEAN Power Utilities/Authorities HAPUA)
 HAPUA is the cooperation of ASEAN Power Utilities in the development of ASEAN power grid (APG)
 and transmission lines to accommodate ASEAN Plan of Action for Energy Cooperation (APAEC) in the
 future. EGAT Governor Chairs HAPUA Council. EGAT Deputy Governor Strategy sits in HAPUA Working
 Committee. EGAT Assistant Governor Corporate Strategy chairs HAPUA Working Group 2 ASEAN Power
 Grid (APG)/Transmission.
- BIMSTEC Grid Interconnection Coordination Committee (BGICC) under the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)
- Other associations such as the Safety and Health at Work Promotion Association (Thailand), Digital State
 Enterprises Club of Thailand, Thailand Council of Engineers, Engineering Institute of Thailand under the
 Royal Patronage of His Majesty the King, Thai Chang Jai Arsa Foundation, Thailand Professional
 Qualification Institute (Public Organization) and Personnel Management Association of Thailand





EGAT Value Chain



Sustainability Management



Policy and Commitment

In 2024, EGAT has reviewed its policy on sustainable development and made improvement of the policy to cover EGAT's material topics of sustainability and to be consistent with the 5th key strategy of the National Strategy which is "Eco-friendly Development and Growth", the principles and guidelines on corporate governance for state-owned enterprises and the 10 Sustainable Development Goals of the United Nations (UNSDG) as follows:

EGAT's Sustainability Policy





















- 1. Strive for excellence of the operations in the environmental, social, economic and governance dimensions
- 2. Promote energy and environmental conservation, coupled with organizational development to support EGAT's transition to carbon neutrality, focusing on enhancing the efficiency of energy and resource utilization
- 3. Operate with a strong commitment to social responsibility and the protection of labor rights, grounded in occupational health and safety management practices. Place the highest priority on safety throughout all work processes, while promoting the development and retention of personnel. Additionally, manage relationships between EGAT and neighboring communities to support sustainable development
- 4. Ensure good corporate governance and respond to the needs of stakeholders in a balanced and sustainable manner, while maintaining energy security and creating business opportunities through the use of innovation and digital technology

Role of EGAT Board of Directors in sustainability management

EGAT Board of Directors is responsible for reviewing and giving approval to EGAT's policy and important strategies, objectives, financial goals, corporate governance, social responsibility and environmental protection and work plans of EGAT. Moreover, the Board of Directors is also responsible for compliance with the formulated policy and work plans consistently. The Board Committee on Governance and Social Responsibility is responsible for formulating, reviewing and approving policy concerning governance, ethics and code of conduct, social responsibility and environmental protection, sustainable development, stakeholder management, customer service, complaint management and anti-corruption. The conflict of interest and the organization's sustainable development in compliance with the international standards must be reported to the Committee. The Board Committee monitors the progress of the operations and report to the Board of Directors guarterly.

In 2024, The Board Committee on Governance and Social Responsibility plays an important role in driving the main sustainability issues as follows:

- Giving approval to
- EGAT's material topics of sustainability
- EGAT's sustainability goals and indicators for use in the preparation of different level of plans such as enterprise plan, master plan, operational plan and designation of the units in charge of the plans
- EGAT sustainable development policy
- EGAT Sustainable Development Handbook
- Master plan for stakeholder management
- Master plan for social responsibility
- Quarterly report on the operation of stakeholder management and social responsibility to monitor the economic, environmental and human impacts. The Board

- Committee does not directly engage with stakeholders, but instead considers matters through the designated units responsible for each stakeholder group
- Reviewing the efficiency of the policy formulation process and preparation of EGAT Sustainable Development Handbook

Delegation of duty in sustainability management

In delegating responsibility for sustainability management, EGAT Board of Directors authorizes the Executive Committee chaired by EGAT Governor, the chief executive of EGAT, and Deputy Governors which are members of the Committee to administer and make decisions across various operational areas in accordance with the policies of regulatory bodies, directives from the EGAT Board, and EGAT's strategic plans. This includes addressing the economic, environmental, and social impacts resulting from EGAT's operations. The Executive Committee reports to the Board of Directors quarterly.

At the executive level, EGAT Deputy Governor-Strategy is responsible for preparing the strategic plan in setting direction of EGAT's operations which includes sustainability strategy. EGAT Assistant Governor-Sustainability Management is responsible for sustainability management of the overall organization.

At the operational level, the Sustainability Strategy Division is in charge of planning and managing sustainability strategy of the organization by formulating policy and preparing sustainability management framework to be consistent with EGAT strategy and responding to the stakeholders' needs. The Division is also in charge of the management of social and environmental projects and other special activities in the organization to support EGAT policy and strategy of social responsibility.

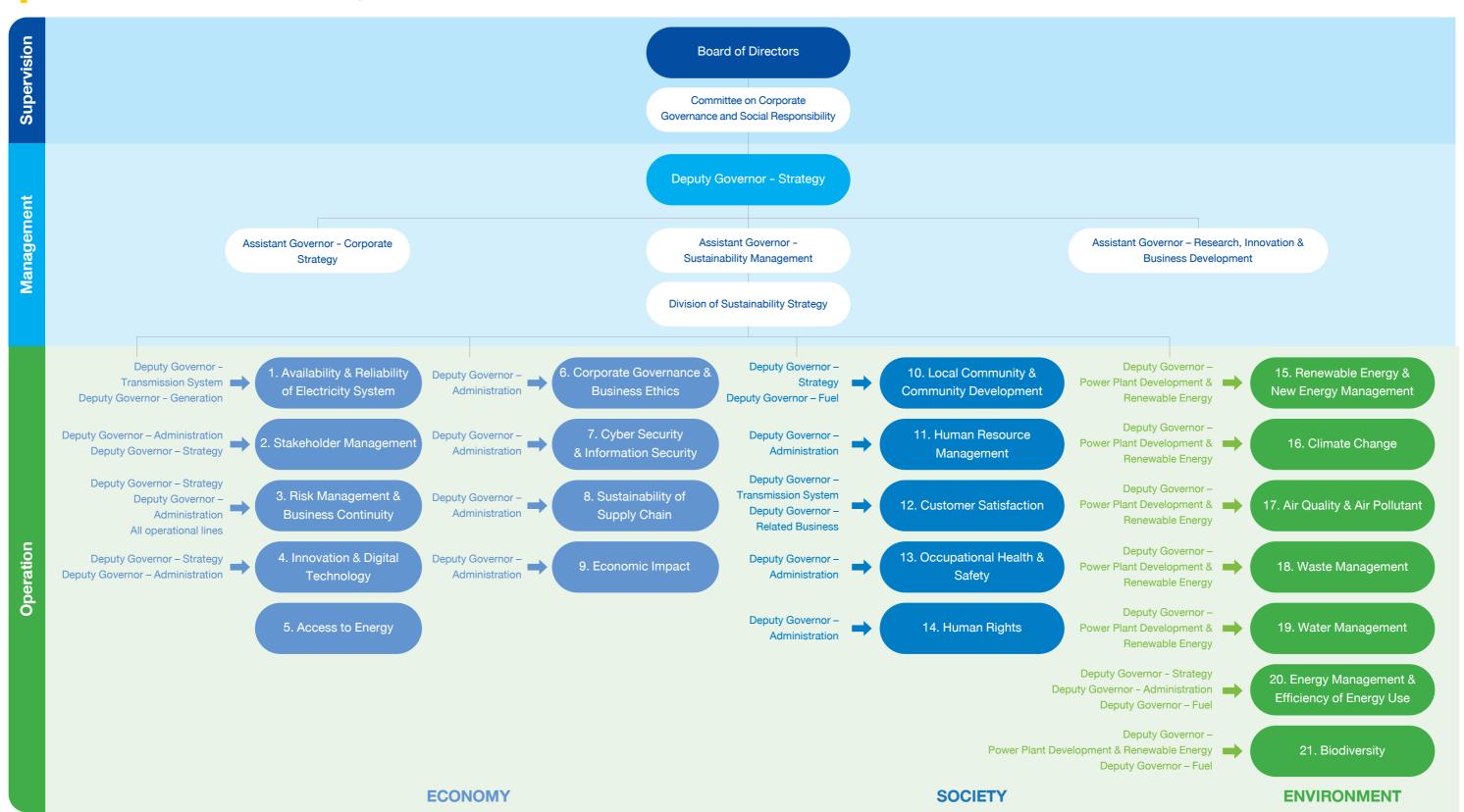
At the departmental level, the Public Relations and Power Plant Community Relations, the Public Relations and Renewable Power Plant Community Relations and the Public Relations and Transmission System Community Relations are responsible for social responsibility and coordination with regional stakeholders.

Additionally, the Working Group on Social Responsibility and Corporate Communications for Sustainability Development has been established by EGAT Deputy Governor-Strategy comprising representatives at the level of Divisional Director of different operation lines and chaired by EGAT Assistant Governor-Sustainability Management. The Working Group is responsible for considering and reviewing the master plan of social responsibility and corporate communications and determining framework, screening, monitoring and supervising the work plans and budget concerning corporate communications, relationship building, social responsibility and annual donation of EGAT.





Structure of EGAT Sustainability Management





■ EGAT's Sustainability Management Process

EGAT has a systematic process of sustainability management as follows:

1. Study the organization's context, collect information and identify the material topics of sustainability

In order to understand the organization's context, it is necessary to study and make analysis of its vision, mission, corporate culture, value chain, EGAT enterprise plan, corporate risks and opportunities, direction and trend of industry and government policy. The understanding of the organization's context will lead to the analysis of stakeholders and material topics of sustainability which the organization should give importance to and should manage with efficiency.

2. Formulate policy on sustainability

Based on the organization's context and material topics of sustainability, the policy and goal of sustainability will be formulated to express the intention and determination to develop and drive the organization to sustainability. Responsible persons should be designated with a clear role in dealing with each material topic of sustainability.

3. Develop sustainability strategy

The policy and goal of organization sustainability are linked with the corporate strategy in order to determine the framework (short-term, medium-term or long-term) or strategy for organization development to sustainability.

4. Implementation of the sustainability work plan

The sustainability work plan is implemented to achieve the objectives and the goal using different project management tools such as Plan, Do, Check, Act (PDCA).

5. Communication

The operating results of sustainability are disclosed and communicated to stakeholders through mass media and different channels such as Sustainability Report in order to create awareness and increase the understanding of EGAT's operations.

Review and Identification Process of Material Topics of Sustainability

EGAT has reviewed the material topics of sustainability annually. In 2024, EGAT conducted a review of the material topics of sustainability in accordance with the standards of Global Reporting Initiative (GRI) 2021. The purpose of the review is to identify the material topics of sustainability to be addressed as well as the significant negative and positive impact on related stakeholders throughout the value chain. The reviewing process is as follows:

1. Understanding of the organization's context

EGAT made a review of activities of the organization and business relations throughout the supply chain, the relevant stakeholders, policy, strategy and the material topics of sustainability in the past year. Moreover, EGAT conducted a study on the sustainability standards and the material topics of sustainability of the leading organizations of related industry which have outstanding achievements in the country and overseas. From this process, EGAT has identified initial material topics of sustainability.

2. Identification of the impacts

EGAT has made an opinion survey of stakeholders on the identified material topics of sustainability concerning the economic, social, environmental and human rights impact which is actual or potential, both positive and negative. Stakeholders had a chance to propose additional material topics of sustainability if it is not included in the

above-mentioned identified material topics of sustainability. However, it was found that additional comments have already been covered by the material topics in the questionnaire.

3. Assessment of the impacts

The stakeholders were requested to assess the significance of the impact of material topics by considering the severity of the actual negative impact, the severity and chance of occurrence of the potential negative impact, size and scope of the actual positive impact and size, scope and chance of occurrence of the potential positive impact.

4. Prioritization of the impacts

The result of the impact assessment will be prioritized by EGAT and commented by outside expert before being submitted to EGAT Board Committee on Corporate Governance and Social Responsibility for approval of the list of material topics of sustainability.



Material Topics of Sustainability

In 2024, the 20 material topics of sustainability which covers economic, governance, environment, human and human rights impacts are as follows:

No.	Material topics of	Negative	impacts	Positive	impacts	Informatio	n disclosure
NO.	sustainability	Actual	Potential	Actual	Potential	GRI Topics	Topics in this Report
1	Availability and Reliability of Electricity Generation and Transmission System	•		•		Availability and Reliability, System Efficiency	Availability and Reliability of Electricity System
2	Stakeholder Management			•		-	Stakeholder Management
3	Renewable Energy and New Energy Management			•		Energy	Energy Management
4	Local Community and Community Development	•		•		Local Communities	Participation in Community and Social Development
5	Climate Change	•		•		GHG Emissions, Demand-side Management, Climate Adaptation, Resilience, and Transition	Greenhouse Gas Management
6	Risk Management and Business Continuity			•		Disaster/Emergency Planning and Response	Risk Management and Business Continuity
7	Access to Energy	•		•		Access	Availability and Reliability of Electricity System
8	Air Quality and Air Pollutant			•		Air Emissions	Air Pollutant Management
9	Energy Management and Efficiency of Energy Use			•		Energy	Energy Management
10	Innovation and Digital Technology			•		Research and Development	Innovation and Digital Technology

	Material topics of	Negative	e impacts	Positive	impacts	Information	disclosure
No.	sustainability	Actual	Potential	Actual	Potential		Topics in this Report
11	Corporate Governance and Business Ethics			•		Anti-corruption	Corporate Governance and Anti-corruption
12	Customer Satisfaction			•		-	Customer Satisfaction
13	Cyber Security and Information Security			•		Customer Privacy	Cyber Security and Information Security
14	Human Rights			•		Freedom of Association and Collective Bargaining, Child Labor, Forced Labor and Modern Slavery, Conflict and Security, Rights of Indigenous Peoples, Land and Resource Rights, Non- discrimination and Equal Opportunity	Human Rights
15	Sustainability of Supply Chain			•		Procurement Practices	Sustainability of Supply Chain
16	Waste Management			•		Wastes, Asset integrity and critical incident management	Waste Management
17	Human Resource Management			•		Employment Practices, Labor/Management Relations, Training and Education	Human Resource Management and Development
18	Occupational Health and Safety			•		Occupational Health and Safety	Occupational Health and Safety
19	Protection of Biodiversity			•		Biodiversity	Biodiversity
20	Water Management			•		Water and Effluents	Water Management



■ Management of Material Topics of Sustainability

No.	Material Topic	Work Plan / Activity	Indicator	Target	Operating result	SDGs	SDGs Targets	SDGs Indicator	Policy ¹	ESG Metrics ²
1	Availability and	Transmission system	Energy not served	The average not more	ENS, SAIDI and SAIFI	7 AFFORDABLE AND CLEAN ENERGY	7.1	-	4	-
	Reliability of Electricity	predictive maintenance	(ENS)	than the moving	values met the target	CLEAN ENERGY				
	Generation and	plan		average of the last 5		- Ö -				
	Transmission		System Average	years	AF _{OEE} was lower than					
	System	Renovation and	Interruption Duration		the target as EGAT					
		expansion project of	Index (SAIDI)	The average not more	extended the time for					
		the aged transmission	Overtown Average	than the moving	the planned outage as					
		system	System Average Interruption Frequency	average of the last 5 years	there were more deterioration of the					
		Replacement of	Index (SAIFI)	years	machinery and					
		transmission equipment	macx (or min)	The average not more	unplanned shutdown					
		in substation plan	Availability Factor _{OFF} :	than the moving	than expected					
		·	AF _{OEE}	average of the last 5	·					
		Management plan for	OLL	years						
		equipment with high								
		failure rate		The best value of the						
				operating result of the						
		Plan for improvement of		Independent Power						
		bus arrangement to		Producer (IPP) of the						
		reduce effect from bus		last 5 years by						
		interruption		calculating the total						
				value of each year by						
		Measure for reduction		finding the weighted						
		of transmission failure		average depending on						
		from animal		generating capacity of each unit of electricity						
				generation.						
				generation.						



No.	Material Topic	Work Plan / Activity	Indicator	Target	Operating result	SDGs	SDGs Targets	SDGs Indicator	Policy ¹	ESG Metrics ²
2	Stakeholder Management	 Survey of stakeholder engagement Stakeholder's key issue management plan Communication and public relations and warning Communication and public relations 	 Score of stakeholder engagement Proportion of stakeholder's key issues management Proportion of complaint reports which is closed or corrected within 30 days (from the registration date) Public relations of the complaint channel on public website 	 2% more of the base year Not lower than 75% 60% (excluding complaints relating to government policy or the issue beyond EGAT's authority) Public relations of the complaint channel on public website 	 Score of stakeholder engagement met the target Proportion of stakeholder's key issue management met the target Proportion of complaint reports which is closed or corrected within 30 days met the target Achieved the target 	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	16.7, 16.10	-	4	
3	Renewable Energy and New Energy Management	Project of Hydro Floating Solar Hybrid of Ubol Ratana Dam (24 MW)	EGAT (accumulated) renewable energy capacity	EGAT accumulated renewable energy capacity is increased by 24 MW from the project of Hydro Floating Solar Hybrid of Ubol Ratana Dam (1 st block)	EGAT accumulated renewable energy capacity met the target	7 AFFORDABLE AND CLEAN ENERGY	7.2	7.2.1	2	EUT-G3.2 Proportion of the use of renewable energy such as solar energy, hydropower, wind power for electricity generation
4	Local Community and Community Development	 Plan for assessment of social impact (SIA) and social return on investment (SROI) in 2023 	Proportion of projects with social return on investment (SROI) more than 2	• ≥ 40%	 Proportion of projects with social return on investment (SROI) more than 2 and achieved the target 	2 ZERO HUNGER	2.4	-	3	-
5	Climate Change	-	Reduction of the carbon emissions intensity in 2030 of the base year	30% of the base year	Reduction of carbon intensity 5.62% of the base year	13 CLIMATE	13.2	-	2	-



No.	Material Topic	Work Plan / Activity	Indicator	Target	Operating result	SDGs	SDGs Targets	SDGs Indicator	Policy ¹	ESG Metrics ²
6	Risk Management and Business Continuity Management	 Approval of EGAT risk management plan by EGAT Committee on Risk Management and Internal Control Operation plan of EGAT Committee on business continuity management 	 Risk analysis covering all dimensions of the operations and all types of risk Monitor and report on the operating result of risk management, problems and remedy Availability of the business continuity system based on the international standard condition Availability of the database for business continuity management plan as a whole 	 Annual risk management plan is reviewed and prepared Result of the risk management is monitored and reported quarterly The internal audit is conducted on EGAT business continuity according to ISO 22301 Availability of website containing database on business continuity plan and, emergency plan and database on rehearsal according to business continuity plan and emergency plan and emergency plan 	 Followed the plan Followed the plan Followed the plan 					
7	Access to Energy							_		



No.	Material Topic	Work Plan / Activity	Indicator	Target	Operating result	SDGs	SDGs Targets	SDGs Indicator	Policy ¹	ESG Metrics ²
8	Air Quality and Air Pollution Management	 Operation plan concerning the environmental aspect of EGAT projects Additional activity to the operation plan concerning environmental aspect of EGAT projects Operation plan of Mae Moh Power Plant Requirements in the contract of EGAT power plant construction 	 Emissions value of important pollutants Proportion of the power plants of which PM 2.5 from the stack have been inspected Control of the efficiency of the operation of flue gas desulfurization (FGD) system of all units of Mae Moh Power Plant Use of the Best Available Technology to reduce the release of pollutant at the minimum 	 Emissions value of important pollutants not exceeding the control value More than 80% of all existing power plants which are in operation The efficiency of FGD operation system of all generating units not less than 93% All new projects which had COD since 2019 have used the Best Available Technology 	 Emissions value of important pollutants met the target Proportion of the power plants of which PM 2.5 have been inspected met the target The efficiency of FGD operation system of all generating units met the target The use of the Best Available Technology met the target 	11 SUSTAINABLE CITIES AND COMMUNITIES	11.6	-	2	EUT-E3.1 Air pollution from business operations such as NO _x , So _x , POP, VOC, HAP and PM
9	Energy Management and Efficiency of Energy Use	 Annual maintenance plan of power plants Monitoring loss in the process of power generation during operation through the Performance Monitoring and Loss Diagnostic System (PMDS) 	Net Heat Rate (The overall performance of EGAT has been assessed in order to establish target benchmarks aligned with the Guaranteed Heat Rate Curve applicable to each EGAT power plant)	Guaranteed Heat Rate Curve Interval (% degradation of Global Top Quartile power plants)	Below the target EGAT identified energy losses in the power generation process through the Performance Monitoring system. Corrective actions, including equipment inspection and repair, have been undertaken and continuously monitored to ensure optimal plant efficiency and reliable electricity supply in line with design performance	7 AFFORDABLE AND CLEAN ENERGY	7.3	7.3.1	2	



No.	Material Topic	Work Plan / Activity	Indicator	Target	Operating result	SDGs	SDGs Targets	SDGs Indicator	Policy ¹	ESG Metrics ²
10	Innovation and Digital Technology	Process innovation plan	 Number of process innovation developed Value originated from using or furthering the process innovations 	 15 process innovation 5% more than the output in 2023 	 Number of process innovation met the target Value originated from using or furthering the process innovations met the target 	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	9.4, 9.5	-	4	-
11	Corporate Governance and Business Ethics	 Plan to improve communication of EGAT's operations to gain acceptance of inside and outside stakeholders Plan to improve and publicize information disclosure to be up to date and consistent with the assessment criteria of Open Data Integrity and Transparency (OIT) 	Score from Integrity and Transparency Assessment (ITA) of the public sector of EGAT	Not less than 95 scores	The obtained score met the target	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	16.5, 16.6	-	4	
12	Customer Satisfaction	 EGAT related business customer relations management plan Data Analytic for Consumer Management Plan Product and service development Plan Customer relations management plan 	 Customer engagement level Customer Satisfaction level 	Not less than 83%Not less than 83%	 Customer engagement level met the target Customer satisfaction level met the target 		-	-		



No.	Material Topic	Work Plan / Activity	Indicator	Target	Operating result	SDGs	SDGs Targets	SDGs Indicator	Policy ¹	ESG Metrics ²
13	Cyber Security and Information Security	Cyber security management plan (to upgrade the capability of management of Cyber security and information security)	Number of severe violations of digital law	• 0 case	None Met the target	-	-	-	-	-
14	Human Rights	 Adding conditions in the invitation letter for bidding and in the monthly report Adding the topic of "human rights" in the seminars of entrepreneurs (trading partners) Organizing activities promoting knowledge on human rights 	 Proportion of contracts or agreements with trading partners with requirement concerning human rights or the trading partners which have been assessed on human rights (for the work over 500 million Baht) Proportion of EGAT security guards who have undergone human rights training 	100%Not less than 80%	 Proportion of contracts or agreements with trading partners with requirement concerning human rights or the trading partners which have been assessed on human rights met the target Proportion of EGAT security guards who have undergone human rights training met the target 	16 PEACE, JUSTICE AND STRONG INSTITUTIONS INSTITUTIONS INSTITUTIONS INSTITUTIONS INSTITUTIONS INSTITUTIONS INSTITUTIONS INSTITUTIONS INSTITUTION INSTITUTION INSTITUTION INSTITUTION INSTITUTION INSTITUTION INSTITUTION INST	16.b, 10.2		-	
15	Sustainability of Supply Chain	 Adding the issue of sustainability in the QR Code of information on governance attached to the invitation letter Adding the issue of sustainability in communicating information on governance with the trading partners by email twice a year Adding the issue of sustainability in satisfaction survey 	Proportion of local trading partners who have been informed of EGAT Supplier Code of Conduct	• 100%	Proportion of local trading partners who have been informed of EGAT Supplier Code of Conduct met the target	12 RESPONSIBLE CONSUMPTION AND PRODUCTION GO	12.7			



No.	Material Topic	Work Plan / Activity	Indicator	Target	Operating result	SDGs	SDGs Targets	SDGs Indicator	Policy ¹	ESG Metrics ²
16	Waste Management	 Circular Economy project Operation plan concerning the environmental aspect of EGAT projects 	 Amount of waste (fly ash, bottom ash and gypsum) which has been recycled Waste disposal quality 	 215,000 tons/year Comply with all regulations and law 	 Amount of waste (fly ash, bottom ash and gypsum) which has been recycled met the target Comply with the target 	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	12.4	-	2	-
17	Human Resource Management	 Master plan of human resource development of 2024-2028 Overview of human resource development plan of 2024 	 Score of employees' engagement with EGAT Average training hours of employees 	Not less than 80%32 hours/person (Average of the past 3 years)	 Score of employees' engagement with EGAT met the target Average training hours of employees 	8 DECENT WORK AND ECONOMIC GROWTH	-	-	3	-
18	Occupational Health and Safety	 Health check-up for employees in contact with risk factor and performing special task, at least annually. Abnormality, if found, will be informed with healthcare advice. Result of the operations will be summarized quarterly and annually EGAT management plan of quality system, safety, health and environment Promotion plan of corporate culture concerning safety Development plan for information on quality, safety and security 	 Percentage of the employee groups identified with health risk factors who have been informed of their screening results and received appropriate recommendations Injury frequency rate (IFR) Injury severity rate (ISR) 	 Less than the average value of the past 3 years Less than the average value of the past 3 years 	 Followed the target Below the target 	8 DECENT WORK AND ECONOMIC GROWTH	8.8		3	



No.	Material Topic	Work Plan / Activity	Indicator	Target	Operating result	SDGs	SDGs Targets	SDGs Indicator	Policy ¹	ESG Metrics ²
19	Protection of Biodiversity	 Prevention of forest fire in the mine restoration area Increase food plant diversity in the mine restoration area Promotion of the surrounding area of the project (community forest) to protect and conserve forest resource in the area Collect and analyze data and make a report on plant diversity in the mine restoration area and the surrounding area of the project (community forest) 	Significant impact from production process which involves biodiversity in the project area and the surrounding area	Report of the plant diversity in the area every 3 years (to be reported in December 2025)	Follow the work plan, e.g. planting trees in the mine restoration area, planning to build firebreak in the area of Mae Moh Mine and launching the campaign about the forest fire protection in the community around the mine area	15 UFE ON LAND	15.1, 15.4, 15.5		2	
20	Water Management	Operation plan concerning the environmental aspect of EGAT projects	Quality of the waste water from the power plant	Not exceeding the criteria in the Notification of Ministry of Natural Resource and Environment on standard for waste water from power plant of 2022	Quality of the waste water met the target	6 CLEAN WATER AND SANITATION 12 RESPONSIBLE CONSUMPTION AND PRODUCTION CONTINUE CONSUMPTION AND PRODUCTION	6.3, 12.4		2	-

¹EGAT Policy on Sustainable Development

² ESG Metrics of the Stock Exchange of Thailand

Stakeholder Management



EGAT is committed to being the country's leading electricity organization, while building trust and shared value with both internal and external stakeholders in an appropriate and sustainable manner.

Target of 2024	Achievements
 Stakeholder engagement level increased by 2% of the base year (2022) 75 % of key issues of need and expectation of stakeholders have been managed 60% of the number of complaints has been closed or corrected within 30 days from the registration date Availability of complaint channel on public website 	 Stakeholder engagement level increased 5.78% of the base year (2022) 85.71% of key issues of need and expectation of stakeholders have been managed 76.29% of the number of complaints has been closed or corrected within 30 days from the registration date Complaint channel is available on EGAT website which is a public website

Policy and Commitment

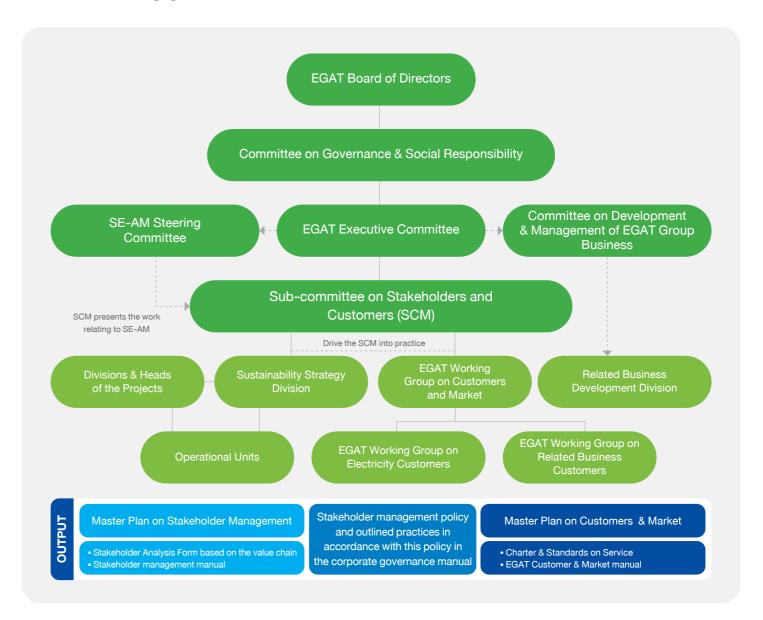
EGAT has established a stakeholder management policy and outlined practices in accordance with this policy in its corporate governance manual. This serves as a framework to ensure stakeholder management is carried out consistently across the organization.



Addition information on Stakeholder management policy

Operational Structure

EGAT Deputy Governor-Strategy's Line is responsible for setting guidelines, monitoring, and evaluating stakeholder management at both the organizational and functional unit levels. This ensures that all units follow a unified approach in addressing stakeholder concerns. Additionally, EGAT has designated responsible operational lines for each stakeholder group, in alignment with their value chain and mission. To ensure effective stakeholder engagement, EGAT selects appropriate formats and communication channels tailored to each stakeholder group. Furthermore, EGAT conducts workshops to enhance understanding and develop the skills of personnel directly responsible for stakeholder-related tasks, particularly in issue analysis and stakeholder engagement.





Stakeholder Management

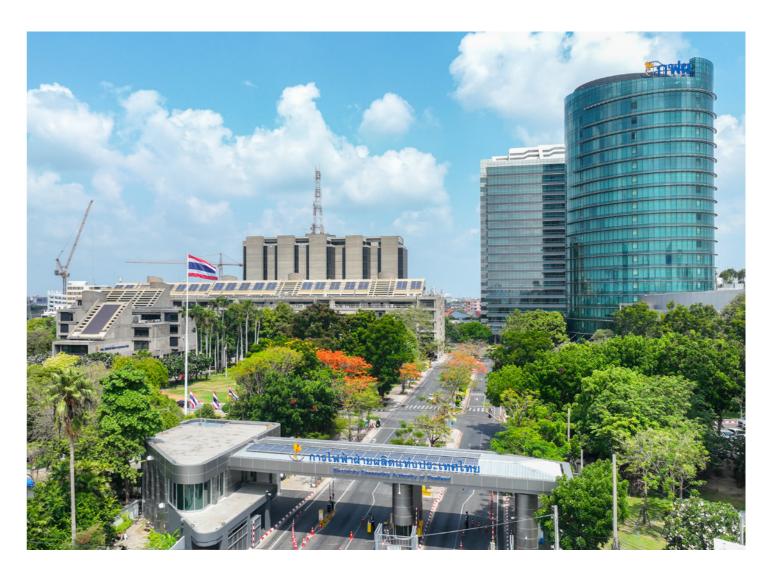
EGAT's stakeholder management complies with AA1000 Stakeholder Engagement Standard: AA1000 SES. EGAT carries out the work in stakeholder management in accordance with the master plan on stakeholder management which has been communicated to responsible units to prepare action plan accordingly. The operation has been monitored and reported to the Committee on Corporate Governance and Social Responsibility quarterly for comments and recommendations for improvement. In 2024, EGAT achieved 100% of its plans, with key initiatives carried out in collaboration with various stakeholder groups as follows:

- Cooperation with MEA and PEA in organizing an event "Show and Share Innovation for Better Life". The objective was to exchange knowledge in research and development, invention and innovation and to promote further development in responding to the changing electricity consumption behavior of consumers
- Cooperation with the National Food Institute in strengthening the community enterprises in the vicinity of EGAT by promoting their food products to gain acceptance locally and internationally. The purpose is to increase their income and to achieve sustainable growth
- Cooperation with Faculty of Engineering, Chulalongkorn University in studying and developing nuclear power plant as an alternative in electricity generation by clean energy in order to drive the country to reach the aim of carbon neutrality and creating sustainable energy security and pleasant environment for the Thai people

- Implementing the pilot project for developing a full-service electric vehicle charging station. The purpose is to support the transition to electric mobility in the Eastern Economic Corridor (EEC). This initiative is a collaboration between the Department of Energy Business, Ministry of Energy, the Eastern Economic Corridor Policy Committee (EECPC), and EGAT
- Participation in Thailand-France Business Forum with Electricite du France (EDF) which was organized to promote the cooperation between the public and private sectors of the two countries. The meeting discussed cooperation in the studies of development of Small Modular Reactor (SMR) so as to exchange information about potential technology, design and safety of SMR power plant, management of used fuel and development of capacity and public communication. The studies will offer an environmentally-friendly alternative to power generation by clean energy aiming at the target of carbon neutrality in the future.

EGAT has also reviewed and updated its stakeholder management policy, stakeholder and customer engagement processes, and the stakeholder protocol manual to enhance the effectiveness of stakeholder operations. These revisions are informed by key findings from stakeholder engagement activities and stakeholder engagement surveys conducted across all units. Additionally, EGAT organized a stakeholder management workshop aimed at enabling units to:

- 1) analyze and identify stakeholders based on their value chain or mission
- 2) prioritize stakeholders using impact and dependency criteria
- 3) identify need, expectation and challenges of stakeholders
- 4) select key issues and develop action plans, projects, or activities to address them





Stakeholder Identification

EGAT identifies stakeholders at two levels: the organizational level and the unit level. At the organizational level, stakeholders are identified by the Sustainable Strategy Division, based on EGAT's roles and missions. At the unit level, stakeholders are identified by divisions and project owners responsible for specific processes, by considering which stakeholders are involved in each step of their operations. In 2024, EGAT continued to classify its organizational stakeholders into 11 groups as follows:

Stakeholder Group	Definitions
Government sector and regulatory bodies	 Government agencies or independent organizations that formulate or oversee energy policies and other policies related to EGAT Government agencies or independent organizations that grant approvals, licenses, or require coordination for the benefit of EGAT's operations EGAT shareholder, i.e. Ministry of Finance
2. EGAT Board of Directors	EGAT Board of Directors and other committees comprising EGAT Board representatives
3. Community	 Communities surrounding EGAT's facilities, transmission systems and other projects, as well as those involved in EGAT's key operations Key communities as defined by EGAT, beyond those previously mentioned
4. EGAT employees and labor union	 Executives, employees, contract employees, labor union, and retired or former EGAT personnel involved with the organization Internal functional units or working groups of EGAT
5. EGAT customers and electricity users	 MEA, PEA and direct customers according to the Royal Decree on electricity users Customers of EGAT related business and new business Electricity consumers and the general public
6. Mass media	 Traditional media networks such as newspapers, radio, and television, both national and local Social media network
7. Business alliance	 Individuals or legal entities who serve as suppliers, partners, contractors, or subcontractors in EGAT's electricity generation and transmission business, related businesses, and key missions Collaborative partners involved in EGAT's supporting missions or other activities beyond those previously mentioned

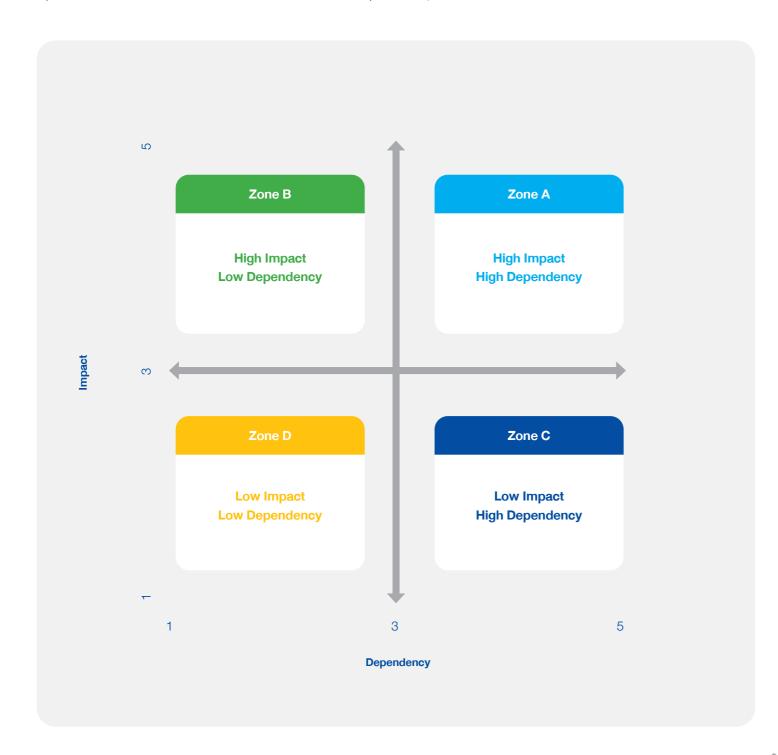
Stakeholder Group	Definitions
8. Affiliated companies	Subsidiaries, affiliated companies, or joint ventures in which EGAT has direct investment or shareholding
Academics and civil society	Thought leaders, influencers, development groups, or activist groups that have an impact on EGAT's operations
10.Finance	 Financial institutions that engage in financial transactions with EGAT Creditors
11.Competitors	Competitors and benchmarking entities in EGAT's electricity generation and transmission business, related businesses, and new ventures





Stakeholder Prioritization

EGAT prioritizes stakeholders by considering the average score of two evaluation criteria: the level of influence stakeholders have on EGAT's operations (Impact), and the level of dependency, which reflects how EGAT's operations affect or involve the stakeholders (Dependency).



Stakeholder Engagement

EGAT engages with stakeholders to understand their needs, expectations, and concerns through various approaches. In addition to considering the characteristics of each stakeholder group, EGAT also takes into account other key factors such as language and cultural differences, internal community divisions or conflicts, and data collection practices aligned with the Personal Data Protection Act (PDPA).

