EGCO GROUP

CLEANER, SMARTER AND STRONGER TO DRIVE SUSTAINABLE GROWTH

ANNUAL REPORT
2021

VISION

To be a major sustainable Thai energy company with full commitment to environment protection and social development support

MISSION

01

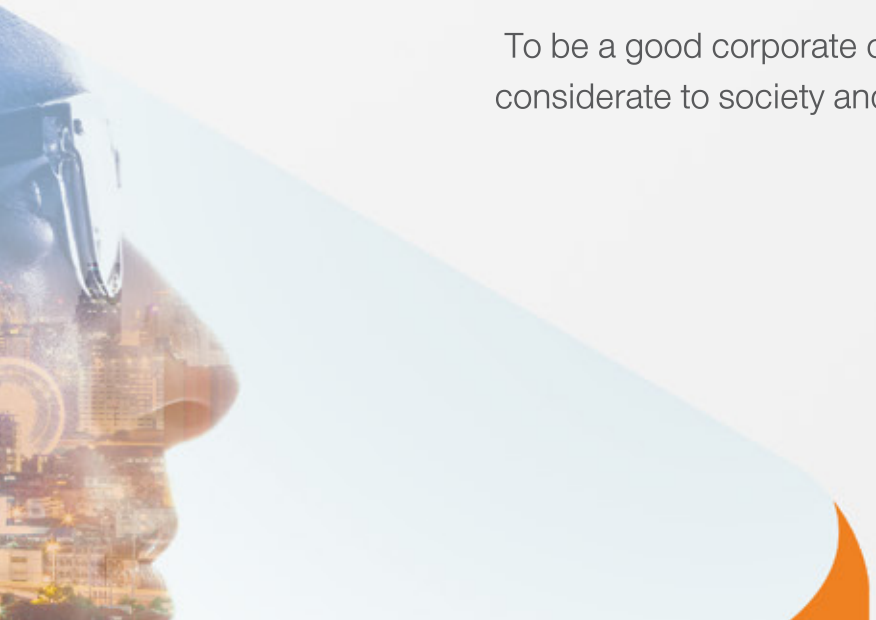
To secure continuous growth in order to maximize shareholder's value

02

To offer reliable energy supply & services

03

To be a good corporate citizen and be considerate to society and environment



We announced our commitment to reducing carbon emission intensity by 10% within 2030 and achieving carbon neutral by 2050.

We marked the first investment in the U.S. by acquiring a stake in Linden Cogen.

CLEANER, SMARTER AND STRONGER TO DRIVE SUSTAINABLE GROWTH

CLEANER

- We invest in eco-friendly businesses.
- We improve our operational efficiency to reduce carbon emission.

Linden Cogen Unit 6 announced hydrogen fuel blending arrangement

We invested in Apex, a leading renewable energy developer in the U.S.

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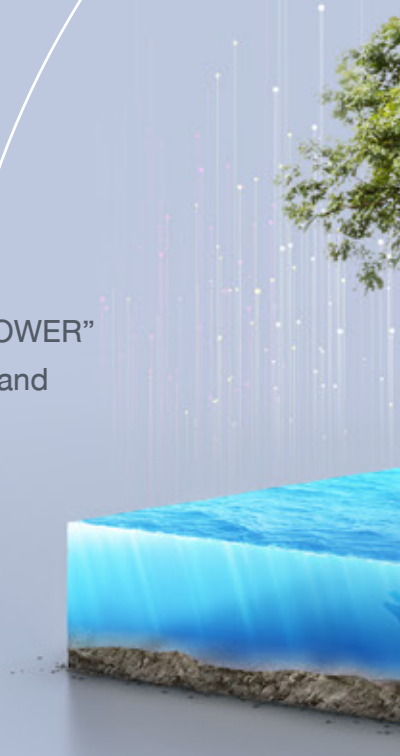
We received an LNG shipper license.

We founded “INNOPOWER” to support electricity and energy start-ups.



SMARTER

- Our power grid is stable and reliable.
- We invest in new S-curve businesses to prepare for digital disruption.

Smart & Green Industrial Estate:
We began developing the EGCO Rayong Industrial Estate into a smart & green industrial estate.

Smart Energy Solutions:
We penned an MoU to develop the technology needed to use hydrogen as fuel for power generation. We also invested in Peer Power, a fintech start-up.

CLEANER, SMARTER AND STRONGER TO DRIVE SUSTAINABLE GROWTH

We founded
Khanom Power Plant
Learning Center

We piloted the Khanom Model for smart farming.

We were recognized nationally and internationally:

- Member of DJSI 2021 in the Emerging Markets Index, Electric Utilities category for the 2nd consecutive year
- Rising Star Sustainability, SET Awards 2021
- Thailand Sustainability Investment (THSI) 2021 award for the 7th consecutive year
- TRIS Rating AA+ / Stable
- AGM 2021 arrangement-100 scores
- UN WEPs Award for gender equality

STRONGER

We create optimum returns on investment for our shareholders by seeking strategic partnerships that foster strong growth and shared sustainability with all stakeholders.

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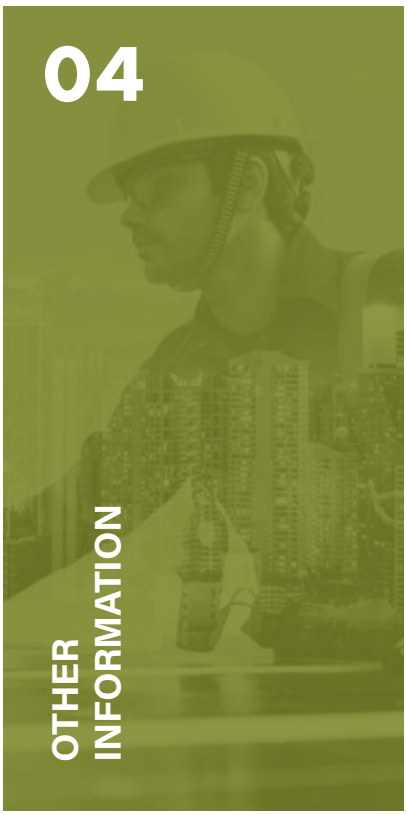

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Mr. Thepparat Theppitak
President

Mr. Kulit Sombatsiri
Chairman of the Board of Directors

MESSAGE FROM THE CHAIRMAN OF THE BOARD OF DIRECTORS AND THE PRESIDENT

At the 2021 United Nations Climate Change Conference, more commonly known as COP26, leaders of more than 130 countries came together and committed to greenhouse-gas emission reduction targets. Thailand has pledged to achieve carbon neutral by 2050 and net-zero emissions by 2065.

Meanwhile, EGCO Group re-examined its business direction and announced its low-carbon society commitment under the concept **"Cleaner, Smarter, and Stronger to Drive Sustainable Growth."** Our long-term goal is to achieve corporate carbon neutral by 2050, and our medium-term plan is to reduce carbon emission intensity by 10% by 2030.

In support of this direction, EGCO Group now operates under the **4I Strategy: Invest, Increase, Improve and Innovate.** This means we are investing in a diverse range of new businesses with a focus on clean energy technology and business innovation. **Our notable successes in 2021** include 2 investment projects in the United States: We acquired a 28% stake in **the Linden Cogen** natural gas power plant with a capacity of 972 MW and a 17.46% stake in **Apex Clean Energy Holding,** a leading developer, seller, and commercial operator of clean energy projects in the United States. In addition, EGCO Group acquired a 24% stake in the startup **Peer Power** to develop an energy trading blockchain platform. We also stepped into a new role as a **supplier and importer of LNG**, allowing us to effectively manage the fuel costs of EGCO Group power plants.

EGCO Group has never stopped looking for new opportunities. Together with the Industrial Estate Authority of Thailand, we are developing the **EGCO Rayong Industrial Estate** into **a smart and green industrial estate** to encourage investment in the target S-curve and new S-curve industries, which have been promoted as part of the Eastern Economic Corridor (EEC). Together with EGAT and RATCH Group, we established and registered **Innopower** to commercialize research and innovation and bolster our smart energy solution business. We also signed a **memorandum of understanding (MoU) on solid oxide fuel cell (SOFC) power generation** with EGAT, Bloom Energy, and ATE. This project makes use of hydrogen to generate electricity. This alternative fuel source will contribute to Thailand's carbon reduction and eventual carbon neutral.

Despite the volatility, EGCO Group performed well in 2021 and received recognition from various entities. For instance, **we were rated AA+ with a "stable" outlook** by TRIS Rating, reflecting our excellent performance, investment diversity, and liquidity. We were also recognized for our "Sustainability Excellence" at the **Rising Star Sustainability Awards**, part of the SET Awards 2021.

As for our **sustainability performance** in 2021, **we have earned a spot on the Emerging Markets Index in the Electric Utilities category of the Dow Jones Sustainability Indices (DJSI) for two consecutive years.** The Stock Exchange of Thailand also placed us on its **Thailand Sustainability Investment list for the seventh consecutive year,** and Thaipat Institute gave us the **Sustainability Disclosure Award for the third year in a row.** In addition, we were a winner of the **UN Women 2021 Thailand WEPs Awards for transparency and reporting** from the United Nations Women's Organization and the European Union, which demonstrates our stance on empowering women and promoting gender equality in the business sector.

In terms of corporate governance, the Board of Directors redefined the qualifications of sub-committees and reviewed and amended their powers and duties to include environmental and sustainable development issues. As a result, sub-committee charters were revised accordingly to make the various aspects of corporate governance more robust, more efficient, and better suit the ever-changing context. The Board of Directors also examined and improved multiple policies, such as the Corporate Governance Policy, the Anti-Corruption Policy, the Whistleblowing Policy, the No Gift Policy, the Information Technology and Cyber Security Policy, and the Personal Data

Protection Policy. Thanks to our efforts on this front, we have received the mark "Excellent" with a total score of 97 on the Corporate Governance Report (CGR) of Thai Listed Companies by the Thai Institute of Directors.

Along with conducting business, EGCO Group has always emphasized **caring for and engaging local communities, society, and the environment.** In the fight against COVID-19, EGCO Group continued to stand alongside health workers and Thai people. We supported the public and private sectors' efforts to cope with and **alleviate the effects of COVID-19** by donating funds, medical equipment, and personal protective equipment to hospitals, schools, children's development centers, and community health centers in areas where EGCO Group operates and in all other regions across the country. We also supported the operation of vaccination centers and patient transit centers with more than 23 million baht. Together with our efforts in 2020, **we have spent over 55 million baht.** We hope that the Thai people and Thailand will get through this crisis as quickly as possible.

For local communities, we conducted 79 projects to improve the quality of life around our power plants. **For society,** we continued to promote learning through the Khanom Power Plant Learning Center's online science activities under the concept **"Smart Solutions for Life."** We also created an **"Energy Teachers Online"** program to pass on our knowledge of electric power and coexistence with communities, society, and the environment to children, teachers, and the general public. These efforts were in line with the guidelines for classroom development in the 21st century. Khanom Power Plant Learning Center was a national winner in the Science and Environment Museums category of **the Museum Thailand Awards 2021,** organized by the National Discovery Museum Institute. EGCO Group was also a regional winner of **the Asia Responsible Enterprise Awards 2021** organized by Enterprise Asia in recognition of our "Investment in People."

Environmentally, EGCO Group continued to play its part in protecting and restoring biodiversity, ecosystems, and forested watersheds through the Thai Rak Pa Foundation. This charitable organization, founded and funded by EGCO Group, **delivered the restored Ang Ka nature trail in the Doi Inthanon National Park, Chiang Mai,** to the Department of National Parks, Wildlife, and Plant Conservation. The nature trail will serve as a learning resource for Thailand's highest mountain swamp forest ecosystem. The various operations of EGCO Group and the Thai Rak Pa Foundation have contributed to the greenhouse gas reduction of over 2,890,000 ton CO_2e and to the carbon sequestration of approximately 180,000 ton CO_2e.

The many successes of 2021 could not have happened without the policy support of the Board of Directors, the drive of the executives, the cooperation of EGCO Group employees, and the helping hands of all stakeholders. We all worked towards a common goal: That is the sustainable development of our organization. EGCO Group will continue to embark on the energy transition to bring about a low-carbon society, create favorable long-term returns for its shareholders, and ensure a balanced future for society.

On behalf of the Board of Directors, management, and employees, we would like to express our heartfelt gratitude to our shareholders, investors, suppliers, customers, communities, and other stakeholders for their continued support for EGCO Group. We promise to continue to grow sustainably and stronger than ever before.

Mr. Kulit Sombatsiri
Chairman of the Board of Directors

Mr. Thepparat Theppitak
President

SECTION
01

BUSINESS OPERATION AND PERFORMANCE

ABOUT THIS REPORT

GRI

102-46, 102-50, 102-51, 102-52, 102-53, 102-54

In 2021, the Electricity Generating Public Company Limited (EGCO Group) published its 2021 annual report in the form of One Report, an integration of Annual Registration Statement (form 56-1), Annual Report (form 56-2) and Sustainability Report, which reports EGCO Group's yearly performance and sustainable development performance with regards to our stakeholders in the economic, social and environmental aspects. This report includes the Company's performance from January 1st to December 31st, 2021, in compliance with the report requirements of the Securities and Exchange Commission, as well as other guidelines such as Thai Institute of Directors' Corporate Governance and ASEAN Corporate Governance Scorecard (ASEAN CG Scorecard).

This One Report was developed in accordance with the International Integrated Reporting Council (IIRC), Global Reporting Initiative Standards' (GRI Standards) 'Core Options' and GRI's G4 Electric Utilities sector-specific disclosure criteria. Furthermore, the objectives and performance report were developed in accordance with the United Nations Sustainable Development Goals (UN SDGs) and Dow Jones Sustainability Index (DJSI) to support sustainability in an international level.

The Performance Data, regarding economy, social, and environment, covers the companies within EGCO Group's operational control as well as joint ventures both in Thailand and overseas, amount to 95% of EGCO Group's contracted capacity.

In 2021, EGCO Group adopted new approach in reporting materiality topics to minimize duplicative data, achieving a more concrete and effective report. This report contains highlights and outstanding sustainable development activities in 2021 within the scope of 4 materiality topics, namely 1) Climate Change, 2) Occupational Health and Safety, 3) Market Opportunity, and 4) Excellence Generation. Operations related to other identified materiality topics are presented on our "Sustainability Website".

The data reported has been audited and certified by a third-party organization to ensure accurate, reliable, and transparent reporting.

EGCO Group welcomes suggestions and feedback for the improvement of our sustainable business operations in response to stakeholders' expectations. Inquiries and suggestions can be submitted through following communication channels:

FOR INQUIRIES AND SUGGESTIONS:

www.egco.com

Sustainability@egco.com

Corporate Planning Division
Electricity Generating Public Company Limited (EGCO)
EGCO Tower 11th Floor,
222 Vibhavadi-Rangsit Rd.,
Tungsonghong, Laksi,
Bangkok 10210

QR Code for Suggestions/Feedback

MATERIALITY MATRIX

In 2021, EGCO Group revised the topics identified in the One Report 2020 through interviews with stakeholders with consideration to global sustainability issues in alignment with the UN SDGs and DJSI, benchmarked against other peer companies. This report was prepared in accordance with the Global Reporting Initiative Standards' (GRI Standards) report framework with the following steps:

IDENTIFICATION
Identification of Material Issues and Definition of the Reporting Scope

PRIORITIZATION
Prioritization of Material Issues

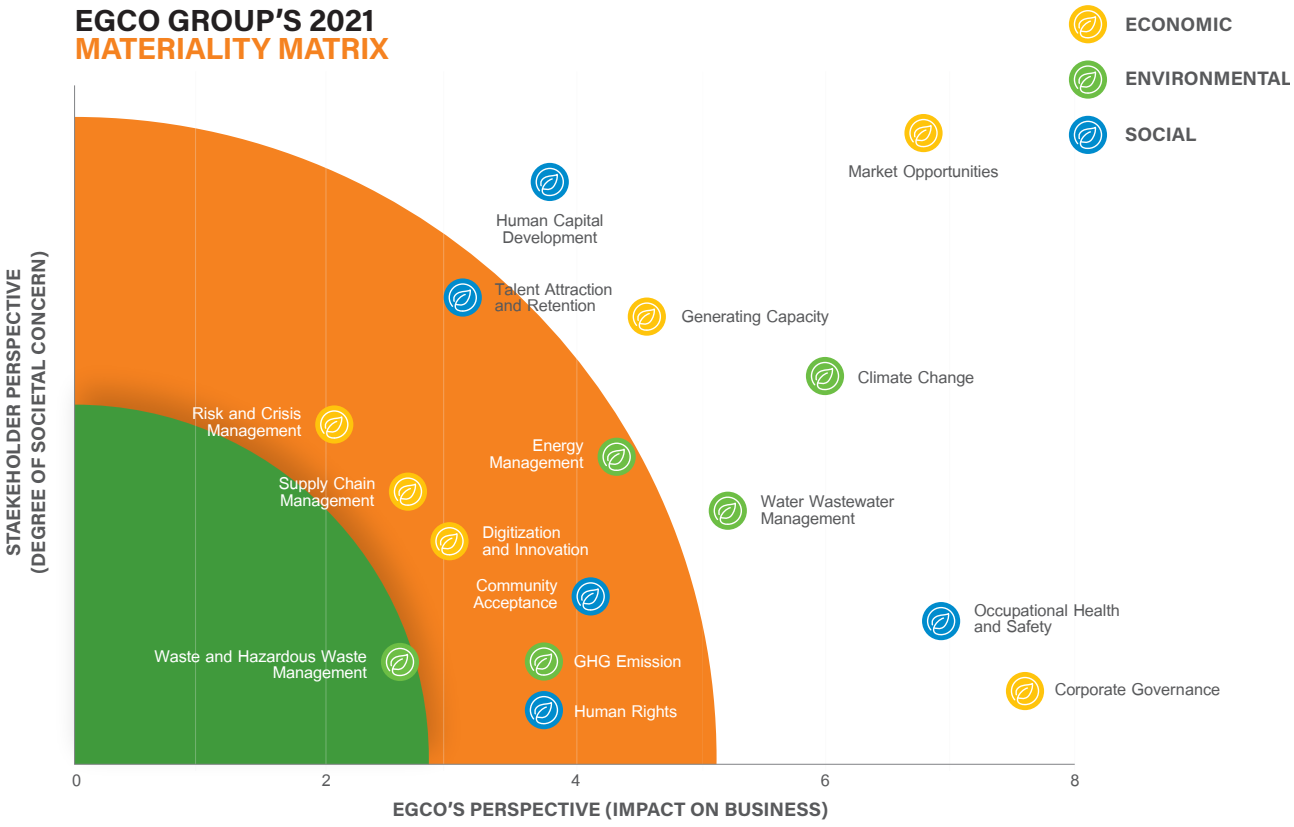
VALIDATION
Validation of Material Issues

REVIEW
Development of Sustainability Report

Further information on EGCO Group's materiality assessment is available online at our sustainability website under the topic "Materiality Assessment"

EGCO GROUP'S 2021 MATERIALITY MATRIX

In 2021, EGCO Group identified 16 materiality topics as follow:



The materiality topics were revisited in 2021 with consideration to both internal and external factors regarding sustainability issues. The topics identified in the One Report 2020 remain relevant to the Company's sustainable business operations.

POLICY AND BUSINESS OVERVIEW

BUSINESS OVERVIEW

Electricity Generating Public Company Limited or EGCO is a holding company. Its primary sources of revenue are dividends from its subsidiaries and the share of profits from joint ventures operating under its business plan. EGCO focuses on developing power projects with either long-term or short-term power purchase agreements ("PPA") both in Thailand and abroad, as well as other related power generation and distribution businesses and energy businesses.

The core responsibilities of EGCO as a holding company are business development, strategic and policy planning, human resource management, accounting and budgeting, and public relations of EGCO Group companies. Besides, EGCO has also provided internal audit and legal services to its subsidiaries, whose responsibilities are power generation and distribution, service, operation, and maintenance.

BUSINESS TARGETS

EGCO continues to expand its portfolio of power generation assets in the domestic and Asia Pacific markets by developing new power projects and acquiring existing power plant projects. In addition, EGCO also invests in related energy businesses, electrical innovation businesses, and new S-Curve businesses. EGCO's investment plan takes into consideration shareholders' return maximization with the acceptable level of risk. It responds to the following vision:

> To be a major sustainable Thai energy company with full commitment to environmental protection and social development support.

Based on this vision, EGCO established business targets. While the "Cleaner Smarter Stronger" business model drives sustainable growth, EGCO also strives to achieve net-zero emissions by 2050. Its targets for 2030 are as follows:

Achieve **9** % ROE

Renewable energy to account for **30** % of the portfolio

Power generated from coal to be reduced to **20-21** % of the portfolio

Reduce carbon intensity by **10** %

To achieve these targets, EGCO has adjusted its business directions and strategies. They are oriented towards creating sustainable growth and long-term value for stakeholders and readiness for all business changes. In addition, EGCO Group has expanded the scope of its operations to include production and service. Electricity generation is still EGCO's core business, but the Company also seeks investment opportunities, especially in renewable energy, in response to the global demand for clean and renewable

energy. It has also invested in related energy businesses such as the fuel and utilities business and the smart energy solution business, joining forces with domestic and international partners. ECGO is driving its business with the 4I strategy:

INVEST

Invest in assets that grow sustainably and yield good returns on investment in the long run.

IMPROVE

Improve and manage existing assets with international-level excellence and efficiency.

INNOVATE

Innovate to drive the business forward towards sustainable growth.

INCREASE

Increase financial competitive edge and improve financial operation processes.

BACKGROUND AND MAJOR DEVELOPMENTS

EGCO is the first independent power producer in Thailand. It was incorporated on May 12, 1992, by the Electricity Generating Authority of Thailand ("EGAT"), marking the commencement of the Thai government's privatization initiatives to allow broader private sector investment in the electricity generating sector. On March 23, 1994, EGCO was transformed into a public company and then listed on the Stock Exchange of Thailand ("SET") on January 16, 1995.

To encourage the private sector's role in energy businesses, EGAT reduced its shareholding in EGCO by divesting some of its shares to strategic shareholders. On June 30, 1998, CLP Power International Limited ("CLP"), an operator of energy businesses in Asia and a subsidiary of CLP Holdings Limited, which is listed on Hong Kong Stock Exchange, purchased EGCO's 78 million shares or 14.92% from EGAT. On July 23, 2008, EGAT transferred the shares to CLP Power Projects (Thailand) Limited ("CLPT"), an operator of energy businesses in Thailand and a subsidiary of CLP Power International Limited. EGAT and CLPT held 25.41% and 22.42% shares in EGCO, respectively.

In 2006, CLP, the major shareholder of CLPT changed its shareholding structure by transferring all of its shares in CLPT to OneEnergy Limited ("OneEnergy"). On March 23, 2006, Mitsubishi Corporation ("MC") engaged in OneEnergy so that it became a joint venture owned by CLP and MC on a 50:50 basis, and EGCO informed SET regarding the change of CLPT's major shareholder on March 27, 2006.

On February 23, 2011, EGCO informed the SET that it was notified by OneEnergy, a major shareholder of OneEnergy holding 23.49 percent of the total issued share capital of the Company, that CLP Holdings Limited would divest its approximately 50% effective interest in OneEnergy while Tokyo Electric Power Company ("TEPCO") would be joining Mitsubishi Corporation ("MC") as its 50:50 partner.

On May 10, 2019, Kyuden International Europe B.V. ("Kyuden International"), a wholly owned subsidiary of Kyushu Electric Power Co., Ltd., acquired 25% of EGCO's shares from MC. Thus, Kyuden International indirectly holds 5.985% of the voting right of EGCO's outstanding shares via TEPDIA Generating B.V.

SHAREHOLDER STRUCTURE

EGCO is listed on the SET. Details of its registered capital as of December 31, 2021, are shown below.

1. Registered Capital

5,300 million baht comprising 530,000,000 ordinary shares with a par value of 10 baht

2. Paid Capital

5,264.65 million baht comprising 526,465,000 ordinary shares with a par value of 10 baht

The top 10 shareholders as of August 30, 2021, the closing date, are as follows:

NO.	SHAREHOLDER	SHARES	PERCENTAGE
1	Electricity Generating Authority of Thailand	133,773,662	25.41
2	TEPDIA Generating B.V.	126,054,178	23.94
3	EGAT Saving and Cooperative Limited	23,410,500	4.45
4	Social Security Office	22,303,900	4.24
5	SOUTH EAST ASIA UK (TYPE C) NOMINEES LIMITED	9,788,004	1.86
6	STATE STREET EUROPE LIMITED	6,033,765	1.15
7	Mr. Suwan Aisuriyakornthep	4,771,200	0.91
8	Bualuang LTF	3,488,000	0.66
9	Vayupak Fund 1 by MFC Asset Management Public Company Limited	3,384,250	0.64
10	Vayupak Fund 1 by Krungthai Public Company Limited	3,384,250	0.64

Note: Excluding 35,345,831 shares held by minority shareholders under Thai NVDR Company Limited, representing 6.71% of all outstanding shares. These shareholders do not have the right to vote at the shareholders' meeting. Information of investors under Thai NVDR Co., Ltd. is shown on the website www.set.or.th./nvdr

The ultimate shareholders with the power to influence EGCO's management policies and operations significant, approved by the Board of Directors, are as follows:

1. Electricity Generating Authority of Thailand ("EGAT")

This state enterprise generates, procures, and distributes electricity. It also offers electricity-related commercial services, including machinery operation and maintenance. Additionally, EGAT invests in electricity generators, shareholders of electricity-related businesses. EGAT holds 25.41% of EGCO's outstanding shares, and 4 out of EGCO's 15 directors represent EGAT.

2. TEPDIA Generating B.V.

TEPDIA was established to invest in EGCO. It comprises the following 3 shareholders:

2.1 JERA Power Management Asia B.V. ("JERA")

a wholly owned subsidiary of JERA Co., Inc., which itself is a joint venture of Tokyo Electric Power Group and Chubu Electric Power Group-procures and transports the fuels needed to operate its thermal power plants in Japan and overseas. JERA holds 11.97% of EGCO's voting shares via TEPDIA Generating B.V. Two of EGCO's 15 directors represent JERA.

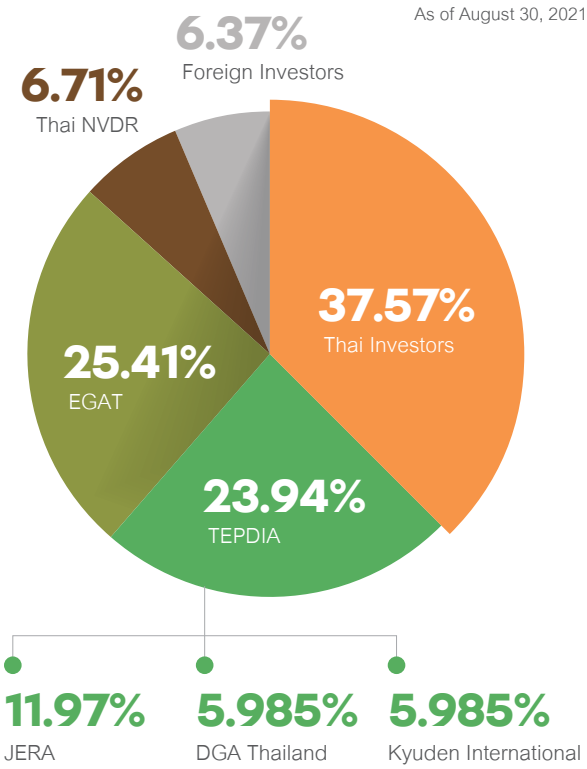
2.2 DGA Thailand B.V. (“DGA Thailand”)

a wholly owned subsidiary of Mitsubishi Corporation (“MC”), which develops and operates businesses in nearly every industry-indirectly holds 5.985% of EGCO’s voting shares via TEPDIA Generating B.V. One of EGCO’s 15 directors represents DGA Thailand.

2.3 Kyuden International Europe B.V. (“Kyuden International”)

a wholly owned subsidiary of Kyushu Electric Power Co., Inc., is shifting from investing in independent power producers (IPPs) to international power businesses with a focus on Asia’s growing markets. Kyuden International holds 5.985% of EGCO’s voting shares through TEPDIA Generating B.V. One of EGCO’s 15 directors represents Kyuden International.

As of August 30, 2021



DIVIDEND PAYMENT

According to EGCO’s dividend payment policy, shareholders shall receive a dividend payment twice a year at the rate of 40% of the consolidated net profit after income tax or at an amount that gradually and regularly increases, subject to impediments such as future business investments or a dividend payment’s substantial effect on its business-as-usual operations. The dividend paid shall not exceed the retained earnings of separate financial statements.

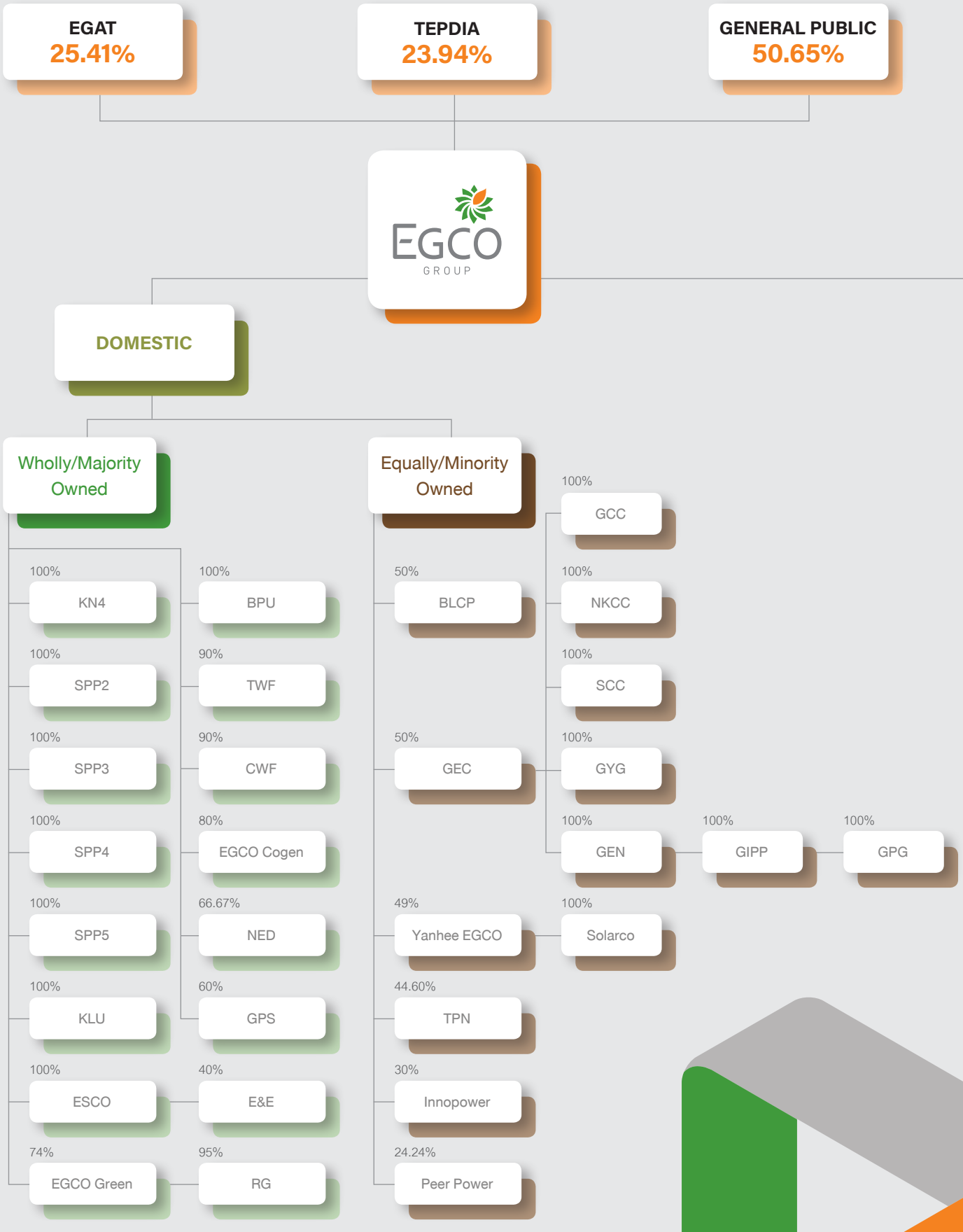
5 Years’ History of Dividend Payments

YEAR	2016	2017	2018	2019	2020
Earnings per share (baht)	15.81	22.45	40.03	24.81	16.59
Dividend per share (baht)	6.50	7.00	9.50	6.50	6.50
Dividend payment ratio (percent)	41.00	31.00	24.00	26.00	39.00

DIVIDEND PAYMENT POLICY FOR SUBSIDIARIES

The dividend payment policy for EGCO’s subsidiaries issued by the Board of Directors stipulates that each of EGCO’s subsidiary is to pay dividends to EGCO at the rate of 100 percent of its net profit after income tax and the legally required reserve deductions, taking into account the impact on the operating results at the end of the year and business-as-usual operations, as well as various conditions in loan agreements. Subsidiaries have had to pay dividends to EGCO 4 times a year since 2007.

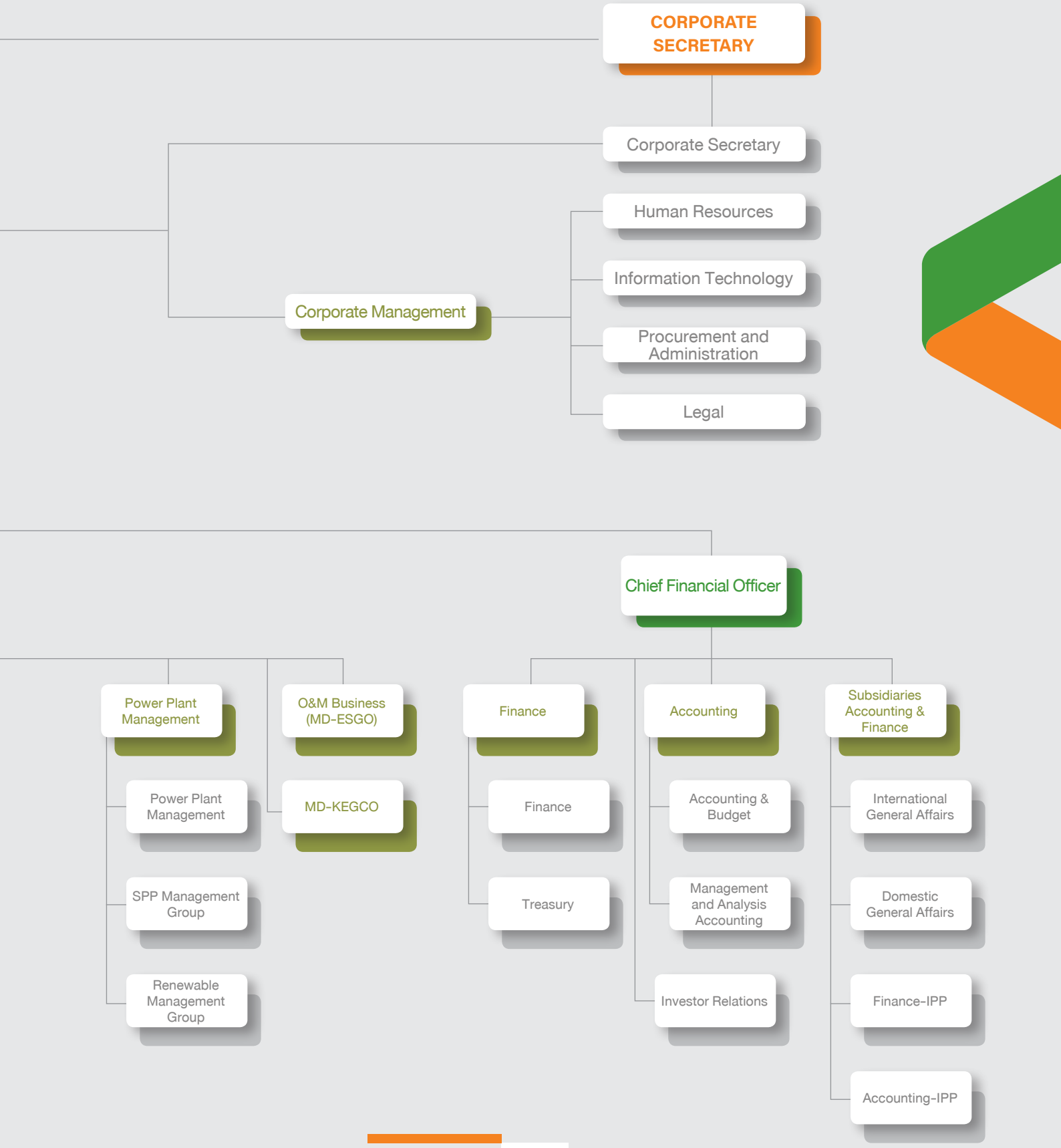
GROUP STRUCTURE AND SHAREHOLDERS



As of December 2021

ORGANIZATIONAL STRUCTURE

Effective 1 January, 2022


CORPORATE SECRETARY
Corporate Secretary
Corporate Management
Human Resources
Information Technology
Procurement and Administration
Legal
Chief Financial Officer
Power Plant Management
O&M Business (MD-ESGO)
Finance
Accounting
Subsidiaries Accounting & Finance
Power Plant Management
SPP Management Group
Renewable Management Group
MD-KEGCO
Finance
Treasury
Accounting & Budget
Management and Analysis Accounting
Investor Relations
International General Affairs
Domestic General Affairs
Finance-IPP
Accounting-IPP

BUSINESS CHARACTERISTICS

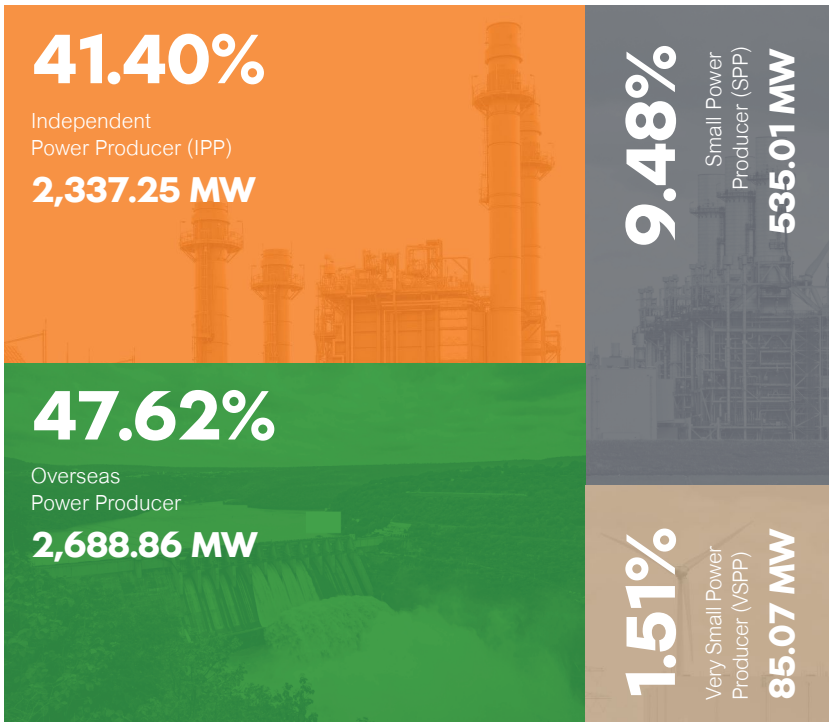
GRI

102-1, 102-2, 102-3, 102-4, 102-5, 102-6, 102-7

The Electricity Generating Public Company Limited (EGCO) is the first independent power producer in Thailand registered on May 12, 1992 by the Electricity Generating Authority of Thailand (EGAT). Such incorporation marked the commencement of the Thai government's privatization initiatives to allow broader private sector investment in the power sector. On March 23, 1994, EGCO was transformed into a public company and then listed on the Stock Exchange of Thailand (SET) on January 16, 1995.

Since EGCO is a holding company, its main source of revenue is from the dividend income from subsidiaries and joint ventures located in Thailand, the Asia Pacific region and the Americas region, which their businesses correspond to EGCO's business plan focusing on the development of the power plants under Power Purchase Agreement (PPA). EGCO Group companies also operate other businesses in the energy sector and related fields.

BUSINESS LINES



EGCO operating businesses can be categorized into 5 groups as follows:

1. Independent Power Producer (IPP)

This Group comprises Khanom Electricity Generating Co., Ltd., (KEGCO), BLCP Power Ltd., (BLCP) and Gulf Power Generation Co., Ltd. (GPG). The combined capacity is 2,337.25 Megawatt (MW) equity, representing 41.40% of EGCO's total asset capacity.

2. Small Power Producer (SPP)

This Group comprises EGCO Cogeneration Co., Ltd. (EGCO Cogen), Roi-Et Green Co., Ltd. (RG), Gulf Yala Green Co., Ltd. (GYG), Chaiyaphum Wind Farm Company Limited (CWF), Klongluang Utilities Company Limited (KLU) Banpong Utilities Company Limited (BPU) and Lopburi Solar Project (LSP) of Natural Energy Development Co., Ltd. (NED). The combined capacity is 535.01 MW equity, representing 9.48% of EGCO's total asset capacity.

Remarks: Nong Khae Cogeneration Co., Ltd. (NKCC) was expired on 12 October 2021.

3. Very Small Power Producer (VSPP)

This Group comprises SPP Two Co., Ltd. (SPP 2), SPP Three Co., Ltd. (SPP 3), SPP Four Co., Ltd. (SPP 4), SPP Five Co., Ltd. (SPP 5), G-Power Source (GPS), Theppana Wind Farm Co., Ltd. (TWF), Solarco Co. Ltd. (Solarco), and Wang Ploeng Solar Project (WSP) of NED. The combined capacity is 85.07 MW equity, representing 1.51% of EGCO's total asset capacity.

4. Overseas Power Producer

This Group comprises Quezon Power (Philippines) Ltd., Co. (Quezon) and San Buenaventura Power Limited Company (SBPL) in the Philippines, Nam Theun 2 Power Co., Ltd. (NTPC) and Xayaburi Power Company Limited (XPCL) in Lao PDR (mainly sells electricity to Thailand), Star Energy Geothermal Pte. Ltd. (SEG) and Star Energy Geothermal (Salak - Darajat) B.V. (SEGSD) in Indonesia, Boco Rock Wind Farm Pty Limited (BRWF) in Australia, Paju Energy Services company limited (PAJU) in Republic of Korea, Yunneng Wind Power Company Limited (Yunneng) in Taiwan, and Linden Topco LLC (LINDEN) in USA. The combined capacity is 2,688.86 MW equity, representing 47.62% of EGCO's total asset capacity.

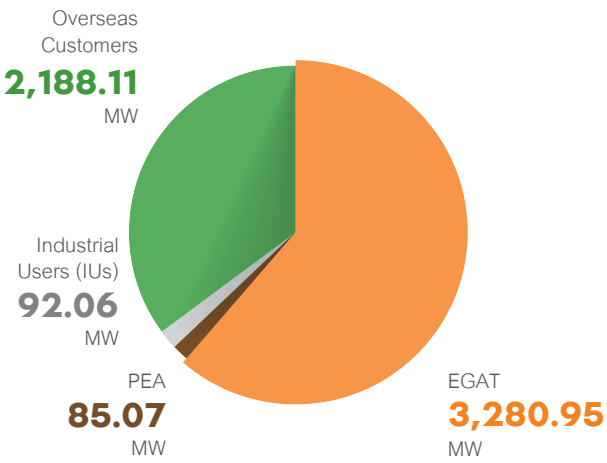
5. Other Businesses

This Group comprises three operation and maintenance companies being EGCO Engineering & Service Co., Ltd. (ESCO), E&E Engineering and Service Company Limited (E&E) and Pearl Energy Philippines Operating, Inc. (PEPOI). There are a management service company being Quezon Management Services Inc. (QMS), a coal mining company being PT Manambung Maura Enim Co., Ltd. (MME), and a clean energy project development being Apex Clean Energy Holdings, LLC (Apex). Also, there is an online electronic platform company being Peer Power Company Limited (Peer Power). Also, there is the LNG shipper business operated by EGCO.

3	Operation and Maintenance Companies	**1**	Clean Energy Project Development
1	Management Service Company	**1**	Online Electronic Platform Company
1	Coal Mining Company	**1**	LNG Shipper Business

Details of each project are shown in the table at the end of this part.

SIGNIFICANT EVENTS IN 2021



No. of power plants in Thailand and abroad

29

Total capacity

5,646.19

MW

In 2021, EGCO Group operated 29 power plants in both Thailand and abroad with total contracted capacity of 5,646.19 MW equity. EGCO mainly sold 3,280.95 MW of power to EGAT, 85.07 MW to PEA, 92.06 MW to Industrial Users (IUs) and the rest 2,188.11 MW to overseas customers. Highlights in 2021 were as follows:

1. On June 4, 2021, EGCO successfully completed the acquisition of a 28% ownership interest in Linden Topco which owns a 972 MW natural gas-fired cogeneration facility (Linden Cogen Facility) situated in Linden, New Jersey, the United States. This transaction is an important step for EGCO Group to enter the US market which lay out the foundation towards future investment opportunities in renewable and gas-fired power facilities.
2. On July 22, 2021, EGCO obtained LNG Shipper License approved by the Energy Regulatory Commission (ERC) to import the Liquefied Natural Gas (LNG) in the greatest amount of 200,380 tons per year with 10 years validity. This approval will enable EGCO to supply such fuel to the 3 SPP power plants in EGCO Group, comprising 1) BPU, 2) KLU, and 3) EGCO Cogen.

3. On September 13, 2021, EGCO, the Electricity Generating Authority of Thailand (EGAT) and RATCH Group Public Company Limited (RATCH) jointly established a joint venture called Innopower Company Limited (Innopower) with the investment portions of 30%, 40% and 30%, respectively. The joint venture is registered with the capital of THB 600 million. The objective of Innopower is to enhance innovative researches and inventions co-developed either among EGAT Group or by strategic partners for commercial purposes through its R&D Spin-off unit. Also, it aims to invest in Start-up business, a new wave of energy industry. It does not only focus the investment in new S-Curve businesses, it also build innovation network and Start-up businesses.
4. On November 6, 2021 Yunneng Wind Power Company Limited, which EGCO indirectly holds 25%, firstly commenced its Commercial Operation Date (COD) to supply electricity to the grid. As of December 31, 2021, there were 4 Wind Turbine Generators (WTG) which is equal to 8 MW equity. COD of individual WTG has been planned to individually COD during the period up to 2023 in the total of 80 WTG which is equal to 160 MW equity.
5. On November 17, 2021, EGCO completed and closed the transaction to acquire a 17.46% indirect interest in Apex Clean Energy Holdings, LLC (Apex). Apex is a private utility scale renewable development company headquartered in the State of Virginia in the United States. Apex's business is based upon the development of renewable projects through the point of Notice to Proceed (NTP) for construction or up to the project's Commercial Operation Date (COD), and the subsequent sale of these projects to third party investors. To date, Apex has commercialized more than USD 9 billion of utility-scale renewable projects and has established a diversified clean energy portfolio with more than 30,000 MW of projects in development, representing one of the largest renewable project development pipelines in the country.
6. On December 21, 2021, EGCO completed to invest in Peer Power Company Limited (Peer Power) for acquiring a stake of 24.24% of the total issued number of shares of the Company on a fully diluted basis. Peer Power is a fintech startup established in 2016, focusing on an online electronic platform for bond and equity crowdfunding that connects investors to Small and Medium-sized Enterprises. Peer Power is the first platform which has obtained the first crowdfunding license from the Securities and Exchange Commission since 2019. EGCO plans to introduce blockchain technology and platform developed by Peer Power in order to support the incoming changes in decentralized energy trend. In addition, EGCO will collaborate with Peer Power benefiting from our core business competency in power sector to further provide renewable energy source for Peer Power's Data center.

EGCO'S PRODUCTS AND SERVICES

BUSINESS GROUP

EGCO invests in 2 business types, being power generation business and other business. EGCO's power business are divided into 4 groups namely (1) Independent Power Producer ("IPP") Group, (2) Small Power Producer ("SPP") Group, (3) Very Small Power Producer ("VSPP"), (4) Oversea Power Generation Group. EGCO's other business comprises 6 types of business which are (1) operation and maintenance business, (2) management services business for power plant, (3) coal mine business, (4) LNG shipper business, (5) a clean energy project development, and (6) an online electronic platform company. EGCO Business is detailed as follows:

Power Generation Business

Electrical Power

Electrical Power is a clean processing power that is easy to use and to transform into other types of energy. Electrical power is vital to all business operations, in industry, agriculture, communication or tourism. To generate sufficient electrical energy to satisfy demand is therefore important. At present, the electricity generation in Thailand is divided into two categories:

1. Non-fuel Electricity such as hydro power plants, and natural energy power plants using sources of natural energy like solar power, wind power and geothermal power.
2. Fuel-based Electricity such as thermal power plants, gas turbine power plants and combined cycle power plants.

A. Types of Power Plant

The types of power plant operated by the EGCO Group are as follows:

1. A Hydro Power Plant generates electricity by the use of force and water compression to rotate water turbines.
   Power plants under this category are NTPC and XPCL.
2. A Thermal Power Plant generates electricity by burning fuel, such as natural gas, coal, or fuel oil, to boil water creating high-pressure steam. The pressure of the steam shall rotate the steam turbine, which attached to the shafts of power generator, generating electricity. This type of plant requires several hours for each start up, from ignition to boiling process and generating electricity, therefore it is suitable as base-load power plant.
   Power plants under this category are BLCP unit 1 and unit 2, Quezon, and SBPL.
3. A Combined Cycle Power Plant generates electricity by combining the use of both gas turbine and steam turbine. When the gas turbine generates electricity, exhausted heat from the gas turbine shall be transferred to boil water, creating high-pressure steam. The pressure of the steam shall rotate the steam turbine, which attached to the shafts of power generator, generating electricity concurrently.
   Power plants under this category are KEGCO unit 4, GPG unit 1 and unit 2, Paju.
4. A Cogeneration Power Plant is a power plant that produce both electrical power and thermal energy at the same time. The process of production is as same as the process of combined cycle power plant. However, the different point is that cogeneration power plant sale steam from its production process while combined cycle power plant does not.
   Power plants of this type are EGCO Cogen, NKCC, KLU, BPU, and Linden.
5. A Renewable Energy Power Plant generates electricity from non-conventional power source such as wind energy, solar power, mini hydro, geothermal energy, biomass, fuel cell and other alternative sources. Biomass and other alternative sources, such as wastes and exhausted gas from industrial process, can be used in the same way as fuel in thermal power plant to generate electricity.
   Power plants under this type are RG using rice husk as fuel, GYG using parawood as fuel, NED, GPS, Solarco, SPP 2, SPP 3, SPP 4, and SPP 5 using solar power, TWF, CWF, BRWF, and Yunneng using wind power, SEG and SEGSD using geothermal power, and Gangdong using fuel cell.

B. Renewable Energy Power Plant

EGCO group prioritizes the investment in renewable energy sources in order to advocate clean energy for environmental conservation, reduce fossil fuel consumption causing greenhouse gases emission and enhance the reliability of electricity supply. Currently, EGCO has 5 types of renewable energy power plants which are;

1. Solar Power Plant: EGCO group has invested in various types of solar power technology, which identified as follows.
   - Thin film solar technology is adopted in NED. The cumulative irradiation is around 1,900-2,000 kWh/m^2 per year.
   - Polycrystalline with single axis solar tracking system technology i.e. SPP 2, SPP 3, SPP 4, and SPP 5. The cumulative irradiation is around 2,000-2,200 kWh/m^2 per year, respectively.
   - Polycrystalline solar technology is adopted in GPS and Solarco. The cumulative irradiation is around 1,900-2,000 kWh/m^2 per year, respectively.

All solar power plants of EGCO group have warranties for main equipment and performance ratio under long-term maintenance service agreement in order to ensure maximum efficiency.

2. Wind Farm: EGCO group invests in wind farms both Domestic and International.
   - Domestic: Power plants of this type are TWF and CWF. Direct Drive wind turbine technology (Gearless) is adopted in both power plants. The hub height are 100 and 120 meters respectively. These turbines operate at maximum performance of 10.3 meters/sec wind speed.
   - International: Power plant of this type is BRWF located in Australia. This wind farm selected the gear system technology of GE with 80 meters of hub height. The average wind speed is 7.1 meters/sec. Another power plant is Yunneng located in Taiwan, which is an offshore wind farm using gearless technology. The hub height is 110 meters. The average wind speed is 12-13 meters/sec.
3. Biomass Power Plant: Power plants of this type are RG and GYG which use rice husk and parawood as primary fuel, respectively. The main sources of fuel from the local community and nearby area are sufficient to generate electricity. However, both power plants have fuel reserves for using in unforeseen circumstances.
4. Hydro Power Plant: There are two hydro power plants under EGCO's portfolio, NTPC and XPCL, which use force and compression of water due to the height of water head to generate electricity. NTPC is the reservoir hydro power plant. The reservoir storage are 3,530 million cubic meters with average water inflow from the rain of 7,521 million cubic meters per year. The main factor of generation is water supply to reservoir each year. NTPC has 25 years power purchase agreement with EGAT and Electricité du Laos (EDL). On the other hands, XPCL is a run-of-river hydro power plant. The characteristic of this run-of-river is that the total outflow of water must equal to the natural inflow, meaning that there is no water stored or channels away from the river. The main factor of generation is the flow of water. XPCL has 29 years power purchase agreement with EGAT and Electricité du Laos (EDL).
5. Geothermal Power Plant: Power plant of this type is SEG and SEGSD which use geothermal power to generate electricity. The plant use flash steam technology, with the steam generating electricity by driving the turbine directly. The steam is produced at more than 260°c. Furthermore, the SEG plant was the world's largest single cylinder machine. There are two phase fluid pipelines with central separators, and integrated pressure control.
6. Fuel Cell Power Plant: The Power plant of this type is Gangdong Fuel Cell Project (Gangdong). The plant adopts Phosphoric Acid Fuel Cell technology (PAFC) with installed capacity of 19.8 MW. Regarding PAFC, the electricity will be generated by electrochemical reaction. The electricity-generating process begins with feeding natural gas through anode. The hydrogen atom in natural gas will cause an electrochemical reaction with oxygen which is fed through cathode. The electricity will be generated by exchanging hydrogen atoms in anode and electrons in cathode. This reaction generates electricity and hot water. Moreover, PAFC technology uses phosphoric acid as the electrolyte for electrochemical reaction by inserting the phosphoric acid in the middle of the cathode and anode. Gangdong sells electricity to Korean Power Exchange (KPX) and hot water to a nearby customer who supplies hot water to the building heating system. Gangdong installs 45 fuel cells and purchases natural gas from city gas pipeline system of Gangdong district.

C. Tariff Rate

EGCO group has power purchase agreements in both Thailand and Asia Pacific region. In Thailand, IPP and SPP mainly sell power to EGAT, while VSPP mainly sells to PEA. Moreover, EGCO group sells power in the republic of Philippines, Laos PDR, Indonesia, Australia, Republic of Korea, and the United State. The detail is demonstrated as follows:

In case of EGAT PPA, the IPP and the SPP tariff has a common principal calculation as follows.

IPP Group - the rate is divided into the following 2 parts:

1. Availability payment is a payment, which EGAT makes the payment to the power plants on a monthly basis for maintaining the availability of the power plants, regardless of whether the electric power will be supplied to EGAT or not. The availability payment covers financial cost of investment in the power plants, principal repayments and interest, fixed operating and maintenance expenses, administrative expenses, major maintenance cost and return on EGCO's equity.
2. Energy payment is the payment for the actual net electrical output. It covers the variable operating (i.e. fuel cost and fuel management cost) and maintenance expenses.

SPP Group - the rate is divided into the following 2 parts:

1. Capacity payment is charged based on the monthly contracted capacity for EGAT and charged on each customer regardless of whether such customer actually purchase electricity or not. However, the capacity payment applicable to EGAT is different from that applicable to customers in general (industrial users). The capacity payment in case of EGAT is calculated from its long run avoided capacity cost due to its purchase of power from SPPs while the capacity payment applicable to industrial users is calculated from contracted capacity that varies to the tariff structure of PEA.
2. Energy payment is the payment for the actual net electrical energy output. The energy payment charged on EGAT covers the variable operating cost, such as fuel cost, while the energy payment charged on industrial users charged in accordance with the tariff structure of PEA. Besides, the discount rate under power purchase agreement between the power plant and each industrial user is also included in the type of payment.

VSPP Group - the rate is divided into the following 2 parts:

1. Energy payment is the payment for the actual net electrical output. The purchase of power from VSPPs varies to the tariff structure of PEA.
2. The adder from power purchasing price of fuel and technology due to production cost of renewable energy varies to technology, fuel type, production capacity and investment details affecting variety of adder level.

Overseas Group

1. Republic of the Philippines

   Power tariff from Meralco consists of 4 main components as below:

   - Capacity Payment is the remuneration paid by Meralco on a monthly basis. It covers financial cost of investment in the power plant.
   - Fixed Operating Payment is the remuneration paid by Meralco on a monthly basis. It covers fixed operating and maintenance expenses of the power plant.
   - Variable Operating Payment is the remuneration paid by Meralco on a monthly basis. It covers variable and maintenance expenses.
   - Energy payment is the remuneration paid for the electricity actually delivered. The tariff of energy payment is charged under specified formula.

   The formula is partially on USD and partially on Peso.

2. Lao People's Democratic Republic (Laos PDR)

   Hydro power plant in Laos mainly has long-term electricity sales agreements with EGAT. In the case of NTPC, the tariff is divided into components as below:

   - Primary Energy Payment is the remuneration paid by EGAT. It is calculated from the quantity of electricity declared to dispatch during on peak demand.
   - Secondary Energy Payment is the remuneration paid by EGAT. It is calculated from the quantity of electricity declared to dispatch during off-peak demand.

   For XPCL, its long-term electricity sales agreements for EGAT is similar to NTPC, but there is one additional component as below:

   - Excess Energy is excess electricity generated when the amount of water is more than expected. Therefore, in that month, the electricity production can be more than the amount of Primary Energy (PE) and Secondary Energy (SE) which the XPCL power plant has informed in advance to EGAT of each month. The excess energy will be counted as excess electricity.

3. The Republic of Indonesia

Power tariff is paid by PT PLN (Persero) to SEG and SEGSD in the term of Energy Payment which is the actual measured quantity of electricity delivered. However, Energy payment will change according to factors in the tariff structure.

4. Australia

For BRWF in Australia, EnergyAustralia pays the Power tariff to BRWF which consisted of 2 components as below:

- Energy Payment is the payment for the actual net electrical output.
- Renewable Green Certificate is the additional payment for the actual net electrical output, which is equivalent to adder.

5. Republic of Korea

In the case of Paju, the power plant generates and sells the electricity to Korea Power Exchange or KPX which is the power pool in Republic of Korea. The tariff consisted of 4 components as below:

- Capacity Payment (CP) is the payment that power plant received from its available capacity. This tariff is a fixed rate and annually declared by KPX. It covers construction cost, operation cost and grid connection cost
- Schedule Energy Payment (SEP) is the payment that power plant received from its energy output that generate as dispatch scheduled by KPX. The tariff rate is real-time and change due to demand of power in the market. This payment covers the fuel cost of power plant.
- Constrained - On (CON) is the payment for the additional generation arising from factors including under-estimation of demand by KPX.
- Constrained - Off (COFF) is the payment for the generation initially assigned but not actually dispatch due to factors including over-estimation of demand by KPX.

The power pool in Republic of Korea is specified as Cost-based pool. For this type of power pool, the merit order will be dispatched based on the cost of generation of each power plant. Power plants will be dispatched in order of lower to higher cost.

6. The United States

In the case of Linden, the power plant generates and sells electricity output and capacity to the New York System Operator (NYISO-Zone J), as well as PJM PS North power market in New Jersey which served as the market operator. The rate is divided into the following 2 parts:

- Capacity Payment (CP) is the payment that power plant received from its available capacity to ensure that sufficient resources are available to meet forecast load on a long-term basis. By based on forecast peak demand and reserve margin (IRM) during delivery year.
- Energy Payment (EP) is the payment for the actual net electrical energy output. Majority of energy commitments made through Day-Ahead Market. Pricing are hourly calculated for the next day operating day based on generation offers, demand bids, and schedule bilateral transactions.

The power pool in New York (NYISO-Zone J) is specified as Cost-based pool. For this type of power pool, the merit order will be dispatched based on the cost of generation of each power plant. Power plants will be dispatched in order of lower to higher cost.

D. Rights and Privileges

In addition to the PPA with EGAT and PEA, the Thai Board of Investment (BOI) also granted the tax privileges to all IPPs and SPPs in the Group under the Promotion Certificate Issuance no. 7.36 (Independent Power Producer) and 7.1 (Public utilities and infrastructure), respectively. The significant information is as follows:

Privileges

1. Exemption of corporate income tax (CIT) for net profit from promoted business for 8 years from the first date of income earnings.
2. Reduction of corporate income tax for net profit from investment by 50% of the normal rate for 5 years from the date following the end of the corporate income tax holiday.
3. Exemption of calculating dividend from the promoted business as taxable income throughout the period of corporate income tax holiday.

Conditions

- Having shareholders who are Thai national holding shares in an aggregate amount of at least 51% of the registered capital.
- Having registered capital of at least as indicated.
- Power plant locating in the indicated areas for 15 years from the first date of operation. Relocation to other areas shall not be made unless with the BOI's prior approval.

Tax privileges to all IPPs are detailed as follows:

POWER PLANT	PROMOTION CERTIFICATE	DATE OF PROMOTION GRANTED	PRIVILEGES (8 YEARS)	REGISTERED CAPITAL OF AT LEAST	LOCATION
KEGCO	No. 2509(2)/2013 dated October 29, 2013	May 17, 2013	January 14, 2016 - January 13, 2024[/1]	6,000 million baht	Nakorn Si Thammarat Province
BLCP	No. 1499/2000 dated August 21, 2000	October 1, 1998	October 1, 2006 - September 30, 2014	12,000 million baht	Rayong Province
GPG	No. 1660(2)/2005 dated July 25, 2005	June 3, 2005	November 3, 2006 - November 2, 2014	1,850 million baht and shall increase the registered capital of at least 9,030 million baht and fully paid before commencing the operation	Saraburi Province

Note:
/1 KEGCO has no authorization for the reduction of corporate income tax by 50% of the normal rate for 5 years from the date following the end of the corporate income tax holiday.

Tax privileges to all SPPs are detailed as follows.