One notable example of stakeholder engagement is the stakeholder engagement survey, which is conducted every two years. The most recent survey carried out in 2024 showed that overall stakeholders have a high level of engagement with EGAT which characterized as Supportive. This reflects stakeholders demonstrate trust and hold positive attitudes toward EGAT and willingly support EGAT's operations.





Stakeholder Engagement

Stakeholder Group	Engagement Approach	Responsib Tier 1	ole Persons Tier 2	Issue	Response
Government Sector and Regulatory Bodies (Quarterly)	 Meetings, dialogue and joint activities (At least 1-2 times a year) Monitoring EGAT's operations in accordance with the policies of regulatory agencies (At least 1-2 times a year) Attending state ceremonies and engagement in social activities (4-5 times a year) Stakeholder engagement survey (Every 2 year) Channels for receiving feedback and complaints Communication through mass media including social media Call Center 1416 	Deputy Governor - Strategy	All operation lines	Accurate, complete, and up-to-date electricity generation data Compliance with laws and relevant Acts Support and cooperation in government activities, such as public affairs engagement, payment of taxes and fees as required, implementation of clean energy policies, and adoption of measures to reduce carbon emissions from energy use Providing timely and relevant data to support prompt decision-making	 There are units that incorporate strategies, Acts, and laws as input factors in formulating organizational strategies Continuously communicate and promote understanding of EGAT's mission through various channels, such as public affairs activities, mission-related study visits, as well as online platforms, websites, and social media Develop joint projects with government agencies and policy regulators Promote compliance with standard to lead the organization to sustainability EIA/EHIA reports Improve the working procedure between EGAT and important government agencies Prepare stakeholder management policy and guidelines for practice
2. EGAT Board of Directors (Monthly)	 Meeting of EGAT Board of Directors (Quarterly) Relations activities or government affairs activities (At least once a year) Stakeholder engagement survey (Every 2 year) 	Corporate Secretary Office	All operation lines	Operate with transparency. Oversee and compliance with law and EGAT Act Organize of EGAT Board of Directors meeting in compliance with timeframe and meeting standard Report the result of EGAT operation to the meeting leading to efficient management and in accordance with the mission	Communicate and promote the understanding of EGAT's mission continuously Improve the meeting process to meet the standard Make correction and improvement according to the recommendations and comments of the meeting Provide information in response to inquiries or concerns raised by the committee

Stakeholder Group	Engagement Approach	Responsib Tier 1	le Persons Tier 2	Issue	Response
3. Community (Monthly)	Meeting, dialogue and community activities around EGAT area (At least 10-12 times per month) CSR projects to increase participation Stakeholder engagement survey	Deputy Governor - Power Pant Development and Renewable Energy Deputy Governor -	• Deputy Governor - Power	Being adaptable to the challenges, fluctuation and changes from external factors Express opinion independently in the meeting Report EGAT performance according to the policy to the meeting Organize learning activities concerning EGAT 's mission Increase participation of the Board of Directors in the preparation process of important policy and strategy Environmental management Occupational health and safety, and efficient resource management Improving quality of life, respecting community rights, and promoting accessible public	Increase the use of technology of digital transformation for quality development / improvement of the issue of responding process to the stakeholder's need and expectation Report the result of EGAT operation to the meeting quarterly Operate in accordance with policies, laws, Acts, and standards to lead the organization toward sustainability CSR and community engagement projects that promote quality of life development in local areas Clearly designate responsible units for sustainable community development Utilize survey results to
	 (Every 2 year) Channels for receiving feedback and complaints Communication through public relations billboards, local mass media Call Center 1416 	Generation Deputy Governor - Transmission System Deputy Governor - Strategy Deputy Governor - Fuel		technology within communities Listening to public opinions, fostering two-way communication, engaging in dialogue, and ensuring transparency Participating in the planning and development of projects with EGAT	improve collaborative processes withcommunities for long-term sustainability Increase involvement of the community in the local plan/activity Prepare stakeholder policy and guidelines for practice Conduct a public hearing with the community regarding local development plans



Stakeholder Group	Engagement Approach	Responsib Tier 1	le Persons Tier 2	Issue	Response
4. Employees and Labor Union (Monthly)	EGAT executives meet employees (At least 2-4 times per year) Synergy activity at the level of division or operation line (At least once a year) Annual survey of satisfaction and engagement Channels for receiving feedback and complaints Communication through public relations media and social media EGAT Sustainability Report Microsoft VIVA Engage Call Center 1416	Deputy Governor - Administration	All operation lines	Job security, employment contracts, and compliance with labor laws Fair compensation and benefits beyond legal requirements Equal opportunity for skill development and professional growth Anti-corruption practices both within and outside the organization and responsible political participation Protection measures for vulnerable groups Opportunity for collective bargaining and access to management Confidential complaint channels to ensure whistleblower safety Safe spaces for employees to voice concerns and opinions	Incorporate human rights principles, international standards and survey results into employee practice guidelines Enhance two-way communication between management and staff through various channels Design accessible personnel plans aligned with job roles Update employee benefits to reflect current conditions Encourage volunteerism and social responsibility among employees Provide co-working space for employees Implement a hybrid working policy to promote work-life balance Offer direct reimbursement rights for outpatient (OPD) medical expenses Establish best practices to prevent sexual harassment Promote and provide services related to safety occupational health, working environment, and legal compliance to ensure all units adhere to laws and standards

Stakeholder Group	Engagement Approach	Responsible Tier 1	le Persons Tier 2	Issue	Response
5. Customers and Electricity Users (Quarterly)	 Meeting, dialogue and joint activities (At least 2-4 times per month) Visit, meet or interview to gather their need and expectation (At least quarterly) Annual survey of satisfaction and engagement Stakeholder engagement survey (Every 2 years) Channels for receiving feedback and complaints Communication through public relations media and social media EGAT Sustainability Report Call Center 1416 	Deputy Governor - Transmissions System Deputy Governor - Power Business Deputy Governor - Strategy Deputy Governor - Fuel	• All operation lines	Fair, transparent and verifiable contract High-quality, environmentally friendly services with accurate, complete, and timely information, along with reliable after-sales support Customer confidentiality measures and effective complaint response mechanisms Awareness raising in sustainable consumption Coordination and communication skills of employees High standards in resolving customer complaints	 Develop products and services to meet the standards in terms of quality and safety and respond to the market demand Manage product and service costs effectively Promote understanding of EGAT's mission and encourage efficient electricity use Use survey feedback to enhance work processes, complaint handling, and service standards Enhance the use of digital technology to improve service quality and responsiveness to customer needs and expectations Upgrade communication systems, including radio and digital channels, and implement incident reporting tools such as feedback platforms and mobile applications Establish equipment replacement schedules to ensure reliable electricity supply Collaborate with PEA and MEA on substation planning to address voltage drops, outages, and flickering issues Utilize technology and innovation to monitor, inspect, and plan for equipment replacement,



Stakeholder Group	Engagement Approach	Responsib Tier 1	le Persons Tier 2	Issue	Response
					for example, using drones for high-voltage tower inspections and Lightning Location Systems (LLS) for transmission line design Develop a comprehensive customer and market master plan Formulate stakeholder engagement policy and guidelines
6. Mass Media (Monthly)	 Meeting, dialogue and relationship activities (At least 5-10 times per month) Stakeholder engagement survey (Every 2 years) Channels for receiving feedback and complaints Communication through public relations media and social media Call Center 1416 	Deputy Governor - Strategy	Deputy Governor - Power Plant Development and Renewable Energy Deputy Governor - Administration Deputy Governor - Fuel Deputy Governor - Generation Deputy Governor - Generation Deputy Sovernor - System	 Accurate and up-to-date information which is transparent and verifiable Improvements in the protocols and procedures for presenting public information Reliable, well-sourced data, especially information that affects electricity consumers, such as electricity rates and the Fuel Adjustment Charge (F₁) 	Continuously communicate EGAT's mission through public engagement activities, site visits, and digital platforms Provide clear, accessible information on topics of public and media interest via EGAT's website Formulate stakeholder engagement policy and guidelines
7. Business Alliance (Annually)	 Seminar, visit, meet trading partners or interview to gather their need and expectation (At least once a year) Annual survey of satisfaction and engagement 	Deputy Governor – Administration	All operation lines	 Fair contractor selection and contract management Sustainability issues in the supply chain such as human rights Reliable delivery and fair, transparent, and equitable procurement and bidding processes 	Establish Green Procurement policy and guidelines for business partners Simplify EGAT's processes to facilitate collaboration with partners, including joint meetings to clarify procedures

Stakeholder Group	Engagement Approach	Responsib Tier 1	le Persons Tier 2	Issue	Response
	Stakeholder engagement survey (Every 2 years) Channels for receiving feedback and complaints Communication through public relations media and social media EGAT Sustainability Report Call Center 1416			Procurement, audit, and evaluation criteria that consider social, community, and environmental impacts Supplier participation in product/service development, resource management, skill development, and respect for rights and intellectual property Clear communicatation and feedback channels for suppliers and stakeholders	 Expand payment options for partners via bank transfer Implement EGAT's Code of Conduct and supplier ethics assessments Promote social responsibility among business partners Support local suppliers and community-based products Adopt best practices in procurement and supply management Follow best practices under the complaint management policy Prepare stakeholder policy and guidelines for practice Publish the updated 2023 feedback and anonymous complaint handling manual, and conduct annual satisfaction surveys
8. Affiliates (Quarterly)	Meeting of EGAT executives and affiliates of EGAT Group (Twice a month) Relationship building or government affairs activities (at least once a year) Annual survey of satisfaction and engagement Coordination via telephone at the operation level Annual Report or EGAT Sustainability Report Channels for receiving feedback and complaints	Deputy Governor - Strategy	All operation lines	Clear business direction aligned with EGAT's strategy Compliance with stock exchange standards Engagement activities between EGAT senior executives and affiliates Independence in business decision-making and management Collaboration across all aspects of operations between EGAT and its affiliates	 Continuously communicate and build understanding of EGAT's mission Foster engagement activities between EGAT and its affiliates Promote joint investments and project collaborations between EGAT and affiliates Develop the EGAT Way of Conduct to define a clear business direction for EGAT and its affiliates Organize knowledgesharing activities for the Business Development



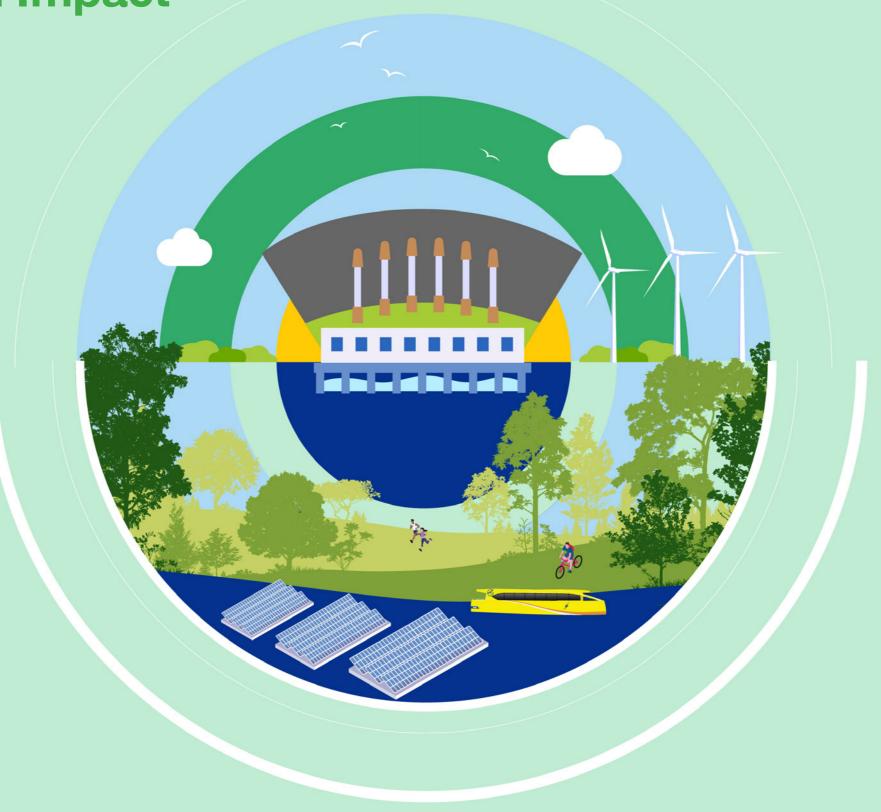
Stakeholder Group	Engagement Approach	Responsib Tier 1	ole Persons Tier 2	Issue	Response
	 Communication through public relations media and social media Call Center 1416 Business Development Team Meeting 				Team across the EGAT group to exchange ideas and research/innovation updates Invite affiliate executives to participate in EGAT's public affairs activities with government stakeholders and regulators
9. Academics and Civil Society (Annually)	 Listen, communicate and exchange ideas through dialogue, research and working together (At least 3-4 times a year) Stakeholder engagement survey (Every 2 years) Channels for receiving feedback and complaints Communication through public relations media and social media Call Center 1416 	Deputy Governor - Strategy	Deputy Governor - Power Business Deputy Governor - Power Plant Development and Renewable Energy Deputy Governor - Administration Deputy Governor - Fuel Deputy Governor - Transmission System	Disclosure of factual and timely information Efficient management of environmental impact and resource use Stable and sufficient electricity supply Public participation in energy-related projects and activities EGAT as a leader in energy innovation	Continuously communicate EGAT's mission and promote knowledge exchange through public forums Provide accessible operational information via EIA/EHIA reports, website, and social media Implement participatory projects in collaboration with government agencies, communities, academics, and civil society Prepare stakeholder policy and guidelines for practice Organize energy innovation showcases such as "Show and Share: Innovation for the Better Life" with MEA and PEA Establish EGAT's Innovation Master Plan to drive effective and tangible innovation

	Engagement	Responsib	le Persons		
Stakeholder Group	Approach	Tier 1	Tier 2	Issue	Response
10. Financial Institution (Annually)	 Meeting and relationship activities (At least once a year) Annual Report or EGAT Sustainability Report Annual survey of satisfaction and engagement Channels for receiving feedback and complaints Communication through public relations media and social media Call Center 1416 	Governor - Finance and Accounting	 Deputy Governor - Power Business Deputy Governor - Strategy Deputy Governor - Generation Deputy Governor - Transmission System 	 Repay debts on schedule Operate with transparency and accountability Manage risks appropriately Comply with financial agreements between EGAT and financial institutions 	Review and plan reporting and financial statement submission, with KPIs and coordination meetings with relevant units Organize engagement activities to promote understanding of EGAT's mission Prepare stakeholder policy and guidelines for practice
11. Competitors (Annually)	 Annual Report or EGAT Sustainability Report Stakeholder engagement survey (Every 2 years) Channels for receiving feedback and complaints Communication through public relations media and social media Call Center 1416 	Deputy Governor - Transmission System Deputy Governor - Power Business	• All operation lines	Sell electricity under EGAT's terms and conditions at fair prices Ensure fair market competition Encourage collaboration with EGAT in developing energy products and services	Adhere to fair competition policies Prepare stakeholder policy and guidelines for practice Apply human rights principles and seven core subjects from international standards such as ISO 26000 Operate with transparency and accountability Communicate EGAT's mission clearly and consistently



Environmental Impact

Management



Energy Management



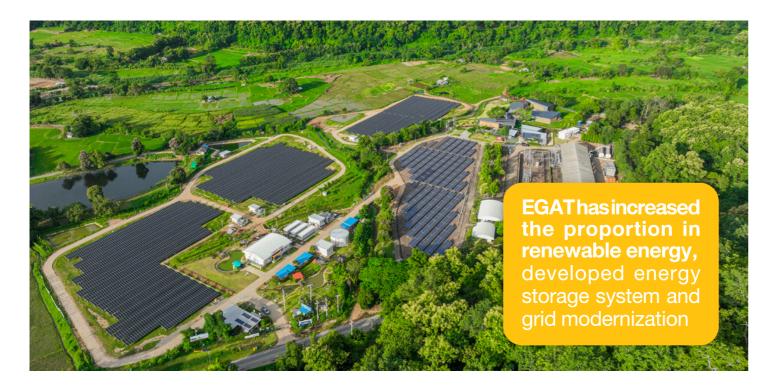
EGAT has placed importance on the efficiency of energy management internally and externally due to the limited availability of energy resource such as natural gas, lignite coal and fuel oil as well as the climate change and continuous fluctuation of fuel price in the global market. EGAT has increased the proportion of investment in renewable energy, developed energy storage system and grid modernization to support the use of renewable energy appropriately so as to deliver the clean and sustainable energy to the country and the next generation.

Target of 2024

 Net Heat Rate (The overall performance of EGAT has been assessed in order to establish target benchmarks aligned with the Guaranteed Heat Rate Curve applicable to each EGAT power plant)

Achievements

 Below the target value. EGAT identified energy losses in the power generation process through the Performance Monitoring system.
 Corrective actions, including equipment inspection and repair, have been undertaken and continuously monitored to ensure optimal plant efficiency and reliable electricity supply in line with design performance



Energy Management

The Line of EGAT Deputy Governor - Fuel is designated to be responsible for fuel management by producing and acquiring fuel in a sufficient amount for EGAT power plants and giving support to fuel business development and related business of EGAT Group in conjunction with the Line of EGAT Deputy Governor - Generation which is responsible for electricity generation.

In electricity generation, EGAT uses various fuels as energy sources including renewable energy and non-renewable energy sources so that the electricity generation of the country is secure, reliable and has reasonable price. In 2024, EGAT still relied on natural gas as the main fuel together with lignite and fuel oil. The amount of fuel of different sources used by EGAT was as follows:



Natural gas EGAT used natural gas from the Thai Gulf, land fields and imported natural gas (from Myanmar and liquefied natural gas) for electricity generation of EGAT power plants of the amount of 333,527.68 million ft³.



Lignite EGAT used lignite from Mae Moh Mine of 12.74 million tons for electricity generation of Mae Moh Power Plant.



Fuel oil EGAT used bunker oil of 10.65 million litres as the main energy source in electricity generation of Krabi Power Plant, diesel oil of 48.42 million litres in electricity generation of Bang Pakong Power Plant, Chana Power Plant, Krabi Power Plant, Mae Hong Son Power Plant, Mae Moh Power Plant, Nam Phong Power Plant, South Bangkok Power Plant and Wang Noi Power Plant.

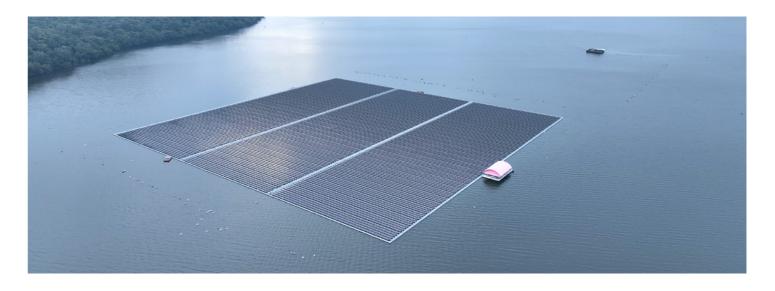
Moreover, EGAT used energy from other renewable energy sources such as geothermal energy, solar energy and wind energy.



Energy Conservation

EGAT gives importance to energy management in the organization by the following energy saving measures:

Energy saving measures	Details	Amount of energy saved
Change of air filter regulators of the Division of Factory and Parts, Nong Chok Office	The change of deteriorated air filter regulators of which there is a leak of hot air resulting in a hard work of air compressor and an increase of energy used.	33,048.18 MJ/year
Reduction of energy use of overhaul cooling water pump of Tha Thung Na Dam Power Plant, Unit 1	The overhaul is carried out to examine and repair the equipment to be in good condition and can operate in full capacity preventing the damage which may occur.	25,431.12 MJ/year
Reduction of station service of Wang Noi Power Plant, Block 4 during the reserve shutdown	Reduction of the use of the power plant equipment. The filtration booster pump system is used to replace circulating water pump.	933,685.20 MJ/year
Replacement of the former air conditioners with high-efficiency air conditioners at Vajiralongkorn Dam	As the former air conditioners have become deteriorated, they are replaced by the air conditioners of the type of solar air system.	75,893.70 MJ/year
Replacement of the lamps at the gas turbine of Nam Phong Power Plant with high-efficiency Lamp (LED)	As the former lamps are halogen lamps which is of low efficiency, they are replaced by high efficiency LED lamps which help reduce energy consumptions.	447,811.2 MJ/year
Control of the use of energy at the flat of Ubol Ratana Dam with the use of key card system	Energy consumption in flat accommodations is managed through a Key Card system, aiming to minimize usage during daytime hours when occupants are not present.	85,134.24 MJ/year
Change of air conditioners at EGAT Headquarters	Replace the air conditioners of the type of fixed speed to the type of variable speed.	119,325.78 MJ/year



Renewable Energy Management

EGAT promotes electricity generation with clean energy to reduce the carbon dioxide emissions, lessen the climate change and support the country in achieving the target of carbon neutrality. The key activities and achievements in 2024 are summarized as follows:

Project of Hydro Floating Solar Hybrid

Project of Hydro Floating Solar Hybrid of Ubol Ratana Dam Unit 1, Khon Kaen Province, with an installed capacity of 24 MW, successfully commenced commercial operation in March 2024. The unique characteristics of the project is the merge of 3 clean energy, namely solar power, hydropower and the energy storage system with battery. Electricity will be generated from solar energy during the daytime, while hydropower from the dam will be utilized during the nighttime. The installation of Battery Energy Storage System (BESS) will enhance the continuity of electricity generation during the transition of the two energy. Moreover, the Energy Management System (EMS) and the Weather Forecast System are used to control and manage

operations, mitigating the limitations of renewable energy sources and contributing to greater reliability in renewable electricity generation. The solar panels occupy the water surface less than 1% of the area of the total reservoir and are installed in a slanting position to allow sunlight passing to the water surface. Consequently, the aquatic ecosystem remains unaffected.

This project is EGAT's second hydro-floating solar hybrid installation, developed in alignment with the Power Development Plan (2018-2037), Revision 1 (PDP 2018 Rev.1). EGAT plans to develop 16 hydro-floating solar hybrid projects across its nine dams, with a total capacity of 2,725 MW, all scheduled for commercial operation by 2030.



Project of Solar Power Plant

EGAT's Solar Farm Project is under construction in the area of Mae Moh Mine, Lampang Province. It is expected to supply electricity commercially in August 2025.

Project of Clean Energy of the Future (Small Modular Reactor–SMR)

EGAT takes part in the Committee on Infrastructure of the Nuclear Power Plant of Thailand which is responsible for making a feasibility study, exploring potential area, finding technology and development of personnel to become experts in order to support the project of Small Modular Reactor (SMR) which is a power plant provided with stability and being

environmentally friendly. Moreover, EGAT is in the process of conducting a feasibility study of the project of electricity generation from hydrogen by the technology of Solid Oxide Fuel Cell (SOFC) at Nam Phong Power Plant, Khon Kaen Province so as to make the maximum use of available resource and to support the demand for electricity of the Northeast.

SMR: A New Vision for the Future of Clean Energy



SMR (Small Modular Reactor)

Generating capacity less than 300 MW, utilizing heat generated from nuclear fission reactions instead of fuel combustion for electricity generation



Highlights

- Electricity generation without CO₂ emissions
- High electricity output with low fuel consumption and stable pricing.
- Pre-assembled core equipment enabling rapid construction



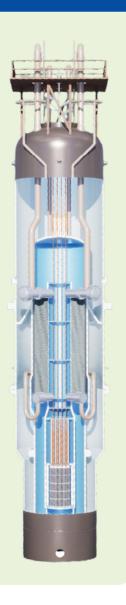
Safety

- Designed to integrate key equipment within the module, reducing system complexity and the risk of accidents.
- Pre-assembled core equipment from the factory, enabling streamlined quality control in production.
- Natural circulation cooling enables safety operation without power supply.



Meet the need

- Energy security
- Reasonable electricity price
- Environmentally-friendly system





Water Management



EGAT recognizes the importance of water resources, which are both limited and shared. Therefore, the organization has established effective management guidelines to prevent and minimize potential impacts on society and the environment.

Target of 2024

 Quality of the wastewater from the power plant does not exceed the requirements of the standard in the Notification of Ministry of Natural Resource and Environment on the Standard for Controlling Water Discharged from the Power Plant B.E. 2022

Quality of the wastewater from the power plant complies with the standard in the Notification of Ministry of Natural Resource

Notification of Ministry of Natural Resource and Environment on the Standard for Controlling Water Discharged from the Power Plant B.E. 2022

Achievements

■ Water Management

EGAT has guidelines for using water resource in the electricity generation process and in consumption in the organization for the maximum benefit taking into account the impact which may happen from activities of the organization to society and environment in all processes. EGAT's water management encompasses all stages from withdrawal and usage to external discharge. Moreover, EGAT complies strictly with law and measures.

Management of Water as Shared Resource

Water is among important resources used all over the organization. The office buildings receive water from the Metropolitan Waterworks Authority. Hydropower plants use water from the dam reservoir. Eight thermal and combined cycle power plants use water as a large proportion of the organization in electricity generation. Water is withdrawn from nearby natural water sources for electricity generation of the power plant such as Ra Phi Phat Canal for electricity generation of Wang Noi Power Plant, Nam Phong River for Nam Phong Power Plant, Chao Phraya River for North Bangkok and South Bangkok Power Plants, Bang Pakong River for Bang Pakong Power Plant, Pakasai Canal for Krabi Power Plant, Poma Canal for Chana Power Plant. Water is also withdrawn from man-made

water sources namely Mae Kham Dam and Mae Chang Dam for Mae Moh Power Plant. All 8 water sources are not regarded as conserved or protected areas at the national level or international level and there is no conservation or protection species.

Prior to the implementation of the power projects, EGAT has conducted assessment of the impact from the water use such as Environmental Impact Assessment (EIA), Environmental Impact and Health Assessment (EHIA). During the project implementation, all EGAT power plants must receive permission to use water from the indicated sources from the local authority of the area. Information of the water must be available. Amount and quality of the water must be controlled closely. From the past experience, every water source can accommodate the water used by the power plant both in draught and rainy season without causing any impacts or water conflict to surrounding community. Moreover, EGAT has taken measures in preventing and restoring water sources from physical and biological impacts such as installing screens at the pumping point to prevent aquatic animal and larvae carried by the water into the power plant, organizing annual release of aquatic species comprising fish and shell species. Furthermore, EGAT has regularly monitored the impact which may occur in the nearby water sources.

For the use of water in electricity generation of hydropower plant, water is simply released through

the generator without any loss and the water discharged is only the by-product for agricultural irrigation. However, realizing the impact which may occur to community upstream and downstream of the dams, EGAT has made a study of the impact caused by water storage and water discharge with a prediction of the short-term and long-term situation in order to plan the water discharge which is consistent with the need of community. Moreover, EGAT promotes involvement of the stakeholders to learn about their problem, to discuss and to find guidelines for solving the problem.

For the water management in Mae Moh Mine, Lampang province, EGAT has conducted a study and prepared the Environmental Impact Assessment (EIA) report of the project in accordance with the criteria, method and regulations of Ministry of Natural Resources and Environment to prevent the possible impact caused by the project to the quality of environment, natural resource and health. A reservoir for storing rainwater in the mine has been designed to keep water to the control limit. An amount of water is used in mining activity such as for spraying on dust in the draught season to reduce the dust from roads and conveyor belt and to distinguish coal burning and for mine restoration. The other amount of water is drained out to the sedimentation trap outside the mine to be treated by the Wetland method before releasing to the natural water path. As the Mae Moh Basin has limestone layers among soil layers and coal layers,

the acidity/alkalinity (pH) of water has been found to range from being neutral to be slightly alkaline. The acidity was not found in the mine.

Management of Impact from Water Discharge

EGAT has the quality control system of water discharged from the power plants by water treatment system. Water will be treated to be of the value complying with the requirements of the standard prior to transferring to a clarifier in the power plant and discharged into the permissible water source nearby. Some power plants use the treated wastewater watering lawn and trees in the power plants without discharging outside. Only the water drained from the cooling tower with reduced temperature will be released to the water source. The temperature of the wastewater will be controlled to be in the standard range required by the law and will not affect the organism.

For the water discharged from hydropower plants, EGAT has used the technology to predict the water situation and planning for different water situation such as flooding or drought in integrating the water information of the public and private organizations under the supervision of Office of the National Water Resources to ensure EGAT's operations have no effect on the rights of stakeholders in water use and comply with applicable law and guidelines on

operation according to the master plan for water management under the national strategy. In the event of unavoidable impact, EGAT has assistance measures in terms of machinery and tool as well as consumption goods.

For the water discharged from the mine, a system for separating the natural water from water which may be contaminated from the mining activity is provided. Water catchment area and water treatment system for the contaminated water is sufficiently available. Moreover, preventive and corrective measure for the impact of water quality is available throughout the project duration. Fourteen stations for inspection of wastewater quality conducts inspection every 3 months in the draught season and rainy season to ensure that the quality of wastewater meets the standard criteria of factory and industrial estate in accordance with the Notification of Ministry of Science, Technology and Environment No.3, B.E. 2539 (1996) before discharging into the public water body.



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Biodiversity



EGAT is aware of the responsibility for the environment and is committed to preserving the biodiversity. EGAT's operations may impact on the environment, ecosystem and biodiversity. These impacts include the loss of natural habitats that serve as sources of food, shelter, and breeding grounds for both flora and fauna, resulting from land clearing for new projects and open-pit mining activities. Additionally, aquatic life, including juvenile fish, may be affected by water intake used in power generation and cooling processes. Transmission lines traversing forested areas can also fragment wildlife habitats, further threatening biodiversity.

Biodiversity Management

EGAT has the following preventive, conservative and restorative plan for natural resources in all stages of the project implementation.

- Pre-project phase: EGAT will study the environmental impact of the project of power plant, dam, mine or transmission lines by assigning experts to study biodiversity of plants, animals, legal status of wild animals and biological resource of water in the natural water sources near to the project site to be used as information for impact analysis. Based on the analysis, EGAT will prepare preventive and corrective measures for the potential impact on the biological resource from project Operations. Addtionally, EGAT regularly conducts stakeholder briefings before launching projects to ensure transparency and incorporate stakeholder input.
- During the project implementation: EGAT will monitor the environmental impact annually to obtain information to be used in the surveillance

on the change of biodiversity. Moreover, EGAT will organize activities concerning natural resources conservation and restoration continuously in different areas of EGAT and in natural forest of the country in cooperation with other organizations.

Moreover, tripartite meeting will be organized regularly 1-2 times per year to report to the meeting of government agencies and community leaders on EGAT environmental management and biodiversity in accordance with the measures in the project.

EGAT signed a Memorandum of Understanding (MoU) on climate change and biodiversity conservation with the Office of Natural Resources and Environmental Policy and Planning to integrate

the operations and technical knowledge and to create efficient personnel of the two organizations. The MoU is the preparation for the further development of the operations in biodiversity conservation in the future.

Under the MoU, EGAT has integrated biodiversity data from its project areas to contribute to and enhance the completeness of Thailand's Biodiversity Information Facility (TH-BIF).

Moreover, EGAT implemented a project to raise the awareness of biodiversity through different

activities. Among the important activities in 2024 are "Bird Walk, Srinagarin Dam, Home of Hornbill" and "EGAT Biodiversity Rangers, Mangrove Protection" (2nd class). Additionally, EGAT collaborates with environmental networks, such as youth groups from the North Bangkok Power Plant and Debsirin Nonthaburi, to raise awareness. Activities include supporting the installation and cleaning of artificial nesting boxes for Alexandrine parakeets at Wat Suan Yai and Wat Amphawan in Nonthaburi Province.

Protected Area

One of EGAT's operational sites, the Mae Moh Power Plant, is located within a designated forest conservation area in the Mae Moh Forest, Lampang Province. The land is reserved for the protection and preservation of forests, wildlife, watersheds, and other natural resources, in accordance with Cabinet resolutions and relevant laws on forestry, wildlife conservation, and environmental quality. Although exempt from municipal zoning regulations, EGAT has been granted permission to utilize the land, preserved as national property, for the operation of the power plant and lignite mining activities.

EGAT monitors wildlife-related environmental quality within a 5-kilometer radius of the Mae Moh Replacement Units 8–9 Project. The monitoring area includes the northeastern overburden disposal site of the Mae Moh lignite mine, natural forest zones, and nearby communities. This effort aims to assess the number, species, and biodiversity of wildlife in the area. The study covers 4 main area as follows:

- 1. Mae Moh Power Plant at the site of the Replacement Mae Moh Power Plant project, Units 8-9
- 2. The northeastern overburden area of the Mae Moh lignite mine includes rehabilitated lower sections restored through EGAT's ecological efforts.

- 3. Natural forest in the area of Pa Mae Chang Forest Reserve
- 4. Community area around Mae Moh Reservoir

From the survey of wildlife in the area of Mae Moh Power Plant, 162 types of wildlife which are protected wild animals according to the Wild Animal Reservation and Protection Act, B.E. 2562 (2019) includes 2 types of reptiles, 8 types of mammals and 152 types of birds. In considering the threatened status in Thailand which is categorized by the Office of Natural Resources and Environmental Policy and Planning and considering the Red List of Threatened Species of the International Union for Conservation of Nature (IUCN), the threatened species in Thailand is as follows:

- The threatened species in Thailand
 Among the threatened species of registered
 wild animals in Thailand, two Vulnerable (VU)
 species are Red-whiskered Bulbul (Pycnonotus
 jocosus) and Darter (Anhinga melanogaster).
 Three Near Threatened (NT) species comprise
 Rufous-winged buzzard (Butastur liventer),
 Peregrine Falcon (Falco peregrinus) and
 Chestnut Munia (Lonchura atricapilla). The
 Least Concern group (LC) which are still
 numerous in nature and the least threatened
 with extinction are 184 species comprising
 8 types of mammals, 150 types of birds,
 12 types of reptiles and 14 types of amphibians.
- IUCN Red List of Threatened Species
 Among the registered wild animals according to the IUCN conservation status, 1 type which belongs to Near Threatened group (NT) is Darter (Anhinga melanogaster) and 189 species belong to the Least Concern group (LC) comprising 8 types of mammals, 156 types of birds, 12 types of reptiles and 13 types of amphibians.

Furthermore, EGAT has continued to restore the land which used to be a Mae Moh Mine by dividing the land into 3 parts, namely for reforestation, for water storage and recreation area and for tourism spot which includes a botanical garden and Mae Moh Lignite Mine Museum.



Waste Management



EGAT gives high importance to the management of waste generated throughout all operational processes in order to prevent and minimize potential impacts on stakeholders across the value chain, environment and other organism in the ecosystem.

Target of 2024	Achievements
 Amount of reused waste (Fly ash, bottom ash, gypsum) 215,000 tons Compliance with requirements and law 	 Amount of reused waste (Fly ash, bottom ash, gypsum) 856,092 tons Complied with requirements, law and conditions of EIA/EHIA reports of the projects

Policy and Commitment

EGAT has announced the policy of Circular Economy to be followed by employees of all units. The policy emphasizes efficient resource utilization, waste reduction, and increased reuse and recycling of materials, with the ultimate goal of achieving zero waste to landfill. In alignment with this policy, EGAT has developed a Circular Economy Strategic plan and initiated three pilot projects as follows:

- 1) Utilization of fly ash, bottom ash and gypsum project
- 2) Creation of value-added leonardite from the mine project
- 3) Industrial waste management to achieve 'Zero Waste to Landfill' project

By-products from coal-fired power generation, mining operations, and industrial waste from EGAT's production processes are repurposed for use in other industries such as raw materials for cement and construction, agricultural applications, and alternative fuel sources. In 2024, all three projects successfully met their targets for waste utilization.

Management

EGAT has stringently complied with law, related requirements, environmental management system according to ISO 14001 and Circular Economy principle as well as preventive and corrective measures of environmental impact and monitoring measure of environmental impact of each project. Waste management report is sent to the permissible authority within the due date. Moreover, EGAT's waste management is monitored by the internal audit system, assessed by external assurance and reviewed by the Management in accordance with the environmental management system.

EGAT has developed a centralized waste management database to analyze overall waste handling practices and explore options for reducing waste from production processes. The initiative promotes beneficial reuse of waste, such as repurposing instead of landfilling or incineration, in alignment with the national standard (NTC 10-2565) on Industrial Waste Management Toward Zero Landfill.

Moreover, EGAT has created involvement in waste management in accordance with Circular Economy (TCAS 2 - 2019) by cooperating with the alliance outside in making use of waste in other industries such as using expired ceramic heat shield which is the insulator of high heat in the burning chamber of the power plant as raw material (initial substance) in the ceramic fiber industry. Moreover, EGAT organized relationship building activity with the organization in charge of Circular Economy management aiming at sustainability development such as empirical study visit to promote knowledge and understanding of the reuse of waste, exchanged ideas and increased cooperation with related organization as well as with educational institutions in conducting research and study concerning the development of waste reuse instead of landfill.



■ Waste Generated from EGAT's Activities

Waste generated from EGAT's activities can be categorized into two main sources based on their origin, namely, waste from the operation of the power plants and waste from the office's activity which can be further classified into hazardous waste and non-hazardous waste. Currently, some waste can be reused, while certain types must be disposed of through landfilling or incineration. EGAT ensures that such waste is handled by legally authorized service providers and regularly monitors their operations to ensure that the disposal is carried out appropriately. Therefore, the disposal has the least or no impact on the community.

Waste Management in the Power Plant Area

In the management of waste generated from the electricity generation process, mining and transmission system, EGAT has prepared working method, operating procedure in collecting waste as well as operating procedure in case of emergency of chemical or waste leakage, preparation of supporting equipment and regular drill for an emergency.

All waste generated, including hazardous and non-hazardous waste, is systematically recorded by type and quantity, sorted according to its properties and classification, and stored in secure, durable containers. Clearly defined storage areas are designated to prevent chemical reactions, spills, and leaks that could pose safety or environmental risks. Additionally, contamination control systems are in place to prevent the spread of waste into the external environment.

EGAT will consider the management of all types of waste for maximum beneficial reuse, as follows:

- Waste which can be useful will be reused in the organization. For waste with potential to be used as precursor materials in external industries, EGAT will coordinate with relevant partners for proper management.
- Non-recyclable waste from production processes is disposed of through service providers authorized by the Department of Industrial Works. EGAT reports the quantity and disposal methods in the Environmental Impact Prevention and Mitigation Measures and Environmental Monitoring Report, which is submitted to the relevant authorities every six months.

Waste Management in the Office

EGAT manages waste generated from office-related activities, including those from offices, medical units, and vehicle fleets, through a waste separation guideline that classifies waste into 5 categories: general, biodegradable, recyclable, hazardous, and orphan/energy waste.

All waste will be collected, classified according to its type and sent to the authorized organization to be disposed. Monitoring is conducted through assessments in accordance with the ISO 14001 Environmental Management System.

In 2024, no significant impacts or major waste leaks were reported. EGAT has established mitigation measures, natural resource and environmental restoration plans, and compensation protocols for affected parties in the event of external waste leakage. These actions are carried out in collaboration with relevant agencies.

Waste in general is classified into 4 main types 1. Hazardous waste



which may pose risks to humans, animals, plants, property, or the environment, and e-waste



2. Recycled waste can be processed, sold and donated



3. Biodegradable waste perishable and rapidly biodegradable



4. General waste not economically viable for reuse



4 main types

5. Orphan waste/ **Energy waste** cannot be sold or reused but flammable



Greenhouse Gas Management



EGAT's core mission is to ensure sufficient electricity generation and energy security to support national economic development. This is carried out with a commitment to environmental quality through the adoption of Best Available Technology. At present, domestic renewable energy generation is continuously promoted to drive the energy transition toward carbon neutrality and net-zero emissions. At the same time, EGAT remains focused on maintaining system stability and balanced electricity pricing.

As a state enterprise in the energy sector, EGAT supports Thailand's efforts under the United Nations Framework Convention on Climate Change (UNFCCC), particularly in achieving the country's post-2020 Nationally Determined Contribution (NDC) targets of reducing greenhouse gas emissions by 30-40% by 2030. In 2024, EGAT has set the following goals and achieved the following results:

Target of 2024	Achievements
 Reduction of greenhouse gas emissions in accordance with the NDC of 6 million tCO₂ 	 Reduction of greenhouse gas emissions in accordance with the NDC of 10.46 million tCO₂ (forecasted value)

Policy of Greenhouse Gas Management

EGAT has implemented a greenhouse gas management policy across the organization since 2007, with regular updates. The most recent revision, made in 2018 to align with international goals and national policy, is as follows:

- 1. EGAT is committed to leading greenhouse gas reduction efforts in the power generation sector through clean and efficient technology which aligns with its Long-Term Greenhouse Gas Management Plan (2018–2030) and the national emission reduction targets.
- 2. Develop a greenhouse gas management network within the electricity generation sector.
- 3. Promote and enhance the implementation of greenhouse gas reduction measures and projects across all EGAT operations.
- 4. Promote research and development of technologies and innovations to achieve sustainable greenhouse gas reduction, in alignment with climate change adaptation efforts
- 5. Support the development of the carbon market.

EGAT successfully exceeded its greenhouse gas reduction target, achieving a total reduction of 10.46 million tCO₂ through 4 measures, namely electricity generation from renewable energy, increasing efficiency of electricity generation,

establishment of standard criteria for No.5 energy-saving labelling and use of cement substitute materials in ready-mixed concrete. Details of EGAT's greenhouse gas emissions reduction are as follows:

■ EGAT's Greenhouse Gas Reduction at the Measure Level (2022–2024)

Measures	Amount of greenhouse gas reduction (tCO ₂)			
Measures	2024*	2023	2022	
Electricity generation from renewable energy	2,891,445	2,950,811	3,426,834	
Increasing efficiency of electricity generation	4,015,185	4,252,093	3,493,782	
Establishment of standard criteria for No.5 energy-saving labelling**	3,238,514	2,114,821	1,364,615	
Use of cement substitute materials in ready-mixed concrete	321,936	329,023	n/a***	
Total	10,467,080	9,646,748	8,285,231	

Note:

- * The preliminary greenhouse gas reduction results for 2024 are subject to verification by EGAT's Greenhouse Gas Management Committee, scheduled for July 2025.
- ** Cumulative greenhouse gas emissions over the service life of each equipment.
- ***There was no available data in 2022, as the evaluation commenced in 2023.



Addition information on EGAT policy in greenhouse gas management



Goal of Greenhouse Gas Reduction at the Organization Level

In 2021, EGAT announced its Carbon Neutrality Policy, targeting carbon neutrality by 2050. A short-term goal was set to reduce greenhouse gas emissions intensity by 30% by 2030, compared to the 2021 baseline, while the long-term goal reflects EGAT's strategic direction toward achieving carbon neutrality by 2050.

■ EGAT's Long-Term Plan for Greenhouse Gas Management

EGAT has prepared its long-term greenhouse gas management plan (2018-2030) to be consistent with the national policy and strategy, to support the Nationally Determined Contribution (NDC) of Thailand and to achieve the goal of greenhouse gas management at the organization level by the following 4 strategies:

Strategy 1: Reduction of greenhouse gas to achieve the goal of the organization

Strategy 2: Building understanding, raising awareness and fostering stakeholder collaboration

Strategy 3: Serving as a focal point for greenhouse gas reduction in the electricity generation sector

Strategy 4: Research and development

The strategies are essential for the greenhouse gas management of the organization, network and alliances, energy sector and relevant stakeholders.

EGAT has intensified its operations in greenhouse gas management by setting a carbon neutrality target for 2050. EGAT is closely monitoring the national policy shift from the Nationally Determined Contribution to the Carbon Neutrality and is currently reviewing its greenhouse gas management operations to support the Carbon Neutrality target-setting and the development of the EGAT Carbon Neutrality Roadmap, guiding the organization toward a sustainable low-carbon future.

Structure of Greenhouse Gas Management

EGAT has established EGAT Committee on Greenhouse Gas Management consisting of senior executives from related operation lines. The Committee is responsible for closely overseeing the transformation of policy into practice, monitoring and evaluating operations. The Greenhouse Gas Management Department under

the Environment Project Division is responsible specifically for greenhouse gas management of the organization in coordination with all relevant units at the operation level in implementing the policy to achieve the goal with maximum efficiency.

Moreover, the Committee on EGAT Carbon Neutrality was appointed to drive the operation of carbon neutrality to achieve the goal with efficiency and tangible results.

Procurement Measure to Mitigate the Problem of Climate Change

Since 2019, EGAT has placed importance on the procurement activity which helps to mitigate the problem of climate change. EGAT has formulated the "Green Procurement Policy" to demonstrate its commitment to social, community, and environmental responsibility by promoting the use of environmentally friendly products and services.

■ Stakeholders and Greenhouse Gas Management

Stakeholders are a key factor in EGAT's greenhouse gas reduction efforts, especially electricity users. To promote their involvement, EGAT has implemented the Energy Efficiency Label No. 5 program, which sets standards and labeling criteria for electrical appliances to encourage energy-saving behavior. EGAT collects and reports annual greenhouse gas reductions achieved through this initiative.

Apart from the greenhouse gas reduction measures, EGAT also implements major project-level GHG reduction initiatives, offering various channels for stakeholders to actively participate in emission reduction efforts.

1. Thailand Voluntary Emissions Reduction Program (T-VER)

EGAT has implemented Thailand Voluntary Emissions Reduction Program (T-VER) since 2014 up to now in order to promote continued greenhouse gas emissions reduction and carbon credit market in the country.

In 2024, the carbon credit of the project of Kwae Noi Bumrungdan Dam Hydropower Plant in Phitsanulok Province of 137,979 tCO₂ eq and the



carbon credit of EGAT Irrigation Valve Based Micro Hydro Project - Mae Ngad Somboonchon Dam in Chiang Mai Province of 4,143 tCO₂ eq have been verified.

EGAT has also registered the Hydro Floating Solar Hybrid Project of Ubolratana Dam, Unit 1, in Khon Kaen Province, under the T-VER program, with an expected annual reduction of 22,860 tons of CO₂eq.

Additionally, EGAT is in the process of registering the Plant Genetic Conservation Project under the Royal Initiative of HRH Princess Maha Chakri Sirindhorn at Srinagarind Dam, Kanchanaburi Province as a T-VER project which is expected to absorb the carbon of 973 tCO₂eq per year.

2. EGAT Green Credit Project

EGAT promotes renewable energy generation by expanding into green business initiatives that support long-term sustainability. To meet the needs of diverse stakeholders advocating for clean energy, EGAT has developed the EGAT Green Credit program, which includes trading Renewable Energy Certificates (RECs) and carbon credits under Thailand's Voluntary Emission Reduction Program (T-VER). As a Thailand Local Issuer, EGAT certifies RECs for domestic power plants in accordance with the International Tracking Standard Foundation (I-Track Foundation), helping to drive renewable energy production and consumption, mitigate

climate change, and support national greenhouse gas reduction goals.

In 2024, EGAT provided registration services for power plants in Thailand under the I-Track Foundation standards and certified a total of 7,496,809 RECs. EGAT was also designated by the Ministry of Energy as the lead agency for developing the Utility Green Tariff (UGT), a key national measure to promote renewable electricity generation and consumption, supporting Thailand's goal of achieving carbon neutrality by 2050.

3. EGAT Cooling Innovation Fund (CIF)

EGAT Cooling Innovation Fund (CIF) was established for the purpose of promoting the cooling technology by using natural refrigerant which is environmentally friendly and increase the efficiency of energy use in air-conditioner and refrigerator. The duration of CIF Project implementation is from 1 April 2021 - 30 June 2025. The fund offers a range of support measures tailored to market needs and driving technological transition in key sectors. The strategic



Training of safe management of flammable refrigerant

plan of CIF management covers 4 aspects as follows:

(1) Training and Education

Projects under CIF disseminate knowledge and enhance the capabilities of vocational teachers, production and maintenance technicians, and other relevant personnel in the safe management of flammable refrigerant. EGAT cooperated with King Mongkut's University of Technology North Bangkok and the Office of Vocational Education Commission in improving the former training center and establishing 17 new training centers countrywide. From the beginning of the project up to present, over 600 vocational teachers and technicians have been trained.

- (2) Demonstration and Pilot Projects
 EGAT supports the following projects through public
 and private organizations:
- Solar refrigerated cabinet demonstration project under the refrigeration innovation fund
- Project supporting the transition to water-loop cooling systems using natural refrigerants

- Project supporting the transition to commercial freezers using natural refrigerants
- Project promoting the use of energy-saving No. 5-labelled refrigerated display cabinets using natural refrigerants
- Project promoting the use of energy-saving No.5labelled refrigerator using natural refrigerants
- Project promoting proper disposal management of used air conditioners and refrigerants
- Project developing an ammonia-based cooling system integrated with ice slurry thermal storage for low-temperature vertical farming
- Project developing an ammonia-based cooling system integrated with paraffin phase-change thermal storage to support temperature reduction in transparent plastic greenhouses
- Project supporting solar energy systems for air conditioning with natural refrigerants





Project supporting the transition to water-loop cooling systems using natural refrigerants



Other demonstration and pilot projects in the area of EGAT are as follows:

- Project of solar energy system for air-conditioning system of Tha Thung Na Machinery Center
- Development project of cooling system from vapor compression using water as working substance
- Demonstration project of cold storage system using ice in combination with solar energy for energy management for cooling system of the Zero Carbon Building near the Interlocking Block Building, Mae Moh Power Plant
- Project of solar energy system for air-conditioning system using natural refrigerant in EGAT Dams areas.



Project supporting the transition to commercial freezers using natural refrigerants



Solar refrigerated cabinet demonstration project, Department of Alternative Energy Development and Energy Efficiency





Project promoting proper disposal management of used air conditioners and refrigerants

(3) Safety and Standard

The CIF projects support research and development on safety and design of the products as well as testing facilities for the products using natural refrigerant such as supporting the testing laboratory of the Electrical and Electronics Institute in the test of commercial freezer using natural refrigerant before the product's entry in the market.





Testing laboratory of commercial freezer using natural refrigerant in safety

(4) Knowledge Management and Communication
The CIF projects support collection of useful
information and knowledge obtained from the
operation of EGAT Cooling Innovation Fund (CIF)
and other different sources. Such knowledge and
information will be publicized on websites,
handbooks and video clips for the benefit of
interested persons.

It is estimated that the amount of greenhouse gas reduction from the implementation of EGAT CIF Fund will be approximately 40,000 tCO₂eq. The greenhouse gas reduction will support the air-conditioning and refrigerating industry of the country in contributing to the achievement of the goal of the Nationally Determined Contribution (NDC) which Thailand has expressed its commitment in the 26th United Nations Climate Change Conference (COP 26).





Projects under CIF Fund

Fund management (CIF Committee/Working Groups)

2. Demonstration & 1. Training & Education 3. Standards & Safety **Pilot Projects** Increasing capability of Promoting cooling Improving testing technicians and organizing technology using natural laboratory, e.g. Improving additional training at the testing laboratory for refrigerant, existing training center e.g. water-loop cooling freezer using natural system, top-tier commercial refrigerant refrigerator, refrigerator with Label No. 5 Expansion of new training center Demonstration project of **Green Cooling** Technology, e.g. EGAT project/project of solar power freezer Circular economy & waste management of refrigerant in cooling industry

4. Knowledge Management & Communication

Such as follow-up projects, knowledge dissemination on website, handbook, public relations media, networking, competency building, workshop

Nith its long experience in greenhouse gas management in 2024 ECAT took part in the 20th Confe

Public Relations in Greenhouse Gas Management

With its long experience in greenhouse gas management, in 2024, EGAT took part in the 29th Conference of the Parties (COP29) of the United Nations Framework Convention on Climate Change (UNFCCC) at Baku, Azerbaijan. EGAT participated in a side event at the Thailand Pavilion to present its guidelines and achievements in greenhouse gas management, along with its goal of achieving carbon neutrality by 2050. The presentation highlighted activities under the 'Triple S' strategies, focusing on the topics 'Energy Transition towards Carbon Neutrality' and 'Compressed Biomass Board Product to Fight Global Warming.' This international knowledge-sharing forum aimed to deliver insights that benefit both society and the environment.

Operating Results and Monitoring the Effectiveness of Greenhouse Gas Management

EGAT has quantified the amount of greenhouse gas emissions at the organization level according to ISO 14064-1:2018 to monitor and control continuously the greenhouse gas emissions. EGAT has contracted outside independent organization to verify the data and data collection process. The amount of the greenhouse gas emissions at the organization level is used as an indicator of environment in the assessment of eco-efficiency in monitoring the effectiveness of the use of organization resource together with the environmental responsibility aiming toward sustainable development.

Based on the monitoring and evaluation of EGAT's greenhouse gas management performance, the total GHG emissions in 2024 (Scope 1, Scope 2, and Scope 3) amounted to 126,334,019.09 tonnes of CO_2 equivalent, representing a 7.24% increase from the base year. This rise is attributed to the inclusion of additional Scope 3 emission activities.

The assessment of greenhouse gas emission intensity from electricity production refers to EGAT's total emissions at the organizational level, in accordance with ISO 14064-1:2018 (Scope 1 and Scope 2 only). In 2024, EGAT generated 66,745,355,802 kWh of net electricity and emitted 34,885,441,870 kg CO₂eq, resulting in an emission intensity of 0.5227 kg CO₂ per kWh or a 5.62% reduction from the base year.



EGAT's Greenhouse Gas Emissions

Important greenhouse gas emissions according to the scope of operational control (Operational Control Approach)	2024 (tCO ₂ eq)	2023 (tCO ₂ eq)	Base year 2021 (tCO ₂ eq)
Scope 1/ Category 1	34,875,864.13	34,677,066.59	33,746,562.47
Direct greenhouse gas emissions from the activities of the organization			
comprising:			
- Combustion from electricity generation process			
- Use of transportation			
- Mining			
- CO ₂ emissions in SO ₂ removal (FGD)			
- Use of ${\rm SF_6}$ in extinguishing electric arc of high voltage electricity system			
Scope 2/ Category 2	9,595.74	14,264.84	9,698.52
Indirect greenhouse gas emissions from the use of energy:			
- Use of electricity from outside			
Scope 3/ Category 4	91,448,577.22	84,214,776.30	84,045,739.42*
Other indirect greenhouse gas emissions:			
Classification 1: Purchased goods and services			
- A4 paper / masking tape / whiteboard marker / document folder /	2,064.32	1,879.35	146.66
ink cartridge / garbage bags / cloth gloves / toilet paper / welding			
wire / chlorine / carbon brush / conveyor belt / battery / oil-absorbent			
cloth / bearing / packing / O-ring / contact cleaner / solvent			
- Utilization of municipal water supply	852.67	813.31	634.38
Classification 3: Fuel- and energy-related activities			
- Origin of fuels utilized by the organization	5,409,675.35	5,446,566.62	n/a
- Electricity purchased for sale	86,034,295.47**	78,758,126.59	84,044,958.39
Classification 5: Waste generated in operations	1,082.07***	5,874.94	n/a
Classification 7: Employee commuting	607.35	1,515.50	n/a
- Employee shuttle service vehicles			
Total	126,334,019.09	118,906,107.73	117,802,000.41

Note:

- All greenhouse gas emissions data are calculated using Global Warming Potential (GWP) values from the IPCC's Sixth Assessment Report (AR6), based on a 100-year time horizon.

- Scope 2/Category 2 emission is calculated using emission factor from the EF CFO (TGO) which includes transmission loss.
- Greenhouse gases included in the emissions calculations (Scope 1, 2, and 3/Categories 1, 2, and 4) are CO_2 , CH_4 , N_2O , HFCs, PFCs, and SF₆. NF₃ is not relevant to EGAT's operations.
- The year 2021 was selected as the base year, as it marks the year EGAT announced its policy to achieve carbon neutrality by 2050.
- * Emissions from A4 paper usage, municipal water consumption, and electricity purchased for sale.
- ** Calculated by using CO₂ intensity per unit of electricity generated in 2023.
- *** Amount of waste from Mae Moh Power Plant, North Bangkok Power Plant, South Bangkok Power Plant, Nam Phong Power Plant, Wang Noi Power Plant, Bang Pakong Power Plant, Krabi Power Plant and Chana Power Plant.

Greenhouse Gas emissions Intensity per Electricity Production in 2024 in Comparison with the Base Year

	2024 (kgCO ₂ eq/kWh)		Percentage of reduction from the base year
Greenhouse gas emissions intensity of electricity production	n 0.5227	0.5538	5.62

Note:

Only the greenhouse gas emissions of scope 1 and scope 2

Greenhouse gas emissions intensity per electricity production

Scope/Activities	2024 (kgCO ₂ eq/kWh)	2023 (kgCO ₂ eq/kWh)	2021 (kgCO ₂ eq/kWh)
Scope 1 Direct greenhouse gas emissions from activities of the	organization		
Combustion from electricity generation process	0.5225	0.5122	0.5536
Use of transportation			
Coal mining			
CO ₂ emissions in the SO ₂ removal (FGD)			
Use of SF ₆ in extinguishing electric arc of high voltage electricity system			
Scope 2 Indirect greenhouse gas emissions from the use of ene	rgy		
- Use of electricity from outside	0.0002	0.0002	0.0002

Not

- Net electricity generation of EGAT in 2024 was 66,745,355,802 kWh
- Net electricity generation of EGAT in 2023 was 67,703,742,326 kWh
- Net electricity generation of EGAT in 2021 was 60,954,769,827 kWh

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Climate Change Adaptation and Climate Resilience

Realizing the increasing severity of climate change and the necessity to generate electricity from fossil fuel to maintain the energy security, EGAT has proactively prepared and adapted to address potential risks and impacts to the organization and its stakeholders, as follows:

Transition Plan, Adaptation Plan and Climate Resilience

EGAT has established the Carbon Neutrality Plan, which encompasses a diverse range of greenhouse gas reduction strategies, and enhanced the strategic framework to support its goal of achieving carbon neutrality by 2050, in line with Thailand's target. This commitment is driven by the Triple S strategy, comprising:

S1- Sources Transformation

EGAT will increase the proportion of electricity generation by renewable energy and develop alternative technology to support renewable energy focusing on the management at the source in order to be self-reliant by using local natural resource and decrease the costly imported fuel by implementing EGAT's Hydro Floating Solar Hybrid as the main projects.

The most recent project which has proved to be successful in commercial operation is 24 MW Hydro Floating Solar Hybrid of Ubol Ratana Dam, Unit 1 in Khon Kaen Province to support the government policy on increasing renewable energy in the system.

However, as electricity generation from renewable energy may cause fluctuation in electricity

generation and transmission system, potentially affecting the stability of the national power grid. Therefore, EGAT has developed the Grid Modernization system, an upgrade to the power system using advanced technologies to enhance flexibility and accommodate the increasing and unpredictable supply of renewable energy, driven by constantly changing weather conditions. In addition, EGAT has established the RE Forecast Center to support planning of electricity generation from wind and solar energy, and also set up the Demand Response Control Center, integrated with the systems of the Metropolitan Electricity Authority (MEA) and the Provincial Electricity Authority (PEA), serving as a national hub for managing demand response operations.

For the base load power plants, they will be improved to become flexible power plants in order to immediately increase the generating capacity when there is a change of the renewable energy. The energy storage system (ESS) such as pumped storage hydropower plant, battery energy storage system (BESS) and hydrogen energy storage system (HESS) are used to cope with the fluctuation of renewable energy in electricity generation system and can store energy at the time when the renewable energy becomes surplus in the system as well as supply back to the system when energy is needed.

Moreover, EGAT has liked and exchanged information of Bigdata/data analytics with the service providers of electricity system and has invested in other technology such as Flexible Generation, Virtual Power Plant (VPP) and Energy Trading Platform (ETP).

As a long-term plan, EGAT will connect electricity transmission system in the region (Grid Connectivity) to create an equilibrium of the 3 factors, namely security, reasonable price and sustainability by the integration of sharing resources in the region. Moreover, EGAT is in the process of making a study on the use of alternative energy such as using hydrogen in electricity generation.

The first strategy S1 is, therefore, regarded as an important strategy for keeping an equilibrium of energy security and carbon neutrality.

S2- Sink Co-creation

EGAT is currently conducting a study on the implementation of Carbon Capture, Utilization, and Storage (CCUS) technology for its power plants.

S3- Support Measure Mechanism

The final "S" emphasizes EGAT's commitment to encouraging public participation in reducing electricity consumption, which simultaneously contributes to lowering carbon dioxide emissions from electricity generation. EGAT's project of No.5 energy-saving labelling has been well received by the public. EGAT has enhanced the efficiency standards of electrical appliances through a star rating system to drive manufacturers and distributors toward greater energy performance.

EGAT also promotes the use of electric vehicle (EV) in full range, both the production of electric vehicles and the development of EV business solutions such as charging station "EleX by EGAT", mobile application platform "EleXA" to find the charging stations, "EGAT Wallbox", a small home charger and "BackEN" a centralized system that integrates all components related to EV management, ensuring optimal operational efficiency.

Moreover, EGAT supports the projects of Bio-Circular-Green Economy (BCG) which contribute to the reduction of carbon dioxide emissions and other greenhouse gas emissions to the atmosphere.





Risk, Opportunity and Financial Implications

EGAT continues to utilize coal-fired power generation to uphold national energy security and maintain energy price stability. Mae Moh Power Plant, the only lignite-fired facility owned and operated by EGAT, ranks second in terms of lowest electricity production cost following hydropower. A sudden cessation of its operations would significantly increase the overall cost of electricity nationwide and trigger adverse economic and social consequences across all sectors.

Despite the global trend of the gradual decline of electricity generation by coal energy which results in the adaptation of the world coal producer by lowering the coal price, Mae Moh Mine has not been affected directly as the coal price of Mae Moh Mine does not quote the coal price in the global market and its price is still significantly lower. On the other hand, the coal price from Mae Moh mine has a tendency to become higher in the future from the change of mining area and the lower amount of coal production resulting in a higher fixed cost per unit.

However, EGAT has a tendency to reduce carbon dioxide emissions from the use of lignite in the future. At the end of 2025, EGAT has a plan to shut down Units 8-13 of Mae Moh Power Plant of the contract capacity of 1,620 MW and starts the operation of Unit 15 of the contract capacity of 600 MW which is a modern power plant using less coal

in the electricity generation. In 2026, the contract capacity of Mae Moh Power Plant will be reduced from 2,220 MW to 1,200 MW and the use of lignite will be reduced from 14-15 million tons to only 6-7 million tons per year.

However, the project of Mae Moh Power Plant, Unit 15, is being affected by the global trend of carbon dioxide emissions reduction measure, as some countries has adopted a measure of stopping giving out loans for the construction of coal power plant. Therefore, in the bidding for contractor for coal power plant construction, there were only few bidders and the bidding had to be organized twice resulted in a delay of the project and the power plant could not be operated on time.



Moreover, the European Union's Carbon Border Adjustment Mechanism (CBAM) marks the beginning of a significant risk. As more countries adopt and enforce carbon-related measures, EGAT's coal-fired power generation may face direct operational impacts.

Recognizing the potential economic, social, and environmental impacts following the completion of lignite mining and the eventual decommissioning of coal-fired power generation at Mae Moh Power Plant, EGAT has initiated studies and planning for area rehabilitation and development. Currently, EGAT is exploring renewable energy projects to

replace coal-fired generation, such as solar power plants and pumped-storage hydropower facilities. Additionally, the possibility of converting the coal-fired plant into a biomass power plant is under consideration. These initiatives aim to ensure the continued stability and reliability of electricity supply in Thailand, particularly in the northern region, while also supporting long-term economic and social development in the area.

Investment in Climate Change

Type of investment	Proportion of investment per the total investment %
Exploration, survey, acquisition and development of the new reserve	Feasibility studies are currently underway for biomass and hydrogen power plants
Expanding the existing mine	Approximately 30% of coal production plan, phase 6
Energy from renewable energy (classified according to the type of renewable energy)	Feasibility studies are currently underway for biomass and hydrogen power plants
Technology for carbon dioxide removals from the atmosphere and solving the problem by natural way to mitigate the climate change	EGAT is conducting a study on Carbon Capture, Utilization, and Storage (CCUS)
Initiative in research and development which can cope with corporate risk concerning climate change	Research proposals are currently under review and development

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Demand Side Management

Demand Side Management (DSM) has been a key mission assigned to EGAT by the Cabinet on December 3, 1991, and officially launched on September 20, 1993, under the name "Together Conservation" project. This initiative promotes efficient electricity and resource usage across all sectors by encouraging the adoption of high-efficiency electrical appliances and systems. It supports the country's social expansion and economic growth, which continue to drive rising electricity demand.

Over the past three decades, EGAT has remained committed to reducing energy consumption and carbon dioxide emissions, contributing concretely to climate change mitigation.

Target of 2024

- Reduction of the use of energy of 1,159 GWh
- Reduction of greenhouse gas emissions of 627 thousand tCO₂
- Redesign of the No.5 Energy Efficiency Label to align with environmentally friendly trends, modern aesthetics, and added value, better meeting the needs of consumers and industry
- Expansion of No. 5 labeled products to include distribution transformers, solar panels, LED streetlights, and grid-connected solar inverters

Achievements

- Reduction of the use of energy of 2,355 GWh
- Reduction of greenhouse gas emissions of 1,228 thousand tCO₂
- Implementation of the newly designed No. 5
 Energy Efficiency Label, officially launched on January 1, 2024
- Implementation of No.5 Energy Efficiency
 Labeling for four targeted products

EGAT carries out Demand Side Management by Triple E strategies as follows:

1. Energy Saving Equipment have played a key role in driving the electrical equipment market by encouraging manufacturers, importers, and distributors to produce and supply high-efficiency products. EGAT has developed energy performance standards and implemented the No.5 Energy Efficiency Label, supported by marketing strategies to promote consumer adoption of high-efficiency appliances. The current label features a 1-5 star rating system, offering consumers more choices for energy-saving products. It also displays the estimated reduction in carbon dioxide emissions over the product's lifetime, enabling consumers to actively participate in climate change mitigation through informed purchasing decisions. The label includes a symbol indicating environmentally friendly production processes aligned with the circular economy concept, expanding its role from guiding purchasing decisions to supporting sustainable product lifecycle management. Additionally, a QR code provides consumers with access to detailed information on product usage, installation, maintenance, and other relevant updates.

These efforts contribute to sustainable energy use and encourage behavioral change among electricity users toward more efficient consumption, reducing unnecessary energy waste. This comprehensive approach, from power generation to end-user consumption, supports tangible public participation in greenhouse gas reduction and aligns with the national goal of achieving carbon neutrality.

- 2. Energy Saving Building EGAT provides consultancy in the promotion of efficient use of energy measure including the selection of construction materials and high- efficiency electrical equipment in the housing and building for residential sector, offices, government, educational institutions, department stores, hotels and hospitals.
- 3. Energy Saving Habit EGAT promotes knowledge, attitudes, and habits related to electricity conservation among educational institutions at all levels, elementary, secondary, and higher education, as well as among the public in business, industrial, and residential sectors. This is achieved through academic services, activities that encourage efficient energy use and environmental preservation, and the provision of materials and equipment. These efforts aim to foster and advance learning toward systematic energy management.

EGAT has developed a data collection framework to monitor and verify electricity management performance in alignment with energy conservation measures across residential, business, and industrial sectors. The organization tracks and coordinates data from related projects to support both quantitative and qualitative evaluations. These insights are integrated for post-project analysis to assess





cost-effectiveness, with summary reports and recommendations provided. Additionally, EGAT has established and integrated a centralized database and dashboard system to present project progress and key information, enabling stakeholders to make timely and informed decisions.

In 2024, demand side management resulted in energy savings of 2,355 gigawatt-hours and avoided cumulative carbon dioxide emissions throughout the product lifetime, based on the 2021 baseline, amounting to 3.49 million tons of CO₂.

Result of Demand Side Management

Droiget	Achievements Units			Ye	ar	
Project	Achievements	Offics	2024	2023	2022	2021
1. No.5 Energy-saving	Total Annual Saving	GWh/Year	2,345	1,545	1,053	1,724
Label	Total Lifetime Saving	GWh/Year	6,659	4,321	2,777	1,724
	Total CO ₂ Reduction Annual	ktCO ₂ /Year	1,223	805	549	899
	Total Lifetime CO ₂ Reduction	ktCO ₂ /Year	3,472	2,253	1,448	899
2. Energy Consultancy	Total Annual Saving	GWh/Year	5.99	6.52	5.08	4.4
	Total Lifetime Saving	GWh/Year	22.01	16.01	9.49	4.4
	Total CO ₂ Reduction Annual	ktCO ₂ /Year	3.13	3.4	2.65	2.3
	Total Lifetime CO ₂ Reduction	ktCO ₂ /Year	11.48	8.35	4.95	2.3
3. No.5 Energy-saving	Total Annual Saving	GWh/Year	3.98	8.04	-	-
Label for Housing and	Total Lifetime Saving	GWh/Year	12.04	8.04	-	-
Building	Total CO ₂ Reduction Annual	ktCO ₂ /Year	2.08	4.19	-	-
	Total Lifetime CO ₂ Reduction	ktCO ₂ /Year	6.27	4.19	-	-
4. Green Classroom	Total Annual Saving	GWh/Year	0.32	9.01	-	-
	Total Lifetime Saving	GWh/Year	-	-	-	-
	Total CO ₂ Reduction Annual	ktCO ₂ /Year	0.16	4.69	-	-
	Total Lifetime CO ₂ Reduction	ktCO ₂ /Year	-	4.69	-	-
Total	Total Annual Saving	GWh/Year	2,355	1,569	1,058	1,728
	Total Lifetime Saving	GWh/Year	6,693	4,345	2,786	1,728
	Total CO ₂ Reduction Annual	ktCO ₂ /Year	1,228	817	552	901
	Total Lifetime CO ₂ Reduction	ktCO ₂ /Year	3,490	2,270	1,453	901

Note:

- The No.5 Energy Efficiency Label project has been evaluated across 12 product categories, including refrigerators, air conditioners, electric fans, rice cookers, washing machines, water heaters, LED bulbs (E27 type), LED tubes (T8 type), televisions, commercial display refrigerators, automatic electric water pumps, and twin-tub washing machines.

- The lifetime is accumulated performance according to the lifetime of the project starting from 2021 which is consistent with the timeframe of the Nationally Determined Contributions (NDCs) 2021-2030.
- The greenhouse gas emission factor of the electricity transmission system for the year 2015 was used, as it serves as the baseline year for evaluating progress under the Nationally Determined Contributions (NDCs) framework.

Demand Side Management (Classified by the Target Groups)

Demand Side Management Projects	Household Sector	Business Sector	Institutional Sector	Industrial Sector
No.5 Energy-saving Label	/	/	/	/
Energy Consultancy	-	/	/	/
No.5 Energy-saving Label for Housing and Building	/	-	/	-
Green Classroom	/	-	/	-

EGAT has outlined future operational plans under the "S – Support Measures Mechanism" strategy to enhance the efficiency of electricity consumption management. These plans include preparations for No.5 labeling of new products such as clothes dryers, chest freezers, and solar-powered LED streetlights. EGAT is also considering expanding the scope of testing standards and energy efficiency criteria for multi-split air conditioners with fan coil units and variable refrigerant flow (VRF) systems with capacities up to 300,000 BTU per hour. Additionally, EGAT aims to promote the development of an e-waste management system for electrical and electronic appliances, in line with the circular economy concept.



Additional information on The project of No.5 energy-saving label



Additional information on The project of No.5 housing and building



Additional information on The project of Green Classroom

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Air Pollution Management



Air pollutant emissions resulting from fuel combustion in thermal power generation processes, such as nitrogen oxides (NO_x), sulfur dioxide (SO_2), and particulate matter, are difficult to avoid and may pose health risks as well as contribute to climate change. Therefore, EGAT places great importance on air quality and pollution control to minimize health risks for stakeholders and to preserve the integrity of surrounding ecosystems.

Target of 2024

- Control the release of emissions of significant pollutants such as sulfur dioxide (SO₂), oxide of nitrogen (NO_x) and particulate matter (PM) to be within the limit
- Control the operation efficiency of the Flue Gas Desulfurization system (FGD) of all operation units of Mae Moh Power Plant to be not less than 93%
- Use the Best Available Technology to keep the emissions release to the minimum in every new power project of EGAT of which the Commercial Operation Date (COD) starting from 2019

Achievements

- Emissions of significant pollutants have been controlled to be within the limit
- The operation efficiency of the Flue Gas
 Desulfurization system (FGD)of all operation
 units of Mae Moh Power Plant was successfully
 controlled to be according to the target
- Use the Best Available Technology to keep the emissions release to the minimum in the following new power projects of EGAT of which the Commercial Operation Date (COD) starting from 2019
 - Bang Pakong Combined Cycle Power Plant,
 Block 1 and
 - South Bangkok Combined Cycle Power Plant, Block 4
 Both power plants use Dry Low NO_x Burner in electricity generation in the case of using natural gas as fuel and use Water Injection System in the case of using diesel oil as fuel
 - Mae Moh Thermal Power Plant, Unit 14 uses Gas Desulfurization System (FGD), Electrostatic Precipitator (ESP) and Dry Low $\mathrm{NO_x}$ Burner of the Selective Catalytic Reduction (SCR)

EGAT strives to control the amount of air pollution released from the stack of the power plant to be not exceeding the limit and criteria specified in the Notification of Ministry of Industry, B.E. 2547 (2004) on the Amount of Air Contaminants Released from the Plant Which Generates, Transmits or Sell Electricity and the Notification of Ministry of Natural Resource and Environment, B.E. 2566 (2023) on the Standard for Control of Air Pollution Released from the Power Plant. Moreover, EGAT has conducted inspection of PM 2.5 from the stack of power plant, control of the efficiency of the operation of flue gas desulfurization (FGD) system of all units of Mae Moh Power Plant and has used the best available technology to keep the pollution release at the minimum.

The Continuous Emission Monitoring System (CEMS) is used to measure the amount of sulfur dioxide (SO_2), nitrogen oxides (NO_x) and particulate matter (PM) throughout 24 hours in order to control the air quality from electricity generation to comply with the requirements of law and with the least impact. The result is reported to Department of Industrial Works and surrounding communities through display screens, public notice boards at the power plant entrance, and EGAT's power plant website.

Moreover, EGAT has installed the Ambient Air Quality Monitoring Systems (AAQMS) to measure the air quality on 24 hours-basis as well as the interval air inspection twice a year to monitor the ambient air quality of the community area around the power plant. Inspection of the total suspended particulate (TSP), PM-10, sulfur dioxide (SO_2) and nitrogen dioxide (NO_2) is conducted with modern equipment and technology and the inspection result is made available to the community. From the inspection, if there is a tendency that the community will be affected, the measuring system will give a signal to the power plant to solve the problem immediately and to control the environmental quality without delay.

The quantity of emissions from EGAT power plants is collected for further management. EGAT collected the data of concentration of nitrogen oxides (NO_x), sulfur dioxide (SO_2) and particulate matter (PM) obtained from the stack of 8 EGAT power plants. The collected data is used in calculating the emissions (ton per year) and the pollutant intensity (kilogram per megawatt hour). For this purpose, EGAT has collected the actual data in 2 parts, namely

- 1) Data of power plant service hours and gross generation
- 2) Pollutant emissions quantity data

Data collection of pollutant emissions comprises the following:

 Data collected from the Continuous Emissions Monitoring System (CEMS) installed at the stack of the power plants CEMS is the measuring system of emissions from the stack of power plant to monitor the emissions continuously. The measuring value is more reliable than the value obtained by other method as it is from the actual operations. Mae Moh power plant is the only power plant which uses data from the CEMS as there is complete data available for use.

2. Data from the stack sampling

Sample of the emissions from the stack of the power plant is taken twice a year as data representative of the emissions per year. The sample for concentration of NO_x , SO_2 , PM, quantity of oxygen (O_2) and flow rate will be collected at the operation status of at least 80% of the full load.