POWER PLANT	PROMOTION CERTIFICATE	DATE OF PROMOTION GRANTED	PRIVILEGES (8 YEARS)	REGISTERED CAPITAL OF AT LEAST	LOCATION
EGCO Cogen	No. 1230/1999 dated June 7, 1999 and the revised version No. 5106/2000 (2-1230/2000, 6379/2002), (3-1230/1999), 6753/2002 (4/1230/2002) and 4063/2017 (5-1230/1999) dated May 31, 2000, October 3, 2002, November 8, 2002 and June 16, 2007, respectively	June 7, 1999	January 10, 2003 - January 9, 2011	Not less than 1 million baht and shall pay up the full amount of register capital of not less than 1,200 million baht before commercial operation date.	Rayong Province

POWER PLANT	PROMOTION CERTIFICATE	DATE OF PROMOTION GRANTED	PRIVILEGES (8 YEARS)	REGISTERED CAPITAL OF AT LEAST	LOCATION
RG	No. 1660(1) 2001 dated October 19, 2001 and revised version No. 6871/2003 (2-1660 (1) 2001) dated November 7, 2003	October 19, 2001	October 19, 2001 - October 18, 2009	Not less than 180 million baht and shall pay up the full amount of registered capital before commercial operation date	Roi-Et Province
NKCC	No. 1594/1998 dated December 28, 1998 and a revised version, No. 4735/2001 (2-1594/1998) dated March 7, 2001	July 9, 1997	June 1, 2000 - May 31, 2008	N/A	Saraburi Province
SCC	No. 1761/1997 dated December 15, 1997 and a revised version, No. 4100/2000 (2-1761/1998) dated January 17, 2000	July 9, 1997	April 1, 1999 - March 31, 2007	N/A	Samut Prakan Province
GYG	No. 1549(2)/2004 dated July 9, 2004	November 19, 2003	November 7, 2006 - November 6, 2014	Not less than 200 million baht and shall increase the registered capital of at least 200 million baht and fully paid before commencing the operation	Yala Province
NED (LSP)	No. 1443(1)/2010 dated April 12, 2010	March 10, 2010	December 22, 2011 - December 21, 2019	Not less than 1,990 million baht	Lopburi Province
CWF	No. 2433(1)/2014 dated July 18, 2014	November 21, 2014	December 16, 2016 - December 15, 2024	Not less than 1,514 million baht	Chaiyaphum Province
KLU	No. 58-2443-0-00-1-0 dated November 9, 2015	May 29, 2015	July 6, 2017 - July 5, 2025	Not less than 1,000 million baht	Pathum Thani Province
BPU	No. 59-0294-0-00-1-0 dated February 24, 2016 and No. 59-0295-0-00-1-0 dated February 24, 2016	May 29, 2015 and May 29, 2015	September 4, 2017 - September 3, 2025 and August 28, 2017 - August 27, 2025	Not less than 2,000 million baht	Ratchaburi Province

Tax privileges to all VSPPs are detailed as follows.

POWER PLANT	PROMOTION CERTIFICATE	DATE OF PROMOTION GRANTED	PRIVILEGES (8 YEARS)	REGISTERED CAPITAL OF AT LEAST	LOCATION
SPP2	No. 1502(1)/2011 dated April 26, 2011	May 7, 2010	May 2, 2012 - May 3, 2020	Not less than 196.7 million baht	Saraburi Province
SPP3	No. 1503(1)/2011 dated April 26, 2011	May 7, 2010	February 21, 2012 - February 22, 2020	Not less than 197.5 million baht	Srisaket Province
SPP4	No. 1504(1)/2011 dated April 26, 2011	April 27, 2010	January 24, 2012 - January 25, 2020	Not less than 148.7 million baht	Srisaket Province and Ubon Ratchathani Province
SPP5	No. 1505(1)/2011 dated April 26, 2011	May 7, 2010	June 22, 2012 - June 23, 2020	Not less than 198.4 million baht	Roi Et Province
GPS (Ta Khit)	No. 1884(1)/2011 dated June 28, 2011	March 22, 2011	March 1, 2012 - February 28, 2020	Not less than 750 million baht	Nakhon Sawan Province
GPS (Ta Sang)	No. 1883(1)/2011 dated June 28, 2011	March 22, 2011	March 2, 2012 - March 1, 2020	Not less than 750 million baht	Nakhon Sawan Province
GPS (Dong Khon)	No. 1882(1)/2011 dated June 28, 2011	March 22, 2011	March 5, 2012 - March 4, 2020	Not less than 750 million baht	Chai Nat Province
GPS (Bueng Sam Phan)	No. 1881(1)/2011 dated June 28, 2011	March 22, 2011	February 1, 2013 - January 31, 2021	Not less than 750 million baht	Petchabun Province
NED (WSP)	No. 1142(1)/2011 dated February 3, 2011	July 9, 2010	May 2, 2013 - May 1, 2021	Not less than 2,281 million baht	Lopburi Province
TWF	No. 2499(1)/2012 dated October 10, 2012	June 26, 2012	July 18, 2013 - July 17, 2021	Not less than 114 million baht	Chaiyaphum Province
Solarco (Sai Yai 1)	No. 1181(1)/2013 dated February 5, 2013	December 26, 2012	November 18, 2013 - November 17, 2021	Not less than 825 million baht	Nakhon Pathom Province
Solarco (Sai Yai 2)	No. 1182(1)/2013 dated February 5, 2013	December 26, 2012	November 18, 2013 - November 17, 2021	Not less than 825 million baht	Nakhon Pathom Province
Solarco (Sai Kyo)	No. 1183(1)/2013 dated February 5, 2013	December 26, 2012	December 16, 2013 - December 15, 2021	Not less than 825 million baht	Suphan Buri Province
Solarco (Sai Phet 1)	No. 1184(1)/2013 dated February 5, 2013	December 26, 2012	December 16, 2013 - December 15, 2021	Not less than 1,650 million baht	Nakhon Pathom Province
Solarco (Sai Phet 2)	No. 1186(1)/2013 dated February 5, 2013	December 26, 2012	December 16, 2013 - December 15, 2021	Not less than 1,650 million baht	Nakhon Pathom Province
Solarco (Sai Phet 3)	No. 1185(1)/2013 dated February 5, 2013	December 26, 2012	November 18, 2013 - November 17, 2021	Not less than 1,650 million baht	Nakhon Pathom Province

Products and Services

Electricity

The company has the policy to supply electricity or to provide related services with high quality. The Company will honor its promise to the customers and will continue to operate its business safely with environmental friendliness. In this regard, the description of the service of IPPs in EGCO Group, the major power plants in EGCO Group, is provided as an example:

1. Capacity, Net Generation and Capacity Factor

The capacity, net generation and capacity factor of IPPs during 2019-2021 is as shown below:

	UNITS	2021	2020	2019
KEGCO				
Contracted Capacity/1	MW	930	930	930
Net Generation/2	Million kWh	5,661	6,516	6,518
Capacity Factor/3	%	69.48	79.76	80.01
Increasing Rate of Net Generation/4	%	(13.12)	(0.04)	7.19
BLCP				
Contracted Capacity/1	MW	1,346.50	1,346.50	1,346.50
Net Generation/2	Million kWh	10,719	11,284	10,912
Capacity Factor/3	%	91.11	95.40	92.51
Increasing Rate of Net Generation/4	%	(5.01)	3.13	5.08
GPG				
Contracted Capacity/1	MW	1,468	1,468	1,468
Net Generation/2	Million kWh	421.72	65.83	684.10
Capacity Factor/3	%	3.28	0.51	5.32
Increasing Rate of Net Generation/4	%	540.62	(90.38)	406.74

Note:

/1 Contracted Capacity is the capacity of generation that EGAT agrees to purchase from each power plant.

/2 Net Generation is the total amount of electricity that each power plant generates and sells to EGAT in each year.

/3 Capacity Factor is computed by Net generation over in that year over the maximum available energy.

/4 Increasing Rate of Generation is the rate of variation in generation of each power plant compared to the previous year.

2. Raw Material

In case of fuel-based electricity, major raw material for power generation is fuel, which comprises natural gas and coal which are primary fuels and diesel oil, the secondary fuel, other raw materials required for the generating process are water and chemicals, water treatment agent and fuel additive. Major raw materials for power generating can be summarized as follows:

- Natural Gas

  Natural gas is a primary fuel used for both thermal and combined cycle plants. Both KEGCO and GPG are suppled fuel by PTT under the contracted amount and price as indicated in the Fuel Supply Agreement between PTT and the power plant. The fuel cost will be passed through in the Energy Payment based on the contracted heat rate as stated in the PPA with EGAT

- Coal

  Bituminous coal is the primary fuel for BLCP power plant. This high quality coal is shipped to the deep sea port of BLCP from overseas contracted suppliers. Its price varies from shipment to shipment depending on its calorific value. According to PPA with EGAT, BLCP is obliged to stock the coal for 30 days continuous operation.

- Diesel Oil

  Diesel oil is reserved to cope with primary oil shortage and for use in case of machinery test-run and for operation after repair and maintenance. According to the PPAs, KEGCO and GPG have to make available diesel oil reserve to serve 3 days of full generation. They will operate the facility with the use of diesel oil only upon the instruction of EGAT. Moreover, diesel oil is used in BLCP for a start-up or lower-than 25% operation load, so the diesel oil is only reserved as necessary each year.

- Water

  Each power plant procures the water for consumption as detailed below:

  KEGCO's primary source of water used in the thermal plant comes from Ban Klang canal and the secondary source comes from Tha Tok canal. A reservoir had been built to accommodate water reserve of 0.4 million cubic meters upon area of 79 rai along the Ban Klang canal, situated about 10 kilometers away from the power plant. It can well cope with shortage of water during dry season. Moreover, an additional reservoir, Ban Bang Koo, situated 6 kilometers from the power plant with the capacity of 0.4 million cubic meters upon area of 114 rai.

  BLCP purchases the water from the Industrial Estate Authority of Thailand ("IEAT") with the reserve of 3 day service. Moreover, BLCP has the desalination plant as the backup source to be used in case of IEAT's incapability to provide its service, to meet the need of water use.

  GPG's primary source of water used in the power plant comes from Pasak River. A reservoir has also been built to accommodate water reserve of 1.3 million cubic meters upon area of 120 rai. Within this reserved capacity, the power plant is able to sustain its normal operation for 40 days. Moreover, GPG has water treatment plant to produce tap water with the capacity of 54,413 cubic meters per day.

- Chemicals

  Most chemicals used in power plants are for improving water quality, such as, Ammonia and Sodium triphosphate for boilers, and Hydrochloric acid (HCL), Sulfuric acid (H2SO4) and Sodium hydroxide (NaOH) for use in water purification system, as well as Aluminum Chlorohydrate (ACH) and Sodium hypochlorite (NaOCl) for tap water system.

Other Businesses

There are 6 types of other business comprise 1) operation and maintenance business, being EGCO Engineering & Service Co., Ltd. ("ESCO"), E&E Engineering and Service Company Limited ("E&E"), and Pearl Energy Philippines Operating, Inc. ("PEPOI"); 2) management services business for power plant, being Quezon Management Services Inc. ("QMS"); 3) coal mine business, being PT Manambung Maura Enim Co., Ltd. ("MME"); 4) LNG shipper business operated by EGCO, 5) a clean energy project development, being Apex Clean Energy TopCo Limited Liability Company ("Apex TopCo") and 6) an online electronic platform company, being Peer Power Company Limited ("Peer Power").

1. Operation and Maintenance Business - ESCO, E&E, and PEPOI

- ESCO

  ESCO is EGCO's wholly owned subsidiary which provides operation, maintenance, engineering and construction services to power plants, petrochemical plants, oil refineries and other industries.

  Service

  Power Plant Operation and Maintenance Services (O&M)

  ESCO aims to provide comprehensive operation and maintenance services with high efficiency, i.e., high equivalent availability factor and low heat rate with reasonable O&M cost. ESCO has extensive experiences to provide a full scope services to both thermal and combined cycle plants

  Maintenance Services

  ESCO has extensive expertise in mechanical maintenance, electrical maintenance, and control and instruments maintenance services and can be on called on 24-hour basis. With the strong and competent workforce, ESCO can provide a variety of professional maintenance services for power, petrochemical and oil & gas industries which covers the following areas:

  - Planned Outage maintenance
  - Contract maintenance services
  - Individual equipment maintenance
  - Field service and emergency troubleshooting

  Engineering & Construction Services

  ESCO has a qualified team of engineer to provide services on civil, mechanical, electrical and control and the testing and installation. The particular strength lies in installation and conducting test on power plant main system such as gas turbine, steam turbine, generator, HRSG, boiler and

balance of plant. ESCO services also cover turnkey of small to medium projects such as pumping stations and power distribution substations.

In addition, ESCO also provides other services such as on demand side management, technical and field testing and technical training, etc.

- E&E

  EGCO indirectly holds 40% stake in E&E Engineering and Service Company Limited, which provides operation and maintenance services to NT1PC power plant through a long-term operation and maintenance agreement and provides the various service to other power plants and industries in the Laos PDR.

- PEPOI

  EGCO indirectly holds 100% stake in PEPOI, which provides operation and maintenance services for Quezon and SBPL power plant through a long-term operation and maintenance agreement.

2. Management Services Business for Power Plant - QMS

EGCO indirectly holds 100% stake in QMS, which provides management services for Quezon and SBPL power plant through a long-term management service agreement.

3. Coal Mining Company - MME

EGCO indirectly holds 40% stake in MME, which owns and operates a coal mining project (an open-pit mine), located in Muara Enim, South Sumatra, Indonesia. It is awarded a concession agreement from Indonesian government for 28 years since March 2010 to March 2038. It has mineable coal reserves of 134 million tons.

4. LNG Shipper Business

The Energy Regulatory Commission (ERC) approved EGCO to acquire the LNG Shipper License to import the Liquefied Natural Gas (LNG) in the greatest amount of 200,380 tons per year with 10 years validity with effect on July 24, 2021. Regarding such approval, EGCO is enable to supply such fuel to the 3 small power plants in EGCO, comprising 1) Banpong power plant, the combined-cycle power plant in Ratchaburi province with a total installed capacity of 256 MW and a fuel consumption of 54,000 tons per year, 2) Klongluang power plant, the combined-cycle power plant in Pathum Thani province with a total installed capacity of 122 MW and a fuel consumption of 27,000 tons per year, and 3) EGCO Cogeneration power plant, the SPP replacement in Rayong province with the installed capacity of approximately 100-120 MW and a fuel consumption of 119,000 tons per year in place of the existing site of which the PPA will expire in 2024.

5. A Clean Energy Project Development - APEX TopCo

EGCO indirectly holds 17.46 % stake in APEX TopCo which is a private utility scale renewable development company, located in the State of Virginia in USA. Its business is based upon the development of renewable projects through the point of Notice to Proceed ("NTP") for construction or up to the project's Commercial Operation Date ("COD"), and the subsequent sale of these projects to third party investors.

6. An Online Electronic Platform - Peer Power

EGCO holds 24.24% stake in Peer Power Company Limited. Peer Power is a fintech startup, focusing on an online electronic platform for bond and equity crowdfunding that connects investors to Small and Medium-sized Enterprises. Peer Power is the first platform which has obtained the first crowdfunding license from the Securities and Exchange Commission since 2019. EGCO plans to apply blockchain technology developed by Peer Power into energy trading platform. Moreover, EGCO plan to utilize Peer Power's Data center for providing renewable energy source.

Undelivered Works

There are 3 power plant projects under developing as follows:

POWER PLANT PROJECT	COUNTRY	BUSINESS TYPE	EGCO SHARES (%)	EQUITY CONTRACTED CAPACITY (MWe)	COD
1. TPN	Thailand	Oil storage/ Oil pipeline	44.60	-	2022
2. Yunneng*	Taiwan	Electricity (Wind)	25.00	152	2021-2023
3. NT1PC	Laos PDR	Electricity (Hydro)	25.00	161.08	2022

Remark: * Yunneng firstly commenced its partial Commercial Operation Date (COD) in 2021. The construction and COD of individual WTG have been planned to be completed within 2023.

EGCO'S BUSINESS LINE

1 IPP GROUP

1.1 Khanom Electricity Generating Company Limited (KEGCO)

EGCO holds 100% stake in KEGCO, which owns and operates KEGCO unit 4 (KN4) power plant which is the largest private power plant in the southern Thailand, located in Nakhon Si Thammarat province. KN4 is a 970 MW combined cycle power plant using natural gas as primary fuel to generate and sell electricity to EGAT under the 25 years PPA.

In 2021, KN4 generated and sold 5,660.65 GWh electricity output to EGAT. Its annual average EAF was 87.29%.

1.2 BLCP Power Limited (BLCP)

EGCO holds 50% stake in BLCP, which owns and operates an IPP coal-fired power plant located in Rayong province. It is a 1,434 MW power plant comprising two identical 717 MW pulverized coal-fired power units using high quality bituminous coal imported from Australia as the primary fuel to generate and sell all electricity output to EGAT under the 25 years PPA.

In 2021, BLCP power plant generated and sold 10,719 GWh electricity output to EGAT. Its annual average EAF for unit 1 and unit 2 was 92.00% and 90.21%, respectively.

1.3 Gulf Power Generation Company Limited (GPG)

EGCO indirectly holds 50% stake in GPG, which owns and operates an IPP gas-fired power plant, located in Saraburi province. It is a 1,510 MW power plant composed of two 755 MW combined cycle power blocks using natural gas as the primary fuel to generate and sell all electricity output to EGAT under the 25 years PPA.

In 2021, GPG power plant generated and sold 421.72 GWh electricity output to EGAT. Its annual average EAF for block 1 and block 2 was 96.86% and 88.62%, respectively.

2 SPP GROUP

2.1 EGCO Cogeneration Company Limited (EGCO Cogen)

EGCO indirectly holds 80% stake in EGCO Cogen, which owns and operates a SPP cogeneration power plant located in Rayong province. It is a 117 MW cogeneration power plant with steam supply of 30 tons per hour using natural gas as the primary fuel. Under the SPP firm cogeneration program, it generates and sells 60 MW electricity output to EGAT under the 21 years PPA, and remaining electricity along with steam output to Industrial Users (IUs) in Rayong Industrial Park under the long-term PPAs.

In 2021, EGCO Cogen power plant generated and sold 630.23 GWh electricity output to EGAT and IUs. Its annual average EAF was 92.04% and the steam output to IUs was 33,117 tons.

2.2 Roi-Et Green Company Limited (RG)

EGCO indirectly holds 70.30% stake in RG, which owns and operates a SPP renewable power plant located in Roi-Et province. It is a 9.9 MW biomass-fired power plant using rice husk as the primary fuel. Under the SPP firm renewable program, it generates and sells electricity output to EGAT under the 21 years PPA.

In 2021, RG power plant generated and sold 54.39 GWh electricity output to EGAT. Its annual average EAF was 82.20%.

2.3 Nong Khae Cogeneration Company Limited (NKCC)

EGCO indirectly holds 50% stake in NKCC, which owns and operates a SPP cogeneration power plant located in Saraburi province. It is a 126 MW cogeneration power plant with steam of 24 tons per hour using natural gas as the primary fuel. Under the SPP firm cogeneration program, it generates and sells 90 MW electricity output to EGAT under the 21 years PPA, and remaining electricity along with steam output to IUs under the long-term PPAs.

In 2021, NKCC power plant generated and sold 577.57 GWh electricity output to EGAT and IUs. Its annual average EAF was 94.31% and the steam output to IUs was 76,994.90 tons.

Remarks : NKCC was expired on 12 October 2021.

2.4 Gulf Yala Green Company Limited (GYG)

EGCO indirectly holds 50% stake in GYG, which owns and operates a SPP renewable power plant located in Yala province. It is a 23 MW biomass-fired power plant using para-wood residue as the primary fuel. Under the SPP firm renewable program, it generates and sells electricity output to EGAT under the 25 years PPA.

In 2021, GYG power plant generated and sold 165.32 GWh electricity output to EGAT. Its annual average EAF was 92.98%.

2.5 Chaiyaphum Wind Farm Company Limited (CWF)

EGCO holds 90% stake in CWF, which owns and operates an 80 MW wind power plant located in Subyai district, Chaiyaphum province. CWF signed a non-firm PPA with EGAT under Small Power Plant scheme for 5-year term which can be renewed every 5 years.

In 2021, CWF power plant generated and sold 125.26 GWh electricity output to EGAT. Its annual average EAF was 99.46%.

2.6 Natural Energy Development Company Limited (NED) (Lopburi Solar)

EGCO holds 66.67% stake in NED, which owns and operates 55 MW thin film solar power plant Lopburi Solar Project (LSP) located in Lopburi province. NED signed anon-firm PPA for LSP with EGAT for the sale of electricity output generated. PPA is automatically renewed every 5 years. In addition to the wholesale tariff referred to EGAT, the projects receive adder 8 baht per kWh, applicable for 10 years from the COD.

In 2021, Lopburi Solar generated and sold 105.18 GWh electricity output to EGAT. Its annual average availability was 99.38%.

2.7 Klongluang Utilities Company Limited (KLU)

EGCO holds 100% stake in KLU, which owns and operates a SPP cogeneration power plant located in Pathum Thani province. It is a 122 MW cogeneration power plant with steam of 13 tons per hour using natural gas as the primary fuel. Under the SPP firm cogeneration program, it generates and sells 90 MW electricity output to EGAT under the 25 years PPA, and remaining electricity along with steam output to IUs under the long-term PPAs.

In 2021, KLU generated and sold 724.32 GWh electricity output to EGAT and IUs. Its annual average availability was 96.90% and the steam output to IUs was 139,672 tons.

2.8 Banpong Utilities Company Limited (BPU)

EGCO holds 100% stake in BPU, which owns and operates a SPP cogeneration power plant located in Ratchaburi province. It is a 256 MW cogeneration power plant with steam of 100 tons per hour comprising two identical 128 MW using natural gas as the primary fuel. Under the SPP firm cogeneration program, it generates and sells 180 MW electricity output to EGAT under the 25 years PPA, and remaining electricity along with steam output to IUs under the long-term PPAs.

In 2021, BPU generated and sold 1,430.28 GWh electricity output to EGAT and IUs. Its annual average availability was 98.06% and the steam output to IUs was 520,538 tons.

3 VSPP GROUP

3.1 Natural Energy Development Company Limited (NED) (Wang Ploeng Solar)

EGCO holds 66.67% stake in NED, which owns and operates 8 MW thin film solar power plant Wang Ploeng Solar Project (WSP) located in Lopburi province. NED signed a non-firm PPA for WSP with PEA for the sale of electricity output generated. PPA is automatically renewed every 5 years with the same as LSP pricing structure.

In 2021, Wang Ploeng Solar generated and sold 15.75 GWh electricity output to PEA. Its annual average availability was 99.22%.

3.2 SPP Two Company Limited (SPP2)

EGCO holds 100% stake in SPP2, which owns and operates the 8 MW solar power plant located in Saraburi province. SPP2 has entered into a non-firm PPA with PEA under VSPP program. The PPA is automatically renewed every 5 years with the same as NED's pricing structure. SPP2 is equipped with solar tracking system.

In 2021, SPP2 power plant generated and sold 14.27 GWh electricity output to PEA. Its annual average availability was 99.55%.

3.3 SPP Three Company Limited (SPP3)

EGCO holds 100% stake in SPP3, which owns and operates the 8 MW solar power plant located in Srisaket province. SPP3 has entered into a non-firm PPA with PEA under VSPP program. The PPA is automatically renewed every 5 years with the same as NED's pricing structure. SPP3 is equipped with solar tracking system.

In 2021, SPP3 power plant generated and sold 15.04 GWh electricity output to PEA. Its annual average availability was 99.41%.

3.4 SPP Four Company Limited (SPP4)

EGCO holds 100% stake in SPP 4, which owns and operates the 6 MW solar power plant located in Srisaket province. SPP4 has entered into a non-firm PPA with PEA under VSPP program. The PPA is automatically renewed every 5 years with the same as NED's pricing structure. SPP4 is equipped with solar tracking system.

In 2021, SPP4 power plant generated and sold 10.57 GWh electricity output to PEA. Its annual average availability was 99.62%.

3.5 SPP Five Company Limited (SPP5)

EGCO holds 100% stake in SPP 5, which owns and operates the 8 MW solar power plant located in Roi-Et province. SPP5 has entered into a non-firm PPA with PEA under VSPP program. The PPA is automatically renewed every 5 years with the same as NED's pricing structure. SPP5 is equipped with solar tracking system.

In 2021, SPP5 power plant generated and sold 15.56 GWh electricity output to PEA. Its annual average availability was 99.18%

3.6 G-Power Source Company Limited (GPS)

EGCO holds 60% stake in GPS, which owns and operates 4 solar power plants under 4 non-firm PPAs with the PEA under VSPP program with installed capacity of 6.5 MW each, total capacity of 26 MW. The PPAs are automatically renewed every 5 years with the same as NED's pricing structure. GPS has 4 sites comprising 1) Ta Khit Solar Project, Nakhon Sawan province 2) Ta Sang Solar Project, Nakhon Sawan province 3) Dong Khon Solar Project, Chai Nat province, and 4) Bueng Sam Phan Solar Project, Phetchabun province.

In 2021, all GPS's solar power plants generated and sold 47.43 GWh electricity output to PEA. Its annual average availability was 99.82%.

3.7 Solarco Company Limited (Solarco)

EGCO indirectly holds 49% stake in Solarco, which owns and operates 6 solar power plants located in Nakhorn Pathom and Suphanburi provinces. Solarco has entered into 6 non-firm PPAs with PEA under VSPP program with the installed capacity of 9.5 MW each, total capacity 57 MW. The PPAs are automatically renewed every 5 years with the same as NED's pricing structure. Solarco has 6 power plants, namely 1) Sai Kiew Solar Project, 2) Sai Yai1 Solar Project, 3) Sai Yai2 Solar Project, 4) Sai Phet1 Solar Project, 5) Sai Phet2 Solar Project and 6) Sai Phet3 Solar Project.

In 2021, all Solarco's power plants generated and sold 118.69 GWh electricity output to PEA. Its annual average EAF was 99.92%.

3.8 Theppana Wind Farm Company Limited (TWF)

EGCO holds 90% stake in TWF, which owns and operates the 7.5 MW wind power plant located in Chaiyaphum province. TWF has entered into a non-firm PPA with PEA under VSPP program. The PPA is automatically renewed every 5 years. In addition to the wholesale tariff referred to EGAT, the project receives adder 3.5 baht per kWh, applicable for 10 years from the COD.

In 2021, TWF power plant generated and sold 12.88 GWh electricity output to PEA. Its annual average EAF was 99.85%.

4 OVERSEAS GROUP

4.1 Quezon Power (Philippines) Limited Company (Quezon)

EGCO indirectly holds 100% stake in Quezon, which owns and operates a 502.50 MW pulverized coal-fired power plant using the high-quality coal imported from Indonesia as the primary fuel. Under the 25 years PPA, it generates and sells electricity output to Manila Electric Company (MERALCO), the country's largest power distribution company.

In 2021, Quezon power plant generated and sold 2,785.72 GWh electricity output to MERALCO. Its annual average EAF was 92.04%.

4.2 Nam Theun 2 Power Company Limited (NTPC)

EGCO holds 35% stake in NTPC, which owns and operates a 1,086.80 MW hydroelectric power plant located in Lao PDR. It generates and sells electricity output to EGAT, as well as Electricité du Laos (EDL) under the 25 years PPAs starting from its COD.

In 2021, NTPC power plant generated and sold 4,830.62 GWh electricity output to EGAT and 217.08 GWh electricity output to EDL. Its annual average EAF was 82.95% for EGAT and 94.63% for EDL.

4.3 Star Energy Geothermal Pte Ltd. (SEG)

EGCO indirectly holds 20% stake in SEG, which owns and operates a 227 MW geothermal power plant located in Indonesia. It comprises 2 units of 110 MW and 117 MW. Under the long-term PPA, it generates and sells electricity output to PT PLN (Persero), an Indonesian government-owned electricity corporation.

In 2021, SEG power plant generated and sold 1,856.40 GWh electricity output to its customers. Its annual average AF was 98.30%.

4.4 Boco Rock Wind Farm Pty Limited (BRWF)

EGCO indirectly holds 100% stake in BRWF, which owns and operates a 113 MW wind power plant located in Australia under long-term PPA with EnergyAustralia Pty Ltd.

In 2021, BRWF power plant generated and sold 333.64 GWh electricity output to the Australian Energy Market Operator (AEMO) and EnergyAustralia Pty Ltd. Its annual average EAF was 97.28%.

4.5 Star Energy Geothermal (Salak – Darajat) B.V. (SEGSD)

EGCO indirectly holds 20.07% stake in SEGSD, which owns and operates a 647.27 MW two geothermal power plant projects located in Indonesia. It comprises of Salak project 6 units of 376.80 MW and Darajat project 3 units 270.46 MW. Under the long-term PPA, it generates and sells steam and electricity output to PT PLN (Persero), an Indonesian government-owned electricity corporation.

In 2021, Salak power plant generated and sold 2,939.00 GWh electricity output to its customers. Its annual average AF was 96.17% and Darajat power plant generated and sold 2,117.30 GWh electricity output to its customers. Its annual average AF was 96.77%

4.6 Paju Energy Services Company Limited (Paju)

EGCO indirectly holds 49% stake in Paju which owns and operates the Paju gas fire power and Gangdong fuel cell power plant, located in Republic of Korea. The Paju gas fired power plant has an install capacity of 1,823 MW. The main source of fuel is the imported natural gas. Gangdong fuel cell power plant has an install capacity of 19.8 MW. A fuel cell is an electrochemical device that combines hydrogen from natural gas and oxygen to produce electricity. The electricity output is generated and sold to Korea Electric Power Corporation (KEPCO), which is the sole off-taker of the wholesale power generation, through the Korea Power Exchange (KPX) which served as the market operator in Republic of Korea.

In 2021, Paju gas fire power generated and sold 10,888.74 GWh electricity output to KEPCO. Its annual average EAF was 90.28%. Gangdong fuel cell power plant generated and sold 161.59 GWh electricity output to KEPCO.

4.7 San Buenaventura Power Limited Company (SBPL)

EGCO indirectly holds 49% stake in SBPL, which owns and operates a 500 MW pulverized coal-fired power plant using the high-quality coal imported from Indonesia as the primary fuel. Under the 25 years PPA, it generates and sells electricity output to Manila Electric Company (MERALCO), the country's largest power distribution company.

In 2021, the power plant generated and sold 3,233.78 GWh electricity output to MERALCO. Its annual average EAF was 89.85%.

4.8 Xayaburi Power Company Limited (XPCL)

EGCO holds 12.50% stake in XPCL, which owns and operates a 1,280 MW run-of-river hydroelectric power plant located in Lao PDR. It generates and sells electricity output to EGAT, as well as Electricité du Laos (EDL) under the 29 years PPAs starting from its COD.

In 2021, XPCL power plant generated and sold 7,211.65 GWh electricity output to EGAT and 83.75 GWh electricity output to EDL.

4.9 Linden TopCo Limited Liability Company (Linden)

EGCO indirectly holds 28% stake in Linden, which owns and operates a 972 MW natural gas combine cogeneration power plant located in USA. It comprises of Linden project units1-5 of 800 MW and Linden project units 6 of 172 MW, which generates and sells electricity output and capacity to the New York System Operator (NYISO-Zone J), as well as PJM PS North power market in New Jersey which served as the market operator

In 2021, Linden power plant units 1-5 generated and sold 4,345.01 GWh electricity output to NYSIO. Its annual average EAF was 88.53% and Linden power plant units 6 generated and sold 1,275.19 GWh electricity output to PJM. Its annual average EAF was 94.50%.

5 OTHER BUSINESSES

5.1 EGCO Engineering & Service Company Limited (ESCO)

EGCO holds 100% stake in ESCO, which provides operation, maintenance, engineering and construction services to power plants, petrochemical plants, oil refineries and other industries.

5.2 E&E Engineering and Service Company Limited (E&E)

EGCO indirectly holds 40% stake in E&E Engineering and Service Company Limited, which provides operation and maintenance services to NT1PC power plant through a long-term operation and maintenance agreement and provides the various service to other power plants and industries in the Laos PDR.

5.3 Pearl Energy Philippines Operating, Inc. (PEPOI)

EGCO indirectly holds 100% stake in PEPOI (formally named Covanta Philippines Operating Inc.), which provides operation and maintenance services to Quezon power plant through a long-term operation and maintenance agreement.

5.4 Quezon Management Services Inc. (QMS)

EGCO indirectly holds 100% stake in QMS, which provides management services to Quezon power plant through a long-term management service agreement.

5.5 PT Manambang Muara Enim (MME)

EGCO indirectly holds 40% stake in MME, which owns and operates a coal mining project (an open-pit mine), located in Muara Enim, South Sumatra, Indonesia. It has the concession agreement from Indonesian government for 28 years since March 2010 to March 2038. It has mineable coal reserves of 134 million tons. The sales volume of MME in 2020 was at 1.58 million tons.

5.6 Apex Clean Energy TopCo Limited Liability Company (Apex TopCo)

EGCO indirectly holds 17.46% stake in APEX TopCo which is a private utility scale renewable development company, located in the State of Virginia in USA. Its business is based upon the development of renewable projects through the point of Notice to Proceed (“NTP”) for construction or up to the project’s Commercial Operation Date (“COD”), and the subsequent sale of these projects to third party investors.

5.7 Peer Power Company Limited (Peer Power)

EGCO directly holds 24.24% stake in Peer Power Company Limited. Peer Power is a fintech startup, focusing on an online electronic platform for bond and equity crowdfunding that connects investors to Small and Medium-sized Enterprises. Peer Power is the first platform which has obtained the first crowdfunding license from the Securities and Exchange Commission since 2019. EGCO plans to apply blockchain technology developed by Peer Power into energy trading platform. Moreover, EGCO plan to utilize Peer Power’s Data center for providing renewable energy source.

5.8 Other Businesses operated by EGCO

EGCO acquired the LNG Shipper License to import the Liquefied Natural Gas (LNG) in the greatest amount of 200,380 tons per year with 10 years validity with effect on July 24, 2021. Regarding such approval, EGCO is enabled to supply such fuel to the 3 Small Power Plants (SPP) in EGCO, comprising 1) BPU with a fuel consumption of 54,000 tons per year, 2) KLU with a fuel consumption of 27,000 tons per year, and 3) EGCO Cogen with a fuel consumption of 119,000 tons per year in place of the existing site of which the PPA will expire in 2024.

OPERATIONAL ASSETS

FIXED ASSETS

The fixed assets of the company and subsidiaries as at December 31, 2021 comprise the following items.

ITEMS	VALUE[/1] (MILLION BAHT)
1. Land and Building	7,280
Less Accumulated Depreciation	(1,966)
Impairment	(73)
Total	5,241
2. Power Plant and Transmission System	72,397
Less Accumulated Depreciation	(26,509)
Impairment	(1,699)
Total	44,189
3. Office Equipment and Cars	686
Less Accumulated Depreciation	(525)
Total	161
4. Work Under Construction	6

Remark: /1 The number was shown in EGCO Group's consolidated financial statement. EGCO Group has recorded interest in equity method from joint ventures in the financial statement. Therefore, the values of land, buildings and pledged of joint ventures were not shown in the financial statement.

Subsidiaries

Khanom Electricity Generating Co., Ltd. has mortgaged land, buildings, and pledged power plant equipment to secure its loan from financial institutions worth 311 million USD and 11,616 million Baht.

SPP 2 Co., Ltd. has mortgaged land, buildings, and pledged power plant equipment to secure its long-term loan worth 868 million Baht.

SPP 3 Co., Ltd. has mortgaged land, buildings, and pledged power plant equipment to secure its long-term loan worth 904 million Baht.

SPP 4 Co., Ltd. has mortgaged land, buildings, and pledged power plant equipment to secure its long-term loan worth 684 million Baht.

SPP 5 Co., Ltd. has mortgaged land, buildings, and pledged power plant equipment to secure its long-term loan worth 830 million Baht.

Banpong Utilities Co., Ltd. (BPU) has mortgaged buildings, and pledged power plant equipment to secure its long-term loan worth 103 million USD and 6,646 million Baht.

Klongluang Utilities Co., Ltd. (KLU) has mortgaged buildings, and pledged power plant equipment to secure its long-term loan worth 5,324 million Baht.

Theppana Wind Farm Co., Ltd. (TWF) has mortgaged buildings, and pledged power plant equipment to secure its long-term loan worth 4 million USD and 275 million Baht.

Chaiyaphum Wind Farm Co., Ltd. (CWF) has mortgaged buildings, and pledged power plant equipment to secure its long-term loan worth 30 million USD and 4,010 million Baht.

Solarco Co., Ltd. (SLC) has mortgaged buildings, and pledged power plant equipment to secure its long-term loan worth 35 million USD and 3,960 million Baht.

Boco Rock Wind Farm Pty Limited has mortgaged company's assets to secure its long-term loan worth 206 million AUD.

INTANGIBLE ASSETS

Right in long-term power purchase agreements, Right to use transmission facilities and Licenses for operating power plants Right in long-term power purchase agreements, right to use transmission facilities and licenses for operating power plants from the acquisitions of subsidiaries, associate and joint ventures at the date of acquisition which EGCO Group expected to receive benefits and bonus in return. Hence, those intangible assets are amortized using the straight-line method over their estimated useful life. Management determines the estimated useful life within 15-25 years.

The net value of right in long-term power purchase agreements, right to use transmission facilities and licenses for operating power plants arising from the acquisitions of subsidiaries are presented in EGCO's consolidated statement of financial position as at 31 December 2021 in the amount of 2,548 million Baht. The amounts arising from the acquisitions of joint ventures and associate are included in investments in joint ventures and associate in the consolidated statement of financial position.

LAND FOR RENT

As at 31 December 2021, EGCO and its subsidiaries have operating leases for operational assets as follows:

LESSEE	LESSOR	TYPES OF LEASE	PERIOD	BEGINNING DATE	ENDING DATE
BPU	Siam Craft Co., Ltd	Land Rental for Power Plant	28 Years 8 Months	1 Feb 2016	15 Oct 2044
KLU	EGCO	Land Rental for Power Plant	28 Years	25 May 2015	24 May 2043
SLC	Yanhee Power Holding Co., Ltd	Land Rental for Power Plant	25 Years	18 Nov 2013	17 Nov 2038

LESSEE	LESSOR	TYPES OF LEASE	PERIOD	BEGINNING DATE	ENDING DATE
TWF	Agricultural Land Reform Office	Land Rental	27 Years	18 Oct 2010	17 Oct 2037
	Individual	Land Rental for placing electrical wire and gateway of Power Plant	27 Years	22 Jun 2011	21 Jun 2038
	Individual	Land Rental for Wind Turbine and corridor between Wind Turbine and Agricultural Land Reform Office	27 Years	1 Jun 2010	31 May 2037
CWF	Agricultural Land Reform Office	Land Rental for operating Power Plant	27 Years	18 Jan 2012	17 Jan 2039
	Agricultural Land Reform Office	Land Rental for operating Power Plant	26 Years	29 Aug 2016	28 Aug 2042
	Individual	Land Rental for operating Power Plant	27 Years	18 Jan 2012	17 Jan 2039
	Individual	Land Rental for Storage	5 Years	1 Jan 2018	31 Dec 2023

INVESTMENT POLICY IN SUBSIDIARIES, ASSOCIATE AND JOINT VENTURES

EGCO aims to secure continuous growth and achieve a corporate vision: “To be a major sustainable Thai energy company with full commitment to environment protection and social development support”. New projects consideration is based on return on investment, EGCO’s experience and expertise to create value added, optimizing financing cost and being within acceptable project risks. Also, EGCO places a great emphasis on effective asset management to ensure maximum efficiency of existing power plants in order to achieve its highest performance and manage projects under construction to be completed as scheduled and within the planned budget. Moreover, EGCO has a strong intention to enhance corporate sustainability standard of EGCO Group, by integration of sustainability practices. In overall, the corporate strategies would be implemented to ultimately deliver sustainable long-term value towards stakeholders.

REVENUE STRUCTURE

EGCO Group business comprise holding company, electricity generation and sale companies, operating, maintenance, engineering and construction companies. The revenue structure of EGCO Group is summarized in the below table.

Unit: Million Baht

PRODUCT SERVICE	TRANSACTION	% SHAREHOLDING	2021		2020	
			REVENUE	%	REVENUE	%
Electricity	Quezon	100.00%				
	Energy Charge		10,599.34	23.78%	8,855.59	21.69%
	BPU	99.99%				
	Capacity Charge		858.13	1.93%	819.74	2.01%
	Energy Charge		3,816.89	8.57%	3,521.37	8.62%
	KLU	99.99%				
	Capacity Charge		420.04	0.94%	423.94	1.04%
	Energy Charge		1,953.59	4.38%	1,814.82	4.44%
	EGCO COGEN	80.00%				
	Capacity Charge		249.38	0.56%	244.80	0.60%
	Energy Charge		1,745.62	3.92%	1,636.64	4.01%
	BRWF	100.00%				
	Energy Charge		914.95	2.05%	872.51	2.14%
	CWF	90.00%				
	Energy Charge		313.78	0.71%	328.24	0.80%
	Solarco	49.00%				
	Energy Charge		351.73	0.79%	369.58	0.91%
	SPP 2	99.99%				
	Energy Charge		43.81	0.10%	47.80	0.12%
	SPP 3	99.99%				
	Energy Charge		45.82	0.10%	48.86	0.12%
	SPP 4	99.99%				
	Energy Charge		32.27	0.07%	33.77	0.08%
	SPP 5	99.99%				
	Energy Charge		47.75	0.11%	48.87	0.12%
	TWF	90.00%				
	Energy Charge		33.35	0.07%	31.59	0.08%
Finance lease income under power purchase agreements	KEGCO	99.99%	2,804.13	6.29%	2,874.68	7.04%
	RG	70.30%	(3.24)	(0.01%)	2.39	0.01%

Unit: Million Baht

PRODUCT SERVICE	TRANSACTION	% SHAREHOLDING	2021		2020	
			REVENUE	%	REVENUE	%
Lease service income under power purchase agreements	KEGCO	99.99%	10,433.96	23.41%	10,696.62	26.20%
	RG	70.30%	210.42	0.47%	233.35	0.57%
Service	ESCO	99.99%	785.45	1.76%	433.19	1.06%
	Quezon, PEPOI and QMS	100.00%	246.24	0.55%	239.32	0.59%
Interest Income	EGCO		97.26	0.22%	117.68	0.29%
	EGCO PLUS		46.29	0.10%	81.25	0.20%
	KEGCO		11.62	0.03%	17.73	0.04%
	Quezon		3.18	0.01%	8.00	0.02%
	KLU		2.62	0.01%	4.54	0.01%
	BPU, CWF, Solarco, KLU, EGCO COGEN, ESCO, RG, SPP 2, SPP 3, SPP 4, SPP 5, TWF, PEPOI, QMS and BRWF		13.11	0.03%	31.18	0.08%
Others	Solarco /A		888.74	1.99%	909.34	2.23%
	CWF /A		438.41	0.98%	437.79	1.07%
	KEGCO		138.93	0.31%	11.59	0.03%
	SPP 2 /A		113.45	0.26%	119.41	0.29%
	SPP 3 /A		119.27	0.27%	123.53	0.30%
	SPP 4 /A		83.87	0.19%	85.70	0.21%
	SPP 5 /A		123.79	0.28%	124.86	0.31%
	EGCO		64.29	0.16%	273.71	0.67%
	TWF /A		44.83	0.10%	41.10	0.10%
	PEPOI		18.55	0.04%	3.57	0.01%
	ESCO, KLU, EGCO PLUS, RG, Quezon, BPU, EGCO COGEN, BRWF, QMS and Quezon		25.32	0.06%	21.71	0.05%

Unit: Million Baht

PRODUCT SERVICE	TRANSACTION	% SHAREHOLDING	2021		2020	
			REVENUE	%	REVENUE	%
Share of profit (loss)	GEC /B, /E	50.00%	1,412.43	3.17%	1,365.91	3.35%
	NTPC	35.00%	1,185.32	2.66%	1,217.19	2.98%
	SBPL	49.00%	815.67	1.83%	604.50	1.48%
	SEG	20.00%	545.05	1.22%	408.78	1.00%
	PAJU ES /C	49.00%	534.15	1.20%	798.42	1.96%
	XPCL	12.50%	455.60	1.02%	103.78	0.25%
	SEGSD	11.89%	435.93	0.98%	265.08	0.65%
	MME	40.00%	409.79	0.92%	(5.73)	(0.01%)
	APEX /D	17.46%	322.32	0.72%	-	0.00%
	NED /E	66.67%	280.59	0.63%	4.44	0.01%
	NT1PC	25.00%	264.25	0.59%	(64.16)	(0.16%)
	BLCP	50.00%	46.13	0.10%	372.89	0.91%
	GPS /E	60.00%	40.51	0.09%	(28.05)	(0.07%)
	Yunlin	25.00%	0.92	0.00%	(206.43)	(0.51%)
	E&E	40.00%	0.29	0.00%	(0.06)	(0.00%)
	Innopower /F	30.00%	(0.16)	0.00%	-	0.00%
	TPN	49.00%	(5.09)	(0.01%)	1.48	0.00%
	Linden Topco /G	28.00%	(315.51)	(0.71%)	-	0.00%
TOTAL REVENUES (REVENUES ITEM IN CONSOLIDATED)			**44,565.13**	**100%**	**40,828.40**	**100%**

Remarks:
/A Adder is an income, which is supported by the government.
/B Samutprakarn Cogeneration Co., Ltd. (SCC) and Nong Khae Cogeneration Co., LTD. (NKCC) are power plant of Gulf Electric Public Co., Ltd. (GEC), which is EGCO holds a 50% stakes, stopped its operation and electricity sales to EGAT due to the expiration of PPA on August 23, 2020 and October 12, 2021 respectively.
/C EGCO approved the investment in Gangdong Fuel Cell Project (Gangdong), a project of Paju Energy Services Co., Ltd. (Paju ES), which is EGCO holds a 49.00% stakes on June 21, 2019. Construction works of the project was complete and its operation started on October 1, 2020.
/D EGCO entered into the share purchase agreement to acquire a 17.46% ownership interest in Apex Clean Energy Holdings, LLC (Apex) on November 17, 2021.
/E Natural Energy Development Co., Ltd. (NED) and G-Power Source Co., Ltd. (GPS) recognised allowance for impairment in 2021 and 2020.
/F EGCO jointly established a joint venture called Innopower Company Limited (Innopower) with the investment portions of 30% on September 13, 2021.
/G EGCO entered into the share purchase agreement to acquire a 28% ownership interest in Linden Topco LLC (Linden Topco) on June 4, 2021.

RISK FACTORS AND RISK MANAGEMENT

RISK GOVERNANCE STRUCTURE

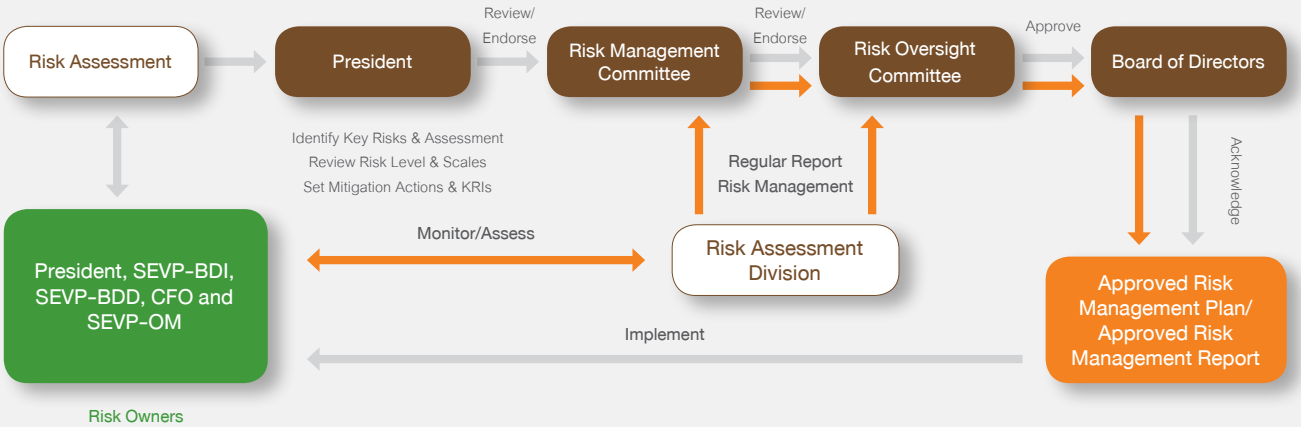
Electricity Generating Public Company Limited (EGCO) operates its core business, focusing on power generation and the continued expansion of investments in up-and downstream related energy businesses (e.g., those related to fuel and other infrastructure and smart energy solutions). EGCO is fully committed and determined to enhance its sustainable growth while operating its business using effective Enterprise-Wide Risk Management, which ultimately optimizes stakeholder value.

Our Risk Oversight Committee (ROC) operates at the level of the board of directors and is comprised of five experienced directors from the fields of enterprise risk management, corporate governance, strategy and business planning, law, accounting, economics, finance and banking, engineering, infrastructure project investment, human resource development, power, and energy business. The executive vice president of corporate strategy is the secretary. The Risk Oversight Committee's main duties and responsibilities are to consider, review, and provide recommendations on enterprise risk management (ERM) policy and framework; to set corporate risk appetite and risk tolerance level; to confirm the key risks, their impacts, and possibilities; ERM plan and process; to provide recommendations and support to EGCO Group's Board of Directors and management, and to appropriately and efficiently supervise the managing of various risks relating to business operations. Additionally, they are to regularly report to the board on the results of their risk assessments and implemented risk mitigations.

At the management level, our Risk Management Committee (RMC) is comprised of top executives with the president serving as the chairman of the committee; all senior executive vice presidents are members, the executive vice president of corporate strategy is the consultant, and the senior vice president of risk assessment is the secretary. The Risk Management Committee's main duties and responsibilities are to manage EGCO Group's risk management to comply with risk management policies and guidelines, promote and support ERM policies, and to regularly report to the ROC and the board of directors. In the case of potential significant risk factors, the Risk Management Committee shall promptly report to the ROC and the board.

Additionally, EGCO Group has a Risk Assessment Division which functions as the secretary of the RMC and the ROC. This division is responsible for monitoring and reporting the company's risk management practice, cooperating with the risk owners on risk identification, risk assessment, risk response, and reporting matters about risk management practice to the Risk Management Committee. In 2021, there were 11 meetings with the RMC and 13 meetings with the ROC to make sure that the risk management processes are implemented throughout the organization, all divisions and EGCO Group are fully aware of risk management's importance. The corporate risk management framework is as follows:

FRAMEWORK FOR CORPORATE RISK MANAGEMENT



RISK MANAGEMENT PHILOSOPHY AND POLICY

EGCO Group announced its risk management philosophy, which states:

EGCO Group strives to manage risk efficiently, despite the risks implicit in doing business, balancing risk and return for the benefit of all stakeholders. Our risk management shall increase our opportunities to achieve corporate goals and create sustainable corporate values.

Our philosophy will be applied throughout our organization to support enterprise risk management (ERM), which follows the risk management framework set by the board of directors. EGCO strives to manage risk efficiently with consideration of balancing risk and return to create value optimization. The Risk Oversight Committee (ROC) is responsible for the management overview of this Risk Management Policy, in which the assignment has been made to the Risk Management Committee (RMC) for execution. The effectiveness of this Risk Management Policy shall cover all companies under EGCO management and control. Moreover, EGCO will inform all of its subsidiaries and affiliated companies, including relevant, about this policy, helping them to enact the risk management goals listed below.

1. To create risk awareness and foster a mutual understanding that risk management is everyone's duty and responsibility.
2. To establish risk governance structure and resources that comply with the COSO-Enterprise Risk Management framework (COSO-ERM) using risk management knowledge and expertise.
3. To ensure that management encourages the awareness of organization risk management as a culture throughout the organization.
4. To set risk appetite and the range of acceptable risk tolerance, complying with business context and strategy.
5. To regularly provide capacity building and knowledge sharing regarding enterprise risk management, covering guidelines for implementation, law, and regulation.
6. To conduct a project risk assessment that aligns with the company's risk management perspective and that must be approved by the Board of Directors for all investment projects.
7. To prepare a risk management report, risk management manual, and business continuity plan for its subsidiaries. Reviews and updates of these documents shall be made regularly.
8. To regularly set an internal audit policy that focuses on risk management activities as well as internal control systems for risk management processes.

EGCO management will ensure the enforcement and continuous support of the risk management policy to ultimately achieve a risk management goal. EGCO Group also applied the Committee of Sponsoring Organizations of the Treadway Commission Enterprise Risk Management (COSO ERM) framework, which was classified as strategic risk management, operating risk management, financial risk management, and compliance risk management. We recently updated our "Risk Management Manual" to be in line with the 2017 COSO ERM. Moreover, EGCO Group established its key risk indicators (KRIs) which comprised the leading and lagging indicators in risk management, and also encouraged the employees to appropriately utilize these KRIs with their operations.

ENCOURAGE RISK MANAGEMENT CULTURE THROUGHOUT THE ORGANIZATION

EGCO Group realizes that risk management culture in an organization is a key factor to achieve ERM, therefore it has been promoting the importance of ERM by using various channels such as annual risk seminars, the Risk Management Manual, journals and news, risk management activities, EGCO radio, EGCO billboards, and EGCO Group Net. Additionally, the company's board of directors and high-level executives play significant roles in promoting risk management throughout the organization by following the "tone at the top" model. The company is now in the process of developing E-Learning applications to instruct employees about the advantages of applying COSO ERM in their future business operations.

In 2021, EGCO developed a "Risk Management Information System" (EGCO RMIS) as an internal risk management monitoring system with high-security details and data storage on the cloud to support the risk management culture and to communicate that risk management comprehension is a part of every employee's role and responsibility. The system will become operational in 2022.

Employees are encouraged to report any risky events that may lead to negative impacts on business operations or the organization. This can be done through a system-service investigation request (SSIR), which is an internal system, or through the following whistleblowing channels and procedures:

BY SENDING AN ELECTRONIC MAIL

to the whistleblower at any faculty, including:

- Audit Committee: auditcommittee@egco.com
- Good Corporate Governance Working Group: goodgovernance@egco.com
- Board of Directors: directors@egco.com

BY SENDING PHYSICAL MAIL

to the whistleblower or one of the committees at the following address:

Electricity Generating Public Company Limited
EGCO Tower, 222 Vibhavadi Rangsit Road,
Thungsonghong, Laksi, Bangkok 10210

ASSESSING CORPORATE KEY RISKS, EMERGING RISKS AND RISK MITIGATION

The following is a summary of EGCO Group's key risk factors and relevant mitigation measures.

1. Investment Expansion Risk

EGCO Group invests in the energy business and its related businesses in both domestic and overseas markets. The primary source of income is dividends from the subsidiaries and joint ventures. To maintain and increase shareholder value, our strategic plan includes continuous investment in new projects. Such acquisition and development projects may entail the following risks that may affect the company's investment target.

1.1 Project Selection Risk

EGCO Group plans to expand its investments to maintain continuous growth. Potential domestic and overseas projects are listed in the yearly investment plan-including the expansion of electricity generation of fossil fuels and renewable energy. Since the project selection process is of great importance, we have assigned this task to the Business Development Unit. This unit analyzes the related factors including economic policies, political and social policies of the targeted countries, economic situations, industry, financial costs, equipment, and construction costs, environmental, social and governance (ESG) issues, and governmental laws and regulations. Moreover, the analysis of the changing environmental factors (sensitivity analysis) and EGCO's internal factors including internal audit factors that affect the projects is taken into consideration, so that the risk prevention and compensation are accounted for in the return of the investment analysis.

Furthermore, EGCO Group has identified new investment opportunities that must be reviewed and scrutinized by the EGCO's Executive Management Committee and the Investment Committee to ensure that all material risks are identified and well-managed before the new investment opportunities are proposed to the board of directors.

1.2 Overseas Asset Management Risk

Overseas investments create opportunities for the long-term growth of EGCO Group. Nevertheless, various factors may impact the performance of such assets such as economic circumstances, political factors, business environment, and the local community. These factors are still present in EGCO Group's earnings forecast and can be possibly affected by those factors. To mitigate these risks, EGCO Group engages competent personnel who have experience in such specific markets to work on these overseas assets so that they are efficiently managed, and the targeted profits are met.

EGCO Group has assigned an executive to work at the power plants such as NT1PC, NTPC in Laos, QPL and SBPL in the Philippines, and NGP in the Netherlands. Additionally, we have hired external specialists who are familiar with Australia's economy to work at BRWF in Australia.

Along with delegating the right people to work in overseas power plants, EGCO Group has also appointed competent representative directors from the management levels of senior vice president and above from the related fields including business development, financial accounting, and asset management. They will be directors in power plants where EGCO Group holds an ownership interest under the shareholder agreement and the Articles of Association. These representative directors are responsible for policy administration, operational performance, and supervising these companies to effectively carry out its business operation following Regulation on Arm's Length Relation with EGCO Group the management principles that are in line with the company's policies.

2. Construction Project Management Risk

EGCO Group is aware of the risk from project construction delays which can be caused by contractors' irresponsibility, local community conflicts, natural disasters, and the COVID-19 epidemic. The measures that can be taken to lower the likelihood and impacts of such risks include the selection of reputable engineering, procurement, and construction (EPC) contractors with binding contracts; proactive community relations activities; and the securing of insurance policies that cover the impacts from natural disasters. EGCO Group assigns a project management team to closely monitor a project's progress to guarantee that it is completed as scheduled.

In 2021, there were 3 projects under construction, specifically Nam Theun 1 Hydropower Plant in Laos, the extension of the petroleum pipeline system to the northeastern region of Thailand, and Yunlin Offshore Wind Farm in Taiwan. These ongoing projects have a well-managed construction risk and are expected to be completed and achieve their COD as scheduled.

3 projects under construction | expected to be completed and achieve their COD as scheduled

3. Operating Risks

3.1 The Risk of Obtaining Lower-forecasted Earnings

EGCO Group has focused on the risks related to its operating assets to verify that the actual performance of these invested assets meets their expected performance. Therefore, the Asset Management Unit has been assigned to monitor the performance of each asset. These financial objectives are comprised of analysis and comparison of the actual and planned performance targets. The measures imposed to manage the relevant risks are as follows:

- Asset management policies will be established and, whenever possible, management representatives and personnel will be selected to be directors or managers of subsidiaries and operating projects.
- The role of performance monitoring and root-cause analysis will be investigated and plans to improve lagging performance will be created.
- Joint venture performance analyses will be prepared and subsequently reported to senior management and the board of directors so that they can promptly take appropriate actions.
- The coordination with partners for collaborative auditing activities in invested companies to ensure the adequacy and the effectiveness of their internal control systems.

In 2021, EGCO Group was able to manage the risks to achieve the Return on Investment (ROI) as target.

3.2 Plant Performance Risks

EGCO Group's power plants have managed plant performance risks to be fully compliant with the power purchase agreements (PPAs). The significance of root causes and risk management measures are summarized as follows.

3.2.1 Power Plant Efficiency Risk

PPAs stipulate various power plants' efficiency indicators such as Heat Rate and failure to meet their performance requirements. Unmaintainable efficiency indicators will result in a higher cost of electricity generation than those specified within the contract. The cause of such risks can be maintenance malpractice in power plants. Therefore, EGCO Group sets the plant management policy and systems so that preventive maintenance is carried out continuously in a professional manner. Working procedures implemented by plant management also confirm that all relevant risks are under control. These procedures are as follows:

- Regular inspections and maintenance according to the schedule by the skilled technicians.

- Installation of monitoring systems for critical equipment in power generation systems. These monitors will provide advance notification if a problem occurs with the equipment such as the vibration monitoring system of the gas and steam turbine and the monitoring system for pressure and temperature of the steam entering the steam turbine.
- Provide the necessary inventory reserves which include machinery spare parts, chemicals, lubricants, and various supplies used in maintenance. These items should be sufficient for use and maintenance under proper inventory management.
- The implementation of the Quality Management System (ISO 9001:2015) in 12 power plants to ensure their quality operation as well as to comply with PPAs such as Khanom, GPG, GYG, SPP Two, SPP Three, SPP Four, SPP Five, GPS, Solarco, SEG, PAJU, and SBPL.
- The continuous development of employee competency.

Last year, the execution of such mitigation measures resulted in the satisfactory performance of our power plants.

3.2.2 Raw Water Shortage Risk

Raw water shortage can be caused by climate change or the delay of the rainy season and can result in power plant shutdowns. Using water in operations may affect the public and the environment. Consequently, the EGCO Group's power plants must assess and plan their yearly water usage, analyze their water situation and have their reservoir reserve sufficient water supply. Moreover, the "3Rs" principle (Reduce, Reuse, and Recycle) has been utilized by the EGCO Group to maximize their water usage efficiency and reduce any environmental or public effects.

3.2.3 Fuel Shortage Risk

A fuel shortage can result in plant shutdowns, revenue shortfalls, or levied fines. A shortage of coal and biomass fuel could be caused by the increasing demand or the impact of a disaster. In addition, fuel prices may fluctuate and result in costs and profits fluctuate which may cause losses.

The following measures have been implemented to prevent and reduce these risks:

- EGCO Group's coal-fired power plants–SBPL, BLCP, and Quezon–have a long-term coal supply agreement which is adequate for power generation. The suppliers are obliged to supply their coal with the quantity and quality specified in the agreement. Plus, each power plant has reserved the coal to sufficiently operate for a 30-day, 30-day, and a 45-day continuous operation, respectively.
- EGCO Group's biomass power plants that use rice husks and rubberwood scraps as fuel for electricity generation may face a fuel risk from inadequate supply and pricing volatility due to the uncertain nature of agricultural products. To mitigate such a risk, the power plants expanded their fuel-sourcing areas and procured large amounts of the materials in the high season at lower prices. The Roi-Et Green Power Project, which uses rice husks, and the Gulf Yala Green power plant, which consumes rubberwood scraps, also reserve fuel sufficient for 20-day and 14-day continuous operations, respectively. Furthermore, Roi-Et Green has added alternative fuels such as sawdust and cassava rhizome to mix with the rice husk; similarly, Gulf Yala has included chopped rubberwood roots to mix with the rubberwood scraps for fuel cost reduction and the diversification of fuel supply risk in electricity generation.

3.2.4. Safety, Health, Environmental, and Social Risks that Must Comply with International Standards

EGCO Group realizes that the electricity generation process could incur certain risks in the safety, health, staff environment, and surrounding communities. Notably, the management has taken the following actions to alleviate any potential negative impacts and reduce the likelihood of the following risks:

- Follow EGCO Group's Corporate Social Responsibility policy.
- Conform to the requirements of safety, health, and environment management manuals in which the guidelines have specified for implementation, monitoring, and auditing.
- Strictly comply with work manuals and emergency plans, administer training and plan testing, equipment and warning systems.
- Implement an Environment Management System (ISO 14001:2015) in the following 10 power plants: Khanom, GPG, BLCP, KLU, BPU, GYG, TWF, NTPC, SEG, and PAJU, for the objective of continuously and sustainably improving the environmental management system.
- Implemented Occupational Health and Safety Assessment Series (OHSAS 18001:2015) in 5 power plants, specifically Khanom, BLCP, NED, Nam Theun 2, and SEG. The objective is to reduce and control health and safety risks in the employees, associated with the employees and the stakeholders, to improve business operations efficiency, maintain safety, and increase a corporate reputation of responsibility toward employees and society.

- Implement Environmental Standards of UA (EMSCOP) to the Quezon power plant in the Philippines.

Through the constant administration of such measures, such risks are properly managed.

3.2.5 Accidents, Resistance, Sabotage, and Natural Disasters Risks

In conducting its business, EGCO Group may cope with natural disaster risks and accidents which occur from human error or low machine efficiency. Possibly, the community resistance may occur when the production negatively affects the community. Furthermore, there is a sabotage risk which will cause severe loss to power plants.

Management has put forth the following measures to investigate and reduce the likelihood of these risks listed here:

- Communicate with personnel to avoid carelessness.
- Regularly maintain all equipment.
- Strengthen relationships with the surrounding communities.
- Collaborate with government agencies as well as local authorities.
- Deploy a security plan that includes regular drills and security equipment such as closed-circuit TV and various monitoring devices that should always be in use.
- Prepare yearly fire drills and fire evacuations to respond to an emergency in the company's power plants and its head office building.
- Arrange and practice business continuity planning (BCP) for crisis management with EGCO Group headquarters to ensure that the business operation is continuously operating with sustainability. Additionally, EGCO Group has sufficient insurance to cover all risks, property damage, machinery breakdowns, business interruptions, third party liabilities, and political violence. For example, enough insurance for the effects of loss from terrorism, sabotage, riots, political conflicts, revolution, and for disaster events such as floods, storms, earthquakes, and landslides. This will assure that loss from damages in unexpected cases would be properly and adequately protected, covering majority-owned power plants and EGCO Group headquarters.
- Apply weather forecast tool and report to cope with drought crisis management and electricity generation planning for NTPC and XPCL.