In monitoring the efficiency of the operations, EGAT conducted inspection on the accuracy of the Continuous Emissions Monitoring System (CEMS) of 8 power plants twice a year to confirm the accuracy of the inspection result. Moreover, EGAT made a report on the operation concerning air quality to the meeting of Joint Committee monitoring the operation and environmental development of the community both at the level of the tripartite committee and subcommittee. Moreover, EGAT regularly reports air quality performance to the Tripartite Committee and its subcommittees. Results of environmental impact mitigation and monitoring measures are also submitted every six months to relevant government agencies in compliance with legal requirements.



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Human Resource Management and Development



An effective human resource management system, encompassing employee welfare, continuous skill and competency development, inclusive participation, and equal opportunity, empowers employees to reach their full potential. This fosters morale and motivation, enhancing operational efficiency and the delivery of products and services to stakeholders.

Target of 2024	Achievements
 The employee engagement survey score for EGAT is not less than 80% The average training hours of EGAT employees is not less than 32 hours per person 	 The employee engagement score is 85% The average training hours of EGAT employees is 36.72 hours per person

Human Resource Management

EGAT Board of Directors has established the Human Resources Committee to be responsible for formulating policy in human resource management and development and to give approval to the master plan and annual operation plan on human resource management, aiming to ensure that EGAT manages and develops its human resources effectively, efficiently, fairly, transparently, and with accountability. The Committee also advises on policies, strategies, and practices in response to both internal and external organizational changes. The Human Resource and Organization Development Division and the Human Resource Development and Quality Division are in charge of the human resource management and development respectively.

In 2024, EGAT revised its human resource policy to include two key issues, namely

- 1) Promoting diversity and equity within the organization by ensuring fair treatment of all personnel regardless of gender, race, religion, age, social status and educational background
- 2) Enhancing labor relations by emphasizing participation, fostering positive relationships, and facilitating comprehensive internal communication to promote mutual understanding between management and



Addition information on EGAT policy on human resource

employees, while nurturing respect for individual rights and roles in alignment with labor law standards and practices.

EGAT has prepared the short-term and long-term strategies in human resource management in accordance with the master plan of human resource (2024-2028). Based on the master plan, EGAT has monitored and supervised the implementation of the operation plan and reported the result quarterly to the EGAT Executive Committee for comments and recommendations.

EGAT conducts annual assessments of its operational processes and management practices under the State Enterprise Assessment Model (SE-AM), specifically in the area of Human Capital Management, as evaluated by the State Enterprise Policy Office. Additionally, organization-wide surveys are conducted to assess the acceptance of the human resource management system among employees and executives. The results are used to improve human resource management processes.

In 2024, EGAT achieved 100% completion of its action plan targets. The SE-AM score for 2023 reached 4.1553, reflecting a 0.7981% increase from 2022 and indicating a high level of performance. Additionally, acceptance of the HRM system was rated at the highest level, with an average score of 4.288, an improvement from the previous year. These results demonstrate enhanced operational efficiency. Nevertheless, EGAT remains committed to continuous development through the following initiatives:

- Benchmark key human resource practices against industry peers, both domestic and international, to identify areas for improvement
- Provide training courses to external contract workers to build basic understanding of organizational operations, including working hours, rules and regulations, dress code, workplace rights, safety, and a positive work mindset
- Review and refine organizational values to better reflect Diversity, Equity, Inclusion, and Belonging (DEI&B), supported by year-round activities and communications to promote awareness and understanding of DEI&B principles

EGAT has communicated annually the master plan of human resource management to the relevant responsible persons. Additionally, EGAT publicizes the change in policy and criteria concerning human resource management which affects the employees such as the promotion criteria and the criteria concerning benefits and welfare.

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For recruitment, EGAT communicates systematically with outside stakeholders with clarity and transparency through different channels. The qualification of candidates is widely opened on the principle of equity.

In cases of significant changes that may affect employees, EGAT does not specify a minimum notice period. Generally, EGAT does not implement changes that negatively impact employment conditions. If the changes are beneficial to employees, announcements are made after implementation, as there are no adverse effects requiring prior preparation. For changes resulting from the employer's managerial prerogative, communication or announcements are made as appropriate to the situation.

Welfare and Benefits

Welfare and Benefits	Senior Executives	Executives	Operational Level/ Contracted Employees
Allowance/accommodation for working locally	/	/	/
Allowance/accommodation for working overseas	/	/	/
Loan, e.g. necessity loan, child education loan	/	/	/
House rent	/	/	/
Provident Fund	/	/	/
Medical allowance and EGAT's medical service*	/	/	/
Overtime pay and holiday pay	-	-	/
Clothing allowance	-	-	/
Allowance or reward for high-risk job**	/	/	/
Special allowance for specific duties or task such as underwater operations, welding craftsmanship, etc.**	-	/	/
Risk allowance and accident insurance for employees working in the Southern border provinces***	/	/	/
Special reward or vacation leave for employees working in the Southern border provinces***	/	/	/
Hybrid working**	/	/	/
Leave rights, e.g. sick leave, maternity leave, parental leave	/	/	/

EGAT supports employees' freedom to establish, join associations, and engage in collective bargaining, in accordance with legal frameworks and internal organizational regulations. This includes participation in the EGAT State Enterprise Labor Union (EGAT Union), the EGAT Labor Relations Committee, the Internal Communication Taskforce, and the Collective Bargaining Representatives. EGAT recognizes these platforms as essential channels for communication between management and employees, helping to foster mutual understanding in cases of conflict or disagreement. They also contribute to strengthening labor relations and serve as mechanisms for protecting EGAT's interests.

Under the law, only employees who are members of the EGAT Union are entitled to benefits under the collective bargaining agreement between EGAT and the Union. In 2024, EGAT had 8,797 union members, accounting for 59.13% of its workforce. However, EGAT extends the benefits of the collective agreement to all employees, ensuring 100% coverage. When employment conditions are improved as a result of collective bargaining, EGAT applies the same improvements to non-union members to maintain consistency in compensation, welfare, and benefits management.



Note: * covers employee's family, ** applies to specific duties or task, *** applies to high-risk areas

Human Resource Development

EGAT designs personnel development programs to address both urgent short-term needs and long-term goals, tailored to employee levels, positions, and career paths. Additionally, EGAT offers targeted development for successors and high-potential employees, along with reskilling plans to support future missions. Goals, formats, and appropriate development methods have been defined as follows:

1. Development of executives and employees in general

- Core development program addressing competency gaps to elevate executives and employees to expected performance levels.
- Additional development programs for employees across levels 1–14, including contracted employees, aligned with strategic goals and future competency needs to support organizational change readiness, while accommodating diverse learning behaviors through various development formats.

2. Development of successors and talents

EGAT has established a 2-year Development Roadmap to prepare executives and employees for leadership succession and appointment to key positions, through diverse development approaches including individual development plans.

3. Development of technical competency based on job positions and professional career paths

The objective of the development is to provide employees with knowledge and skill in accordance with the professional standards.

4. Development of new skills to support EGAT's future missions

EGAT conducts analysis and planning for reskilling initiatives to support future strategic missions, offering diverse and tailored development approaches to maximize effectiveness.

Development of orientation project for new employees

EGAT prepares employees with essential organizational knowledge and fosters professional networking among staff.

Moreover, EGAT has implemented the 'Prepare for Happy Retirement' project to support employees in planning and transitioning smoothly into retirement.



Occupational Health and Safety



Effective occupational health and safety management helps reduce and control risks across all operational processes which may lead to work-related accidents and loss of life of the person who is employee, contractor and relevant stakeholder. It also reduces loss of property and damage on important work process which may affect the business continuity as well as the reputation and trustworthiness of the organization.

Target of 2024

- Injury Frequency Rate (IFR) lower than the average of the past 3 years (0.5537)
- Injury Severity Rate (ISR) lower than the average of the past 3 years (151.6797)
- Surveillance and advice have been provided to employees who had health risk-based medical examination of which abnormality was found

Achievements

- Injury Frequency Rate (IFR) was 0.364 which was lower than the average of the past 3 years
- Injury Severity Rate (ISR) was 436.597 which was higher than the average of the past 3 years
- 100% of employees who had health risk-based medical examination and abnormality was found have been provided with appropriate surveillance and advice

Policy and Commitment

EGAT has formulated the policy on quality, welfare, safety, occupational health and environment to enhance work processes for greater efficiency. The policy aims to appropriately meet the needs and expectations of stakeholders, ensure a safe and stable working environment, promote good health, and support environmental friendliness. The organization is committed to continuous management in accordance with international standards. In addition, operational manuals and procedures have been developed to guide practices across the organization in compliance with relevant laws and regulations.



Addition information on EGAT policy on quality, welfare, safety, health and environment

Operational Structure

EGAT has a Medical and Health Division responsible for providing medical services, health promotion, and environmental health activities. Additionally, the organization has a Safety Division, regional safety and security units, and workplace safety officers at all levels who oversee and manage safety-related operations.

Furthermore, EGAT has different working groups concerning occupational health and safety, namely

- Committee on operational risk and safety, responsible for preparing guidelines for the supervision and monitoring of operational risk, safety and security
- Working group on assessment of operational risk and safety, responsible for assessment of the units which has high risk
- Working group on causes of serious accidents which involves high-risk, responsible for analyzing the cause of serious accidents involving great damage and make a report on the findings.

Occupational Health and Safety Management System

Realizing the importance of occupational health and safety of stakeholders, EGAT complies with related laws namely the Occupational Safety, Health and Environment Act, B.E. 2554 (2011) and the Ministerial Regulations on Safety Management Standard, B.E. 2565 (2022).

Furthermore, EGAT has prepared EGAT Quality, Safety, Health and Environment System (EGAT QSHE) which refers to the International Standards of ISO 9001-2015 Quality Management System–Requirements, ISO 14001-2015 Environmental Management Systems–Requirements with Guidance for Use and ISO 45001-2018 Occupational Health and Safety Management Systems–Requirements with Guidance for Use. EGAT QSHE System is provided with clear guidance and designated responsible units.

The EGAT QSHE system serves as EGAT's fundamental management framework, covering all units across the organization. It encompasses the establishment of standards, manuals, operational procedures, implementation, audits, reporting, and corrective actions. Internal audits are conducted annually. For divisions responsible for EGAT's core missions, such as power generation, transmission systems, and fuel operations, which involve hazardous sources and high-risk activities, the development and certification of

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ISO 45001 systems by external bodies is required. In 2024, all 43 non-certification divisions underwent internal audits under the EGAT QSHE system, representing 100% coverage. Additionally, 33 divisions obtained ISO 45001 certification from external certifying bodies, also representing 100%.

Hazard Identification, Risk Assessment and Incident Investigation

EGAT identifies hazards and assesses risks and environmental aspects in both routine and non-routine tasks. This process covers all stages of work performed by employees, contractors, and stakeholders within the scope of the responsible units. The objective is to reduce and control risks in every work process that could lead to injury, illness, or loss of life and property.

For this purpose, EGAT has developed a web application for Risk Assessment and Environmental Aspects (RAEA) consisting of risk and hazard identification of the activity, location and characteristics of work, risk assessment by considering opportunities and severity of risk and prioritization of risk to set up risk management measures/plans, control and assessment of risk management measures/plans and report the operating results to the executives for review and improvement. The operating results of risk management and environmental aspects will be used in planning and control of the operation such as in preparing policy, objectives and work plan and control measures in the work procedure, work process or work instruction of relevant units.

For the work of high risk, it is possible for the employees, contractors and stakeholders who have been assigned such work to refuse to do the work if they find that the situation or the job description involves hazard/high risk which they cannot manage by themselves.

Moreover, EGAT has guidelines for reporting incident and investigating the cause of incident which may lead or has led to injury, illness or work-related disease, damage of property and accident in the production process and all activities in the responsible area and nearby community. The guidelines cover employees and stakeholders including analysis of the incident, cost related to the accident and communication on the incident.



Occupational Health Service

- General medical examination and health risk-based medical examination (periodic health examination) at least once a year
- The medical examination is conducted according
 to the general criteria for general medical
 examination, health risk-based medical
 examination and health examination for
 employees who perform work of special
 characteristics. The employees who have
 abnormality will be informed to have advice and
 referred to hospital for further diagnosis
- Health examination for the group of employees who perform work of special characteristics

- Surveillance for advice in healthcare will be provided for employees performing work overseas for work preparedness
- Return to Work Assessment after injury or illness according to the law
- Surveillance of health examination for employees
 who are exposed to loud noise. Recommendation
 on hearing conservation measure to the
 responsible units. If hearing abnormality was
 found, employees will receive advice or referred
 to hospital for further diagnosis.



Participation, Consultation and Communication in Occupational Health and Safety

 EGAT Quality, Safety, Health and Environment System(EGATQSHE) is provided with requirements concerning participation of employees and stakeholders in the implementation of occupational health and safety system as well as consultation and communication.

In this connection, employees have an opportunity to take part in the activities of quality, safety, occupational health and safety. Moreover, EGAT will make consultation with employees in the improvement of equipment, control measures or the serious accident or incident of high potential of loss. Furthermore, EGAT will communicate with employees to raise their awareness about occupational health and safety to promote the corporate culture of safety throughout the organization by various means such as by public relations poster, video clip and talk about safety before each meeting.

EGAT has appointed the Committee on Safety,
 Occupational Health and Working Environment
 covering all operating areas. Proportionally, the
 committee consists of 50% of representatives of
 employees and 50% of representatives of
 employers. The meeting frequency is once a
 month. The Committee is responsible for
 formulation of the policy on safety, occupational

health and working environment, preparation of the guidelines for accidents prevention and reduction, experiencing danger, illness, difficulty in connection with the employees's work, reporting and proposing measures or guidelines for correction or improvement of working condition and working environment, consideration of the projects or plans for training on safety as well as monitoring the evaluation and reporting the annual operating results.

• EGAT has appointed a healthcare coordinator for each unit both at the Headquarters and the regional offices. The healthcare coordinator is responsible for occupational medicine service or related work such as taking care of the health examination of the employees, organizing a meeting of health coordinators at least once a year to create participation in expressing opinion and promoting the understanding of the role and responsibility of the work in occupational health. Moreover, a Group of the Application Line has been formed as a channel for communication, press information and public relations as well as enquiry or advice for occupational health.

■ Training in Occupational Health and Safety

Trainings on occupational health and safety as required by the law have been organized including other courses necessary for employees such as safety of work concerning electricity, safety of work at heights, basic fire-fighting, investigation of the causes of incidents, risk management and environmental aspects, work-related disease (hazardous noise and chemicals, office syndrome and shift work), life-saving, first aid and use of automated external defibrillator (AED).

Health Promotion of Employees

EGAT promotes employee's awareness and attitude of good health and their participation in healthcare program such as "EGAT Healthy Idol" which is a weight loss competition in 90 days. The program consists of nutritional training, exercise, physical fitness test and continuous surveillance. The program "Take Care of Your Health" provides healthcare knowledge by the principle of food, mood and exercise. Moreover, the program "EGAT Step Challenge" is a walking competition by counting the number steps through the Application.

Safety Management of Trading Partners

EGAT has issued the regulation concerning safety management of contractor which EGAT and contractor have to follow. The regulation covers the safety activities which involve the contractor selection, contractor management before starting the work, contractor management during the work, work delivery, work inspection, evaluation and report. The regulation includes important safety requirements such as preparation of safety condition as a part of the term of reference, organizing a meeting between EGAT and contractor to communicate the policy and guidelines on safety. For the contractor, a work plan concerning safety must be prepared for inspection before starting the work, their employees must have health risk-based medical examination, personal protective equipment (PPE) must be worn during the work. If an accident happens to the contractor's employee, an investigation must be conducted to find the cause in accordance with the regulation concerning incident management.

Participation in Community and Social Development



Realizing that the core mission of electricity generation and transmission which involves construction and expansion of power plants and transmission system, substations as well as coal mining may cause concern or impact on the community, EGAT gives importance to engagement with the community, assessment of the impact on community and participation in the community and social development as a whole.

Target of 2024	Achievements
The projects which have Social Return on Investment (SROI) more than 2 over or equal to 40% of the number of important community development projects underassessment	• The number of projects which have Social Return on Investment (SROI) more than 2 equal 40% of the projects under assessment

Community Engagement

EGAT engages with the community through dialogues, joint meetings, public discussions, and study visit in order to communicate and promote the understanding of the community in EGAT operations. For this purpose, EGAT listens to their comment, need and concern which have been affected or may be impacted by EGAT operations and try to find solution together. Moreover, EGAT has made a survey on the community's attitude toward EGAT such as attitude towards perception and comprehension of the necessity of EGAT for the project development, detail of project development and the operations of EGAT as well as their satisfaction from participation in EGAT activities. The information obtained from the survey will be used in improving the activities.

Impact Assessment

EGAT conducted assessment of the potential impact based on the principle of predicting environmental impact from the project development which may affect resource, economy, society and health in order to find prevention. Moreover, EGAT proposes preventive and corrective measures for the environmental impact, monitoring measures of the environmental impact and an environmental action plan during the construction and operation period.

■ Impact Management

EGAT manages the impacts of its operations on communities through various measures as follow:

 For the community of which there is a project of transmission system construction over their land

EGAT has a policy to hold public meetings to disseminate information regarding land rights acquisition to landowners and other rights holders before proceeding with the acquisition. These meetings aim to clarify and ensure understanding of land rights acquisition and legal entitlements. Additionally, compensation for land and property will be provided in accordance with the Energy Industry Act B.E. 2550 (2007), along with financial assistance for affected landowners and property owners as per EGAT's regulations on assistance for those impacted by the construction of power plants and transmission system. Moreover, EGAT will allocate a certain budget to support the projects initiated by community, the construction of infrastructure or equipment for use in the community activities and cultural conservation of each locality.

For the community in the area of EGAT lignite

EGAT has controlled the impact from the source in order to reduce the impact on community in the surrounding area. By doing this, EGAT has implemented a strict environmental measure to control dust, odor, noise, vibration and water quality. From the surveillance, it was found that the result of the inspection was within the requirements of law and the control criteria of EGAT which is even stricter than the requirements of law.

Moreover, EGAT has a plan to increase the efficient control of all aspects of environmental impact throughout the mining concession period. Furthermore, EGAT has allowed representatives of the community in the surrounding area to participate in the environmental inspection with EGAT. From the survey of community's confidence and trust in EGAT's environmental management of Mae Moh Mine, the community has confidence and trust level higher than the requirement.



Displacement Management

EGAT has implemented measures to address the concerns of residents in five villages located in Mae Moh District, Lampang Province, in accordance with the Cabinet resolution dated October 15, 2013. The relocation of residents from five villages, Ban Hua Fai Village 1, Ban Dong Village 2, Ban Suan Pa Mae Moh Village 7, Ban Hua Fai Lai Thung Village 8 in Ban Dong Subdistrict, and Ban Huai King Village 6 in Mae Moh Subdistrict, was carried out to alleviate the impact caused by EGAT's lignite mining operations.

The relocation plan spans from 2014 to 2025, affecting a total of 1,458 individuals. Importantly, the relocation is voluntary. Those who choose not to relocate may continue residing in their original area, with a memorandum of understanding signed between EGAT and the residents who opt to stay, acknowledging mutual agreement. As of 2024, 1,311 individuals have relocated, while 147 have withdrawn from the relocation process.

To support the relocation, EGAT approved compensation payments for land and property based on the standard rates set by the Royal Irrigation Department, as announced by the committee overseeing the relocation of the five villages. A total of seven compensation rounds have been conducted, covering 900 individuals. By 2024, compensation had been paid to 894 individuals, representing 99.66% of the total. The remaining six cases are under legal review.

Additionally, EGAT has allocated land for relocated residents, constructed essential infrastructure and public utilities, promoted the preservation of local customs, traditions, and culture, and initiated various development projects within the area.

Community Development

EGAT has several important projects to promote community, social and environmental development as follows:

EGAT Biological Way of Life Project

EGAT has further developed the model community based on the philosophy of Sufficiency Economy according to the guidelines on EGAT Biological Way of Life to be a registered community enterprise so that the community's members can have continuously stable income with productivity complying with the market standard (Organic Agriculture Standard) and produce safe food. Their quality of life will be upgraded leading to sustainable development in accordance with EGAT strategic objectives.

In 2024, in the assessment of the community's potential, 5 communities were supported to be registered as community enterprises, namely

- Ban Tub Sai Organic Agriculture Community Enterprise, Krabi Province,
- Wieng Kao Organic Agriculture Community Enterprise, Khon Kaen Province,
- Ban Mae Lua Organic Agriculture Community Enterprise, Phrae Province
- Ban Klong Thom Tai Organic Agriculture
 Community Enterprise, Krabi Province
- Surassada Phirom Organic Agriculture
 Community Enterprise, Surat Thani Province

Project of Khok Nong Na Model, the New Way to Social Development toward Sustainability

EGAT has integrated the implementation of the project of Khok Nong Na Model, the New Way to Social Development toward Sustainability with the project of Agri-Nature Network of River Basin (the location of 7 EGAT's dams with royal names and 3 power plants). The 10 EGAT Sufficiency Economy Study and Development Centers offered training courses in agricultural development toward sufficiency economy for the youth, people,

communities and network around the areas before expanding further to other river basins countrywide.

In 2024, the number of participants in the training programs was 1,374 among which 405 persons (29.5 %) has further developed the knowledge obtained from the training. 10 models (of areas/communities/role model) (accumulated) were achieved from the application of Khok Nong Na Model.

Pan Sang (Light Sharing) Innovation Project: Social Activities under the Transmission Lines

EGAT, in cooperation with the community of Ban None Yang, Khwao Sub-district, Sela Phume District, Roi-et Province, has improved the area near the high voltage transmission lines to be sustainable agricultural area by the application of smart agriculture system with greenhouse-integrated photovoltaic systems (GIPV) using semi-transparent photovoltaic cell and solar water-pumping system inthe agricultural plot. The appropriate environmental condition has upgraded the quality of the economic crops. The community has become a stable community enterprise which generates more income to farmers in the community and reduces the degraded forest area near to the transmission lines.

In 2024, the project has been developed further to be registered as a social enterprise, thus, adding value to the products and competitiveness while maintaining local identity by processing the local raw materials or resources such as powdered Kale, crispy sweet potato and corn milk. Information on products is available on the Facebook of "Ban None Yang Agriculturists Planting Vegetables under the High Voltage Transmission Lines".

Evaluation of the Community Development Projects

In 2024, EGAT conducted assessment of the Social Return on Investment (SROI) of the important community development projects such as Ban Kuan Biological Way of Life Project, Krabi Province, EGAT Sufficiency Economy Study and Development Center at Vajiralongkorn Dam, Kanchanaburi Province, Energy Management Systems Project, Organic Agriculture Project and the Project to Add Value to Organic Waste by Black Soldier Fly Larvae (Hermetia Ilucens L).

According to the assessment, 40% of the key community development projects evaluated demonstrated a Social Return on Investment (SROI) of more than 2.



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Human Rights



EGAT places great importance on conducting business responsibly and with respect for human rights, ensuring the protection of all stakeholder groups. This approach aligns with the National Action Plan on Business and Human Rights, Phase 2 (2023–2027), as well as the United Nations Guiding Principles on Business and Human Rights (UNGPs).

Target of 2024

Concrete implementation of human rights practices

- 100% of contracts or agreements with partners for projects valued at 500 million baht or more include human rights provisions or have been subject to human rights assessments
- At least 80% of EGAT's security personnel have received training in human rights.

Achievements

- EGAT has a dedicated unit for human rights operations, with clearly defined policies and quidelines
- 100% of contracts or agreements with partners for projects valued at 500 million baht or more include human rights provisions or have been subject to human rights assessments
- 84.21% of EGAT's security personnel have received training in human rights

Policy and Commitment

In 2024, EGAT announced its Human Rights Policy and related guidelines, covering four key areas of operations that may impact human rights, namely, labor, land, communities, natural resources and the environment, human rights defenders, and investment. These guidelines are intended to be used alongside EGAT's policy on legal and regulatory compliance and the updated code of ethics and conduct manual (2023 edition).



Addition information on EGAT policy on human rights



Addition information on EGAT Guidelines for implementing human rights policy

Operational Structure

The chairman of EGAT's Board of Directors has approved the EGAT code of ethics and conduct manual. Additionally, the chairman of the legal and regulatory compliance committee, a subcommittee of the Board, has issued the policy on legal and regulatory compliance. This policy mandates that EGAT conduct its business with respect for human dignity, human rights, individual freedoms and equality, while also ensuring labor protection. These principles serve as a foundation for board members, executives, and employees in performing their duties. The policy also requires quarterly reporting of complaint and whistleblower management outcomes to the executives and board members during meetings of the governance and social responsibility committee and the legal and regulatory compliance committee.

■ Risk Assessment Concerning Human Rights

In 2024, EGAT conducted a risk assessment and Human Rights Due Diligence (HRDD) for 16 units involved in labor, land, community, natural resources and the environment, human rights defenders, and investment. The assessment revealed that EGAT has a low risk of human rights violations due to its strict compliance with legal requirements. Nevertheless, EGAT will continue to monitor and provide ongoing human rights education to employees at all levels, ensuring that newly rotated or promoted staff integrate human rights principles into their duties, thereby reducing the risk of violations.

Human Rights Management

EGAT's key efforts in human rights include the following:

Labor aspect:

- Providing employee rights and benefits beyond legal requirements
- Commitment to preventing and addressing sexual harassment
- Employing persons with disabilities
- Establishing a labor union and a welfare committee

- Ensuring inclusive workplace design
- Promoting the value of Empathy under EGAT's "SPEED" framework, encouraging openness to diverse perspectives

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- Land, community, natural resource and the environment aspect:
 - Conducting environmental impact assessments
 (EIA) prior to project development by a neutral
 consulting firm with registered experts
 authorized to prepare EIA reports. This includes
 implementing measures to prevent and
 mitigate environmental impacts.

• Human rights defender aspect:

- Establishing an EGAT feedback center that accepts complaints and suggestions through various channels, with a clear management process and notification of complaint resolution outcomes to the complainants

Investment:

 Governance through the EGAT Group Way of Conduct (WOC)

Remedial Measures

EGAT has prepared remedial measures for the impact which may occur as a result of EGAT operations.

For EGAT employees, EGAT has the regulation concerning compensation for the employees who have work-related injury or ill health and who have work-related fatal injury.

For external individuals affected by EGAT's operations, EGAT provides remedial measures through contributions to the Electricity Development Fund, as required by the Energy Industry Act B.E. 2550 (Section 97(3)), to support local development or rehabilitation in impacted areas. Additionally, EGAT has internal regulations on communication, relationship building, and social responsibility, which include providing initial humanitarian assistance to affected individuals.



■ Issues of Using Child Labor, Forced Labor, Association and Bargaining

Type of risk to the case of violation of labor rights	Type of workplace	Unit/type operating risky work	Risky workplace	Measures taken to eliminate violation of human rights of workers
Use of child labor (under 15 years old or under the age of compulsory education)	Within the organization	None	-	EGAT Regulation No. 353 on Persons, Section 9/(2) requires that the age of the person to be hired has to be at least 18 years old. Qualification of employees of the contractor in the TOR must be at least 18 years old.
	Trading partner or supplier	Construction unit/ contractor work with unskilled workers	- Construction work - Area maintenance work (all areas)	
Use of child labor in contact or involve with dangerous work (age more than minimum working age and under 18 years old)	Within the organization	None	-	EGAT Regulation No. 353 on Persons, Section 9/ (2) requires that the age of the person to be hired has to be at least 18 years old. Qualification of employees of the contractor in the TOR must be at least 18 years old.
	Trading partner or supplier	Construction unit/ contractor work with unskilled workers	Construction work,Area maintenance work (all areas)	
Use of forced labor	Within the organization	None	-	
	Trading partner or supplier	None	-	-
Violation of rights to use freedom of association or collective bargaining	Within the organization	None	-	EGAT's State Enterprise Labor Union was established in accordance with the State Enterprise Labor Relations Act, B.E.2543 (2000) and works under the regulations of EGAT's State Enterprise Labor Union, B.E.2563 (2020)
	Trading partner or supplier	None	-	

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Conflict Management and Safety

As EGAT is an organization which operates national infrastructure in energy, it is necessary for EGAT to have concise security measures. The security officers who have knowledge in human rights and applicable law will help to avoid violation of rights which may lead to conflict and dispute.

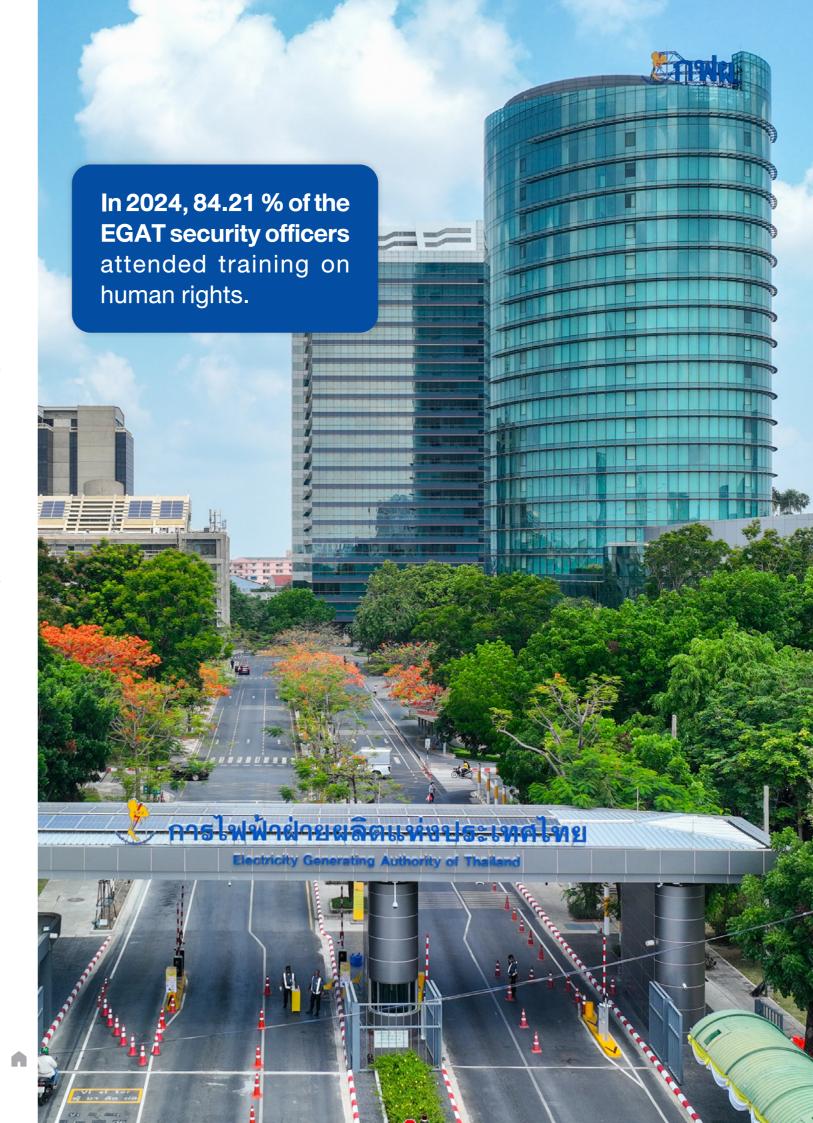
EGAT has prepared EGAT Standard for Security Management System which is consistent with the Regulation on National Security of 2552 (2009) of the Prime Minister's Office, the Thai Standard for Civil Security of Government Agencies of the National Intelligence Agency and the International Standard for Security Management Systems for the Supply Chain (ISO 28000 : 2022). The standard will be used as guidelines on operating security in the organization taking into account the relevant stakeholders who are affected by the security measures.

EGAT security officers are trained in fundamental knowledge of human rights in theory and practice. Apart from the security training course in practice, the fundamental security training course comprises the provisions of law related to security such as right in self-defense and duress in the Criminal Code, use of force, right of arrest and search in the Criminal Procedure Code of Law as well as the preparation of security measure. In 2024, 176 out of the total 209 EGAT security officers or 84.21% attended training.

In addition, communication and explanation about security management with a focus on human rights has been conducted in various meetings such as meeting of heads of security officers and in forming a line.

For contracted security officer, EGAT has made a condition in the Term of Reference that he must be a licensed security officer and has been trained completely as required by the Business Security Act, B.E. 2558 (2015). Moreover, the contractor must organize regular refresher course for security officer throughout the contract duration.

EGAT has provided complaint channel for managing the negative impact which may have occurred. Upon receipt of complaint, EGAT will make investigation. If it is found that the compliant is true, disciplinary punishment will be made according to EGAT regulation for EGAT employee. For employees of the contractor, the case will be communicated to the contractor for punishment according to their rules. The complainant will be informed of the action taken.



Customer Satisfaction



EGAT prioritizes an effective and efficient customer management system by studying and understanding both current and future customers to meet the needs and expectations of all segments. This approach aims to create new market opportunities, generate positive impacts, and mitigate negative ones, in compliance with relevant laws and regulations, ultimately contributing to sustainable business development.

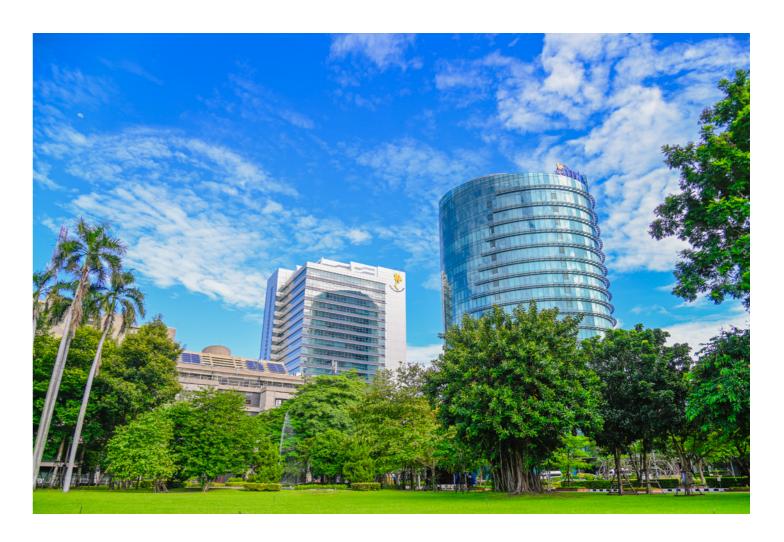
Target of 2024	Achievements
Customer satisfaction level: higher than 83%Customer engagement level: higher than 83%	Satisfaction level: 96.59%Engagement level: 92.2%

EGAT utilizes the customer and market master plan, customer and market management manual, and service charters and standards as key frameworks for effective and efficient customer management across the organization. Additionally, a customer and market working group, comprising representatives from the lines of deputy governor-transmission system, deputy governor-related business and deputy governor-strategy, is responsible for developing, reviewing, and monitoring the implementation of the master plan and action plans.

EGAT adopts a customer-centric approach by collecting feedback, needs, and expectations throughout the customer lifecycle via its Voice of Customer system (EGAT-VOC) at http://voc.egat.co.th, as well as through other channels. The key needs and expectations shared across all EGAT customer groups include efficient operations, standardized and high-quality products and services, reasonable pricing, and timely responsiveness to customer needs and issue resolution.

In addition, EGAT continuously develops innovative products and services to meet customer needs and expectations. This includes supporting customers with standardized services, managing customer relationships, handling complaints, and evaluating customer satisfaction across all segments.

In 2024, overall customer satisfaction among EGAT's electricity business customers increased compared to 2023. A similar trend was observed among related business customers, including engineering, telecommunications, and by-product innovation businesses.



For the energy solution business, which was evaluated for the first time, customer satisfaction was rated at the highest level. Meanwhile, satisfaction among electric vehicle solution customers declined from the previous year but remained within the target range. For the power plant operation and maintenance business, as well as the transmission system maintenance business, overall satisfaction is assessed every three years, with the next survey scheduled for 2025. However, in 2024, customer satisfaction was evaluated after each completed service through individual questionnaires sent to customers.



Additional information on EGAT Business



Conducting **Business with Good Governance**

Corporate Governance and Anti-Corruption

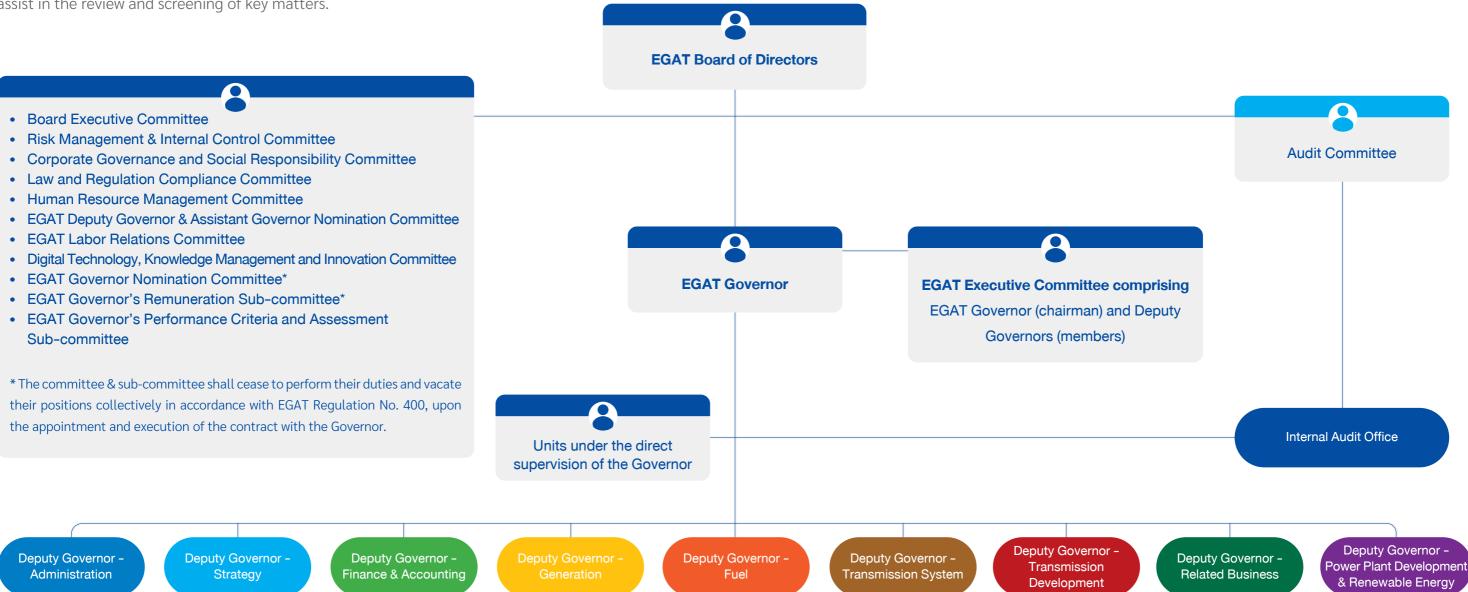


Good corporate governance plays a vital role in driving the organization toward effective and sustainable development. It positively impacts regulatory agencies, EGAT's Board of Directors, executives, employees, and other stakeholders.

Governance Structure and Components of EGAT Board of Directors

EGAT's governance structure is transparent and systematic comprising EGAT Board of Directors which is appointed by the Cabinet to formulate policy and supervise EGAT's operations in accordance with the principles of good governance. EGAT Board of Directors has appointed 12 Board Committees and Sub-committees to assist in the review and screening of key matters.

EGAT's operations are managed by the Executive Committee, chaired by the Governor as Chief Executive Officer, with Deputy Governors serving as members. This structure ensures operational efficiency and alignment with clearly defined goals.



EGAT Board of Directors consists of the Chairman and not more than 10 other members including EGAT Governor who is ex officio member. The term of office is 3 years. In 2024, the Board of Directors comprises 11 members (10 males and 1 female). There are 4 independent members who have freedom in making-decision and expressing their own opinion. Among the 4 independent members, one member is in the list of State Enterprise Directors (Directors' Pool), out of the total 7 members who are from Directors' Pool The component of EGAT Board of Directors complies with the Principles and Guidelines on Corporate Governance for State-owned Enterprise of 2019 of the State Enterprise Policy Office (SEPO) and the Act of Standard Qualifications for State Enterprise Directors and Employees (No.6), B.E. 2550 (2007). Moreover, EGAT complies with the Cabinet resolution of 18 July 2017 which requires that no less than one-third of the members of the Board of Directors must possess experience in business operations.

Composition of EGAT Board of Directors

Male



Female

Age 30-39 years

40-49 years

Age 50 years

and over

Proportion of EGAT Board of Directors



Non-executive directors

Directors with experience in business sector

Term of Office





EGAT Board of Directors

No.	Name	Position in the Board/ Working Position	Independent Member	DP	Business experience	Skill	Position in Board Committees
1	Mr. Prasert Sinsukprasert	Chairman / Permanent Secretary of Ministry of Energy		•		Engineering, Energy, Administration, Economics	
2	Associate Professor Kulyos Audomvongseree	Director / Director, Energy Research Institute, Chulalongkorn University	•		•	Administration, Innovation, Human resource, Energy	 Chairman, Committee on Digital Technology, Knowledge Management and innovation Chairman, Sub-committee on EGAT Governor's Performance Criteria and Assessment Member, Board Committee on Executive Member, Committee on Deputy Governor & Assistant Governor Nomination
3	Lieutenant General Jearanai Vongsaard	Director / Senior Expert, Office of Permanent Secretary for Defence, Ministry of Defence		•		Administration, IT, Risk management & Internal control, Procurement	 Member, Board Executive Committee Member, Committee on Risk Management & Internal Control Member, Committee on Digital Technology, Knowledge Management and Innovation Member, Committee on Deputy Governor & Assistant Governor Nomination
4	Associate Professor Takoon Siriyutwatana	Director / Advisor of the Committee on Corruption Prevention and Suppression	•		•	Law, Administration, CG	- Member, Audit Committee
5	Ms. Niramarn Laisathit	Director / Senior Executive Vice President, Bangkok Bank Public Company Limited	•		•	Finance & Investment, Accounting, CG, Risk management & internal Control	 Chairman, Committee on Risk Management & Internal Control Member, Committee on Corporate Governance & Social Responsibility Member, Sub-committee on EGAT Governor's Performance Criteria and Assessment
6	Mr. Pakorn Aphapant	Director / Executive Director, Geo-informatics and Space Technology Development Agency (Public Organization) (GISTDA)		•	•	Administration, IT, Risk management & Internal control, communications and transport	- Member, Audit Committee

No.	Name	Position in the Board/ Working Position	Independent Member	DP	Business experience	Skill	Position in Board Committees
7	Mr. Pornpoth Penpas	Director / Director General, Department of Lands, Ministry of Interior		•		Procurement, Risk management & Internal control, Human resource, Law, Land management, Engineering	 Chairman, Committee on Law and Regulation Compliance Member, Board Executive Committee Member, Committee on Human Resource Member, Committee on Deputy Governor & Assistant Governor Nomination
8	Professor Pisut Painmanakul	Director / Associate Dean-Innovation toward Sustainability, Faculty of Engineering, Chulalongkorn University	•	•	•	Engineering, Environment, Climate change, CG, IT, ESG, Innovation	 Chairman, Committee on EGAT Labor Relations Chairman, Committee on Corporate Governance & Social Responsibility Member, Committee on Law and Regulation Compliance
9	Mr. Warakorn Brahmopala	Director / Director General, Department of Mineral Fuels, Ministry of Energy		•		Engineering, Administration, Human resource, Corporate strategy, Crisis management, Energy, Law	 Chairman, Board Executive Committee Chairman, Committee on Human Resource Chairman, Committee on Deputy Governor & Assistant Governor Nomination Member, Sub-committee on EGAT Governor's Performance Criteria and Assessment
10	Mr. Akkaruth Sandhyananda	Director / Deputy Permanent Secretary, Ministry of Finance				Administration, Law, ESG, CG	- Chairman, Audit Committee
11	Mr. Thepparat Theppitak	Director (Ex-officio) and Secretary / EGAT Governor		•		Engineering, Energy, Administration	 Member, Committee on Risk Management & Internal Control Member, Committee on Human Resource Member & ex officio Secretary, Board Executive Committee Member & ex officio Secretary, Committee on Deputy Governor & Assistant Governor Nomination

Note

- 1. Nos. 1-10 were appointed by the Cabinet resolution on 20 February 2024
- 2. No.11 was appointed by the Cabinetresolution on 3 March 2024, effective 14 March 2024, and assigned as EGAT Board Secretary per Board Meeting No. 3/2024 on 27 March 2024.
- 3. Skill referenced from self-qualification declaration form and DP

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Nomination and Selection of EGAT Board of Directors

Nomination and selection of EGAT Board of Directors is carried out in accordance with law and related criteria comprising the Act on Development of Corporate Governance and Administration of State Enterprise, B.E. 2562 (2019), the resolution of State Enterprise Policy Committee in the 2/2023 Meeting on 25 October 2023 concerning the skill matrix and the guidelines on the appointment of the Board of Directors, the criteria set by the Committee on Screening the Board Members and the Principles and Guidelines on Corporate Governance for State-owned Enterprise of 2019 and the practices. Among the important issues for consideration are the following:

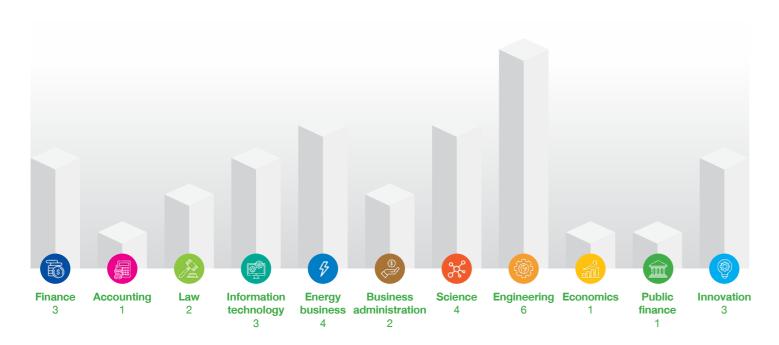
 The skill matrix of EGAT Board of Directors will be used as criteria in the selection and appointment of the Board members. To acquire the Board members who have appropriate knowledge and expertise in the area necessary for the supervision of EGAT's operations, the skill

matrix of EGAT Board of Directors comprises 11 areas, namely finance, accounting, law, information technology, energy business, business administration, science, engineering, economics, public finance and innovation.

The EGAT Board of Directors shall include a representative from the Ministry of Finance who is a full-time government official, to safeguard the government's interests as a shareholder and to comply with the Regulation of the Office of the Prime Minister on Policy Formulation and Supervision of State Enterprises B.E. 2557 (2014) and its amendments. Additionally, the Board must include a representative from EGAT's supervising ministry (Ministry of Energy), who is a full-time official of the ministry and not affiliated with the regulatory agency overseeing the enterprise.

- A Board member may not serve as a director in more than 3 state enterprises at the same time
- Former EGAT Governors who have left their executive position for less than 2 years shall not be nominated
- Members of the National Legislative Assembly, political officials, and individuals holding political positions shall not be appointed as members of the Board of Directors.

Skill Matrix of EGAT Board of Directors



Nominees for the EGAT Board of Directors must be Thai nationals with sufficient expertise in business administration, science, engineering, economics, finance, or law. They must also meet the qualifications and not possess any prohibited characteristics as specified in the State Enterprise Board and Employee Standard Qualifications Act B.E. 2518 (1975) and its amendments.

Chairman of the Board of Directors

In order to have a balance and transparency in EGAT operations, the Chairman of the Board of Directors acts as the top executive of the supervision without holding a position of EGAT executive. However, to provide a link between the supervision and the administration, EGAT Governor is appointed by the Board of Directors to be the Board Secretary as stipulated in Section 6 of EGAT Regulation No. 373 concerning meeting and operations of the Board of Directors which states that the Secretary of the Board of Directors is appointed by the Chairman with approval of the Board members.



Furthermore, the Chairman of EGAT Board of Directors shall not hold any position in EGAT's sub-committees in accordance with the Principles and Guidelines on Corporate Governance for State-owned Enterprise of 2019, and the practices set by the State Enterprise Policy Office, Ministry of Finance, which stipulate that the Chairman should not serve on any sub-committee.

Roles of the Board of Directors in the Corporate Governance

The EGAT Board of Directors, executives, and top management of EGAT Group hold an annual Top Team Meeting (TTM) to jointly review EGAT's vision, mission, and strategy. The review incorporates government and regulatory policies, stakeholder needs and expectations, sustainability factors, internal and external conditions, and benchmarking data. These are analyzed alongside strategic challenges, advantages, and organizational capacity to formulate EGAT's corporate plan, which serves as the operational framework. Additionally, the strategy and implementation approach are reviewed whenever significant external changes occur that may impact EGAT.

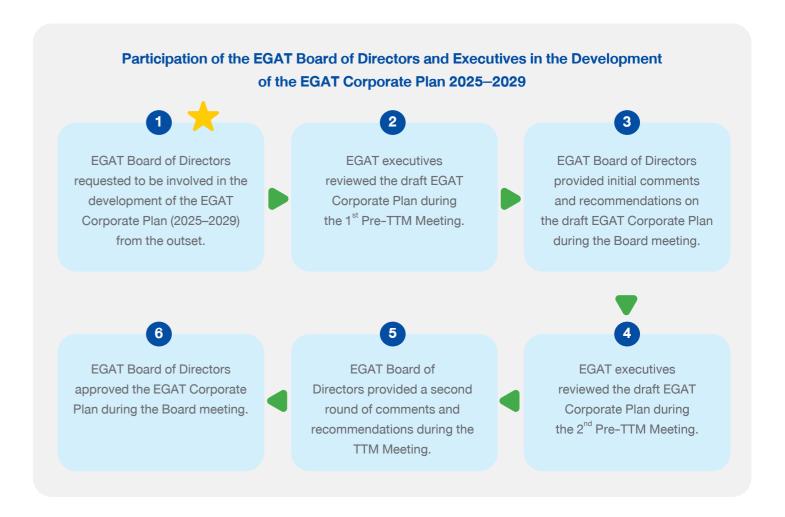
In 2024, the EGAT Board of Directors actively participated in the initial phase of drafting the EGAT Corporate Plan for 2025–2029. The Board provided input on the following key focus areas:

- (1) Piloting a model solar farm under the Environmental, Social and Governance (ESG) Plan
- (2) Electric vehicles
- (3) Revenue opportunities from used batteries and solar panels
- (4) Government policy which has impact on Mae Moh Power Plant
- (5) Biomass fuel
- (6) Renewable energy
- (7) Power system security in Northern Thailand

During the Top Team Meeting (TTM) held on 5–6 July 2024, the Board resolved to:

- (1) Revise EGAT's strategic positioning to align with national power system security
- (2) Update the strategic indicators under Strategy S2 to "Supporting Low Carbon and Resilience for Society"
- (3) Include cross-functional operational data across all dimensions
- (4) Strengthen alignment between EGAT's sustainability initiatives and the Dow Jones Sustainability Indices (DJSI)

The management incorporated the Board's feedback into the draft corporate plan. At EGAT Board Meeting No. 9/2024 on 31 July 2024, the Board approved the EGAT Corporate Plan 2025–2029 and agreed to submit it to the Ministry of Energy for endorsement before forwarding it to the State Enterprise Policy Office.



In addition, during the TTM Meeting held on 5–6 July 2024, the Chairman of the EGAT Board provided operational and governance policy guidance to the Board members and executives, focusing on:

- (1) Governance-based management oversight
- (2) Sustainable organizational development through ESG principles
- (3) Implementation of Bio-Circular-Green Economy (BCG) model, including clean energy promotion, development of infrastructure to support green energy and exploration of alternative energy source such as hydrogen



The EGAT Board of Directors has engaged in consultations and fostered relationships with government agencies to ensure the effective management and operation of EGAT's various functions. Engagement with other stakeholders is overseen by the unit under the Deputy Governor – Strategy, which is responsible for implementing the stakeholder engagement action plan and reporting performance outcomes to the Governance and Social Responsibility Committee. This committee reviews the results and reports them to the EGAT Board of Directors on a quarterly basis.

Regarding the review and assessment of the effectiveness of impact management processes in economic, social, and environmental dimensions, the Governance and Social Responsibility Committee plays a supervisory role. It monitors and reports performance to the EGAT Board of Directors quarterly and promptly informs the Board of any changes that may affect EGAT's operations. Additionally, the committee reviews the effectiveness of relevant policies and considers or proposes amendments to the EGAT Regulations on the Governance and Social Responsibility Committee to the Board at least once a year.

Interest and Related Party Transaction Disclosure Form for Executives at the Level of Assistant Governor and Above." The Internal Audit Office is responsible for reviewing these disclosures and reporting to the Audit Committee for consideration, as well as to the EGAT Board of Directors within the first quarter of the following year.

 Any EGAT Board member with a conflict of interest must abstain from attending or participating in the discussion of the relevant agenda item, such as appointments, remuneration, or performance evaluations. Committees responsible for bid evaluation and procurement must verify that all bidders have submitted proposals independently, without collusion or unfair price manipulation. They must also ensure that no EGAT Board members, executives, or employees are involved in the operations of any bidding entities.

Conflict of Interest

EGAT places great importance on the prevention of conflicts of interest. Relevant regulations, policies, and practices have been established as follows:

- The EGAT Board of Directors is responsible for overseeing and addressing potential conflicts of interest that may arise among Board members, executives and employees. This includes monitoring the misuse of EGAT's assets.
- The Audit Committee is responsible for reviewing related party transactions or any transactions that may involve conflicts of interest or potential fraud that could impact EGAT's operations.
- The EGAT Board of Directors, the Governor, and executives at the level of Assistant Governor and above are required to avoid engaging in related party transactions that may lead to conflicts of interest. They must also disclose such transactions at the end of each calendar year, upon appointment or assumption of a new position, or when there are changes during the year. This is done using the "Conflict of Interest and Related Party Transaction Disclosure Form for EGAT Board Members and the Governor" and the "Conflict of





Communication of Critical Concerns

In cases involving significant concerns, the responsible division will first present the issue to the EGAT Executive Committee for consideration, followed by submission to the relevant subcommittees and the EGAT Board of Directors for review or acknowledgment, as appropriate. In the event of a force majeure incident with potentially severe impacts on society or the nation, the EGAT Governor will immediately communicate the situation and report EGAT's response actions to the Board.

In 2024, two key concerns were communicated during EGAT Board meetings:

- (1) The revision of terms in the standard natural gas purchase and sale agreement, effective July 2024, to adopt a net settlement method, allowing same-day offsetting of purchase and sale transactions.
- (2) Project of Hydro-Floating Solar Hybrid of Bhumibol Dam, unit 2 and unit 3 proposed under EGAT's fast-track initiative and included in the new Power Development Plan (PDP) to support national policy on increasing renewable energy capacity.

Additionally, concerns were communicated through the Enterprise Performance Management (EPM) system, where Board members could provide comments and suggestions.

■ Knowledge Enhancement for the Board of Directors

EGAT promotes continuous knowledge development for its Board members through annual training programs, seminars, and other activities. In 2024, the Board participated in the following initiatives:

- Introduction Program for newly appointed Board members, including a briefing on the Board's key roles based on the updated 2024 State Enterprise Assessment Model (SE-AM) by the State Enterprise Policy Office (SEPO), held on 21 February 2024. Participants also received EGAT's operational handbook covering essential legal and regulatory information.
- Site Visits to the Renewable Energy Forecast Center,
 Demand Response Control Center, and National
 Power Control Center on 27 March 2024.

- Special Lecture on Driving Sustainable Organization through ESG Initiative by Professor Pisuth Peeramonkul, EGAT Board Member, on 28 August 2024.
- Study Visit to explore EGAT's new energy business in the United States from 10 to 22 September 2024.





Performance Assessment of the Board of Directors

EGAT Board of Directors must conduct an annual self-assessment in accordance with the principles and guidelines on corporate governance of the state enterprise prepared by the State Enterprise Policy Office (SEPO) which requires self-assessment of the state enterprise directors at least once a year. In 2024, the Board of Directors conducted 3 types of self-assessment which includes group assessment, individual assessment and cross assessment. The assessment covers the role of Board of Directors on the supervision of economic, environmental and people impact on the organization. The result of the self-assessment of 3 types was rated "excellent".

Following the assessments, the Board held a discussion to review the results and approved the 2025 Board Governance Enhancement Plan, which will serve as a guideline for improving various aspects of the Board's operations to ensure greater efficiency and effectiveness in fulfilling its duties.



Remuneration Policy

Remuneration of EGAT Board of Directors which includes monthly remuneration and meeting allowance complies with the Guidelines on Allowance for Directors of State Enterprise of the State Enterprise Policy Office (SEPO), Ministry of Finance and the Cabinet resolution on 24 April 2019 which specifies that directors of the large enterprise receive the monthly allowance of not more than 10,000 baht /month whereas the chairman receives the monthly allowance of not more than 20,000 baht/month depending on proportion of the office terms.

Members of EGAT Board of Directors receive allowance of not more than 20,000 baht/month only for the month in which the meeting is held whereas the chairman receives the meeting allowance not more than 25,000 baht/month. If necessary, the meeting allowance can be paid more than once per month but not more than 15 times a year.

Member of EGAT Board of Directors who holds directorship in more than one committee will receive meeting allowance for not more than 2 committees, i.e. a committee for not more than one meeting per month. Member of EGAT Board of Directors has to pay an income tax by himself.

Remuneration for EGAT senior executives is as follows:

- (1) Remuneration for the top executive who is EGAT Governor

 Remuneration for the top executive is determined by the Sub-committee on EGAT Governor's

 Remuneration which is responsible for considering remuneration and other compensation for EGAT

 Governor, preparation of criteria and guidelines for remuneration payment and draft hiring contract,

 negotiation on remuneration and other compensation for approval of the Board of Directors. Moreover,

 the Sub-committee on EGAT Governor's Performance Criteria and Assessment is appointed to be
 responsible for scrutinizing the work plan and criteria for performance assessment in accordance

 with the hiring contract framework for approval of the Board of Directors.
- (2) Remuneration for Division Director or equivalent and higher

 The Division Directors or equivalent and higher receive remuneration in accordance with EGAT's salary structure. They receive the bonus payment at the same rate all over the organization which depends on the turnover and the results of EGAT's performance according to the criteria of the Ministry of Finance.

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The EGAT Board of Directors is responsible for setting policies and overseeing operations to ensure that the management team achieves the goals outlined in the corporate plan. This plan encompasses dimensions of economy, environment, and people, and is translated into master plans and various action plans. These are systematically linked to the remuneration and incentive structures for both the Board of Directors and senior executives.

Concerning the compensation for the retired Board of Directors, there is no compensation payment for retired members of EGAT Board of Directors. EGAT senior executives will receive the compensation upon retirement based on the number of years' experience in accordance with the criteria prescribed by law the same as other employees.

For bonus payment, EGAT is a state enterprise which can allocate the bonus payment to directors and employees when the organization gains sufficient profit for bonus allocation. EGAT complies with the Guidelines on Motivation System according to the Performance Appraisal of the State Enterprise Policy Office, Ministry of Finance. Criteria for bonus payment is based on the profits for bonus allocation, bonus payment according to the results of performance appraisal and the conditions of bonus payment for directors are as follows:



• Base Rate of Bonus Payment to EGAT Board of Directors

The calculation of the base rate for bonus allocation is considered from the profits of the organization as the following:

Profits for bonus	s allocatio	on (Mil	lion baht)	Bonus (baht per person)
Not exceeding	100			3% of the profit for bonus allocation but not more than 60,000
From	100	to	300	65,000
Over	300	to	500	70,000
Over	500	to	700	75,000
Over	700	to	1,000	80,000
Over	1,000	to	2,000	90,000
Over	2,000	to	5,000	100,000
Over	5,000	to	8,000	110,000
Over	8,000	to	11,000	120,000
Over	11,000	to	13,000	130,000
Every 2,000 incr	rease in pr	rofit		Additional payment 10,000

Note:

- The Chairman receives bonus of 25% more than other members
- In a fiscal year, the directors who are absent from the meeting for more than 3 months will receive bonus as follows:
 - (1) Being absent from the meeting for more than 3 months but not more than 6 months, the bonus is reduced 25%
 - (2) Being absent from the meeting for more than 6 months, but not more than 9 months, the bonus is reduced 5 %
 - (3) Being absent from the meeting for more than 9 months, the bonus is reduced 75%



• Bonus Allocation According to the Performance Assessment

Assessment result (Score)	Amount of bonus received (baht/person/year)
5.00 Excellent)	Base + 100% of base
4.50	Base + 75% of base
4.00 (Very good)	Base + 50% of base
3.50	Base + 25% of base
3.00 (Good)	Base
2.50	Base - 25% of base
2.00 (Fair)	Base - 50% of base
1.50	No beauty
1.00 (Need improvement)	No bonus

Conditions for Bonus Payment

- The bonus can be paid after EGAT has sent the levies to the Ministry of Finance or is approved by the State Enterprise Policy Office to pay by installment in a limit duration.
- If the business runs at a loss or having no profits for bonus allocation, the bonus will be paid in accordance with the results of performance assessment only.
- The bonus can be paid only after the financial statements have been audited by the Office of the Auditor-General of Thailand and the bonus allocation is approved by the State Enterprise Policy Office.
- Members of the Board of Directors has to pay the income tax themselves



■ Remuneration Determination Process

The determination of remuneration of EGAT Board of Directors is in accordance with the Cabinet resolution and the criteria set by Ministry of Finance. There is no appointment of any consultant.

For the highest-ranking executive, the Governor, a subcommittee is appointed comprising one independent director to determine salary and benefits, set remuneration criteria and guidelines, draft the employment contract, negotiate terms and submit proposals to the EGAT Board of Directors for consideration. Another subcommittee is responsible for reviewing the Governor's operational plans and performance indicators in accordance with the employment contract framework, and for conducting performance evaluations. The EGAT Board of Directors participates in a 360-degree electronic evaluation every six months, the results of which are submitted to the Board for review.

For other senior executives, Deputy Governors, the remuneration process aligns with performance outcomes based on policy and performance evaluation agreements. According to Section 22 (1) of the Electricity Generating Authority of Thailand Act B.E. 2511 (1968), any salary or wage increases for employees or officers at the level of Advisor, Expert, Division Director, or equivalent and above must be approved by the EGAT Board of Directors.

EGAT's remuneration framework incorporates human resource and management policies, employee demands (via the labor union or EGAT's labor relations committee), engagement survey results, changes in laws or government policies, and external compensation benchmarks. These factors are analyzed to develop remuneration proposals for the EGAT Executive Committee and Board of Directors in cases involving existing financial employment conditions. For new or exceptional conditions, approval must be obtained from the State Enterprise Labor Relations Committee and the Cabinet.



Governance and Anti-Corruption

EGAT has announced its corporate governance and anti-corruption policy as a framework for conducting operations with integrity, transparency, fairness, accountability, and zero tolerance for all forms of corruption. It has also implemented policy on governance, risk management and compliance (GRC), requiring all levels of management to lead by example in ethical conduct and adherence to laws and regulations. EGAT promotes active participation from employees at all levels and strictly prohibits any form of corrupt practices. The organization has established a code of ethics for its Board of Directors, executives, and employees, along with an ethics and conduct handbook and professional code of conduct, which set behavioral standards. These are supported by operational mechanisms and systems to ensure effective enforcement including disciplinary procedures based on the severity of misconduct.



Additional information on EGAT Policy on Corporate Governance and Anti-Corruption



Additional information on EGAT Policy on governance, risk management and compliance

The Governor of EGAT has declared a strong commitment to ethical and transparent management, emphasizing operations guided by EGAT's corporate governance principles. This includes fostering an organizational culture of integrity and zero tolerance for corruption, promoting awareness of the distinction between personal and public interests, and implementing policies and guidelines on the giving and receiving of gifts to prevent conflicts of interest and potential bribery. EGAT also regularly reviews its operational processes to ensure clarity, transparency, and accountability, and maintains readiness for both internal and external audits. These efforts aim to mitigate risks related to corruption and reinforce a culture of ethical conduct throughout the organization.



Additional information on EGAT Declaration of Intent for Ethical and Good Governance Management



Additional information on EGAT No-Gift policy

EGAT encourages its Board of Directors, executives, and employees to actively engage in operations with integrity and fairness. Key initiatives include:

- Activities to promote governance and anticorruption
- Fostering a positive work environment and ethical behavior in line with EGAT's Ethics and Conduct Handbook
- Reporting conflicts of interest between personal and public benefits
- Distributing the Ethics and Conduct Handbook for acknowledgment and compliance by all personnel

- Conducting regular electronic self-assessments on governance, ethics, and conduct
- Communicating anti-corruption knowledge, including publicizing examples of misconduct and disciplinary actions, and hosting educational sessions such as the 2024 governance seminar attended by 851 employees

EGAT has established the Anti-Corruption Operations Center to oversee and enhance the effectiveness of its anti-corruption initiatives. The center promotes adherence to EGAT's Corporate Governance and Anti-Corruption Policy through the Corporate Governance Master Plan and the Action Plan for Governance Promotion and Anti-Corruption, which are implemented across all departments. Progress is monitored and reported quarterly to the Governance and Social Responsibility Committee and the EGAT Board of Directors.

The center also develops guidelines and manuals on governance and anti-corruption, analyzes issues, obstacles, and risks related to corruption, and reports findings to the Governance and Social Responsibility Committee.

In cases of suspected misconduct, EGAT appoints a fact-finding committee. If serious disciplinary violations are found, the supervisor of the accused employee must appoint a disciplinary investigation committee. Proven misconduct may result in penalties ranging from dismissal to termination, depending on the severity and impact on EGAT.

Complaint Mechanism

EGAT places great importance on receiving feedback, complaints, and suggestions from all stakeholder groups to improve operations and address both direct and indirect impacts arising from its mission, in line with good governance principles. The EGAT Feedback Management Center serves as the central unit for handling complaints. EGAT has also appointed the Complaint and Anonymous Letter Review Committee to manage cases involving corruption, serious disciplinary violations, and anonymous reports. Additionally, the EGAT Anti-Corruption Operations Center supports, promotes, and monitors compliance with EGAT's complaint and anti-corruption management processes.

EGAT provides 6 official channels for receiving complaints and suggestions from stakeholders: (1) letters submitted to EGAT (2) the Government Complaint Management System (1111) (3) EGAT website (4) the Feedback and Complaint Management System (5) the Customer Voice System and (6) the EGAT Information Service Center (Call Center 1416). These channels are actively promoted through emails, brochures, stickers and video clips to ensure stakeholders are aware of how to access EGAT's complaint mechanisms.

Upon receiving a complaint, EGAT provides an initial response to the complainant via email or letter to confirm receipt and inform them that the matter is being coordinated with the relevant department. If the issue is unrelated to EGAT or its personnel, the EGAT Feedback Management Center forwards the case to the appropriate agency. Stakeholders can track progress through EGAT's Feedback and Complaint Management System until resolution, with formal notifications issued upon closure.

In cases involving corruption, serious disciplinary violations or anonymous reports, the Secretary of the Complaint and Anonymous Letter Review Committee forwards the matter to the responsible unit for fact-finding. A fact-finding committee is appointed and the results are reported back to the Secretary. If the complaint is found to be unsubstantiated, the unit is instructed to resolve the issue appropriately to foster understanding among staff and close the case.

If a complaint is found to have merit involving disciplinary misconduct, the supervisor of the accused employee appoints a committee to investigate minor disciplinary violations. If misconduct is confirmed, the supervisor issues a disciplinary order, with penalties ranging from a warning, salary deduction or reduction, dismissal (for permanent staff), termination (for contract staff), to removal, depending on the severity and





impact of the violation. For complaints not involving disciplinary misconduct, the responsible unit must resolve the issue appropriately. To ensure transparency, fairness and credibility, EGAT reports the outcomes of complaint management to senior executives, the Anti-Corruption Operations Center and the Governance and Social Responsibility Committee.

EGAT ensures the protection of the rights of complainants, whistleblowers, and witnesses who submit information through the EGAT Feedback Management Center or via the Complaint and Anonymous Letter Review Committee. All personal data and identifying information are kept strictly confidential and disclosed only when necessary for complaint resolution. Responsible personnel are required to sign confidentiality agreements related to the complaint management system.

Stakeholders may also submit anonymous complaints through representatives or third parties. If the identity of the complainant cannot be verified, the complaint is treated as anonymous and processed under the procedures of the EGAT Feedback Management Center or via the Complaint and Anonymous Letter Review Committee.

EGAT conducts annual satisfaction surveys among users of its complaint management system and holds regular meetings with system administrators to identify challenges and areas for improvement. These insights are used to continuously enhance the system.

Beyond complaint mechanisms, EGAT also engages in proactive efforts to minimize actual and potential impacts, such as communicating with communities to build understanding about EGAT's operations and listening to their concerns for further improvement.

Complaints in 2024

Categories of Complaints Received	Number (case)	%	Resolved (case)	In process (case)
 Allegations of corruption from the public or EGAT personnel, including abuse of authority, can cause serious damage to EGAT or negatively impact the organization's reputation. 	2	0.98	1	1
2. Complaints related to procurement processes	20	9.76	17	3
3. Complaints regarding EGAT's operations that affect the quality of life of the public or are submitted by customers through the Voice of Customer (VOC) system	83	40.48	71	12
 Complaints concerning management practices, employee conduct, or behavior that may negatively affect EGAT's image 	100	48.78	87	13
Total	205	100	176	29*

Note:

As of 31 December 2024



Additional information on EGAT Handbook on Corporate Governance



Additional information on EGAT Handbook on Ethics and Conduct



Additional information on EGAT Policy

Risk Management and Business Continuity



Risk management and business continuity are critical components of EGAT's organizational governance. They serve to ensure that the organization can achieve its assigned mission effectively, respond promptly to emergencies or crises and maintain uninterrupted electricity operations for the benefit of all stakeholders.

Target of 2024 Achievements

- Conducting an annual review and development of risk management plan
- Quarterly monitoring and reporting of risk management performance, including issue analysis and corrective actions
- Reviewed and developed EGAT's 2025 risk management plan
- Monitored and reported risk management performance including analysis of issues, challenges and corrective actions quarterly, and adjusted the risk management plan in alignment with changes to the annual operational plan

Risk Management

To ensure effective organizational risk management, EGAT has established a risk management and internal control policy, along with implementation guidelines on good governance, risk management, and compliance (GRC). The risk management structure includes the EGAT Board of Directors, the Risk Management and Internal Control Committee, the EGAT Executive Committee, risk management committees at operational line level, the Audit Committee under the Office of Internal Audit, and all EGAT personnel. The Risk Management and Internal Control Department, under the Strategic Planning Division, supports enterprise-wide risk management by formulating policies, setting acceptable risk levels, developing risk management guidelines, and preparing an annual risk management manual and review.

As organizations transition into the digital era, EGAT has adopted digital technologies to enhance operational efficiency. However, this shift also introduces cybersecurity risks, such as server attacks, network intrusions, and other forms of cyber threats. To address these challenges, EGAT conducts annual assessments of cybersecurity and information risk.

In 2024, EGAT continued its enterprise-level cybersecurity risk management efforts from 2023, implementing both existing controls and mitigation plans to reduce risk severity to an acceptable level (Risk Appetite). Key measures included strengthening access control for critical systems, regularly reviewing and updating access rights to sensitive systems and data, and conducting phishing email simulations to raise cybersecurity awareness among employees. These simulations featured diverse email content and were accompanied by targeted communications before and after testing to reinforce learning.

As a result of implementing access control measures, EGAT reviewed system access rights and notified system administrators to restrict access in accordance with ISO/IEC 27001 standards. The enhanced phishing email content led to a reduction in the number of employees who fell for simulated attacks, meeting the organization's targets. Consequently, EGAT's cybersecurity risk management in 2024 achieved its objectives, with no severe cyber incidents impacting the organization.



Additional information on EGAT policy on risk management and internal control



Additional information on Implementation Guidelines for the Governance, Risk, and Compliance Policy

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Business Continuity Management

EGAT's business continuity management aligns with the international standard ISO 22301:2019. The organization has established a policy, manual, and business continuity plan (BCP) as operational frameworks to support its mission of delivering uninterrupted electricity.

EGAT has formed a Business Continuity Management Committee, comprising division-level directors from all operational lines, responsible for conducting Business Impact Analysis (BIA) and developing continuity plans to address potential incidents. These plans ensure that EGAT can continue its core operations during crises within the Maximum Tolerable Period of Disruption (MTPD) and recover within the targeted Recovery Time Objective (RTO). The organization also monitors and analyzes preparedness for disasters and emergencies to maintain operational resilience.

EGAT communicates its business continuity management processes to both internal and external stakeholders through various channels, such as training sessions for relevant employees, information disclosure on the EGAT website, and annual presentations to the Provincial Electricity Authority (PEA), the Metropolitan Electricity Authority (MEA), and direct customers. Awareness assessments are conducted to gather feedback for improving future operational plans.

Additionally, EGAT conducts regular emergency response and business continuity plan (BCP) drills based on simulated risk scenarios, such as power plant fires, lightning strikes on transmission systems, and disruptions in natural gas supply pipelines. These drills are carried out at the unit, operational line, and organizational levels, and include joint exercises with external agencies and surrounding communities. The objective is to ensure organizational readiness and to confirm EGAT's capability to respond swiftly and effectively to potential incidents.



Additional information on Business Continuity Management



Availability and Reliability of Electricity System



Electricity is a fundamental factor in daily life, household operations, and large-scale business activities. It plays a vital role in driving the country's economic development. Therefore, the EGAT is committed to enhancing its operations to ensure energy security, minimize energy loss during generation and transmission, and maintain the adequacy and efficiency of the power system. These efforts are carried out in alignment with government policies and international standards, aiming to provide inclusive access to electricity across all sectors of society and to manage electricity cost components in a fair and appropriate manner.

Target of 2024	Achievements
 Energy Not Served (ENS) not exceeding the 5-year moving average System average interruption duration index (SAIDI) not exceeding the 5-year moving average System average interruption frequency index (SAIFI) not exceeding the 5-year moving average Availability factor_{OEE} (AF_{OEE}) 	 ENS achieved as targeted SAIDI achieved as targeted SAIFI achieved as targeted AF_{OEE} below target due to extended planned outages from unexpected equipment damage and higher-than-expected unplanned shutdowns

■ National Power Development Plan

EGAT serves as a representative on the Subcommittee on Load Forecast and Power Development Plan Formulation. The subcommittee is responsible for preparing long-term electricity demand forecasts for the country, which serve as a foundation for planning and formulating national electricity policies, reporting on electricity demand trends and providing technical analyses and recommendations related to demand forecasting and power development planning. These efforts aim to ensure the long-term efficiency of electricity procurement in Thailand, while maintaining power system security and supporting investment in electricity infrastructure expansion.

In addition, EGAT is responsible for developing its power plant and transmission system projects listed in the Power Development Plan (PDP), ensuring timely completion. EGAT also procures electricity from domestic private producers in accordance with announcements by the Energy Regulatory Commission (ERC), and from foreign private producers as approved by the Cabinet under the resolutions of the National Energy Policy Council (NEPC).

■ The National Control Center

The primary mission of the National Control Center (NCC) under EGAT is to manage power generation from contracted sources, including EGAT's power plants, Independent Power Producers (IPPs), Small Power Producers (SPPs), and imports from neighboring countries, to ensure a real-time balance between electricity supply and demand. This is done with a focus on public benefit, system reliability, power quality, and cost efficiency, regardless of the generation source.

NCC also oversees the stability of power flow across the grid, enabling continuous electricity delivery, managing system disturbances and approving equipment shutdowns or activations in line with maintenance schedules.

NCC ensures power supply readiness and system reliability through a structured generation dispatch planning process, based on the following priorities:



1. Power System Security – Operations must comply with the N-1 Contingency Criteria, meaning that if any equipment or power plant is unexpectedly disconnected from the grid, the power system must still be able to supply electricity continuously, with voltage and frequency maintained within international standards.



availability, and supporting

future renewable energy

projects.