4. Financial Risks

EGCO Group's investments are capital-intensive. Since partial-funding sources primarily consist of loans from domestic and international financial institutions, fluctuations in foreign exchange rates and interest rates constitute a source of significant risk. Therefore, mitigation measures regarding these investments are listed below.

4.1 Foreign Exchange Rate Fluctuation Risk

EGCO Group has a policy to lessen currency mismatches for each invested project to prudent levels by matching currencies from the funding sources and revenue structures. During the construction phase, EGCO Group applies an appropriated financial instrument and cross currency swap in order to manage the loan currency that matches with the development and construction costs.

4.2 Interest Rate Fluctuation Risk

EGCO Group has an interest rate fluctuation management policy which sets the guidelines of interest rate exposure mitigation by swapping floating interest rates to fixed interest rates at appropriate levels when the swap market is favorable.

4.3 Cash Management Risk from Overseas Investments

Most of the EGCO revenue is in US dollars and is a result of excess cash from offshore accounts, which may, in turn, affect US dollar cash management. Nevertheless, the EGCO Group will attempt to expand many of its overseas investment projects to maximize the firm value that invests primarily in US currency. The EGCO group will make it necessary to hold US currency cash. Moreover, the cash flow status is forecasted monthly to monitor the balance of cash inflow and outflow and to maintain cash in overseas accounts for any potential new investments. EGCO conducts financial projections every month. Cash is managed by depositing it with foreign commercial banks that have an investment-grade credit rating and a suitable deposit time. In this way, the cash has liquidity and EGCO can be consistent with its use of funds for new potential project investments.

5. Corporate Tax Legislation Risk

EGCO Group prioritizes its compliance with corporate tax legislation and tax planning to ensure that its tax management has due regard for relevant regulations. Currently, EGCO Group invests in both domestic and international businesses, and each country has different tax criteria, legislation, regulation, tax tariffs, etc. Accordingly, without well-prepared risk analysis and intensive study, the EGCO may have to confront risk and extensive damage to the EGCO reputation and operations. Therefore, it is vital for EGCO Group to thoroughly plan its tax strategies and provide accurate tax payments in compliance with invested countries' corporate tax legislation. For any new investment, EGCO Group must carry out an equivalent analysis and calculate the potential tax liability for that investment before proceeding.

EGCO Group has also presented its tax policy and practices on its intranet. This is meant to inform its related internal functions and to serve as a guideline for its tax management system.

6. Compliance Risk

With both domestic and overseas business operations, EGCO Group is regulated under related local laws and regulations as well as international laws. Because a legal dispute can affect our operation and its corporate image, we have been strictly complying with all relevant laws and regulations as well as environmental laws and the safety, health and environmental (SHE) regulations. Moreover, the organization will closely monitor any new governing laws and regulations.

In 2021, EGCO Group had no record of failures to comply with related laws and regulations that involved its business. Additionally, EGCO Group followed up with the new related laws and regulations to be disclosed to all concerned units in order to comply with newly issued conditions and to monitor through the legal database for their further compliance.

7. Human Resources Risk

EGCO Group believes that the employees are its most valuable asset and the success factor of the company. Losing valuable employees will lead to impairment, inefficient business continuity, and additional costs for recruiting and training recruits. Employee knowledge and expertise in the power business is crucial, and so losing competent employees is one of EGCO Group's major concerns. To alleviate such a risk, EGCO Group has accomplished the following risk mitigation measures.

- The creation of the effective Succession Plan Program for leadership and management development for the key-position successor's preparation along with deploying the individual development plan and job rotation program.
- Implement knowledge sharing (e.g., the characters and fuel types of the power plant, the power plant insurance, the successful innovations, the financial model and investment project valuation, and the application of the principles of ERM for integrated risk management with strategic plans) by keeping the lecture document, presentation, and video in the Knowledge Center to publish through the internal-use EGCO GroupNet.
- Implement an E-Learning system as the Employee Development Channel.
- Granting of the appropriate remuneration and benefits in return for employees' industrious dedication from their participation in the success of the organization. The employees will receive the remuneration monthly by following the company's salary structure and providing the compensation and the benefits at the competitive level with the labor market of the same business.
- Support the company activities among the employees, the management, and the committee to build up strong engagement and lead to a happy organization.

These risk mitigations ensure that the company's employees are competent and have the required knowledge and abilities which will enable it to be a sustainable growth organization.

8. Products and Services Procurement Procedure Risk

EGCO Group is determined to create sustainable operations. Thus, procurement procedures will be directed toward "supplier" risk management and will cover three factors: Environmental, Social, and Governance (ESG). The associated mitigation measures are as follows:

Supplier Code of Conduct

EGCO Group developed the Supplier Code of Conduct according to the Ten Principles of the UN Global Compact in combination with other internal standards, including industry material topics such as guidelines that all the EGCO's suppliers will be expected to follow. As expected, the EGCO Group's suppliers shall operate their businesses with integrity and in alignment with ESG objectives, as stated in the Code of Conduct. In 2021, 100% of new suppliers signed the Supplier Code of Conduct.

Supplier Day

EGCO Group intends to regularly hold a "Supplier Day," not only to promote a positive relationship with suppliers but also to provide them with sustainability-related information. EGCO Group implemented an assessment tool to review supplier current risk (weakness) on sustainability compared to EGCO Group's expectation (as outlined in the Supplier Code of Conduct). The assessment showed that there is still a need to further decrease current risk in environmental management.

For the Supplier Day 2021 seminar, EGCO Group organized knowledge sharing activities for the critical and risk suppliers, which entailed a discussion on the results of the annual supplier audit program, including

- Compliance with the law-safe environment and safety equipment for working
- Intellectual property confidentiality and data protection
- Human rights
- Conducting business with interest in the resources and environment.

That were ordered to apprise the suppliers of the ESG risks and encourage them to determine their own ESG risk management guidelines.

Supplier Audit Program

In the 2021 supplier audit program, EGCO Group assessed the risks of critical and high-risk suppliers to identify which suppliers were at risk of encountering ESG issues and requested their cooperation in attending the audit program.

In 2021, EGCO Group audited the key value supplier and the high-risk suppliers with a total of 40 partners. In 2022, EGCO Group is continuing the process to proceed to the next audit.

EMERGING RISKS

1. Coronavirus Disease 2019 (COVID-19) Impact Risk

The COVID-19 crisis affects EGCO's short-term operations, such as fewer electricity generation dispatch orders (which decrease with the decrease in electricity demand) and the postponement of maintenance plans for some power plants due to travel and transportation restrictions. However, the EGCO Group is still generally able to operate its business continuously and efficiently throughout the business chain according to the Business Continuity Plan (BCP), which has been prepared for both headquarters

and power plants in the EGCO Group. The BCP plan is reviewed for each situation. Presently, the EGCO Group's 29 power plants in both domestic and overseas operations continue to smoothly operate and distribute electricity to the power system. Additionally, there is a slight delay in the progress of construction projects and new investment projects, but the construction and project development risk has been well-managed, and the projects are expected to be completed as scheduled.

To handle the spread of COVID-19, including new variants (e.g., Delta, Omicron, etc.) the EGCO Group mitigated risk by preparing and following strict COVID-19 preventive measures in office processes and power plant operations, as stipulated in the BCP plan for office worker mitigations. For office workers, these measures include working from home, holding meetings online, measuring body temperature, and wearing a face mask. For power plant operators, mitigation measures include area restrictions, limitations on the number of operators in a control room, isolated shift operations, and conducting medical screening of contractors. The EGCO Group provides the sources for vaccination as well as supports the employees, who work in offices and power plants, for vaccinations. Moreover, the EGCO Group is highly concerned about the safety and health of its shareholders and all related parties at the annual shareholders' meeting. Hence, the annual shareholder's meeting was conducted via electronic media, and e-proxy and e-voting were implemented.

2. Government Policy, Legislative Change and Compliance Risk Due to Climate Change

Climate change has a continual and severe global impact. Many countries have realized this and anticipated the necessity of a clear and definite response to the problems and potential dire repercussions, such as the rise in global temperatures, floods, earthquakes, wildfires, tropical storms, etc. As a result, the 26th United Nations Climate Change Conference was held in Glasgow, Scotland from November 1st to 12th, 2021. The summit resolved to keep the global temperature rise limit at 1.5 degrees Celsius and restrict coal consumption. The Thai government stated that Thailand would become a carbon-neutral country by 2050 and reach net zero emissions by 2065. The National Energy Plan (NEP) intends to assist Thailand in its transition to renewable energy and carbon reduction.

To mitigate such global climate risks, EGCO Group not only closely monitors and analyzes the impacts, but also set a long-term investment target to decrease its coal energy portfolio to 20-21% and increase its renewable energy and smart energy portfolio to achieve 30% and aims to reduce 10% carbon intensity by 2030 in both domestic and overseas operations to transition to a low-carbon society. The investment plan is consistent with EGCO Group's "Cleaner, Smarter and Stronger to Drive Sustainable Growth" initiative, which targets carbon neutrality by 2050 in support of the global low-carbon goals. In 2021, the EGCO renewable energy portfolio was 18.61% of our total electricity generating capacity which could reduce approximately 564,000 tons of carbon dioxide equivalents to the per-year emission rate (14 EGCO subsidiaries) in alignment with the government's policy. Furthermore, EGCO Group will invest in environment-friendly technology for future investments, promote energy conservation within our organization, and reduce GHG emissions indirectly by conducting business with eco-friendly partners.

set a long-term investment target to decrease its coal energy portfolio to **20-21%**

increase its renewable energy and smart energy portfolio to achieve **30%**

Reduce approximately **5.64** thousand tonCO_2e equivalents to the per year emission rate

3. Emerging/Disruptive Technology Risk

Following the rapid technological advancements from microgrid systems, renewable energy systems, energy storage systems, and big data systems, the government aims to develop and launch its Commercial Smart Grid by 2021. Regarding the Thailand Smart Grid Development Master Plan 2016-2021, the Ministry of Energy has been assigned to take primary accountability through these three pillars: (1) Demand Response and Energy Management System, (2) Renewable Energy Forecasting System, and (3) Micro Grid and Energy Storage System. This government policy will gradually transform the user behaviors from consumer to "prosumer" and electricity peer-to-peer trading.

Furthermore, the smart grid could reasonably be expected to influence the industries due to its production cost and energy trading scheme that may impact not only government authorities that include the Electricity Generating Authority of Thailand, Metropolitan Electricity Authority, and Provincial Electricity Authority, but also the independent power plants. On the other hand, this transformation may provide an opportunity to create value for the organization.

To alleviate such a risk, the EGCO Group closely monitors technological changes while developing new business opportunities by running the "EGCO Group INNERGY." This event aims to improve teamwork, employee creativity, and employee competency, which will eventually provide sustainable business growth to the organization.

4. Cybersecurity and Data Privacy Protection Risk

Information technology (IT) systems increase business efficiency, efficient control of power generation, and operational cost management to enable the EGCO group to be competitive in both domestic and overseas markets, where it invests or plans to invest; IT plays an increasingly important role in business operations.

In 2019, the Royal Thai Government Gazette announced the Cyber Security Act B.E. 2562 (2019), effective from May 28, 2019, and the Personal Data Protection Act B.E. 2562 (2019), effective from 28 May 2020 (however, it has been postponed taking effect on June 1, 2022). According to the Cyber Security Act B.E. 2562 (2019), administrators that provide any computer-related services must ensure and strengthen the cybersecurity of computers, computer data, computer systems, or other information related to computer systems to prevent, confront, and reduce the risk of cyber threats promptly. EGCO Group has decided to create an IT security policy, which includes an IT emergency plan and IT risk management policy.

According to the Personal Data Protection Act B.E. 2562 (2019), which deals with the control of personal information and instructs business partners to collect, use or disclose information in accordance with the Act, EGCO has established policies and measures to prevent the leakage of important information, including the development of information security systems and protection of personal information by collecting, storing, using or disseminating personal information of employees, partners or contacts in the electronic form to prevent personal data breaches.

The Information Technology Department of the EGCO Group has established policies and guidelines for information security and cybersecurity, which comply with ISO/IEC 27001:2013 clause 5.2 and item A.5 information security policy and comply with the Cyber Security Maintenance Act B.E. 2562 and in accordance with the Personal Data Protection Act B.E. 2562 (2019). The EGCO Group also promotes the security of information technology systems for users, by informing them to change their password every 90 days and training employees and executives to be aware of cyber threats to reduce the risk of business data leaks (Security Awareness Training).

In 2021, EGCO became certified ISO/IEC 27001:2013 (Information Security Management System: ISMS) to establish the information security management system in the data center.

In addition, a working group has been established to formulate policies and guidelines for personal data protection, follow-up, and evaluation of the company and subsidies, and to take various actions which relevant use personal information carefully, efficient, and accurate as required by law as well as encouraging all divisions to collect data as required. EGCO has set up a personal data collection system according to each company on the SharePoint Online (Office365) system. The access rights of each user are defined and only the information related to personal data is stored. In addition, the system can be checked through the audit logs portal to see who added, modified, or deleted information.

EGCO CREATE THE BUSINESS VALUE CHAIN TOWARD SUSTAINABILITY

VALUE CREATION

INPUTS

FINANCIAL CAPITAL
- Equity 114,037 million baht
- Total debt 127,895 million baht
- Operating cost 27,560 million baht

MANUFACTURED CAPITAL
- Property and equipment 49,597 million baht
- Total asset 241,392 million baht

INTELLECTUAL CAPITAL
- Investment in technology, digitization, and innovation 19,418 million baht
- Procedures and processes

HUMAN CAPITAL
- Total employees 1,129 persons
- Training spending 121 million baht
- Average training hours per personnel 26.36 hours

SOCIAL AND RELATIONSHIP CAPITAL
- Budget for community development programs 23 million baht
- Cash and In-kind donation 2.72 million baht
- Customer relationship
- Stakeholder engagement and community trust
- Business partnership

NATURAL CAPITAL
- Energy consumption 132,469 TJ
- Water consumption 7,162 ML

BUSINESS ACTIVITIES

VISION, MISSION, AND CORE VALUE

INTERNAL POLICIES AND GUIDELINES

STRATEGIC PLAN

STAKEHOLDERS:

Customer, Shareholders, Government Agencies, Employees, Community, Creditors, Suppliers and Business Partners, Investors, Society, Contractors and Subcontractors, Media, Non-Governmental Organization (NGO)

01 RAW MATERIALS

STAKEHOLDERS:

Coal, Natural Gas, Biomass, Water

02 POWER GENERATION

STAKEHOLDERS:

- Thermal Power Plant
- Combined Cycle Power Plant
- Renewable Power Plant

RISKA AND OPPORTUNITIES

GLOBAL TRENDS AND CHANGES

CORPORATE GOVERNANCE

04 CUSTOMERS

STAKEHOLDERS:

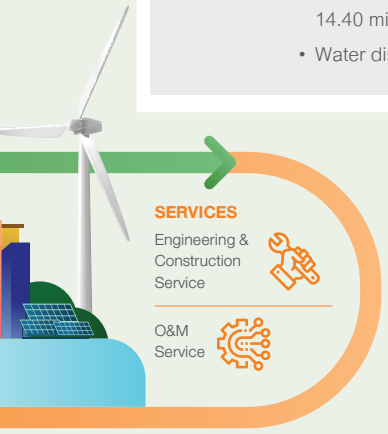
- EGAT
- PEA
- Offtaker (Overseas)
- Industrial Users

PERFORMANCE

PRODUCTS
- Electricity 97,586 GWh
- Steam 660,210 tons

OTHER BY-PRODUCTS
- Ash 0.34 million tons

EMISSIONS
- Total waste 0.27 million tons
- NOx 16,203 tons
- SOx 15,492 tons
- GHG (Scope 1 and 2) 14.40 million tCO_2e
- Water discharge 1.49 million ML



SERVICES
Engineering & Construction Service
O&M Service

03
PRODUCTS

STAKEHOLDERS:

Electricity | Steam | By-product (Ash)

SUPPORTING ACTIVITIES:

VALUES

	TO THE COMPANY	TO OUR STAKEHOLDERS
FINANCIAL CAPITAL	• Sales and services income 42,093 million baht • EBITDA 11,350 million baht • Operating profit 10,218 million baht • Net profit 4,104 million baht	• Earning per share 7.80 baht • Dividend per share 6.50 baht • ROE 9.20% **STAKEHOLDERS:**
MANUFACTURED CAPITAL	• 30 operating power plants and 9 other related power business • 2 power plants under construction • 1 other business under construction • Total production capacity based on PPA and shareholding production 5,959.27 MWe	• Plant availability 91.15% • Long-term ROI from green field projects, brown field projects, and effective property asset management **STAKEHOLDERS:**
INTELLECTUAL CAPITAL	• Cost reduction from innovative idea implementations more than 1,000 million baht • Total innovation 40 projects	• Power plant efficiency • Knowledge sharing among employees, community, and suppliers **STAKEHOLDERS:**
HUMAN CAPITAL	• Employee turnover rate 3.77% • 0 Fatality rate • LTIFR 0.11 times per million working hours	• Total employee training hours 18,035 hours per year • Total renumeration paid by EGCO Group 2,180 million baht per year **STAKEHOLDERS:**
SOCIAL AND RELATIONSHIP CAPITAL	• Customer satisfaction 92.37% • Social and community satisfaction 94.60% • No Human Rights violation complaint • No complaints from the community	• Tax paid to government 1,398 million baht • 79 community development projects • Approximately 15,749 Facebook followers for Khanom Learning Center • 4 Sukjai Journals were launched to Community around EGCO power plants **STAKEHOLDERS:**
NATURAL CAPITAL	• All EGCO Group's power plants fully comply with environmental laws • Reused and recycled water 1,257 ML • Total recycled waste 1,016 tons	• Reduced GHG emissions from production by 2.89 million tCO_2e to align with the NDC and COP21 targets **STAKEHOLDERS:**

STAKEHOLDERS IN EGCO GROUP'S VALUE CHAIN

STAKEHOLDER	RAW MATERIAL PROCUREMENT	ELECTRICITY PRODUCTION	OPERATION AND MAINTENANCE SERVICE	ENERGY-RELATED BUSINESS	PROFIT AND INCOME	SUPPORT FUNCTION*
CUSTOMER		●	●	●	●	
SHAREHOLDERS					●	●
GOVERNMENT AGENCIES	●	●	●	●		●
EMPLOYEES	●	●	●	●	●	●
COMMUNITY	●	●	●	●		●
CREDITORS					●	●
SUPPLIERS AND BUSINESS PARTNERS	●	●	●	●		●
INVESTORS					●	●
SOCIETY	●	●	●	●		●
CONTRACTORS AND SUBCONTRACTORS	●	●	●	●		●
MEDIA						●
NON-GOVERNMENTAL ORGANIZATION (NGO)	●					●

Remark: * Support function such as Corporate Management, Corporate Strategy and Financial Officer Group

2021 PERFORMANCE HIGHLIGHT

ECONOMIC DIMENSION

Contracted Capacity for Power and Stream Generation

5,959.27 MWe

Operating Profit

10,218 million Baht

Income

42,093 million Baht

Renewable Energy share in EGCO Portfolio

18.6%

100% of EGCO Suppliers were assessed on Economic, Social and Environmental Issues

The Average Attendance Rate of each Individual Committee is

99.44%

SOCIAL DIMENSION

Number of Total Employees

1,129 People

Turnover Rate

3.77%

23 million Baht through the Community Development Programs

0 Fatality of Employees and Contractors in accidents at work

Lost Time Injury Frequency Rate (LTIFR) is

0.11 Cases/1,000,000 Working Hours

ENVIRONMENTAL DIMENSION

Energy Consumption

4.55 GJ/MWh

Greenhouse Gas Emissions (Scope 1&2)

0.49 Ton CO_2e/MWh

Water Consumption

0.25 m^3/MWh

Total Non-hazardous Waste

267,000 Tons

0 Environmental Complaints

BUSINESS DRIVING CHALLENGES

POWER INDUSTRY AND COMPETITION

1. Economic and Electricity industry situation in Thailand

Global economy remains vulnerable to renewed outbreaks of COVID-19. The ongoing pandemic continues to shape the path for global economic activity, with severe outbreaks continuing to weigh on growth in many countries. According to the World Bank, the global economy is witnessing an exceptionally strong but highly uneven rebound as a result of highly unequal vaccination access. Economic growth is concentrated in a few major economies, with most emerging market and developing economies falling behind. The global economy is forecasted to expand by 5.6 percent in 2021, the strongest post-recession pace in 80 years. For Thai economy in 2021, it is expected to expand by 0.9 percent, primarily as a result of reopening the country for tourism, relaxation of containment measures in several areas and the continual economic policy packages for mitigating impact and increasing purchasing power measures including particularly the "Half-half" scheme phase 3. For the 2022 forecast, the Thai economy is expected to recover more pronouncedly from a low base in 2021, mostly due to a restoration of domestic demand following an improved outbreak situation and advances in vaccine distribution. Furthermore, significant supporting factors include tourist recovery as a result of relaxing foreign travel restrictions, as well as exports and industrial expansion as a result of global economic and trade recovery. However, key risks to economic outlook include the uncertainty of COVID-19 outbreaks from virus mutations, weak financial conditions of the households and business sectors, as well as volatility in the global economic and financial environment due to increased inflation pressure.

Thailand's electricity industry situation in 2021, the peak demand in 3 power authorities system (Electricity Generating Authority of Thailand (EGAT), Metropolitan Electricity Authority (MEA) and Provincial Electricity Authority (PEA)) was 31,023 megawatts, occurred on March 31, 2021 at 14.49 pm, recovered from the peak demand of 30,342 megawatts in 2020 by 2.2 percent. Meanwhile, electricity consumption of the country as of December 2021 stood at 190,468 gigawatt-hours, which were 1.8 percent increase from 2020. These are the consequence of an increase in power consumption in the industrial sector, as well as a growth of the export sector as a result of the global economy's and global trade's recovery.

Thailand's electricity in 2021, the peak demand was **31,023** MW

Recovered in 2020 by **2.2%**

As of December 31, 2021, the country's contracted capacity in 3 power authorities system was 50,883 megawatts, 16,082 megawatts or 31.6 percent of which were generated by EGAT power plants, and the remaining from other producers as follows;

Independent Power Producers (IPPs)	Small Power Producers (SPPs)	Import from Neighboring Countries	Very Small Power Producers (VSPPs)
15,499 megawatts	**9,381** megawatts	**5,721** megawatts	**4,200** megawatts
or **30.5%**	or **18.4%**	or **11.2%**	or **8.3%**

EGCO's contracted capacity of electricity sold to EGAT and PEA was 3,350 megawatts, representing 6.6 percent of the country's contracted capacity in three power authority's system, as presented in Figure 1

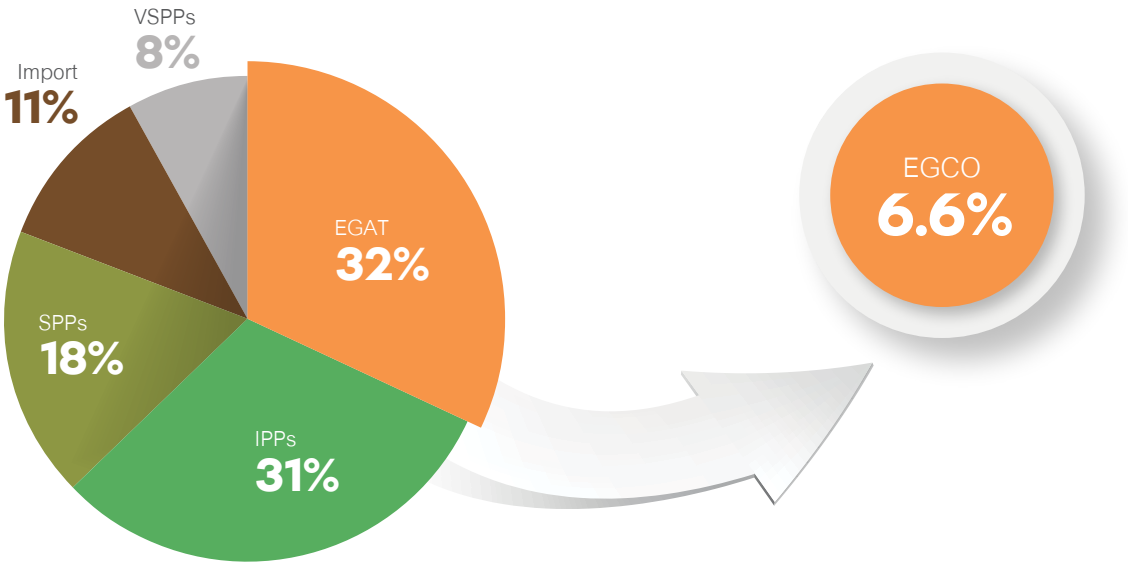


FIGURE 1: THE COUNTRY'S CONTRACTED CAPACITY OF ELECTRICITY IN 2021 CLASSIFIED BY PRODUCERS

Source: EGAT, EPPO and Department of Alternative Energy Development and Efficiency (DEDE)

Thailand's power development plan for 2018 to 2037 revision 1 (PDP 2018 rev.1) is currently in effective. The PDP 2018 rev.1 focuses on the use of natural gas as primary fuel for power generation as well as the increase proportion in renewable energy. PDP 2018 rev.1 promoted community power plants for local economy and solar power generated by households. However, to address climate change and be in line with the country's target of reaching carbon neutrality by 2050 and net zero greenhouse gas emissions by or before 2065, which was recently vowed by the government in COP26, the new PDP is being revised accordingly, which is expected to reduce reliance on conventional energy and increase the portion of renewable energy.

Regarding the Alternative Energy Development Plan for 2018 (AEDP 2018), the electricity generation from renewable energy sources will contribute a total of 28,004 megawatts by 2037. According to the Department of Alternative Energy Development and Efficiency (DEDE), the current status of renewable energy power plants as of November 2021, which achieved COD was 12,379 megawatts, increased from which of 2020 by 375 megawatts or 3.1 percent.

the electricity generation from renewable energy sources will contribute a total of

28,004

MW

2. Electricity industry in target countries

For electricity situation in targeted countries, the peak demand of each country increased from the low base of 2021 due to reopening economy as well as easing of containment measures. Furthermore, the energy master plan of each country tends to be revised to in line with the recent COP 26 agreement to limit global temperature rise far below 2 degrees Celsius, ideally 1.5 degrees Celsius, relative to pre-industrial levels as well as the COVID-19 impact to electricity demand. Energy master plan of each country is expected to reduce reliance on conventional energy and shift toward renewable energy in order to reduce Green House Gas (GHG) emissions, with a greater focus on the impact of climate change.

Due to limited growth prospect for domestic electricity industry, EGCO has expanded the investment globally such as Philippines, Lao PDR, Indonesia, Australia, South Korea, Taiwan and the U.S. where the Company has established business bases. Investment capacity of EGCO in each country is shown in Figure 2. In addition, EGCO has also been seeking for further investment opportunities in other countries such as Vietnam, Myanmar, and Cambodia. EGCO consistently monitors and analyzes electricity industry situation to explore investment opportunities in those targeted countries. The overall industry situations in each targeted country are as briefed below;

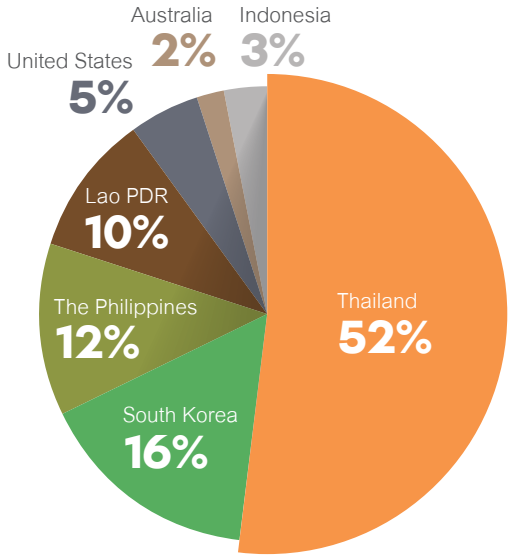


FIGURE 2: EGCO'S EQUITY CONTRACTED CAPACITY OF ELECTRICITY IN 2021 CLASSIFIED BY COUNTRY

2.1 The Philippines

The Philippines currently has installed capacity of 26,000 megawatts, which are primarily from coal-fired power. Peak demand in the Philippines is expected to increase 6 percent annually. The Philippines plan to expand its capacity by 40,000 megawatts, which move away from coal to more cleaner resources such as natural gas and renewable. Additionally, the Philippines has a 35 percent renewable energy target of total capacity by 2030, which promotes the power generation from solar, hydro and wind power.

Installed capacity of

26,000

MW

The Philippines

2.2 Lao People's Democratic Republic (Lao PDR)

Lao PDR's installed capacity is approximately 9,200 megawatts. Because of its abundant water resource and mountainous geography, the electricity generation is mainly from hydropower plants. With an aim to be the Battery of Asia, the electricity generation for export to neighboring countries such as Thailand and Vietnam are approximately 65 percent of total capacity. The peak demand of whole country is forecasted to grow 13 percent annually. Furthermore, Lao PDR promotes the investment in power generation from hydropower and alternative renewable energies, such as solar and wind from private sectors, both domestic and overseas.

Presently, Thailand imported 5,420 MW of electricity from Laos under Memorandum of Understanding (MOU) to purchase electricity of 9,000 megawatts.

Installed capacity of

9,200

MW

Lao PDR

2.3 Indonesia

Indonesia's installed capacity is approximately 63,000 megawatts. Coal-fired and natural gas power plants play a significant role as base load generation. Peak demand is forecasted to increase 7 percent annually. According to 2019-2028 Power Supply Business Plan (RUPTL), the government plans to expand its electricity generating capacity by 56,000 megawatts, mainly from coal, gas, geothermal and hydropower. However, Indonesia is in the process of drafting RUPTL 2021-2030, planning to develop new solar and wind power plants, mix biomass with coal in existing coal plants and convert diesel-fired power plants to renewable power plants. In addition, there would be no more new thermal plants after an ongoing 35,000 MW program is completed.

Installed capacity of

63,000

MW

Indonesia

2.4 Australia

Australia's installed capacity is approximately 62,000 megawatts, mainly supplied by aging coal-fired power plants and renewable energy. In recent years, solar, wind and gas generation increased drastically, while coal-fired generation declined because of the reduction in its average availability and displacement by solar during the day. Due to energy efficiency and a continuous increase in rooftop PV capacity, peak demand in Australia is estimated to be flat at 0.3 percent over the 20-year outlook period. Additionally, the government has a commitment to become net-zero emissions by 2050 and plan to achieve 100 percent renewable energy by 2030.

Installed capacity of

62,000

MW

Australia

2.5 South Korea

South Korea's installed capacity is approximately 120,000 megawatts, which are significantly from natural gas and coal-fired power. Peak demand is estimated to increase 1 percent annually. South Korea electricity market is cost based pool. The Korea Power Exchange (KPX) functions as the independent electricity market operator in Korea. In this role, KPX also does the billing settlement for power sales and purchases. It controls real time dispatch of all generators which is set daily on a merit order. According to the 9th Basic Plan, South Korea plans to shift away from coal-fired and nuclear power towards LNG and renewables. Moreover, South Korea promotes the development of renewable energy to achieve 34 percent and 40 percent of total capacity by 2030 and 2040, respectively, which focus on solar power and wind power.

Installed capacity of

120,000

MW

South Korea

2.6 Taiwan

Taiwan's installed capacity is approximately 45,000 megawatts, which are mostly generated from natural gas and coal-fired power. Peak demand is forecasted to increase 2 percent annually. The government of Taiwan plans to expand 26,000 megawatts of electricity generating capacity with emphasis on development of natural gas power plant while reducing the dependence on coal-fired power plants. Presently, the government has set the goal of achieving a nuclear-free homeland and increasing the ratio of renewable energy generation to 20 percent by 2025. Power generation from renewable energy focusing on solar and wind in Taiwan is expected to increase by 18,000 megawatts and 6,000 megawatts by 2025, respectively.

Installed capacity of

45,000

MW

Taiwan

2.7 United States

The installed capacity of United States is approximately 1,000 gigawatts, mainly from natural gas and coal-fired power. Peak demand is forecasted to increase 1 percent annually. The government plans to retire existing coal-fired power plants and nuclear power plants, replacing with natural gas power plants and diesel power plants. Moreover, the US. sets 40 percent renewable target of total capacity by 2030. The government implements Renewable Portfolio Standards (RPS) as a mechanism to increase renewable energy in order to meet renewable target.

Installed capacity of

1,000

GW

United States

2.8 Vietnam

The installed capacity of Vietnam is approximately 54,000 megawatts, which are primarily from coal-fired power and hydropower. Peak demand is estimated to increase 8 percent annually. According to the recent power master plan VIII, Vietnam's electricity generating capacity is forecasted to increase to 130,000 megawatts by 2030, which reduce dependency on coal-fired power plants, compared with previous master plan and replace with LNG and renewable power plants. Additionally, the government of Vietnam aims to develop power generation from renewable energy to achieve target of 30 percent by 2030, which promotes investment from solar power and wind power.

Installed capacity of

54,000

MW

Vietnam

2.9 Myanmar

Myanmar's installed capacity is approximately 5,700 megawatts, which are mainly generated by hydropower plants. However, the current supply is not sufficient to meet country's demand, which is forecasted to increase 10 percent annually. Additionally, as 60 percent of households are not connected to the national grid, relying on local solutions such as diesel generators and solar rooftop, the government puts an effort to achieve 100 percent electrification by 2030 by increasing energy access in rural areas and securing reliable supply in urban areas and Special Economic Zones (SEZs) through joint investment with foreign investors. With this regard, Myanmar plans to expand its electricity generating capacity to 14,000 megawatts in 2030, which focuses on the development of hydropower plants and coal-fired plants. Thailand has signed Memorandum of Understanding (MoU) for the purchase of electricity from Myanmar, with no specific capacity.

Installed capacity of

5,700

MW

Myanmar

2.10 Cambodia

Cambodia's installed capacity is approximately 2,200 megawatts. Hydro and coal are primary source of fuel supply in Cambodia. Peak demand in Cambodia is forecasted to increase 10 percent annually. The government has a policy to connect all villages to the national grid by 2030 and import more energy from neighboring countries to fulfil its growing demand. Cambodia plans to increase 2,200 megawatts of electricity generating capacity, which promote power generation from hydropower and coal-fired power. Thailand has signed Memorandum of Understanding (MoU) for the purchase of electricity from Cambodia, with no specific capacity.

Installed capacity of

2,200

MW

Cambodia

3. Competition

As 3Ds trends; Decarbonized, Decentralized and Digitalized along with disruptive technology have shaped the power industry over the last few years, which created the challenges and new business opportunities. For the competition in 2021, power industry faces intensified competition. The competitors expand the investment in overseas due to the limited growth prospect for domestic electricity industry. In addition, to cope with disruptive change in industry, competitors also diversify investment to related business and new business. Despite the high competition and challenges in industry, EGCO successfully expanded its investment to cover three investment direction as follows;

POWER BUSINESS

Investment in a

28%

ownership interest in Linden Topco LLC (Linden Topco), which owns and operates a

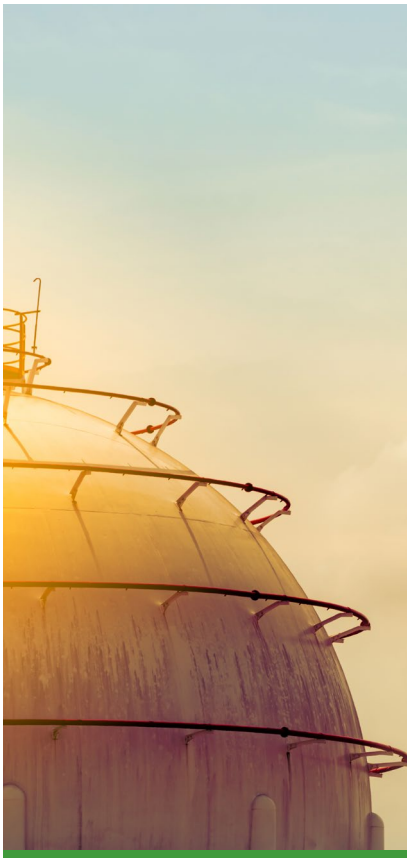
972 MW

natural gas-fired combined cycle cogeneration facility (Linden Cogen Facility), sited in the State of New Jersey, the United States

Investment in a

17.46%

indirect interest in Apex Clean Energy Holdings, LLC (Apex), a leader in utility-scale clean energy project development and in clean energy sales to the commercial and industrial market in the United States



FUEL AND OTHER INFRASTRUCTURE BUSINESS

Approval of the LNG Shipper License to import the Liquefied Natural Gas (LNG) in the greatest amount of

200,380

tons per year with 10 years validity

SMART ENERGY SOLUTION BUSINESS

Joint with EGAT and RATCH Group to establish a joint venture called Innopower Company Limited (Innopower) with a portion of

30%

aiming to invest in Start-up business and a new wave of energy industry

Investment in

24.24%

stake in Peer Power Company Limited (Peer Power), a fintech startup established in 2016, focusing on an online electronic platform for bond and equity crowdfunding that connects investors to Small and Medium-sized Enterprises

These investments would not only enhance business growth but also enable EGCO to handle with and respond to the abrupt changes in energy industry in timely, appropriate, and sustainable manners.

EGCO DRIVING BUSINESS TOWARD SUSTAINABILITY

MARKET OPPORTUNITY

Management Approach

Performance Data

MARKET OPPORTUNITY

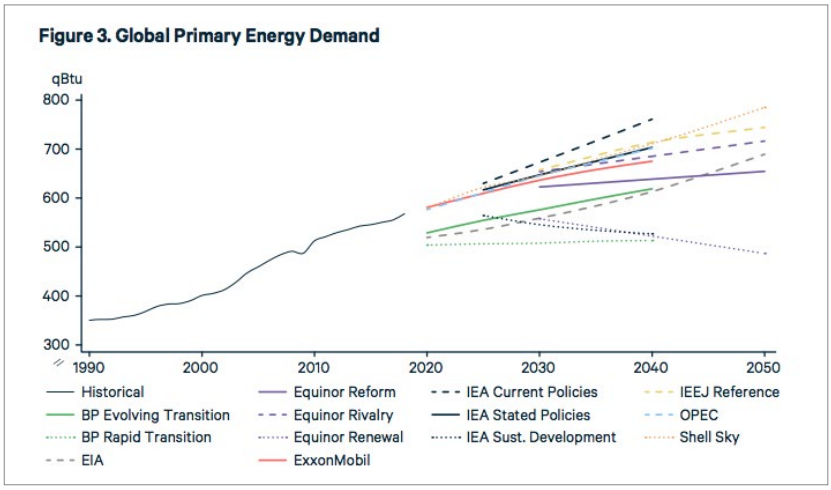
Despite the decreased demand during COVID-19 pandemic, many studies show trends of power supply demand rising in conjunction with the economic recovery. The demand will recover to pre-COVID-19 level by 2023 and is expected to increase on an average of 0.8% per year until 2030 as seen in figure 1 (Resource For the Future, 2021). This is due to the increasing demand in the transport sector, heat production and increasing access to electronics as well as its rising demand in the Emerging Economies.

expected to increase on an average of

0.8%

per year until 2030

FIGURE 1:
GLOBAL PRIMARY ENERGY DEMAND



Source: Resource for the Future, 2021

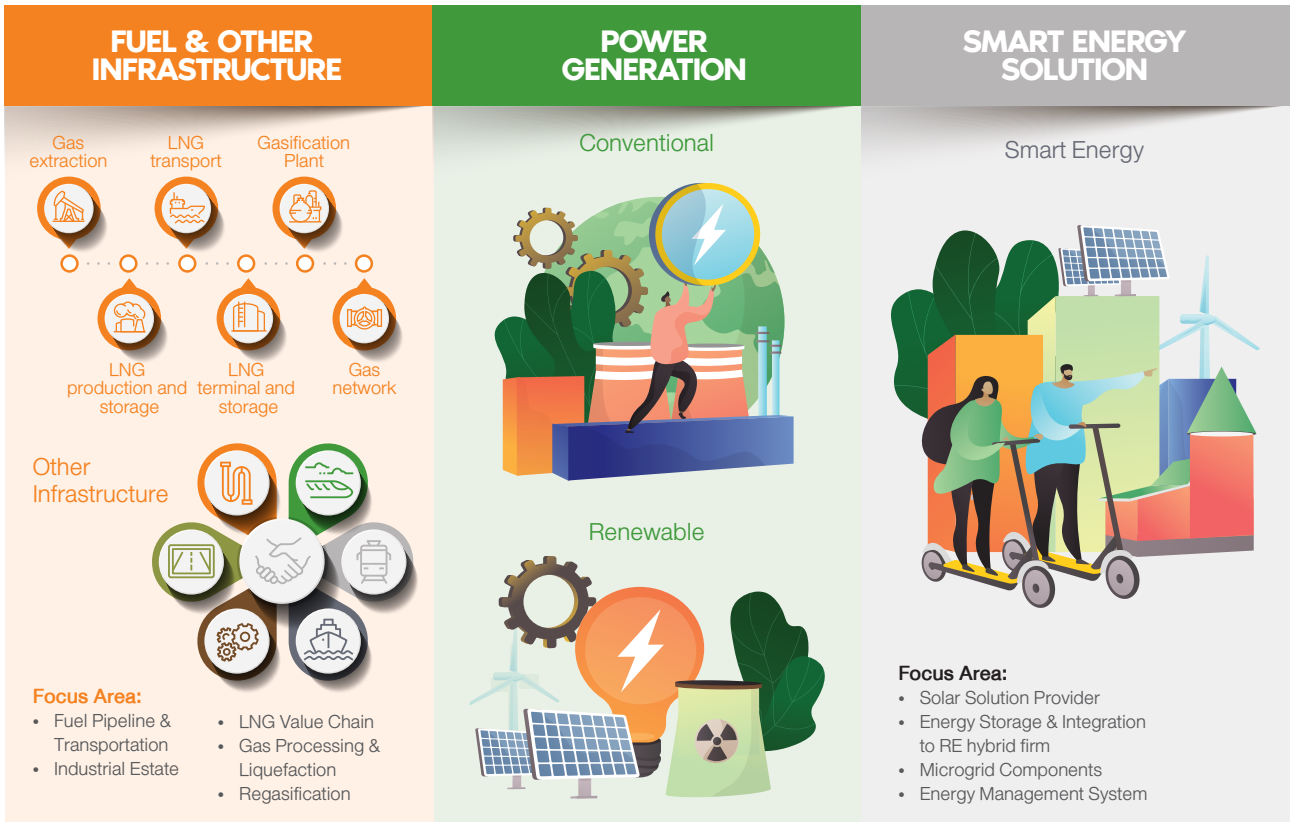
Aside from an increasing demand in power supply, digital technology implementation is also a hot issue in the power industry. A study by McKinSey&Company reported 2-10% increase in efficiency and 10-30% cost reduction from digital technology Implementation in the power industry. Hence, EGCO Group focuses our investment on innovation, technology and Smart Energy to expand our market opportunity as well as prepare ourselves for Smart Energy and Technology market in the future.

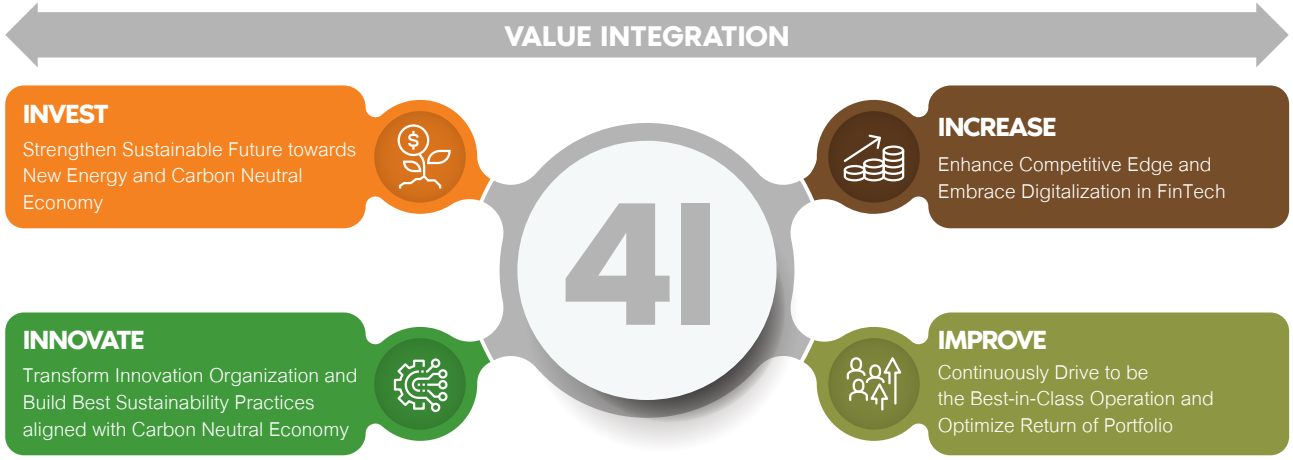
Thailand has determined the direction of the economic drive by supporting investments in targeting industry or the New S-Curve which emphasizes on improvement, expand, digitization and innovation to stimulate power supply demand. This is a chance for EGCO Group as a power producer to provide full quality service as well as to develop Smart Energy to prepare for the nearing New S-Curve.

EGCO GROUP'S MARKETING STRATEGY

In order to enhance the Company's market opportunity and diversify our investment in accordance with long-term energy demand, EGCO Group established 3 investment directions, namely by strengthening core business with portfolio balance view, expanding the investment to fuel and other infrastructure and further explores new business opportunity in smart energy solution. EGCO Group stipulated the 4I strategy: Invest, Increase, Improve and Innovate along with marketing strategy. Furthermore, the Company give importance to investment risk management including investment debts. EGCO Group also takes potential revenue and risks in renewable energy market into consideration as well as set KPIs in accordance with the investment direction and revenue for personnel in related job functions to increase the Company's market opportunity.

INVESTMENT DIRECTION





GOALS AND PERFORMANCE

LONG-TERM GOAL

BUSINESSES AS OF 2020

POWER PLANT/EGCO'S BUSINESS

28 power plants with **5,422.53** MWe total generating capacity

OTHER BUSINESS

5 businesses

NEW PROJECT COMPLETION IN 2021

POWER PLANTS

Linden Cogen Power Plant **972** MWe

Apex Clean Energy Holdings, LLC.

OTHER BUSINESS

Innopower Company Holdings

Peer Power Platform Company Limited

NEW PROJECT EXPECTED TO COMPLETE IN 2022

POWER PLANTS

Yunlin Offshore Wind Farm **160** MWe

Nam Thuen 1 Hydro Power Plant (NT1PC) **161.08** MWe

Expansion of Oil Pipeline to Northeastern Region by Thai Pipeline Network (TPN)

OTHER BUSINESS

EGCO Rayong Industrial Estate (ERIE)

NEW PROJECT EXPECTED TO COMPLETE IN 2024

POWER PLANTS

EGCO Cogen (Replacement)

TARGET 2030

EGCO aims for **10%** Carbon Emission Intensity reduction by 2030

increase the portion of renewable energy to **30%** of the total generating capacity by 2030.

2020 → 2021 → 2022 → 2024 → 2030

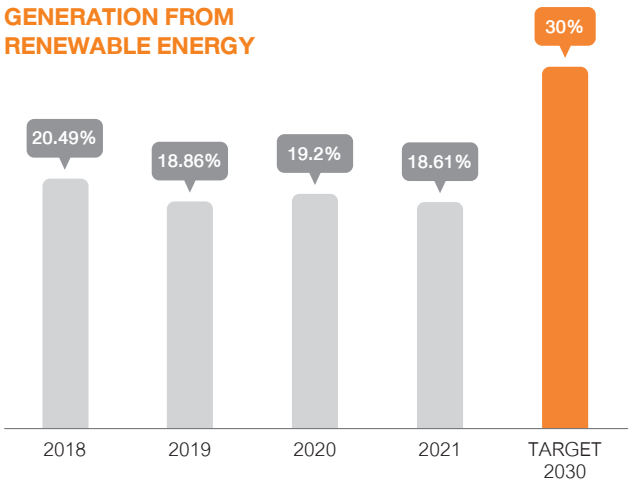
Become Carbon Neutral by 2050

Decrease Carbon Emission Intensity 10% by 2030

>150,000 MTHB CAPEX for 2021-2025 Investment

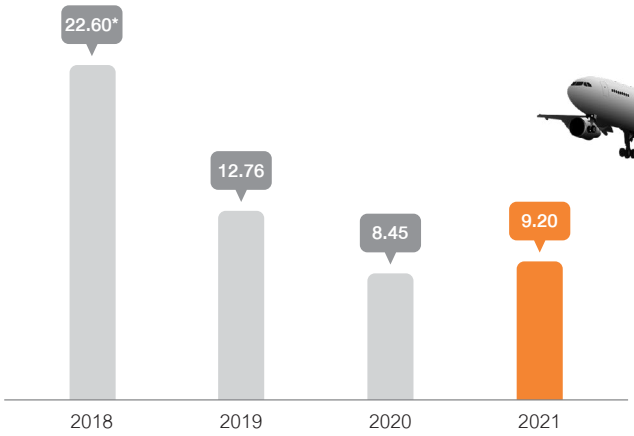
1,000 MWe/Year

PROPORTION OF ELECTRICITY GENERATION FROM RENEWABLE ENERGY



PERFORMANCE

NET PROFIT ACHIEVE RETURN ON EQUITY (ROE)



Remark: * Including returns from MPPCL, GDEC and East Water

INCREASING EGCO GROUP'S MARKET OPPORTUNITY

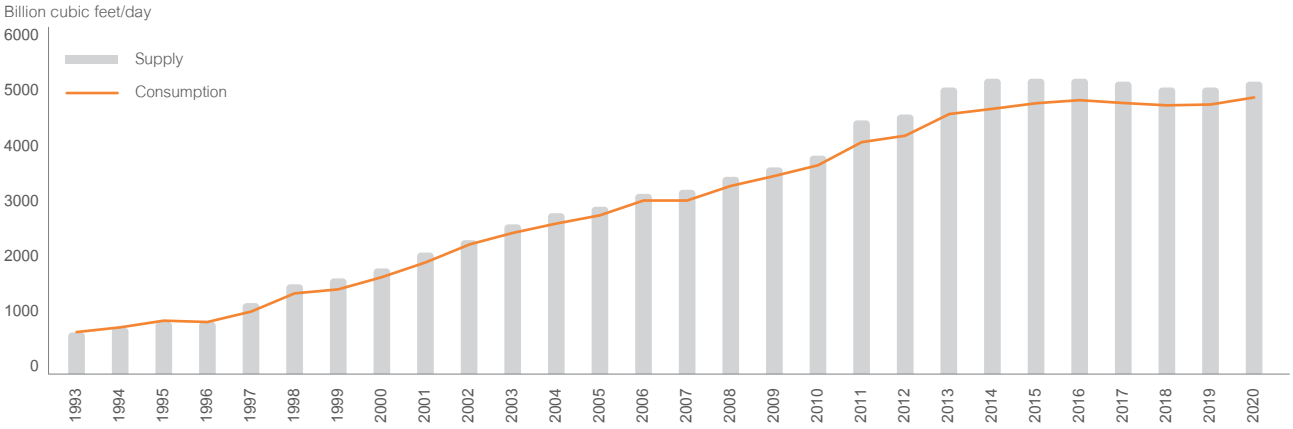
FUEL AND OTHER INFRASTRUCTURE

LNG Shipper

As the natural gas demand in Thailand rises, the policy to promote market opportunity and natural gas free trade plans allow New Shipper to import a total of 5.24 tons LNG by 2023.

EGCO Group submitted a request to Energy Regulatory Commission (ERC) in cognizant of this trend and was granted a 10-year LNG Shipper License, making us 1 of the 7 new shippers with up to 200,380 tons of LNG per year of allowance. A new milestone as the Company embarks on a new venture as "LNG Shipper".

Natural Gas Supply and Consumption



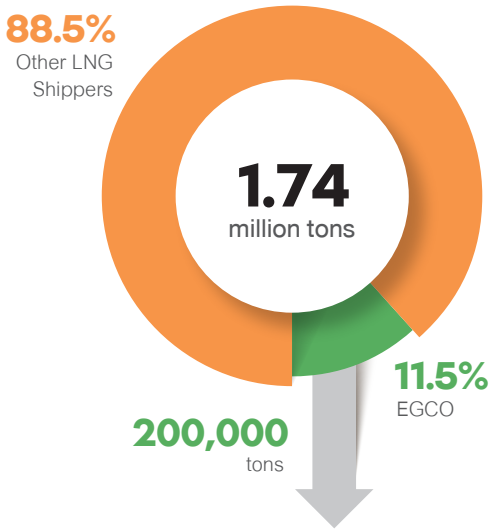
Source: Thailand Energy Statistics Report 2021

The imported LNG will feed EGCO Group's power plants, such as BPU, KLU and EGCO Cogen which consume more than 200,000 tons LNG per year. Not only will this venture complete our business circle but will also support the fuel cost management for power generation and offer investment opportunities for EGCO Group in fuel business. The Company is expected a full-capacity import in 2022. EGCO Group is allowed 11.5% of total LNG import allowance in 2022 of 1.74 million tons LNG.

EGCO Group's new role as the LNG shipper will support our core power generation business in terms of fuel cost management of those power plants. Moreover, this will position EGCO Group for new investment opportunities in fuel business.

Mr. Thepparat Theppitak
President

THAILAND LNG IMPORT ALLOWANCE 2022



EGCO GROUP'S LNG DEMAND

54,000 Tons/year

27,000 Tons/year

119,000 Tons/year

EGCO Rayong Industrial Estate (ERIE)

EGCO Group established ERIE, smart & green industrial estate set to support investments of targeted S-Curve and New S-Curve industries with promotional privileges in the Eastern Economic Corridor (EEC). ERIE also serves as a development ground for Smart Grid as well as Solar Rooftop and Floating Solar Farm.

Additionally, ERIE is a good opportunity to work with smart energy business in the industrial estate, including battery and energy storage system manufacturing plant and data center. As of 2021, ERIE has passed the EIA and is expected to start operating in 2022.

POWER GENERATION

EGCO Group established investment strategy and planned long-term investment in alignment with growing energy demands. The Company focuses on distributing energy to various sectors in Thailand and overseas from variety of fuel. EGCO Group's performance in market opportunity expansion and power plant capacity enhancement in 2021 is as follow:

PROJECT	COUNTRY	FUEL	CAPACITY	SHARE	SCOD	STATUS
Linden Cogen			972 MW	28%	1992, 2002	Operating
APEX			-	17.46%	-	Operating
Yunlin Holding GmbH			640 MW	25%	Q4/2021-2022	Under Construction
Nam Theun 1 (NT1PC)			644 MW	25%	Q2/2022	Under Construction
EGCO Cogen Replacement			100-110 MW	100%	2024	Passed EIA Construction Scheduled to Begin in 2022

In 2021, EGCO Group successfully acquired 17.46% share in APEX Clean Energy Holdings (APEX), the US-based utility-scale clean energy project developer. The Company wishes to expand the market opportunity in ASEAN clean energy market as well as other businesses, namely Energy Storage, Distributed Energy Resources (DER) and clean energy.

The investment in Apex marks the first renewable investment for EGCO Group in the United States, one of the largest single country markets for installed wind and solar capacity in the world with a vast number of potential investment opportunities from among several hundred gigawatts of renewable capacity expected to enter the market during the next decade. We are very excited about this important opportunity and we also foresee a number of synergies with our renewable plans in Southeast Asia. In addition, the investment is in line with EGCO Group's "Cleaner, Smarter and Stronger to Drive Sustainable Growth" strategy which targets carbon neutral by 2050 in support of the global low-carbon objectives

Mr. Thepparat Theppitak
President

SMART ENERGY SOLUTION

As digital technology plays more parts in our lives, Smart Energy became an important deciding factor for EGCO Group's investment in residential and commercial customers' demand-side management in alignment with the country's energy policy. EGCO Group intends to invest in SPP and VSPP power plants to promote comprehensive power production business as well as invest in energy efficiency and renewable energy services for industrial estates and factories. This includes heating system service to tend to customer demand in energy management service, providing energy management consultation and contracting for load reduction in the future. Load reduction consists mainly of efficiency enhancement through facility modification, such as Combined Heat and Power (CHP), lighting system, Heating, Ventilation and Air-conditioning (HVAC) and other appliances.

The Company operates through EGCO's subsidiary companies both in Thailand and overseas, namely EGCO Engineering & Service Co., Ltd. (ESCO), E&E Engineering & Service Company Limited (E&E) and Pearl Energy Philippines Operating, Inc. (PEPOI), providing energy audits, energy management services, maintenance, engineering and construction.

In 2021, EGCO Group has supported investment in Smart Energy Solution as follow:

1. InnoPower Company Limited

A study by Research and Markets found that Smart Energy market is growing with 9.6% CAGR during 2020-2027. Moreover, Thailand is increasingly focused on Smart Energy system development in response to the New S-Curve.

Over the last year, EGCO Group with EGAT and RATCH Group have established InnoPower Co., Ltd. a joint venture with EGAT Group that invests in electricity innovation and startups. EGCO Group will focus on adding commercial values to the microgrid, energy storage system and electric vehicle technologies.

> EGCO Group, together with EGAT and Ratch Group PCL, established EGAT Innovation Holding-a joint venture-to invest in new electricity innovation commercially developed by EGAT and new S-curve business such as Smart Grid and innovations that support EV such as the Energy Storage System (ESS) and battery, development of power stations to support renewable energy, etc.
>
> **Mr. Kulit Sombatsiri**
> Chairman of the Board of Directors

2. Solar Solution Provider

Solar power trend is rising due to the support from the government as the technology becomes more affordable. It is expected to grow 162 GW globally in 2022 in the face of energy transformation. EGCO Group has determined investment direction in solar power market, aiming to provide renewable energy consulting service through EGCO Engineering & Service Co., Ltd. (ESCO). Investment in APEX, a company specialized in renewable energy development and consultation, added a valuable expertise to the Company.

3. Peer Power Platform Company Limited

EGCO Group invested in a FinTech startup "Peer Power", holding 24.24% shares, to develop further integration of blockchain to an Energy Trading Platform, paving way for decentralized energy and the establishment of a comprehensive power and energy ecosystem. The Company plans to utilize our expertise in power business to supply renewable energy for Peer Power's data center.

Peer Power is a FinTech startup established in 2016 focusing on an online electronic platform for bond and equity crowdfunding that connects investors to small and medium-sized enterprises (SMEs). Peer Power is the first platform which has obtained a crowdfunding license from the Securities and Exchange Commission (SEC) since 2019.

EXCELLENCE GENERATION

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Management Approach

Performance Data

As one of the key power producers of Thailand, EGCO Group is committed to expand our generating capacity in alignment with government policy. We aim to deliver reliable power supply to our customers and users. As of 2021, EGCO Group has a total equity contracted capacity of 5,959.27 MW from 30 operating power plants in 9 countries, which generate electricity using various fuel sources such as coal, natural gas, hydro, wind, solar, biomass, etc.

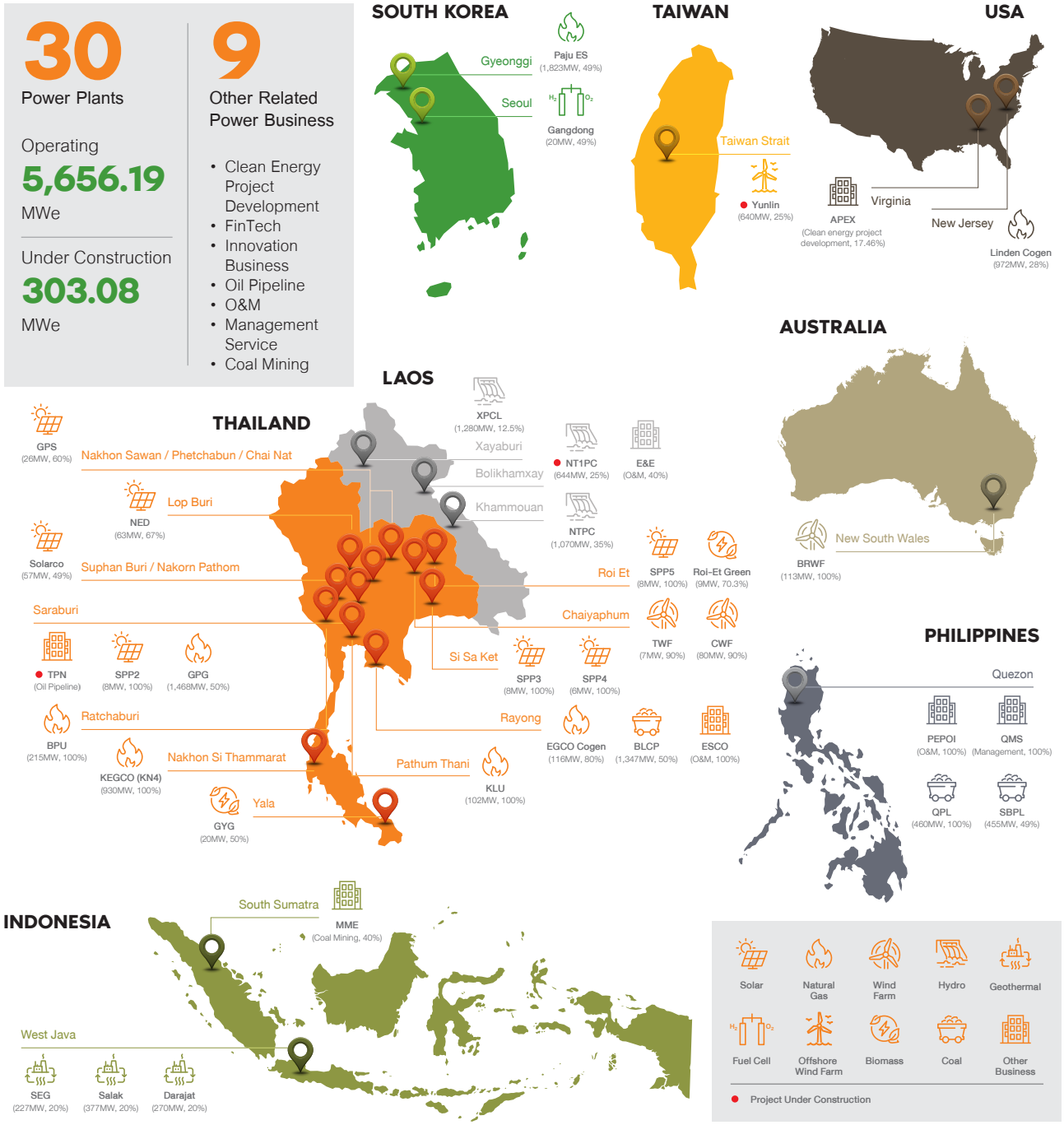
30
Power Plants

Operating
5,656.19
MWe

Under Construction
303.08
MWe

9
Other Related Power Business

- Clean Energy Project Development
- FinTech
- Innovation Business
- Oil Pipeline
- O&M
- Management Service
- Coal Mining



As of December 31, 2021

However, EGCO Group's operations are not only for business revenue generate, but the main objective is to create energy supply stability that meets the demand. In Thailand, power usage increases averagely 13% over 10 years in the same direction with the demand during peak load as seen in figure 1.