2. Contractual Compliance – Dispatch must follow power purchase agreements and relevant policies, including accepting electricity from non-firm small power producers (SPPs) based on their declared
 3. Cost Optimization - After meeting system security and contractual obligations, NCC dispatches generation units based on cost-effectiveness to ensure optimal electricity production costs.



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Efficient operation planning of power plants requires comprehensive tools and accurate data, particularly reliable electricity demand forecasts. These forecasts serve as a critical foundation for planning electricity generation to ensure a balanced alignment between generation and load. However, electricity demand is influenced by a wide range of dynamic and volatile factors, such as weather conditions.

To maintain the stability of the power system, it is therefore essential not only to have accurate forecasting data but also to ensure that power plants are adequately prepared to respond promptly to unforeseen circumstances. In this regard, EGAT has strategically scheduled maintenance outages in alignment with the condition of the power system and ensured that reserve generation capacity meets established standards.

Additionally, EGAT has developed system control protocols and generation plans that are coordinated with the maintenance schedules of transmission system equipment and grid enhancement projects. The organization also continuously monitors and assesses changes within the system, updates relevant data, and conducts both short-term and long-term forecasts. These efforts aim to ensure that generation plans closely reflect actual future conditions, thereby enhancing the reliability and resilience of the national power system.

Despite comprehensive control measures, the power system may encounter emergency situations that exceed predefined thresholds. To manage risks associated with unforeseen events that could impact system stability, EGAT in collaboration with relevant public and private sector agencies, has developed emergency response manuals. These manuals are regularly reviewed and rehearsed to ensure readiness across all activities within the electricity generation and supply chain.

Preparedness plans include emergency scenarios such as disruptions in the power generation system or natural gas pipeline network, with natural gas being the primary fuel for electricity generation in Thailand. These plans are developed in cooperation with PTT Public Company Limited and agencies under the Ministry of Energy. Additionally, EGAT has formulated, reviewed, and conducted drills for the Blackout Restoration Plan, aimed at restoring the system to normal operation as swiftly as possible in the event of transmission system failures. The organization also maintains contingency plans for various types of disasters, including fire and flooding, to ensure comprehensive risk mitigation and system resilience.

EGAT's significant electricity generation and transmission projects

Renewable Power Plant Construction Projects

Project	Objective	Details	Operations in 2024
Hydro Floating Solar H	Hybrid Project		
Hydro Floating Solar Hybrid Project of Ubol Ratana Dam, Unit 1	Stabilizing renewable power plants through the Integrated Renewable Firm Power System to indirectly enhance grid reliability, while maximizing resource efficiency with no adverse impact on communities or the environment	- Installation of 24 MW floating solar and Battery Energy Storage System (BESS) of 6 MWh	Commercial operation date on 5 March 2024
Hydro Power Plant at	the End of the Irrigation Dam De	evelopment Projects	
Lam Pao Hydro Power Plant	Maximizing the benefits of water resources including effective management for agricultural and irrigation	Contract generating capacity of 2.5 MWCommercial operation date in November 2029	The project was approved by the Cabinet on June 18, 2024, and is currently undergoing permitting and construction.
Lam Takong Hydro Power Plant	purposes to support communities downstream of irrigation dams	 Contract generating capacity of 1.5 MW Commercial operation date in December 2029 	The project was approved by the Cabinet on June 18, 2024, and is currently in progress.
Mae Thor Hydro Power Plant		 Contract generating capacity of 1.25 MW Commercial operation date in February 2027 	The project was approved by the Cabinet on June 18, 2024, and is currently in the process of tender announcement and document sales.
Kra Siew Hydro Power Plant		 Contract generating capacity of 1.5 MW Commercial operation date in February 2027 	The project was approved by the Cabinet on June 18, 2024, and is currently in the process of tender announcement and document sales.



Power Purchase Projects

Source	Operation in 2024
Independent power producers (IPPs)	Between 2019 and 2025, power purchase agreements (PPAs) totaling 5,000 MW were signed with EGAT under the third phase of the Independent Power Producer (IPP) procurement policy. The projects include (1) Gulf SRC Power Plant, comprising 4 units, each with a contracted capacity of 625 MW, totaling 2,500 MW. All units commenced commercial operation in 2022. (2) Gulf PD Power Plant, also comprising 4 units of 625 MW each, totaling 2,500 MW. Units 1 and 2 began commercial operation in 2023, while Units 3 and 4 followed on 31 March 2024 and 1 October 2024 respectively. In addition, under the national Power Development Plan (PDP), there is a major power plant project that is Hin Kong Power Plant (Western Replacement Project), consisting of 2 units, each with a contracted capacity of 700 MW, totaling 1,400 MW. Unit 1 began commercial operation on 1 March 2024, and Unit 2 is scheduled to begin operation in 2025.
Small power producers (SPPs)	The total contracted electricity generation capacity amounts to 9,319.875 megawatts (MW), comprising 6,050.00 MW from cogeneration systems, of which 5,772.00 MW are classified as Firm and 278.00 MW as Non-Firm, and 3,269.875 MW from renewable energy sources, including 587.53 MW as Firm and 2,682.345 MW as Non-Firm. Currently, EGAT is in the process of procuring electricity based on the resolutions of the Energy Regulatory Commission as follows: (1) Electricity procurement from municipal solid waste projects under the 2022 Feed-in Tariff (FiT) scheme, with 34 projects totaling 282.98 MW in contracted capacity, of which 4 projects are SPPs with a combined capacity of 98.00 MW. (2) Electricity procurement from renewable energy sources under the 2022–2030 FiT scheme for fuel-free projects, with 175 projects totaling 4,852.26 MW, including 83 SPP projects with a combined capacity of 4,346.22 MW. Of these, 5 projects have already commenced electricity sales totaling 295.00 MW. (3) Under the additional round of the same FiT scheme announced in 2024, 72 projects have been selected with a total capacity of 2,145.40 MW, including 35 SPP projects totaling 1,914.15 MW. However, the National Energy Policy Council (NEPC) has resolved to temporarily suspend the power purchase process, including the signing of contracts with the three electricity authorities, pending verification of project accuracy.
Neighboring countries	The total contracted capacity of 6,234.9 MW comprises 5,934.9 MW from IPP in the Lao PDR. Between 2022 and 2023, EGAT signed power purchase agreements with several hydropower projects in Laos, including the Luang Prabang Hydropower Project with a contracted capacity of 1,400 MW, the Pak Lay Hydropower Project with 763 MW, the Pak Beng Hydropower Project with 897 MW, and the Xekong 4A and 4B Hydropower Projects with a combined capacity of 347.3 MW. These agreements represent an additional contracted capacity of 3,407.3 MW. In addition, electricity is also imported through the Thailand–Malaysia High Voltage Direct Current (HVDC) transmission system, with a contracted capacity of 300 MW.

Transmission System Construction and Improvement Projects

 $EGAT\ has\ implemented\ 19\ transmission\ system\ construction\ and\ improvement\ projects\ countrywide\ as\ follows:$

No.	Projects	Objectives	Progress of the project %	Completion date
1	Transmission system development to accommodate the power purchase from Independent Power Producers (IPP)	Development of transmission system to support domestic private power plant	77.51	October 2026
2	Main transmission system expansion to accommodate the power purchase from Small Power Producers (SPP) Cogeneration Power Plants based on Request for Proposal 2010 (SPPC)	private power plant	100.00	December 2025
3	Transmission system project to accommodate the power purchase from SPP Firm Cogeneration Power Plants of which the contract period will ended by 2019-2025 (TSFC)		100.00	September 2024
4	Transmission system development plan to accommodate the power purchase from Small Power Producers (SPP), phase 1 (SPP1)		1.21	May 2026
5	Substation improvement plan to accommodate connection in accordance with EGAT's Connection Code (SICC)	Development of transmission system to enhance future power system reliability and support domestic independent power producers	2.91	December 2029
6	Transmission system development for Ubol Ratana Dam Hydro Floating Solar Hybrid Project (URS1)	Development of transmission system to accommodate EGAT power plant	100.00	June 2024
7	Bulk Power Supply for the Greater Bangkok Area, phase 3 (GBA3)	Development of transmission system to support the increasing	78.63	December 2028
8	Transmission system expansion project (TS 12)	demand of electricity	84.77	October 2026



No.	Projects	Objectives	Progress of the project %	Completion date
9	Transmission system improvement project in the Eastern region to enhance system security (TIPE)	Development of transmission system to enhance future power system reliability	52.02	June 2027
10	Transmission system improvement project in the Western and Southern region to enhance system security (TIWS)	System reliability	76.19	April 2027
11	Transmission system improvement project in the Northeast, Lower North and Central regions including Bangkok to enhance system security (TIEC)		35.31	June 2029
12	Transmission system improvement project in the Lower Southern region to enhance system security (TILS)		45.11	June 2028
13	Transmission system improvement project in the Upper Northern region to enhance system security (TIPN)		37.65	December 2025
14	Substation improvement plan in the South for protection of sabotage and flood (HSIS)		3.20	April 2027
15	Submarine cable system development project to Koh Samui District in Surat Thani Province to enhance system security (SPSS)		-	June 2029
16	Plan for improvement of the pattern of electricity distribution for the substation to enhance reliability of the transmission system (IETS)		-	December 2027
17	Transmission system renovation and expansion project, phase 1, Substation (RSP1)	Upgrading and expanding transmission infrastructure deteriorated due to aging	93.56	December 2025
18	Transmission system renovation and expansion project, phase 1, Transmission lines (RLP1)		97.71	December 2025
19	Transmission system renovation and expansion project, phase 2, Transmission lines (RTS2)		89.62	October 2026

Grid Connectivity

EGAT supports regional energy exchange and trading initiatives (Grid Connectivity) in alignment with the following resolutions, strategies, and policies.

- The resolution of the National Energy Policy Council (NEPC) Meeting No. 1/2019 (16th session) calls for the study and development of the national transmission system to enhance power system reliability and efficiency, positioning Thailand as a regional electricity trading hub (Grid Connection).
- EGAT's strategic direction includes becoming a regional electricity market operator, which necessitates feasibility studies on interconnection with neighboring countries to pave the way for future development of energy trading businesses.
- The policy on electricity imports from neighboring countries, as outlined in Thailand's Power Development Plan (PDP 2018 Revision 1) for 2018–2037, aims to procure electricity from abroad to promote energy accessibility, accommodate renewable energy integration, reduce domestic power plant investment costs and enable efficient resource allocation among countries.

Note:

The progress of the project as of 25 December 2024

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EGAT engages in regional electricity exchange through both bilateral and multilateral power trade mechanisms. Bilateral power trade is conducted with neighboring countries, namely the Lao PDR and Malaysia, via alternating current (AC) and high-voltage direct current (HVDC) transmission systems respectively.

EGAT also participates in multilateral power trade with regional partners, with a notable success being the Lao PDR-Thailand-Malaysia Power Integration Project (LTM-PIP), under which Laos exports electricity to Malaysia through Thailand's existing transmission infrastructure. Building on the success of this initiative, member countries agreed to expand electricity trade to Singapore under the Lao PDR, Thailand, Malaysia, and Singapore Power Interconnection Project (LTMS-PIP).

Phase 1 of the LTMS-PIP, implemented from June 2022 to June 2024, was successfully completed, with more than 266 million units of electricity traded. Phase 2 of the project involves a maximum trade volume of 200 MW over a two-year period, utilizing two transmission routes.

- Route: 1 Electricity generated from clean energy (Green Source) of up to 100 MW is transmitted from Lao PDR to Singapore through the existing transmission system of Thailand and Malaysia.
 At present, the power purchase is under negotiation.
- Route: 2 Electricity generated from fossil fuel (Brown Source) is transmitted from Malaysia to Singapore via existing transmission infrastructure in both countries. This route complements Phase 2 of the LTMS-PIP, aiming to reach the maximum trade volume of 200 MW. On 20 September 2024, Tenaga Nasional Berhad (TNB) of Malaysia and SP Group of Singapore signed the Cross-Border Power Trade Interconnection Agreement (CBPTIA), marking the start of Phase 2. The first trade occurred on 26 September 2024, with up to 30 MW transmitted.

On December 11, 2024, during the 2nd meeting of the Subcommittee on Electricity Cooperation between Thailand and Neighboring Countries, the committee approved the implementation of LTMS-PIP Phase 2 and acknowledged Thailand's wheeling charge rates for direct electricity transactions between producers and consumers. EGAT was assigned to negotiate the wheeling charge and draft the Energy Wheeling Agreement (EWA) for the project.

Grid Modernization

Technological advancements in electricity generation and consumption, combined with the 4D1E policy (Digitalization, Decarbonization, Decentralization, De-Regulation and Electrification) and Thailand's commitment to achieving carbon neutrality by 2050, are driving the widespread adoption of small-scale renewable energy generation across the country. This includes Small Power Producers (SPPs), Very Small Power Producers (VSPPs) and electricity consumers who become self-generating producers (Prosumers). Additionally, the increasing use of electric vehicles is contributing to more volatile and rapidly changing electricity consumption patterns within the EGAT system. Existing tools and equipment in the power system may not be able to respond effectively to these changes. As the key agency responsible for national power system security, EGAT is modernizing the grid with intelligent management systems and actively supporting regulatory and policy reforms to remove operational constraints. These efforts aim to ensure a reliable and resilient power system capable of adapting to future changes in the electricity industry structure.

EGAT's Grid Modernization initiative comprises five key components:

- 1. Digital Control Platform: A platform for managing and controlling the power system, including data analysis for demand forecasting, renewable energy generation forecasting, power plant availability and cost analysis, and automated selection of appropriate generation resources to maintain supply-demand balance under various constraints
- 2. Infrastructure Expansion Planning and Development: Planning and development of essential infrastructure such as power plants, transmission systems, energy storage systems, and technologies to support the National Control Center (NCC) and Regional Control Centers (RCCs) in maintaining future system stability
- 3. Transmission Protection, Control, Monitoring and Asset Management: Enhancing fault detection capabilities to prevent system damage and applying technologies for efficient maintenance of transmission networks to ensure readiness and optimal utilization
- **4. New Agreement and New Business:** Revising EGAT's contractual frameworks to reduce operational constraints and increase flexibility in power system management
- **5. Support:** Developing data collection systems, communication networks and cybersecurity measures to enable seamless, secure and automated operation of the future power system



EGAT has outlined plans to modernize the power system and enhance its responsiveness across three key areas as follows:

Sub-projects	Details Details			
Digital Control Platform				
RE Forecast / Control Center	 To develop a spatial day-ahead forecasting model for renewable energy power plants To establish a regional renewable energy forecasting center for the country 			
Demand Response Control Center (DRCC)	- To assess the benefits of implementing the pilot Demand Response (DR) project in power system control, and to prepare for the development of infrastructure and command systems for future DR operations			
Infrastructure Expansion Plan	ning and Development			
Pumped-Storage Hydro Power Plant (PSH)	- To integrate Pumped-Storage Hydropower Plants into the grid-scale electricity network to enhance the stability of renewable energy sources entering the system			
Transmission Protection Cont	trol Monitoring and Asset Management			
Geographic Information System (GIS) Development Plan	 To develop a Geographic Information System (GIS) as a centralized platform for integrating control and protection systems, as well as asset maintenance data, supporting prescriptive maintenance for transmission systems to ensure efficient power delivery and accommodate increasing renewable energy integration 			
Development of Intrusion Forecasting System under Transmission Line	 To develop an application or risk visualization system for transmission equipment by monitoring, alerting, and resolving issues using smart cameras To establish a big data management system and a risk analysis platform to identify equipment requiring maintenance 			
Development of the transmission equipment health forecasting system	 To create a predictive system for assessing the health and operational readiness of transmission equipment, such as transformers and circuit breakers. This enables condition-based maintenance planning, helping reduce long-term maintenance costs and extend equipment lifespan 			

Access to Energy

Thailand continues to rely on natural gas as the primary fuel for electricity generation and must import spot LNG to meet rising domestic demand. Due to the current volatility in natural gas prices, the government has implemented measures to reduce electricity costs during the energy price crisis. One such measure is the adoption of the Pool Gas pricing mechanism for calculating electricity generation costs, as approved by the National Energy Policy Council (NEPC) under the Single Pool policy, effective from January 2024. Additionally, the Energy Regulatory Commission (ERC) issued a regulation in March 2024 outlining the supervisory framework for Pool Managers. The Pool Gas price is a weighted average of gas prices and volumes from various sources, including domestic gas from the Gulf of Thailand (excluding gas used for LPG

production), gas from Myanmar, and LNG imported by licensed shippers. This policy aims to lower natural gas prices, ease the electricity cost burden on consumers in the long term, and promote competition in the second phase of the natural gas industry liberalization.

Regarding electricity charges, the Energy Regulatory Commission (ERC) resolved that EGAT would temporarily absorb the accumulated Fuel Adjustment Charge (Ft) on behalf of consumers, starting from the September–December 2021 billing period. EGAT has also worked closely with the government to manage fuel resources and reduce electricity generation costs. This includes restarting Mae Moh Unit 4 and postponing the retirement of Mae Moh Units 8–11 until December 2025, thereby maintaining low-cost, domestically sourced lignite power generation. This helps reduce reliance on high-priced spot LNG imports and diversifies the fuel mix to enhance national energy security.

Although the ERC resolved to gradually reimburse part of the accumulated Ft burden to EGAT during 2023–2024 to ease liquidity constraints, the continued volatility in natural gas prices and the potential rise in exchange rates remain significant risks to EGAT's financial stability. Without a clear schedule for the full reimbursement of the outstanding Ft burden, EGAT may face the risk of a credit rating downgrade which would negatively impact its ability to secure financing and increase financial costs for both EGAT and private power producers.

As a state enterprise, EGAT operates under government policies and regulated electricity pricing structures. Electricity prices and EGAT's profits are overseen by the ERC to ensure sufficient revenue for investment and operations. EGAT's profits are not only remitted to the Ministry of Finance as state revenue for national development, but are also reinvested in critical electricity infrastructure such as power plants, substations, and transmission lines to strengthen energy security. Over the past 55 years, EGAT has consistently used its retained earnings for these purposes. These retained earnings, however, cannot be used to offset rising fuel costs.

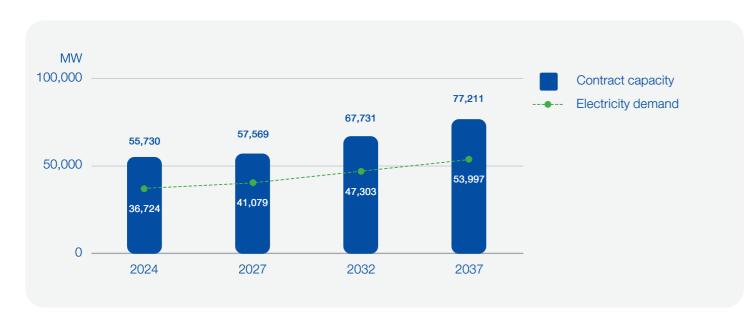


Key Operating Results

In 2024, EGAT's power generation system development continued to comply with the energy security criteria outlined in the Power Development Plan 2018 Revision 1 (PDP2018 Rev.1), as approved by the National Energy Policy Council (NEPC) and the Cabinet on 19 March 2020 and 20 October 2020 respectively. Additionally, EGAT's operations were in accordance with NEPC Resolution No. 2/2023 (Meeting No. 165) dated 9 March 2023, which approved EGAT's implementation of transmission system construction and upgrades to support electricity procurement from renewable energy sources during 2021–2030, as part of PDP2018 Rev.1 (updated) and the second revision of the power generation expansion plan. The projects are funded by a Cabinet-approved budget designated to support renewable energy integration and to enhance transmission system capacity, if necessary.

Details of operations to ensure power system availability and reliability are as follows:

Contract Capacity and Electricity Demand







Preliminary actual value as of December 2024 refers to contract capacity of EGAT system from the website of the System Control Division and information of contract capacity of

- 1) Department of Alternative Energy Development and Energy Efficiency
- 2) Provincial Electricity Authority (PEA)
- 3) Very Small Power Producers (VSPPs) from the Metropolitan Electricity Authority (MEA) and the Provincial Electricity Authority (PEA) as of December 2024

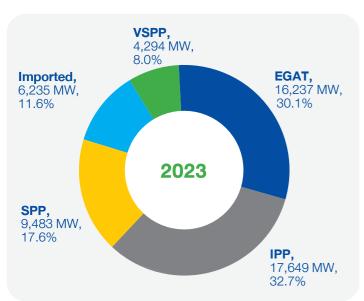
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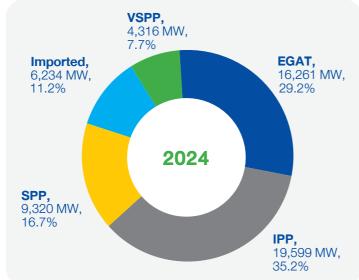


Contract Capacity and Electricity Demand

Data	Actual Value 2024	Predicted Value				
Data		2024	2027	2032	2037	
Maximum electricity demand (MW)	36,724	37,610	41,079	47,303	53,997	
Increase/ (decrease) from the forecast value in 2024 (%)			9	26	44	
Contract capacity	55,730	58,354	57,569	67,731	77,211	
Increase/ (decrease) from the forecast value in 2024 (%)			-1	16	32	

Comparison of Contract Capacity in 2023 and 2024 Classified by Type of Power Producers





Note:

- 1) Statistical value as of December 2023 refers to the Report of Energy Statistics of Thailand 2023, Energy Policy and Planning Office
- 2) Preliminary actual value as of December 2024 refers to contract capacity of EGAT system from the website of the System Control Division and information of contract capacity of
 - 1) Department of Alternative Energy Development and Energy Efficiency
 - 2) Provincial Electricity Authority (PEA)
 - 3) Very Small Power Producers (VSPPs) from the Metropolitan Electricity Authority MEA) and the Provincial Electricity Authority (PEA) as of December 2024

Contract Capacity Classified by Type of Power Producers

	2024		2023		2022	
Type of power producers	Generating capacity		Generating capacity		Generating capacity	%
EGAT	16,261	29.2	16,237	30.1	16,920	31.7
Independent Power Producers (IPPs)	19,599	35.2	17,649	32.7	16,749	31.4
Small Power Producers (SPPs)	9,320	16.7	9,483	17.6	9,195	17.2
Foreign Power Producer	6,234	11.2	6,235	11.6	6,235	11.7
Very Small Power Producers (VSPPs)	4,316	7.7	4,294	8.0	4,323	8.0
Total	55,730	100	53,898	100	53,336	100

Note:

- IPP (Independent Power Producer) has the generating capacity more than 90 MW
- SPP (Small Power Producer) has the generating capacity 10-19 MW
- VSPP (Very Small Power Producer) has electricity in the system of not exceeding 10 MW
- Statistical data of December 2022 and 2023 refers to energy statistics of Thailand 2022 and 2023 of Energy Policy and Planning Office
- Preliminary actual value as of December 2024 refers to contract capacity of EGAT system from the website of the System Control Division and information of contract capacity of
 - 1) Department of Alternative Energy Development and Energy Efficiency
 - 2) Provincial Electricity Authority (PEA)
 - 3) Very Small Power Producers (VSPP) from Metropolitan Electricity Authority (MEA) and Provincial Electricity Authority (PEA) as of December 2024

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Innovation and Digital Technology



EGAT applies innovation and digital technology in its operations to enhance organizational efficiency and capabilities, meet stakeholder needs, and create positive impacts while minimizing negative effects on society and the environment.

Target of 2024			Achievements
	Number of process innovations: 15 The value generated from the implementation		Number of process innovations: 20 The value generated from the implementation
•	or scaling of process innovation: 560 million baht		or scaling of process innovation: 646.3 million baht

Policy and Commitment

To ensure the effective promotion and management of innovation, EGAT continuously establishes, reviews and communicates its innovation policy. Additionally, in 2024, EGAT announced the implementation of its Digital Policy, which encompasses the management of digital technology, organizational information, information and cybersecurity, as well as the development of infrastructure and information systems to enhance operational efficiency and explore business opportunities. The policy also includes initiatives to strengthen employees' digital skills to support technological transformation and accommodate EGAT's growth.



Additional information on EGAT policy on innovation

Structure

The Committee on Digital Technology, Knowledge Management and Innovation, appointed by the EGAT Board of Directors, is responsible for overseeing, formulating policies and preparing both the master plan and annual action plans. The Committee also monitors progress and provides recommendations in the areas of digital technology, knowledge management and innovation.

EGAT has established a three-tiered structure for innovation management.

1. Policy-Level Innovation Management

This refers to the Innovation Committee, which is responsible for formulating policies, master plans, and action plans to govern, oversee, promote, and drive innovation management.

2. Operational-Level Innovation Management

This includes the Research and Innovation Division, innovation units at division level, and EGAT's business units which play a key role in marketing activities, including market testing, identifying investment opportunities, and supporting the commercialization and scaling of innovative outcomes.

3. Innovation Development

This involves all EGAT employees, who are encouraged to contribute ideas and identify problems, as well as to develop innovations through various activities and channels.

In addition, EGAT has established the Office of the Assistant Governor – Digital Technology to lead the organization's digital technology initiatives. There are also several related committees and working groups, including the EGAT Digital Committee, the EGAT Digital Working Group, and the EGAT Data Services Working Group.

Management

EGAT has reviewed its Innovation Master Plan and innovation management approach, which consists of four key components: innovation governance structure, management system, operational support system, and monitoring, evaluation and reporting system. An Innovation Framework has been designed to align with the principles of ISO 56002 and the Corporate Innovation System (CIS), based on the State Enterprise Assessment Model (SE-AM). Additionally, EGAT has developed an Innovation Management Manual to serve as a guideline for innovation management.



EGAT has also reviewed its Digital Master Plan, focusing on the integration of digital technology across all areas of the organization. The management and development of EGAT's digital technology cover the following aspects:

- (1) Governance of digital technology and the organization's digital action plans
- (2) Application of digital technology throughout the organization, including enterprise architecture analysis and design, efficient project and digital operations management, and quality management
- (3) Integration and collaboration of data and operations across units
- (4) Data governance and management of organizational big data
- (5) Information security management
- (6) Business continuity management and system availability
- (7) Resource utilization management and selection of environmentally friendly technologies

EGAT has continuously carried out research and innovation activities. From 2006 to 2024, EGAT supported a total of 785 research and development projects in collaboration with academic institutions, research organizations, and various agencies.

In 2024, EGAT funded 19 new research and innovation projects, with a total budget disbursement of 214.358 million baht for research and innovation activities.

Budget for Research and Development and Innovations

รายการ	2024	2023	2022	2021
Budget disbursement (million baht)	214.358	359.742	613.34	437.09
Support of Research and Innovations (projects)	19	26	45	56

Key operations in research, innovation, and digital technology in 2024

Category	Examples of R&D projects/activities	Research and innovation	Digital technology	Budget (million baht)
Energy efficiency	 Development of arm robot for assembling radioactive rods in a mineral exploration equipment set Development of automatic TIG HOT WIRE welding system for turbine rotors 	•		34.828
	The O&M Digital Platform is an initiative to upgrade the operation and maintenance of EGAT power plants through digital solutions and increased automation. It enhances the plants' capability to maintain production efficiency, ensure power availability, improve maintenance capacity, and boost operational reliability. This transformation is supported by digital technologies such as the Predictive Maintenance Analytics System (PMAS) which automatically forecasts equipment failures and issues early warnings for better maintenance planning, and the Performance Monitoring and Loss Diagnostic System (PMDS) which continuously analyzes equipment performance to maximize efficiency and minimize operational losses during electricity generation.		•	18
Renewable energy technology	 Testing system for Redox Flow Battery (RFB) Inverter for solar cell and battery that operates both in grid-connected mode and in grid-forming mode 	•		16.244
Transmission system technology	 An integrated energy management system combining battery energy storage and solar power for the Khun Huai Haeng Research Unit, under the Royal Agricultural Station Inthanon. 	•		16.468
	Grid Modernization is a program focused on equipping the power transmission system with tools and technologies that enhance stability and flexibility, enabling it to handle the increasing variability caused by the growing share of renewable energy. Key components include the Demand Response Control Center which manages electricity consumption reduction during periods of high fuel prices or peak demand through load aggregators such as the Metropolitan Electricity Authority (MEA) and the Provincial Electricity Authority (PEA). Another component is the Renewable Energy Forecast Center which develops forecasting models for wind and solar power generation to support grid reliability.		•	





Category	Examples of R&D projects/activities	Research and innovation	Digital technology	Budget (million baht)
Generation and high technology	Study of production of calcium carbonate from FGD gypsum and carbon capture Virtual Power Plant (VPP) is a pregram designed to	•		83.016
	 Virtual Power Plant (VPP) is a program designed to establish a new energy management ecosystem that supports diverse technologies such as renewable energy sources, energy storage systems, demand response, and electric vehicles. It aims to aggregate and manage distributed energy resources to operate collectively as a virtual power plant, enabling more efficient power generation and grid management. 		•	
Innovative sustainability related to services	Study on predictive maintenance of wind turbines at the Lam Takhong Jolpawatana Power Plant using swarm unmanned aerial vehicles (UAVs) integrated with artificial intelligence-based data processing systems	•		1.197
	EV Ecosystem is a national digital platform designed to support and promote the overall electric vehicle ecosystem. It comprises four key products and services: the "EleX by EGAT" charging station, the "EleXA" mobile application platform, the "EGAT Wallbox" home charging unit, and the "BackEN" (Backend EGAT Network Operator Platform) for managing the charging station network. The initiative includes the expansion of EleX by EGAT stations and partner stations, along with integration of charging management applications across agencies to ensure seamless connectivity and efficient energy use.		•	18
	 Green Energy Trading is a platform designed to efficiently manage green energy service mechanisms, supporting the national goals of achieving carbon neutrality and net zero emissions. 		•	1
	 Energy Solution is a digital platform supporting the smart energy solutions business through integrated energy management services which includes: standardized solar rooftop systems for buildings, factories, and homes which are designed, installed, and maintained by experts, along with an Energy Management System (EMS) that coordinates smart meters, sensors, and automated controls with centralized data visualization for users. 		•	2

Category	Examples of R&D projects/activities	Research and innovation	Digital technology	Budget (million baht)
	 ENZY Platform, offering comprehensive energy management using IoT devices and Al-based forecasting to monitor key parameters, reduce electricity costs, and promote energy efficiency and environmental sustainability Peer-to-Peer Energy Trading Platform, enabling prosumers which are individuals who generate clean energy to trade electricity in ways that align with the country's energy landscape 			
Others	 Development of a prototype air purification tower for communities using plasma technology Study on the properties of concrete mixed with high- calcium fly ash and ammonia-contaminated fly ash 	•		58.378



Additional information on innovation management

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Cybersecurity and Information Security



EGAT is one of the critical information infrastructure (CII) agencies in the energy and utilities sector. Therefore, it is essential to ensure cybersecurity and information security in its operations to prevent any impact on its activities and on related stakeholders.

Target of 2024	Achievements
Number of serious digital law violations: 0 incidents	Number of serious digital law violations: 0 incidents

Policy and Commitment

In 2024, EGAT revised its cybersecurity and information security policy, mandating that key units responsible for EGAT's core missions and technology infrastructure oversee and manage cybersecurity and information security. This includes identifying and preventing risks, monitoring and detecting cyber threats, responding to incidents, and maintaining and recovering from damage caused by cyber and information threats.

Additionally, EGAT has implemented other related policies and measures, such as the personal data protection policy, personal data security measures, and privacy notices for activities involving personal data.



Additional information on Policy and Privacy Notice on personal data protection

Operational Structure

To ensure the effective implementation of cybersecurity and information security operations, and to manage related risks in alignment with EGAT's mission, the organization has established several relevant committees and working groups. These include the EGAT Digital Committee, the Cybersecurity Management Working Group, the Sub-working Group on Cybersecurity Risk Management and Compliance, and the Sub-working Group on Cybersecurity Operations.

Management

EGAT has developed short-, medium-, and long-term plans to enhance human resource capabilities, improve work processes, and appropriately procure and manage technology. Various training programs on cybersecurity and personal data protection have been provided to relevant employees. Additionally, EGAT has prepared documentation and agreements related to cybersecurity and personal data protection for its partners to acknowledge, in order to promote compliance with EGAT's policies and practices.

EGAT also holds meetings and/or briefings to inform partners about operational updates that may affect or relate to their processes. Furthermore, EGAT conducts reviews of operational procedures to support technological improvements in monitoring activities involving partners or other stakeholders, aiming to prevent security breaches.

In 2024, EGAT carried out several key cybersecurity and information security initiatives, including:

- Aligned internal processes and practices with the Cybersecurity Act B.E. 2562 and the Personal Data Protection Act B.E. 2562 to build stakeholder confidence
- Prepared risk assessment reports and cybersecurity/information security risk management plans, submitted to EGAT's Cybersecurity Management Working Group, Digital Committee and the Governor for approval,
- and forwarded to the National Cybersecurity

 Committee
- Executed cybersecurity and communication plans effectively, with no serious incidents or violations of the Personal Data Protection Act
- Conducted external audits under ISO 27001 for digital infrastructure services, and internal audits by the Office of Internal Audit to ensure compliance with the Cybersecurity Act, B.E. 2562 (2019)

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- Surveyed and analyzed cybersecurity operations, leading to improvements in personnel, processes, and technology, with progress reported to senior management
- Participated in the Government Platform for PDPA Compliance (GPPC), a joint initiative by the PDPA Committee and the Digital Economy and Society Committee, to promote implementation of the Personal Data Protection Act, B.E.2562 (2019). As part of the initiative, EGAT staff

attended a training course on PDPA knowledge for practitioners, with five employees successfully completing and passing the assessment.

■ Violation of Customer Privacy

	20	024	20)23	2022		
Туре	From outside parties	From regulatory bodies	From outside parties	From regulatory bodies	From outside parties	From regulatory bodies	
Number of substantiated complaints concerning breaches of customer privacy and losses of customer data	0	0	0	0	0	0	
Number of identified leaks, thefts, or losses of customer data	0	0	0	0	0	0	
Total	0	0	0	0	0	0	



Supply Chain Sustainability



EGAT's operations involve a diverse range of partners, contractors, and business allies. Therefore, fostering and enhancing the capabilities of the supply chain to operate responsibly, with consideration for economic, social, and environmental impacts, and supporting local suppliers through continuous raw material procurement processes are key elements in driving both the organization and society toward sustainable development.

Target of 2024	Achievements
100% of domestic partners were informed of	100% of domestic partners were informed of
EGAT's Supplier Code of Conduct	EGAT's Supplier Code of Conduct

EGAT places great importance on promoting and engaging in the capacity building of its partners, contractors, and business allies to ensure responsible business practices that minimize negative economic, social, and environmental impacts. The organization also supports local suppliers both directly and indirectly to help strengthen local economy and foster positive relationship with local communities. These efforts are carried out through procurement management and mechanisms that aim to promote and drive sustainability throughout EGAT's supply chain. In 2024, key initiatives were implemented as follows:

EGAT's Supplier Code of Conduct

EGAT has established and implemented a Supplier Code of Conduct, which is framed within relevant regulations, directives, and applicable laws. This Code serves as a guideline for all suppliers and contractors engaged in business activities with EGAT. It aims to ensure that EGAT's partners conduct their business ethically and with good governance, while also considering environmental and social impacts, complying with legal requirements, and respecting human rights principles.



Additional information on EGAT's Supplier Code of Conduct

Human Rights Requirements

EGAT mandates that all procurement projects valued at 500 million baht or more must include human rights requirements or undergo human rights assessments. In 2024, 100% of such procurement activities incorporated human rights criteria or had completed human rights evaluations. Additionally, human rights topics were presented during EGAT's annual supplier engagement activities to promote shared understanding.

Corporate Governance of Supplier

EGAT conducts governance assessments of its suppliers to encourage strict compliance with contractual obligations and corporate governance principles. EGAT collects data on violations of governance standards, which include:

- 1. Document falsification
- 2. Obstruction of fair competition
- 3. Refusal to sign the contract within the required timeframe without valid justification
- 4. Breach of contract
- 5. Human rights violations such as employing women in prohibited jobs (e.g., mining or construction work conducted underground, underwater, in caves or tunnels) or employing children under the age of 15

Violations under items (1) to (4) are subject to penalties, including being classified as a defaulting contractor. For violations under item (5), EGAT will notify the contractor to take corrective action. If no action is taken, EGAT will report the matter to the relevant authorities for further consideration.

In addition, EGAT strictly enforces compliance with procurement guidelines, the Code of Conduct for procurement personnel, and fair and non-discriminatory procurement requirements which are part its Fair Competition Policy. The organization also communicates its policies, codes of conduct, operational guidelines, and feedback and complaint mechanisms to suppliers to foster awareness and build trust in EGAT's procurement processes.

As a result, in 2024, there were no substantiated complaints related to transparency in procurement and inventory management. Furthermore, the supplier satisfaction survey for EGAT's procurement activities exceeded the target, achieving a score above 80%.



Additional information on Fair competition policy



■ International Awards



Awards for Research, invention and innovation

From The 35th International Invention, Innovation & Technology Exhibition 2024 (ITEX 2024), Kuala Lumpur, Malaysia

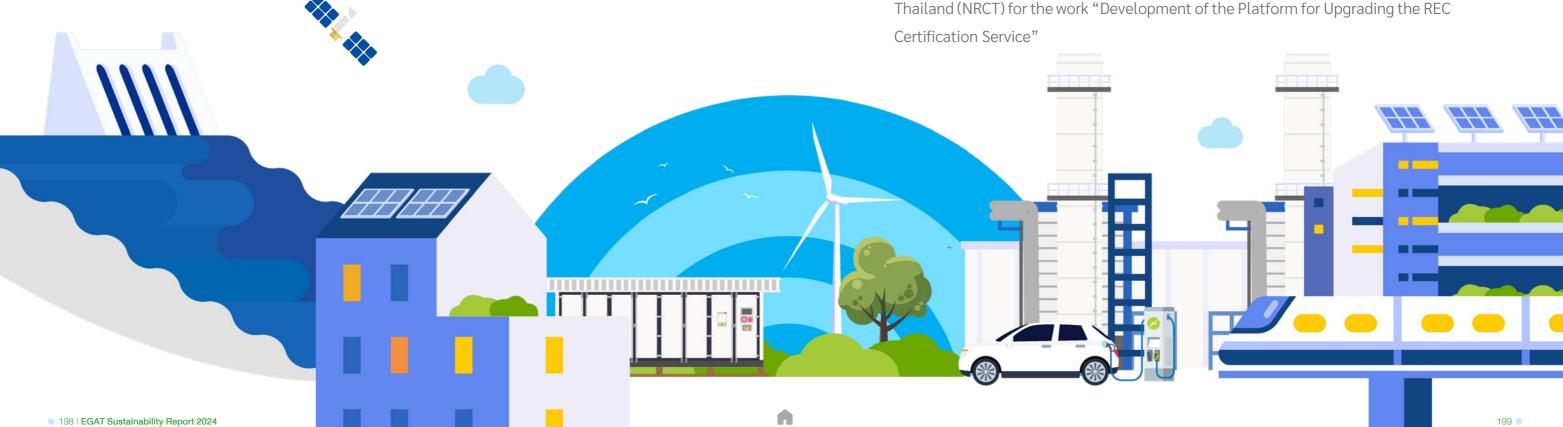
- Silver Medal and Special Award from WIPA Special Award (Taiwan) for the work "Development of the Application for Finding Smart Breakers"
- Silver Medal for the work "Development of the Platform for Assessment of the Condition of the Power Plant Machinery and Equipment for Online Smart Maintenance"
- Bronze Medal for the work "Invention of Real -Time High Voltage Substation Intrusion Detection System"



Awards for research, invention and innovation

From Seoul International Invention Fair 2024 (SIF 2024), Seoul, Republic of Korea

- Gold Medal, Special Prize on Stage (CAI Award Invention & Innovation) from China Association of Inventions, NRCT Special Award from the National Research Council of Thailand (NRCT) and Special Award from Malaysia for the work "Invention of Cleaning Robot for Floating Solar Panels"
- Gold Medal, Special Award from Taiwan and Honorable Mention from the National Research Council of Thailand (NRCT) for the work "Invention of Equipment for Inspection of Clogging of the Air Hole of the Cooling System of the Blade and Vane of the Gas Turbine"
- · Bronze Medal and Honorable Mention from the National Research Council of Thailand (NRCT) for the work "Development of the Platform for Upgrading the REC







Awards for research, invention and innovation

From Japan Design, Idea and Invention EXPO (JDIE 2024), Tokyo, Japan

- Gold Medal and Special Award from the Highly Innovative Unique Foundation (HIUF)
 of Saudi Arabia for the work "Invention of the Recording System of Fault in the Electricity System Supporting the Real Time Phaser Meter"
- Gold Medal for the work "Invention of Tool for Removal of Piston from Cylinder for Maintenance of Hydraulic Cylinder Ram"



Awards for research, invention and innovation

From The 17th International Inventions and Innovations Show (INTRAG 2024),
Katowice, Poland

 Platinum Award, Gold medal and Honorable Mention Award for Excellent Invention from the National Research Council of Thailand (NRCT) for the work "Invention of Survey Ship and Automatic Sampling System for Sterile Water (for Microbiological Water Sampling)"



Awards for research, invention and innovation

From The 49th International Exhibition of Invention of Geneva,
Geneva, Switzerland

- Silver Medal and Special Prize from the first Institute Inventors and Researcher in I.R., Iran for the work "Development of Energy Management Platform ENZY"
- Silver Medal for the work "Invention of EGAT Humic, Soil Amendments Which is the By-product of Lignite Mine"



Awards for research, invention and innovation

From Worldinvent TM Singapore 2024 (WoSG), Singapore

- Silver Medal, NRCT Special Award from the National Research Council of Thailand (NRCT) and Outstanding Award from Singapore for the work "High Voltage Resistant Insulation Box"
- Silver Medal, NRCT Honorable Mention Award Special Award from the National Research Council of Thailand (NRCT) and Special Prize on Stage (Special Award of Merit) from the Philippines for the work "Innovation of Automatic Testing Equipment of Atterberg's Limits"

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Awards for research, invention and innovation

From the International Trade Fair, Ideas, Inventions and New Products (iENA 2024),
Nuremberg, Germany

- Silver Medal, Special Prize on Stage (Prominent Invention) from Taiwan Creativity
 Development Association (TCDA) and Special Prize from Korea Invention Promotion
 Association (KIPA) for the work "Equipment for Identification of the Failure Point
 on Transmission Lines Which Can Connect with the Transmission Lines Through
 Capacitive Voltage Transformer (CTV) Without Line Trap"
- Special Award from Indonesian Innovation and Invention Promotion Association (INNOPA) for the work "Invention of Testing Set for Suspension Insulators in the Distribution System and Transmission System"



Awards for research, invention and innovation

From Taiwan Innotech Expo 2024 (TIE 2024),
Taipei, Taiwan

- Gold Medal, Special Prize from Taiwan Invention Association (TIA) and Honorable Mention Award from the National Research Council of Thailand (NRCT) for the work "Development of the Installation Procedure of Transmission Line Arrester (TLA) of 230 kV MM3-CM3 without Turning Off the Electricity"
- Bronze Medal and Special Award for the Outstanding Invention and Innovation from the National Research Council of Thailand (NRCT) for the work "Invention of 200 kW Mobile Power Plant of Waste Energy"



Awards for research, invention and innovation

From International Innovation Awards (IIA 2024)

by Enterprise Asia

 The Winner of the Prestigious International Innovation Awards (IIA) 2024 in the category of Service and Solution for the work "Application for Electric Vehicles Users (EleXA)"



ASEAN Energy Award 2024

From ASEAN Center for Energy (ACE)

ASEAN Excellence in Energy Management by Individual 2024



Asia Sustainability Reporting Awards (ASRA)

From CSR Works International Pte Ltd.

 Asia Sustainability Reporting Awards in the category of Asia's Best Sustainability Report (Public Sector) at the Silver Level for the work "EGAT Sustainability Report 2022"

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National Awards



SOE Awards 2024

From the State Enterprise Policy Office, Ministry of Finance

- Outstanding CSR Award for the work "Project of Smart Grid Development at Pa Bong Sub-district, Muang District, Mae Hong Son Province"
- Outstanding Creativity and Innovation Award (in the category of Innovation) for the work "Energy Management System to Support the Future Electricity Generation (ERC Sandbox and ENZY Platforms)"



Innovation Awards

From Bangkok International Intellectual Property, Invention, Innovation and Technology Exposition (IPITEx 2024) organized by the National Research Council of Thailand (NRCT)

- Special Prize on Stage (the Outstanding International Invention & Innovation Award)
 and Gold Prize for the work "Invention of Air Purification Tower with Plasma Technique"
- Gold Prize and Special Prize (The Outstanding Award) from the Citizen Innovation,
 Singapore for the work "Invention of Slide Pump Set"
- Gold Prize for the works
 - "Wire Grip Installer and Remover Tool"
 - "Decision Support System for Spare Transformer Management"
 - "The Quality Checking Method of the Splicing Joint for Coal Conveyor Belts"
 - "EGAT Point on Wave Switching Adaptive Control 2023"
 - "The Variable Speed Small Hydro Power Plant (Prototype) of 100 kW"
- Silver Prize for the work "Real-time High Voltage Substation Intrusion Detection System with AI CiRA CORE"



Prime Minister Awards: Thailand Cybersecurity Excellence Awards 2024

From the National Cyber Security Agency (NCSA)

 Plaque of Honor for Best Performance Award for the category of the Organization with Progress in Cyber Security



Prime Minister's Industry Awards 2023

from Ministry of Industry

 Outstanding Industry Award in the category of CSR for the work "CSR Works of South Bangkok Power Plant"



Plaque of Honor for Outstanding Performance to Climate Action Leading Organization (CALO)

From Thailand Carbon Neutral Network

- Gold Prize for the topic of "Measure"
- Bronze Prize for the topic of "Reduce"
- Bronze Prize for the topic of "Contribute"

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EIA Monitoring Awards 2024

From the Office of Natural Resources and Environment Policy and Planning

- Top Award for Mae Moh Lignite Mine Project
- Outstanding Awards (6) for the work of
 - "Project of Limestone Quarry for Chemical Industry"
 - "Project of Chana Power Plant"
 - "Project of Wang Noi Power Plant, Block 4"
 - "Project of North Bangkok Power Plant"
 - "Project of Replacement of South Bangkok Power Plant, Phase 1"
 - "Project of Replacement of Khanom Power Plant"



CSR Award 2024

From Ministry of Social Development and Human Security

 Award of Outstanding Organization for the work of "CSR Promotion of the Business Sector at Provincial Level (Lampang and Samut Prakan Provinces)



CSR-DIW Continuous Award 2024

From the Department of Industrial Works, Ministry of Industry

 Award for the Project of Promoting Sustainable CSR of Industrial Plant for the work of Bang Pakong Power Plant, North Bangkok Power Plant, Wang Noi Power Plant and Chana Power Plant



CSR-DPIM Continuous Award 2024

From the Department of Primary Industries and Mines, Ministry of Industry

 Award for the Establishments of Mines and Primary Industries which Have Implemented CSR Standard (in the category of Mining)



Green Mining Award 2024

From the Department of Primary Industries and Mines, Ministry of Industry

 Award for Maintaining Continuously Green Mining Standard for the Projects of Limestone Quarry and Lignite mine



Thailand Research Expo Award 2024

• Honorable Mention Award for the work of "Invention of Lineman Lift"



Sustainability Disclosure Award 2024

From Thai Pat Institute

 Honorary Sustainability Disclosure Award for the work "Sustainability Disclosure to the Public and Stakeholders Through EGAT Sustainability Report"



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Model Establishments in Safety, Occupational Health and Environment Award 2024

From Department of Labor Protection and Welfare

 Awards Given to the Model Establishments in Safety, Occupational Health and Environment (15 organizations)



Certificate for organizing "Zero Accident Campaign 2023"

From Thailand Institute of Occupational Safety and Health (Public Organization)

- Platinum Level to 2 units, namely Bhumibol Dam, Wang Noi Power Plant
- Gold Level to 4 units, namely EGAT Headquarters, Chana Power Plant, Vajiralongkorn Dam, North Bangkok Power Plant
- Silver Level to 4 units, namely Chulabhorn Dam, Tha Thung Na Dam, Rajjaphrabha Dam, Srinagarind Dam
- Bronze Level to Ubol Ratana Dam
- Primary Level to EGAT offices at Nakhon Ratchasima and Sakon Nakhon



Model Organization in Human Rights Award 2024

From Rights and Liberties Protection Department

 Award for Outstanding Model Organization in Human Rights in the category of State Enterprise



Healthy Organization Award 2024

From Rai Phoong Network of the Royal College of Physicians of Thailand

Awards in the category of

- Outstanding Organization Leader
- Outstanding Healthy Leader Team
- Satisfactory Work Procedures
- Outstanding Health Promotion Innovation
- Special Prize for Top Performance of Healthy Leader Team of Large Organization

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■ Contract Capacity Classified by Fuel Type and Region [EU1] [EU2]

Power plants	Metropolitan (MW)	Central (MW)	Northeast (MW)	South (MW)	North (MW)	Total capacity (MW)	Proportion (%)
1. EGAT power plants							
1.1 EGAT power plants, firm							
• Fuel oil	0	0	0	315	0	315	0.61
Natural gas	3,428.00	3,998.00	650	1,476.00	0	9,552.00	18.58
• Lignite	0	0	0	0	2,220.00	2,220.00	4.32
Hydropower (large dams)	0	1,090.00	237.2	324	1,321.20	2,972.40	5.78
Hydropower (small dams)	0	0	0	0	14	14	0.03
Others (pumped-storage)	0	0	1,000.00	0	0	1,000.00	1.94
Total	3,428.00	5,088.00	1,887.20	2,115.00	3,555.20	16,073.40	31.26
1.2 EGAT power plants, non-firm							
• Wind energy	0	0	26.5	0.19	0	26.69	0.05
• Diesel oil	0	0	0	26	4.4	30.4	0.06
Solar energy	0	5.02	70.26	0.01	3.21	78.5	0.15
Hydropower (small dams)	0	16.82	8.31	1.28	25.32	51.73	0.1
Geothermal	0	0	0	0	0.3	0.3	0
Total	0	21.84	105.07	27.48	33.24	187.62	0.36
Total of EGAT power plants	3,428.00	5,109.84	1,992.27	2,142.48	3,588.44	16,261.02	31.62
2. Private power producers							
2.1 Independent power producers							
(IPP) and EGAT affiliates							
Natural gas	0	16,620.00	0	930	0	17,592.00	34.22
Bituminous coal	0	2,006.50	0	0	0	2,006.50	3.9
Total	0	18,668.50	0	930	0	19,598.50	38.12
2.2 Foreign power producers							
2.2.1 Lao PDR							
• Hydropower	0	0	4,461.90	0	0	4,461.90	8.68
• Lignite	0	0	0	0	1,473.00	1,473.00	2.87
2.2.2 Malaysia							
• Others	0	0	0	300	0	300	0.58
(HVDC Transmission Lines)							
Total	0	0	4,461.90	300	1,473.00	6,234.90	12.13

Power plants	Metropolitan (MW)	Central (MW)	Northeast (MW)	South (MW)	North (MW)	Total capacity (MW)	Proportion (%)
2.3 Small sower producers (SPP)							
2.3.1 SPP, firm							
Natural gas	810	4,692.00	180	0	0	5,682.00	11.05
• Coal	0	90	0	0	0	90	0.18
• Renewable energy (bagasse,	0	287.8	198.13	29	72.6	587.53	1.14
husk, biomass, palm bunch,							
black liquor, solar energy, chaff,							
rubber wood scraps)							
Total	810	5,069.80	378.13	29	72.6	6,359.53	12.37
2.3.2 SPP, non-firm							
Natural gas	65	205	0	0	0	270	0.53
• Coal	0	8	0	0	0	8	0.02
• Renewable energy (bagasse,	30	689	1,274.00	167.62	521.72	2,682.35	5.21
natural gas from crude oil							
production, waste gas, garbage,							
wind energy, solar energy,							
hydro energy (large dams),							
rubber wood scraps							
Total	95	902	1,274.00	167.62	521.72	2,960.35	5.76
Total SPP	905	5,971.80	1,652.13	196.62	594.32	9,319.88	18.13
Total private power producers	905	24,640.30	6,114.03	1,426.62	2,067.32	35,153.28	68.38
Total contract capacity	4,333.00	29,750.14	8,106.30	3,569.10	5,655.76	51,414.30	100.00

As of 31 December 2024

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Power Sale [EU3]

Customers	2024		2023		2022		
Customers	Million kWh	%	Million kWh		Million kWh	%	
Metropolitan Electricity Authority (MEA)	58,257.18	26.96	55,483.50	27.21	53,369.19	26.18	
Provincial Electricity Authority (PEA)	153,259.35	70.93	145,381.90	71.31	140,680.96	69.00	
Direct customers	1,025.03	0.47	912.53	0.45	930.46	0.46	
Reserve and temporary electricity	296.93	0.14	272.2	0.13	307.03	0.15	
Lao PDR	2,458.39	1.14	1,642.08	0.81	841.24	0.41	
Tenaga Nasional Berhad (TNB)	602.82	0.03	32.85	0.02	2.92	-	
Electricity Authority of Cambodia	63.05	0.28	7.02	-	566.53	0.28	
*Others	106.79	0.05	143.32	0.07	97.03	0.05	
Total	216,069.55	100.00	203,875.38	100.00	196,795.37	100.00	

^{*}Others include Malaysia (OE), retail customers, residence of employees and other electricity users in substations (contractors working in the substations)

■ Transmission Lines Length [EU4]

Voltage	2024		2023		2022	
Voltage	On the ground	Underground	On the ground	On the ground Underground	On the ground	Underground
500 kV	9,294.85	-	8,725.30	-	8,275.25	-
230 kV	15,542.89	-	15,553.08	-	15,952.49	-
115 kV	15,152.77	-	14,707.92	-	14,388.35	-
132 kV	8.705	-	8.705	-	8.705	-
69 kV	18.8	-	18.8	-	18.8	-
300 kV HVDC	23.066	-	23.066	-	23.066	-
Total	40,041.09	-	8,725.30	-	38,666.65	-

■ Revenue, Profit and Levies

No.		2024	2023	2022
1	Revenue (Baht)	716,720,742,266.47	740,725,968,313.76	811,539,801,024.79
2	Net Profit (Baht)	45,370,090,189.49	48,575,130,244.60	37,747,392,664.96
3	Levies (Baht)	16,872,529,384.00	28,386,000,000.00	20,841,000,000.00

■ Generation Efficiency [EU11]

Thermal power plants	2024	2023	2022
EGAT power plant overview	43.18	43.86	42.54

Note

- 1. Data referenced from the Generating Availability Data System (GADS) as of 20 January 2025
- 2. The GADS system is a database that collects data on electricity generation, operational activities and fuel consumption in the production process of EGAT power plants.
- 3. Generation efficiency data of individual EGAT power plants is considered confidential and cannot be disclosed to external parties as it may affect EGAT's internal operations. Therefore, only generation efficiency data from thermal power plants is used to represent EGAT's overall performance.
- 4. The calculation of generation efficiency is based on definitions and data from the GADS database system. Efficiency = 3600/Net Heat Rate (kJ/kWh) x 100 (%)

Where Net Heat Rate: the heat rate used in the electricity generation calculated from the ratio of amount of fuel used electricity generation and net actual generation

- Heat Input refers to Fuel Billing (Unit: MBTU)
- Net Actual Generation: gross actual generation deducted by amount of electricity used in power generation (station service) (Unit: MkWh)
- 1kJ = 1.05506 BTU



Power Loss [EU12]

Type of loss	2024	2023	2022
Power loss in EGAT transmission system	1.49	1.49	1.48
Power loss in EGAT operations	0.56	0.55	0.65

■ Performance Index and Availability [EU28][EU29]

รายการ	2024	2023	2022
SAIFI	0.0994	0.0997	0.0904
SAIDI	0.6532	0.6397	0.9041
SA	99.92123 %	99.86473 %	99.89346 %
Availability of transmission lines	99.97360 %	99.98458 %	99.98211 %
Availability of transformers	98.75818%	98.90831 %	99.08563 %
VD	0.015 %	0.012 %	0.040 %
FD	0.0000 %	0.0000 %	0.0000 %

Note:

For EGAT, performance index of quality service applies to unplanned outages which is used for evaluation of the operations

■ Average Availability Factor of Power Plants [EU30]

Power plants classified by energy source and region	Number of planned outage hours	Number of forced outage hours	Average availability factor of power plants (%)
Northern operations			
Thermal power plant (1)	765.93	1,121.83	78.50
Renewable power plants (hydropower) (11)	226.83	2.71	29.51
Renewable power plants (wind, solar,	57.94	9.22	53.09
geothermal) (3)			
Diesel power plant (1)	2,603.55	161.11	1.68
Central operations			
Thermal power plants (2)	617.67	94.54	48.25
Renewable power plants (hydropower) (9)	128.53	14.32	28.39
Renewable power plants (wind, solar,	15.12	-	49.83
geothermal) (2)			
Northeastern operations			
Thermal power plant (1)	267.22	2.69	87.78
Renewable power plants (hydropower) (8)	234.04	24.64	7.52
Renewable power plants (wind, solar,	168.99	669.49	53.96
geothermal) (3)			
Metropolitan area			
Thermal power plants (2)	957.07	201.18	76.24
Southern operations			
Thermal power plants (2)	205.23	118.09	49.01
Renewable power plants (hydropower) (3)	139.92	43.11	28.25
Renewable power plant (wind, solar,	3,413.92	-	58.60
geothermal) (1)			
Total	547.31	248.50	54.19





Note:

- 1. Data referenced from the Generating Availability Data System (GADS) as of 20 January 2025.
- 2. The GADS system is a database that collects data on electricity generation, operational activities, and fuel consumption in the production process of EGAT power plants.
- 3. Power plants are classified by operation areas (there is no power plants in the western area) in accordance with the classification of the Power System Control and Operation Division
- 4. Definitions and data are referenced from the GADS database system.
 - 4.1. Planned outage hours mean the total number of planned outage hours and the number of unplanned outage hours which can fix the date of operating shutdown more than 7 days in advance (Maintenance Outage Hours) (Unit: Hour)
 - 4.2. Forced outage hours mean the number of unplanned forced outage hours which is emergency shutdown hours when there is a warning system or when the machine disconnects from the system (Forced Outage Hours) (Unit: Hour)
 - 4.3. Availability factor (AF) corresponds to the hours ratio value of availability hours of the power plant to the Service factor of GADS database system with calculation formula as follows:
 Service Factor (SF) = the number of availability hours and service hours of the power plant / the number of period hours X 100 (Unit %)
 - 4.4. Calculation of the overall operating results is calculated by the time-based and find a capacity weighted average by the gross maximum capacity (GMC) of each generating unit



■ Energy Use in the Organization [302-1]

Energy used in the organization	Amo	ount of energy used	(GJ)
Energy used in the organization	2024	2023	2022
Energy used by the organization			
Natural gas	323,057,100.82	322,053,733.21	270,229,160.79
Fuel oil	433,933.92	123,441.53	1,080,812.93
Diesel oil			
- for electricity generation	1,827,952.84	6,561,774.28	11,886,086.21
- for transportation	179,550.67	114,798.21	99,463.02
Benzene oil			
- for transportation	10,179.06	10,873.19	10,394.70
Lignite	179,720,943.36	174,050,029.76	176,053,988.08
A. Total non-renewable fuel used	505,229,660.68	502,914,650.18	459,359,905.73
Palm oil	-	-	-
B. Total renewable fuel used	-	-	-
Energy purchased for use in the organization			
Electricity	553,842,288.75	455,813,688.68	500,877,932.08
C. Total energy purchased for use in the organization	553,842,288.75	455,813,688.68	500,877,932.08
Energy generated by EGAT but not used in the organization			
Electricity	-	-	-
D. Total energy produced by EGAT but not used in the organization	-	-	-
E. Energy sold	778,042,122.87	733,951,374.09	705,090,170.82
Total net energy used	281,029,826.57	224,776,964.78	255,147,666.98

Note

- Net energy use in the organization = A + B + C + D E
- Energy of 1 million BTU is 1.05505585262 GJ, electric energy of 1 kWh is 0.00360 GJ, 1 liter of diesel oil for vehicle is 36.42 MJ, benzene oil of 1 liter for vehicle is 31.48 MJ (Energy Policy and Planning Office, Ministry of Energy)
- Natural gas (dry) of 1 cubic foot is 0.97 MJ, coal of 1 kilogram is 14.11 MJ, bunker oil of 1 liter is 40.76 MJ, diesel oil for electricity generation is 37.75 MJ, (calculated from EGAT Report of Fuel Use in 2024)
- The figures are based on the amount of fuel input prior to electricity generation and have not been adjusted for production losses. As a result, the reported energy consumption may appear higher.



■ Energy Use outside the Organization [302-2]

External power producers	Amount of energy purchased (kWh)						
External potrol producero	2024	2023	2022				
Independent power producers (IPPs)	64,586.32	41,134.90	52,695.43				
Small power producers (SPPs)	53,273.71	52,674.86	50,965.57				
Foreign power producers	35,985.05	32,805.15	35,471.76				
Total	153,845.08 (553,842,288.75 GJ)	126,614.91 (455,813,688.68 GJ)	139,132.75 (500,877,900.00 GJ)				

Note:

Electric energy of 1 kWh = 0.00360 GJ

■ Intensity of Energy Use [302-3]

Items	2024	2023	2022
Total net energy used in the organization (GJ)	281,029,826.57	224,776,964.78	255,147,666.98
Total generating capacity per year (kWh)	65,857,319,327.73	67,075,981,221.02	60,238,150,088.95
Intensity of energy used (GJ/kWh)	0.0043	0.0034	0.0042

Note:

- Intensity of energy use is calculated from energy use in the organization compared to the annual total generating capacity
- Annual total generating capacity means the net actual generation considered from the gross actual generation deducted from the amount of electric energy used in the station service

■ Water Withdrawal, Discharge and Consumption [303-3][303-4][303-5]

	20	024	20	023	20	022
Water	All areas (Million liters)	Areas with water stress (Million liters)	All areas (Million liters)	Areas with water stress (Million liters)	All areas (Million liters)	Areas with water stress (Million liters)
Water withdrawal						
Total water withdrawal	245,272.63	224,120.38	213,129.71	194,593.94	241,984.62	164,798.52
Surface water (including rain water)	244,115.14	223,169.95	211,670.85	193,239.78	241,000.16	164,642.79
- Fresh water	139,161.03	136,526.74	123,139.27	121,014.16	106,573.15	67,836.97
- Other water	104,954.11	86,643.20	88,531.58	72,225.62	134,427.00	96,805.82
Ground water	82.52	38.58	102.00	58.81	124.209	49.771
- Fresh water	82.52	38.58	102.00	58.81	124.209	49.771
- Other water	0.00	0.00	0.00	0.00	0.00	0.00
Water supply	1,074.96	911.85	1,356.86	1,295.34	860.255408	7.866
- Fresh water	1,074.96	911.85	1,356.86	1,295.34	860.255408	105.962138
- Other water	0.00	0.00	0.00	0.00	0.00	0.00
Water discharge						
Total water discharge	180,974.33	169,222.05	134,061.94	123,818.27	155,107.12	102,923.41
- Water discharged to surface water source	179,218.25	167,465.98	131,860.21	121,616.54	153,068.12	100,884.41
- Water discharged to ground water source	1,756.08	1,756.08	2,201.73	2,201.73	2,039.00	2,039.00
- Water discharged to sea	0.00	0.00	0.00	0.00	0.00	0.00
- Water discharged to others	0.00	0.00	0.00	0.00	0.00	0.00
-Water (fresh water)	73,929.04	73,924.31	55,626.43	55,625.14	43,097.95	24,821.61
- Water (others)	107,045.29	95,297.74	78,435.51	68,193.13	112,009.17	78,101.80
Water consumption						
Total water consumption	64,298.30	54,898.32	79,067.76	70,775.67	86,877.50	61,875.12

Note

- Fresh water means water with total dissolved solid (TDS) not exceeding 1,000 mg/l
- Other water means water with total dissolved solid (TDS) from 1,000 mg/l
- Water consumption means amount of water withdrawn amount of water discharged

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Amount of Waste and Waste Management [306-3][306-4][306-5]

Wasta and made manager	0004	2000	0000						
Waste and waste management	2024	2023	2022						
1. Total waste classified by type (ton)									
Hazardous waste	1,959.25	1,844.14	1,575.22						
Hazardous waste from coal mine	-	113,134,973.67	n/a						
- Overburden	106,604,152.78	-	n/a						
- Rock waste	-	-	n/a						
- Tailings	-	-	n/a						
Total	106,606,112.03	113,136,817.81	1,575.22						
Non-hazardous waste	4,422,978.06	4,696,118.56	5,940.68						
Non-hazardous waste from coal mine	-	-	n/a						
- Overburden	-	-	n/a						
- Rock waste	-	-	n/a						
- Tailings	-	-	n/a						
Total	4,422,978.06	4,696,118.56	5,940.68						
Total waste	4,424,937.31	4,697,962.69	7,515.90						

2. Recycled waste/reused waste (ton)

	Inside	Outside	Inside	Outside	Inside	Outside
Hazardous waste						
- Preparation for reuse	0.02	56.56	-	24.81	-	-
- Recycling	-	409.17	-	10.14	-	65.71
- Others	-	1.56	-	0.01	27.40	0.05
Hazardous waste from coal mine						
- Preparation for reuse	-	-	-	-	n/a	n/a
- Recycling	-	-	-	-	n/a	n/a
- Others	-	-	-	-	n/a	n/a
Total	467	7.30	34	.96	93	.16
Non-hazardous waste						
- Preparation for reuse	126.85	917.32	34.50	312.19	34.20	0.50
- Recycling	29.76	1,230,814.57	13.58	17.01	4.84	27.16
- Others	25.25	66.42	-	-	118.37	35.57
- Others	25.25	00.42	-	-	118.37	35.57

Waste and waste management	2024		20	23	2022		
	Inside	Outside	Inside	Outside	Inside	Outside	
Non-hazardous waste from coal mine							
- Preparation for reuse	-	-	-	n/a	n/a	n/a	
- Recycling	-	-	-	-	n/a	n/a	
- Others	-	-	-	-	n/a	n/a	
Total	1,231,9	980.17	377 <mark>.28</mark>		377 <mark>.28 220</mark>		
Total recycled and reused waste	1,232,	447.47	412 <mark>.24</mark>		412 <mark>.24 313.80</mark>		

3. Amount of waste disposed (ton)

	Inside	Outside	Inside	Outside	Inside	Outside	
Hazardous waste							
- Burning (energy from burning is used)	-	583.05	-	331.13	-	5.95	
- Burning (energy from burning is not used)	-	1.42	-	79.22	-	0.19	
- Landfill	0.05	376.53	-	13.63	1.24	205.00	
- Others	114.08	358.01	135.33	446.63	31.64	1,238.03	
Hazardous waste from coal mine							
- Burning (energy from burning is used)	-	-	-	-	n/a	n/a	
- Burning (energy from burning is not used)	-	-	-	-	n/a	n/a	
- Landfill	-	-	-	-	n/a	n/a	
- Others *(from overburden)	106,604,152.78 - 113,134,973.67 -		n/a	n/a			
Total	106,605,585.91		113,135	,979.61	1,482.06		
Non-hazardous waste							
- Burning (energy from burning is used)	-	79.94	-	117.06	-	121.28	
- Burning (energy from burning is not used)	0.70	-	-	55.00	-	10.98	
- Landfill	79.45	3,655.31	2,864,652.22	1,256.26	1,191.12	1,319.65	
- Others	3,186,276.23	885.96	7.12	1,086,142.08	20.31	3,056.70	
Non-hazardous waste from coal mine							
- Burning (energy from burning is used)	-	-	-	-	n/a	n/a	
- Burning (energy from burning is not used)	-	-	-	-	n/a	n/a	
- Landfill	-	-	-	-	n/a	n/a	
- Others	-	-	-	-	n/a	n/a	
Total Total waste disposed	-,		3,952 <mark>,215.53</mark> 117,088 <mark>,195.14</mark>		5,720.04 7,202.10		



Note:

- Overburden: the rock or soil layer that needs to be removed in order to access the ore being mined. Overburden is normally kept near the mine pit until it is placed into a previously mined pit when the digging is completed. However, the overburden may not be placed back in the mine pit therefore, it needs a proper disposal.
- Rock waste: consists of rock and target minerals in concentrations too low for economic recovery. Waste form rock can affect environment such as dust which can be flown by wind or rainwater and have impact on air, water or soil quality.
- Tailings: is left-over materials from the processing of mined ore. They consist of ground rock, unrecoverable and uneconomic metals, chemicals and organic matters which can have an effect on water quality caused by tailings leaching such as acidity water and heavy metal contamination.
- In 2024, the amount of recycled waste/reused waste increased as the additional data of recycled waste is reported by Mae Moh Power Plant.

■ Air Pollutant Emissions from EGAT Power Plants [305-7]

Air Pollutant	2024	2023	2022
SO ₂ Emissions (ton)	13,239.06	15,153.05	15,862.27
SO ₂ Intensity (kg/MWh)	0.21	0.24	0.27
NO _x Emissions (ton)	33,594.63	37,689.27	33,264.62
No _x Intensity (kg/MWh)	0.54	0.60	0.57
PM Emissions (ton)	709.51	787.87	616.03
PM Intensity (kg/MWh)	0.01	0.01	0.01

Note:

The total amount of electricity used in calculating SO₂ intensity, NO_x intensity and PM intensity is 61,953,338.07 MWh

EGAT Employees [2-7][2-8]

	Employees					Contract employees				
Year	Headq	uarters	Regional		Headq	uarters	Reg	ional	Total	
	Male	Female	Male	Female						
2024	3,703	2,561	7,265	1,231	15	0	94	1	14,870	
2023	3,760	2,615	7,509	1,291	14	0	126	2	15,317	
2022	3,612	2,628	7,160	1,316	189	20	651	14	15,590	

Note:

The number of workers who are not employees in 2024 is 14,254

■ Newly Recruited Employees and Employees which Employment is Terminated [401-1]

Vasi	Unit	20	24	2023		2022	
Year	Onit	Male	Female		Female	Male	Female
Newly recruited empl	loyees						
	person	3	9	43	33	15	50
Number of newly	регооп	33	6	339	94	134	16
recruited employees	%	0.	26	2.	83	0.9	96
	70	0.22	0.04	2.21	0.6	0.86	0.1
Newly recruited emplo	yees classified by working	area					
Headquarters	person	4	1	130	64	22	12
i leauquaiteis	%	0.03	0.01	0.85	0.42	0.14	0.08
Regional	person	29	5	209	30	112	4
negional	%	0.20	0.03	1.36	0.2	0.72	0.03
Newly recruited emplo	yees classified by age						
21-30 years old	person	24	5	337	92	62	13
21-30 years old	%	0.16	0.03	2.2	0.6	0.4	0.08
31-40 years old	person	9	1	2	2	53	3
01-40 years old	%	0.06	0.01	0.01	0.01	0.34	0.02
41-50 years old	person	0	0	0	0	17	0
. r oo joaro ola	%	0	0	0	0	0.11	0
51-60 years old	person	0	0	0	0	2	0
2 . 22 jau. 2 aid	%	0	0	0	0	0.01	0
Termination of emplo	yment						

Number of person	48	31	707		869		
employees of which	person	361	120	542	165	639	230
employment Is	%	3.23		4.6	62	5.8	57
terminated %	70	2.43	0.81	3.54	1.08	4.10	1.48

Termination of employment classified by working area

Headquarters	person	118	68	385	66	175	133
	%	0.79	0.46	2.51	0.43	1.12	0.85
Dagianal	person	243	52	157	99	464	97
Regional	%	1.63	0.35	1.03	0.65	2.98	0.62



Year	Unit	20)24	2023		2022			
Tear	Offic	Male	Female		Female	Male	Female		
Termination of employment classified by age									
21-30 years old	person	8	2	18	8	12	16		
21-30 years old	%	0.05	0.01	0.12	0.05	0.08	0.1		
31-40 years old	person	14	3	33	8	12	7		
31-40 years old	%	0.09	0.02	0.22	0.05	0.08	0.04		
41-50 years old	person	6	1	15	2	3	1		
41-50 years old	%	0.04	0.01	0.1	0.01	0.02	0.01		
51-60 years old	person	333	114	476	147	612	206		
31-00 years old	%	2.24	0.77	3.11	0.96	3.93	1.32		

Note:

Termination of employment includes employees resign voluntarily, being discharged or retired



Parental Leave [401-3]

Darrost II arros		2024			2023		2022		
Parental Leave	Male	Femae	Total			Total	Male	Female	Total
Total number of employees entitled to parental leave (person)	11,077	3,793	14,870	11,409	3,908	15,317	11,612	3,978	15,590
Total number of employees took parental leave (person)	274	127	401	272	66	338	227	88	315
Total number of employees who returned to work after parental leave (person)	274	127	401	272	66	338	227	88	315
Total number of employees whose employment is terminate within 12 months after returning to work (person)	0	0	0	2	0	2	1	2	3
Total number of employees returning to work after the end of parental leave and continue to work 12 months afterward (person)	270	66	336	226	86	312	198	74	272
Return to work rate after parental leave (%)	100	100	100	100	100	100	100	100	100
Employee retention rate after parental leave (%)	99.26	100.00	99.41	99.56	97.73	99.05	100.00	100.00	100.00

Note:

- Return to work rate = (Number of employees returning to work after parental leave/Number of the employees due to return to work after taking parental leave) X 100
- Retention rate = (Number of employees retained 12 months after returning to work following a period of parental leave/ Number of employees returning from parental leave in the prior reporting period) x 100



Training [404-1]

Training	20	24	2023		2022			
Training	Male	Female	Male	Female	Male	Female		
Total training hours for all employees (hour)								
Senior executives (level 12 and above)	14,010	6,060	7,188	3,606	14,361	4,980		
Executives (level 8-11)	98,400	53,661	189,618	108,162	137,814	74,505		
Operation staff (lower than level 8)	260,856	83,229	402,540	164,820	286,929	103,452		
Average training hours (hour)								
Senior executives (level 12 and above)	145.94	183.64	22.75	54.64	142.19	191.54		
Executives (level 8-11)	32.73	39.05	23.54	35.93	43.38	53.26		
Operation staff (lower than level 8)	32.55	34.69	35.63	52.47	34.41	40.51		

Performance Assessment [404-3]

Employees	Unit	2024		2023		20	22
Employees	Offic	Male	Female	Male	Female	Male	Female
Assessment of emplo	oyee performance						
Number of employees	noroon	14,6	666	14,776		15,301	
whose performance have been assessed	person	10,926	3,740	10,994	3,782	11,380	3,921
	%	98.77		96.45		98.15	
Assessment rate		98.81	98.68	74.40	25.60	73.00	25.15
Assessment of emplo	oyee performance classifie	ed by type of	work				
Technical area	person	10,5	581	10,2	241	10,580	
recrimedialed	%	98.	71	69.	.31	67.	.86
Other areas	person	4,085		4,535		4,793	
	%	98.93		30.69		30.74	

■ Employees Eligible to Retire (Classified by Type of Work and Working Area) [EU15]

Tuno of work	In the next	5-10 years	In the next	Total	
Type of work	Headquarters	Regional	Headquarters	Regional	Total
Technical	742	1,938	361	682	3,648
Others	623	427	303	161	1,589
Total	1,365	2,365	664	843	5,237

■ Training of Contractors and Subcontractors' Employees in Occupational Health and Safety Management System [EU17][EU18]

Activities	Working days of employees (Day)	Total number of employees (Person)	Number of trained employees (Person)	Percentage of trained employees %
Power plant and transmission lines construction	1,501	2,956	2,956	100
Power plant and transmission system operation	140,831	337	337	100
3. Maintenance	38,346	3,551	3,549	100
4. Mining	366	5,197	5,197	100

Note:

Training courses for contractors' employees comply with the law



■ Occupational Health and Safety Statistics [403-8][403-9][403-10]

Data	Unit	2024	2023	2022
Employees under occupational	health and safety management sys	stem		
Those covered by occupational h	ealth and safety management syster	n		
ECAT ampleyage	person	14,875	15,312	15,098
EGAT employees	%	100	100	96.84
Contractor's employees	person	5,949	14,805	n/a
Contractor 3 cmployees	%	100	100	n/a
Those covered by occupational h	ealth and safety management syster	n which are verified	d by internal organi	zation
FOAT amarilance	person	5,511	7,277	6,306
EGAT employees	%	37.05	47.51	40.45
Contractor's ampleyees	person	2,793	11,355	n/a
Contractor's employees	%	46.9	76.70	n/a
Those covered by occupational h	ealth and safety management syster	n which are verified	d by external organ	ization
	person	9,364	8,040	9,284
EGAT employees	%	62.95	52.49	59.55
O and the other than the control of	person	3,156	10,048	n/a
Contractor's employees	%	53.1	67.87	n/a
Work-related injury				
Working hours				
EGAT employees	hour	27,489,000	28,296,576	27,267,912
Contractor's employees	hour	n/a	n/a	6,623,204
Fatality				
	person	2	1	0
EGAT employees	person/1,000,000 working hours	0.87	0.42	0
	person	1	1	3
Contractor's employees	person/1,000,000 working hours	0.955087944	n/a	0.45
Serious injury (excluding fatality)				
FOAT -	person	1	0	0
EGAT employees	person/1,000,000 working hours	0.44	0	0
Contractor's ampleyees	person	0	7	9
Contractor's employees	person/1,000,000 working hours	0	n/a	1.36

Data	Unit	2024	2023	2022
Recordable injury				
EGAT employees	person	30	31	7
EGAT employees	person/1,000,000 working hours	13.10	13.15	3.01
Contractor's employees	person	12	27	9
Contractor's employees	person/1,000,000 working hours	11.46105533	n/a	1.36
Work-related ill health				
Fatality from work-related ill heal	th			
FOAT ampleyees	person	0	0	0
EGAT employees	person/1,000,000 working hours	0	0	0
Contractor's ampleyage	person	0	0	n/a
Contractor's employees	person/1,000,000 working hours	0	0	n/a
Recordable work-related ill healt	h			
FOAT ampleures	person	0	0	0
EGAT employees	person/1,000,000 working hours	0	0	0
Combractorio amenio con	person	0	0	n/a
Contractor's employees	person/1,000,000 working hours	0	0	n/a

Note:

- Serious injury: work-related injury which results in fatality or inability to work or to expect to be fully recovered to the health condition before injury within 6 months
- Recordable injury: serious work-related injury diagnosed by physicians or certified medical practitioner or work-related injury which results in the following cases: fatality, absence from work, work limitation or work transfer, hospitalization other than first aid and loss of consciousness
- Recordable work-related ill health: serious work-related ill health diagnosed by physicians or certified medical practitioner or work-related ill health which results in the following cases: fatality, absence from work, work limitation or work transfer, hospitalization other than first aid and loss of consciousness



■ Ratio of standard entry level wage to local minimum wage [202-1]

Employees	20	24	2023		2022	
Employees	Male	Female		Female	Male	Female
Percentage of new employees who receive compensation equal to/more than the minimum wage	100	100	100	100	100	100
Percentage of new workers (who are not employees) who receive compensation equal to/more than minimum wage	100	100	100	100	100	100

■ Number and Proportion of EGAT Employees and Board of Directors Classified By Diversity [405-1]

0.11		Board of	Employees (person)								
Con	nposition	Directors (person)	Senior executives	%	Executives	%	Operation level	%	Total		
Total		11	128	100	4,345	100	10,397	100	14,870		
Gender	Male	10	95	74	2,982	69	8,000	77	11,077		
Gender	Female	1	33	26	1,363	31	2,397	23	3,793		
	≤30	0	0	0	0	0	1,051	10	1,051		
Age range	30-50	3	119	93	2,773	64	2,217	21	5,109		
9 -	≥50	8	9	7	1,572	36	7,129	69	8,710		
Persons	with Disabilities	0	0	0	1	0	24	0	25		

■ Remuneration Ratio [2-21][405-2]

	2024	2023	2022
Ratio of the compensation for the organization's highest-paid individu	ıal to the compen	sation for all em	ployees
Ratio of the annual total compensation for the organization's highest-paid individual to the median annual total compensation for all employees	11.97 : 1	18.25 : 1	16.15 : 1
Ratio of the percentage increase in annual total compensation for the organization's highest-paid individual to the median percentage increase in annual total compensation for all employees	0:1	1.21 : 1	1.20 : 1
Ratio of basic salary and remuneration of women to men [405-2]			
Senior executives (Level 12 and above) Executives (Level 8-11) Operation staff (Below level 8)	0.97 : 1 0.94 : 1 1.03 : 1	0.95 : 1 0.95 : 1 1.01 : 1	0.96 : 1 0.97 : 1 0.99 : 1

Note:

Compensation includes both salary and bonus.