THAILAND'S ENERGY DEMAND TREND

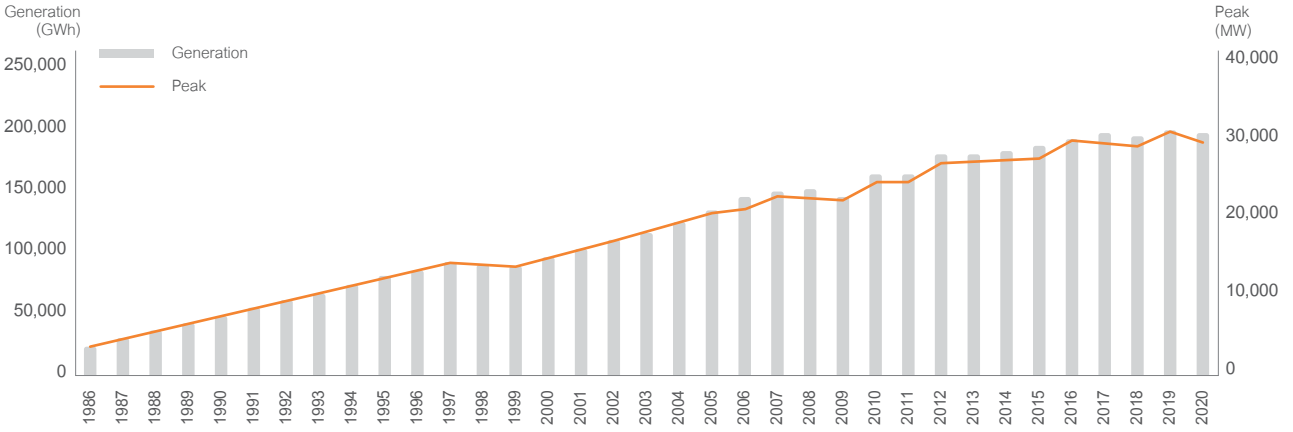


Figure 1 Power generation trend against demand during peak load
Source: Energy Information, Energy Policy and Energy Planning Office, Ministry of Energy (2020)

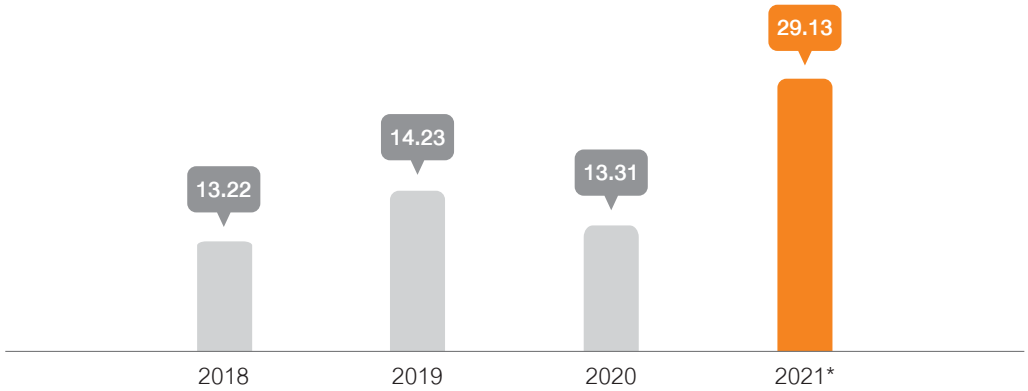
EXCELLENCE GENERATION STRATEGY

To ensure EGCO Group's power generation is stable, competitive, and up to standard, the Company operates under the 4I strategy: Invest, Increase, Improve and Innovate. The strategy works as a guideline in innovation integration for generation ability improvements. The Company stipulated governance structure and tasked executives with generation capability expansion by setting their KPIs accordingly. Furthermore, the Company has established management guideline focusing on 3 operational aspects, namely Power Plant's Reliability and Availability, Excellence Generation and Credibility Management.

GOALS AND PERFORMANCE

GENERATING CAPACITY

(Unit: GWh)



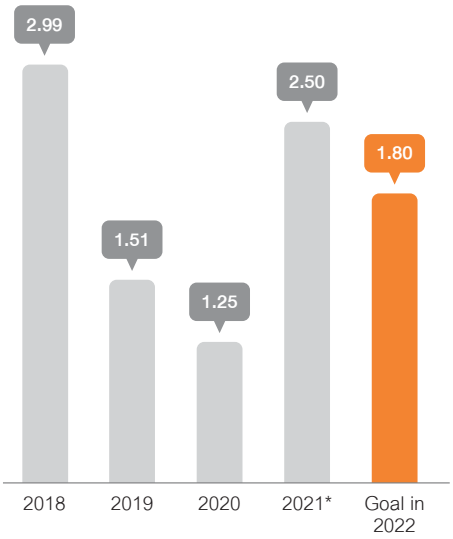
Goal:
Plant Availability:
91.65%

Unplanned Outage:
<1.80%

Remark*: In 2021, performance data expanded its coverage to 95% of MWe

UNPLANNED OUTAGE FACTOR

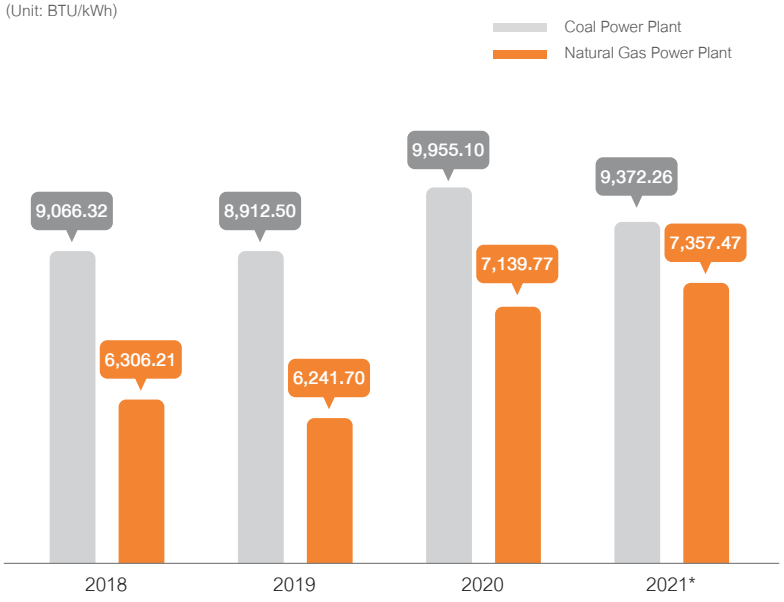
(Unit: %)



Remark: * In 2021, performance data expanded its coverage to 95% of MWe

HEAT RATE

(Unit: BTU/kWh)



Remark: * In 2021, performance data expanded its coverage to 95% of MWe

HIGHLIGHTS

POWER PLANT'S RELIABILITY AND AVAILABILITY

EGCO Group sets the target for power plant's availability to ensure adequate power supply to both industrial and household sectors as indicated in the Power Purchase Agreements (PPAs). In 2021, EGCO Group has an average availability of 91.15%.

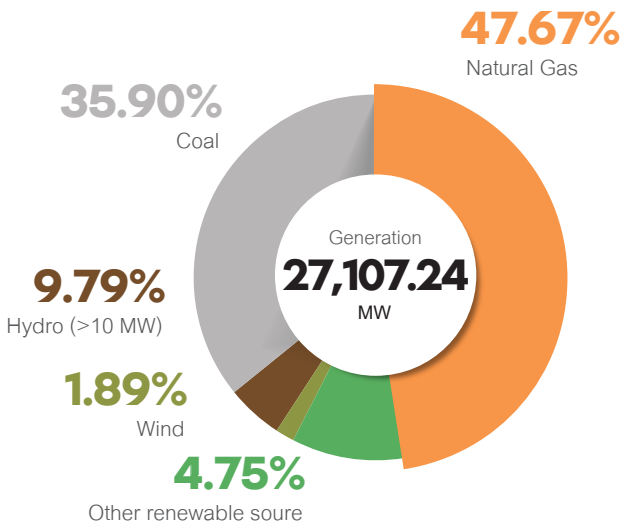
Additionally, the Company conducts maintenance annually to ensure power plants' efficient operations.

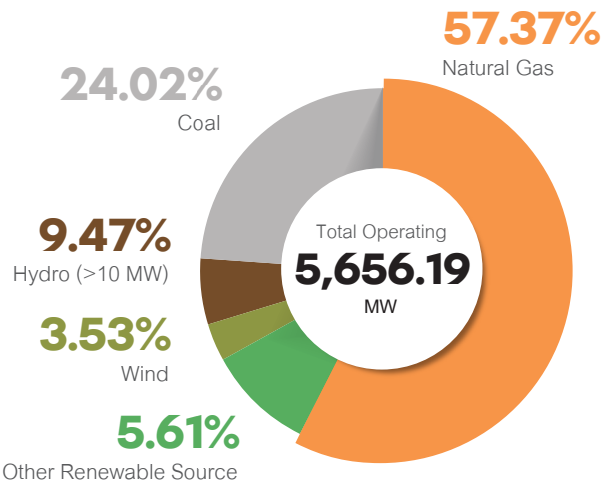
EGCO Group has an average availabillity of **91.15%**

	QPL	SBPL	NTPC	XPCL	LINDEN	KEGCO	EGCO COGEN	KLU	BPU
Q1	●	●		●		●		●	
Q2			●	●			●		
Q3						●		●	
Q4		●			●				●

EXCELLENT GENERATION

EGCO Group values diversified power generation. In 2021, the amount of energy generated classified by fuel source, such as natural gas, coal, and renewable energy are as follows:



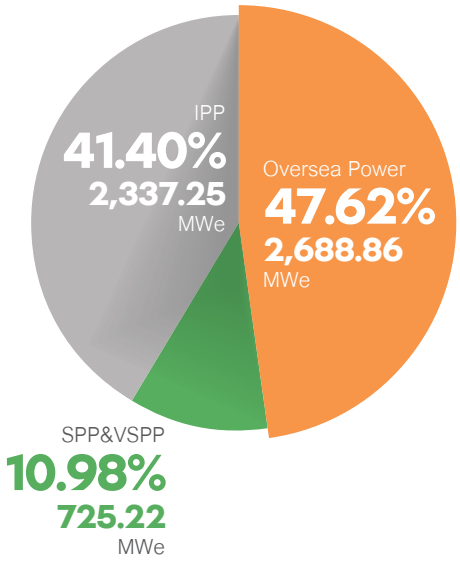


Additionally, EGCO Group invests in power plants varied in generating capacity to decentralized power generation core. EGCO Group currently has 30 operating and under construction power plants which amount to total equity contracted capacity of 5,656.19 MW. 3,264.50 MW was distributed to EGAT – 7.08% of total contracted capacity in the country of 46,102.37 MW with 2 power plants (303.08 MW) under construction.

total equity contracted capacity of **5,656.19** MW

EGCO Group's generating capacity classified by contracted capacity is as follow:

Contracted Capacity



EGCO has been prioritizing renewable energy since 2010, when our first biomass power plant starts operating. Various renewable energy started adding to our portfolio eversince- for example, hydro power, wind power, solar energy, biomass, geothermal (invested in Indonesia), and fuel cell. As of 2021, EGCO Group is investing in 8 countries with 1.6 GW renewable energy in our portfolio.

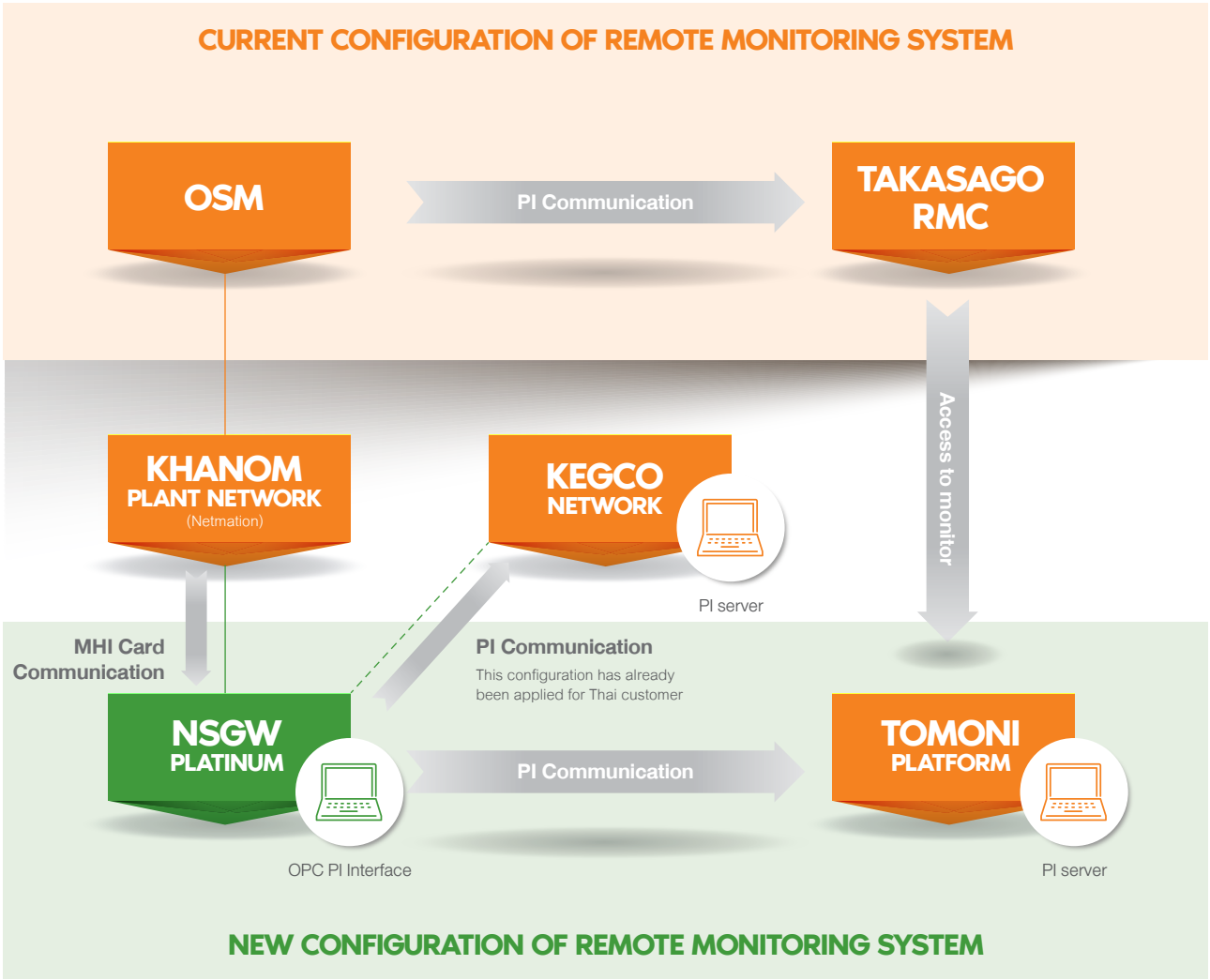
Mr. Thepparat Theppitak
President

EGCO Group values power generation improvements through environmentally friendly innovation and technology implementations, aiming to reduce fuel consumption and to minimize environmental impacts. In 2021, technological implementation for efficiency enhancement is such as:

Inlet Guide Vane (IGV) for Performance Improvement

KEGCO unit 4 modified the Inlet Guide Vane (IGV) to enhance the power plant's generation efficiency by increasing exhaust temperature in gas turbine. The increased temperature allows Heat Recovery Steam Generator (HRSG) to have more power which leads to higher stream turbine efficiency. During the improvement, highest efficiency achieved is during 60%-70% partial load.

Additionally, Software TOMONI Cloud Platform for issue monitoring and notification to avoid emergency maintenance operation outage and unplanned outage.



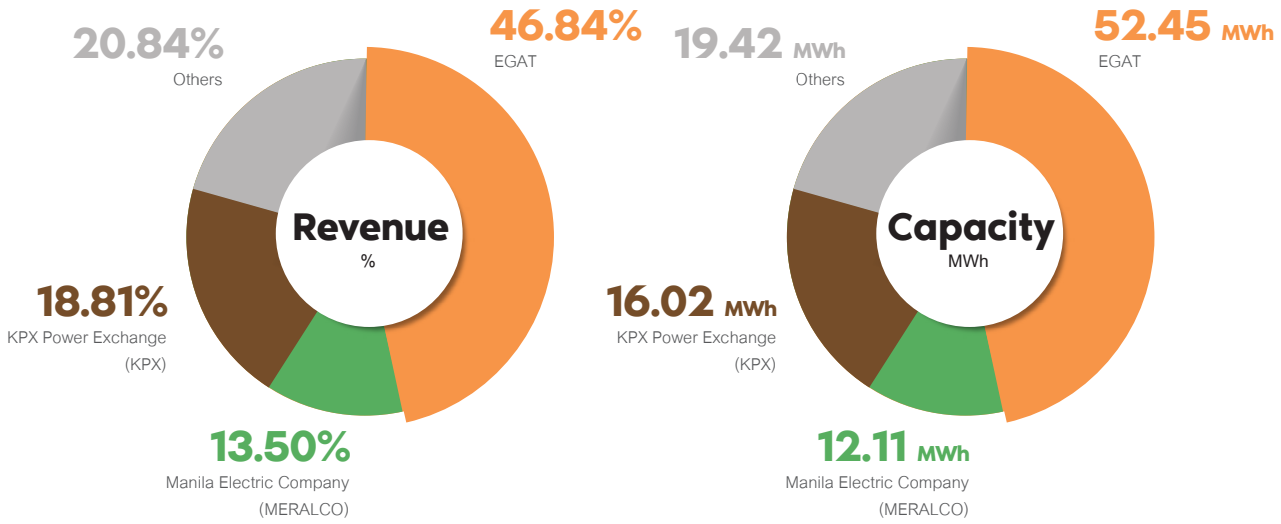
Energy management that meets international standards is crucial to EGCO Group. KEGCO has been certified for ISO 50001 on energy management, emphasizing how EGCO gives importance to continuously improve on energy management efficiency to create positive impact to the community, society, and the environment.

ISO 50001 ENERGY MANAGEMENT

KEGCO is Certified.

CREDIBILITY MANAGEMENT

EGCO Group's key customers in power generation business are EGAT, Manila Electric Company (MERALC O) and KPX Power Exchange (KPX), and other customers such as PLN, Energy Australia Pty Ltd., industrial customers, and PEA. The proportion of energy generated sold to each customer is as follow:



EGCO Group is confident in our capacity to generate and deliver quality energy that meets customers' demand and expectations. The Company conducts customer satisfaction survey annually. In 2021, customer satisfaction survey received 92.37%, surpassing the target set at 90%

Customer Satisfaction Survey Received

92.37%

Surpassing the Target Set at

90%

CLIMATE CHANGE

Management Approach

Performance Data

EGCO GROUP AND CLIMATE CHANGE

130 countries, under the Paris Agreement, are setting target to reduce GHG emission and Net Zero emission in some regions as seen in figure 1. The collective effort to fight against climate change by drives Energy Transition in figure 2 which reflects significant increase renewable energy portfolio in the past 10 years. Thailand has also set a target to achieve carbon neutral by 2050 to achieve global target of controlling the Earth's temperature. EGCO Group hence operates with consideration to the global and national trends in energy.

Due to the nature of our business, climate change can impact EGCO Group's operation in many dimensions, namely physical risk which includes flood, drought and transition risk regarding policy, regulation and technological changes. For instance, carbon tax can affect the Company's strategy and investment directions. EGCO Group recognizes the significance of risks that climate change can bring, so we conducted Scenario Analysis of Climate-Related Risks to determine guidelines for action plan and mitigate impacts.

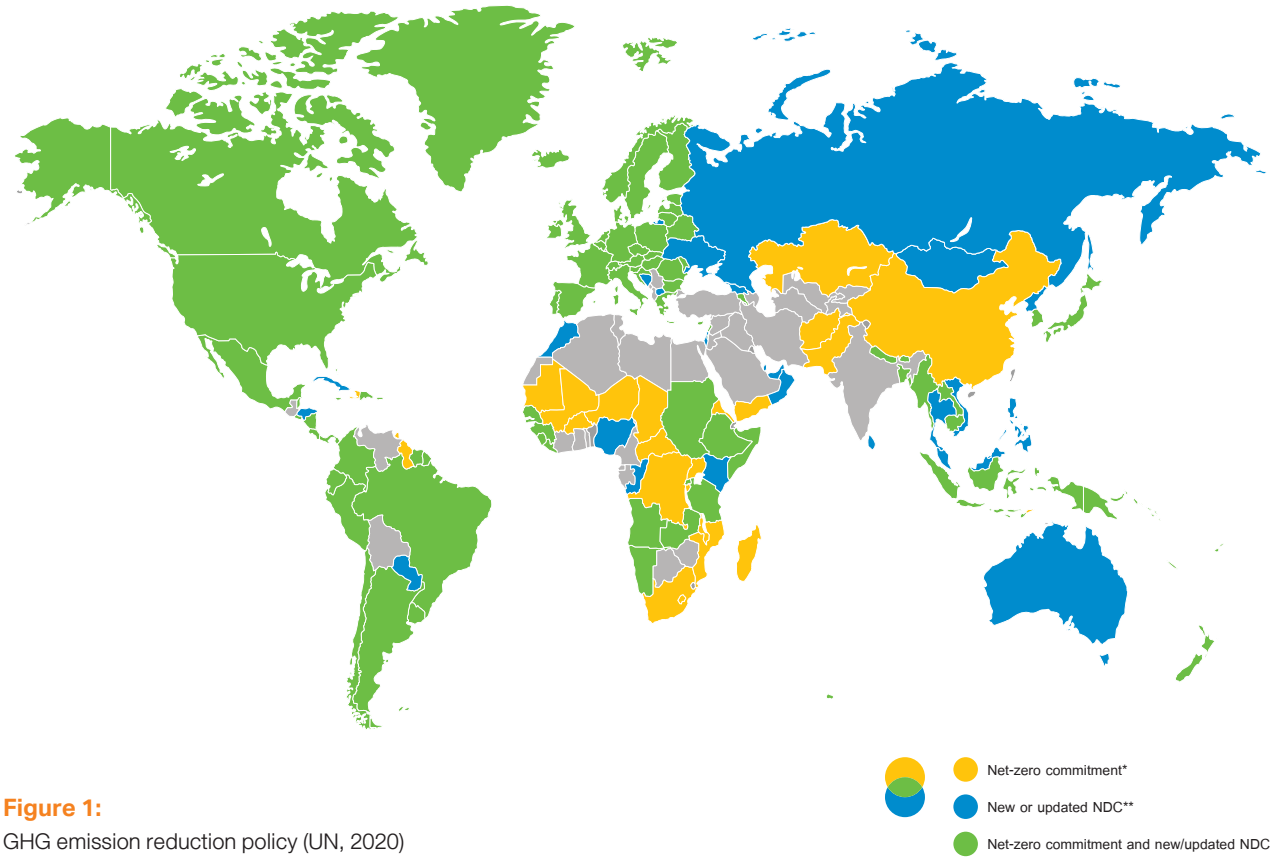
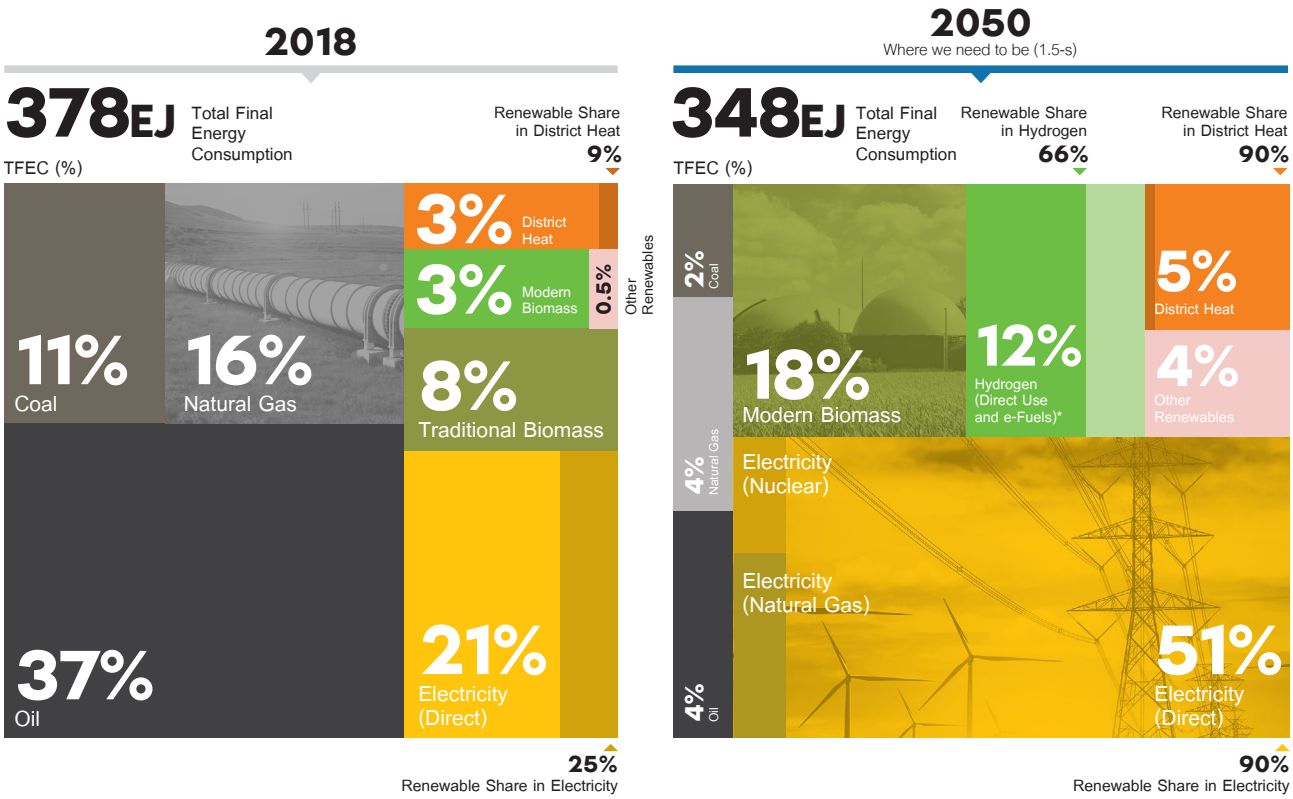


Figure 1:
GHG emission reduction policy (UN, 2020)

Figure 2:
Energy Transition in 2018 and 2050 (IRENA, 2021)



CLIMATE STRATEGY

In 2021, EGCO Group adopted the concept "Cleaner, Smarter and Stronger to Drive Sustainable Growth" and conducted business under 4I: Invest, Increase, Improve and Innovate strategy, focusing on climate change management through investment diversification in clean energy business as well as innovation. Additionally, EGCO Group determined Climate Change Goals as one of the Company's main goals as well as analyzed and established Climate Strategy. The Company assigned Climate Change to the Sustainability Development Committee and included the related topics in executives' KPIs to ensure strict response to the issue.

EGCO Group recognizes the environmental impact power generation business has, namely CO_2 emission leading to global warming and climate change. The Company continuously prioritize problem solving in the early stages of business operation such as balanced distribution of fuel source to ensure stable energy generation, increasing investment in renewable and clean energy continuously and established Thai Rak Pa Foundation to conserve and restore vital watershed forests for over 20 years. As the global and national trend approach clean energy and aim to achieve Carbon Neutral by 2050, EGCO Group has adapted our operations in alignment with that goal.

Mr. Thepparat Theppitak
President

GOAL AND PERFORMANCE

In 2021, EGCO Group set a mid-term target in carbon intensity by 10% by 2030 compared to the baseline in 2020. The Company also aims to achieve long-term goal as a carbon neutral by 2050, reinforcing our vision "To be a major sustainable Thai energy company with full commitment to environment protection and social development support".

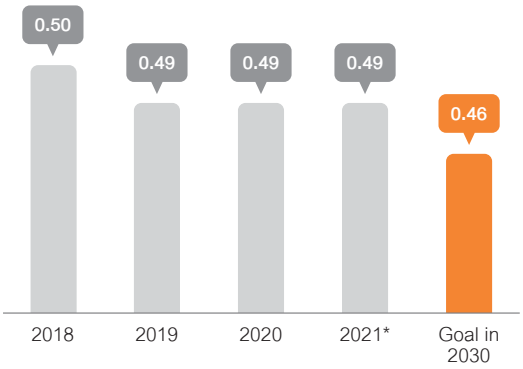
Target:

Increase renewable energy portfolio by **30%** from baseline

Reduce carbon intensity by **10%** from baseline (2020)

DIRECT AND INDIRECT GHG EMISSION (SCOPE 1 AND 2)

Unit: tCO_2e/MWh



Remark*: In 2021, performance data expanded its coverage to 95% of MWe

RESPONSE TO CLIMATE CHANGE

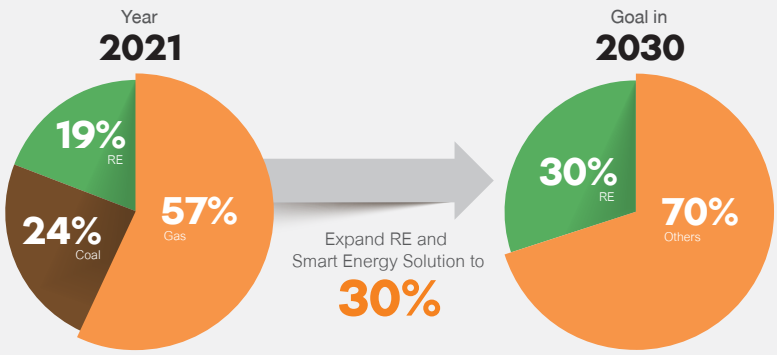
EGCO Group's Climate Strategy operation framework covers 3 main aspects, namely Resilient Portfolio, Innovative Business and Enabling Programs.

RESILIENT PORTFOLIO

Under resilient portfolio management framework, EGCO Group is able to conduct business, supportive of low-carbon society by setting portfolio target in response to environmental and industrial scenario changes.

EGCO Group revised our investment portfolio to increase investment in renewable energy business and Smart Energy Solution. This change was made in alignment with the Company's goal to reduce carbon intensity by 10% by 2030 as well as the National Energy Plan, which set a target to generate energy from clean fuel for more than 35% of total consumption by 2037.

As of 2021, EGCO Group generated 1,050.25 MW of renewable energy or 19% of total generating capacity. There are 2 projects with total generation capacity of 303.08 MW under construction that will increase renewable energy in our portfolio to 23% up completion.

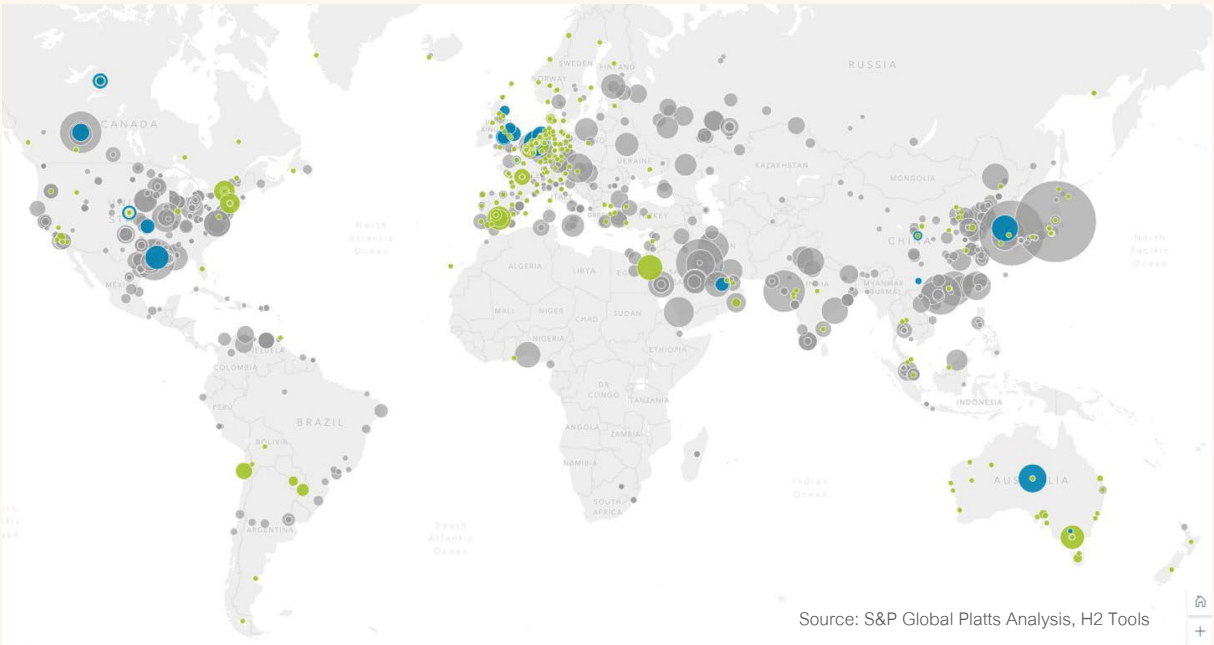


INNOVATIVE BUSINESS

EGCO Group is determined to support low-carbon businesses and invest in ventures that support clean energy innovations, such as investment in community power plants, floating solar farm project and a new alternative to clean energy-hydrogen fuel.

Hydrogen Fuel

Hydrogen fuel is a clean energy innovation increasingly being adopted around the world. Gray Hydrogen, Blue Hydrogen and Green Hydrogen have different sources and GHG emission. Countries in Europe, America and Asia Pacific gradually released new policy to support hydrogen fuel utilization in energy generation, proving its promising future as an investment. As of 2021, EGCO Group has 2 facilities generating power using hydrogen fuel, namely Linden Cogen in the USA and Gangdong Fuel Cell Power Plant in South Korea. The Company aims to invest in related innovation in the future as well as continue to utilize hydrogen fuel to lower GHG emission.



Source: S&P Global Platts Analysis, H2 Tools

Linden Cogen

unit 6 with 172 MW generating capacity supports mixed combustion with up to 40% hydrogen. It is expected to reduce CO_2 emission by as much as 10% of the regular amount.

Generating Capacity

172

MW

Gangdong Fuel Cell Power Plant

(19.8 MW) uses hydrogen as primary feedstock for power generation and has received Renewable Energy Certificates from its output.

Generating Capacity

19.8

MW

> EGCO Group is in the forefront of Thailand's plans to promote the use of hydrogen as a clean fuel for power generation. We are committed to promoting the adoption of cleaner fuels and the pursuit of excellence in new cutting-edge power generation technologies

ENABLING PROGRAMS

EGCO Group supports activities which promotes and encourage the pursuit of low-carbon society. The Company focuses on internal operations as well as certifications and memberships to ensure that our operations are in line with established goal.

Aside from investing in clean energy business and innovations, EGCO Group also encourage efficient energy consumption within the Company through various projects, such as light bulbs change to LEDs, solar panels installation, etc. EGCO Group intends to decrease energy consumption intensity, putting EGCO Group in the top tier of power industry in performance efficiency.

EGCO Group encourages voluntary climate reporting in accordance with the climate-related financial reporting framework of the Task Force on Climate-Related Financial Disclosures (TCFD) and becoming one of the 13 TCFD Supporters in Thailand, 5 among which are energy and utilities companies. EGCO Group was the first company from power industry that became TCFD supporter in June 2021.

EGCO Group was the first company from power industry that became

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

supporter in June 2021

Carbon Credit is one of the important financial tools in the fight against climate change. The Climate Focus reported the carbon credit market is seeing a doubling expansion trend in 2021, twice higher than the expansion rate in the first half of 2020. EGAT reported that Thailand potentially has carbon credits from 1,567.90 MW renewable energy generation capacity. This is an opportunity for EGCO Group to expand our carbon credit trading in the country.

In 2021, EGCO Group's power plants overseas that sell carbon credit are as follow:

Carbon Credits from Renewable Energy Genearation Trades Amounts to

575

million Baht

01 Boco Rock Wind Farm (BRWF)

with the Large-Scale Generation Certificates (LGCs)

02 SEG Power Plant

trades carbon credit with the Certified Emission Reduction (CER) and Verified Carbon Unit (VCU)

03 Darajat Power Plant

trades carbon credit with the CER

04 Salak Power Plant

trades with the International Renewable Energy Certificate (I-REC)

05 Gangdong Power Plant

trades carbon credit with the Renewable Energy Certificate (REC)

SPP2-5, GPS, Solarco, NED, CWF and TWF are in registration process with the I-REC and are expected to start selling carbon credits in 2022.

Additionally, EGCO Group carried out watershed forest conservation and restoration projects through Thai Rak Pa Foundation as well as forest restoration project near power plant areas, such as Quezon, SBPL, BLCP, etc. All effort to offset the emission from our operations in order to move forward to low-carbon society. In 2021, EGCO group's power plants and throught Youth Network Preservation and Restoration of Biodiversity, Ecosystem and Watershed forest planted 95,315 mangroves and 61,699 forest trees.

In 2021, planted mangrove and forest

157,014

trees

Absorb more than

180,000

tCO_2e

OCCUPATIONAL HEALTH AND SAFETY

Management Approach

Performance Data

In 2021, World Health Organization (WHO) and the International Labour Organization (ILO) reported more than 2 million deaths each year resulted both directly and indirectly from work, which were mostly preventable through upholding international and local occupational health and safety laws and regulations such as appropriate working hours and safe work environment. The aim is to minimize risk and damage from work injury or fatality which could impact 1.8-6.0% of the Global Gross Domestic Product. Furthermore, private sector is one of the crucial driving forces in occupational health and safety operations. As the world faces COVID-19 pandemic, occupational health and safety operates in a much more varied dimensions than it has been before-especially an increasing importance of employee healthcare as well as strong innovative drive for healthcare and work safety.

Occupational Health and Safety Strategy

EGCO Group places great importance on occupational health and safety management. In our business operation, employee care is as crucial as economic growth. The Company has appointed Occupational Health and Safety Committee and Working Group to supervise 3 aspects, namely Safety, Health, and Occupational. We are determined to make safety a part of our corporate culture that is valued by executives, employees, and suppliers.

Goal and Performance

LTIFR **0**

	Unit	2018	2019	2020	2021*	Target 2030
Fatality						
Employees	Case	0	0	0	0	0
Contractors	Case	0	0	0	0	0
Lost Time Injury Frequency Rate (LTIFR)						
Employees	Case per million manhours	0	0	0	0.44	0
Contractors	Case per million manhours	0.25	0	0.75	0	0
Injury Severity Rate (ISR)						
Employees and Contractors	Day per million manhours	5.23	0	16.57	5.88	0

Remark: * 2021 Performance covered 95% of EGCO's contracted capacity (MWe)

HIGHLIGHTS

SAFETY

SAFETY

EGCO Group recognizes the importance of safety in our operations. The Company raises awareness and promote accident-free workplace to employees and contractors through various activities and trainings. They are trained on emergency protocols and technology integrations to minimize risks in operations.

In 2021, EGCO Group organized the safety training, which equals 5,960 employee training hours.

5,960
safety training hours

average safety training per employee
5.00
hours/person/year

In 2021, EGCO Group's power plant organized Occupational Health and Safety training both on-site and online as follow:

- Safety, Occupational Health, and Environment Training for OHS Committee
- Safety, Occupational Health, and Environment Training for Employees and New Recruits
- Pre-operational Safety Training for Personnel and Contractor
- Training for Senior and Lead Safety Control Officers
- Boiler Controller Refresher Training
- Crane Operation Refresher Training
- Safety Training for Confined Space Operations
- "Soft Soft" Safety Communication Technique
- Safety Coaching
- First aid training: CPR and AED usage
- Trainings in accordance with related laws

Furthermore, EGCO Group encourages participation in safety awareness building activities, such as Solarco Safety Exhibition and 2 million Safety Hour Celebration and KEGCO 2021 Safety Awareness Motto Contest.

Solarco Safety Exhibition
and 2 million Safety Hour Celebration

"Work safely, pay attention to rules, reduce danger and prevent the disease of COVID-19"
"Work safety-safe family-save money"

After the training, I communicate safety techniques systematically with more confidence especially in safety awareness creation, danger indicating and hidden danger identification techniques. I have a deeper understanding of the topics which can be passed on effectively to operation personnel.

Natsima Hemtanon
Senior Safety Control Officer - KEGCO

Additionally, EGCO Group elevated work safety by modifying the working process to minimize risks with notable changes as follow:

Fast Tag System is a safety system to isolate compromised equipment to make way for maintenance unit's quick and safe entrance. The system uses the Functional Location Database or KKS Number of the compromised equipment to mark safety issue at system gateways such as valves, breakers, and the status tracking system to minimize accident occurrence and error during maintenance. It is a digitization of old analog database project which earned innovation prize from EGCO Group.

Remote Monitoring Center is a power plant monitoring system provided by a manufacturer. It is used to monitor for abnormalities in KEGCO operating plants and promptly alert the responsible parties before the plant trips. The system can also conduct remote tuning on combustion system or equipment operational system immediately with access restriction for security reasons. This helps saves both time and costs as the specialists no longer need to travel to the site.

Installation of Grounding System and Surge Protection Device is an improvement on solar energy facility surge protection system through installation of high voltage surge protection device and the improvement of grounding system. The modifications help decrease voltage and current surges such as lightning which can heavily damage electronics, monitor and analysis equipment, etc.

HEALTH AND WELL-BEING

Health and well-being of our employees are crucial to us. EGCO Group place great importance in providing employees with healthy promoting benefits and activities with an aim to organize health training and sport activities at least twice per year. This includes health promotion activities such as inter-facility sport events.

Friendly soccer game between EGCO-KLU

In 2021, EGCO Group organized health supporting activities for employees with an emphasis on COVID-19 measures as well as COVID-19 emergency drills.

Emergency Drills in case of finding the COVID-19 patients

- Closed office building
- Clean the area inside office building
- Clean the toilet
- Clean the common touch points
- Take the infected person to the hospital for medical treatment

The spread of COVID-19 influenced changes in working routines which could affect employee's mental health both positively and negatively. EGCO Group thus provides support to promote psychological well-being of our employees through stress management courses via an E-learning platform as well as established EGCO Mental Health Center by HR EGCO-counseling program with specialists from "iSTRONG". The program offers psychological survey and online counseling with trained psychologists.

OCCUPATIONAL

EMPLOYEES' EFFICACY AND SAFETY

Employees' efficacy and safety can be supported with good working environment which also contributes to employees' well-being. Thus, EGCO Group place great emphasis on working environment. The Company conducts working environment assessments to ensure higher safety standards than legal requirements and promotes good working atmosphere as follow:

1. The Company conducted annual working environment inspection which complies with related laws.

Illumination	Heat	Noise	Hazard Chemical Concentration Level

2. Provide recreational area for employees to participate in joint activities as well as to relax.

Table Tennis Room at BPU

Petanque Field at RG

Outdoor Fitness at KEGCO

Information Technology
Provide office supplies support during Work From Home (WFH)

Emergency Communication Plan
Establish emergency information and operation center

Employee
Encourage employees to WFH, aid business continuity

Accounting
Provide support for the company's transaction

Power Plant
Covers power generation contunuity, euipment preparedness, and personnel's operations

Organizational Communication
Prepare to communicate both internally and externally

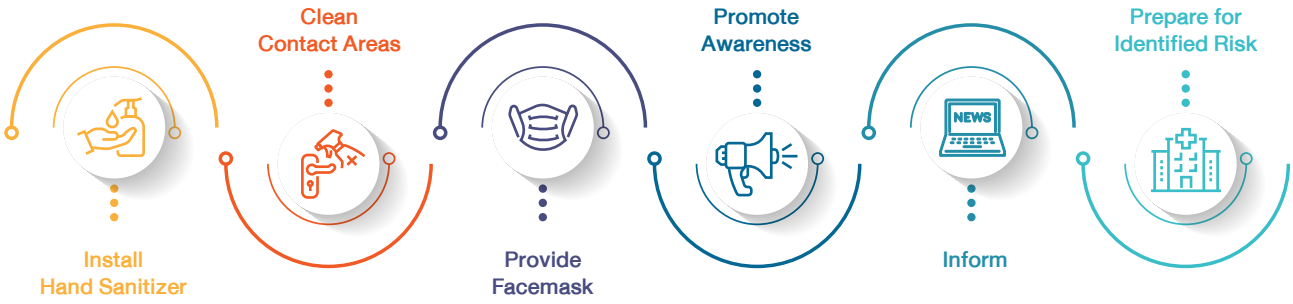
Controlled
Shutdown of office building and power plants

EGCO GROUP: TOGETHER WE FIGHT AGAINST COVID-19

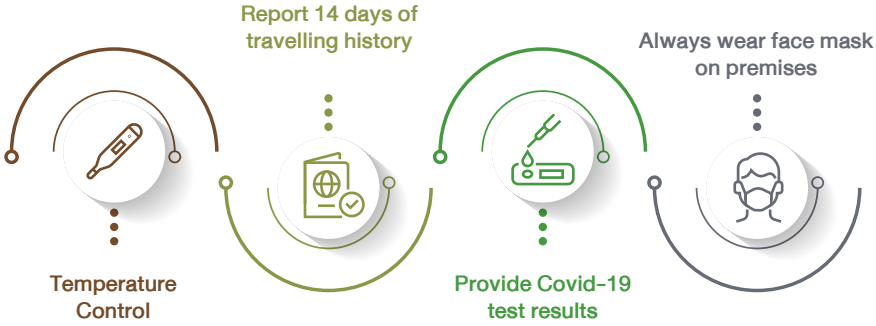
COVID-19 pandemic widely affects every sector directly and indirectly. EGCO Group is no exception. The Company has established action plan for power plants in case of emergency to ensure business continuity.

COVID-19 Prevention Measures

EGCO Group stipulated risk mitigation and prevention measures as well as action plan for case of reported COVID-19 patient on premises as follow:



Entering Control Measure



EGCO Group's facilities are certified clean, safe, and COVID-19 free by the Department of Health.

Furthermore, EGCO Group encourages employees to receive COVID-19 vaccinations as well as reimbursed fees for employees that chose alternative COVID-19 vaccines.

TOGETHER WE FIGHT AGAINST COVID-19

EGCO Group recognizes importance in standing with communities in the fight against COVID-19 pandemic to emerge through this crisis together. In the past year, the Company supported COVID-19 prevention and response through various activities as follow:

EGCO Group Helps Community

EGCO Group supported COVID-19 prevention equipment and proper biohazardous waste management to 85 schools and children development centers around the country, partaking in community care in the areas surrounding our operating facilities.

"Care Bag" Home Isolation Kit

EGCO Group assembled "Care Bag" containing medicine and medical supplies for COVID-19 patients in home isolation. The kit was distributed to local healthcare facilities surrounding EGCO Cogen and EGCO Rayong Industrial Estate to be passed on to green condition patients in home isolations.

Medical Equipment Support for Community Isolation Center

EGCO Group donated necessary medical supplies to "Bangkae Community Isolation Center"-comprise of thermometer, PPE suits, CPE suits, sanitary caps, face shields, medical grade gloves, shoe covers-to support frontline healthcare workers and personnel in the center.

Support for Chulabhorn Royal Academy Vaccination Center

EGCO Group supported Chulabhorn Royal Academy's Sinopharm-alternative vaccine-vaccination center by donating 500 sets of food and beverages to support healthcare workers, personnel, and volunteers at the center during vaccination center opening ceremony.

Support for KU Fights COVID-19 Vaccination Center

EGCO Group donated 500,000 THB to "KU fights COVID-19" vaccination center as a support to COVID-19 vaccination and herd immunity creation in Thailand. The donation went to medical supplies procurement and food budget for volunteers.

SECTION
02

CORPORATE GOVERNANCE

GOVERNANCE STRUCTURE

EGCO's organization structure comprises the Board of Directors, standing committees, President and the top management as follows:

STRUCTURE OF THE BOARD OF DIRECTORS

1. Board of Directors

The Board of Directors ("Board") has main responsibility to conduct business in a way that will benefit EGCO, shareholders and stakeholders including employees and communities where EGCO operates its business. Additionally, the Board works with the Management in formulating EGCO's vision and policy and approving corporate budget. The Board also monitors the Management's performance and suggests sound resolutions to problems.

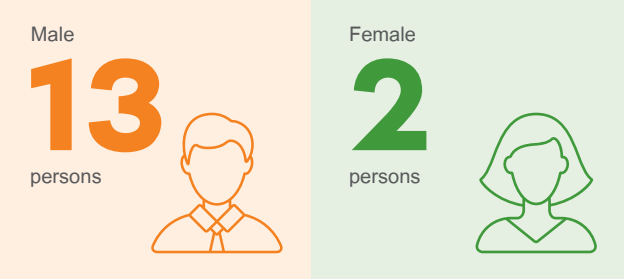
EGCO's Board comprises not less than 5 and not exceeding 15 members as stipulated in the Company's Articles of Association. The appropriate number of the directors will be periodically reviewed to align with their responsibilities. The change in the number of directors needs the approval of the shareholders with the votes of not less than four-fifth of the shareholders present and entitled to vote.

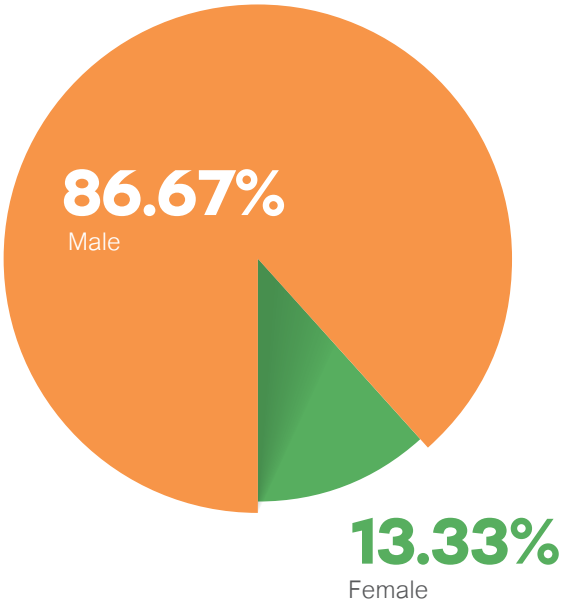
The composition is based on the diversity of gender, individual's skills and experiences that would contribute to the balance of board composition and benefit to Company's business as follows:

As of January 31, 2022, EGCO's Board comprises 15 directors as follows:

- 14 non-executive directors, 93.33% of total directors, comprising:
  - 6 independent directors, 40.00% of total directors,
  - 8 representative directors, 53.33% of total directors, and
- President, the only executive member, 6.67% of total directors.

- Diversity of gender





- Diversity of expertise and experiences

NAME	BACKGROUND									
	INDUSTRY KNOWLEDGE: POWER BUSINESS/ ENERGY BUSINESS/ENGINEERING	INTERNATIONAL BUSINESS	STRATEGY/BUSINESS PLANNING	HR	ACCOUNTING/ FINANCE/ECONOMICS	AUDIT	INTERNAL CONTROL/ ENTERPRISE RISK MANAGEMENT	SMART TECHNOLOGY	LAW	CORPORATE GOVERNANCE
1. Mr. Kulit Sombatsiri	√	-	√	√	√	-	-	√	-	√
2. Mrs. Jaruwan Ruangswadipong	-	-	√	√	√	√	√	-	-	√
3. Dr. Pasu Loharjun	√	-	√	√	-	-	-	-	-	√
4 Prof. Dr. Anya Khanthavit	-	-	√	-	√	√	√	-	-	√
5. Mr. Paisan Mahapunnaporn	√	-	√	√	-	√	√	-	√	√
6. Mr. Poomjai Attanun	√	-	√	-	√	-	-	-	-	√
7. Mrs. Wannipa Bhakdibutr	-	-	√	√	-	-	-	-	-	√
8. Prof. Dr. Pisut Painmanakul	√	-	√	-	-	-	-	√	-	√
9. Mr. Nutthavutthi Chamchang	√	-	√	√	-	-	-	-	-	√
10. Mr. Polsri Suvisisarsa	√	-	√	√	-	-	-	√	√	√
11. Mr. Toshiro Kudama	√	√	√	√	-	-	-	-	-	√
12. Mr. Naoki Tsutsumi	√	√	√	√	-	-	-	-	-	√
13. Mr. Shunichi Tanaka	√	√	√	√	-	-	-	-	-	√
14. Mr. Makoto Nogami	√	√	√	-	√	-	√	√	-	√
15. Mr. Thepparat Theppitak	√	-	√	√	-	-	-	-	-	√
TOTAL	12	4	15	11	5	3	4	4	2	15

Average tenure is 2.71 years; the tenure of each director is detailed below:

NAME	APPOINTMENT DATE	TERM OF OFFICE	IN OFFICE (ENDING JANUARY 31, 2022)
1. Mr. Kulit Sombatsiri	January 17, 2020	1st	2 years
	April 19, 2021	2nd	
2. Mrs. Jaruwan Ruangswadipong	April 20, 2016	1st	5 years 9 months
	April 18, 2019	2nd	
3. Dr. Pasu Loharjun	April 19, 2018	1st	3 years 9 months
	April 19, 2021	2nd	
4. Prof. Dr. Anya Khanthavit	April 19, 2017	1st	4 years 9 months
	July 20, 2020	2nd	
5. Mr. Paisan Mahapunnaporn	April 19, 2017	1st	4 years 9 months
	July 20, 2020	2nd	
6. Mr. Poomjai Attanun	April 19, 2021	1st	9 months
7. Mrs. Wannipa Bhakdibutr	April 19, 2021	1st	9 months
8. Mr. Pisut Painmanakul	October 21, 2020	1st	1 year 3 months
	April 19, 2021	2nd	
9. Mr. Nutthavutthi Chamchang	July 30, 2021	1st	6 months
10. Mr. Polsri Suvisisarsa	October 1, 2021	1st	4 months
11. Mr. Shunichi Tanaka	May 1, 2014	1st	7 years 9 months
	April 20, 2016	2nd	
	April 18, 2019	3rd	
12. Mr. Toshiro Kudama	June 1, 2019	1st	2 years 8 months
	July 20, 2020	2nd	
13. Mr. Naoki Tsutsumi	June 1, 2019	1st	2 years 8 months
	July 20, 2020	2nd	
14. Mr. Makoto Nogami	July 15, 2021	1st	6 months
15. Mr. Thepparat Theppitak	November 12, 2019	1st	2 years 2 months

2. Independent Director

EGCO's Corporate Governance Principle determines the number of independent directors at least one-third of all directors in compliance to the laws. Presently, EGCO's board of directors comprises 6 independent directors which are more than one-third of total directors. The independent director could serve the company not more than 2 terms or 6 years, starting from the 2015 annual general meeting. None of independent director stays in the office more than the term limit. Also, they can schedule their own meeting as necessary.

Moreover, the independent directors are competent, independent and do not possess the prohibited qualifications as regulated by the law. They fulfill all qualifications of independent directors as defined by the Company as follows:

1. Holding shares not more than 0.5% of the paid-up capital with the voting right of EGCO, parent company, subsidiary company, associated company or any legal entity that may have the conflict of interest (including the connected persons as stipulated in section 258 of securities laws),
2. Not being or having been a director who takes part in the management (executive director, director who has the same responsibility as management and authorized director, except the case of joint signing with other directors for transactions approved by the Board), an employee, or an advisor who receives regular salary, or a controlling person of EGCO, parent company, subsidiary, associate or fellow subsidiary (two or more subsidiaries of the same holding company) or any entity that may have a conflict of interest during the period of two years before his/her appointment,
3. No relationship by family or by law with the management, major shareholders, controlling persons of EGCO or its subsidiaries, or those being nominated,
4. No business relationship with EGCO, parent company, subsidiary, associate company and not being a major shareholder, non-independent director or management of any entity that may have a conflict of interest in a way that would affect the giving of independent opinions for at least two years before the filing date,
5. Not being an auditor or a major shareholder, director, management or partner of the audit firm that provides auditing services to EGCO, parent company, subsidiary company, associate company or any entity that may have the conflict of interest for at least two years before the filing date,
6. Not being a professional service provider, including legal and financial consultant to EGCO, parent company, subsidiary company, associate company or any entity that may have the conflict of interest, with the fee higher than 2 million baht per year, or being a major shareholder, non-independent director, management or partner of such company for at least two years before the filling date,
7. Not being EGCO's representative director of its director, majority shareholders or shareholders who are related to EGCO's majority shareholders, and
8. Not having any constraint that would affect the performance of giving independent judgment on EGCO.

The qualifications of the independent directors are in accordance with the Capital Market Supervisory Board' s regulations. Meanwhile, independent director can hold EGCO shares not more than 0.5%, which is stricter than the regulation of the Capital Market Supervisory Board which allows 1% shareholding.

During the year, the independent directors provided the independent judgement and recommendations when considering and making decision on significant issues such as business strategy, investment projects, succession plan, organization structure, and other issues related to the corporate governance, for the best interest of the Company. They also were concerned about all stakeholders and prevented any actions which caused conflicts of interest among the Company, executives, directors, and major shareholders. In 2021, the independent directors held 2 independent directors' meetings to discuss regarding roles and responsibilities of the independent directors in supporting EGCO's business operations and strategies as well as board of directors' development plan through knowledge sharing among directors or seminar arranged by specialists in topics which are cooperative with EGCO's strategic plans.

3. Chairman

On January 17, 2020, the Board of Directors in the meeting no. 1/2020 appointed Mr. Kulit Sombatsiri, a representative director of EGAT to be the Chairman. Mr. Kulit is the current EGAT Chairman. Moreover, they possess leadership to lead EGCO towards the corporative vision, mission and strategic plan to benefit all shareholders. Although the Chairman is not an independent director, the Board performs its duties with fairness and transparency and makes independent decisions with due care and responsibility to all shareholders equally through the following mechanisms:

1. The Chairman is a non-executive director, not the same person as the President and has no relations with the management. There is a clear distinction between oversight and day-to-day business administrative roles. The Chairman takes the lead role in conducting board meetings to be effective and efficient by encouraging involvement by all directors and providing recommendations and supports to the Management via the President. The Board does not intervene in any routine activities under the President's responsibilities.
2. The Board member appointed the lead independent director as the representative of independent directors to consider meeting agendas and coordinate with the shareholders, the Board members, and the Management.
3. Most of the Board members are non-executive directors and the Board's seats are allocated to major shareholders who have expertise in Company's business comprising 4 EGAT representative directors, 4 TEPDIA representative directors, and 6 independent directors. This indicates a proper balance of power.
4. The Board has assigned the sub-committees to oversee tasks where there may be a potential for transactions with conflict of interest and to balance the need of each stakeholder. With respect to this, the Audit Committee is entrusted for the oversight and review of the accuracy of financial and non-financial reports as well as related matters. The Nomination and Remuneration Committee is assigned to take care of selection of the Board members and key executives and their remuneration on a transparent basis.

The responsibilities of the Chairman are as follows:

1. Determine the Board meeting agendas by collaborating with the Lead Independent Director and the President, call the Board meeting, and be a chairman of the meetings.
2. Conduct the Board meeting to be efficient and compliance with regulations and articles of association, as well as encourage directors to independently provide their opinions.
3. Give support to the Board of directors to perform its duties to the best of its abilities according to authorization, duties and responsibilities, and good governance principles.
4. Monitor and ensure that directors performances are effective and able to achieve EGCO's objectives and strategic plan.

The result of the Board's performance appraisal in 2021 indicated that the Chairman was excellent in leading the meeting and encouraging directors to participate in the discussion around the Board table.

4. Lead of Independent Director

The Board in the Meeting No. 1/2018 held on January 19, 2018, with the recommendation of independent directors to appoint Ms. Jaruwan Ruangswadipong as the Lead of Independent Director with effect on January 19, 2018. The Lead of Independent Director shall support the activities of the Board in compliance to the corporate governance principles and take care the interests of every party with fairness.

The Lead Independent Director's term of office is 3 years starting from the appointment date. When the Lead Independent Director retires, resigns, or vacate the office before the end of the term, the new Lead Independent Director shall be appointed by the Board within 3 months after the vacancy.

The responsibilities of Lead Independent Director when acting as such are as follows:

1. Chair the independent directors' meetings and represent the independent directors in discussions with the Chairman and the Management on corporate governance issues and other significant matters as deemed appropriate by independent directors,
2. Arrange the independent directors' meeting at least once a year with participation from the executives or related persons to provide information and clarification,
3. Serve as the principal liaison between the Chairman, the independent directors and President on board-wide issues,
4. Preside and act as Chairman at all meetings of the Board at which the Chairman or the Vice Chairman is not present,
5. Collaborate with the Chairman and the President to develop Board meeting agendas to ensure that the significant issues are included to be proposed in the Board meeting and Non-Executive Directors' meetings, for consideration or acknowledgment,
6. In collaboration with the Chairman and the President, serve as a contact person for shareholders who wish to discuss, negotiate, and seek consultation from the Board wishing to communicate with the Board other than through the Chairman.

5. Authorized Directors

EGCO determines that the authorized directors comprise the Chairman or the President to sign and affix the company's seal independently, or any two directors to sign jointly and affix the company's seal. Such authorized directors shall exclude (1) independent directors to maintain their independence under the good corporate governance principle, (2) directors who are senior government officers, and (3) directors who are also directors of the financial institutions to avoid the limitation that such financial institutions cannot provide future financial service to EGCO.

6. Board of Directors' Duties and Responsibilities

The duties and responsibilities of the Board of Directors are prescribed below:

Duties to EGCO

1. Understand its leadership role and assume its responsibilities in overseeing the Company, towards the sustainable value
2. Oversee the Company to create sustainable value and to pursue the following outcomes: competitiveness, performance with long-term perspective, ethical and responsible business, good corporate citizenship, and corporate resilience
3. Establish and drive the core value which upholds ethics and be a role model
4. Define policies for directors, executives and employees in writing which represent principles and practices for operating the Company, and put in place the governance mechanism to ensure the compliance with the established policies, monitoring the performance and regularly review of policies and practices,
5. Ensure performance of all directors, executives, and employees in compliance with their fiduciary duties, and company's operation in compliance with applicable law and standards as well as the shareholders' resolutions,
6. Define core objectives and targets and monitor the performance of the Company to achieve the defined objectives, targets, and strategies,
7. Determine and review the board structure to support the achievement of objectives and targets
8. Select and develop directors and President and determine their remuneration as well assessing their performance
9. Determine the employees' remuneration structure as motivation for employees to drive the Company to achieve the objectives and targets
10. Develop a succession planning for key executives and monitor the performance to ensure that the Company has competent executives to fill in the vacant positions
11. Ensure that a good internal control is established by setting up the Company's regulations including a clear and appropriate working processes, accounting system, standard and reliable financial reports, substantial risk management, efficient compliance system and regular monitor

Duties to Shareholders

1. Ensure that EGCO is financially viable, properly managed and constantly improved so as to protect and enhance the interests of the shareholders
2. Ensure that the information disclosure is materially correct, complete, transparent and timely
3. Ensure the equitable treatment of all shareholders
4. Not report of fault information or avoid disclosure of the mandatory required information on the Company's operating results and financial position

Duties to Creditors

1. Ensure EGCO's full compliance with loan provisions and disclosure of EGCO's financial status
2. Promptly seek professional advice when in uncertain circumstance which might impact lenders such as unstable financial position or pending insolvency

Duties to other Stakeholders

1. Ensure EGCO's compliance with the governing laws and regulations while taking into account the impact on employees, other stakeholders, community, society and environment

Due Diligence

1. Attend all Board meetings, or give apology in advance when meeting attendance is not possible
2. Acquire a knowledge of the corporate objectives, mission and core business
3. Acquire a knowledge of EGCO business including statutory laws and regulations affecting the discharge of duties as director, and well aware of the business environment
4. Be provided substantial information in advance to allow adequate time to analyze; then make thorough judgment
5. Consider and make independent judgment; In case of dissent from Board's resolution, directors can request the record of objection in the Minutes of Meeting.

6. Ensure that the communication system is established for directors to be provided regular and timely information to enable the thorough and careful judgment.
7. Ensure that the communication and information disclosure among stakeholders are executed correctly, appropriately and timely.
8. Encourage the open communication between the Board of Directors and auditors and that the auditors can work independently and efficiently with the full co-operation from the management and internal auditors.
9. Ensure that EGCO complies with the governing laws, rules, regulations and business standard and ethics.

Board of Directors' Authority

The Board has the authority to approve the following matters:

The Board's Matters

1. Elect and appoint directors in the Board of Directors to replace resigning directors during the year, and to nominate directors to the shareholders to replace the directors who retire by rotation
2. Conduct the self-assessment annually and explain the Board of Directors' responsibilities and governance in the annual report
3. Establish and amend the sub-committees' charters
4. Appoint, remove, and change members in the sub-committees.
5. Establish a new sub-committee during the year and determine its remuneration when considered as appropriate

Corporate Policy and Management

1. Approve and revise the Company's vision, goal, mission, and policies
2. Approve both short-term and long-term strategic plans, including action plans, annual budget and manpower to be in line with the strategic plans
3. Make a decision for the interest of the Company, shareholders, stakeholders; and to monitor the Management's performance and provide suggestions to solve the problems appropriately
4. Establish and amend the Company's regulations
5. Determine, establish, and revise the Company's Table of Authority
6. Establish and revise the organization structure of EGCO and EGCO Group's companies in which EGCO has management control
7. Consider risks related to corporate management in all aspects

Business Activities

1. Establish, amend, or change the binding agreements of investment/joint venture/bids under EGCO's commitment including any divestment
2. Endorse the following matters before proposing for the shareholders' approval:
   - Acquisition or sale of important assets or any related transaction as outlined by the laws and the Capital Market Supervisory Board
   - Sale or transfer of EGCO enterprises or its components to other entities
   - Purchase or acquisition of enterprises on behalf of EGCO
   - Making addendums or changes to EGCO's Memorandum or Articles of Association
   - Increase or decrease of the registered capital
   - Issuance of securities for sales to the public, except for common shares
   - Dissolution of EGCO or merging it with another company
   - Announcing annual dividends
   - Sundry other activities as mandated by laws or the Company's Articles of Association to seek approval from shareholders' meeting
3. Approve the interim dividend payment for the shareholders
4. Approve the change in significant accounting policy and compliance with new accounting standards
5. Approve the issuance of debt securities (excluding debentures), borrowing, refinancing and rescheduling
6. Approve the guarantee, loan to group companies and other financial supports
7. Approve the revision of annual budget
8. Approve the disposal of materials

Human Resources

1. Approve hiring, employment, appointment, termination, and compensation required by law for the President, top executives and Corporate Secretary
2. Evaluate the President's performance and approve the salary increase for the President
3. Consider the disciplinary action for the President
4. Approve the Company's salary structure, wages, compensation, and benefits
5. Approve the succession plan for the position of Executive Vice President upwards

Other Business

1. Approve the court actions
2. Appoint specializes to provide in-depth information or take any related actions for the Company in case of the issues significantly affecting the Company's business, financial positions, or reputation of Group Company
3. Authorize the President appropriately to manage the Company in accordance with the corporate strategy, directions, goal and policy by ensuring that the Company has a proper corporate governance and efficient monitoring and evaluation
4. Take other responsibilities in relation to the Company's business as assigned by the shareholders
5. Consider donation apart from what has been approved in the annual budget

STANDING COMMITTEE

In order to prudently consider and monitor the significant issues, the Board appoints the proficient and qualified directors to be members in the standing committees to enhance the governance efficiency. Presently, Currently, EGCO has 5 standing committees namely, (1) Audit Committee, (2) Risk Oversight Committee (3) Investment Committee (4) Nomination and Remuneration Committee, and (5) Corporate Governance and Social Responsibility Committee.

Each Board committee has its own charter which prescribes functions, composition, term of office, responsibilities, and meeting conduct. The committee's charter, which is approved by the Board, would be reviewed as deemed appropriate. Each committee can retain outside counsels, experts, and professional advisors, as deemed appropriate at EGCO's expense. All committees shall report their activities (if any) to the Board.

In 2021, the Board and all sub-committee had reviewed their charters. The Risk Oversight Committee, Investment Committee, Nomination and Remuneration Committee, and Corporate Governance and Corporate Social Responsibilities Committee considered the revision of the charters regarding qualifications, responsibilities, and meeting procedure to be clear and in consistent with their performances. Except for the charter of the Audit Committee which has no revision, considered that it is appropriate and integral for their duties and responsibilities.

Audit Committee

Comprises 3 independent directors. The Lead Independent Director, Mrs. Jaruwan Ruangswadipong, is appointed as the Chairman of the Committee. The mission the Audit Committee covers the review of the financial statements, legal compliance, internal control and internal audit systems and appointment and removal of external auditors. The Audit Committee also reviews the connected transactions or transactions with conflicts of interest to ensure that such transaction is in compliance with the SET's requirement, well-grounded and for the best interest of EGCO. The responsibilities of the Audit Committee were described below:

1. Review the accuracy and adequacy of Company's financial reporting,
2. Review the appropriateness and effectiveness of the Company and its subsidiaries internal control systems, and internal audit functions and determine the Internal Audit Division's independence,
3. Approve the appointment, rotation, and removal of the Chief Internal Audit,
4. Monitor Company's compliance with Securities and Exchange Acts and Regulations of the SET and any other laws relevant to Company's business,
5. Recommend to the Board of Directors an independent person to be Company's auditor, removal of the auditor and audit fees,
6. Consider non-audit services performed by the auditors which may lead to the auditors' non independence,
7. Consider and endorse the significant change in accounting policy of the Company prior to proposing to the Board of Directors for approval,
8. Meet with the auditor exclusively at least once a year,
9. Consider the connected transactions or any transactions that may cause conflict of interest complying with rules and regulations of SET to ensure that such transactions are reasonable and create highest benefit to the Company,
10. Review EGCO's Regulation on Internal Audit prior to proposing to the Board of Directors for approval,
11. Approve the internal audit plan as well as budget and personnel,
12. Review the internal audit report of internal audit division,

13. Meet with the Chief Internal Audit exclusively at least once a year,
14. Review with the Management the preparation of the Management's Discussion and Analysis or MD&A and the disclosure in Annual Report,
15. Prepare a report that describes the Audit Committee's activities and responsibilities. This report shall be signed by the Chairman of the Audit Committee and published in the annual report to the shareholders. The Audit Committee's Report shall consist of at least the following information:
    (a) an opinion on the accuracy, completeness and creditability of the Company's financial report,
    (b) an opinion on the adequacy of the Company and its subsidiaries internal control system,
    (c) an opinion on the compliance with the law on securities and exchange, the Exchange's regulations, or the laws relating to the Company's business,
    (d) an opinion on the suitability of an auditor,
    (e) an opinion on the transactions that may lead to conflicts of interests,
    (f) the number of the Audit Committee meetings, and the attendance of such meetings by each committee member,
    (g) an opinion or overview comment received by the Audit Committee from its performance of duties in accordance with the charter, and
    (h) other transactions which, according to the Audit Committee's opinion, should be known to the shareholders and general investors, subject to the scope of duties and responsibilities assigned by the Board of Directors.
16. Inspect any suspiciousness reported by the Company's auditor, that the President, the Management, or any person responsible for the company's operation commits an offence under the Securities and Exchange Act (No. 4) B.E. 2551 and report the result of preliminary inspection to the Office of the Securities and Exchange Commission and the auditor within thirty days after being informed by the auditor,
17. Monitor compliance with Anti-Corruption Policy and review related measures and internal control of the Company,
18. Review reported concerns about fraud or corruption of the Company and its subsidiaries,
19. Review the Audit Committee Charter and perform the self-assessment at least once a year,
20. Perform any other act as assigned by the Board of Directors with approval of the Audit Committee.

Reference to the above responsibilities, the Committee is accountable to the Company's Board of Directors whereas the Board of Directors remains responsible to third persons for the operation of the Company.

Risk Oversight Committee

Comprises 5 members having 2 independent directors, 2 non-executive directors and the President. ROC appointed Mr. Anya Khanthavit, independent director, to be the Chairman of the Committee for his expertise and experiences in risk management. Risk Oversight Committee takes duties to consider the policy, recommend, oversee, and monitor corporate risk management framework. The responsibilities of the Risk Oversight Committee are detailed below:

1. Consider and provide recommendations on enterprise risk management policy and framework to be proposed to the Board of Directors for approval,
2. Consider and provide recommendations on risk appetite and risk tolerance for constant effectiveness to be proposed to the Board of Directors for approval,
3. Oversee the Company to ensure the key risks and their impacts and possibilities are identified including considering the enterprise risk management plan and process,
4. Monitor and assess the Company's risk management to comply with the risk management framework and plans,
5. Regularly report to the Board of Directors on the result of risk assessment and implemented measures. In case of any significant issues materially impacting to the Company, the Board of Directors should be informed promptly for further actions,
6. Provide recommendations on the risk management to directors, management and EGCO Management Committee, with continuous encouragement and support for the improvement and development of risk management system within the company,
7. Monitor and encourage the review of the enterprise risk management policy and framework at least once a year to ensure the company's risk management policy and framework suited to EGCO's business process and risk mitigation activities
8. Regularly review and update its own charter to ensure its appropriateness to be proposed to the Board for approval
9. Evaluate the effectiveness of Risk Oversight Committee performance annually
10. Perform other duties relating to the risk management as may be assigned by the Board

Nomination and Remuneration Committee

Comprises 5 non-executive directors, 3 of whom are independent directors. NRC appointed Mr. Toshiro Kudama, representative from TEPDIA, the major shareholder, as the Chairman of the Committee for his knowledge and experiences in strategy and human resources management as well as international corporate governance. His expertise supports the Company's strategy to develop and manage human resources to prepare for the investment and management of international assets. Although the NRC Chairman is not an independent director, the Board ensures that NRC has its due process of directors and senior management's selection which is in line with the best practices, taking recommendations from all shareholders. Directors and senior management's remuneration is considered under transparent and clear guidelines, comparable to those of peer companies and aligned with the long-term benefit of EGCO and the shareholders. The responsibilities of the Nomination and Remuneration Committee are detailed below:

1. Consider policies, regulations, or any same class documents regarding HR matters for the Board's consideration and biannually review with subsequent revision if necessary or in case of any significant changes.
2. Consider charter of the Committee to be proposed to the Board and biannually review with subsequent revision if necessary or in case of any significant changes.
3. Endorse to the Board to consider the structure, composition and qualifications of Board and subcommittees.
4. Recommend the list of nominees for the Board's consideration in case of vacancies by rotation and/or in case of casual vacancies.
5. Recommend for the Board's consideration remuneration structure, including meeting allowance, annual bonus, welfare, and other benefits in cash and in kind for EGCO Board and Board of EGCO Group's companies in which EGCO has management control.
6. Consider Annual performance appraisal forms for Board's consideration.
7. Endorse organization restructure of EGCO and EGCO Group's companies in which EGCO has management control (Senior Vice Presidents (SVP) upward).
8. Endorse for the Board's consideration Company's annual manpower planning,
9. Scrutinize the list of nominees for EGCO President in case of vacancy for the Board's consideration.
10. Consider appointment, promotion, rotation, and removal of the Senior Executive Vice Presidents ("SEVP"), Executive Vice Presidents ("EVP") of EGCO and Corporate Secretary, as authority stated in the regulations and Table of Authority.
11. Consider appointment of EGCO representative directors in EGCO Group's companies and joint venture companies based on the equity proportion or shareholders' agreements, to be in line with the regulations and Table of Authorities.
12. Recommend the result of performance evaluation of EGCO President and SEVPs to the Board for consideration.
13. Evaluate the performance of all EVPs and Corporate Secretary.
14. Endorse succession plans of EGCO's EVP upward to the Board's consideration.
15. Endorse to the Board's consideration remuneration structure, including meeting allowance, annual bonus, welfare, and other benefits in cash and in kind for EGCO and of EGCO Group's companies in which EGCO has management control.
16. Consider budget for annual salary increase rate of the employees of EGCO and the EGCO Group's companies in which EGCO has management control.
17. Consider corporate bonus criteria of EGCO and EGCO Group's companies in which EGCO has management control.
18. Determine Bonus-linked KPIs to determine annual bonus for EGCO and EGCO Group's companies in which EGCO has management control.
19. Endorse special bonus to be proposed to the Board.
20. Endorse for the Board's consideration the early retirement program for the employees of EGCO and EGCO Group's companies in which EGCO has management control.
21. Consider risks and mitigation measures associated to HR issues to the Board for consideration.
22. Evaluate the effectiveness of the Committee annually.
23. Other issues as assigned by the Board and as stipulated in the Company's regulations and principles.

Investment Committee

Comprises 5 directors and has the responsibility to screen and consider the Management's proposals regarding the investments, funding and relating activities for the Board's approval. However, medium, and small sized transactions can be approved by the Investment Committee itself after the Board's acknowledgement since this Committee is empowered to approve business decisions within its delegated authority. The Chairman of the Board, with his knowledge and experiences in energy business and business strategy, is also appointed as the Chairman of the Investment Committee. He has been proven to be an efficient chairman and conducted the meetings efficiently and has been attentive to other members' recommendations both at the Board's and the committee's meeting. The Investment Committee's responsibilities are described below:

1. Consider policies, regulations or any same class document regarding investment, asset management, accounting, financial management and procurement for the Board's consideration with biannual review and subsequently revision if necessary or in case of any significant changes.
2. Consider charter of the Committee to be proposed to the Board and biannually review with subsequent revision if necessary or in case of any significant changes.
3. Consider Company's strategic plan, business plan, action plan and annual budget for the Board's consideration.
4. Determine Corporate KPIs for the Board's consideration.
5. Monitor progress of Corporate KPIs and assess their performance.
6. Endorse the increase or reduction of the registered capital for the Board's consideration.
7. Endorse to propose to the Board to consider acquisition, investment, and divestment of Company's assets.
8. Endorse the Company's financing for the Board's consideration.
9. Endorse the Company's project and asset management for the Board's consideration.
10. Endorse the Company's profit allocation, financial management, financial support to EGCO Group's companies including significant financial transactions for the Board's consideration.
11. Consider procurement and disposal material management as stated in the Company's regulations and Table of Authorities.
12. Consider risks associated with investment and finance and their preventive measures and mitigations to the Board for consideration.
13. Evaluate the effectiveness of the Committee annually.
14. Other issues as assigned by the Board and as stipulated in the Company's regulations and principles.

Corporate Governance and Social Responsibility Committee

Comprises 5 members having 3 independent directors, 1 non-executive director and the President. Dr. Pasu Loharjun, independent director, is the Chairman of the Committee. The Corporate Governance and Social Responsibility Committee is responsible for the corporate governance principles and the frameworks, policies relating to corporate social responsibility and environmental matters that affect shareholders and other key stakeholders, for the Company's sustainable growth. The CC Committee is entrusted to the following responsibilities.

1. Endorse to the Board for consideration policies aligning to the rules and regulations issued by the government or regulators such as the Stock Exchange of Thailand and Office of Securities and Exchange Commission, as well as biannually review and subsequently revise if necessary or in case of any significant changes.
2. Establish the Charter of Committee to be proposed to the Board for consideration, biannually review with subsequent revision if necessary or in case of any significant changes.
3. Endorse objectives and annual plans, to be in line with the strategic plan, for the Board's approval.
4. Oversee, monitor, and appraise the performance to comply with the policies, practices, objectives and approved plans.
5. Encourage, support, and advise directors, executives and employees to assure their compliance with the policy, practices, objectives and plans of CG, CSR and Anti-Corruption.
6. Cooperate with and provide suggestions to subcommittees and working teams in relation to CG, Anti-Corruption, CSR, environment, and sustainability management.
7. Support communication to directors, Management, and employees to assure their awareness and understanding the embedded policies and practices regarding CG, Anti-Corruption, CSR, environment, and sustainability management.
8. Oversee the assessment of Anti-Corruption risks and risk mitigation.
9. Evaluate the effectiveness of the Committee annually.
10. Other issues as assigned by the Board and as stipulated in the Company's regulations and principles.

The Board of Director regularly attends the board meetings to establish policies regarding EGCO's business operation, monitor performance, discuss, and provide opinion on management. Also, the Board has encouraged the non-executive directors to hold a meeting as deemed appropriate at least once a year without the presence of management to independently discuss and voice their opinions on related issues.

Meeting Attendance of the Board of Directors in 2021

NAME	MEETING ATTENDANCE IN 2021 (NUMBER OF TIMES)							
	BOARD MEETING (13 TIMES/PERCENTAGE)	INDEPENDENT DIRECTORS MEETING (2 TIMES/PERCENTAGE)	NON-EXECUTIVE DIRECTOR MEETING (1 TIME/PERCENTAGE)	AUDIT COMMITTEE (12 TIMES/PERCENTAGE)	RISK OVERSIGHT COMMITTEE (13 TIMES/PERCENTAGE)	INVESTMENT COMMITTEE (12 TIMES/PERCENTAGE)	NOMINATION AND REMUNERATION COMMITTEE (10 TIMES/PERCENTAGE)	CORPORATE GOVERNANCE AND CORPORATE SOCIAL RESPONSIBILITIES COMMITTEE (6 TIMES/PERCENTAGE)
1. Mr. Kulit Sombatsiri	13/13 (100%)	-	1/1 (100%)	-	-	12/12 (100%)	-	-
2. Mrs. Jaruwan Ruangswadipong	13/13 (100%)	2/2 (100%)	1/1 (100%)	12/12 (100%)	-	-	-	-
3. Dr. Pasu Loharjun	13/13 (100%)	2/2 (100%)	1/1 (100%)	-	-	-	10/10 (100%)	6/6 (100%)
4. Prof. Dr. Anya Khanthavit	13/13 (100%)	2/2 (100%)	1/1 (100%)	12/12 (100%)	13/13 (100%)	-	-	-
5. Mr. Paisan Mahapunnaporn	13/13 (100%)	2/2 (100%)	1/1 (100%)	12/12 (100%)	4/4 (100%)	-	7/7 (100%)	-
6. Mr. Poomjai Attanun was appointed on Apr 19, 2021	9/9 (100%)	1/1 (100%)	1/1 (100%)	-	9/9 (100%)	-	-	4/4 (100%)
7. Mrs. Wannipa Bhakdibutr was appointed on Apr 19, 2021	8/9 (88.89%)	1/1 (100%)	1/1 (100%)	-	-	-	7/7 (100%)	4/4 (100%)
8. Prof. Dr. Pisut Painmanakul	13/13 (100%)	-	1/1 (100%)	-	-	5/5 (100%)	-	3/3 (100%)
9. Mr. Nutthavutthi Chamchang was appointed on Jul 30, 2021	6/6 (100%)	-	1/1 (100%)	-	-	-	-	3/3 (100%)
10. Mr. Polsri Suvisisarsa was appointed on Oct 1, 2021	3/3 (100%)	-	1/1 (100%)	-	3/3 (100%)	-	3/3 (100%)	-
11. Mr. Toshiro Kudama	13/13 (100%)	-	1/1 (100%)	-	-	-	11/11 (100%)	-
12. Mr. Naoki Tsusumi	13/13 (100%)	-	-	-	-	12/12 (100%)	-	-
13. Mr. Shunichi Tanaka	13/13 (100%)	-	1/1 (100%)	-	-	12/12 (100%)	-	-

NAME	MEETING ATTENDANCE IN 2021 (NUMBER OF TIMES)							
	BOARD MEETING (13 TIMES/PERCENTAGE)	INDEPENDENT DIRECTORS MEETING (2 TIMES/PERCENTAGE)	NON-EXECUTIVE DIRECTOR MEETING (1 TIME/PERCENTAGE)	AUDIT COMMITTEE (12 TIMES/PERCENTAGE)	RISK OVERSIGHT COMMITTEE (13 TIMES/PERCENTAGE)	INVESTMENT COMMITTEE (12 TIMES/PERCENTAGE)	NOMINATION AND REMUNERATION COMMITTEE (10 TIMES/PERCENTAGE)	CORPORATE GOVERNANCE AND CORPORATE SOCIAL RESPONSIBILITIES COMMITTEE (6 TIMES/PERCENTAGE)
14. Mr. Makoto Nogami was appointed on Jul 15, 2021	6/6 (100%)	-	1/1 (100%)	-	6/6 (100%)	-	-	-
15. Mr. Thepparat Theppitak	13/13 (100%)	-	1/1 (100%)	-	13/13 (100%)	12/12 (100%)	-	6/6 (100%)
16. Assoc. Prof. Dr. Bordin completed term of office on Apr 19, 2021	4/4 (100%)	1/1 (100%)	-	-	-	-	3/3 (100%)	2/2 (100%)
17. Assoc. Prof. Dr. Nualnoi Treerat completed term of office on Apr 19, 2021	4/4 (100%)	1/1 (100%)	-	-	-	-	3/3 (100%)	2/2 (100%)
18. Ms. Choosri Kietkajornkul resigned on Jul 20, 2021	7/7 (100%)	-	-	-	-	6/6 (100%)	-	-
19. Mr. Roengchai Khongthong resigned on Oct 1, 2021	10/10 (100%)	-	-	-	10/10 (100%)	-	8/8 (100%)	-
20. Mr. Tomoyuki Ochiai resigned on Jul 15, 2021	7/7 (100%)	-	-	-	7/7 (100%)	-	-	-

In 2021, the Board held 13 meetings, with 99.49% of the Board of Directors attending. Individually, each director attended more than 99.44% of the total number of meetings.

In 2021, the Board of Director has improved the knowledge and capabilities by attending training programs/seminars in topic of related business, corporate governance, improvement of competency which will lead to the sustainable creation of business value, and factors that may affect EGCO's business.

Training program/seminar Attendance of the Board of Directors in 2021

NAME	TRAINING PROGRAM/SEMINAR					
	THAILAND'S IN LAND TRANSPORT INFRASTRUCTURE AND INVESTMENT OPPORTUNITY PROGRAM[1]	HOW TO DEVELOP A WINNING DIGITAL STRATEGY[2]	ROLES OF PRIVATE SECTOR'S EXECUTIVES AND OFFICERS IN ANTI-CORRUPTION[3]	TRANSFORMATION TO SUSTAINABLE GROWTH[4]	ESG TRENDS IN THAILAND'S POWER BUSINESS AND WAYS TO ACHIEVE SUSTAINABILITY[5]	OTHERS
1. Mr. Kulit Sombatsiri	√	√	-	√	-	-
2. Ms. Jaruwan Ruangswadipong	√	√	√	√	√	Certificate of Boardroom Success through Financing & Investment, organized by Thai Institute of Directors Association

NAME	TRAINING PROGRAM/SEMINAR					
	THAILAND'S IN LAND TRANSPORT INFRASTRUCTURE AND INVESTMENT OPPORTUNITY PROGRAM[/1]	HOW TO DEVELOP A WINNING DIGITAL STRATEGY[/2]	ROLES OF PRIVATE SECTOR'S EXECUTIVES AND OFFICERS IN ANTI-CORRUPTION[/3]	TRANSFORMATION TO SUSTAINABLE GROWTH[/4]	ESG TRENDS IN THAILAND'S POWER BUSINESS AND WAYS TO ACHIEVE SUSTAINABILITY[/5]	OTHERS
3. Dr. Pasu Loharjun	√	√	-	√	-	-
4. Prof. Dr. Anya Khanthavit	√	√	-	-	-	• Roles and Responsibility of Audit Committee Members to support Good Corporate Governance • Certificate of Ethical Leadership Program, organized by Thai Institute of Directors Association • Certificate of Cyber Resilience Leadership: Herd Immunity, organized by Bank of Thailand • Easy Listening Forum on Accounting and Financial Statements for AC by The Securities and Exchange Commission, Thailand
5. Mr. Paisan Mahapunnaporn	√	√	√	√	√	Roles and Responsibility of Audit Committee Members to support Good Corporate Governance
6. Mr. Poomjai Attanun	√	√	√	√	√	-
7. Mrs. Wannipa Bhakdibutr	-	-	-	√	√	-
8. Prof. Dr. Pisut Painmanakul	√	√	-	√	√	-
9. Mr. Nutthavutthi Chamchang	-	√	√	-	√	Certificate of Environmental Governance for Executive Officer, organized by Ministry of Natural Resources and Environment
10. Mr. Polsri Suvisisarsa	-	-	-	√	-	• Certificate of Advanced Master of Management Program, organized by National Institute of Development Administration • Certificate of Director Certification Program, organized by Thai Institute of Directors Association
11. Mr. Toshiro Kudama	√	√	-	-	-	-
12. Mr. Naoki Tsusumi	√	√	-	-	-	-
13. Mr. Shunichi Tanaka	√	-	-	√	-	-
14. Mr. Makoto Nogami	-	√	-	√	-	-
15. Mr. Thepparat Theppitak	√	√	√	√	-	-
TOTAL	**11**	**12**	**5**	**11**	**6**	**5**

Remarks: /1 'Thailand's in Land Transport Infrastructure and Investment Opportunity Program' organized by Mr. Sorapong Paitoonpong, Deputy Permanent Secretary of Ministry of Transport

/2 'How to Develop a Winning Digital Strategy' organized by Thai Institute of Directors Association

/3 'Roles of Private Sector's Executives and Officers in Anti-Corruption Program' organized by Thai Private Sector Collective Action Against Corruption (CAC)

/4 'Transformation to Sustainable Growth': Knowledge Sharing among Directors and Management, by Mrs. Wannipa Bhakdibutr, Independent Director

/5 'ESG Trends in Thailand's Power Business and Ways to Achieve Sustainability Program' organized by PricewaterhouseCoopers ABAS Ltd.

Directors and Executives are required by laws to report their holding of the Company's securities or any change of such holding, including report of their spouse and minor children (if any), to the Board. The Company Secretary will prepare and present a summary of the report to all Board of Directors' meeting on a quarterly basis

The Board and their share ownership in EGCO as of January 31, 2021, are as listed below:

NAME	NO. OF SHARES		
	DIRECTOR	SPOUSE/ MINOR CHILD	INCREASE/ DECREASE (JAN 1, 2020 – JAN 31, 2021)
1. Mr. Kulit Sombatsiri - Chairman - Chairman of Investment Committee	-	-	-
2. Ms. Jaruwan Ruangswadipong - Lead Independent Director - Chairman of Audit Committee	-	-	-
3. Dr. Pasu Loharjun - Independent Director - Chairman of Corporate Governance and Social Responsibility Committee - Member of Nomination and Remuneration Committee	800	-	-
4. Prof. Dr. Anya Khanthavit - Independent Director - Chairman of Risk Oversight Committee - Member of Audit Committee	-	13,000	-
5. Mr. Paisan Mahapunnaporn - Independent Director - Member of Audit Committee - Member of Nomination and Remuneration Committee	-	-	-
6. Mr. Poomjai Attanun[/1] - Independent Director - Member of Risk Oversight Committee - Member of Corporate Governance and Social Responsibility Committee	-	-	-
7. Mrs. Wannipa Bhakdibutr[/2] - Independent Director - Member of Nomination and Remuneration Committee - Member of Corporate Governance and Social Responsibility Committee	-	-	-
8. Prof. Dr. Pisut Painmanakul - Director - Member of Investment Committee	-	-	-
9. Mr. Nutthavutthi Chamchang[/3] - Director - Member of Corporate Governance and Social Responsibility Committee	1,500	-	-
10. Mr. Polsri Suvisisarsa(4) - Director - Member of Risk Oversight Committee - Member of Nomination and Remuneration Committee	-	-	-
11. Mr. Toshiro Kudama - Director - Chairman of Nomination and Remuneration Committee	-	-	-

NAME	NO. OF SHARES		
	DIRECTOR	SPOUSE/ MINOR CHILD	INCREASE/ DECREASE (JAN 1, 2020 – JAN 31, 2021)
12. Mr. Naoki Tsusumi - Director - Member of Investment Committee	-	-	-
13. Mr. Shunichi Tanaka - Director - Member of Investment Committee	-	-	-
14. Mr. Makoto Nogami[/5] - Director - Member of Risk Oversight Committee	-	-	-
15. Mr. Thepparat Theppitak - Director - Member of Risk Oversight Committee - Member of Investment Committee - Member of Corporate Governance and Social Responsibility	-	-	-

Remarks: [/1] Mr. Poomjai Attanun was appointed as a director to substitute Assoc. Prof. Dr. Bordin Rassameethes with effect on Apr 19, 2021
[/2] Mrs. Wannipa Bhakdibutr was appointed as a director to substitute Assoc. Prof. Dr. Nualnoi Treerat with effect on Apr 19, 2021
[/3] Mr. Nutthavutthi Chamchang was appointed as a director to substitute Ms. Choosri Kietkajornkul with effect on Jul 30, 2021
[/4] Mr. Polsri Suvisisarsa was appointed as a director to substitute Mr. Roengchai Khongthong with effect on Oct 1, 2021
[/5] Mr. Makoto Nogami was appointed as a director to substitute Mr. Tomoyuki Ochiai with effect on Jul 15, 2021

The list of directors who complete their term of office/resigned in 2021 and their share ownership in EGCO are as shown below:

NAME	TENURE	NO. OF SHARES		
		DIRECTOR	SPOUSE/ MINOR CHILD	INCREASE/ DECREASE (JAN 1, 2020 – JAN 31, 2021)
1. Assoc. Prof. Dr. Bordin Rassameethes - Independent Director - Member of Nomination and Remuneration - Member of Corporate Governance and Social Responsibility	Oct 27, 2017 - Apr 19, 2021	-	-	-
2. Assoc. Prof. Dr. Nualnoi Treerat - Independent Director - Member of Nomination and Remuneration - Member of Corporate Governance and Social Responsibility	Sep 1, 2017- Apr 19, 2021	-	-	-
3. Ms. Choosri Kietkajornkul - Director - Member of Investment Committee	Oct 1, 2020 - Jul 20, 2021	2,000	-	-
4. Mr. Roengchai Khongthong - Director - Member of Risk Oversight Committee - Member of Nomination and Remuneration	Jul 1, 2020 - Oct 1, 2021	-	-	-
5. Mr. Tomoyuki Ochiai - Director - Member of Risk Oversight Committee	June 1, 2019 - Jul 15, 2021	-	-	-

MANAGEMENT STRUCTURE

The Board appoints the President as the head of management team to respond business management and to deploy the policies to practice by authorizing management duties to the President. The President will delegate his authority to the management team as prescribed in the Table of Authority.

Roles and Responsibilities of Management

President as the head of top Management team was appointed among the directors as stated in the Company's Articles of Association. The Management led by the President has the following duties and responsibilities.

1. Manage EGCO's day-to-day business to be in line with the corporate policies, plans, and objectives, Articles of Association and obligatory rules and regulations,
2. Operate the business in according to corporate strategy, business plan and budget as approved by the Board,
3. Monthly Report to the Board the Company's performance and the implemented actions following the Board's resolution to ensure the Board that all actions have been taken as planned or remedied if there are some mismatches between actions and plans.
4. Develop and support the employee's career path advancement.

EGCO's 2022 organization structure was approved by the Board in the meeting no. 11/2021 with effect on January 1, 2022, comprises 5 groups as shown below:

1. **Business Development - International:** this group is headed by a Senior Executive Vice President - Business Development (International) (SEVP-BDI). Under the SEVP-BDI, there is one Executive Vice President (EVP) supervising the international business development.

2. **Business Development - (BDD):** this group is headed by a Senior Executive Vice President – Business Development (Domestic) (SEVP-BDD). Under the SEVP-BDD, there are two Executive Vice Presidents (EVPs) as follows:
   1) Executive Vice President - Business Development (Power Generation)
   2) Executive Vice President - Business Development (New Business)
3. **Accounting and Finance Group:** this group is headed by a Chief Finance Officer (CFO) with 3 EVPs as follows:
   1) Executive Vice President - Accounting
   2) Executive Vice President - Finance
   3) Executive Vice President - Subsidiaries Accounting and Finance
4. **Operating Group:** this group is headed by a Senior Executive Vice President – Operating (SEVP-OM) with 5 EVPs as follows:
   1) Executive Vice President - Asset Management
   2) Executive Vice President - Project Management
   3) Executive Vice President - Power Plant Management
   4) Executive Vice President - Managing Director of KEGCO
   5) Executive Vice President - Operation and Management Business, also assigned as the Managing Director of ESCO
5. **President's Direct Report Groups:** There are 2 EVPs under this group:
   1) EVP-Corporate Management supervises Legal Division, Human Resources Division, Information Technology Division, and Procurement and Administration Division, and
   2) EVP-Corporate Strategy supervises Planning Division, Risk Assessment Division, and Corporate Communications Division

Additionally, there are 2 divisions under the President's supervision, namely Internal Audit and Corporate Secretary. The Internal Audit reports directly to the Audit Committee, but functionally to the President. The Corporate Secretary Division reports directly to the President.

Management

The list of the Management team and their share ownership in EGCO in accordance with SEC notification as of January 31, 2022 is as follows:

NAME	TITLE	NO. OF SHARES		
		MANAGEMENT	SPOUSE/ MINOR CHILD	INCREASE/ DECREASE (JAN 1, 2021- JAN 31, 2022)
1. Mr. Thepparat Theppitak	President	-	-	-
2. Mr. John Palumbo	Senior Executive Vice President - Business Development - International	-	-	-
3. Mr. Prach Chongkittisakul	Senior Executive Vice President - Business Development - Domestic	-	-	-
4. Mr. Somkiat Suttiwanich	Chief Financial Officer	-	-	-
5. Dr. Gumpanart Bumroonggit	Senior Executive Vice President - Strategy&Asset Management	-	-	-
6. Mr. Amornrat Debhasdin Na Ayudhya	Executive Vice President - Accounting	330	-	-
7. Ms. Somsiri Yoosuk	Executive Vice President - Finance	-	-	-
8. Ms. Sudruedee Lertkasem	Executive Vice President - Subsidiaries Accounting and Finance	800	-	700
9. Ms. Somlerdee Fakon	Senior Vice President - Accounting and Budget	-	-	-
10. Ms. Amornrat Jittavisuthikul	Senior Vice President - Management and Analysis Accounting	-	-	-
11. Ms. Pojanee Ngoensa-ard	Senior Vice President - International General Affairs Management	-	-	-
12. Ms. Pornnara Kookarinrat	Senior Vice President - Domestic General Affairs Management	-	-	-

CORPORATE SECRETARY

The Board appointed Ms. Kulkanok Leongsoithong as the Corporate Secretary with the duties and responsibility as prescribed in the Securities and Exchange Act (No. 4) B.E. 2551, Section 89/5, and Section 89/16. She was also appointed as Board's secretary to support Board activities such as Board Meetings, Board Orientation, including provide important information, rules, regulations to the Board as well as to coordinate subsequent actions under the Board's resolution. The Corporate Secretary directly reports to the Board while the Nomination and Remuneration Committee is delegated to appraise the performance of the Corporate Secretary.

In 2021, the Corporate Secretary has attended training seminars and discussions in various topics, arranged by regulators which oversee listed companies and the Thai Institute of Directors Association (IOD), in order to improve and increase efficiency of the Corporate Secretary's performance and corporate governance.

DIRECTOR AND MANAGEMENT REMUNERATION

EGCO sets the policy to reward directors and management with appropriate remuneration. In this regard, the Nomination and Remuneration Committee is entrusted to review the appropriate rate that takes into account the responsibility and the company's financial status while being in line with the peer practices.

1. Director Remuneration

Director remuneration is appropriately set at a rate comparable to that of peer companies. The remuneration comprises 3 parts: (1) monthly retainer fee to reflect directors' responsibilities, (2) meeting allowance to reflect time devotion and meeting attendance, and (3) bonus which is paid in accordance with the shareholder value creation. The Nomination and Remuneration Committee will endorse the director remuneration for the Board's endorsement before seeking the shareholders' approval on an annual basis. The guidelines are as follows:

- Retainer and meeting allowance will be set in accordance with peer practices, EGCO operating performance, business size, and responsibility, knowledge, competencies of the directors as required by the company.
- Bonus will be considered from the Company's profit or dividend paid to shareholders.

In 2021, the shareholders' Meeting resolved the directors' remuneration as shown below.

1. Monthly retainer fee of 30,000 baht and meeting allowance of 10,000 baht each. Members who do not attend the meeting will not receive the meeting allowance. The Chairman and the Vice Chairman of the Board received 25% and 10% additional remuneration respectively for both the retainer fee and the meeting allowance.
2. 2020 bonus of 25 million baht approved by the shareholders in the 2021's annual general meeting, taking into account the Company's growth, the recognition in terms of good corporate governance, the increasing share price, peer's director bonus, and dividend payout ratio.
3. Remuneration for Board's Committee being Investment Committee, Audit Committee, Risk Oversight Committee, Nomination and Remuneration Committee, and Corporate Governance and Corporate Social Responsibility Committee as follows:

COMMITTEE	RETAINER FEE (BAHT)	MEETING ALLOWANCE (BAHT)
Investment Committee	20,000	20,000
Audit Committee	20,000	20,000
Nomination and Remuneration Committee	20,000	20,000
Risk Oversight Committee	-	24,000
Corporate Governance and Corporate Social Responsibility Committee	-	24,000

Remark: * The chairman of each Board Committee would receive 25% additional remuneration both in retainer fee and meeting allowance.

Beside the remuneration mentioned above, EGCO does not provide other remuneration to the Board.

The overall directors' remuneration for 2021 is summarized below:

NAME	BOARD OF DIRECTOR	STANDING COMMITTEE					BONUS	TOTAL REMUNERATION
		AC	IC	NRC	ROC	CC		
1. Mr. Kulit Sombatsiri	625,000.00	-	593,728.49	-	-	-	2,097,114.37	3,315,842.86
2. Ms.Jaruwan Ruangswadipong	500,000.00	600,000.00	-	-	-	-	1,754,385.96	2,854,385.96
3. Dr. Pasu Loharjun	500,000.00	-	-	440,000.00	-	180,000.00	1,754,385.96	2,874,385.96
4. Prof. Dr. Anya Khantavit	500,000.00	480,000.00	-	-	390,000.00	-	1,754,385.96	3,124,385.96
5. Mr. Paisan Mahapunnaporn	500,000.00	480,000.00	-	307,666.67	96,000.00	-	1,754,385.96	3,138,052.63
6. Mr. Poomjai Attanun	351,500.00	-	-	-	216,000.00	96,000.00	-	663,500.00
7. Mrs. Wannipa Bhakdibutr	331,500.00	-	-	307,666.67	-	96,000.00	-	735,166.67
8. Prof. Dr. Pisut Painmanakul	500,000.00	-	201,290.32	-	-	72,000.00	440,993.19	1,214,283.51

NAME	BOARD OF DIRECTOR	STANDING COMMITTEE					BONUS	TOTAL REMUNERATION
		AC	IC	NRC	ROC	CC		
9. Mr. Nutthavutthi Chamchang	221,935.48	-	-	-	-	72,000.00	-	293,935.48
10. Mr. Polsri Suvisisarsa	120,000.00	-	-	120,000.00	72,000.00	-	-	312,000.00
11. Mr. Toshiro Kudama	500,000.00	-	-	575,000.00	-	-	1,658,655.78	2,733,655.78
12. Mr. Naoki Tsusumi	500,000.00	-	480,000.00	-	-	-	1,658,655.78	2,638,655.78
13. Mr. Shunichi Tanaka	500,000.00	-	480,000.00	-	-	-	1,900,584.78	2,880,584.78
14. Mr. Makoto Nogami	236,451.61	-	-	-	144,000.00	-	-	380,451.61
15. Mr. Thepparat Theppitak	-	-	-	-	-	-	-	-

The summary of remuneration of retired and resigned directors during 2021 is as follow:

NAME	RETIREMENT/ RESIGNING DATE	NUMBER OF MONTHS IN SERVICE	MEETING ATTENDANCE (13 TIMES/ YEAR)	TOTAL REMUNERATION			TOTAL REMUNERATION
				MONTHLY RETAINER AND MEETING ALLOWANCE		BONUS[/1]	
				DIRECTOR	STANDING COMMITTEE		
1. Assoc. Prof. Dr. Bordin Rassameethes	Apr 19, 2021	3	4	148,500.00	180,333.33	1,754,385.96	2,083,219.29
2. Assoc. Prof. Dr. Nualnoi Treerat	Apr 19, 2021	3	4	148,500.00	180,333.33	1,754,385.96	2,083,219.29
3. Ms. Choosri Kietkajornkul	Jul 20, 2021	6	7	268,387.10	252,258.06	440,993.19	961,638.35
4. Mr. Roengchai Khongthong	Oct 1, 2021	9	10	380,000.00	580,000.00	881,986.39	1,841,986.39
5. Mr. Tomoyuki Ochiai	Jul 15, 2021	6	7	263,548.39	168,000.00	2,097,252.27	2,528,800.66

Remarks: [/1] Bonus of Board of Directors in 2020 was paid in May 2021 as resolved by the Shareholders in the Annual General Meeting for year 2021

2. Directors' Remuneration of Subsidiaries

EGCO assigned the Management to be directors of subsidiaries as one of their duties so that the Management will not receive the remuneration as the directors.

EGCO AND SUBSIDIARIES' MANAGEMENT REMUNERATION

1. EGCO's Management Remuneration

The Management's remuneration as approved by the Board which comprises both salary and bonus is designed to reflect the corporate and individual achievement based on the remuneration structure approved by the Board and the Key Performance Indicators (KPIs). The Board with the recommendations from the Nomination and Remuneration Committee approves the President's remuneration while the Nomination and Remuneration Committee appraises the performance of executives at Senior Executive Vice President and Executive Vice President levels with the proposal by the President.

Also, the Nomination and Remuneration Committee recommends and determines both short-term and long-term remuneration for President and top executives, taking into account their performance linked to both financial and non-financial KPIs as approved by the Board. Another factor taken into consideration for the management remuneration is the survey of the executive remuneration to ensure that the rate is comparable to their work and those of the peer companies.

The summary of the executive's remuneration for 2021 is shown below:

REMUNERATION	2021
	EXECUTIVE[/1]
Total Salary	36,180,600.00
Bonus[/2]	10,434,130.95
Provident Fund	3,077,082.00
TOTAL	**49,691,812.95**

Remarks: [/1] Executives mean 5 executives as defined by SEC which are (1) President (2) SEVP – BDI (3) SEVP – BDD (4) CFO (5) SEVP – OM and include all EVP
[/2] The 2020 bonus was paid in January 2021.

2. Total Remuneration of Core Subsidiaries' Management

In 2021, EGCO's core subsidiaries which generate electricity for sale and the revenues accounted to more than 10% of the consolidated revenue consists of KEGCO, BPU, and QPL. However, QPL had no permanent employees but have engaged QMS for the project management while the operation and maintenance works had been engaged to Pearl Energy Philippines Operating Inc. from the commercial operation date (COD).

EGCO AND CORE SUBSIDIARIES' EMPLOYEES

In 2021, EGCO Group had 388 headcounts, 257 of which were EGCO employees while 131 people worked for core subsidiaries namely KEGCO and BPU.

As of December 31, 2021, EGCO has 257 headcounts which include the President, 4 Senior Executive Vice Presidents. The number of employees in each reporting line of EGCO and numbers of core subsidiaries' employees are as shown below:

BUSINESS GROUP	NO. OF EMPLOYEES (PERSON)
1. President	17
2. Corporate Management	59
3. Corporate Strategy	20
4. Business Development - International	10
5. Business Development - Domestic	12
6. Operation Management	66
7. Accounting and Finance	73
TOTAL OF EGCO	**257**
CORE SUBSIDIARIES' EMPLOYEES	**131**
TOTAL	**388**

There has been no significant turnover and no labor dispute during the past three years.

EGCO AND CORE SUBSIDIARIES' EMPLOYEE REMUNERATION

EGCO has the policy that the employees in the Group have fair remuneration which is comparable to the peer companies. The remuneration of EGCO and core subsidiaries' employees in year 2021 is as shown below.

(Unit: Baht)

REMUNERATION	AMOUNT	
	EGCO	CORE SUBSIDIARIES
Total Salary	280,735,484.00	134,670,332.00
Bonus[/1]	124,660,206.06	63,345,908.58
Provident Fund	31,115,716.07	14,253,193.81
TOTAL	**436,511,406.13**	**212,269,434.39**

Remarks: [/1] The 2020 bonus was paid in January 2021.

Human resource development policy is disclosed in Sustainable Business Operation.

BOARD OF DIRECTORS

As of January 31, 2022

01

MR. KULIT SOMBATSIRI

- Chairman
- Chairman of Investment Committee (Authorized Director)

02

MRS. JARUWAN RUANGSWADIPONG

- Lead Independent Director
- Chairman of Audit Committee

03

MRS. WANNIPA BHAKDIBUTR

- Independent Director
- Member of Nomination and Remuneration Committee
- Member of Corporate Governance and Social Responsibility Committee

04

PROF. DR. ANYA KHANTHAVIT

- Independent Director
- Chairman of Risk Oversight Committee
- Member of Audit Committee

05

MR. PAISAN MAHAPUNNAPORN

- Independent Director
- Member of Audit Committee
- Member of Nomination and Remuneration Committee

DR. PASU LOHARJUN

- Independent Director
- Chairman of Corporate Governance and Social Responsibility Committee
- Member of Nomination and Remuneration Committee

MR. POOMJAI ATTANUN

- Independent Director
- Member of Corporate Governance and Social Responsibility Committee
- Member of Risk Oversight Committee

MR. NUTTHAVUTTHI CHAMCHANG

- Director
- Member of Corporate Governance and Social Responsibility Committee

(Authorized Director)
(Appointed with effect on July 30, 2021)

MR. POLSRI SUVISISARSA

- Director
- Member of Nomination and Remuneration Committee
- Member of Risk Oversight Committee

(Authorized Director)
(Appointed with effect on October 1, 2021)

PROF. DR. PISUT PAINMANAKUL

- Director
- Member of Investment Committee

(Authorized Director)

11

MR. TOSHIRO KUDAMA

- Director
- Chairman of Nomination and Remuneration Committee

(Authorized Director)

12

MR. NAOKI TSUTSUMI

- Director
- Member of Investment Committee

(Authorized Director)

13

MR. SHUNICHI TANAKA

- Director
- Member of Investment Committee

(Authorized Director)

14

MR. MAKOTO NOGAMI

- Director
- Member of Risk Oversight Committee

(Authorized Director)
(Appointed with effect on July 15, 2021)

15

MR. THEPPARAT THEPPITAK

- President
- Member of Investment Committee
- Member of Corporate Governance and Social Responsibility Committee
- Member of Risk Oversight Committee
- Chairman of Risk Management Committee
- Chairman of Good Corporate Governance Committee
- Chairman of EGCO Management Committee

(Authorized Director)

BOARD OF DIRECTORS

Who Vacated the Office During the Year 2021 Until January 31, 2022

MR. ROENGCHAI KONGTHONG

- Director
- Member of Nomination and Remuneration Committee
- Member of Risk Oversight Committee

(Authorized Director)
(Resigned with effect on October 1, 2021)

MS. CHOOSRI KIETKAJORNKUL

- Director
- Member of Investment Committee

(Authorized Director)
(Resigned with effect on July 20, 2021)

MR. TOMOYUKI OCHIAI

- Director
- Member of Risk Oversight Committee

(Authorized Director)
(Resigned with effect on July 15, 2021)

BOARD OF DIRECTORS

As of January 31, 2022

1 Mr. Kulit Sombatsiri

Age 58

- Chairman
- Chairman of Investment Committee

(Authorized Director)

EDUCATION

- Master of Public Administration in Public Finance, San Diego State University, USA
- Master of Business Administration, University of Southern California, USA
- Bachelor of Public Administration, Ramkhamheang University
- Certificate of Executive Program in Energy Literacy for a Sustainable Future, Thailand Energy Academy
- Certificate of Director Certification Program, Thai Institute of Directors Association
- Certificate of Financial Statement for Directors, Thai Institute of Directors Association
- Certificate of Senior Executive Program 1, The Civil Service Development Institute
- Certificate of Capital Market Academy Leadership Program, Capital Market Academy
- Thailand's in Land Transport Infrastructure and Investment Opportunity Program, by Mr. Sorapong Paitoonpong, Deputy Permanent Secretary of Ministry of Transport (2021)
- Certificate of How to Develop a Winning Digital Strategy Program, Thai Institute of Directors Association (2021)
- Transformation to Sustainable Growth Program (Knowledge Sharing among Directors and Management, by Mrs. Wannipa Bhakdibutr, Independent Director) (2021)

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2019 – Present	Chairman, Electricity Generating Authority of Thailand
2018 – Present	Permanent Secretary, Ministry of Energy
2015 – 2018	Director General of the Customs Department, Ministry of Finance

2 Mrs. Jaruwan Ruangswadipong

Age 66

- Lead Independent Director
- Chairman of Audit Committee

EDUCATION

- Master of Business Administration (Financial Studies), University of Nottingham, UK
- Master of Accountancy, Thammasat University
- Bachelor of Accountancy, Thammasat University
- Diploma in Adult Training Specialist, INTOSAI Development Initiative
- Certificate of Canadian Comprehensive Auditing Foundation CCAF's International Program and Performance Audit Internship at the Office of the Auditor General of Canada
- Certificate of Director Certification Program, Thai Institute of Directors Association
- Certificate of IT Governance for Directors Program, Thai Institute of Directors Association
- Certificate of Risk Management: Issues for Boards Program, Thai Institute of Directors Association
- CG Code Update Program, PricewaterhouseCoopers ABAS Ltd.
- Project Acquisition Program, PricewaterhouseCoopers ABAS Ltd.
- Disruptive Technology Program (Knowledge Sharing among Directors and Management, by Mr. Patana Sangsriroujana, Director)
- Cryptocurrency Technology Program (Knowledge Sharing among Directors and Management, by Mrs. Tipsuda Tawaramorn, Ex-Deputy Secretary-General of SEC Thailand)
- COSO ERM Program (Knowledge Sharing among Directors and Management, by Prof. Dr. Anya Khanthavit, Independent Director)
- Forensic Accounting Certificate, Federation of Accounting Professions
- Certificate of Leading Your Business through Uncertainties Program, Thai Institute of Directors Association
- Thailand's in Land Transport Infrastructure and Investment Opportunity Program, by Mr. Sorapong Paitoonphong, Deputy Permanent Secretary of Ministry of Transport (2021)
- Roles of Private Sector's Executives and Officers in Anti-corruption Program, Thai Private Sector Collective Action Against Corruption (CAC) (2021)
- Certificate of How to Develop a Winning Digital Strategy Program, Thai Institute of Directors Association (2021)
- Certificate of Boardroom Success through Financing & Investment Program, Thai Institute of Directors Association (2021)
- ESG Trends in Thailand's Power Business and Ways to Achieve Sustainability Program, PricewaterhouseCoopers ABAS Ltd. (2021)
- Transformation to Sustainable Growth Program (Knowledge Sharing among Directors and Management, by Mrs. Wannipa Bhakdibutr, Independent Director) (2021)

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2020 – Present	Member of Accounting Profession Development Subcommittee, Federation of Accounting Professions
2020 – 2021	Chairman of Financing, Budget and Treasury Management Subcommittee and Member of Corporate Governance Subcommittee, Nakhon Phanom University
2018 – Present	Member of the Committee to Establish Promotion Criteria for SAO's Officers to Advisory, Expert and Senior Professional Level, State Audit Office of the Kingdom of Thailand
2017 – 2021	Council Representative Member from Federation of Accounting Professions, ASEAN Federation of Accountants (AFA)
2017 – 2020	Director and Secretary General, Federation of Accounting Professions
2016 – 2019	Senior Capacity Development Consultant and Senior Auditing Expert, German Society for International Cooperation (GIZ)

3 Mrs. Wannipa Bhakdibutr

Age 58

- Independent Director
- Member of Nomination and Remuneration Committee
- Member of Corporate Governance and Social Responsibility Committee

EDUCATION

- Master of Business Administration, San Diego State University, USA
- Bachelor of Economics, Kasetsart University
- Certificate of Director Certification Program, Thai Institute of Directors Association
- ESG Trends in Thailand's Power Business and Ways to Achieve Sustainability Program, PricewaterhouseCoopers ABAS Ltd. (2021)
- Transformation to Sustainable Growth Program (Knowledge Sharing among Directors and Management, by Mrs. Wannipa Bhakdibutr, Independent Director) (2021)

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

Listed Companies in SET

2021 – Present	Chief Executive Officer and Director, Osotspa PCL.
2016 – 2021	President and Director, Osotspa PCL.

Other Organizations

2021 – Present	Director, Innovation of Experience Co., Ltd.
2021	Director, O2C Co., Ltd.
2021	Director, Osotspa Enterprises Co., Ltd.
2020 – Present	Advisor, Marketing Association of Thailand
2019 – Present	Managing Director, Osotspa Loi Hein Co., Ltd.
2018 – Present	Director, Osotspa Enterprises Singapore Pte. Ltd.
2018 – Present	Director, Oventure Pte. Ltd.
2016 – Present	Director, Uni.Charm (Thailand) Co., Ltd.
2016 – Present	Director, Siam Glass Industry Co., Ltd.
2016 – Present	Director, Siam Glass Ayutthaya Co., Ltd.
2016 – Present	Director, Osotspa Loi Hein (Thailand) Co., Ltd.
2016 – Present	Director, Osotspa Taisho Pharmaceuticals Co., Ltd.
2016 – Present	Director, House Osotspa Foods Co., Ltd.
2016 – Present	Director, Yamamura International (Thailand) Co., Ltd.
2016 – 2019	Director, Osotspa Beverage Co., Ltd.
2015 – 2018	Director, Government Savings Bank
2015 – 2017	Director, Thailand Institute of Scientific and Technological Research

4 Prof. Dr. Anya Khanthavit

Age 59

- Independent Director
- Chairman of Risk Oversight Committee
- Member of Audit Committee

EDUCATION

- Ph.D. in International Business and Finance, Stern School of Business New York University, USA
- Master of Philosophy (Hons.) in International Business and Finance, Stern School of Business New York University, USA
- Master of Science (Hons.) in Transportation Management, State University of New York, Maritime College, USA
- Bachelor of Business Administration (Accounting), Thammasat University
- Certificate of Director Certification Program, Thai Institute of Directors Association
- Certificate of Advanced Audit Committee Program, Thai Institute of Directors Association
- Certificate of Risk Management: Issues for Boards Program, Thai Institute of Directors Association
- Certificate of Senior Executive Program, Capital Market Academy
- CG Code Update Program, PricewaterhouseCoopers ABAS Ltd.
- Certificate of Strategic Board Master Class Program, Thai Institute of Directors Association
- Certificate of Cyber Resilience Seminar, Bank of Thailand
- Certificate of Audit Committee Forum: "Strategic Audit Committee: Beyond Figure and Compliance", Thai Institute of Directors Association
- Certificate of Bangkok Sustainable Banking Forum 2019: An Industry Wake-up Call, Bank of Thailand
- Disruptive Technology Program (Knowledge Sharing among Directors and Management, by Mr. Patana Sangsriroujana, Director)
- Cryptocurrency Technology Program (Knowledge Sharing among Directors and Management, by Mrs. Tipsuda Tawaramorn, Ex-Deputy Secretary-General of SEC Thailand)
- COSO ERM Program (Knowledge Sharing among Directors and Management, by Prof. Dr. Anya Khanthavit, Independent Director)
- Certificate of Leading Your Business through Uncertainties Program, Thai Institute of Directors Association
- Thailand's in Land Transport Infrastructure and Investment Opportunity Program, by Mr. Sorapong Paitoonphong, Deputy Permanent Secretary of Ministry of Transport (2021)
- Certificate of Ethical Leadership Program, Thai Institute of Directors Association (2021)
- Certificate of How to Develop a Winning Digital Strategy Program, Thai Institute of Directors Association (2021)
- Certificate of Cyber Resilience Leadership: Herd Immunity, Bank of Thailand (2021)
- Roles and Responsibility of Audit Committee Members to support Good Corporate Governance (Meeting among Audit Committee Members of Listed Companies), The Securities and Exchange Commission, Thailand (SEC) (2021)

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) 0.002469%

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

Listed Companies in SET

2017 – Present	Director, Kiatnakin Phatra Bank PCL.
2012 – Present	Member of Risk Management Committee, Kiatnakin Phatra Bank PCL.

Other Organizations

2021 – Present	Board Member of Burapha University Council, Burapha University
2020 – Present	Director and Chairman of Risk Management Committee, Thailand Science Research and Innovation
2018 – Present	Director, Chairman of Audit Committee and Chairman of Risk Oversight Committee, Tobacco Authority of Thailand
2017 – Present	Member of Appeal Committee, Thailand Futures Exchange PCL.
2015 – Present	Member of Thailand Quality Award Committee, Thailand Quality Award
2012 – Present	Member of Public Services Subsidy Board, Ministry of Finance
2008 – 2020	Member of the Risk Management Subcommittee, The Stock Exchange of Thailand
2005 – Present	Professor of Banking and Finance, Thammasat University
2002 – Present	Member of the Performance Assessment Committee for State Enterprises, Ministry of Finance
2001 – Present	Founding Director, Professor Sangvien Indaravijaya Foundation
2016 – 2017	Member of the Subcommittee on the Monitoring of Co-operative Financial Problems, Office of the National and Anti-Corruption Commission
2014 – 2018	Director, Thailand Tobacco Monopoly, Ministry of Finance
2014 – 2017	Director, Member of Audit Committee and Chairman of Risk Management Committee, Government Pharmaceutical Organization
2012 – 2018	Member of Policy and Public Debt Management Committee, Ministry of Finance

5 Mr. Paisan Mahapunnaporn

Age 58

- Independent Director
- Member of Audit Committee
- Member of Nomination and Remuneration Committee

EDUCATION

- Master of Laws in Business Laws, Chulalongkorn University
- Bachelor of Laws, Chulalongkorn University
- Certificate of Director Certification Program, Thai Institute of Directors Association
- Certificate of Risk Management: Issues for Boards Program, Thai Institute of Directors Association
- Certificate of ASEAN Business and Investment Law Program
- CG Code Update Program, PricewaterhouseCoopers ABAS Ltd.
- Certificate of ID Forum Program (Tough boardroom situations–ID share lessons learned), Thai Institute of Directors Association
- Corporate Responsibilities and Practices in Anti-Corruption Program, Faculty of Law, Chulalongkorn University
- Project Acquisition Program, PricewaterhouseCoopers ABAS Ltd.
- Disruptive Technology Program (Knowledge Sharing among Directors and Management, by Mr. Patana Sangsriroujana, Director)
- Cryptocurrency Technology Program (Knowledge Sharing among Directors and Management, by Mrs. Tipsuda Tawaramorn, Ex-Deputy Secretary-General of SEC Thailand)
- COSO ERM Program (Knowledge Sharing among Directors and Management, by Prof. Dr. Anya Khanthavit, Independent Director)
- Certificate of Leading Your Business through Uncertainties Program, Thai Institute of Directors Association
- Thailand's in Land Transport Infrastructure and Investment Opportunity Program, by Mr. Sorapong Paitoonphong, Deputy Permanent Secretary of Ministry of Transport (2021)
- Roles of Private Sector's Executives and Officers in Anti-corruption Program, Thai Private Sector Collective Action Against Corruption (CAC) (2021)
- Certificate of How to Develop a Winning Digital Strategy Program, Thai Institute of Directors Association (2021)
- ESG Trends in Thailand's Power Business and Ways to Achieve Sustainability Program, PricewaterhouseCoopers ABAS Ltd. (2021)
- Roles and Responsibility of Audit Committee Members to support Good Corporate Governance (Meeting among Audit Committee Members of Listed Companies), The Securities and Exchange Commission, Thailand (SEC) (2021)
- Transformation to Sustainable Growth Program (Knowledge Sharing among Directors and Management, by Mrs. Wannipa Bhakdibutr, Independent Director) (2021)

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017–PRESENT)

Other Organizations

2016 – Present	Director and Member of Audit Committee, Masstec Link Co., Ltd.
2015 – Present	Consultant, V Food Group
2012 – Present	Consultant, Piyasombat Group

6 Dr. Pasu Loharjun

Age 62

- Independent Director
- Chairman of Corporate Governance and Social Responsibility Committee
- Member of Nomination and Remuneration Committee

EDUCATION

- Ph.D. in Industrial Engineering and Operations Research, Virginia Polytechnic Institute and State University, USA
- Master of Science in Industrial Engineering, Polytechnic Institute of New York, USA (NYU Poly)
- Bachelor of Engineering in Electrical Engineering, Chulalongkorn University
- Certificate of Public Economic Management for Executives, King Prajadhipok's Institute
- Certificate of Executive Development Program, Office of the Civil Service Commission
- Certificate of Executive Development Program 2, Office of the Civil Service Commission
- Certificate of Executive Creative Economy Training Program, Office of Knowledge Management and Development
- Certificate of Top Executive Program in Commerce and Trade, Commerce Academy, University of the Thai Chamber of Commerce
- Certificate of Top Executive Program, Capital Market Academy
- Certificate of Director Certification Program, Thai Institute of Directors Association
- Certificate of Role of the Chairman Program, Thai Institute of Directors Association
- CG Code Update Program, PricewaterhouseCoopers ABAS Ltd.
- COSO ERM Program (Knowledge Sharing among Directors and Management, by Prof. Dr. Anya Khanthavit, Independent Director)
- Certificate of Boardroom Success through Financing & Investment Program, Thai Institute of Directors Association (2021)
- Thailand's in Land Transport Infrastructure and Investment Opportunity Program, by Mr. Sorapong Paitoonphong, Deputy Permanent Secretary of Ministry of Transport (2021)
- Certificate of How to Develop a Winning Digital Strategy Program, Thai Institute of Directors Association (2021)
- Transformation to Sustainable Growth Program (Knowledge Sharing among Directors and Management, by Mrs. Wannipa Bhakdibutr, Independent Director) (2021)

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) 0.000015%

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

Listed Companies in SET

2021 – Present	Independent Director, Thai Beverage PLC
2021	Independent Director, Saha-Union PCL
2020 – Present	Independent Director, Allianz Ayudhya Capital PCL
2017 – 2019	Chairman, General Environmental Conservation PCL

Other Organizations

2021 – Present	Chairman, Plastic Institute of Thailand
2021 – Present	Chairman, Export-Import Bank of Thailand
2020 – Present	Director, Thailand Convention and Exhibition Bureau (Public Organization)
2020 – Present	Board Member of Thai-Nichi Institute of Technology Council, Thai-Nichi Institute of Technology
2019 – Present	Member, Council of State
2019 – Present	Chairman, Thailand National Metal and Materials Technology Center (MTEC)
2019 – Present	Director, Thai-German Institute
2019 – 2021	Chairman, Thailand Institute of Scientific and Technological Research (TISTR)
2018 – Present	Director, Foundation for Industrial Development
2017 – 2019	Permanent Secretary, Ministry of Industry
2017 – 2019	Chairman, Thai Sugar and Cane Co., Ltd.
2016 – 2017	Director General, Department Of Industrial Promotion

7 Mr. Poomjai Attanun

Age 54

- Independent Director
- Member of Corporate Governance and Social Responsibility Committee
- Member of Risk Oversight Committee

EDUCATION

- Master of Public Policy Planning and Project Management, National Institute of Development Administration (NIDA)
- Bachelor of Arts, Political Science (Public Policy), Kasetsart University
- Certificate of Infrastructure Appraisal, Risk Analysis and Markets Program, John Deutsch Institute for the Study of Economic Policy Queen's University, Canada
- Certificate of Director Certification Program, Thai Institute of Directors Association
- Certificate of Financial Statements for Directors Program, Thai Institute of Directors Association
- Certificate of Executive Development Program, Office of the Civil Service Commission
- Certificate of Innovative Government: Public sector Executive Program, Lee Kuan Yew School of Public Policy, Singapore
- Certificate of Innovation for Economic Development Program, Harvard Kennedy School, USA
- Roles of Private Sector's Executives and Officers in Anti-corruption Program, Thai Private Sector Collective Action Against Corruption (CAC) (2021)
- Thailand's in Land Transport Infrastructure and Investment Opportunity Program, by Mr. Sorapong Paitoonpong, Deputy Permanent Secretary of Ministry of Transport (2021)
- Certificate of How to Develop a Winning Digital Strategy Program, Thai Institute of Directors Association (2021)
- ESG Trends in Thailand's Power Business and Ways to Achieve Sustainability Program, PricewaterhouseCoopers ABAS Ltd. (2021)
- Transformation to Sustainable Growth Program (Knowledge Sharing among Directors and Management, by Mrs. Wannipa Bhakdibutr, Independent Director) (2021)

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2014 – 2019 Advisor, Ministry of Transport

8 Mr. Nutthavutthi Chamchang

Age 59

- Director
- Member of Corporate Governance and Social Responsibility Committee

(Authorized Director)

(Appointed with effect on July 30, 2021)

EDUCATION

- Master of Environmental Business Administration (Energy Management), University of Twente, The Netherlands
- Bachelor of Engineering in Mechanical Engineering, Chulalongkorn University
- Certificate of Water Leadership Program, Water Institute for Sustainability, The Federation of Thai Industries
- Certificate of Leadership Succession Program, Institute of Research and Development for Public Enterprises
- Certificate of Advanced Management Program, Harvard Business School, USA
- Certificate of Director Certification Program, Thai Institute of Directors Association
- Certificate of Corporate Governance for Directors and Senior Executives of Regulator, State Enterprises and Public Organizations, King Prajadhipok's Institute
- Certificate of Executive Branding, John Robert Power
- Certificate of Environmental Governance for Executive Officer, Ministry of Natural Resources and Environment (2021)
- Certificate of How to Develop a Winning Digital Strategy Program, Thai Institute of Directors Association (2021)
- ESG Trends in Thailand's Power Business and Ways to Achieve Sustainability Program, PricewaterhouseCoopers ABAS Ltd. (2021)

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) 0.000028%

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

Listed Companies in SET

2019 – 2021	Director, RATCH Group PCL.