■ Discrimination and Corrective Action [406-1]

						Discrimination Status				
Event where there is discrimination	Corrective plan	Number of events	Have been reviewed by organization	Being corrected according to the plan	Have been processed and the result has been reviewed by regular internal management	No longer subject to action				
-	-	-	-	-	-	-				



■ Violation of the Rights of Indigenous People [411-1]

Violation of rights of indigenous people	2024	2023	2022
Incidents of violations involving the rights of indigenous peoples	0	0	0

Community Activities [413-1]

Coverage	2024	2023	2022
Coverage of operation area (%)	100	100	100

Risk Assessment Concerning Corruption [205-1]

Identified and significant risk	EGAT units subject to risk assessment concerning corruption				
identined and significant risk	Number of units	Percentage			
Unintentional or negligent violation of laws, regulations, or rules by employees (excluding cases related to accidents) Abuse of authority for personal gain or for the benefit of associates Misuse of EGAT's assets or supplies for personal benefit	9	100			

■ Communication Concerning Anti–Corruption Policy and Practice [205-2]

Type of target group		en communicated on e in anti-corruption	Those who have been trained in anti-corruption		
	Number	%	Number		
EGAT Employees	15,295	100	857	5.60	
Classified by group					
- Senior executive (Level 12 and above)) 127	0.83	14	0.09	
- Executive (Level 8-11)	4,635	30.30	407	2.66	
- Operation staff (Below level 8)	10,533	68.87	436	2.85	
Classified by area					
- Central	6,430	42.04	392	2.56	
- Regional	8,865	57.96	465	3.04	
Trading partners	21,871	100.00	-	-	
Classified by type					
 Procurement according to the Public Procurement and Supplies Administration Act 	14,624	66.86	-	-	
- Commercial procurement	7,247	33.14	-	-	
Classified by area					
- Oversea	195	0.95	-	-	
- Central	8,008	39.17	-	-	
- Regional	12,241	59.88	-	-	

Note:

Percentage is based on the total number of each group



Confirmed Cases of Corruption and Management [205-3]

	Type of corruption	Number of occurrence (times)	Number of employees punished (persons)	Number of contracts with business alliances cancelled/not extended (contracts)	Number of litigation (times)	Dispute settlement/ judgment
reimbi	y claiming travel expenses for personal ursement, and using EGAT vehicles to port unauthorized individuals	2	2	0	0	-

■ Violation of Customer Privacy [418-1]

	20	24	20	23	2022	
Types of complaints	From outside parties	From regulatory bodies	From outside parties	From regulatory bodies	From outside parties	From regulatory bodies
Number of substantiated complaints received concerning breaches of customer privacy	0	0	0	0	0	0
Number of identified leaks, thefts or losses of customer data.	0	0	0	0	0	0
Total	0	0	0	0	0	0

■ Proportion of Expense with Local Supplier [204-1]

	20	2024		23	2022	
Area	Amount (Million Baht)	%			Amount (Million Baht)	%
Overseas	5,597.90	21.05	49,406.73	51.10	7,465.56	18.77
Local	20,991.17	78.95	47,283.37	48.90	32,314.62	81.23
- Central	15,828.62	59.53	41,170.34	42.58	26,854.77	67.51
- Regional	5,162.55	19.42	6,113.03	6.32	5,459.85	13.73
Total	26,589.07	100.00	96,690.10	100.00	39,780.18	100.00

Note:

- Percentage of the local procurement budget is calculated in comparison with the total procurement budget of the organization in a year
- Overseas: Partner's establishment which is located overseas
- Local: Partner's establishment which is located domestically
- Central: Partner's establishment which is located in Bangkok Metropolitan
- Regional: Partner's establishment which is located outside Bangkok Metropolitan

GRI Content Index



Statement of use

Electricity Generating Authority of Thailand has reported in accordance with the GRI Standards for the period from 1 January 2024 to 31 December 2024.

GRI 1: Foundation 2021

GRI 12: Coal Sector 2022

GRI 1 used
Applicable GRI Sector Standard(s)

GRI STANDARD/				OMISSION		GRI SECTOR	SDG
OTHER SOURCE	DISCLOSURE	LOCATION	REQUIREMENT(S) OMITTED	REASON	EXPLANATION	STANDARD REF. NO.	LINKAGE TO DISCLOSURE
General disclosures							
GRI 2: General Disclosures 2021	2-1 Organizational details	14-15					
Disclosures 2021	2-2 Entities included in the organization's sustainability reporting	13					
	2-3 Reporting period, frequency and contact point	12-13		ure or that a G	ns for omission are not RI Sector Standard ref not available.		
	2-4 Restatements of information	No restatement					
	2-5 External assurance	13, 250-251					
	2-6 Activities, value chain and other business relationships	15-19, 22-23					
	2-7 Employees	222					SDG 8, SDG 10
	2-8 Workers who are not employees	222					SDG 8
	2-9 Governance structure and composition	140-145					SDG 5, SDG 16
	2-10 Nomination and selection of the highest governance body	146-147					SDG 5, SDG 16
	2-11 Chair of the highest governance body	147-148					SDG 16
	2-12 Role of the highest governance body in overseeing the management of impacts	25, 148-150					SDG 16
	2-13 Delegation of responsibility for managing impacts	26, 28-29					
	2-14 Role of the highest governance body in sustainability reporting	31					
	2-15 Conflicts of interest	150-151					SDG 16
	2-16 Communication of critical concerns	152					

GRI STANDARD/				OMISSION		GRI SECTOR	SDG
OTHER SOURCE	DISCLOSURE	LOCATION	REQUIREMENT(S) OMITTED	REASON	EXPLANATION	STANDARD REF. NO.	LINKAGE TO DISCLOSURE
	2-17 Collective knowledge of the highest governance body	153					
	2-18 Evaluation of the performance of the highest governance body	154					
	2-19 Remuneration policies	155-158					
	2-20 Process to determine remuneration	159					
	2-21 Annual total compensation ratio	231					
	2-22 Statement on sustainable development strategy	9-11					
	2-23 Policy commitments	160, 166	a. describe its policy commitments for responsible business conduct, including: i. the authoritative intergovernmental instruments that the commitments reference; ii. whether the commitments stipulate conducting due diligence.	Information unavailable/ incomplete	It is in the process of considering the OECD Due Diligence Guidance for Responsible Business Conduct to be applied in the organization.		SDG 16
	2-24 Embedding policy commitments	160-161	a. describe how it embeds each of its policy commitments for responsible business conduct throughout its activities and business relationships.	Information unavailable/ incomplete	It is in the process of considering the OECD Due Diligence Guidance for Responsible Business Conduct to be applied in the organization.		
	2-25 Processes to remediate negative impacts	162, 164					
	2-26 Mechanisms for seeking advice and raising concerns	164	a. describe the mechanisms for individuals to: i. seek advice on implementing the organization's policies and practices for responsible business conduct; ii. raise concerns about the organization's business conduct	Information unavailable/ incomplete	It is in the process of considering the OECD Due Diligence Guidance for Responsible Business Conduct to be applied in the organization.		SDG 16





GRI STANDARD/	DIO SI COLUMNIA			OMISSION		GRI SECTOR	SDG
OTHER SOURCE	DISCLOSURE	LOCATION	REQUIREMENT(S) OMITTED	REASON	EXPLANATION	STANDARD REF. NO.	LINKAGE TO DISCLOSURE
	2-27 Compliance with laws and regulations	No instances of non-compliance					
	2-28 Membership associations	20					
	2-29 Approach to stakeholder engagement	50-65					
	2-30 Collective bargaining agreements	115					SDG 8
rganization Profile							
Electric Utilities (EU)-Specific Information Disclosure of Electric Utilities	EU1 Installed capacity, broken down by primary energy source and by regulatory regime	210-211					SDG 7
Sector according to GRI (Organization Profile)	EU2 Net energy output broken down by primary energy source and by regulatory regime	210-211					SDG 7, SDG 14
	EU3 Number of residential, industrial, institutional and commercial customer accounts	212					
	EU4 Length of above and underground transmission and distribution lines by regulatory regime	212					
laterial topics							
GRI 3: Material Topics 2021	3-1 Process to determine material topics	31	_		that reasons for omiss or that a GRI Sector S		
	3-2 List of material topics	32-33		1	number is not available	Э.	
takeholder Manage	ment						
GRI 3: Material Topics 2021	3-3 Management of material topics	50-65					
Sustomer Satisfaction	n						
GRI 3: Material Topics 2021	3-3 Management of material topics	136-137					
rocurement Practic	es						
GRI 3: Material Topics 2021	3-3 Management of material topics	196-197					
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	235					SDG 8

GRI STANDARD/	DIGOLOGIADA	1001500		OMISSION		GRI SECTOR	SDG
OTHER SOURCE	DISCLOSURE	LOCATION	REQUIREMENT(S) OMITTED	REASON	EXPLANATION	STANDARD REF. NO.	LINKAGE TO DISCLOSURE
Anti-Corruption							
GRI 3: Material Topics 2021	3-3 Management of material topics	160-161				12.20.1	
GRI 205: Anti-Corruption 2016	205-1 Operations assessed for risks related to corruption	232				12.20.2	SDG 16
	205-2 Communication and training about anti-corruption policies and procedures	233				12.20.3	SDG 16
	205-3 Confirmed incidents of corruption and actions taken	234				12.20.4	SDG 16
Energy							
GRI 3: Material Topics 2021	3-3 Management of material topics	68-69					
GRI 302: Energy 2016	302-1 Energy consumption within the organization	217					SDG 7, SDG 8, SDG 12, SDG 13
	302-2 Energy consumption outside of the organization	218					SDG 7, SDG 8, SDG 12, SDG 13
	302-3 Energy intensity	218					SDG 7, SDG 8, SDG 12, SDG 13
	302-4 Reduction of energy consumption	70					SDG 7, SDG 8, SDG 12, SDG 13
	302-5 Reductions in energy requirements of products and services	-	All disclosures of Reductions in energy requirements of products and services	Not Applicable	EGAT's products and services are electricity and transmission.		SDG 7, SDG 8, SDG 12, SDG 13
Water and effluents							
GRI 3: Material Topics 2021	3-3 Management of material topics	74				12.7.1	
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	74-75				12.7.2	SDG 6, SDG 12
	303-2 Management of water discharge related impacts	76				12.7.3	SDG 6
	303-3 Water withdrawal	219				12.7.4	SDG 6
	303-4 Water discharge	219				12.7.5	SDG 6
	303-5 Water consumption	219				12.7.6	SDG 6





GRI STANDARD/				OMISSION		GRI SECTOR	SDG
OTHER SOURCE	DISCLOSURE	LOCATION	REQUIREMENT(S) OMITTED	REASON	EXPLANATION	STANDARD REF. NO.	LINKAGE TO DISCLOSURE
Biodiversity							
GRI 3: Material Topics 2021	3-3 Management of material topics	78-79				12.5.1	
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	79				12.5.2	SDG 6, SDG 14, SDG 15
	304-2 Significant impacts of activities, products and services on biodiversity	78				12.5.3	SDG 6, SDG 14, SDG 15
	304-3 Habitats protected or restored	80				12.5.4	SDG 6, SDG 14, SDG 15
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	80				12.5.5	SDG 6, SDG 14, SDG 15
Electric Utilities (EU)-Specific Information Disclosure of Electric Utilities Sector according to GRI (Biodiversity)	EU13 Biodiversity of the offset habitats compared to the biodiversity of the affected areas	78-79					SDG 6, SDG 9, SDG 14, SDG 15
GHG Emissions							
GRI 3: Material Topics 2021	3-3 Management of material topics	86-95				12.1.1	
GRI 302: Energy 2016	302-1 Energy consumption within the organization	217				12.1.2	SDG 7, SDG 8, SDG 12, SDG 13
	302-2 Energy consumption outside of the organization	218				12.1.3	SDG 7, SDG 8, SDG 12, SDG 13
	302-3 Energy intensity	218				12.1.4	SDG 7, SDG 8, SDG 12, SDG 13
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	96				12.1.5	SDG 3, SDG 12, SDG 13, SDG 14, SDG 15
	305-2 Energy indirect (Scope 2) GHG emissions	96				12.1.6	SDG 3, SDG 12, SDG 13, SDG 14, SDG 15
	305-3 Other indirect (Scope 3) GHG emissions	96				12.1.7	SDG 3, SDG 12, SDG 13, SDG 14, SDG 15
	305-4 GHG emissions intensity	97				12.1.8	SDG 13, SDG 14, SDG 15

GRI STANDARD/	DIGOLOGIAN.	100151011		OMISSION		GRI SECTOR	SDG
OTHER SOURCE	DISCLOSURE	LOCATION	REQUIREMENT(S) OMITTED	REASON	EXPLANATION	STANDARD REF. NO.	LINKAGE TO DISCLOSURE
	305-5 Reduction of GHG emissions	89-93					SDG 13, SDG 14, SDG 15
	305-6 Emissions of ozone-depleting substances (ODS)	-	All disclosures of Emissions of ozone-depleting substances (ODS)	Not applicable	Emission of ODS is not defined as EGAT's material topic.		SDG 3, SDG 12
limate adaptation,	resilience, and transition						
GRI 3: Material Topics 2021	3-3 Management of material topics	98-99				12.2.1	
GRI 201: Economic Performance 2016	201-2 Financial implications and other risks and opportunities due to climate change	100-101				12.2.2	SDG 13
GRI 305: Emis- sions 2016	305-5 Reduction of GHG emissions	89-93				12.2.3	SDG 13, SDG 14, SDG 15
GRI 12: Coal Sector 2022 (Additional sector disclosures)	Describe the organization's approach to public policy development and lobbying on climate change, including: • the organization's stance on significant issues related to climate change that are the focus of its participation in public policy development and lobbying, and any differences between these positions and its stated policies, goals, or other public positions; • whether it is a member of, or contributes to, any representative associations or committees that participate in public policy development and lobbying on climate change, including: - the nature of this contribution; - any differences between the organization's stated policies, goals, or other public positions on significant issues related to climate change; and the positions of the representative associations or committees.	249				12.2.4	





GRI STANDARD/				OMISSION		GRI SECTOR	SDG
OTHER SOURCE	DISCLOSURE	LOCATION	REQUIREMENT(S) OMITTED	REASON	EXPLANATION	STANDARD REF. NO.	LINKAGE TO DISCLOSURE
Air Emissions							
GRI 3: Material Topics 2021	3-3 Management of material topics	106-108				12.4.1	
GRI 305: Emissions 2016	305-7 Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	222				12.4.2	SDG 3, SDG 12, SDG 14, SDG 15
Waste							
GRI 3: Material Topics 2021	3-3 Management of material topics	82-85				12.6.1	
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	84-85				12.6.2	SDG 3, SDG 6, SDG 11, SDG 12
	306-2 Management of significant waste-related impacts	84-85				12.6.3	SDG 3, SDG 6, SDG 8, SDG 11, SDG 12
	306-3 Waste generated	220				12.6.4	SDG 3, SDG 11, SDG 12, SDG 15
	306-4 Waste diverted from disposal	220-221				12.6.5	SDG 3, SDG 11, SDG 12
	306-5 Waste directed to disposal	221				12.6.6	SDG 3, SDG 6, SDG 11, SDG 12, SDG 15
Employment Practic	es						
GRI 3: Material Topics 2021	3-3 Management of material topics	112-114				12.15.1	
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	223-224				12.15.2	SDG 5, SDG 8, SDG 10
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	114				12.15.3	SDG 3, SDG 5, SDG 8
	401-3 Parental leave	225				12.15.4	SDG 5, SDG 8
GRI 402: Labor/ Management Relations 2016	402-1 Minimum notice periods regarding operational changes	114				12.15.5	SDG 8
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	226				12.15.6	SDG 4, SDG 5, SDG 8, SDG 10
	404–2 Programs for upgrading employee skills and transition assistance programs	116				12.15.7	SDG 8

GRI STANDARD/	DISCLOSURE	LOCATION		OMISSION		GRI SECTOR	SDG LINKAGE TO
OTHER SOURCE	DISCLOSURE	LOCATION	REQUIREMENT(S) OMITTED	REASON	EXPLANATION	STANDARD REF. NO.	DISCLOSURE
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	-	a. Percentage of new suppliers that were screened using social criteria.	Information unavailable/ incomplete	It is in discussion process with relevant parties to collect data.	12.15.8	SDG 5, SDG 8, SDG 16
	414-2 Negative social impacts in the supply chain and actions taken	-	All disclosures of Negative social impacts in the supply chain and actions taken	Information unavailable/ incomplete	It is in discussion process with relevant parties to collect data.	12.15.9	SDG 5, SDG 8, SDG 16
Electric Utilities (EU)-Specific Information Disclosure of Electric Utilities	EU14 Programs and processes to ensure the availability of a skilled workforce	116					SDG 4, SDG 8
Sector according to GRI (Employment)	EU15 Percentage of Employees eligible to retire in the next 5 and 10 years broken down by job category and by region.	227					SDG 8
	Policies and requirements regarding health and safety of employees and employees of contractors and subcontractors (former EU16)	123					SDG 8
	EU17 Days worked by contractor and subcontractor employees involved in construction, operation & maintenance activities	227					SDG 8
	EU18 Percentage of contractor and subcontractor employees that have undergone relevant health and safety training	227					SDG 8
Occupational health	and safety						
GRI 3: Material Topics 2021	3-3 Management of material topics	118-119				12.14.1	
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	119-120				12.14.2	SDG 8
2010	403-2 Hazard identification, risk assessment, and incident investigation	120				12.14.3	SDG 3, SDG 8
	403-3 Occupational health services	121				12.14.4	SDG 3, SDG 8





GRI STANDARD/				OMISSION		GRI SECTOR	SDG
OTHER SOURCE	DISCLOSURE	LOCATION	REQUIREMENT(S) OMITTED	REASON	EXPLANATION	STANDARD REF. NO.	LINKAGE TO DISCLOSURE
	403-4 Worker participation, consultation, and communication on occupational health and safety	122				12.14.5	SDG 8, SDG 16
	403-5 Worker training on occupational health and safety	123				12.14.6	SDG 8
	403-6 Promotion of worker health	123				12.14.7	SDG 3
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	123				12.14.8	SDG 8
	403-8 Workers covered by an occupational health and safety management system	228				12.14.9	SDG 8
	403-9 Work-related injuries	228-229				12.14.10	SDG 3, SDG 8, SDG 16
	403-10 Work-related ill health	229				12.14.11	SDG 3, SDG 8, SDG 16
Training and educat	ion						
GRI 3: Material Topics 2021	3-3 Management of material topics	116					
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	226					SDG 4, SDG 5, SDG 8, SDG 10
	404-2 Programs for upgrading employee skills and transition assistance programs	116					SDG 8
	404-3 Percentage of employees receiving regular performance and career development reviews	226					SDG 5, SDG 8, SDG 10
Child Labor							
GRI 3: Material Topics 2021	3-3 Management of material topics	130-131				12.16.1	
GRI 408: Child Labor 2016	408-1 Operations and suppliers at significant risk for incidents of child labor	133				12.16.2	SDG 5, SDG 8, SDG 16

GRI STANDARD/				OMISSION		GRI SECTOR	SDG
OTHER SOURCE	DISCLOSURE	LOCATION	REQUIREMENT(S) OMITTED	REASON	EXPLANATION	STANDARD REF. NO.	LINKAGE TO DISCLOSURE
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	-	a. Percentage of new suppliers that were screened using social criteria.	Information unavailable/ incomplete	It is in discussion process with relevant parties to collect data.	12.16.3	SDG 5, SDG 8, SDG 16
orced labor and mo	odern slavery						
GRI 3: Material Topics 2021	3-3 Management of material topics	128-129				12.17.1	
GRI 409: Forced or Compulsory Labor 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	131				12.17.2	SDG 5, SDG 8
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	-	a. Percentage of new suppliers that were screened using social criteria.	Information unavailable/ incomplete	It is in discussion process with relevant parties to collect data.	12.17.3	SDG 5, SDG 8, SDG 16
reedom of Associat	tion and Collective Bargaini	ng					
GRI 3: Material Topics 2021	3-3 Management of material topics	115				12.18.1	
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	131				12.18.2	SDG 8
Conflict and Security	1						
GRI 3: Material Topics 2021	3-3 Management of material topics	132				12.12.1	
GRI 410: Security Practices 2016	410-1 Security personnel trained in human rights policies or procedures	132				12.12.2	SDG 16
Rights of Indigenous	Peoples						
GRI 3: Material Topics 2021	3-3 Management of material topics	128-130				12.11.1	
GRI 411: Rights of Indigenous Peoples 2016	411-1 Incidents of violations involving rights of indigenous peoples	228				12.11.2	SDG 2
GRI 12: Coal Sector 2022 (Additional sector disclosures)	List the locations of operations where indigenous peoples are present or affected by activities of the organization	228				12.11.3	





GRI STANDARD/				OMISSION		GRI SECTOR	SDG
OTHER SOURCE	DISCLOSURE	LOCATION	REQUIREMENT(S) OMITTED	REASON	EXPLANATION	STANDARD REF. NO.	LINKAGE TO DISCLOSURE
Land and resource r	ights						
GRI 3: Material Topics 2021	3-3 Management of material topics	126, 130-132				12.10.1	
GRI 12: Coal Sector 2022 (Additional sector disclosures)	List the locations of operations that caused or contributed to involuntary resettlement or where such resettlement is ongoing. For each location, describe how peoples' livelihoods and human rights were affected and restored.	126				12.10.2	
Non-discrimination a	and equal opportunity						
GRI 3: Material Topics 2021	3-3 Management of material topics	112-113, 130-131				12.19.1	
GRI 202: Market Presence 2016	202-1 Ratios of standard entry level wage by gender compared to local minimum wage	230				12.19.2	SDG 1, SDG 5, SDG 8
	202-2 Proportion of senior management hired from the local community	-	All disclosures of proportion of senior management hired from the local community	Information unavailable/ incomplete	It is in discussion process with relevant parties to collect data.	12.19.3	SDG 8
GRI 401: Employment 2016	401-3 Parental leave	225				12.19.4	SDG 5, SDG 8
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	226				12.19.5	SDG 4, SDG 5, SDG 8, SDG 10
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	230				12.19.6	SDG 5, SDG 8
	405-2 Ratio of basic salary and remuneration of women to men	231				12.19.7	SDG 5, SDG 8, SDG 10
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	231				12.19.8	SDG 5, SDG 8
Local Communities							
GRI 3: Material Topics 2021	3-3 Management of material topics	124-127				12.9.1	
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	232				12.9.2	

GRI STANDARD/	DISCLOSURE	LOCATION		OMISSION		GRI SECTOR	SDG LINKAGE TO
OTHER SOURCE	DISCLOSURE	LOCATION	REQUIREMENT(S) OMITTED	REASON	EXPLANATION	STANDARD REF. NO.	DISCLOSURE
	413-2 Operations with significant actual and potential negative impacts on local communities	125				12.9.3	SDG 1, SDG 2
GRI 12: Coal Sector 2022 (Additional sector disclosures)	Report the number and type of grievances from local communities identified, including: - percentage of the grievances that were addressed and resolved; - percentage of the grievances that were resolved through remediation.	165				12.9.4	
Electric Utilities (EU)-Specific Information	Approach to managing the impacts of displacement (former EU20)	126					SDG 1, SDG 2, SDG 11
Disclosure of Electric Utilities Sector according to GRI (Local Communities)	EU22 Number of people physically or economically displaced and compensation, broken down by type of project	126					SDG 1, SDG 2
Customer Privacy							
GRI 3: Material Topics 2021	3-3 Management of material topics	192-194					
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	195					SDG 16
Disaster/emergency	planning and response						
GRI 3: Material Topics 2021	3-3 Management of material topics	168					
Electric Utilities (EU)-Specific Information Disclosure of Electric Utilities Sector according to GRI (Disaster/ emergency planning and response)	Contingency planning measures, disaster/ emergency management plan and training programs, and recovery/ restoration plans (former EU21)	168					SDG 1, SDG 11
Asset integrity and c	ritical incident managemen	t					
GRI 3: Material Topics 2021	3-3 Management of material topics	168				12.13.1	
GRI 306: Effluents and Waste 2016	306-3 Significant spills	85				12.13.2	SDG 3, SDG 6, SDG 12, SDG 15





GRI STANDARD/				OMISSION		GRI SECTOR	SDG		
OTHER SOURCE	DISCLOSURE	LOCATION	REQUIREMENT(S) OMITTED	REASON	EXPLANATION	STANDARD REF. NO.	LINKAGE TO DISCLOSURE		
Availability and relia	vailability and reliability								
GRI 3: Material Topics 2021	3-3 Management of material topics	170-181							
Electric Utilities (EU)-Specific Information Disclosure of Electric Utilities Sector according to	Management approach to ensure short and long-term electricity availability and reliability (former EU6)	170-181					SDG 7		
GRI (Availability and Reliability)	EU10 Planned capacity against projected electricity demand over the long-term, broken down by energy source and regulatory regime	182-184					SDG 7		
Demand-side Manaç	emand-side Management								
GRI 3: Material Topics 2021	3-3 Management of material topics	102-104							
Electric Utilities (EU)-Specific Information Disclosure of Electric Utilities Sector according to GRI (Demand-side Management)	Demand-side management programs including residential, commercial, institutional and industrial programs (former EU7)	102-105					SDG 7, SDG 8, SDG 12, SDG 13		
Research and develo	ppment								
GRI 3: Material Topics 2021	3-3 Management of material topics	186-188							
Electric Utilities (EU)-Specific Information Disclosure of Electric Utilities Sector according to GRI (Research and Development)	Research and development activity and expenditure aimed at providing reliable electricity and promoting sustainable development (former EU8)	188-191					SDG 7, SDG 9, SDG 17		
System Efficiency									
GRI 3: Material Topics 2021	3-3 Management of material topics	171-180							
Electric Utilities (EU)-Specific Information Disclosure of Electric Utilities	EU11 Average generation efficiency of thermal plants by energy source and by regulatory regime	213					SDG 7, SDG 8, SDG 12, SDG 13, SDG 14		
Sector according to GRI (System Efficiency)	EU12 Transmission and distribution losses as a percentage of total energy	214					SDG 7, SDG 8, SDG 12, SDG 13, SDG 14		

GRI STANDARD/	TANDARD/			OMISSION	GRI SECTOR	SDG LINKAGE TO	
OTHER SOURCE	DISCLOSURE	LOCATION	REQUIREMENT(S) OMITTED	REASON	EXPLANATION	STANDARD REF. NO.	DISCLOSURE
Access							
GRI 3: Material Topics 2021	3-3 Management of material topics	180-181					
Electric Utilities (EU)-Specific	EU28 Power outage frequency	214					SDG 1, SDG 7
Information Disclosure of Electric Utilities	EU29 Average power outage duration	214					SDG 1, SDG 7
Sector according to GRI (Access)	EU30 Average plant availability factor by energy source and by regulatory regime	215					SDG 1, SDG 7

Topics in the applicable GRI Sector Standar	Topics in the applicable GRI Sector Standards determined as not material								
TOPIC	EXPLANATION								
GRI 12: Coal Sector 2022									
Topic 12.3 Closure and rehabilitation	EGAT still uses coal mines at present. However, there are plans to restore resources affected during or after the coal mine closure.								
Topic 12.8 Economic impacts	Economic impact was not identified as a material issue by the process to determine material topics.								
Topic 12.21 Payments to governments	EGAT is a state enterprise agency. Therefore, payments are made to the government sector in a correct, transparent and verifiable manner.								
Topic 12.22 Public policy	EGAT has a role in receiving and responding to public policies as determined by the government.								





ASSURANCE STATEMENT

SGS (THAILAND) LIMITED'S REPORT ON SUSTAINABILITY ACTIVITIES IN THE ELECTRICITY GENERATING AUTHORITY OF THAILAND'S SUSTAINABILITY REPORT FOR 2024

NATURE AND SCOPE OF THE ASSURANCE

SGS (Thailand) Ltd. (hereinafter referred to as SGS) was commissioned by Electricity Generating Authority of Thailand (hereinafter referred to as EGAT) to conduct an independent assurance of the Sustainability Report for 2024 (hereinafter referred to as the Report). The scope of assurance is based on the SGS Sustainability Report Assurance methodology that included the sampled text, and data in accompanying tables, contained in the report presented during verification. SGS reserves the right to update the assurance statement from time to time depending on the level of report content discrepancy of the published version from the agreed standards requirements.

INTENDED USERS OF THIS ASSURANCE STATEMENT

This Assurance Statement is provided with the intention of informing all FGAT's Stakeholders

RESPONSIBILITIES

The information in the EGAT's Sustainability Report of 2024 and its presentation are the responsibility of the directors or governing body and management of EGAT. SGS has not been involved in the preparation of any of the material included in the Report. Our responsibility is to express an opinion on the report content within the scope of assurance with the intention to inform all EGAT's stakeholders.

ASSURANCE STANDARDS, TYPE AND LEVEL OF ASSURANCE

The SGS ESG & Sustainability Report Assurance protocols used to conduct assurance are based upon internationally recognized assurance guidance and standards including the principles of reporting process contained within the Global Reporting Initiative Sustainability Reporting Standards (GRI Standards) GRI 1: Foundation 2021 for report quality, GRI 2 General Disclosure 2021 for organization's reporting practices and other organizational detail, GRI 3 2021 for organization's process of determining material topics, its list of material topics and how to manages each topic, and the guidance on levels of assurance contained within the ISAE3000 and ISAE3410 standards. The assurance of this report has been conducted according to the following Assurance Standards:

Assurance Standard	Level of Assurance
ISAE 3000: Assurance Engagements other than Audits or Reviews of Historical Financial Information	Limited
ISAE 3410: Assurance Engagements on Greenhouse Gas Statements	Limited

SCOPE OF ASSURANCE AND REPORTING CRITERIA

The scope of the assurance included evaluation of quality, accuracy and reliability of specified performance information as detailed below and evaluation of adherence to the following reporting criteria:

Reporting Criteria

- 1 GRI (In Accordance with)
- 2 The Electric Utility Sector Disclosures ("EUSD")
- evaluation of content veracity of the sustainability performance information in relation to the determined material topics (as listed below) at a limited level of scrutiny for EGAT and subsidiaries, and applicable aspect boundaries outside of the organization covered by this report;

a) Environmental:

GRI 303-3 (2018): Water withdrawal, GRI 305-1 (2016): GHG Scope 1, GRI 305-2 (2016): GHG Scope 2, GRI 305-3 (2016): Other indirect (Scope 3) GHG emissions, GRI 305-4 (2016): GHG Emission intensity, GRI 305-7 (2016): Nitrogen oxides (NO_x), sulfur oxides (SO_x), and other significant air emissions (PM).

b) Socia

GRI 405-2 (2016): Ratio of basic salary and remuneration of women to men

E) EUSD

Former EU7: Demand-side management programs including residential, commercial, institutional, and industrial program, EU10: Planned capacity against projected electricity demand over the long term, broken down by energy source and regulatory regime, EU28: Power outage frequency, EU29: Average power outage duration, EU30: Average plant availability factor by energy source and by regulatory regime.

- evaluation of the report against the requirements of GRI Standards claimed in the GRI content index as material and in accordance with.
- evaluation of the report against the requirements of GRI Standards listed in the GRI content index where the
 organization has referenced for the preparation of the reported information.

ASSURANCE METHODOLOGY

The assurance comprised a combination of pre-assurance research, interviews with relevant employees, superintendents, Sustainability committee members and the senior management in Thailand, on-site visits (Mae Moh Mine, Mae Moh Power Plant, North Bangkok Power Plant, and Head Office at Nonthaburi); Review of the concept for data collection and estimation (application of appropriate methods), for analysis and consolidation of the sustainability data to be assured under the present assignment. Verification and confirmation of vouchers, review of related materials and records, and analytical procedures.

LIMITATIONS AND MITIGATION

Financial data drawn directly from independently audited financial accounts has not been checked back to source as part of this assurance process. Some statements and data within the scope were not assured due to lack of accessible records during the time scale allowed for assurance, and these are clearly marked throughout the Report.

STATEMENT OF INDEPENDENCE AND COMPETENCE

The SGS Group of companies is the world leader in inspection, testing and verification, operating in more than 140 countries and providing services including management systems and service certification; quality, environmental, social and ethical auditing and training; environmental, social and sustainability report assurance. SGS affirm our independence from EGAT, being free from bias and conflicts of interest with the organization, its subsidiaries and stakeholders.

The assurance team was assembled based on their knowledge, experience and qualifications for this assignment, and comprised auditors and sustainability professionals specializing in the Environmental, Social and Governance (ESG), environmental and carbon fields.

ASSURANCE/VERIFICATION OPINION

On the basis of the methodology described and the assurance work performed, we are satisfied that the disclosure with inclusivity, materiality, responsiveness, and impact information in the scope of assurance is reliable, has been fairly stated and has been prepared, in all material respects, in accordance with the reporting criteria. We believe that the organization has chosen an appropriate level of assurance for this stage in their reporting.

Signed:

For and on behalf of SGS (Thailand) Limited

Mortre T.

Montree Tangtermsirikul

General Manager

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