Other Organizations

2020 – Present	Deputy Governor-Power Business, Electricity Generating Authority of Thailand
2019 – Present	Chairman, EGAT Diamond Service Co., Ltd.
2018 – 2020	Director, District Cooling System and Power Plant Co., Ltd.
2018 – 2020	Deputy Governor-Generation, Electricity Generating Authority of Thailand
2018 – 2019	Director, Ratchaburi Power Co., Ltd. (RPCL)
2017 – 2018	Assistant Governor-Hydro Power Plant, Electricity Generating Authority of Thailand
2014 – 2017	Director of Bhumibol Dam, Electricity Generating Authority of Thailand

9 Mr. Polsri Suvisisarsa

Age 60

- Director
- Member of Nomination and Remuneration Committee
- Member of Risk Oversight Committee

(Authorized Director)

(Appointed with effect on October 1, 2021)

EDUCATION

- Bachelor of Laws, Sukhothai Thammathirat Open University
- Bachelor of Engineering in Mechanical Engineering, Kasetsart University
- Certificate of Director Accreditation Program, Thai Institute of Directors Association
- Certificate of Middle Level of Development Administrator, National Institute of Development Administration
- Certificate of Public Administration and Law for Executives, King Prajadhipok's Institute
- Certificate of Executive Development Program, Sasin Graduate Institute of Business Administration of Chulalongkorn University
- Certificate of Advanced Master of Management Program, National Institute of Development Administration
- Certificate of Director Certification Program, Thai Institute of Directors Association (2021)
- Transformation to Sustainable Growth Program (Knowledge Sharing among Directors and Management, by Mrs. Wannipa Bhakdibutr, Independent Director) (2021)

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2020 – Present	Deputy Governor-Generation, Electricity Generating Authority of Thailand
2020 – Present	Director, District Cooling System and Power Plant Co., Ltd.
2020 – 2021	Director, EGAT Diamond Service Co., Ltd.
2018 – 2020	Assistant Governor-Generation 2, Electricity Generating Authority of Thailand
2017 – 2018	Director of Wang Noi Power Plant, Electricity Generating Authority of Thailand

10 Prof. Dr. Pisut Painmanakul

Age 44

- Director
- Member of Investment Committee

(Authorized Director)

EDUCATION

- Ph.D. in Industrial Processes Engineering, Laboratoire d'Ingenierie des Procedes de l'Environnement, INSA-Toulouse, Republic of France
- Master of Advanced Studies (Diplome d'Etude Approfondie, DEA), INSA-Toulouse, Republic of France
- Master of Science (Diplome d'ingenieur) in Environmental Engineering, INSA-Toulouse, Republic of France
- Bachelor of Engineering in Environmental Engineering, Chulalongkorn University
- Certificate of Institute of Security Psychology Course, National Defense Studies Institute
- Certificate of Director Certification Program, Thai Institute of Directors Association
- Certificate of Advanced Audit Committee Program, Thai Institute of Directors Association
- Certificate of Risk Management Program for Corporate Leaders, Thai Institute of Directors Association (2021)
- Certificate of Role of the Chairman Program, Thai Institute of Directors Association (2021)
- Certificate of Successful Formulation & Execution of Strategy, Thai Institute of Directors Association (2021)
- Certificate of Boardroom Success through Financing & Investment, Thai Institute of Directors Association (2021)
- Thailand's in Land Transport Infrastructure and Investment Opportunity Program, by Mr. Sorapong Paitoonphong, Deputy Permanent Secretary of Ministry of Transport (2021)
- Certificate of How to Develop a Winning Digital Strategy Program, Thai Institute of Directors Association (2021)
- ESG Trends in Thailand's Power Business and Ways to Achieve Sustainability Program, PricewaterhouseCoopers ABAS Ltd. (2021)
- Transformation to Sustainable Growth Program (Knowledge Sharing among Directors and Management, by Mrs. Wannipa Bhakdibutr, Independent Director) (2021)

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2019 – Present	Director, Electricity Generating Authority of Thailand
2019 – Present	Director, National Housing Authority of Thailand
2017 – Present	Member, The National Strategy Drafting Committee on Eco-Friendly Development and Growth
2016 – Present	Associate Dean-Innovation Strategy, Faculty of Engineering, Chulalongkorn University

11 Mr. Toshiro Kudama

Age 63

- Director
- Chairman of Nomination and Remuneration Committee

(Authorized Director)

EDUCATION

- Master of Engineering in Mechanical Engineering, Tokyo Institute of Technology, Japan
- Bachelor of Engineering in Mechanical Engineering, Tokyo Institute of Technology, Japan
- Certificate of Leading Your Business through Uncertainties Program, Thai Institute of Directors Association
- Thailand's in Land Transport Infrastructure and Investment Opportunity Program, by Mr. Sorapong Paitoonphong, Deputy Permanent Secretary of Ministry of Transport (2021)
- Certificate of How to Develop a Winning Digital Strategy Program, Thai Institute of Directors Association (2021)

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2021 – Present	Director, Aboitiz Power Corporation (Philippines)
2021 – Present	Senior Managing Executive Officer, JERA Co., Inc.
2019 – Present	Director, Summit Power International Limited (Singapore)
2019 – Present	Chief Executive Officer, JERA Asia Pte. Ltd.
2019 – 2021	Managing Executive Officer, JERA Co., Inc.
2018 – 2019	Director and Chief Executive Officer, JERA Americas Inc.
2016 – 2019	Chief Power Development Officer, Senior Executive Vice President, JERA Co., Inc.

12 Mr. Naoki Tsutsumi

Age 50

- Director
- Member of Investment Committee

(Authorized Director)

EDUCATION

- Master of Engineering in Civil Engineering, University of Kyoto, Japan
- Bachelor of Engineering in Civil Engineering, University of Kyoto, Japan
- Thailand's in Land Transport Infrastructure and Investment Opportunity Program, by Mr. Sorapong Paitoonphong, Deputy Permanent Secretary of Ministry of Transport (2021)
- Certificate of How to Develop a Winning Digital Strategy Program, Thai Institute of Directors Association (2021)

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2021 – Present	Executive Officer, Overseas Power and Energy Infrastructure Business Group, Business Development Department, JERA Co., Inc.
2019 – 2021	Executive Officer, Overseas Power and Energy Infrastructure Development Group, Business Development Department, JERA Co., Inc.
2018 – 2019	General Manager, Overseas Power Business Unit 3 (Americas), Energy Infrastructure Group, JERA Co., Inc.
2016 – 2018	Deputy General Manager, Comprehensive Alliance Promotion Office, TEPCO Fuel & Power, Incorporated

13 Mr. Shunichi Tanaka

Age 56

- Director
- Member of Investment Committee

(Authorized Director)

EDUCATION

- Master of Engineering in Agricultural Civil Engineering, Kyushu University Graduate School, Japan
- Thailand's in Land Transport Infrastructure and Investment Opportunity Program, by Mr. Sorapong Paitoonphong, Deputy Permanent Secretary of Ministry of Transport (2021)
- Transformation to Sustainable Growth Program (Knowledge Sharing among Directors and Management, by Mrs. Wannipa Bhakdibutr, Independent Director) (2021)

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2014 – Present	Chief Executive Officer, Diamond Generating Asia, Limited
2014 – 2019	Managing Director, TEPDIA Generating B.V.

14 Mr. Makoto Nogami

Age 52

- Director
- Member of Risk Oversight Committee

(Authorized Director)

(Appointed with effect on July 15, 2021)

EDUCATION

- Currently in the Department of Business and Technology Management, Graduate School of Economics, Kyushu University, Japan
- Bachelor of Foreign Studies, Sophia University, Japan
- Certificate of How to Develop a Winning Digital Strategy Program, Thai Institute of Directors Association (2021)
- Transformation to Sustainable Growth Program (Knowledge Sharing among Directors and Management, by Mrs. Wannipa Bhakdibutr, Independent Director) (2021)

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2021 – Present	Chief Group Manager, International Administration Group, International Business Office, Kyushu Electric Power Co., Inc.
2021 – Present	Senior Manager, Asia Division, Kyuden International Corporation
2019 – 2021	Assistant General Manager, Passenger Development Department, Traffic Development Division, Fukuoka International Airport Co., Ltd.
2016 – 2019	Manager, Safety Improvement Group, Nuclear Power Generation Division, Kyushu Electric Power Co., Inc.

15 Mr. Thepparat Theppitak

Age 56

- President
- Member of Investment Committee
- Member of Corporate Governance and Social Responsibility Committee
- Member of Risk Oversight Committee
- Chairman of Risk Management Committee
- Chairman of Good Corporate Governance Committee
- Chairman of EGCO Management Committee

(Authorized Director)

EDUCATION

- Master of Science in Electricity Industry Management and Technology, University of Strathclyde, UK
- Bachelor of Engineering in Mechanical Engineering, Chiang Mai University
- Certificate of Director Certification Program, Thai Institute of Directors Association
- Certificate of Senior Executive Program, Sasin Graduate Institute of Business Administration of Chulalongkorn University
- Certificate of Advanced Management Program, Harvard Business School, USA
- Certificate of Executive Program in Energy Literacy for a Sustainable Future, Thailand Energy Academy
- Certificate of Leading Your Business through Uncertainties Program, Thai Institute of Directors Association
- Certificate of Corporate Governance for Directors and Senior Executives of Regulator Program, State Enterprises and Public Organizations, King Prajadhipok's Institute
- Thailand's in Land Transport Infrastructure and Investment Opportunity Program, by Mr. Sorapong Paitoonphong, Deputy Permanent Secretary of Ministry of Transport (2021)
- Roles of Private Sector's Executives and Officers in Anti-corruption Program, Thai Private Sector Collective Action Against Corruption (CAC) (2021)
- Certificate of How to Develop a Winning Digital Strategy Program, Thai Institute of Directors Association (2021)
- ESG Trends in Thailand's Power Business and Ways to Achieve Sustainability Program, PricewaterhouseCoopers ABAS Ltd. (2021)
- Transformation to Sustainable Growth Program (Knowledge Sharing among Directors and Management, by Mrs. Wannipa Bhakdibutr, Independent Director) (2021)

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2021 – Present	Chairman, Gulf Electric PCL.
2021 – Present	Director, Thai Listed Companies Association
2020 – Present	Director, Xayaburi Power Co., Ltd.
2020 – Present	Chairman, Khanom Electricity Generating Co., Ltd.
2020 – Present	Chairman, EGCO Engineering and Service Co., Ltd.
2020 – Present	Director, BLCP Power Co., Ltd.
2020 – 2021	Director, Gulf Electric PCL.
2020 – Present	Chairman, Thai Ruk Pa Foundation
2020 – Present	Deputy Governor-Governor's Office, Electricity Generating Authority of Thailand
2018 – 2020	Deputy Governor-Power Plant Development and Renewable Energy, Electricity Generating Authority of Thailand
2017 – 2018	Assistant Governor-Renewable and New Energy, Electricity Generating Authority of Thailand
2016 – 2017	Director, Mechanical Maintenance Division, Electricity Generating Authority of Thailand

BOARD OF DIRECTORS

Who Vacated the Office During the Year 2021 Until January 31, 2022

1 Mr. Roengchai Kongthong

Age 61

- Director
- Member of Nomination and Remuneration Committee
- Member of Risk Oversight Committee

(Authorized Director)

(Resigned with effect on October 1, 2021)

EDUCATION

- Master of Business Administration, Thammasat University
- Bachelor of Engineering in Electrical Engineering, Prince of Songkla University
- Advanced Master of Management Program (AMM), National Institute of Development Administration (NIDA)
- Certificate of Royal Thai Army War College Course, The Royal Thai Army Institute of Advanced Military Studies
- Certificate of RTAF & CEO Relationship Program, Royal Thai Armed Forces Headquarters, Institute of Security Psychology
- Certificate of Public Economics Management for Executives, King Prajadhipok's Institute
- Certificate of Corporate Governance for Directors and Senior Executives of Regulator Program, State Enterprises and Public Organizations, King Prajadhipok's Institute
- Certificate of Director Certification Program, Thai Institute of Directors Association
- Certificate of Leading Your Business through Uncertainties Program, Thai Institute of Directors Association
- Thailand's in Land Transport Infrastructure and Investment Opportunity Program, by Mr. Sorapong Paitoonphong, Deputy Permanent Secretary of Ministry of Transport (2021)
- Roles of Private Sector's Executives and Officers in Anti-corruption Program, Thai Private Sector Collective Action Against Corruption (CAC) (2021)
- Certificate of How to Develop a Winning Digital Strategy Program, Thai Institute of Directors Association (2021)

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-2021)

2018 – 2021	Deputy Governor-Transmission System, Electricity Generating Authority of Thailand
2017 – 2018	Assistant Governor-Transmission System, Electricity Generating Authority of Thailand
2014 – 2017	Director, Power System Control and Operation Division, Electricity Generating Authority of Thailand

2 Ms. Choosri Kietkajornkul

Age 58

- Director
- Member of Investment Committee

(Authorized Director)

(Resigned with effect on July 20, 2021)

EDUCATION

- Master of Accountancy, Chulalongkorn University
- Bachelor of Accountancy, Chulalongkorn University
- Postgraduate Certificate in Finance and Management, London School of Business and Finance, UK
- Certificate of Strategy Management Program, Faculty of Commerce and Accountancy, Chulalongkorn University
- Certificate of Chief Financial Officer Certification Program, Federation of Accounting Profession
- Certificate of Financial and Fiscal Management Program for Senior Executive, Institute of Human Resource Development on Fiscal and Financial for Public Enterprises
- Certificate of Leading Your Business through Uncertainties Program, Thai Institute of Directors Association
- Thailand's in Land Transport Infrastructure and Investment Opportunity Program, by Mr. Sorapong Paitoonphong, Deputy Permanent Secretary of Ministry of Transport (2021)

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) 0.000038%

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-2021)

2020 – 2021	Deputy Governor-Finance and Accounting (CFO), Electricity Generating Authority of Thailand
2018 – 2020	Assistant Governor-Finance, Electricity Generating Authority of Thailand
2016 – 2017	Director, Controller Division, Electricity Generating Authority of Thailand

3 Mr. Tomoyuki Ochiai

Age 56

- Director
- Member of Risk Oversight Committee

(Authorized Director)

(Resigned with effect on July 15, 2021)

EDUCATION

- Master of System Design and Management, Keio University, Japan
- Bachelor of Laws, Keio University, Japan
- University of Guadalajara, Mexico (One-year student dispatched from the Government of Japan)
- Cryptocurrency Technology Program (Knowledge Sharing among Directors and Management, by Mrs. Tipsuda Tawaramorn, Ex-Deputy Secretary-General of SEC Thailand)
- Certificate of Leading Your Business through Uncertainties Program, Thai Institute of Directors Association
- Thailand's in Land Transport Infrastructure and Investment Opportunity Program, by Mr. Sorapong Paitoonphong, Deputy Permanent Secretary of Ministry of Transport (2021)

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-2021)

2021 – Present	General Manager, International Business Office, Kyushu Electric Power Co., Inc.
2020 – 2021	Chief Group Manager, Asset Management Group, International Business Office, Kyushu Electric Power Co., Inc.
2018 – 2020	Chief of Division, Project Development Division, Kyuden International Corporation (KIC)
2017 – 2018	General Manager, Project Development Department 2, Kyuden International Corporation (KIC)
2016 – 2017	Assistant Senior Manager, Business Planning Group, International Business Division, Kyushu Electric Power Co., Inc.
2014 – 2017	Advisor, Policy and Strategy Office, Japan Bank for International Cooperation (JBIC)

THE POSITIONS OF THE MANAGEMENT AND THE CONTROL PERSONS

As of January 31, 2022

01

MR. JOHN MATTHEW PALUMBO

- Senior Executive Vice President - Business Development International
- Risk Management Committee Member
- Good Corporate Governance Committee Member
- EGCO Management Committee

02

MR. PRACH CHONGKITTISAKUL

- Senior Executive Vice President - Business Development Domestic
- Risk Management Committee Member
- Group Business Committee Member
- EGCO Management Committee Member

03

MR. SOMKIAT SUTTIWANICH

- Chief Financial Officer
- Risk Management Committee Member
- Good Corporate Governance Committee Member
- EGCO Management Committee

04

DR. GUMPANART BUMROONGGIT

- Senior Executive Vice President - Operation Management
- Risk Management Committee Member
- Good Corporate Governance Committee Member
- EGCO Management Committee

05

MS. SOMSIRI YOOSOOK

- Executive Vice President - Finance

06

MR. AMORNRAT DEBHASDIN NA AYUDHYA

- Executive Vice President - Accounting

MS. SUDRUEDEE LERTKASEM

- Executive Vice President
  - Subsidiaries Accounting and Finance

MS. SOMLERDEE FAKON

- Senior Vice President
  - Accounting & Budget

MS. AMORNRAT JITTAVISUTHIKUL

- Senior Vice President
  - Management and Analysis Accounting

MS. POJANEE NGOENSA-ARD

- Senior Vice President
  - International General Affairs Management

MS. PORNNARA KOOKARINRAT

- Senior Vice President
  - Domestic General Affairs Management

12

MRS. PLOY SUKSRISOMBOON

- Executive Vice President
  - Business Development (International)

13

MR. VICHAN SRIPAIROJ

- Executive Vice President
  - Business Development (Power Generation)

14

MS. SALIL TIRAWAT

- Executive Vice President
  - Corporate Management

15

MS. PIYANON WATTANACHANYA

- Executive Vice President
  - Corporate Strategy

16

MR. THAWAT HIRANCHARUKORN

- Executive Vice President
  - Asset Management

MR. PRASIT LAOHAWIRAPAP

- Executive Vice President
  - Project Management

MR. INTOUCH PRAKOBVANICHKUL

- Executive Vice President

MR. THERDSAK VIJITSOMBAT

- Executive Vice President
  - Power Plant Management

MR. KOSOL SIRIWAL

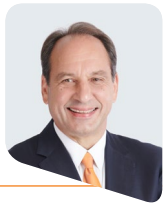
- Executive Vice President

THE POSITIONS OF THE MANAGEMENT AND THE CONTROL PERSONS

As of January 31, 2022

1 Mr. John Matthew Palumbo

Age 58



- Senior Executive Vice President
  - Business Development International
- Risk Management Committee Member
- Good Corporate Governance Committee Member
- EGCO Management Committee

EDUCATION

- Bachelor of Science in Mechanical Engineering (Honors), Columbia University, School of Engineering and Applied Science, New York

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2021 - Present	Director, Linden TopCo Limited Liability Company
2020 - Present	Investment Committee, Yunlin Holding Gmbh
2019 - Present	Director, Paju Energy Services Company Limited
2018 - Present	Director, EGCO Pearl Company Limited
2017 - Present	Director, EGCO Plus Company Limited
2016 - 2018	Director, AES Normandy Holding B.V.
2014 - 2018	Director, Masin-AES Pte. Ltd.
2012 - Present	Director, Kalilayan Power Holdings Inc., Mauban Holdings Company Inc.

2 Mr. Prach Chongkittisakul

Age 51

- Senior Executive Vice President
  - Business Development Domestic
- Risk Management Committee Member
- Group Business Committee Member
- EGCO Management Committee Member

EDUCATION

- Master of Business Administration (Finance), Sasin Graduate Institute of Business Administration, Chulalongkorn University
- Bachelor of Civil Engineering, Chulalongkorn University

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2021 - Present	Director, Innopower Company Limited, Peer Power Company Limited, BLCP Power Limited, Dawei Electricity Generating Company Management Pte., Ltd., Khanom Electricity Generating Company Limited, EGCO Engineering and Service Company Limited
2021 - Present	Commissioner, PT Manambang Muara Enim Company Limited
2018 - 2020	Managing Director, GAIA One Company Limited
2018	Senior Vice President - Strategy & Business Development - Mobility Energy Solutions, BANPU Public Company Limited
2005 - 2017	Vice President - New Energy, BANPU Public Company Limited

3 Mr. Somkiat Suttiwanich

Age 53

- Chief Financial Officer
- Risk Management Committee Member
- Good Corporate Governance Committee Member
- EGCO Management Committee

EDUCATION

- Master of Business Administration, Chulalongkorn University
- Bachelor of Accountancy, Chulalongkorn University
- Certificate of Director Certification Program (DCP), Thai Institute of Directors Association (IOD)
- Certificate of Strategic CFO in Capital Markets, Thailand Securities Institution (TSI), Stock Exchange of Thailand

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2021 - Present	Director, Khanom Electricity Generating Company Limited, EGCO Engineering and Service Company Limited, BLCP Power Limited, Gulf Electric Public Company Limited, Thai Pipeline Network Company Limited, PT Manambang Muara Enim Company Limited, Dawei Electricity Generating Company Management Pte., Ltd.
2019 - Present	Director, Nam Theun 2 Power Company Limited, Nam Theun 1 Power Company Limited
2019 - 2020	Director, Natural Energy Development Company Limited
2019	Director, Sub Yai Wind Farm Company Limited
2018 - 2019	Director, Klongluang Utilities Company Limited, Banpong Utilities Company Limited
2018 - 2019	Executive Vice President - Subsidiaries Accounting & Finance, Electricity Generating Public Company Limited
2017 - 2018	Senior Vice President - Finance, Electricity Generating Public Company Limited
2013 - 2017	Chief Financial Officer, Nam Theun 2 Power Company Limited

4 Dr. Gumpanart Bumroonggit

Age 56

- Senior Executive Vice President - Operation Management
- Risk Management Committee Member
- Good Corporate Governance Committee Member
- EGCO Management Committee

EDUCATION

- Ph.D. in Engineering Science (Electrical Engineering), Southern Illinois University at Carbondale, USA
- Master of Science (Electrical Engineering), Southern Illinois University at Carbondale, USA
- Bachelor of Engineering (Electrical Engineering), Chulalongkorn University

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2021 - Present	Board of Advisor, Ares Apex Pooling Limited Liability Company
2021 - Present	Director, Linden TopCo Limited Liability Company
2020 - Present	Investment Committee, Yunlin Holding Gmbh
2020 - Present	Director, Nam Theun 1 Power Company Limited
2019 - Present	Director, Paju Energy Services Company Limited
2018 - Present	Director, Nam Theun 2 Power Company Limited
2017 - Present	Director, Khanom Electricity Generating Company Limited, EGCO Engineering and Service Company Limited, EGCO Plus Company Limited
2015 - 2018	Director, Boco Rock Wind Farm Pty Limited
2013 - Present	Director, BLCP Power Limited
2013 - 2018	Director, GIDEC Company Limited
2012 - Present	Director, Gulf Electric Public Company Limited
2012 - Present	Commissioner, PT Manambang Muara Enim Company Limited
2012 - 2018	Director, Natural Energy Development Company Limited, Quezon Power, Inc., Quezon Management Service Inc., Pearl Energy Philippines Operating, Inc.
2012 - 2017	Director, PT Manambang Muara Enim Company Limited
2012 - 2017	Executive Vice President - Asset Management, Electricity Generating Public Company Limited

5 Ms. Somsiri Yoosook

Age 57

- Executive Vice President - Finance

EDUCATION

- Master of Business Administration (Finance), Youngtown State University, USA
- Bachelor of Science (Accounting) (2nd Class Honors), Kasetsart University

DISPUTE None

FAMILY RELAMONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2020 - Present	Director, New Growth Plus B.V., Greenwing Energy B.V., Gen Plus B.V.
2017 - Present	Director, EGCO Plus Company Limited
2014 - 2021	Director, Nam Theun 2 Power Company Limited
2014 - 2018	Director, North Pole Investment Company Limited

6 Mr. Amornrat Debhasdin Na Ayudhya

Age 56

- Executive Vice President - Accounting

EDUCATION

- M.Sc. (Information Technology in Business: Accounting Information System), Chulalongkorn University
- B.B.A. (Accounting), Ramkhamhaeng University
- Certificate of Director Certification Program (DCP), The Institute of Directors Association (IOD)

DISPUTE None

FAMILY RELAMONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2021 - Present	Director, Natural Energy Development Company Limited, Nam Theun 1 Power Company Limited
2019 - Present	Director, G-Power Source Company Limited, Yanhee EGCO Holding Company Limited, Solarco Company Limited
2019 - 2020	Senior Vice President - Accounting and Budget, Electricity Generating Public Company Limited
Nov - Dec 2018	Senior Vice President - Domestic General Affair, Electricity Generating Public Company Limited
2017 - Oct 2018	Finance and Administration Manager, Natural Energy Development Company Limited

7 Ms. Sudruedee Lertkasem

Age 50

- Executive Vice President
  - Subsidiaries Accounting and Finance

EDUCATION

- Master of Business Administration, Thammasat University
- Bachelor of Accounting (Honours), Thammasat University
- Certificate of Director Certification Program (DCP), Thai Institute of Directors (IOD)

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) 0.0000013

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2022 - Present	Director, EGCO Pearl Company Limited, Pearl Energy Philippines Operating, Inc., Quezon Management Service Inc., Evergreen Power Venture B.V., Quezon Power, Inc., New Growth B.V.
2021 – Present	Director, Nam Theun 2 Power Company Limited, EGCO Linden I Limited Liability Company
2020 - Present	Director, Klongluang Utilities Company Limited, Banpong Utilities Company Limited, EGCO Cogeneration Company Limited
2018 - 2019	Senior Vice President - Internal Audit, Electricity Generating Public Company Limited
2017 - 2018	Director, Chaiyaphum Wind Farm Company Limited
2016 - 2018	Director, SPP Two Company Limited, SPP Three Company Limited, SPP Four Company Limited, SPP Five Company Limited, EGCO Cogeneration Company Limited, Roi-Et Green Company Limited, EGCO Green Energy Company Limited, Theppana Wind Farm Company Limited
2016 - 2018	Senior Vice President - Domestic General Affairs Management, Electricity Generating Public Company Limited

8 Ms. Somlerdee Fakon

Age 35

- Senior Vice President - Accounting & Budget

EDUCATION

- Master of Business Administration, Kasetsart University
- Bachelor of Accounting (Honours), Thammasat University

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2022 - Present	Senior Vice President - Accounting & Budget, Electricity Generating Public Company Limited
2021	Vice President - Accounting, Electricity Generating Public Company Limited
2018 - 2020	Vice President - International General Affairs Management, Electricity Generating Public Company Limited

9 Ms. Amornrat Jittavisuthikul

Age 39

- Senior Vice President - Management and Analysis Accounting

EDUCATION

- Master of Business Administration, Thammasat University
- Bachelor of Accounting, Kasetsart University

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2022 - Present	Senior Vice President - Management and Analysis Accounting, Electricity Generating Public Company Limited
2021	Senior Vice President - Accounting and Budget, Electricity Generating Public Company Limited
2017 - 2020	Vice President - Accounting, Electricity Generating Public Company Limited

10 Ms. Pojanee Ngoensa-ard

Age 42

- Senior Vice President
  - International General Affairs Management

EDUCATION

- Master of Business Administration, Kasetsart University
- Bachelor of Accountancy, Kasetsart University

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2022 - Present	Director, EGCO Linden II, LLC, Springtime Plus, LLC, Autumntime Plus, LLC, Summertime Plus, LLC, Wintertime Plus, LLC
2021 - Present	Director, Phoenix Power B.V., Boco Rock Wind Farm Pty Limited, South Pacific Power Pty Limited, Millennium Energy B.V.
2021 - Present	Senior Vice President - International General Affairs Management, Electricity Generating Public Company Limited
2021	Vice President - International General Affairs Management, Electricity Generating Public Company Limited
2015 - 2020	Vice President - Accounting and Budget Analysis, Electricity Generating Public Company Limited

11 Ms. Pornnara Kookarinrat

Age 47

- Senior Vice President
  - Domestic General Affairs Management

EDUCATION

- B.B.A. (Accounting),
  Rajamangala Institute of Technology, Nakornratchasima
- Certificate of Director Certification Program (DCP),
  Thai Institute of Directors (IOD)

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2021 - Present	Director, Chaiyaphum Wind Farm Company Limited, Theppana Wind Farm Company Limited, Roi-Et Green Company Limited, EGCO Green Energy Company Limited, SPP Five Company Limited, SPP Four Company Limited, SPP Three Company Limited, SPP Two Company Limited
2021 - Present	Senior Vice President - Domestic General Affairs Management, Electricity Generating Public Company Limited
2016 - 2020	Vice President - Accounting Power Plant Business 3, Electricity Generating Public Company Limited

THE POSITION OF MANAGEMENT AND THE CONTROL PERSONS IN THE SUBSIDIARIES AND OTHER RELATED COMPANIES

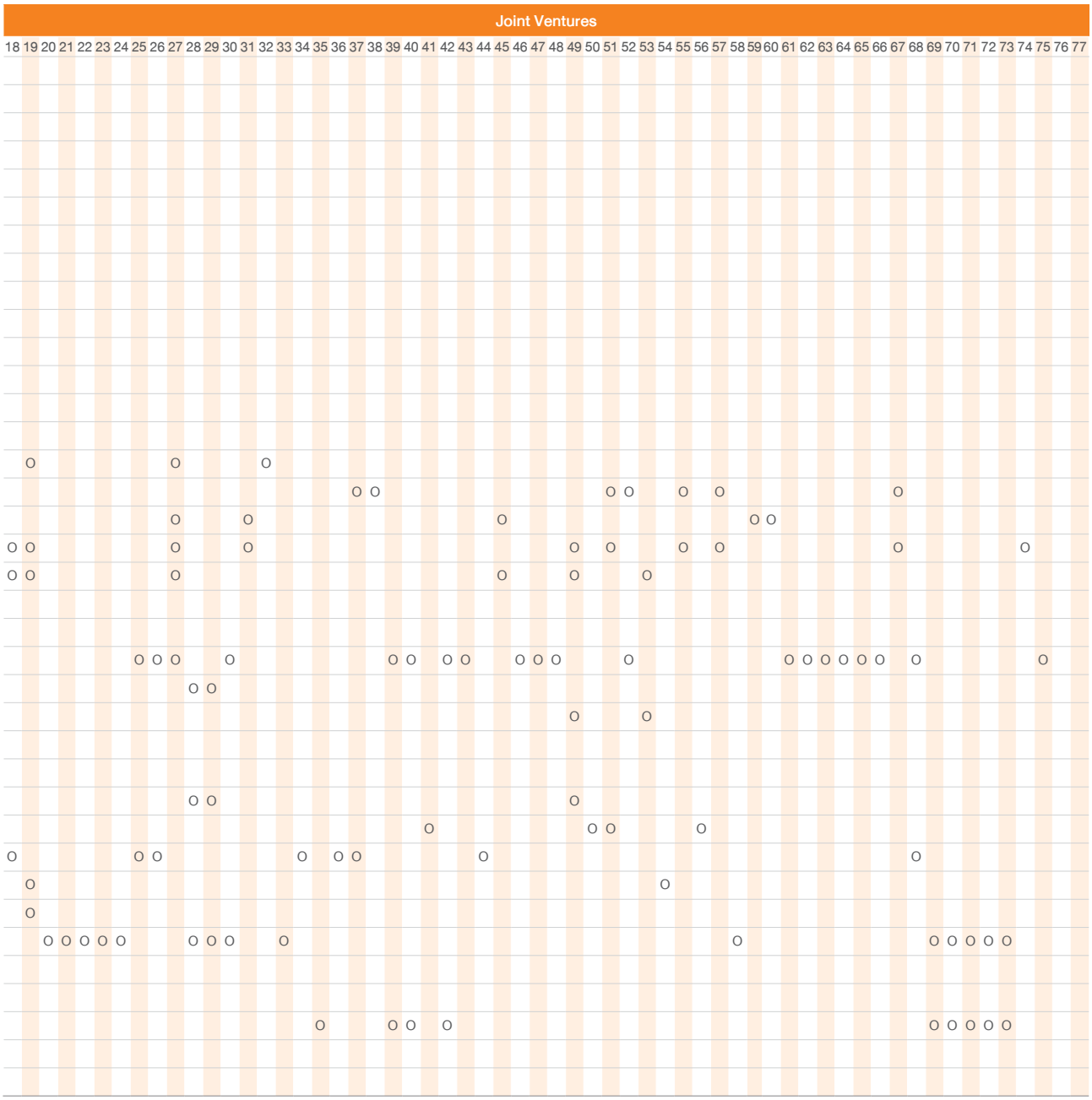
	Name	EGCO	Major Subsidiaries	Subsidiaries															
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Mr. Kulit Sombatsiri	Δ, XX																	
2	Ms. Jaruwan Ruangswadipong	I, AA, LID																	
3	Dr. Pasu Loharjun	I, N, CC																	
4	Prof. Dr. Anya Khanthavit	I, A, RR																	
5	Ms. Wannipa Bhakdibutr	I, N, C																	
6	Mr. Paisan Mahapunnaporn	I, A, R																	
7	Mr. Poomjai Attanun	I, N, C																	
8	Mr. Polsri Suvisisarsa	O, N, R	Deputy Governor																
9	Mr. Nutthavutthi Chamchang	O, C	Deputy Governor																
10	Prof. Dr. Pisut Painmanakul	O, X																	
11	Mr. Shunichi Tanaka	O, X																	
12	Mr. Makoto Nogami	O, R																	
13	Mr. Toshiro Kudama	O, NN																	
14	Mr. Naoki Tsutsumi	O, X																	
15	Mr. Thepparat Theppitak	O, President, X, C, GG, R	Engineer Level 14		Δ		Δ												
16	Mr. John Matthew Palumbo	SEVP - Business Development - International																	
17	Mr. Prach Chongkittisakul	SEVP - Business Development - Domestic			O		O												
18	Dr. Gumpanart Bumroonggit	SEVP - Operation Management			O		O												
19	Mr. Somkiat Suttiwanich	SEVP - Chief Financial Officer			O		O												
20	Ms. Ploy Suksrisomboon	EVP - Business Development (International)																	
21	Mr. Vichan Sripairoj	EVP - Business Development (Power Generation)																	
22	Mr. Thawat Hirancharukorn	EVP - Asset Management								O									
23	Mr. Therdsak Vijitsombat	EVP - Power Plant Management				Δ		Δ	Δ						O	O	O	O	O
24	Mr. Prasit Laohawirapap	EVP - Project Management																	
25	Ms. Piyanon Wattanachanya	EVP - Corporate Strategy						O											
26	Ms. Salil Tirawat	EVP - Corporate Management																	
27	Mr. Amornrat Debhasdin Na Ayudhya	EVP - Accounting								O								O	
28	Ms. Somsiri Yoosook	EVP - Finance																	
29	Ms. Sudruedee Lertkasem	EVP - Subsidiaries Accounting & Finance				O									O				O
30	Mr. Intouch Prakobvanichkul	EVP - Managing Director					O												
31	Mr. Kosol Siriwal	EVP - Managing Director			O														
32	Mr. Rattagarn Vallapa	SVP - Asset Management				O		O	O	O	O	O	O	O	O	O	O	O	O
33	Ms. Somlerdee Fakon	SVP - Accounting and Budget																	
34	Ms. Amornrat Jittavisuthikul	SVP - Management and Analysis Accounting																	
35	Ms. Pojanee Ngoensa-ard	SVP - International General Affairs Managagement																	
36	Ms. Pornnara Kookarinrat	SVP - Domestic General Affairs Management						O	O		O	O	O	O		O	O		
37	Ms. Kulkanok Leongsoithong	Corporate Secretary, SVP - Corporate Secretary																	

Remarks :

A. Δ = Chairman O = Director XX = Chairman of Investment Committee X = Investment Committee Member AA = Chairman of Audit Committee A = Audit Committee Member NN = Chairman of Nomination and Remuneration Committee N = Nomination and Remuneration Committee Member RR = Chairman of Risk Oversight Committee R = Risk Oversight Committee Member CC = Chairman of Corporate Governance and Social Responsibility Committee C = Corporate Governance and Social Responsibility Committee Member GG = Chairman of Good Corporate Governance Committee G = Good Corporate Governance Committee Member LID = Lead Independent Director

B.
1 = Electricity Generating Authority of Thailand
2 = TEPDIA Generating B.V.
3 = Khanom Electricity Generating Co., Ltd.*
4 = EGCO Cogeneration Co., Ltd.
5 = EGCO Engineering and Service Co., Ltd.
6 = EGCO Green Energy Co., Ltd.
7 = Roi-Et Green Co., Ltd.
8 = Natural Energy Development Co., Ltd.
9 = SPP Two Co., Ltd.
10 = SPP Three Co., Ltd.
11 = SPP Four Co., Ltd.
12 = SPP Five Co., Ltd.
13 = Klongluang Utilities Co., Ltd.
14 = Theppana Wind Farm Co., Ltd.
15 = Chaiyaphum Wind Farm Co., Ltd.
16 = G-Power Source Co., Ltd.
17 = Banpong Utilities Co., Ltd.*
18 = Nam Theun 2 Power Co., Ltd.
19 = Gulf Electric Pcl.
20 = Gulf Power Generation Co., Ltd.
21 = Nong Khae Cogeneration Co., Ltd.
22 = Samutprakarn Cogeneration Co., Ltd.
23 = Gulf Energy Co., Ltd.
24 = Gulf IPP Co., Ltd.
25 = Quezon Power, Inc.
26 = Pearl Energy Philippines Operating, Inc.
27 = BLCP Power Limited
28 = Yanhee EGCO Holding Co., Ltd.
29 = Solarco Co., Ltd.
30 = PT Manambang Muara Enim Co., Ltd. (Board of Directors)
31= PT Manambang Muara Enim Co., Ltd. (Board of Commissioner)
32 = Xayaburi Power Co., Ltd.
33 = Gulf Yala Green Co., Ltd.
34 = New Growth B.V.
35 = Millenium Energy B.V.
36 = Quezon Management Service Inc.
37 = Mauban Holdings Company Inc.
38 = Kalilayan Power Holding Inc.
39 = South Pacific Power Pty Ltd.
40 = Boco Rock Wind Farm Pty Ltd.

as of January 31, 2022



41 = Gen Plus B.V.
42 = Phoenix Power B.V.
43 = Star Energy Geothermal Pte. Ltd.
44 = Evergreen Power Venture B.V.
45 = Dawei Electricity Generating Company Management Pte., Ltd.
46 = Star Phoenix Geothermal JV B.V.
47 = Star Energy Geothermal Holdings (Salak-Darajat) B.V.
48 = Star Energy Geothermal (Salak-Darajat) B.V.
49 = Nam Theun 1 Power Co., Ltd.
50 = New Growth Plus B.V.
51 = EGCO Plus Co., Ltd
52 = EGCO Pearl Co., Ltd.
53 = Thai Pipeline Network Co., Ltd.
54 = E&E Engineering & Service Co., Ltd.
55 = Paju Energy Services Co., Ltd.
56 = Greenwing Energy B.V.
57 = Yunlin Holding Gmbh (Investment Committee)
58 = Gulf Cogeneration Co., Ltd.
59 = Peer Power Co., Ltd.
60 = Innopower Co., Ltd.
61 = Star Energy Geothermal Salak Ltd.
62 = Star Energy Geothermal Salak Pratama Ltd.
63 = Star Energy Geothermal Darajat I Ltd.
64 = Star Energy Geothermal Darajat II Ltd.
65 = PT Darajat Geothermal Indonesia
66 = PT Star Energy Geothermal Suoh Sekincau
67 = Linden TopCo, LLC
68 = EGCO Linden I, LLC
69 = EGCO Linden II, LLC
70 = Springtime Plus, LLC
71 = Autumntime Plus, LLC
72 = Summertime Plus, LLC
73 = Wintertime Plus, LLC
74 = Ares Apex Pooling, LLC (Board of Advisor)
75 = Green Diamond Ltd.
76 = Blue Diamond B.V.
77 = Quezon Power (Philippines) Co., Ltd.*

* Subsidiaries (Core Business) which generate electricity for sale and the revenues accounted to more than 10% of the consolidated revenue

CORPORATE GOVERNANCE

EGCO understands the significance of good corporate governance, which is one of the fundamental components of a solid foundation of sustainability. It has maintained good corporate governance over the years by adhering to relevant laws, rules, and regulations, as well as best practices for directors of listed companies and criteria for companies with good corporate governance established by the Securities and Exchange Commission ("SEC") and the Stock Exchange of Thailand ("SET"). To promote and foster good corporate governance of operations and to provide the Company's directors, management, and personnel with guidelines, the Board of Directors ("Board") has issued in writing the Good Corporate Governance Principles and Code of Conduct, which are available on EGCO's website and internal communications portal (EGCO Groupnet).

The Board has established the Good Corporate Governance Principles, applicable to EGCO Group's operations, based on the following 6 pillars:

PROMOTION OF BEST PRACTICE

Promote compliance with the Good Corporate Governance Principles and Code of Conduct

RESPONSIBILITY

Operate the business with responsibility towards the community and society and caring for the environment

EQUITABLE TREATMENT

Treat all shareholders and stakeholders equally

ACCOUNTABILITY

Perform duties with honesty and integrity

CREATION OF LONG-TERM VALUE

Create long-term value for the shareholders and increase competitiveness to create sustainable growth

TRANSPARENCY

Ensure fairness, transparency, accountability, and no direct or indirect involvement in any form of fraud and corruption

The Board also focuses on EGCO's compliance with domestic and international corporate governance standards. The Good Corporate Governance Principles are annually reviewed and continuously improved based on the criteria and recommendations of the SEC, the SET, the Corporate Governance Report of Thai Listed Companies ("CGR") of the Thai Institute of Directors ("IOD"), the ASEAN Corporate Governance Scorecard ("ASEAN CG Scorecard"), and the Dow Jones Sustainability Indices ("DJSI").

EGCO's board and business performance, pursuant to the 8 principles of Corporate Governance Code for Listed Companies 2017 (CG Code 2017), can be summarized as follows:

PRINCIPLE 1 ESTABLISH CLEAR LEADERSHIP ROLES AND RESPONSIBILITIES OF THE BOARD

The Board's duties, roles, and responsibilities are outlined in the directors' manual, which is distributed to all new directors to help them understand the nature of the Company's business and ensure their effective performance in accordance with the established duties and responsibilities-namely, the formulation of **the corporate policy, vision, mission, and direction** in close collaboration with management. The Board makes plans, sets short- and long-term strategies, and monitors their implementation according to the stipulated policies and directions.

The Board, representing shareholders, devotes its time to **fiduciary duties** and implementing shareholder resolutions with honesty, prudence, and care for the benefit of the Company and fairness to all stakeholders, i.e., shareholders, investors, employees, customers, suppliers, creditors, government agencies, communities, and the environment. Each member of the Board also comments independently and in conformity with the Company's Good Corporate Governance Principles.

The Board is in charge of board and subcommittee charters, the duties and responsibilities under which conform to applicable laws, rules, regulations, and the Good Corporate Governance Principles to ensure the directors' understanding of their roles, duties, and responsibilities towards shareholders and stakeholders, and to allow the directors to perform the said duties effectively.

The Board oversees executives', employees', and its own compliance with the Code of Conduct as they initiate, promote, and take responsibility for the Company's mission. The Board considers both national and international best practices consistent with the Company's Good Corporate Governance Principles and reviews the Code of Conduct every two years. The latter has been done since 2003. The Code of Conduct for Directors comprises Business Principles, Adherence to the Code of Conduct, the Board's Ideals, the Board's Duties and Responsibilities, Conflicts of Interest, and Use of Information. The Code of Conduct for Employees comprises 8 topics: 1. Responsibilities to Stakeholders; 2. Responsibilities to the Company; 3. Procurement and Transactions; 4. Prevention of Conflicts of Interest; 5. Employees; 6. Safety, Health, and the Environment; 7. Anti-corruption Measures; and 8. Whistleblowing.

The Board is responsible for carrying out its duties with prudence and honesty. It oversees the Company's operational compliance with laws, regulations, and shareholder resolutions. In 2021 the Board worked to improve and implement good corporate governance in the following areas:

1. The Board examined and amended the charters of various subcommittees, such as the Investment Committee, the Nomination and Remuneration Committee, the Corporate Governance and Social Responsibility Committee, and the Risk Oversight Committee.
2. The Board revised the "Roles, Duties, and Responsibilities" section on the Board and Subcommittee self-appraisal forms to align them with the amended charters. This ensured that any subsequent evaluation would be accurate and beneficial to their performance development.
3. The Board amended the Table of Authorities for itself, its committees, and management for greater flexibility and operational clarity in light of the ongoing situations.
4. The Board also revised the following:
    - The Personal Data Protection Act (PDPA) Statement
    - The Anti-Corruption Policy in preparation for the second renewal of the certification Thailand Private Sector Collective Action Coalition Against (CAC);
    - The Cyber Security Policy; and
    - The Whistleblowing Policy.

PRINCIPLE 2 DEFINE OBJECTIVES THAT PROMOTE SUSTAINABLE VALUE CREATION

The Board regularly monitors the implementation of the Company's strategies through opinions expressed to and discussions with management in board and subcommittee meetings. To ensure that the Company can achieve its goals according to strategic plans, the Board performs the following roles and duties:

- Formulate a risk management policy, a business plan, and an annual budget, and monitor the Company's performance as well as approve major investments, acquisition, and disposal of assets
- Recruit, determine remuneration, monitor, and (if necessary) change key management personnel, as well as monitor management succession plans
- Review the remuneration rate of directors and senior executives and ensure that board nomination is conducted formally and transparently
- Regularly monitor and resolve conflicts of interest, which may occur among the management, directors, and shareholders, as well as ensure an independent audit, appropriate internal controls, risk monitoring, financial controls, and legal compliance
- Regularly monitor the effectiveness of the current implementation of corporate governance and make changes if necessary
- Monitor information disclosure and communication processes
- Conduct self-appraisal annually and declare its duties and responsibilities in the Annual Report
- Nominate and appoint qualified directors, replacing those who retire or resign throughout the year, to supervise the Company's implementation of goals and strategies.

From Leadership to Strategic Plans

The Board establishes the corporate vision, mission, strategies, goals, and short- and long-term business plans. These are revised annually to ensure suitability for the present-day context. The Board and management participate in corporate strategy seminars. In 2020 these were held on July 17 and August 6. Based on the Board's opinions and recommendations, management formulates short- and long-term strategic plans that best address the current and future business challenges and allow operations to comply with the established vision, mission, and goals. These strategic plans are also based on the Balanced Scorecard's 4 perspectives: financial perspective, customer perspective, internal business process perspective, and learning and growth perspective. This process facilitates strategic implementation by means of measurement and appraisal, which will ensure consistency within the Company and highlight its critical success factors. The action plan is also consistent with key performance indicators.

According to the 2022 strategic plan, EGCO will invest based on the motto "Cleaner, Smarter and Stronger to Drive Sustainable Growth," which extends across the following 4 business areas:

Nonetheless, EGCO will continue to invest in power businesses, which are the core of its operations, fuel and utilities businesses, and smart energy solution businesses. Moreover, EGCO will focus on competitive funding sources and financial risk mitigation to increase competitiveness, which is one of its key success factors. Furthermore, EGCO emphasizes the maximum efficiency of commercially operated power plants, the completion of power plants under construction within the specified timeframe and budget, and the integration of information technology and innovation into its operations to improve efficiency. In terms of human resources, EGCO focuses on strengthening its people by continuously improving its human resource management system and

enhancing its personnel's competence in order to achieve a high-performance organization status. Overall, EGCO is committed to sustainability by integrating sustainability practices in its operations as part of a corporate strategy to create long-term value for its stakeholders.

Once the Board approves a strategic plan, an action plan, and key performance indicators, management prepares a budget and headcount accordingly and submit them to the Board for approval. The Board must then allocate the necessary resources to management to ensure their achievement. Management reports the implementation progress of all plans and corporate KPIs to the Board every month. This is normally done by the President.

Typically, the President informs employees of the Company's strategic plan and goals on "Communication Day," explaining the plan for each division and its responsibilities. The employees will have to implement these plans to achieve the established goals. In 2021, Communication Day was a hybrid event that included participation through Microsoft Teams Live, allowing offsite workers to participate in the event and maintaining an appropriate social distance according to the New Normal guidelines.

PRINCIPLE 3 STRENGTHEN BOARD EFFECTIVENESS

The Board determines the suitable number of directors for the size of the organization and effective corporate governance. At present, the Board comprises 15 directors. More details on this subject can be found under Board of Directors' and Management's Profile in the Annual Report. The Board annually reviews its structure and composition to ensure their appropriateness and necessity for the achievement of goals. It gives due consideration to the criteria and recommendations of the SEC, SET, CGR, ASEAN CG Scorecard, and DJSI. However, it finds that the Company cannot comply with some of the criteria prescribed by the CGR, ASEAN CG Scorecard, and DJSI. The Board is of the opinion that, for the utmost benefit of all stakeholders, adherence to the existing practices is appropriate for the Company's current context. Nonetheless, the Board has established conditions and practice guidelines for management and oversight to garner stakeholders' confidence in fair, transparent, and effective operations. The details are as follows:

UNIMPLEMENTED ITEMS	CONDITIONS AND PRACTICES
The Board shall consider the appropriate number of directors who can efficiently perform duties. The Board shall comprise at least 5 directors and not more than 12 directors, depending on the size, type, and complexity of the business.	The Board comprises 2 directors representing major shareholders and independent directors who are suitable for the nature of the business, especially the overseas energy business, which requires the knowledge and expertise in the energy sector of these representative directors to allow EGCO to achieve its objectives and strategic plan. The number and ratio of representative directors to independent directors reflect appropriate checks and balances.
A Chairman of the Board shall be an independent director.	The Board selects an appropriate person as Chairman of the Board. Although EGCO's Chairman is not an independent director, he has performed his duties fairly and transparently, taken the Company's interests into account, and not subserved private interests. The Chairman has also encouraged representative directors and independent directors to discuss and express their opinions freely. There has never been a case of decisive votes exercised by the Chairman to pass any resolution. Moreover, the Board has appointed Mrs. Jaruwan Ruangswadipong, Independent Director, as Lead Independent Director, to chair Independent Directors' meetings and represent them in discussions held between the Chairman and management on corporate governance matters and other significant issues that Independent Directors have deemed appropriate. The minutes of these meetings are reported to the Board. Furthermore, the Lead Independent Director takes part in deciding which topics are to be included in the agenda of every board meeting. More details about the Chairman and the Lead Independent Director can be found in the Annual Report under Governance Structure.
A Chairman of the Nomination and Remuneration Committee shall be an independent director.	Although the Chairman of the Nomination and Remuneration Committee is not an independent director, his experience and expertise in international organization management have been beneficial for the formulation of policies for personnel recruitment and development, remuneration, and directors' and employees' benefits, thereby ensuring competitiveness and supporting the Company's investment expansion in the energy sector and downstream businesses overseas, which is in alignment with its strategic plan.
Consideration of the suitability of remuneration proportion in terms of salary, short-term operating results such as bonus, and long-term operating results such as Employee Stock Ownership Plan ("ESOP")	The Nomination and Remuneration Committee has endorsed the remuneration structure of the Board, executives, and employees by linking bonuses to the Company's performance according to the KPIs, one of which is long-term growth. However, no ESOP has been given to employees.

Qualifications of EGCO's Directors

The Board has determined the following qualifications of EGCO's directors, as well as director nomination criteria and procedures, to ensure that the Board composition is appropriate and good corporate governance is implemented efficiently and effectively:

GENERAL QUALIFICATIONS	SPECIFIC QUALIFICATIONS
• A director must not be over 72 years of age on the date of appointment. (If a director turns 72 while in office, he or she may remain in office until the end of term).	A director shall possess relevant skills, knowledge, competence, and experience in the following fields: • Industrial Business/Energy Business/Engineering • International Business • Strategic/Business Planning • Human Resources • Accounting/Finance/Economics • Audit • Internal Control/Risk Management • Smart Technology • Law • Corporate Governance
• A director may hold a maximum of 3 directorships in SET-listed companies.	
• A director must have qualifications required by laws, relevant regulations, and the Company's Articles of Association.	
• A director must exhibit integrity, responsibility, and maturity.	
• A director must be able to make comments and suggestions freely without influence and interference from others.	
• A director must be able to dedicate his or her full attention to overseeing the Company.	

Nomination, Appointment, and Removal of Directors

EGCO's director nomination process and procedures are clearly defined and transparent. They are as follows:

1. Director candidates shall come from nomination by shareholders, which is a right the Company has guaranteed; the current directors; and a list of candidates selected by external consultants and from the Director Pool of reliable institutes, such as the Thai Institute of Directors (IOD) and the Ministry of Finance. At present, most of EGCO's directors appear in the Director Pool of the Ministry of Finance. In 2021 EGCO's director chosen from the Director Pool of the Ministry of Finance was Mr. Polsri Suvisisarsa.
2. The Nomination and Remuneration Committee is responsible for screening all director nominees by considering qualifications and the skills matrix, which outlines the abilities the Company needs and still lacks, to facilitate the achievement of strategies and objectives, as well as create challenges that culminate in the Company's success. The Committee shall also take into account the diversity of the Board in terms of sex, age, race, nationality, knowledge, competence, experience, and expertise in vital areas.
3. The Board shall consider the re-election of directors retiring by rotation based on the directors' past performance and appraisal results.
4. The Nomination and Remuneration Committee shall propose a list of all qualified director candidates, including both representative directors and independent directors, to the Board for appointment in the event of a vacancy from any other reasons than retirement by rotation and to a shareholder meeting for appointment in the event of a vacancy due to the completion of term of office.

The Board, appointed at an Annual General Meeting ("AGM"), shall comprise no less than 5 directors and no more than 15 directors. No fewer than half of the directors must have residency in the Kingdom of Thailand. In the case of a vacancy due to any other reasons than the end of term, the Board shall select a qualified candidate in the next meeting with majority votes of three-fourths of all remaining directors.

EGCO abides by the Public Limited Companies Act B.E. 2535 (1992). At each AGM, one-third of the directors shall retire by rotation. If the total number of directors is not evenly divisible by 3, the number shall be closest to one-third. In case any director intends to resign from the post, he or she must submit a resignation letter. The resignation shall be effective on the date the Company receives the letter. There shall be no less than four-fifths of the votes of eligible shareholders in attendance to vote for any director's early retirement before the end of term.

Tenure of Independent Directors

EGCO prohibits independent directors from serving more than 2 terms or 6 years to maintain their independence from the management and shareholders. In line with best practice, this policy has been effective from the 2016 AGM date onwards. As of 2021, none of the independent directors has been in office for more than 2 terms or 6 years.

Separation of Powers

The Board has separated the formulation of governance policies, which is its duty, from the daily management, which is the duty of the leadership team. The Table of Authorities, as approved by the Board, has therefore been established as guidelines. In 2021 the Board approved amendments, in terms of the dynamics between the Board and management, to the existing Table of Authorities in accordance with the revised board and subcommittee charters for greater flexibility and operational clarity in light of the ongoing situations. The Board does not intervene in any daily operation or business carried out by management, which falls under the President's responsibilities. More details can be found in the Annual Report under Governance Structure.

Directorship Limits

The Board prioritizes its directors' performance efficiency. To allow directors to dedicate their full capacity to the governance of the Company, the Board has therefore established a policy to limit the number of their directorships at other listed companies. A non-executive director can serve on the board of no more than 3 other listed companies; meanwhile, an executive director can serve on the board of no more than 2 other listed companies. Currently, none of the directors have exceeded this limit.

Establishment of Subcommittees

The Board has established 5 subcommittees-namely, 1. Audit Committee; 2. Investment Committee; 3. Nomination and Remuneration Committee; 4. Corporate Governance and Social Responsibility Committee; and 5. Risk Oversight Committee. These subcommittees lessen the burden on the Board and allow each director to focus on their areas of expertise and be more thorough with their missions. All subcommittees directly report to the Board. Further details on each subcommittee's structure, roles, and duties can be found in the Annual Report under Governance Structure and on the Company's website (www.egco.com).

Board and Subcommittees Meetings

The Board determines meeting dates and agenda for the entire year in advance. A board meeting is held every month. An ad hoc meeting can be arranged if there is a justifiable urgent need. The Board can authorize a subcommittee to review or approve management's activities within its scope of powers. Board meeting notice and meeting documents, with sufficient information, are delivered to directors at least 7 days in advance to allow them adequate time to study the information and optimize meeting time, except when a meeting is held urgently to protect the rights or benefit of the Company. To facilitate and enhance the safety in the delivery of meeting documents for the Board and in compliance with the Go Paperless campaign, part of the carbon reduction goal, EGCO sends these documents in their electronic form via email, which can be read on directors' iPads or personal computers. More details about meeting arrangements and attendance records of each director can be found in the Annual Report under Governance Structure.

Moreover, due to the ongoing COVID-19 pandemic, EGCO allowed directors to attend meetings electronically (e-meetings) throughout 2021 in compliance with announcements of the Department of Disease Control, Ministry of Public Health. These e-meetings also adhered to the Emergency Decree on Electronic Meetings B.E. 2563 (2020) and e-meeting safety measures announced by the Ministry of Digital Economy and Society in the Royal Thai Government Gazette.

Quorum of the Meeting

The quorum required to pass a board resolution is no less than two-thirds of all directors. A director with a potential conflict of interest shall not receive any document related to the topic in question and shall not participate in any discussion on that topic or vote on it. After each meeting, the secretary to the Board shall prepare a written record of it-namely, the Board's resolutions-and submit it to the Board within 3 days for confirmation. The secretary shall also submit a draft of the meeting minutes for the Board to review within 14 days after the meeting. These minutes require the Board's approval at its next meeting. The approved minutes and agenda documents shall be kept systematically as physical and electronic confidential documents at the Corporate Secretary Division for ease of access and reference.

Access to Additional Crucial Information

The Board is entitled to additional crucial information from the President, Corporate Secretary, or other executives delegated under the specified policy. The Corporate Secretary will support the Board's action and facilitate their access to additional crucial information. To this end, the Corporate Secretary possesses the knowledge and experience that ensure performance efficiency, as further detailed in the Annual Report under Governance Structure. Moreover, to ensure compliance with good corporate governance principles, the Board has stipulated that non-executive directors shall hold a meeting to jointly discuss and voice their opinions on the guidelines for the Company's management and business operations. Independent directors shall also hold their own meetings to exchange ideas and consider other dimensions of independent directors' performance. The Board and the Independent Directors have these meetings at least once a year. In 2021 the non-executive directors held one meeting on Thursday, December 23, 2021, to discuss and initiate further developments of directors to enhance the Board's efficiency in a rapidly changing and volatile world, EGCO's succession plan, and investor confidence in EGCO's operations.

Board's Self-Appraisal

The Board appraises itself every year, allowing all directors to review their previous year's performance and problems to improve their performance efficiency. The Board typically uses self-appraisal forms endorsed by the Nomination and Remuneration Committee; however, in 2021, the Board approved amendments to the "Roles, Duties, and Responsibilities" section on the Board and Subcommittee self-appraisal forms. These forms encompass all aspects of the Board's responsibilities and fit the Company's business nature and conditions, including its Code of Conduct and business ethics. There are 4 self-appraisal forms: 1. Collective Self-Appraisal Form; 2. Subcommittee Self-Appraisal Form; 3. Individual Self-Appraisal Form; and 4. Cross-Appraisal Form. Each item is calculated as a percentage. The Board self-appraisal forms are sent to the Corporate Secretary to tally the final total score and compute an overall performance result. The performance is graded on the following scale:

LEVEL	☆	☆☆	☆☆☆	☆☆☆☆
%	MODERATE	GOOD	VERY GOOD	EXCELLENT
	0-69	70-79	80-89	90-100

The score and the Board's recommendations for each category will be used for further performance improvements each year.

1) **Collective Self-Appraisal:** The collective self-appraisal form comprises 5 categories: 1. policy; 2. structure, composition, and qualifications; 3. collective responsibilities; 4. meeting attendance; and 5. self-development and management development.
Result of the Collective Self-Appraisal: an average score of 95.98% or "Excellent."

2) **Subcommittees' Self-Appraisal:** The Audit Committee, Investment Committee, Nomination and Remuneration Committee, the Risk Oversight Committee, and Corporate Governance and Social Responsibility Committee participated in this self-appraisal. The self-appraisal form used has been prepared according to the Good Corporate Governance Principles and each subcommittee's specific duties and responsibilities.

- Audit Committee's Self-Appraisal: The Audit Committee conducted a collective self-appraisal. This appraisal form has been adapted from the SEC's Audit Committee Handbook. It is divided into 2 parts: 1. overall performance and 2. performance of specific duties. Based on the self-appraisal result in 2021, it can be concluded that the composition, qualifications, and performance of the Audit Committee are in accordance with the SET's guidelines, international best practices, and missions assigned by the Board as stipulated in the Audit Committee Charter. The Audit Committee reported its 2021 self-appraisal result to the Board for acknowledgement in board meeting no. 13/2020 held on December 23, 2021 (date adjusted: BOD1/2565)

- Investment Committee's Self-Appraisal: 3 topics were covered: 1. structure and qualifications; 2. meeting attendance; and 3. role, duties, and responsibilities. All 5 members of the Investment Committee participated in the self-appraisal.
  Result of the Investment Committee's Self-Appraisal: an average score of 92.73 % or "Excellent."

- Nomination and Remuneration Committee's Self-Appraisal: 3 topics were covered: 1. structure, composition, qualifications, and self-development; 2. responsibilities and teamwork; and 3. dedication and meeting attendance. 4 out of 5 members of the Nomination and Remuneration Committee participated in the self-appraisal.
  Result of the Nomination and Remuneration Committee's Self-Appraisal: an average score of 99.78 % or "Excellent."

- Corporate Governance and Social Responsibility Committee's Self-Appraisal: 3 topics were covered: 1. structure, composition, qualifications, and self-development; 2. responsibilities and teamwork; and 3. dedication and meeting attendance. All 5 members of the Corporate Governance and Social Responsibility Committee participated in the self-appraisal.
  Result of the Governance and Social Responsibility Committee's Self-Appraisal: an average score of 99.20% or "Excellent."

- Risk Oversight Committee's Self-Appraisal: 3 topics were covered: 1. structure and qualifications; 2. committee meetings; and 3. roles, duties, and responsibilities. All 5 members of the Risk Oversight Committee participated in the self-appraisal.
  Result of the Risk Oversight Committee's Self-Appraisal: an average score of 94.07% or "Excellent."

3) Individual Self-Appraisal: 3 topics were covered: 1. qualifications and self-development; 2. responsibilities and teamwork; and 3. dedication and meeting attendance. All 15 members of the Board participated in the individual self-appraisal.
Result of the Individual Self-Appraisal: an average score of 96.99% or "Excellent."

4) Cross-Appraisal: Using the matching/grouping approach, a director appraised 4 other directors based on the topics provided on the form. This appraiser was selected at random. The cross-appraisal covers 3 topics: 1. qualifications and self-development; 2. responsibilities and teamwork; and 3. dedication and meeting attendance. All 15 members of the Board participated in the cross-appraisal.
Result of the Cross-Appraisal: an average score of 98.01% or "Excellent."

Use of Appraisal Results for Director Development

The Board considers corporate governance crucial to efficient operations, stakeholders' confidence, and sustainable business value creation. In 2021, after reviewing reports on its performance and its subcommittees', the Board considered development plans and topics against the Company's strategies and goals, as well as established a succession plan to replace vacant director positions. The Board began requiring senior management succession plans to be reviewed regularly at least once a year. Additionally, due to the volatility of current affairs, which affects EGCO's sustainability, the Board stated that management succession plans should be reviewed more than once a year.

Directors' Remuneration

EGCO's director remuneration criteria are based on its financial performance, assigned responsibilities, and comparability to other organizations of the same size and in the same business sector. A director's remuneration comprises 3 parts: fixed remuneration, meeting allowance, and a bonus to be given once a year, subject to the value created for shareholders. The Nomination and Remuneration Committee is responsible for determining the preliminary remuneration scheme, which requires the Board's endorsement before being proposed to shareholders at the AGM for their final approval. It is EGCO's policy to disclose each director's remuneration for transparency. Directors who serve on subcommittees are entitled to additional compensation for their increased duties and responsibilities. More details can be found in the Annual Report under Governance Structure.

Development of Directors and Executives

The Board pays close attention to the continuous development of directors and executives to foster efficiency and effectiveness. Orientation for new directors is arranged and led by the President, as well as other relevant executives, focusing on good corporate governance, anti-corruption policy, code of conduct for directors, electric power industry, business nature, EGCO Group's businesses, structure and composition of the Board and Subcommittees, organizational chart, and management team. A director manual given to all new directors serves as guidelines to provide them with a good understanding of the Company's business and related regulations. A meeting with executives is arranged to allow new directors to obtain in-depth information about the Company's business. The Company also encourages new directors to attend related training programs held by the IOD and other beneficial training programs related to corporate governance.

In addition, it is the Board's policy to continuously **improve the knowledge and capabilities of directors and executives.** In 2021 the Company's directors and executives attended the following training programs and seminars held by credible institutes:

- 35 directors and executives attended a presentation entitled the "Overview of Land Transport Infrastructure Development Plan and Investment Opportunities in Thailand" by Mr. Sorapong Paitoonphon, Deputy Permanent Secretary of the Ministry of Transport.
- 10 directors and 65 executives and employees from EGCO Group joined an online training session on "The Roles of Executives and Employees in the Fight against Corruption" by Mr. Pana Ratanabanangkoon, Director of the Thai Private Sector Coalition Against Corruption (CAC).
- 40 directors, executives, and employees attended a seminar entitled "Transformation to Sustainable Growth" by Mrs. Wannipa Bhakdibutr, one of EGCO's independent directors.
- 5 directors attended a presentation on the "ESG Direction for Thailand's Power Generating Businesses and the Road to Sustainability" by a sustainability expert from PwC.
- 35 directors and executives participated in the "How to Develop a Winning Digital Strategy" seminar by the Thai IOD.

Operational Oversight of Subsidiaries and Associate Companies:

To ensure that the operations of EGCO Group, which functions as a holding company, meet policy requirements and goals and produce the appropriate return on investment for shareholders, the Board has established the following rules in writing for overseeing subsidiaries and associate companies as guidelines:

1. The operations of EGCO Group companies shall be monitored through appointed representatives who serve as directors or shareholders of these subsidiaries and associate companies. The Nomination and Remuneration Committee shall approve the appointment of a representative.
2. The duties of an EGCO representative shall be as follows:
   - 2.1 A representative shall ensure the preparation of guidelines for the management of subsidiaries or associate companies for scrupulous and efficient operations.
   - 2.2 A representative shall seek the EGCO Board's approval for any major decision; however, urgent matters only require the Board's acknowledgment as soon as possible.
   - 2.3 A representative shall propose the following matters to the EGCO Board for approval before execution:
     - Nomination and removal of the President and Senior Executive Vice President
     - President's remuneration
     - Formulation, amendment, or change of important rules
     - Capital increase or decrease
     - Business operations of new investments
     - Business operations affecting or competing with EGCO or EGCO Group companies
     - Expansion of business operations other than the core business
   - 2.4 Management shall report on EGCO Group companies' business performance and major events, which are included as an agenda item for acknowledgment in a board meeting.

PRINCIPLE 4 ENSURE EFFECTIVE CEO AND PEOPLE MANAGEMENT

Executive Development and Succession Plan

The Board encourages the President to invite senior executives, such as Senior Executive Vice Presidents, to attend all board meetings. Other executives are also asked to join these meetings occasionally to provide additional information on related agenda items. This practice enables the Board to know about each executive's role better and can subsequently use their knowledge to formulate a succession plan. In addition, the Board ensures that EGCO has executive development programs in place to enhance the competencies of executives expected to be placed in higher offices, honing the knowledge and skills suitable for these positions and challenging assignments. The Board determines the policy and criteria for electing the President and the succession plan of this office in an unexpected event or the retirement of the President. The selection process is fair and transparent. The candidates' knowledge, competency, experience, ethical values, and leadership will be assessed. The Nomination and Remuneration Committee is responsible for nominating qualified candidates to take up offices of the President and Senior Executive Vice Presidents.

While the Nomination and Remuneration Committee is responsible for filling offices of Senior Executive Vice Presidents and higher, the Board has authorized the President to place knowledgeable, competent, and experienced individuals in Senior Vice President offices and lower according to the qualifications identified by the Nomination and Remuneration Committee. The appointment of executives shall comply with the Company's Regulations on Work Rules 2010 and board resolutions.

Furthermore, the Company has executed succession plans in various areas-namely, Executive Vice President to Senior Executive Vice President and Senior Vice President to Executive Vice President-replacing those who retired. The Board has also entrusted the Nomination and Remuneration Committee to monitor the progress of succession planning. To this end, the Nomination and Remuneration Committee has prescribed that the report on the execution of succession plans shall be an annual agenda item.

Performance Appraisal of the President and Executives

All non-executive directors collectively assess the President's performance. They consider the Company's operating results, his implementation of policies assigned by the Board, and his competencies. Factors for consideration include the following:

- Qualitative indicators, such as leadership, relationship with the Board, risk management and internal controls, human resource management, good corporate governance, and conduct;
- Achievement of the key performance indicators (KPIs), which are set annually and in long-term plans; and
- The ability to take the business to the next level each year.

The Nomination and Remuneration Committee is responsible for approving Senior Executive Vice Presidents' performance appraisal results to be presented to the Board and evaluating Executive Vice Presidents' performance based on their individual KPIs.

Remuneration of Executives

All non-executive directors serving on the Board are responsible for determining the remuneration scheme for the President and approving the Company's remuneration structure. The Board periodically surveys executive remuneration to ensure that its compensation packages are competitive and sufficient to attract and maintain qualified executives. Executives who sit on the Board and subcommittees are not entitled to any director remuneration.

Remuneration of the President

The remuneration scheme for the President, consisting of a monthly salary and a bonus, takes into consideration the monthly wage of executives in the same industry and the annual performance appraisal. The President's bonus is based on the achievement of both annual KPIs and long-term KPIs. The latter are set in the strategic plan to generate future growth. The President's remuneration scheme is therefore aligned with EGCO's primary objectives and goals, as well as its short- and long-term benefits. Details of remuneration of executives are disclosed in the Annual Report under Governance Structure.

The Board Understands that the Structure and Relationship of Shareholders might affect the Company's management and operations. The Board has, therefore, determined guidelines and measures to prevent possible negative impacts, such as measures and procedures for approving connected transactions, insider trading prevention, and conflict prevention. Details of these are disclosed in the Annual Report under Connected Transactions and Corporate Governance (Insider Trading Prevention and Conflict of Interest Prevention subsections, respectively).

The Board Regularly Monitors Personnel Management and Development to ensure the appropriate number, knowledge, skills, experience, and incentives. In 2021 the Board continued to support personnel development. The details on this matter can be found in the Annual Report under Creating Value to the Society (Human Resource Management subsection). In addition, EGCO promotes employees' awareness of being good employees and citizens, as well as the importance of corporate governance and ethics. The Board has encouraged **communications of Good Corporate Governance Policy and Principles and Code of Conduct** internally and externally. Internal communication channels include meetings between employees and the President (Communication Day), an internal website (EGCO Groupnet), and awareness-raising activities. External communication channels include the Company's website (www.egco.com). Due to the COVID-19 outbreak in 2021, EGCO shifted to online activities for all participants' health. The main event was the CG Champion League, in which participants collected points from completing the following activities:

- CG Podcast offered discussions on good corporate governance principles and answered questions about EGCO's Good Corporate Governance Principles. Last year it focused on bribery and facilitation payments under the concept "We have the money, but we're not making facilitation payments."
- CG Cartoon Clips promoted good corporate governance principles and occupational health, safety, and environment through short, animated video clips of no more than 3 minutes, available on the e-learning platform for EGCO Group employees' ease of access.
- CG Davinci and CG Mission Possible picture-word association games promoted aspects of good corporate governance, such as ethics, transparency, anti-bribery, and gender equality.
- The CG Quiz was the final activity in the CG Champion League designed to test EGCO Group employees' understanding of good corporate governance after listening to the CG Podcast and watching the CG Cartoon Clips.

Compliance Monitoring and Appraisal

The Board monitors and ensures that directors, executives, and employees comply with the Good Corporate Governance Principles and Code of Conduct. Each director receives a Director Manual and a Code of Conduct booklet for Directors upon appointment. All new employees must obtain a Code of Conduct booklet from the Human Resources Division to be signed to acknowledge strict compliance. The President requires employees at all levels to comply with good corporate governance principles and review their compliance activities.

Additionally, the Board has promoted innovation and technology in work processes and approved the use of an online appraisal form to measure employees' knowledge and understanding of good corporate governance principles and guidelines and the Code of Conduct since 2017. In 2021 EGCO Group used the CG Quiz, one of the CG Champion League activities, to test employees' knowledge and understanding of good corporate governance principles. 90% of the participants passed the quiz.

PRINCIPLE 5 NURTURE INNOVATION AND RESPONSIBLE BUSINESS

Business Value Creation through Innovation is executed in parallel with the creation of benefits for customers and concerned parties. The Board emphasizes and supports innovation, as well as social and environmental responsibility, as a way to contribute to the creation of business value and benefits for customers and concerned parties. The Board has entrusted the President and management to promote a creative and innovative thinking mindset among EGCO Group employees. It has also made innovation one of the Company's core values. Innovation projects and activities are annually undertaken concretely. Details about innovation projects and activities are disclosed in the Annual Report under Innovation and EGCO Group's Adaptation in the Digital Age.

Information Technology

The Board has underlined the importance of information technology and promoted its use to improve business operations and risk management. To this end, it has required management to conduct a study on the proper, correct, complete, and safe use of information technology to support EGCO's new businesses. In 2020 the Information Technology Division improved the following information technology systems for higher operational efficiency:

- Corporate Performance Management System: This information management system encompasses planning, budgeting, estimation, asset management analysis, operation and maintenance, and finances. All of this provides executives with the information necessary for decision-making and supports different divisions with the information necessary for their operations.
- SAP Success Factors: The workflow of the HR management system now covers all HR management processes.
- EGCO Risk Management Information System (EGCO RMIS): This system is used for risk management and internal control.
- Procure-to-Pay (P2P): Improvements made to every division's procurement requests, payments, and document storage processes allow the EGCO Group to function more efficiently.
- Information Security Management System (ISMS): Our data center is now ISO/IEC 27001:2013 certified.
- Compliance: Guidelines for users' information technology security and our information and cyber security policy now conform to the Cyber Security Act B.E. 2562 (2019) and the Personal Data Protection Act B.E. 2562 (2019).
- Distributed Denial-of-Service (DDoS).
- Annual security awareness training: ECGO's employees and executives are equipped with cyber security best practices, reducing our own risk of confidential information being leaked.
- Backup: Thanks to backup, EGCO avoids the undesirable effects of data loss and damage on its businesses. Backup data allows operations to continue smoothly.

Social and Environmental Responsibility

As Thailand's first large-scale, privately-owned power producer, EGCO is committed to business growth and sustainability. In addition to careful management for the benefit of steady corporate growth, EGCO has also understood that social and environmental sustainability is the foundation of its success. It has clearly set in its vision and mission statements the commitment to the cause, which is part of its roles and responsibilities as a good corporate citizen. EGCO's chosen power-generating technologies effectively minimize their impacts on the environment and society, contributing to the fight against climate change and global warming continues. EGCO strictly complies with environmental laws and regulations on controlling emissions of pollutants and waste. It fairly treats stakeholders and is involved in the social development of communities surrounding its power plants. EGCO's good corporate governance ensures fair, efficient, transparent, and accountable operations. All of this not only enhances confidence among shareholders, stakeholders, and all concerned parties but also promotes sustainable growth and increases long-term competitiveness. EGCO reports on its social and environmental responsibility performance annually, complying with the disclosure requirements of the SET. EGCO also prepares an Integrated Report (IR) according to the International Integrated Reporting Council (IIRC) framework. This IR covers its sustainability performance pursuant to the GRI Sustainability Reporting Standards (GRI Standards). In addition, to ensure that the information reported is correct, transparent, and credible, an independent third party verifies the credibility of the information reported, especially the information about the production, environment, safety, and occupational health.

Roles of Stakeholders and Protection of Stakeholders' Rights

The Board has also taken great care of the rights of all groups of stakeholders by giving priority to internal and external issues that may affect its business, as well as corporate social and environmental responsibility. Therefore, the Board has established Guidelines for Responding to Stakeholders' Needs in the Good Corporate Governance Policy and Code of Conduct, by which directors, management, and employees must abide. Moreover, in 2021 the Board regrouped stakeholders through stakeholder engagement for better suitability to the current situation. Details of the new stakeholder groups are presented under Business Driving for Sustainability-Oriented Operation. To this end, EGCO's various operations take new and existing stakeholder groups into account, complying with the Good Corporate Governance Policy and Code of Conduct. Measures

for stakeholders' rights protection in force are summarized below. Meanwhile, additional details about treatment towards employees and stakeholders may be found under Sustainability-Oriented Operation.

- Employees: EGCO's Human Resource Policy places great importance on all facets of its employees, starting from recruitment. All new hires must come through a recruitment process that offers equal opportunities to all interested persons. Because EGCO wants its employees not only to be good at their jobs but also to be good people, its recruitment and hiring process prioritize people with a good attitude towards their peers, duties, responsibilities, as well as the Company, in extension to job-specific qualifications, such as knowledge, expertise, and potential. These individuals are known as "givers," because they willingly help others and give back to society. As good people who are good at their jobs come together at EGCO, they advance the organization with benevolence and goodwill. EGCO also supports local employments to create jobs and promote revenue generation in communities in which EGCO operates. Since 2017 EGCO has also supported projects that help people living with disabilities in the provinces where its power plants are located, in lieu of fund contributions. In 2021 the Company sponsored 3 projects in Chiang Mai-namely, a coffee shop and community shop enhancement project, a pork and pork rind production enhancement project, and a traditional Thai treat production enhancement project. With respect to employee treatment, EGCO provides a safe working environment in addition to appropriate and fair remuneration and welfare. EGCO encourages its people to continue enhancing their knowledge and capabilities through training for the benefit of increased efficiency. Employees are also encouraged to participate in community and social development activities to ensure harmonious relations with surrounding communities, especially those around the headquarters and EGCO-operated power plants. Activities between employees and executives are also organized to foster good professional relationships, contributing to a happy workplace. EGCO Group has always put great emphasis on the physical and mental well-being of its people. The Company believes that quality people are the most efficient workers. In addition to the appropriate qualifications, the management of their quality of life and well-being also enables them to achieve a good work and life balance, which will result in employee loyalty and mutual growth. In 2021 the Company made improvements to the following: performance management system, talent management implementation, compensation structure implementation, and competency model redesign. E-payroll was also implemented to enhance human resource management efficiency, in addition to EGCO Group's review of suitable compensation packages for its personnel. All of this ensures that EGCO Group operates fairly, transparently, and consistently with its performance. Furthermore, the Company provides appropriate welfare to its employees-namely:

- To encourage vaccination against COVID-19, EGCO allowed workers to claim vaccine expenses. They didn't have to take sick leave for their vaccine appointment either.
- EGCO also extended its employees' health claim coverage.

Thanks to this level of care, there were no disputes or lawsuits between EGCO and its employees in 2021. There were no accidents that caused a shutdown of any of its subsidiaries.

- Customers: As a power producer-cum-seller and energy supplier, EGCO demonstrates its commitment to customers by delivering quality products and services in a timely and reliable manner within the framework of fairness, accountability, and freedom from corruption. Moreover, to build lasting relations, EGCO keeps customers' information in strictest confidence and never wrongfully uses customers' information for its own or any other entity's benefit. In 2021 there were no disputes or lawsuits between EGCO, or any of its subsidiaries, and its customers. Concerning the power generating business, EGCO Group's Equivalent Availability Factor (EAF) is higher than the benchmark prescribed in Power Purchase Agreements (PPAs) and higher than its annual target. Its customers were satisfied with EGCO Group's power plant operations, as shown by the average score of 92.37% from the customer satisfaction survey. As for the maintenance business, EGCO Group's services were rated "Excellent," with an average score of 97.95% from the customer satisfaction survey.

An average score of

97.95%

from the customer satisfaction survey

- **Creditors:** EGCO has treated all of its creditors with fairness, responsibility, and transparency. It fulfills the commitment it has made to every creditor by strictly adhering to loan agreement terms and correctly disclosing its financial status. If it suspects that an event will affect a creditor, EGCO will immediately take action to find a solution. In 2021 EGCO and its subsidiaries fulfilled all the obligations they have to their creditors and never failed to make payments due.
- **Suppliers & Business Partners:** Because these stakeholders play a significant role in its operations, EGCO Group has continued to improve upon its supply chain management guidelines to ensure the success and sustainability of its supply chain management. Its supplier management guidelines provide the support that suppliers need to operate sustainably. EGCO also has a monitoring mechanism in place to ensure that its suppliers' management systems respond to sustainability issues that EGCO Group prioritize and meet accepted standards. EGCO's suppliers must operate ethnically, have good corporate governance, and take their social and environmental impacts into consideration. Furthermore, EGCO Group has communication channels to promote anti-corruption policy and guidelines, among others corporate governance issues, as well as activities that enable suppliers to manage, prevent, and mitigate corporate governance risks. Details about its supply chain management performance can be found in the Sustainability Report.
- **Competitors:** EGCO operates ethically on a transparent, accountable, and corruption-free basis. It never seeks to gain its competitors' confidential information through inappropriate means, such as bribing its competitors' employees or tarnishing their reputation with false allegations. There has never been any dispute or lawsuit between EGCO Group and its competitors.
- **Society:** EGCO Group conducts its business with due consideration to society, especially to those communities where its operations are located. Since part of the Company's mission is to be a good and caring corporate citizen, ECGO executives and employees have a role to play. Any information they provide must be truthful and current. They must foster supportive coexistence by respecting local customs and traditions, as well as participate in activities that improve the quality of life in these communities and help them create a pleasant environment to live in. All of this will lead to the sustainable development of society at large. Since its establishment, EGCO Group has continuously conducted various social contribution projects and activities, which fall under 3 main categories-namely, improving the quality of life for local communities around its power plants, promoting the education of young Thais in energy and environmental science, and conserving and rehabilitating ecosystems and biodiversity in areas of operation and critical forested watersheds. These are further divided into 79 community contribution projects and 2 social contribution projects. Moreover, EGCO publishes a quarterly newsletter named Sukjai, which serves as a communication channel that bolsters good relations with surrounding communities. The newsletter is now available via its LINE official account, adapting to the present context and changing consumer behavior. It has also continuously supported the operation of the Thai Rak Pa Foundation, which it has established to sustainably promote the conservation of forested watersheds in collaboration with a network of allies from all sectors. In 2021 the Thai Rak Pa Foundation pursued forested watershed conservation and restoration tasks in 3 regions. In Northern Thailand, the foundation supported the conservation of approximately 72,000 rai of forested watershed communities in the Doi Inthanon National Park, Chiang Mai; it also encouraged people in Mae Cham District, Chiang Mai, to join the Reforestation for Income Generation Project, which has reduced the use of land for monoculture by 1,055 rai from 2017 to 2021. In the South, the Foundation supported the conservation of 30,000 rai of forested watershed communities in the Khao Luang National Park, Nakhon Si Thammarat. In Northeastern Thailand, it continued the Lam Pa Thao Forested Watershed Restoration Project in Chaiyaphum, which is part of a broader social effort to conserve watersheds named Reforestation and Watershed Conservation. This project seeks to plant local species and imitate the existing forest structure with help from local communities. From 2017 to 2021 the project has reforested 320 rai of land. Furthermore, EGCO has received a certification confirming its success in the sequestration of 6,983.399 $MTCO_2e$ through trees planted from 2017 to 2021 by 30 schools in its network. In 2021 there were no disputes or lawsuits between EGCO or its subsidiaries and people in the communities around its power plants or civil society organizations.

EGCO has received a certification confirming its success in the sequestration of

6,983.399

$MTCO_2e$

through trees planted from 2017 to 2021 by

30

schools in its network

Respect for Human Rights is one of the fundamental principles of good corporate governance. It plays a significant role in any business operation. EGCO Group has continuously promoted the understanding of human rights and their guidelines among its employees and suppliers according to the Universal Declaration of Human Rights (UDHR). It has also embraced respect for human rights as part of its corporate culture. The ECGO Group's human rights policy, which encompasses various significant issues, serves as guidelines for EGCO's employees, business partners, and suppliers and demonstrates EGCO's complete commitment to doing business with respect for human rights. EGCO Group has also exercised human rights due diligence and performed human rights risk assessments on all of its operations and supply chain activities according to the UN Guiding Principles on Business and Human Rights (UNGP) to ensure that there are no human rights violations in any of its operational processes, whether internal or external, or by any stakeholder throughout its supply chain. Moreover, EGCO Group has underlined the importance of compliance with the International Norms of Ethical Practices, which have been incorporated into its Code of Conduct for employees. Further details on this subject can be found in the Annual Report under Corporate Governance (Guidelines for Responding to Stakeholders' Needs subsection) and Creating Value to the Society (Our People subsection).

To promote respect for human rights as part of its corporate culture, EGCO Group provides training and performs human rights risk assessments throughout its value chain; it also raises awareness and promotes a better understanding of human rights throughout its organization. In 2021 all of its employees (100%) underwent human rights training. Additionally, EGCO Group has established clear onboarding guidelines for its own workers and business partners, focusing on strict compliance with labor laws across the board, including child labor and forced labor prohibition and the provision of a safety-oriented work environment and systems. In 2021 EGCO Group has received no complaints or reports on human rights issues in its activities, business operations, and supply chain.

Moreover, EGCO's Welfare Committee heeds the opinions and recommendations that are beneficial and necessary for the current situation, which it uses to further improve employees' benefits and welfare.

PRINCIPLE 6 STRENGTHEN EFFECTIVE RISK MANAGEMENT AND INTERNAL CONTROL

Risk Management

Understanding the importance of risk management, especially under today's threat of disruption, the Board formed the Risk Management Committee in 2021 and entrusted its Risk Oversight Committee with collaborating with management on risk management policy, implementation, and guidelines for EGCO Group. All of this is formulated according to EGCO's organizational goals of returns on investment, growth, and organizational excellence. Additionally, risk management and related issues and recommendations are reported to the Risk Oversight Committee at least 4 times a year and to the Board regularly to ensure the risk management system's adequacy and effectiveness. In doing so, strategies, plans, and management approaches can be adjusted promptly. Recognizing the importance of risk management in EGCO Group's corporate governance, the Board has separated risk management and assessment from the Planning Division. It has established a new division, the Risk Assessment Division, to monitor risk management performance throughout the organization according to EGCO Group's policy and guidelines. This new division also conducts risk assessments and reports results to the relevant committees, subject to their responsibilities. The Risk Assessment Division reports to the Executive Vice President of Asset Management, who reports to the Senior Executive Vice President of Strategy and Asset Management Group.

EGCO's Risk Management Framework:

- The Risk Oversight Committee (ROC) operates at the level of the board of directors and is comprised of five experienced directors from the fields of enterprise risk management and corporate governance. The executive vice president of corporate strategy is the secretary. The Risk Oversight Committee's main duties and responsibilities are to consider, review, and provide recommendations on enterprise risk management (ERM) policy and framework; to set corporate risk appetite and risk tolerance level; to confirm the key risks, their impacts, and possibilities; ERM plan and process; to provide recommendations and support to EGCO Group's Board

of Directors and management; and to appropriately and efficiently supervise the managing of various risks relating to business operations. Additionally, they are to regularly report to the board on the results of their risk assessments and implemented risk mitigations.

- The Risk Management Committee consists of EGCO executives, with the President serving as Chairman. The Senior vice president of risk management division serves as the secretary. It oversees EGCO Group's risk management policy and monitors its implementation. It also monitors and assesses risk management activities according to EGCO Group's guidelines and reports to the Risk Oversight Committee and the Board, respectively. Moreover, each power plant has its own risk management committee to monitor and manage its risk in accordance with EGCO Group's policy and guidelines and to better address the overall business condition of each power plant.
- Risk management is responsible for all units to ensure risk management's efficiency and suitability to EGCO Group's current business context. The Risk Management Division collaborates with risk owners and presents a risk management report to the Risk Management Committee and to the Risk Oversight Committee every month.
- Risk management is engrained in EGCO's operations. The Company assesses internal and external risk factors, considers their probabilities and impacts, and establishes risk mitigation measures and plans. It also promotes an organizational culture of risk management by raising awareness of the importance of risk management in their operations.

EGCO Group has adopted the Risk Management Policy and Manual as guidelines for its operations since 2001. At board meeting no. 8/2020 on June 17, 2020, the Risk Oversight Committee revised and aligned the Risk Management Policy with EGCO Group's risk management philosophy established by the Board to support organization-wide risk management within the COSO Enterprise Risk Management Integrated Framework (COSO ERM) that EGCO Group has adopted. Furthermore, EGCO Group has required that risk assessment be part of the self-appraisal to control or mitigate operational risks and create value-added for the organization. The 2021 assessment shows that EGCO Group companies have appropriately implemented risk management. More details on this matter can be found in the Annual Report under Risk Factors and Risk Management.

Internal Control and Internal Audit Systems

The Board has clearly established the duties, responsibilities, and authorities of executives and employees in writing. The separation of powers ensures checks and balances. Asset control allows assets to be used genuinely for the benefit of the Company. EGCO also has an accurate and timely financial reporting system in place. Moreover, EGCO's Internal Audit Division-with Mrs. Jutima Tangcharoendee as Senior Vice President of Internal Audit Division and Secretary of the Audit Committee-is responsible for independently auditing EGCO Group's domestic and overseas activities and providing advice to relevant units to ensure that the internal control system is appropriate and adequate for the prevention of fraud and corruption risks. The Internal Audit Division reports directly to the Audit Committee, which is responsible for approving internal audit plans and appointing, removing, and evaluating the Senior Vice President of Internal Audit Division to ensure independence.

The Audit Committee encourages the internal auditors to continue developing their knowledge by attending internal and external training programs. They are also encouraged to learn from real internal audit and risk management environments, where they can exchange knowledge and experience, and to obtain international auditing certificates. In 2021 the Internal Audit Division participated in the following training programs:

1. Corporate Governance Auditing by the Federation of Accounting Professions
2. IT Governance and IT Risk Management in the 4.0 Era by the Federation of Accounting Professions
3. Agile Auditing by the Institute of Internal Auditors of Thailand
4. Rethinking Value Creation for Internal Audit by Wolters Kluwer TeamMate
5. Internal Audit Modernization by the Institute of Internal Auditors of Thailand
6. ESG Directions for Thailand's Power Generating Businesses and the Road to Sustainability by Pricewaterhousecoopers ABAS Limited
7. Risk Management in Energy's New Reality by the Risk Assessment Division of Electricity Generating Public Company Limited and KPMG Poomchai Audit Co., Ltd.
8. Risk Base Audit by the Institute of Internal Auditors of Thailand
9. Dynamic Risk Assessment, Agile Audit, and Data-Driven Analytics by Wolters Kluwer TeamMate
10. Corruption Risk and Control by the Thai Institute of Directors
11. Audit and Risk Management of Financial Institutions in the Midst of COVID-19 by the Institute of Internal Auditors of Thailand

12. Must-Knows of the Anti-Money Laundering Draft for Accounting Professionals by the Federation of Accounting Professions
13. Cryptocurrency & Blockchain Revolution by the Human Resource Development Division of Electricity Generating Public Company Limited and Dr. Pravate Tantisajjatham
14. PDPA Reality by the PDPA Working Group of Electricity Generating Public Company Limited and Baker & McKenzie Co., Ltd.
15. Auditing Analytics by Wolters Kluwer TeamMate
16. Fraud Audit by the Institute of Internal Auditors of Thailand
17. Financial Statements Review for Internal Auditors by the Federation of Accounting Professions
18. Anti-Corruption the Practical Guide (ACPG) by the Thai Institute of Directors
19. Next-Level Worksheets for Anti-Corruption Experts by the Thai Institute of Directors
20. Technology Driven Organizational Transformations: Risks and Opportunities for Internal Audit by Wolters Kluwer TeamMate
21. Disruptive Innovation Disrupting Internal Audit by the Institute of Internal Auditors
22. Keeping up with Data Analytics for Accountants in the 5.0 Era by the Federation of Accounting Professions
23. Google Data Analytics Professional Certificate by Google Career Certificates
24. Introduction to Data Science in Python by DataCamp for Business Enterprise
25. Critical Thinking Skills for Decision-Making by BeSunshine Co., Ltd
26. The Art of Internal Audit Report Writing by the Federation of Accounting Professions

Auditor Appointment and Remuneration

The Audit Committee is responsible for selecting, nominating, and removing the Company's independent auditor and determining the audit fee, subject to shareholder approval at the Annual General Meeting (AGM). In 2021 the Board and the Audit Committee were of the following opinion: The auditor PricewaterhouseCoopers ABAS Co., Ltd. ("PwC") had shown professionalism, independence, and impartiality; demonstrated a track record in the energy industry; and gained insight into EGCO Group companies through continuous auditing. PwC had also provided excellent auditing service, offered beneficial guidance, demonstrated a satisfactory auditing standard, and quickly and punctually delivered audit results. Moreover, PwC had been internationally reputable for its auditing standards and had its accounting and auditing offices in countries in which EGCO had invested. The Board and the Audit Committee, therefore, deemed it appropriate to appoint PwC as EGCO Group's 2021 auditor for an audit fee of 3,522,400 baht with an additional budget of up to 175,000 baht for other actual expenses incurred from auditing activities performed in Thailand. As for auditing activities conducted in other countries in which the Company had invested, EGCO would assume responsibility for the actual travel expenses incurred, subject to suitability. Shareholders at the 2021 AGM resolved to approve the auditor's appointment and remuneration proposed by the Board.

Compliance

The Board oversees the Company's operations through 2 responsible bodies. 1. The Compliance Unit under the Corporate Secretary Division is responsible for overseeing EGCO's and the Board's compliance with securities and exchange laws, rules, and regulations, as well as SET notifications. 2. The Law Division is responsible for overseeing compliance with relevant laws.

Conflicts of Interest

It is the Board's policy to avoid conflicts between personal and corporate interests, which is prescribed in the Good Corporate Governance Principles. The guidelines can be summarized as follows:

- Directors or employees wishing to serve as directors or advisors at another company or organization shall ensure that their new role doesn't conflict with their current position and inform the Board in advance.
- If any director or their family member engages or holds shares in any business that may benefit or creates a conflict with ECGO; has any direct or indirect interest in any contract the Company enters into, or holds securities in EGCO or any of its subsidiaries, the director in question shall promptly notify the Board of the potential conflict of interest in detail and refrain from participating in related discussions or voting on related agenda items, or shall be absent from any meeting in which such agenda items are discussed, or shall request not to receive any related documents, or resign from the post.
- Directors and senior management per the definition under Section 89/1 of the Securities and Exchange Act-namely, the President, Senior Executive Vice Presidents, Executive Vice Presidents of Accounting and Finance, and the Senior Vice President of Accounting and Budget-shall report their holding of ECGO securities and any changes thereof to the regulatory agency under applicable laws. Executive Vice Presidents, Corporate Secretary, Senior Vice President of Corporate Communications, and Senior Vice President of Investor Relations shall also report their and their associates'

holding of EGCO securities. The Corporate Secretary is responsible for presenting these securities holding reports to the Board at every board meeting. Additionally, directors and executives shall report their and their associates' interests to the Company, pursuant to the Notification of the Capital Market Supervisory Board No. TorChor. 2/2552, which came into effect on July 1, 2009, prescribing that the report must be prepared quarterly and in the event of any changes during each quarter. In compliance with this provision, the directors and senior executives shall prepare a report without delay. The Corporate Secretary shall submit a copy of these reports to the Chairman of the Board and the Chairman of the Audit Committee for acknowledgment within 7 business days from the date of receipt.

The Corporate Secretary has also informed the directors that directors and executives, including their spouses and underage children, pursuant to Section 258 of the Securities and Exchange Act B.E. 2535 (1992), shall prepare and submit to the SEC a report on the holding of securities and the changing of securities for every purchase, sale, transfer, or acceptance of transfer of securities within 3 days from the date of sale/purchase.

- Upon the commencement of their employment with EGCO group, employees must disclose their interests by reporting their and their associates' positions as shareholders, directors, or executives in companies, trade partners, contractors, or competitors of EGCO and its subsidiaries to the highest-ranking officer of their line of work. They shall submit another report to the Corporate Secretary for recordkeeping purposes. The employees shall report without delay any transaction that may constitute a conflict of interest between the Company and them or any of their family members that have not been reported to the Corporate Secretary. Moreover, employees have a duty to review their interests annually and provide an update whenever there is a change.
- Employees shall not borrow funds from any supplier, individual, or juristic person who engages in business with the Company, except for a financial institution, which may impact their performance as the Company's representatives.
- Connected transaction procedures and disclosure shall be strictly executed as required by the SEC and the SET. The Corporate Secretary Division shall verify the transaction types and approval authority before reporting them to the Audit Committee for acknowledgment.

Furthermore, EGCO's Audit Committee is responsible for reviewing and providing opinions on connected transactions. The committee compares each connected transaction with ones made with other outsiders to determine its appropriateness. The Audit Committee is required to report its findings and opinions to the Board and/or shareholders for further consideration, subject to the criteria set by the SET and the Capital Market Supervisory Board. The committee shall also ensure the completeness of all information disclosure assure all related parties that all connected transactions are made in the best interest of the Company and its shareholders.

Prevention of Insider Information Misuse

EGCO has established in writing stringent guidelines to prevent the misuse of insider information, which appear in the Code of Conduct and Good Corporate Governance Principles. Improper use of insider information is the exploitation of information available only to insiders for one's own or another person's benefit. Doing so gives the user an advantage over other shareholders or may cause damage to shareholders as a whole. An internal control system has been established to prevent information from being leaked to the public before it is officially announced. These measures and controls are part of the Company's essential risk control activities. It is the duty and responsibility of a supervisor to control and ensure that confidential information is kept and used well under applicable rules and regulations. An employee performing insider trading for him- or herself or his or her family member is a severe violation of the Code of Conduct. The principles regarding this matter are as follows:

- Directors and employees shall at all times strictly observe the rules and regulations issued by the SET and the SEC, as well as relevant laws, and equitably disclose information to the shareholders and/or the public.
- Directors and employees shall not misuse any information acquired by virtue of the directors' and employees' position or cause damage to the Company by doing so.
- Trade secrets or any sensitive business information shall not be disclosed to any outsiders.
- Directors and employees in possession of insider information relating to financial statements shall refrain from trading their securities 45 days before and 24 hours after information disclosure. As for any other significant information, they shall refrain from trading from the day they learn of the information and 24 hours after the information has been disclosed to the SET. The Corporate Secretary will be responsible for sending an email to remind directors,

executives, and related employees of the blackout period before every fiscal budget announcement.

- Together with their spouses and underage children, directors or senior executives who wish to trade the Company's stock shall inform the Corporate Secretary at least one day before the transaction.
- Disclosure of any information to the public that will affect the business and EGCO's stock price requires approval from the President, who will be responsible for disclosing this information or authorizing another person to do so on his/her behalf.
- The Corporate Communications Division, the Corporate Secretary Division, and the Investor Relations Unit are the central units responsible for disclosing EGCO's information to the public and investors. The information owners, meanwhile, will be responsible for providing necessary fact sheets.

Equitable Treatment of Shareholders

The Board recognizes the need to treat all shareholders fairly and equitably, including foreign shareholders and institutional investors. It ensures that all shareholders are well-informed of EGCO's important decisions as prescribed by laws or Articles of Association in the following ways:

- The Board afforded shareholders an opportunity to propose agenda items and nominate qualified director candidates. This opportunity was announced via SET Portal and on EGCO's website. The criteria and procedures were clear, transparent, and aligned with the SET's additional guidelines on minority shareholders' rights. Shareholders were able to nominate director candidates from October 1 to December 31, 2021, or about 7 months before the Annual General Meeting (AGM). The minimum number of shares was fixed at 0.05% of the Company's total shares (equivalent to 263,233 shares as of October 1, 2021). This minimum could be met either as a single shareholder or a group of shareholders. It was lower than the SET's recommendation of 5% shareholding. Nonetheless, no shareholders proposed an agenda item or nominated a director candidate.
- To protect the rights of all shareholders at the AGM, EGCO permitted no agenda item to be added without notice to afford all shareholders adequate time to familiarize themselves with the information before casting their votes. Shareholders had the right to vote according to the number of shares in their possession. One share was equal to one vote. No share had a special privilege that limited the rights of other shareholders.
- For transparency and accountability, ballot papers were employed when voting on any agenda item, and directors were elected individually by shareholders. Baker & McKenzie Co., Ltd. served as an independent inspector to ensure that the AGM was conducted transparently and in compliance with the laws and the Company's Articles of Association. Shareholders who were unable to attend the AGM in person could vote by proxy, using any of the 3 proxy forms introduced by the Department of Business Development, Ministry of Commerce. Alternatively, 3 independent directors of the Company who did not have a conflict of interest with any item on the AGM agenda could be appointed proxies. The proxy forms were made available for shareholders on EGCO's website.
- Since most shareholders attending the AGM were Thai, the meeting was conducted in Thai. However, considering the needs of foreign shareholders, EGCO prepared the meeting notice and supporting documents in both Thai and English.
- Minutes of the meeting were disseminated via SET Portal and the Company's website within 14 days from the meeting date to allow shareholders to review them.
- Understanding that some shareholders may not have access to the minutes on SET Portal or EGCO's website, the Board mailed a hard copy of the minutes of the 2021 AGM to each shareholder.

Intellectual Property and Copyright

EGCO's policy is to comply with intellectual property and copyright laws. The use of work or information belonging to a third party requires verification to prevent intellectual property violations. Moreover, the Company has established guidelines for using personal computers and company laptops and desktops. To this end, employees must comply with copyright laws to prevent intellectual property violations and only install software permitted by the Company. They must not download or upload unauthorized software via the internet. The Information Technology Division, which is responsible for matters of information technology, has required employees to sign a policy and procedure acknowledgment form every time new computers are set up. Training is also provided to educate employees whenever there is a new computer system update.

Anti-Corruption Policy and Guidelines

Thanks to the Board, EGCO is equipped with control, audit, and prevention processes for all direct and indirect forms of corruption. The Anti-Corruption Policy and Anti-Corruption Measures Manual serve as guidelines for EGCO Group. They have been distributed and communicated to all EGCO and EGCO Group employees-even to outsiders. Further details on this subject can be found in the Annual Report under Corporate Governance (EGCO Group's Memberships in Other Organizations). The Board has also established an Anti-Corruption Working Committee of EGCO Group, consisting of representatives from each unit, to oversee anti-corruption efforts. In 2021 EGCO revised its Anti-Corruption Policy and guidelines to differentiate facilitation fees from bribery and include provisions for appointing or hiring a person working or having worked in a state enterprise or government agency. These actions can be taken as long as the policy is respected. The policy also includes what gifts to avoid accepting and conflict of interest prevention. The revision is designed to facilitate implementation, corruption risk assessment, and modification of corruption risk mitigation measures. Consultation is provided to anyone with questions about the Anti-Corruption Policy and guidelines, while communication and awareness campaigns engender a collective action against corruption. Additionally, the Board also encourages EGCO subsidiaries to apply for membership in Thailand's Private Sector Collective Action Coalition Against Corruption (CAC). Currently, 3 ECGO Group companies are CAC members-namely EGCO, EGCO Engineering and Service Co., Ltd., and Khanom Electricity Generating Co., Ltd. In 2021 Khanom Electricity Generating received its second CAC recertification. Meanwhile, in 2022 EGCO Engineering and Service will apply for its second CAC recertification.

Whistleblowing

EGCO encourages employees and stakeholders to take part in monitoring its compliance with applicable laws, rules, regulations, corporate governance principles, and the Code of Conduct. EGCO also encourages them to report and file grievances against any suspected violation of the law or Code of Conduct or any behavior implicatory of corruption or misconduct. In 2021 EGCO revised its Whistleblowing Policy and guidelines, along with a mechanism to protect whistleblowers and the accused. For peace of mind, any information obtained will be kept in strictest confidence and accessible only on a need-to-know basis. The following should be reported: 1. any act of corruption or suspected of corruption, 2. any non-compliance with applicable laws, rules, regulations, corporate governance, or code of conduct, and 3. any human rights violation or any form of discrimination or harassment, including that of sexual or racial nature.

Whistleblowing Channels and Procedure

The whistleblower can report via 2 channels:

CHANNEL 1

Visit EGCO's website
https://www.egco.com/th/whistle-blowing

CHANNEL 2

Send an email
to any of the following:
CEO
ceo@egco.com
Audit Committee
auditcommittee@egco.com
Board of Directors
directors@egco.com

CHANNEL 3

Mail your report
addressed to one of the recipients above, to
Electricity Generating Public Company Limited,
EGCO Tower 222, Vibhavadi Rangsit Road,
Tungsonghong, Laksi, Bangkok 10210

EGCO has established due processes for whistleblowing, protection of whistleblowers and the accused, hearing, and whistleblowing reports. The recipient of a whistleblowing report is responsible for forwarding it to the Board for further action. All of these processes appear in detail in the Anti-Corruption Measures Manual.

In 2021 the Board did not receive any report of non-compliance that could be considered a violation of the Code of Conduct or the Anti-Corruption Policy and that resulted in damages.

Communication Channels

Stakeholders can submit their opinions, recommendations, and other non-corruption-related concerns to EGCO via the following channels:

EMAIL

RECIPIENT	EMAIL ADDRESS	TELEPHONE NUMBER
Board of Director	directors@egco.com	-
Audit Committee	auditcommittee@egco.com	-
Corporate Secretary	cs@egco.com	0 2998 5020-7
Corporate Communications Division	corp_com@egco.com	0 2998 5130-7
Investor Relations Unit	ir@egco.com	0 2998 5150-3

MAIL

The mailing address is
Electricity Generating Public Company Limited
EGCO Tower 222,
Vibhavadi Rangsit Road,
Tungsonghong, Laksi,
Bangkok 10210.

Person in Charge of Documents Addressed to the Board

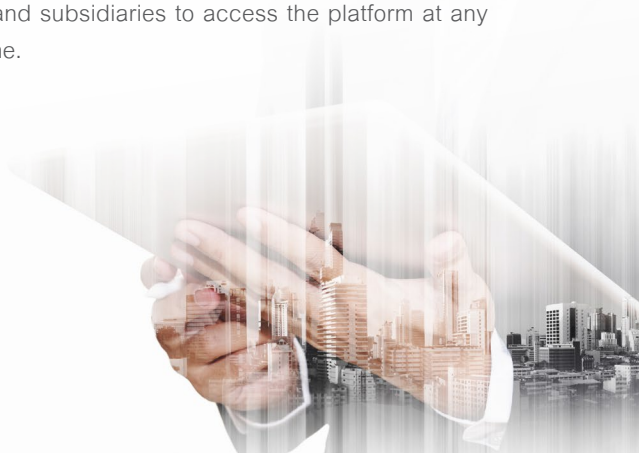
The Corporate Secretary is responsible for accepting documents addressed to the Board and forwarding them to relevant committees or directors. Issues and recommendations will be summarized and submitted to the Board, except for documents addressed to the Audit Committee, which will be directly forwarded to the Audit Committee. Any email sent to the address auditcommittee@egco.com can only be accessed by the Audit Committee.

Monitoring, Review, and Assessment

The Anti-Corruption Working Committee is responsible for monitoring, reviewing, and assessing risks every year. When a new risk is identified, the Working Committee shall prepare and submit prevention and mitigation plans and guidelines to the Corporate Governance Committee, who assesses risks and oversees compliance with anti-corruption measures. Meanwhile, the Audit Committee reviews measures and related internal control activities. Moreover, the Internal Audit Division is responsible for reporting any wrongdoing or violation of the Company's Code of Conduct to the Audit Committee quarterly. The Audit Committee then forwards these reports to the Board through the Audit Committee's report, which is included in the agenda of every board meeting.

2022 Anti-Corruption Plan

The Board will continue to encourage and support EGCO subsidiaries to be certified CAC members. The policy is communicated through representatives holding directorial and management positions in EGCO Group companies. EGCO's ultimate goal is to have all of its subsidiaries become certified CAC members. In addition, EGCO has been raising EGCO Group employees' anti-corruption awareness and knowledge via e-learning activities since 2019, allowing workers at the head office and subsidiaries to access the platform at any place and time.



PRINCIPLE 7 ENSURE DISCLOSURE AND FINANCIAL INTEGRITY

Information Disclosure and Transparency

The Board is responsible for ensuring that financial reports and information are disclosed in an accurate, adequate, and timely manner and in compliance with relevant rules, criteria, and guidelines. The Board reviews the policy and guidelines on information disclosure every year. In 2021 the Board concluded that the information disclosure policy and guidelines, which were revised in 2017, were still proper and aligned with the rules and regulations of regulatory agencies, the SEC's corporate governance principles, and revised criteria for assessing good corporate governance. The Board also believed that they accommodated changing circumstances and corresponded to the roles of communication technologies and online media. It is also the Board's policy to encourage the use of information technology for information disclosure. To this end, the information disclosure policy and guidelines apply to written information prepared in Thai and English and non-written information and all communication methods used by EGCO, such as meetings, conference calls, interviews, and all communication channels, including online media such as webpages and Facebook pages.

Guidelines for Information Disclosure and Confidentiality of Different Types of Information

TYPES OF INFORMATION

1. Material Non-Public Information
2. Forward Looking Information
3. Material Public Information
4. Non-Material Information
5. Business or Competition Sensitive Information
6. Irregular Information (Rumor, Data Leakage, etc.)
7. Online and Social Network Information

INFORMATION DISCLOSURE CHANNELS

- Regulatory agencies, i.e., SET's website (www.set.or.th) and SEC's website (www.sec.or.th)
- Shareholders, individual investors, securities analysts, and institutional investors
  - Press conferences for investors and analysts
  - Roadshows
    Company visits
    Notice via mail
- Mass media, e.g., PR news, newspapers, advertising media, journals, and television programs
- Online media
- Annual report (56-1 One Report)
- Management discussion and analysis
- Company website, i.e., www.egco.com

UNITS AND PERSONS RESPONSIBLE FOR INFORMATION DISCLOSURE

Responsible Units

- Corporate Secretary Division: To the SEC, the SET, and major shareholders
- Investor Relations Unit: To minor shareholders, securities analysts, institutional investors, and individual investors
- Corporate Communication Division: To the media, NGOs, and general public

Responsible Persons

- President
- Chief Financial Officer
- Senior executives authorized by the President

Financial Statement Preparation

Entrusted by the Board, the Audit Committee is responsible for preparing complete and accurate financial reports in compliance with applicable laws and notifications. It is also responsible for overseeing the consistent implementation of appropriate accounting policies. Doing so demonstrates that EGCO takes its financial reports' accuracy, completeness, and transparency seriously; protects the Company's assets against losses or unauthorized use; and prevents corruption and irregular transactions. EGCO's practices align with Thailand's generally accepted accounting standards and applicable laws and regulations, enhancing stakeholders' confidence in its financial reports. To this end, the Audit Committee requires a meeting with the auditor, without the presence of management, at least once a year to inquire and seek opinions from the auditor on matters related to financial reports. Furthermore, the Board also prepares a statement on its responsibility towards the financial reports, covering significant issues according to the SET Code of Best Practice for Directors of Listed Companies as shown in the Auditor's Report in the Annual Report. In 2021 EGCO appointed PricewaterhouseCoopers ABAS Ltd. as its auditor after considering this auditor's professional expertise, independence, impartiality, and experience. The appointment has enhanced the confidence of the Board and shareholders that the Company's financial reports accurately and reliably reflected all aspects of its actual financial standing and performance.

EGCO also prepares a Management Discussion and Analysis to provide analytic information on the Company's financial status, business performance, and significant changes for investors and securities analysts every quarter. This report is submitted via SET Portal along with the Company's financial statements.

Moreover, the International Standard on Auditing (ISA) 720 (Revised), the Auditor's Responsibilities Relating to Other Information, prescribes that the auditor shall read and consider other information, such as financial and non-financial information (other than financial statements and the auditor's report), which is included in the Company's Annual Report, to ensure that the materiality of other information and financial statements and the auditor's knowledge gained from auditing do not significantly contradict facts. Doing so ensures that the financial reports prepared by management, the report of the Board's financial reporting responsibilities, and the auditor's report are accurate, reliable, and consistent.

The SEC has never demanded that EGCO restate the financial statements. In addition, the Company has always disclosed quarterly and annual financial statements to shareholders and investors before due dates.

Sustainability Report Preparation

It has been the Board's policy since 2007 to prepare a sustainability report, in which issues that influence EGCO's direction on the path towards sustainability are to be included. Every report has since been prepared according to environmental, social, and governance (ESG) reporting criteria of the Global Reporting Initiative (GRI). In addition, pursuant to the SEC's notice numbered SEC.JT.-3 (W.) 39/2563 regarding amendments to the regulations on the disclosure of financial standing and operating results of a listed company and the filing of a registration statement for offering securities, Form 56-1 and Form 56-2 (Annual Report) is to be replaced by Form 56-1 One Report from the 2021 reporting year onwards. The Board of Directors considered EGCO ready for Form 56-1 One Report and authorized the switch in 2020. Form 56-1 One Report includes operating results and sustainability performance according to ESG criteria.

Information Disclosure of Concerned Units

The Board has determined that the following units shall be responsible for information disclosure to communicate with the shareholders and other stakeholders in an appropriate, equal, and timely manner:

1. Investor Relations Division: The Investor Relations Unit is responsible for equally and fairly communicating to all institutional investors, shareholders, and analysts, as well as devising a consistent annual investor relations plan. Considering the importance of equitable treatment of shareholders, EGCO has carefully disclosed information to ensure that all stakeholders have equal access. The quiet period, during which no information or answers to questions related to performance forecast are given to analysts and investors, is 14 days before the release of a financial statement. Moreover, the Investor Relations Unit has adhered to EGCO's Code of Conduct for Investor Relations Practitioners approved by the Board in 2018. Significant issues are as follows: 1. Disclosure of material and necessary information in an accurate, adequate, and timely manner 2. Protection of internal information 3. Disclosure of information in a fair and equitable manner 4. Performance of duties with integrity.

Information Dissemination via Investor Relations Activities

EGCO also emphasizes information dissemination via investor relations activities. Its executives have participated in these activities by presenting information and meeting with investors to create a good understanding of the Company's management, foster good relationships with investors, and encourage continuous exchanges of opinions. The main activities in 2021 were as follows:

ACTIVITIES	NUMBER OF ACTIVITIES
Quarterly analyst meetings	4
Power plant visits for investors and shareholders*	-
Power plant visits for analysts and institutional shareholders*	-
National and international seminars and meetings with investors and securities analysts	15
Communication via emails and phones	about 5 times a day
Preparation of Life quarterly newsletter as a channel to communicate the Company's significant activities and performance to shareholders	4
EGCO Group's Q&A in the Life quarterly newsletter to provide information for shareholders	4

Note: * Cancelled due to the COVID-19 pandemic.

The activities for investors and shareholders are stated in the Annual Report under 2021 Performance Highlights: Activities for Shareholders and Investors.

2. **Corporate Communications Division:** The Corporate Communications Division is responsible for communicating the Company's activities and cooperation with other organizations to all media and the public. Major events in 2021 included 2 online press conferences about its operating results, business direction, and projects' progress; 8 online executive interviews; an excursion to the Ang Ka Nature Trail in Chiang Mai with the media; a school building renovation project with the press; and 3,380 pieces of published public relations news and articles under 35 different topics.

3. **Corporate Secretary Division:** The Corporate Secretary Division is responsible for disclosing all information required by the SET and the SEC accurately, completely, and transparently. Information disclosure is subject to due procedures. In 2021 the division submitted 23 notifications to the SET.

Understanding the need to provide the most up-to-date, complete, and accurate information, EGCO ensures that the information on its website is always detailed and updated. The efficiency of information disclosure is assessed by a questionnaire every time a meeting is held with shareholders, investors, or analysts. The answers are then used as guidelines to improve the efficiency of information disclosure and investor relations.

Use of Information Technology for Information Dissemination

EGCO has made notable and interesting information available on its website (www.egco.com) in Thai and English, enabling shareholders, investors, and interested persons to have access to the most accurate and up-to-date information about the Company. The information available includes company profile, vision and mission, shareholder structure, Board of Directors, subcommittees, management team, EGCO Group's businesses, whistleblowing channels, and downloadable documents, such as corporate governance policy, company registration certificate, Articles of Association, financial statements, annual reports (Form 56-1 One Report), sustainability reports, AGM meeting notices, and documents to be presented in analyst meetings.

PRINCIPLE 8 ENSURE ENGAGEMENT AND COMMUNICATION WITH SHAREHOLDERS

Rights of Shareholders

EGCO values and respects shareholders, including institutional investors, as investors and owners of the Company. Therefore, the Board encourages all shareholders to exercise their fundamental rights. These rights include the right to share profits; buy, sell, or transfer shares; receive adequate company information; and attend shareholders meetings to vote to appoint or remove directors, determine director remuneration, appoint auditors, and determine audit fees, and consider other significant issues affecting the Company, and make inquiries and voice opinions.

Besides encouraging shareholders and institutional investors to exercise these fundamental rights, EGCO endeavors to ensure the equitable treatment of shareholders, such as providing updated information via the Company's website in Thai and English, newsletters, and site visits for shareholders. EGCO has ensured that none of its activities would ever deprive shareholders of their rights or violate them.

Shareholder Meetings

The Board considers an Annual General Meeting of Shareholders (AGM) an important event. An AGM is held within 4 months from the Company's closing date to accommodate shareholders' participation in monitoring the Company's performance. The Board may call for an extraordinary general meeting of shareholders on a case by case basis to consider a special agenda item that affects or involves shareholders' interests and requires shareholder approval. EGCO's 2021 AGM was held online on April 19, 2021, due to the COVID-19 pandemic. Live feed was streamed from Saisampan Room, 9th floor, EGCO Tower, on Vibhavadi–Rangsit Road, Bangkok. There was no extraordinary general meeting of shareholders this past year. This AGM was arranged in accordance with AGM checklists issued by the Thai Investors Association, Listed Companies Association, and the SEC. Details of the meeting are as follows:

Before the Meeting

EGCO prepares and delivers comprehensive meeting documents to shareholders in advance to afford them material information needed for voting. It also encourages shareholders to actively participate in annual general meetings and facilitates proxy voting for those unable to attend in person. In 2021 EGCO made the meeting notice and relevant documents accessible via QR Codes. It also encouraged shareholders to appoint independent directors to vote on their behalf instead of in-person participation to prevent the spread of COVID-19. The Company also arranged a live broadcast of the event for shareholders to follow along remotely. EGCO performed the following activities before the Annual General Meeting of Shareholders:

- We made the meeting schedule and agenda available via-SETLink and our company website on February 25, 2021, or 53 days before the AGM date, before mailing them out. The record date was also detailed in the meeting notice.
- We distributed the meeting notice with details of each distinct agenda item in Thai and English. The notice consisted of matters for consideration pursuant to Chapter-IV of the Articles of Association entitled Shareholders' Meeting. The election of directors to replace those who had retired by rotation and consideration of the remuneration for directors appeared as separate items on the agenda. Included in the agenda were general information, objectives, reasons, opinion of the Board, voting requirements, remuneration policy and regulations, director nomination policies and criteria, names and biographies of director nominees, and detailed minutes of the previous meeting. Also included were the requirements and methods for attendance, 3 proxy forms (Forms A, B, and C) according to the Department of Business Development, Ministry of Commerce, along with the QR Code to access the annual report. EGCO notified its shareholders of the meeting on March 15, 2021, or 35 days before the meeting date. The AGM was also announced in 2 Thai daily newspapers and 1 English newspaper for 3 consecutive days to afford shareholders sufficient time to prepare for the meeting. All relevant information was presented on EGCO's website to allow shareholders to have time to familiarize themselves with the available information ahead of the meeting. The meeting notice was delivered to shareholders on March 22, 2021, or 27 days

before the meeting date. EGCO provided a telephone number for further inquiries, if needed. It also provided material information pertinent to the election of directors in accordance with best practices of the SEC and the SET.

- To encourage institutional investors' attendance, the Investor Relations Unit asked institutional investors to submit their registration documents to EGCO 7 days ahead of the meeting date for verification in case any additional documents were needed to facilitate the administrative process on the actual meeting day.
- Shareholders could make inquiries about the agenda in advance by sending an email to cs@egco.com or a facsimile to the number 0 2998 5999 ext. 5020-5027 for shareholders to make the most out of the meeting and to protect their legal rights to the fullest extent, as well as to prevent the spread of COVID-19.

On the Day of the Meeting

EGCO strongly encourages shareholders to exercise their rights to attend and vote at shareholder meetings. All due processes, including registration, vote counting, and voting result announcements, are conducted transparently, correctly, and accountably. EGCO never deprives shareholders of their rights or violates them. Shareholders' inquiries and opinions are welcomed and taken into consideration. A summary of EGCO's conduct on the day of the meeting is as follows:

- Thai directors, foreign directors, executives, and external auditors from PricewaterhouseCoopers ABAS ("PwC") attended the meeting online to answer shareholders' questions and acknowledge their opinions. A total of 15 directors, including the Chairman and directors, attended the 2021 AGM, which accounted for 100% of the Board. The Chairman of the Board, the chairpersons of all subcommittees, and the President, together with senior executives, provided detailed explanations regarding agenda items and answered shareholders' questions
- In the meeting notice, EGCO identified the names of directors with personal interests in agenda items. These directors were not present when these agenda items were being discussed.
- To facilitate shareholders' and institutional investors' participation, EGCO informed them of measures, guidelines, and details of registration online in the meeting notice. Registration points were appropriately and adequately provided for shareholders. Staff were made available for their convenience.
- Representatives from the Thai Investors Association also observed the process online.
- Shareholders who completed registration after the meeting had already started were permitted to vote on the ongoing and remaining agenda items.
- The AGM was convened according to the order of agenda items. The introduction to each agenda item included the general background, supporting rationale, and recommendation of the Board. All material information was included in the meeting notice delivered to shareholders. No ad hoc agenda items were added during the meeting.
- Shareholders were equitably treated and allowed to raise questions and opinions. All questions were addressed and clarified by the Chairman and comprehensively recorded in the minutes.
- Baker & McKenzie Co., Ltd. was hired to inspect shareholders' or their proxies' registration documents, meeting quorum, voting methods, vote counting pursuant to the Company's Articles of Association, shareholders' ballot collection, and voting results. The inspector reported that the quorum of the Board, the meeting itself, and the voting procedures were transparent and compliant with the Company's Articles of Association, applicable laws, and the SET's best practices. In addition, the inspector reported that EGCO highly respected its shareholders' rights to participate in the meeting and voice their opinions actively, as well as efficiently facilitated all aspects of the meeting for shareholders.
- An AGM quality assessment questionnaire was circulated to gather feedback for future improvement in the best interest of the Company and its shareholders.

As of the close of the 2021 AGM, 39 shareholders attended the meeting in person and 713 shareholders attended by proxy, representing 376,745,452 shares or 71.5613 % of the total issued shares.

39
shareholders attended the meeting in person

713
shareholders attended by proxy

After the Meeting

- After the AGM, EGCO delivers the summary of a concluded resolution for each agenda item to shareholders and the SET via SETLink according to the SET's information disclosure requirements. In 2021 the summary was made available after 5:00 p.m. of April 19, 2021, the same day as the AGM.
- EGCO also prepared minutes of the meeting, which included the names and titles of directors, executives, auditors, and meeting inspector in attendance; voting and vote counting procedures; voting ballot instructions; Board's recommendations; inquiries and recommendations of shareholders; and clarifications from management. Details on the number of "approve," "disapprove," and "abstain," votes, void ballot papers, and the resolution of each agenda item were made available to shareholders on EGCO's website (www.egco.com) on April 30, 2021, within 14 days after the meeting as required by the SET. Moreover, EGCO disseminated a visual and audio recording of the AGM on its website for absent shareholders' acknowledgment.
- EGCO coordinated with the securities registrar at Thailand-Securities Depository Co., Ltd. (TSD, to ensure that shareholders received dividend payments in a complete and accurate manner.
- Recommendations made and opinions raised by the shareholders and inspectors were taken into further consideration for the continuous improvement of the AGM.

Results of Compliance with Good Corporate Governance Policy

EGCO Group directors, management, and employees have always strictly adhered to the Good Corporate Governance Policy. Thanks to this commitment, EGCO has always passed assessments and earned awards for corporate governance. EGCO's assessment results and awards for 2021 are as follows:

- EGCO Group became a certified member in the Emerging Markets Index of the Dow Jones Sustainability Indices (DJSI) under Electric Utilities category for the first time in 2021. It is Thailand's first power producer to do so.
- EGCO Group has been included on the Thailand Sustainability Investment (THSI) list of the Stock Exchange of Thailand, part of the SET Awards 2021, under the "Resources" category for the seventh consecutive year in recognition of its sustainable business operations with a focus on growth under principles of corporate governance, transparency, and accountability, as well as the role it has fulfilled as a good corporate citizen who cares for its environment, communities, and society at large.
- EGCO Group received the Sustainability Excellence title from the Rising Star Sustainability Awards, part of the SET Awards 2021 for listed companies with a market value of 100 billion baht or more. This designation demonstrates EGCO's commitment to building a sustainable business and contributing value to stakeholders, society, and the environment according to ESG guidelines.
- EGCO Group garnered a Sustainability Disclosure Award in 2021 from the Thaiphat Institute in recognition of its sustainability disclosure to the public and relevant stakeholders based on EGCO Group's sustainability report. It reflects our commitment to the economic, social, and environmental pillars of sustainability and corporate governance principles for sustainable organizational growth.
- EGCO Group received a full score of 100 for its 2021 Annual General Meeting of Shareholders (AGM). The assessment was conducted by the Thai Investor Association.
- EGCO Group received a score of 97 or "Excellent" for the 2021 Corporate Governance Report of Thai Listed Companies (CGR) Assessment Project conducted by the Thai Institute of Directors (IOD).
- EGCO and Khanom Electricity Generating Co., Ltd. received the second CAC recertification.

SUBCOMMITTEE'S REPORTS

AUDIT COMMITTEE'S REPORT

The Audit Committee of Electricity Generating Public Company Limited ("EGCO") comprises Ms. Jaruwan Ruangswadipong as Chairwoman, Mr. Anya Khanthavit, and Mr. Paisan Mahapunnaporn. These 3 independent directors are knowledgeable and experienced in law, accounting, finance, economics, strategy and business planning, corporate governance, audit, internal control, enterprise risk management, human resource development, and industrial businesses.

In 2021, the Audit Committee convened a total of 12 meetings. All members were always present. There were also discussions attended by management, internal auditors, and external auditors, as well as meetings with the auditors without the presence of management in order to independently discuss EGCO's operations and exchange ideas with the auditors. In compliance with COVID-19 sanitary measures, the Audit Committee held video conferences with limited presence in actual meeting rooms.

The Audit Committee performed its duties and responsibilities, as assigned by the Board of Directors and defined in the Audit Committee Charter, which was formulated in conformity with regulations of the Stock Exchange of Thailand ("SET"). It regularly reported its performance to the Board of Directors. The Audit Committee was of the opinion that EGCO provided accurate, complete, reliable financial reports with appropriate and adequate internal control systems and good corporate governance, in compliance with the law on securities and exchange, SET's regulations, and applicable laws. Connected transactions or potential conflicts of interest were also accurately and fully disclosed.

Summary of the Audit Committee's Activities

Review of Financial Statements

The Audit Committee reviewed 2021's quarterly and annual financial statements with the external auditors and management. It inquired the external auditors about state statements' accuracy and completeness and significant adjustments that affected them to ensure that EGCO's financial reports conformed to generally accepted accounting standards and that the information disclosed was adequate, accurate, reliable, and in compliance with governing laws and regulations.

The Audit Committee reviewed, in cooperation with management, the preparation of the Management Discussion and Analysis to ensure that the information was correct, complete, sufficient, and beneficial to investment decisions of shareholders and general investors.

The Audit Committee also examined the nature of work performed by a person or business related to the auditors and the affiliated auditing office outside the scope of the auditing services provided to EGCO and its subsidiaries to ensure that the auditors would remain independent while performing the audit.

Reviewing the Internal Control System

At Board Meeting No. 1/2022 on January 24, 2022, the Board of Directors deliberated the report on the internal control system's adequacy assessment, which the Audit Committee had reviewed. The Board agreed with the Audit Committee that EGCO's internal control system was adequate and appropriate and that EGCO provided sufficient personnel to operate the system efficiently. In addition, the internal control system was properly set to monitor and supervise the operations of the subsidiaries to protect the assets of EGCO and its subsidiaries from misuse or unauthorized use by directors, management, or employees.

In the previous year, the external auditors reported to the Board that there was no significant deficiency in the internal control system.

Oversight of Internal Audit

The Audit Committee considered and approved the annual internal audit plan, budget plan, and staffing plan for 2022. It supported the development of an audit spectrum whose scope would conform to the current situation's needs in lieu of a yearly audit plan. The audit spectrum would still be based on notable risks and the Internal Audit Division's long-term strategic and action plans, as well as support EGCO's execution of its strategic plan. The goal was to further improve the standard of internal auditing. In addition, we assessed and improved the Internal Audit Division's performance in 2021, supported its personnel development, and approved the key performance indicators of the head of the Internal Audit Division and other Internal Audit employees.

The Audit Committee considered and supported the development of assessment tools of the internal control system of companies of which EGCO was not a controlling person to ensure that investments in those companies were guided by good corporate governance and had an adequate internal control system, thus adding value to the organization.

The Audit Committee supported the development of remote auditing in light of the COVID-19 pandemic and its application to the new-normal audit. Remote auditing leads to faster auditing and lowers the cost of traveling to various companies in the EGCO Group. Information technology has been further integrated to assist with the auditing work without compromising the auditing service's quality, accuracy, completeness, and appropriateness.

The Audit Committee also considered and reviewed the audit report of the Internal Audit Division and provided comments and recommendations to properly improve internal control. The Internal Audit Division submitted the report directly to the Audit Committee to ensure independence.

Review of Connected Transactions or Potential Conflicts of Interest

The Audit Committee considered connected transactions to ensure their compliance with SET's regulations, taking into account the reasonableness and the best interest of the Company, with approval from an authorized person having no interest in such transactions. In 2021 no transactions required the Audit Committee's endorsement prior to the Board's approval and the shareholders' meeting.

Review of Risk Management

The Committee examined EGCO's risk management report and key risk indicators, previously reviewed by the Risk Oversight Committee, and assessed the adequacy of corporate risk management to ensure that EGCO's organizational risk management process had an adequate internal control system and conformed with recommendations of the Internal Audit Division based on the various auditing tasks. The Committee also encouraged Internal Audit to plan and review audit plans in accordance with changing risk factors for more effective risk management processes.

Review of Good Corporate Governance

The Audit Committee conducted a review in cooperation with management to ensure that EGCO's activities conformed with the laws on securities and exchange, regulations of the SET and the Securities and Exchange Commission (SEC), and other laws relevant to EGCO's business.

The Audit Committee supported good corporate governance practices and considered and acknowledged the compliance statement of EGCO's Business Code of Conduct of EGCO Group employees. The process and content of the compliance statement ensured that EGCO operated in accordance with the business code of conduct and relevant laws and promoted the prevention of fraud and corruption. Relevant information or complaints regarding illegal acts or business ethics breaches, as well as questions about EGCO's financial reports or internal control system, can be submitted directly to the Audit Committee at the email address auditcommittee@egco.com.

A whistleblowing system has also been put in place, along with protection measures to keep the whistleblower's identity confidential.

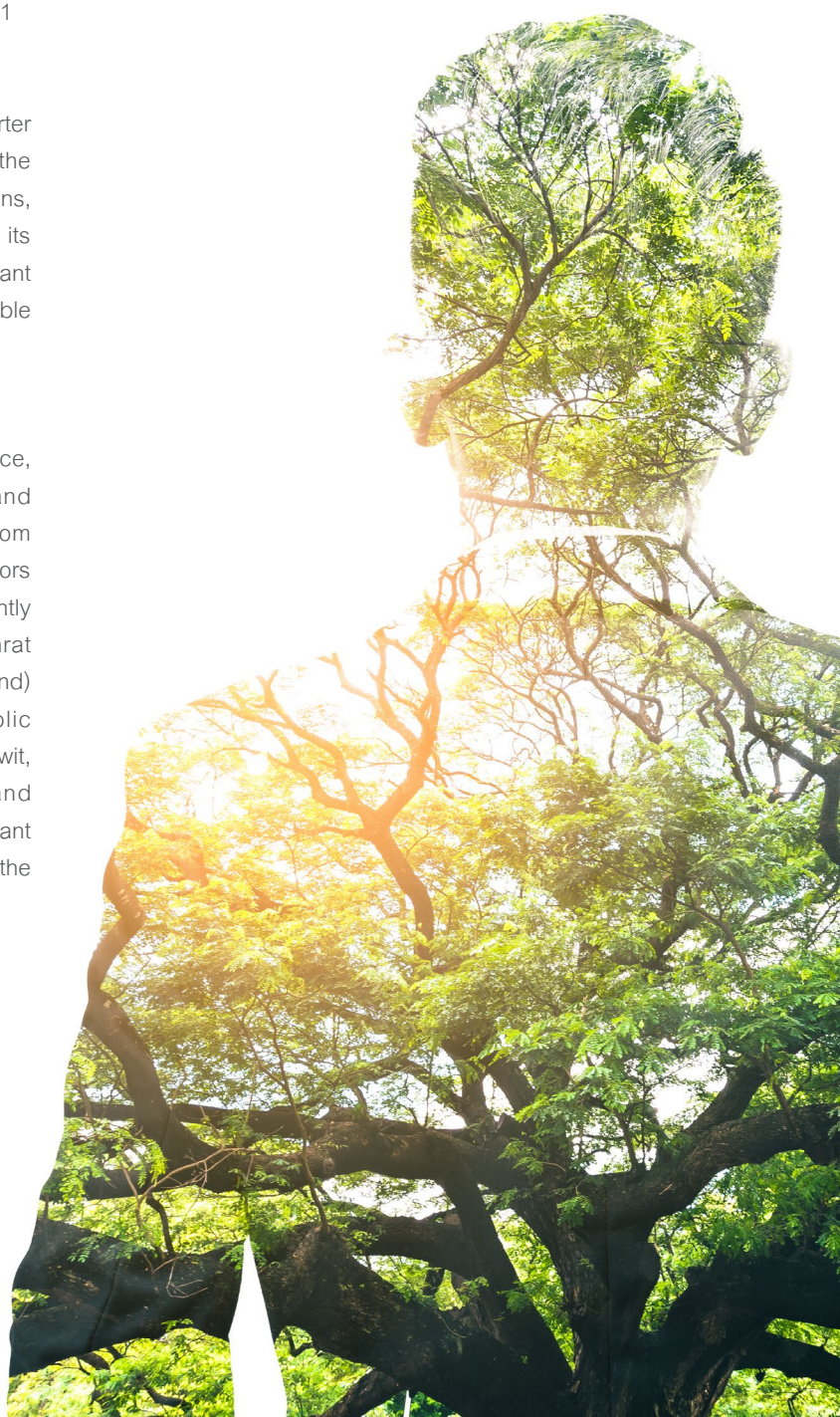
The Committee considered and reviewed the audit report on anti-corruption measures and approved the anti-corruption self-assessment form for EGCO and its subsidiaries in 2021

Maintaining the Quality of the Audit Committee

The Audit Committee reviewed the Audit Committee Charter and conducted an annual performance assessment of the Audit Committee to ensure that its composition, qualifications, and performance of assigned duties were consistent with its scope of authority, obligations, and responsibilities, compliant with both SET's and international best practices, and suitable for EGCO's business.

Appointment of External Auditors for 2022

The Audit Committee reviewed qualifications, independence, performance, and appropriate fees of the auditors and proposed the appointment of the following auditors from Pricewaterhouse Coopers ABAS Ltd. as EGCO's 2022 auditors to the Board of Directors for consideration and subsequently for the shareholders' approval in the AGM: Ms. Amornrat Pearmpoonvatanasuk, Certified Public Accountant (Thailand) No. 4599; Miss Wanvimol Preechawat, Certified Public Accountant (Thailand) No. 9548; Mr. Boonrueng Lerdwiseswit, Certified Public Accountant (Thailand) No. 6552; and Ms. Rodjanart Banyatananusard, Certified Public Accountant (Thailand) No. 8435. The Audit Committee also determined the audit fee for 2022.



Mrs. Jaruwan Ruangswadipong
Chairwoman of the Audit Committee

RISK OVERSIGHT COMMITTEE'S REPORT

As of December 31, 2021, the Risk Oversight Committee (ROC) of Electricity Generating Public Company Limited (EGCO) comprising 5 members, who are experts and have vast experiences in risk management, law, finance and banking, engineering, and energy business, with 2 independent directors, namely Professor Dr. Anya Khanthavit as Chairman, and Mr. Poomjai Attanun, and 2 non-executive directors namely Mr. Polsri Suvisisarsa, and Mr. Makoto Nogami and 1 executive director namely Mr. Thepparat Theppitak as a President. Miss Piyanon Wattanachanya, executive vice president-corporate strategy, serves as the secretary of the committee.

The ROC performed its assigned duties as prescribed in the charter and regularly reported its meeting resolutions to the board.

In 2021, 13 meetings were conducted to carry out the ROC's duties and responsibilities. Their activities are listed below.

1. To review the EGCO Group's risk management philosophy, risk management policy, risk appetite, risk tolerance, and the charter of the ROC.
2. To revise the EGCO Group's risk management manual to align it with the COSO 2017 Enterprise Risk Management (ERM)-Integrated Framework.
3. To closely monitor the monthly report of corporate risks, key risk indicators (KRIs), key performance indicators (KPIs), and action plans.
4. To closely monitor the construction risks and risk mitigations of under-construction projects, such as the Nam Theun 1 Hydro Power Plant in the Lao People's Democratic Republic, the extension of the petroleum pipeline system to the northeastern region of Thailand, and the Yunlin offshore wind farm in the Republic of China (Taiwan).
5. To advise on the development of the EGCO Group's risk management monitoring system and support the application of a risk management information system program to monitor risks in EGCO, subsidiaries, JVs, power plants, and divisions. The system will be implemented in 2022.
6. To advise on the organization seminars and workshops on sustainable value creation through an enterprise risk management plan for EGCO Group's employees, executives, risk owners, and risk coordinators in October 2021 to identify EGCO Group's 2022 corporate key risks, develop key risk indicators (KRIs), create effective risk management plans, and learn the use of the risk management program.
7. To advise on the application of the COSO enterprise risk management integrated framework in EGCO Group's companies. Emphasized the importance of considering risk in both the strategy-setting process and performance improvement.
8. To oversee EGCO's corporate risk appetite and risk tolerance to align with EGCO's strategic plan.
9. To oversee risk assessment in situations and scenarios, impact analysis, and mitigation plans of EGCO's investment plans, long-term financial plans, IT master plans, construction plans, pandemic-risk mitigation plans, environmental, social, and governance (ESG) related risks, and sustainable development.
10. To approve EGCO Group's 2022 corporate key risks, KRIs, risk rating scales, root causes, and risk mitigation plans.
11. To approve the committee's meeting schedules and agendas for 2022.
12. To conduct an annual self-assessment using the ROC's self-assessment form; the form was designed following the guidelines of the Stock Exchange of Thailand (SET). The 2021 result indicated that the composition, qualifications, and performance in accordance with the scope of authority, obligation and responsibility of the ROC fully complied with the ROC Charter and the SET's guidelines. The results were then reported to the board of directors.

Professor Dr. Anya Khanthavit
Chairman of the Risk Oversight Committee

REPORT OF THE INVESTMENT COMMITTEE

According to its Charter, EGCO's Investment Committee shall comprise five Board-appointed members, namely four nonexecutive directors and the President, with the Senior Vice President of the Corporate Secretary Division as its secretary. As of December 31, 2021, the Board had appointed the following nonexecutive directors to serve alongside President Thepparat Theppitak on the Committee: Mr. Kulit Sombatsiri (Chairman), Mr. Pisut Painmanakul, Mr. Shunichi Tanaka, and Mr. Naoki Tsutsumi. These are seasoned power and energy experts with domestic and international management experience.

In 2021 the Investment Committee prioritized strategic plans and investments in clean energy and new businesses to support current energy trends, policies, and the global economy. It held a total of 12 meetings to consider material matters assigned by the Board under the Investment Committee Charter, the summary of which is as follows:

1. The Committee amended the Investment Committee Charter, refining the desired qualifications for its members and the scope of its duties and responsibilities. It also amended its authorization power in EGCO's Table of Authorities.

2. The Committee examined and presented amendments to the regulations of the Electricity Generating Public Company Limited on accounting, finance, and budgeting to the Board for approval.

3. The Committee revised its self-assessment form to include the added duties and responsibilities under the amended Investment Committee Charter to ensure better efficiency in the future.

4. The Committee considered the feasibility and progress of investments in energy, downstream, and new businesses in Thailand and overseas, including their financing. It ensured that these were aligned with EGCO's corporate vision and strategic plan, taking into account the appropriate returns on investment. In 2021 the Committee deliberated and agreed to propose to the Board of Directors an investment in the following two new projects:

4.1 Apex Clean Energy Holding LLC: EGCO indirectly acquired a 17.46% stake in this prominent U.S.-based private developer and seller of renewable energy projects through its wholly-owned subsidiary EGCO Plus Company Limited. The final agreement was signed on October 5, 2021, and the process was completed on November 17, 2021. This investment is EGCO's first step into the American renewable energy sector. It is expected to lead to several other large-scale green energy projects and contribute to the 2050 carbon neutrality goals.

4.2 PeerPower Company Limited (PeerPower): Established in 2016, this fintech start-up operates an online crowdfunding bond platform, connecting investors with small and medium-sized enterprises (SMEs). EGCO purchased a 24.24% stake in the company. Completed on December 20, 2021, this deal provides EGCO with access to blockchain technology for developing an energy trading platform to support the entry into the decentralized energy era that is expected to emerge soon, as well as lead to energy business opportunities

5. The Committee reviewed EGCO's asset management to ensure optimal benefits. Matters reviewed included loan refinancing and investing through financial institutions.

6. The Committee examined and presented short- and long-term strategic plans, action plans, and the annual budget to the Board. It ensured these plans' alignment with EGCO's vision, mission, and policy, as well as reasonable budget allocation to support the achievement of these plans. In 2021 EGCO set a long-term goal of achieving net-zero carbon emissions by 2050. It also set a medium-term goal of reducing carbon emissions per unit of electricity produced by 10% from 2020's levels by 2030. In addition, EGCO launched the "cleaner, smarter, and stronger to drive sustainable growth" strategy to support the goal and long-term sustainability.

7. The Committee monitored and assessed the performance of various investment projects to verify whether they met their investment goals and management action plans. It also provided guidelines and recommendations if the performance failed to meet the objectives set forth by the Board.

8. The Committee followed up on the progress of the 2021 Action Plan, which covers four areas of operations according to the Balanced Scorecard, namely finance, customers, internal management processes, and learning and growth. To this end, it was management's duty to provide a quarterly progress report to the Investment Committee and the Board to obtain recommendations in any event of a delay in any step of the plan.

The Investment Committee fulfilled its duties as set forth in the Charter and assigned by the Board. The Committee considered various matters in the best interests of EGCO and its stakeholders with care and diligence and in accordance with pertinent laws and Company regulations. The meeting minutes were regularly reported to the Board as well.

Mr. Kulit Sombatsiri
Chairman of the Investment Committee

NOMINATION AND REMUNERATION COMMITTEE'S REPORT

In 2021, the Nomination and Remuneration Committee, appointed by the Board of Directors, consisted of 2 non-executive directors, namely Mr. Toshiro Kudama, Chairman of the Nomination and Remuneration Committee, and Mr. Polsri Suvisisarsa, and 3 independent directors, namely Dr. Pasu Loharjun, Mr. Paisan Mahapunnaporn, and Mrs. Wannipa Bhakdibutr. The Nomination and Remuneration Committee performed its duties assigned by the Board of Directors as stipulated in the Nomination and Remuneration Committee Charter.

In the previous year, the Nomination and Remuneration Committee convened a total of 11 meetings. In addition to the nomination and remuneration of directors and senior executives, and the remuneration and benefits of the employees, the Nomination and Remuneration Committee also considered the revision of its authority and responsibility, the establishment of master plan for the Board development, and the organization restructuring and increase of manpower framework. Its main activities were as follows:

1. Revision of the Nomination and Remuneration Committee's Charter and Table of Authority

After reviewing its charter, the Nomination and Remuneration Committee viewed that the qualification of the committee's member should be put in writing. Thus, it was stated that the member shall be knowledgeable in human resources management, fair-minded and able to balance directors' motivation and shareholders' interest. It also determined the duties to review its charter and Company's regulations every 2 years. The Board of Directors approved such revision to be effective on March 26, 2021, onwards.

Furthermore, the Committee reviewed and revised the authority of the Committee and the management in the Company's Table of Authority with regards to human resources management, aiming for a more flexible operation. At the same time, it added the responsibilities to monitor the performance of EGCO and subsidiaries, and review and revise their employees' benefits regularly. The Board of Directors approved such revision to be in effect on January 1, 2022.

2. Establishment of Master Plan for the Board of Directors Development

Following the assessment results of the Board and subcommittees' performance in 2020 where a continuous director development was suggested, the Nomination and Remuneration Committee endorsed a systematic master plan of Board development which consisted of the development on fundamental skills to support the directors' performance and on specific skills to enhance the performance in subcommittees, as well as the development based on annual trends and EGCO's strategic plan. The Board of Directors approved this master plan as a guideline for arranging director trainings in years 2021-2023, with a regular review every 2 years so that the directors were kept abreast of the changing situation and business trends.

3. Reviewing Self-assessments of the Board of Directors and the Nomination and Remuneration Committee

The Committee reviewed the assessment criteria, procedures and forms of the Board of Directors, which comprised group evaluation, self-evaluation and cross-evaluation, and its own assessment form. Viewing that the Board's assessment procedures and forms revised in 2020 and the Committee's current procedures and forms were appropriate, the Committee presented to the Board for consideration. The Board of Directors approved the assessment criteria and forms for the performance appraisal in year 2021 as proposed.

The Committee conducted its self-appraisal and disclosed the assessment result under the section of Corporate Governance.

4. Organization Restructuring and Increase of Manpower Framework

The Nomination and Remuneration Committee endorsed the establishment of a new division under the Chief Finance Office Group who would participate in project development under the collaboration with the Business Development Group, while taking charge of EGCO Group's taxation in parallel. Owing to its benefits in promoting group synergy in the Company and among EGCO Group, the Board of Directors approved this structure with an effect on January 1, 2022.

In order to support the Company's strategic plan and business direction, the Nomination and Remuneration Committee also endorsed the increase of manpower framework for divisions in need of additional workforces, especially for the Business Development Domestic Group who was responsible of exploring power generation business in Thailand and new business in relation to power generation. After due consideration, the Board approved accordingly.

5. Amendment to the Regulations on Human Resources Management

The Nomination and Remuneration Committee considered and endorsed to the Board of Directors the amendment to the Regulations on Human Resources Management in order to comply with the Company's Personal Data Protection Policy. The Board approved as proposed and it was effective on June 1, 2021.

6. Improvement of Employee Welfare and Benefits

Due to the continuous COVID-19 pandemic, the Nomination and Remuneration Committee approved to continue purchasing a temporary COVID-19 health insurance for employees for another year. The Committee also endorsed the extension of mobile and internet package allowance to cover all employees in order to cope with the new normal working condition. The Board of Directors approved as proposed.

7. Consideration on Succession Planning

Considering the directors and senior executives who were due to retire in 2022, the Nomination and Remuneration Committee was adjusting the required skills for new directors to be consistent with the changing business direction and world situation. The Committee also appointed new executives to succeed the retiring executives to ensure a continuous business operation and compliance with the vision and strategies determined by the Board of Directors.

The Nomination and Remuneration Committee had performed its duties as prescribed in the Charter and as delegated by the Board of Directors with care and diligence as well as fairness and transparency, complying with the good corporate governance principles and acting in the best interests of the Company and stakeholders.

Mr. Toshiro Kudama
Chairman of the Nomination and Remuneration Committee

CORPORATE GOVERNANCE AND SOCIAL RESPONSIBILITY COMMITTEE'S REPORT

The Corporate Governance and Social Responsibility ("CC") Committee of Electricity Generating Public Company Limited comprises five directors: three independent directors, one non-executive director, and the President.

As of December 31, 2021, members of the CGSR Committee are as follows: Dr. Pasu Loharjun, Independent Director and Committee Chairman; Mrs. Wannipa Bhakdibutr, Independent Director; Mr. Poomjai Attanun, Independent Director; Mr. Nutthavutthi Chamchang, Director; and Mr. Thepparat Theppitak, President. The Senior Vice President of the Corporate Secretary Division serves as Secretary to the Committee.

As determined by the Board of Directors, the CC Committee oversees and monitors the Company's operations to ensure compliance with the Good Corporate Governance Principles and Anti-Corruption Policy. It also promotes the Corporate Social Responsibility Policy, focusing on equitable treatment of all shareholders for sustainable development and continuous growth.

In 2021 the CC Committee held six meetings. The details of its activities are summarized below:

1. Good Corporate Governance

1.1 The Committee amended its charter. A summary of the key changes is as follows:

- Its oversight now extends to matters of the environment and sustainable development.
- Its member selection criteria now include knowledge and experience in corporate governance, social responsibility, the environment, and sustainable development in response to the new scope of power.
- Its power to approve policies and the relevant guidelines is more clearly defined. The Committee is now responsible for scrutinizing relevant policies before presenting them to the Board of Directors for consideration
- The CC Charter and policies pertaining to the scope of its authorities are to be examined and revised every two years.

1.2 The Committee reviewed and updated several corporate governance policies, namely:

- Occupational Health and Safety Policy of EGCO Group
- Personal Data Protection Policy
- Anti-Corruption Policy
- Information and Cyber Security Policy
- Corporate Governance Policy
- Whistleblowing Policy

1.3 The Committee considered and approved management's proposal for the Board of Directors to apply to renew, for the second time, EGCO's certified membership in the Collective Action Coalition Against Corruption ("CAC").

1.4 The Committee encouraged the dissemination, communication, training, and organization of activities that promote good corporate governance.

2. Corporate Social Responsibility for Sustainable Business Operations

2.1 The Committee monitored the progress of EGCO's sustainability efforts, including compliance with DJSI Corporate Sustainability Assessment (CSA) criteria. EGCO Group was listed on the Emerging Markets Index of the Dow Jones Sustainability Indices (DJSI) under the category "Electric Utilities" for a second consecutive year in 2021.

2.2 The Committee monitored EGCO Group's corporate social responsibility (CSR) efforts, which are part of its sustainability policy. In 2021, despite the continuation of the COVID-19 pandemic from 2020, EGCO was able to adhere to most of the plan, with minor adjustments that suit the situation for the continued benefit of communities and society. EGCO's CSR activities included the following:

2.2.1 **Improving the quality of life of communities around its power plants**

In addition to each power plant's own projects/activities based on its surroundings and the 6-dimension framework-namely, local employment, child and

youth development, vocational development, good community hygiene and sanitation, public utilities development, and natural resource and environmental conservation-EGCO also began distributing the Sukjai newsletter via its Line Official Account to promote community engagement in a way that responds to the current consumer behavior.

2.2.2 **Promoting energy and environmental education among children and teens**

EGCO continued to support EGCO's Power Plants and Children's Schools. This project was first approved in 2016. In 2021, EGCO offered a science class online under the theme "Smart Solutions for Life" to encourage learning about energy technologies and innovations regardless of time and place. Even a pandemic could not stop them from learning.

Meanwhile, the Khanom Power Plant Learning Center was honored with national and regional accolades, including recognition for scientific and environmental museums from the Museum Thailand Awards 2021 and awards for outstanding activities, learning processes, and community relations and for investment in people from Asia Responsible Enterprise Awards 2021 (AREA 2021).

ECGO gave vocational scholarships to young students in communities around its power plants for the fifth consecutive year. EGCO also launched the "Energy Teachers Online" program to equip primary and secondary school teachers with the know-how they will need to effectively teach about energy and the environment through digital media, consistent with the guidelines for developing quality citizens and new-normal learning to encourage young people to change their behaviors to conserve energy and the environment.

2.2.3 **Conservating and restoring ecosystems and biodiversity in areas of operation and important watershed forests**

EGCO continued its biodiversity database project at the Khanom Power Plant (from 2020) and received a certificate for reducing greenhouse gas emissions under the Low Emission Support Scheme (LESS) of the Thailand Greenhouse Gas Management Organization (Public Organization) by storing 536.597 metric tons of carbon dioxide equivalent. In 2021 the foundation continued to rehabilitate forests (since 2017) in the project "Restoration for Income" in Chiang Mai to decrease monocultural land and increase the accumulated green spaces to 1,055 rai, which is already higher than the target. The foundation also reforested an area of 320 rai in Chaiyaphum in the project entitled "Reforestation and Watershed Conservation." For these efforts, EGCO received a certificate for reducing greenhouse gas emissions under the Low Emission Support Scheme (LESS) of the Thailand Greenhouse Gas Management Organization (Public Organization) by storing 6,983.399 metric tons of carbon dioxide equivalent.

2.3 The Committee endorsed the 2022 CSR Action Plan, which supports EGCO's sustainability through the following two programs:

2.3.1 Khanom Power Plant's Biodiversity Development Plan (a continuation of the 2021 Plan)

2.3.2 The Corporate Social and Environmental Responsibility Development Plan to increase internal and external stakeholders' participation and cooperation

In accordance with good corporate governance principles, the Committee provided a meeting report to the Board of Directors after every meeting.

Dr. Pasu Loharjun
Chairman of the Corporate Governance and Social Responsibility Committee

INTERNAL CONTROL AND RELATED TRANSACTIONS

INTERNAL CONTROL

The Board of Directors has tasked the Audit Committee with reviewing and assessing the adequacy of internal controls, as well as with overseeing results provided by the Internal Audit Division and the external auditors' attestation report on EGCO's and its subsidiaries' internal controls. In 2021 the Audit Committee reviewed the assessment of management's internal controls to ensure that EGCO's and its subsidiaries' internal controls conform with the criteria of the Securities and Exchange Commission (SEC), the Stock Exchange of Thailand (SET), and standards of The Committee of Sponsoring Organizations of the Treadway Commission (COSO).

At Board Meeting No. 1/2022 on January 24, 2022, which the Audit Committee attended, the Board of Directors approved the assessment results of EGCO's and its subsidiaries' internal controls. The Board agreed with the Audit Committee that EGCO and its subsidiaries had adequate and appropriate internal controls with sufficient personnel to exercise them effectively. EGCO also had internal controls for the operations of its subsidiaries, protecting its and its subsidiaries' assets from unauthorized use or misuse by any director, executive, or employee. These internal controls also covered transactions with potential conflicts of interest and transactions with connected persons. The Board also believed that EGCO had adequate internal controls for other aspects as well. The Audit Committee received no report from the auditor about any significant insufficiencies in internal controls in the past year.

EGCO's internal controls include operations, reporting, and compliance objectives. The results of evaluation EGCO's and its subsidiaries' 5 aspects of internal controls according to the COSO Internal Control Framework are as follows:

1. Control Environment

- EGCO's vision, mission, and objectives, which the Board of Directors has established, serve as guidelines for management and employees. Through its supervision, the Board ensures operations' alignment with corporate goals, taking into account fairness to all stakeholders and long-term value for EGCO.
- The Board of Directors has designed a suitable organizational structure to accommodate business growth. This structure is subject to adjustments based on the changing environment.
- The Board of Directors has issued the Business Code of Conduct and Good Corporate Governance Principles in writing, subject to periodic reviews, for directors, executives, and employees. New employees are to undergo orientation, which promotes their understanding of internal controls, equips them with best practices, and prevents conflicts of interest.
- The Board of Directors has issued rules, regulations, orders, and the Table of Authorities in writing. Official announcements are made to inform employees and facilitate their adoption of these rules.
- The Board of Directors has issued the Anti-Corruption Policy and the Anti-Corruption Manual for directors, executives, and employees.
- According to EGCO's Internal Control Policy, the Board of Directors tasks the Audit Committee with examining the suitability and effectiveness of ECGO's and its subsidiaries' internal controls to protect assets and shareholders' benefits. Internal Control is responsible for auditing every department.

2. Risk Assessment

- The Board of Directors assigns the administration of risk identification, risk assessment, and risk appetite to the Risk Oversight Committee, which also runs a monthly corporate risk management plan. Meanwhile, the Audit Committee monitors corporate risks quarterly.
- Risk management is the duty of all departments and units at EGCO. The Risk Assessment Division provides corporate risk management support to ensure that all risks are managed efficiently, effectively, and according to EGCO Group's current business context.
- EGCO examines internal and external risk factors that may affect its goals, evaluates their likelihood and impact, identifies and prioritizes significant risks, and provides risk management measures accordingly. The risk culture is part of EGCO's corporate culture.
- In 2021 EGCO had plans in place to manage critical enterprise risks and emerging risks, namely the impact of COVID-19, changes in government policy due to climate change, digital disruption, cybersecurity, and personal data protection.

3. Control Activities

- EGCO's written Table of Authorities specifies the scope of power and amount per transaction an executive at different levels can approve. This table is set to be revised periodically.
- EGCO's procurement process complies with applicable regulations and orders, which specify the exact procedures to follow and the duties and responsibilities in the procurement process.
- Responsible units for transaction approval, account operation or recording, and asset safeguarding are appropriately segregated.
- EGCO monitors the performance of its subsidiaries and associated companies. Management reports operating results to the Board of Directors for acknowledgment every month.
- Connected transactions are executed in compliance with regulations of the Stock Exchange of Thailand, taking into account the reasonableness and EGCO's best interest. They must be approved by an authorized person with no vested interest.
- In 2021 a working group was established to formulate a personal data protection policy, including the relevant guidelines, to govern, monitor, and evaluate EGCO Group companies' use of personal data. They are intended to be thorough, effective, and compliant with applicable laws.

4. Information & Communication

ECGO provides adequate information to allow the Board of Directors, sub-committee members, and management to make decisions. Its internal communication channels are also effective.

- The meeting notice and agenda containing necessary and sufficient information are delivered to Board and sub-committee members at least 7 days in advance.
- Monthly performance reports are submitted to the Board, who can invite related persons-namely, executives, employees, auditors, and internal auditors-to discuss, clarify or answer questions at a Board meeting.
- Internal communication channels include intranet, email, and the EGCO Talk internal broadcast, allowing all employees to receive information about policies, company regulations, orders, and good corporate governance principles. We have also issued an Anti-Corruption Manual. In 2021 intranet-based public relations events took place regularly to educate employees about anti-corruption efforts. Anti-corruption training was also conducted for EGCO Group directors and employees.
- EGCO stores and categorizes all important documents, including accounting and financial reports' supporting documents. The auditors who use them have found no flaws and made no improvement recommendations to EGCO.
- Laws, regulations, and orders related to EGCO's business operations are categorized and compiled in a compliance database, making it convenient for reference and research. The Legal Division is responsible for handling the information and providing consultation.
- EGCO's communication is two-way. We disclose information to outsiders via the website www.egco.com so that external stakeholders are aware of EGCO's information at all times. We hold meetings with investors and analysts every quarter. We issue press releases to the media. Our Investor Relations Division prepares and distributes Investor pamphlets to shareholders and investors. Stakeholders can contact us through various channels.
- EGCO has published whistleblowing guidelines in the Code of Conduct, which is available on EGCO's website. Employees and stakeholders can report non-compliance to the Good Corporate Governance Committee, the Audit Committee, and the Board of Directors. We protect the whistleblowers by keeping their identity confidential and accessible only by the people assigned to the case to reassure whistleblowers of their safety.

- Employees from the operational level to the Executive Vice President level to complete the Report on Interest using the MS Forms in EGCO GroupNet in compliance with the policy and guidelines for conflict-of-interest prevention of the Electricity Generating Public Company Limited that require employees to report their interests since the first day of duty at EGCO.
- In 2021 Electricity Generating Public Company Limited and Khanom Electricity Generating Company Limited received their membership recertification from the Thai CAC.
- In 2021 EGCO received the ISO/IEC 27001:2013 certification for its data center's information security management system (ISMS) and its policies and guidelines for information security and cybersecurity

5. Monitoring Activities

- The Asset Management Unit, Power Plant Management Unit, and Project Management Unit have been established to monitor the performance of EGCO, its subsidiaries, and its associated companies. They also compare it against the established operation plans and KPIs and analyze failures when plans are not executed, and KPIs are not met. They regularly report the results to EGCO's executives and Board of Directors.
- External auditors are encouraged to perform their tasks independently and regularly report audit results to the Audit Committee.
- Management is required to review EGCO's and its subsidiaries' internal controls annually to assess their adequacy and suitability. The assessment form used conforms to the guidelines of the SEC.
- EGCO's employees and executives are required to study and follow the rules and regulations and Code of Conduct on the intranet and sign a compliance statement that confirms their adherence.
- The Internal Audit Division regularly reviews the adequacy and suitability of EGCO's internal controls and monitors the implementation of the Anti-Corruption Policy. The review outcomes are presented to the Audit Committee for consideration and approval and subsequently to the Board of Directors for acknowledgment.
- External auditors review EGCO's internal controls for accounting and finance to determine audit guidelines, timeframe, and scope of work. In 2020 the external auditors did not find any material issues and made no recommendation for improvement.

Chief of Internal Audit

In the Audit Committee Meeting No. 7/2019 on July 9, 2019, Mrs. Jutima Tungcharoendee was appointed Senior Vice President of Internal Audit due to her knowledge, ability, and experience in EGCO's internal auditing. She has attended training courses related to internal auditing, received CPIAT certification, and passed the Forensic Accounting Certificate (FAC) exam. She also possesses an understanding of EGCO's activities and operations. The Audit Committee deemed her suitable to perform the role appropriately and adequately.

RELATED TRANSACTIONS

In conducting our business activities and services, there are related transactions between EGCO or its subsidiaries and persons or parties who may have potential conflicts of interest. EGCO endeavors to ensure that these transactions are justified and in compliance with the Stock Exchange of Thailand ("SET") and the Capital Market Supervisory Board's rules and regulations. Apart from designating the authorized persons to approve the transaction in accordance with the Table of Authority, the Audit Committee is entrusted to review the related transactions that need to be approved by the Board of Directors. The details of the related transactions are disclosed under the items 37 and 38 of the Notes to Financial Statements for the year ended December 31, 2021.

PROCEDURES TO APPROVE THE RELATED TRANSACTIONS

EGCO has materialized the following policies and guidelines in treating and approving the related transactions.

- In case of entering into any agreements or any related transactions with EGCO, subsidiaries, joint venture companies, associate companies and/or any concerned parties, EGCO will consider the necessity and justification of such transactions for the best interest of the Company. Costs are charged at the market price like transactions with any other outside parties (Arm's Length Basis). If there is no such price, EGCO will apply the price of similar market transactions. EGCO may also compare the price with the one recommended by an independent appraiser to ensure that such price is reasonable to maximize the Company's benefits.
- Business transactions that are considered connected transactions according to the SET's rules and regulations have to strictly comply with the requirements of the SET's and the Capital Market Supervisory Board. They are also to be reviewed by the Audit Committee in case that such transactions must be approved by the Board of Directors.
- The Board has assigned management and the Investment Committee to approve related transactions which have terms and agreements that any ordinary person will agree with the counterpart under similar circumstances, EGCO always ensures its bargaining power without any influential privileges resulted from persons holding administrative titles as the director, executive or related authority. Such transactions shall be reported to the Audit Committee and the Board of Directors. This is aimed to ensure that such transactions are properly carried out and provide optimal benefits to the Company and in line with the procedures.
- In case that the shareholders' approval is needed, the major shareholders who may have conflicts of interest can attend the meeting in order to constitute a quorum but will not have voting rights, thus does not affect the quorum and the vote counting.
- Managements and employees discharge of duties as director, management and employee of subsidiaries and associates which EGCO holds an ownership interest have to care for the conflicts of interest between the status of managements and employees of EGCO Group and the status of director or management of such subsidiaries and associates.
- Directors and executives with potential conflicts of interest are not allowed to vote or attend the meeting.

Related Transactions in 2021

EGCO or subsidiaries' related transactions which may have potential conflicts of interest in 2021 as follows:

1. Related Transactions with Electricity Generating Authority of Thailand (EGAT)

EGAT is a major shareholder which owns 25.41% of EGCO stakes and has 4 representative directors on EGCO Board.

Transactions	Value of Related Transactions for the Fiscal Year Ended 31 December 2021 (in million baht)	Necessity and Reasonableness
1. Sales of electricity • Revenue for the period • Receivable	 20,923 4,497	The Group has entered into 7 power purchase agreements with EGAT. The 6 agreements are effective for periods of 21 years to 25 years, and another one with a term of renewable period every 5 years. EGAT is the only purchaser which its price and conditions are in accordance with standard prices and have been approved by the government agency.
2. Maintenance/ Services Income • Revenue for the period • Receivable	 94 34	The Group has entered into maintenance service agreement with EGAT by the price and conditions are following the general business conditions.
3. Back up power fee • Expense for the period • Account Payables	 18 1	The Group has entered into a backup power purchase agreement with EGAT for the use in the event of an interruption of the power generation. The prices and conditions are mutually agreed in the agreements which are following the general business conditions.
4. Fuel management and diesel fuel management fee • Expense for the period • Account Payables	 3 -	The Group hired an advisor for fuel management and diesel fuel management with EGAT by the price and conditions are following the general business conditions.
5. Service of install and analyze equipment and general repair services fee • Expense for the period • Account Payables	 96 0.11	The Group has hired a service of install and analyze equipment. Including hiring general repair and major maintenance services with EGAT by the price and conditions are following the general business conditions.
6. Training fee • Expense for the period • Account Payables	 0.05 -	The Group hired EGAT to train employees in operating and maintenance course and Boiler Tube damage analysis course in order to develop personnel knowledge and skills to meet commercial requirements.

2. Related Transactions with TEPDIA Generating B.V. (TEPDIA)

TEPDIA is a major shareholder which owns 23.94% of EGCO stakes and has 4 representative directors on EGCO Board.

2.1 Mitsubishi Corporation, Inc (MC)

MC indirectly holds some stakes in TEPDIA which owns 5.985%

Transactions	Value of Related Transactions for the Fiscal Year Ended 31 December 2021 (in million baht)	Necessity and Reasonableness
1. Operation/Maintenance Services Fee • Expense for the period • Account Payables	 103 15	The Group has entered into Major Maintenance Agreement with MC in order to provide maintenance services to the power plants. The price for such services is calculated under the agreements on a cost plus basis and will be adjusted annually according to the Consumer Price Index. The agreements are effective for a period of 12 years, commencing from 19 June 2016
2. Maintenance Fee • Expense for the period • Account Payables	 19 0.40	The Group hired an advisor for Major Inspection maintenance with MC by the price and conditions are following the general business conditions.
3. Purchases of Spareparts • Spareparts • Account Payables	 6 3	The Group has entered into spareparts purchases agreement with MC which is the manufacturer in order to provide maintenance services to the power plants. Prices and conditions are following the general business conditions.
4. Training fee • Expense for the period • Account Payables	 1 -	The Group has entered into Cloud Simulator program for employees' training with MC to develop personnel on knowledge and skills to meet commercial requirements. The training agreement is valid for 3 years, commencing from 5 April 2018

2.2 Mitsubishi Corporation Machinery, Inc. (MCM)

MCM is a wholly 100% owned subsidiary of MC which indirectly holds some stakes in TEPDIA which owns 5.985%.

Transactions	Value of Related Transactions for the Fiscal Year Ended 31 December 2021 (in million baht)	Necessity and Reasonableness
1. Long-term technical advisory service fees • Expense for the period • Account Payables	 451 79	The Group has entered into a maintenance service agreement with MCM to provide maintenance to the power plant. The service fee is based on the basis of cost plus margin under the terms of the contract and will be adjusted annually according to the consumer price index. The prices and conditions are in accordance with general business conditions. The agreement is effective for a period 12 years commencing from June 19, 2016.
2. Purchases of Spareparts • Spareparts • Account Payables	 1 -	The Group has entered into spareparts purchases agreement with MCM which is the manufacturer in order to provide maintenance services to the power plants. Prices and conditions are following the general business conditions.

2.3 JERA Co., Inc. (JERA)

JERA indirectly holds some stakes in TEPDIA which owns 11.97%

Transactions	Value of Related Transactions for the Fiscal Year Ended 31 December 2021 (in million baht)	Necessity and Reasonableness
1. Long-term technical advisory service fees • Expense for the period • Account Payables	 14 4	The Group has entered into a Long-term technical advisory service agreement with JERA to manage the power plant efficiency through expert supervision and consultation. The prices and conditions are in accordance with general business conditions. The agreement is effective for a period 25 years, commencing from June 19, 2016.

Policy and Tendency of Future Related Transactions

EGCO's existing related transactions tends to continue and EGCO will seek to ensure that all of the related transactions be conducted transparently, fair and beneficial to the Company. The Audit Committee, external auditors or independent consultants shall be assigned by the Board to review and give their independent opinions on the pricing and justifications of those transactions. Disclosure of related transactions shall strictly follow the notifications of SET and SEC. In addition, EGCO will continue to provide the updated information, rules and regulations on related transactions to concerned staffs for thorough understanding which will certainly lead to full compliance and transparency for the optimal benefits of the shareholders.

SECTION
03

FINANCIAL OVERVIEW

FINANCIAL OVERVIEW

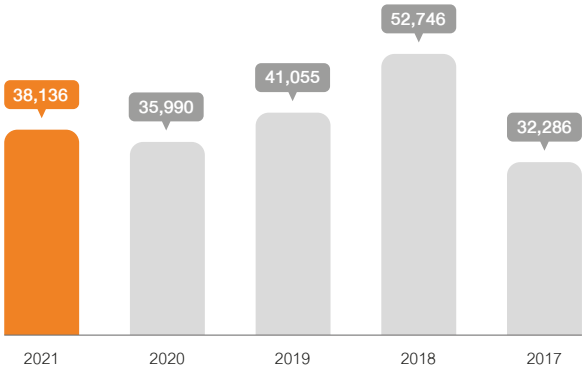
CONSOLIDATED FINANCIAL STATEMENTS

	2021	2020	2019	2018	2017
FINANCIAL PERFORMANCE (Million Baht)					
Sales and service income	35,903	33,578	37,511	35,522	30,018
Dividend and other income	2,233	2,412	2,895	2,652	2,268
Net gain on disposal of investments in joint ventures	-	-	-	9,819	-
Net gain on disposal investment in marketable securities	-	-	-	4,358	-
Net gain on dissolutions of a subsidiary and a joint venture	-	-	649	395	-
Costs of sales and services	(27,560)	(25,258)	(28,420)	(26,606)	(21,332)
Administrative expenses and income taxes	(4,312)	(5,243)	(4,360)	(6,414)	(3,480)
Finance costs	(8,248)	(4,221)	(1,254)	(4,009)	210
Gains (losses) on remeasurement of financial instruments, net	(1,398)	1,793	-	-	-
Share of profit from investments in associates and joint ventures, net	6,428	4,838	6,405	5,488	5,773
Profit attributable to non-controlling interests	13	27	67	43	45
Gains (losses) on exchange rates, net	1,071	861	(300)	(89)	(1,594)
Profit attributable to owners of the parent	4,104	8,733	13,059	21,073	11,818
Operating Profit (Loss)[1]	10,218	8,738	10,368	9,195	9,268
FINANCIAL POSITION (Million Baht)					
Total assets	241,932	214,438	208,523	206,428	200,332
Total liabilities	127,895	111,604	103,416	105,578	113,476
Equity attributable to the owners	113,441	102,243	104,491	100,239	86,238
Non-controlling interests	596	591	616	611	618
Issued and paid-up share capital	5,265	5,265	5,265	5,265	5,265
PER SHARE DATA (Baht)					
Earnings per share	7.80	16.59	24.81	40.03	22.45
Book Value	215.48	194.21	198.48	190.40	163.81
Dividend	6.50[2]	6.50	6.50	9.50	7.00
RATIO ANALYSIS					
Liquidity ratio (Time)	1.42	2.14	2.87	1.51	2.26
Cashflows liquidity ratio (Time)	0.48	0.81	0.49	0.44	0.71
Gross profit ratio (%)	23.24	24.78	24.24	25.10	28.94
Earnings ratio (%)	9.21	21.39	27.52	36.19	31.05
Return on equity ratio (%)	3.81	8.45	12.76	22.60	14.05
Return on assets ratio (%)	1.80	4.13	6.29	10.36	5.95
Debt to equity ratio (Time)	1.12	1.09	0.98	1.05	1.31

Remarks: [1] Operating Profit (Loss) : Profit (Loss) before the effects of foreign exchange, deferred tax, impairment, financial instruments and lease income.
[2] Subject to the approval of the 2021 Shareholders' Annual General Meeting for the appropriation of net profit and the payment of dividend.

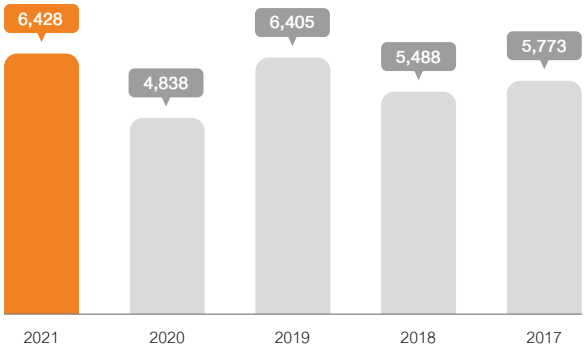
Total Revenues

Unit: Million Baht



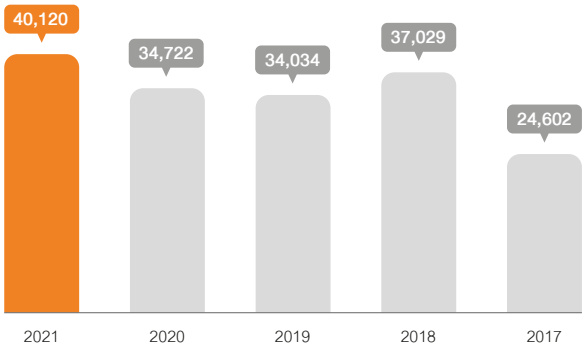
Share of profit from investments in associates and joint ventures, net

Unit: Million Baht



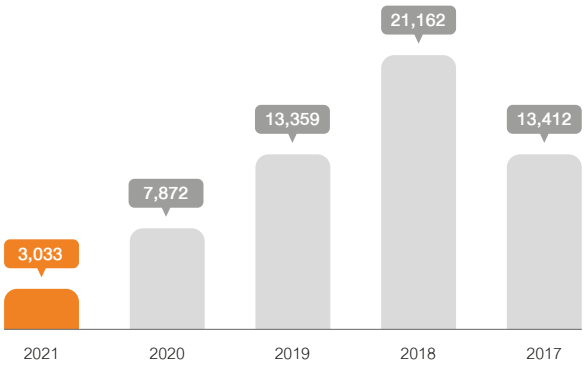
Total Expenses excluding gains (losses) on exchange rates, net

Unit: Million Baht



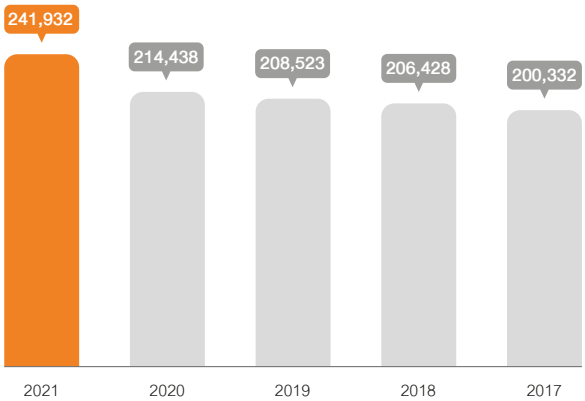
Net Profit excluding gains (losses) on exchange rates, net

Unit: Million Baht



Total Assets

Unit: Million Baht



STATEMENT OF DIRECTORS' RESPONSIBILITIES

According to the Public Limited Companies Act B.E. 2535, the Accounting Act B.E. 2543, the Securities and Exchange Act B.E. 2535, and the Notification of Capital Market Supervisory Board re: "Disclosure of Financial Statements and Performance of Listed Companies", the Board of Directors is responsible for preparing the company's true and fair financial statements.

To adhere with such responsibilities, the Electricity Generating Public Company Limited's (EGCO) Board of Directors has issued the company's accounting, finance and budget regulation, B.E. 2564, that Management must comply with. The Audit Committee has reviewed to ensure that EGCO's financial statements are justified and prudently prepared, are in compliance with laws and regulations, and that appropriate accounting policies are consistently applied. The Audit Committee also has reviewed EGCO's internal control systems to ensure their adequacy and effectiveness as a means to safeguard the company's assets from unauthorized use and to prevent fraud.

EGCO has prepared both consolidated and separate financial statements for the year ending December 31, 2021, in compliance with the Thai Financial Reporting Standards, and the financial reporting requirements issued under the Securities and Exchange Act. The appropriate accounting policies were consistently applied, and financial statements were prepared in a prudent and justified manner with significant information adequately disclosed in the financial statement notes. The consolidated and separate financial statements were audited by the auditor with unqualified opinions.

The Board of Directors' opinion is that both the consolidated and separate financial statements for 2021 fairly present EGCO's financial position, operating results and cash flows, in all material respects and in a reliable manner, and that such statements were in compliance with the Thai Financial Reporting Standards and all governing laws and regulations.

MR. KULIT SOMBATSIRI
Chairman

INDEPENDENT AUDITOR'S REPORT

TO THE SHAREHOLDERS OF ELECTRICITY GENERATING PUBLIC COMPANY LIMITED

My Opinion

In my opinion, the consolidated financial statements and the separate financial statements present fairly, in all material respects, the consolidated financial position of Electricity Generating Public Company Limited (the Company) and its subsidiaries (the Group) and the separate financial position of the Company as at 31 December 2021, and its consolidated and separate financial performance and its consolidated and separate cash flows for the year then ended in accordance with Thai Financial Reporting Standards (TFRS).

What I have Audited

The consolidated financial statements and the separate financial statements comprise:

- the consolidated and separate statements of financial position as at 31 December 2021;
- the consolidated and separate statements of income for the year then ended;
- the consolidated and separate statements of comprehensive income for the year then ended;
- the consolidated and separate statements of changes in equity for the year then ended;
- the consolidated and separate statements of cash flows for the year then ended; and
- the notes to the consolidated and separate financial statements, which include significant accounting policies and other explanatory information.

Basis for Opinion

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

Key Audit Matters

Key audit matters are those matters that, in my professional judgement, were of most significance in my audit of the consolidated and separate financial statements of the current period. These matters were addressed in the context of my audit of the consolidated and separate financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

KEY AUDIT MATTER	HOW MY AUDIT ADDRESSED THE KEY AUDIT MATTER
Impairment assessment of goodwill	
Refer to Note 20 Goodwill. As at 31 December 2021, the Group recognised goodwill net of an allowance for impairment of Baht 7,151 million, which represented 3% of the total assets in the consolidated financial statements. The goodwill of Baht 7,130 million arose from the acquisition of an electricity generation business in the Philippines, and the remaining Baht 21 million arose from the acquisitions of the electricity generation businesses in Thailand. The Group recognised an additional impairment loss of Baht 765 million for the goodwill arose from the acquisition of the electricity generation business in the Philippines in the consolidated financial statements for the year ended 31 December 2021. The management tests the impairment of goodwill annually or whenever there is an indicator of impairment. Also, the management performs impairment test at the cash-generating unit level (CGU) and calculates its recoverable amount by applying the value-in-use model. This model involves management's significant judgements in respect to the business' future operating results, projected cash flows and the discount rate to be applied to those projected cash flows. Key assumptions applied in the value-in-use model are the forecasted electricity tariffs, capacity of the power plants, operating expenditures, capital structure, growth rates and the discount rate to be applied to the projected cash flows. I focused on the goodwill valuation arising from the acquisition of the electricity generation business in the Philippines due to its significant value and the fact that the determination of value-in-use depends on a number of assumptions. Those assumptions involve management's significant judgements in assessing the feasibility of future business plans.	I carried out the following procedures to assess the impairment testing of the goodwill arising from the acquisition of the electricity generation business in the Philippines which was prepared by the management: • assessed the appropriateness of the management's identification of the CGUs. • held discussions with management to understand the basis for the assumptions applied and evaluated whether the goodwill impairment testing process and assumptions had been applied consistently across the Group. • challenged management's significant assumptions used in the goodwill impairment testing, especially the forecasted electricity tariffs, capacity of the power plants, operating expenditures, capital structure, growth rates and discount rate. My procedures included comparing those assumptions to the underlying agreements, external sources, forecasted foreign exchange rates and the approved business plan. • assessed the reasonableness of the business plan by comparing the 2021 plan with the actual results. • assessed whether the discount rate applied by the management was within the acceptable range, taking into account independently obtained data from available public information of companies in the industry. As a result of the procedures performed, I noted that the key assumptions applied by the management are within the acceptable range and consistent with supporting evidence.

KEY AUDIT MATTER	HOW MY AUDIT ADDRESSED THE KEY AUDIT MATTER
Impairment assessment of investments in subsidiaries and joint ventures and subsidiaries' property, plant and equipment	
Refer to Note 16 Investments in subsidiaries, associates and joint ventures and Note 18 Property, plant and equipment. During the year ended 31 December 2021, the Company recognised an impairment loss on investments in subsidiaries and joint ventures which operate the electricity generation businesses in Thailand of Baht 544 million in the separate statement of income. Also, the Group recognised an impairment loss on the subsidiaries' power plants of Baht 242 million in the consolidated statement of income. The management tests the impairment of investments in subsidiaries and joint ventures and subsidiaries' power plants whenever there is any indicator that asset may be impaired and calculates their recoverable amounts by applying the value-in-use models. These models involve management's significant judgements in identifying CGUs and the assumptions applied, which are the forecasted electricity tariffs, capacity of the power plants, operating expenditures, capital structure, growth rates and discount rates to be applied to the projected cash flows. The management considered the following factors to assess whether there were any impairment indicators: • the significant decrease of the subsidiaries' forecasted revenues due to the less remaining period of adder tariffs as specified in the power purchase agreements. • the carrying value of investment recognised in the separate financial statements was higher than its net equity value. I focused on the impairment assessment of the investments in subsidiaries and joint ventures and subsidiaries' power plants due to their significant values, the various assumptions applied for the calculation of the recoverable amounts and management's significant judgements involved in determining the appropriate level of impairment to be recorded.	I carried out the following procedures to assess the impairment testing of the investments in subsidiaries and joint ventures and subsidiaries' power plants which was prepared by the management: • assessed the appropriateness of the impairment indicators and management's identification of the CGUs. • held discussions with management to understand the basis for the assumptions applied and evaluated whether the impairment testing process and assumptions had been applied consistently across the Group. • challenged management's significant assumptions used in the impairment testing of the investments in subsidiaries and joint ventures and subsidiaries' power plants, especially the forecasted electricity tariffs, capacity of the power plants, operating expenditures, capital structure, growth rates and discount rates. My procedures included comparing those assumptions to the underlying agreements, external sources and the approved business plan. • assessed the reasonableness of the business plans by comparing the 2021 plans with the actual results. • assessed whether the discount rates applied by the management was within the acceptable range, taking into account independently obtained data from available public information of companies in the industry. As a result of the procedures performed, I noted that the key assumptions applied by management in assessing the recoverable amounts were reasonable and consistent with supporting evidence.

Other Information

The directors are responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated and separate financial statements and my auditor's report thereon. The annual report is expected to be made available to me after the date of this auditor's report.

My opinion on the consolidated and separate financial statements does not cover the other information and I will not express any form of assurance conclusion thereon.

In connection with my audit of the consolidated and separate financial statements, my responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the consolidated and separate financial statements or my knowledge obtained in the audit, or otherwise appears to be materially misstated.

When I read the annual report, if I conclude that there is a material misstatement therein, I am required to communicate the matter to the audit committee.

Responsibilities of the directors for the consolidated and separate financial statements

The directors are responsible for the preparation and fair presentation of the consolidated and separate financial statements in accordance with TFRS, and for such internal control as the directors determine is necessary to enable the preparation of consolidated and separate financial statements that are free from material misstatement, whether due to fraud or error.

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

The audit committee assists the directors in discharging their responsibilities for overseeing the Group's and the Company's financial reporting process.

Auditor's responsibilities for the audit of the consolidated and separate financial statements

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

As part of an audit in accordance with TSAs, I exercise professional judgement and maintain professional scepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the consolidated and separate financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's and the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.

- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's and the Company's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the consolidated and separate financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Group and the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated and separate financial statements, including the disclosures, and whether the consolidated and separate financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

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

I also provide the audit committee with a statement that I have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, related safeguards.

From the matters communicated with the audit committee, I determine those matters that were of most significance in the audit of the consolidated and separate financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

PricewaterhouseCoopers ABAS Ltd.

Amornrat Pearmpoonvatanasuk
Certified Public Accountant (Thailand) No. 4599
Bangkok
28 February 2022

STATEMENT OF FINANCIAL POSITION

Electricity Generating Public Company Limited As at 31 December 2021

	Notes	Consolidated financial statements 2021 Baht'000	Consolidated financial statements 2020 Baht'000	Separate financial statements 2021 Baht'000	Separate financial statements 2020 Baht'000
Assets					
Current assets					
Cash and cash equivalents	10	17,897,793	17,236,750	3,454,668	3,682,900
Financial assets measured at amortised cost	11	4,128,104	3,257,439	2,382,794	1,927,863
Financial assets used as collateral measured at amortised cost	12	3,073,612	3,639,546	-	-
Trade receivables, net	13	7,059,679	4,810,992	-	-
Current portion of lease receivables under power purchase agreements from a related party, net	37.3	1,679,978	1,466,629	-	-
Other receivables, net	15	1,259,607	1,393,471	2,621,079	3,008,301
Current portion of long-term loans to related parties	37.5	19,496	8,335	200,312	193,283
Derivative assets	6, 7	314,964	222,578	137,100	-
Fuel and spare parts and supplies, net	14	2,946,664	2,760,001	-	-
Non-current assets held-for-sale		115,600	115,600	-	-
Total current assets		38,495,497	34,911,341	8,795,953	8,812,347

The accompanying notes are an integral part of these consolidated and separate financial statements.

STATEMENT OF FINANCIAL POSITION

Electricity Generating Public Company Limited As at 31 December 2021

	Notes	Consolidated financial statements 2021 Baht'000	Consolidated financial statements 2020 Baht'000	Separate financial statements 2021 Baht'000	Separate financial statements 2020 Baht'000
Assets (contitnued)					
Non-current assets					
Lease receivables under power purchase agreements from a related party, net	37.3	15,744,435	15,945,867	-	-
Other receivables, net	15	703,091	715,813	1,256,703	730,972
Long-term loans to related parties	37.5	4,710,035	1,290,936	50,656,238	50,883,162
Investments in subsidiaries, net	16.2	-	-	15,572,739	15,597,965
Investments in associates	16.3	25,050,170	14,010,611	3,625,414	3,357,625
Investments in joint ventures, net	16.4	94,701,776	82,601,530	26,958,780	27,432,963
Investment property, net	17	517,138	518,174	719,908	719,908
Property, plant and equipment, net	18	49,597,484	49,750,114	431,397	424,324
Right-of-use assets, net		583,781	512,883	58,980	29,518
Intangible assets, net	19	2,547,938	2,991,502	-	-
Goodwill, net	20	7,150,963	7,915,963	-	-
Derivative assets	6, 7	992,005	2,017,421	-	552,991
Deferred tax assets, net	24	770,645	1,002,860	-	-
Other non-current assets		367,042	252,680	60,952	24,741
Total non-current assets		203,436,503	179,526,354	99,341,111	99,754,169
Total assets		241,932,000	214,437,695	108,137,064	108,566,516

For Director .....

The accompanying notes are an integral part of these consolidated and separate financial statements.

STATEMENT OF FINANCIAL POSITION

Electricity Generating Public Company Limited As at 31 December 2021

	Notes	Consolidated financial statements 2021 Baht'000	Consolidated financial statements 2020 Baht'000	Separate financial statements 2021 Baht'000	Separate financial statements 2020 Baht'000
Liabilities and equity					
Current liabilities					
Trade payables		4,380,006	2,509,974	-	-
Other payables	21	2,812,084	2,427,473	376,368	607,646
Current portion of long-term loan from financial institutions, net	22.1	14,514,076	11,066,550	11,069,492	6,141,986
Current portion of long-term loans from other company, net	22.2	115,881	103,472	-	-
Current portion of debenture	23	5,039,546	-	5,039,546	-
Derivative liabilities	6, 7	100,112	139,108	99,475	88,975
Current portion of lease liabilities, net		57,468	43,532	10,415	4,913
Total current liabilities		27,019,173	16,290,109	16,595,296	6,843,520
Non-current liabilities					
Long-term loans from financial institutions, net	22.1	89,747,254	76,332,704	23,038,890	27,670,001
Long-term loan from other company, net	22.2	327,096	383,510	-	-
Debenture	23	-	5,041,566	-	5,041,566
Derivative liabilities	6, 7	3,478,156	6,117,562	513,229	1,385,286
Lease liabilities, net		545,535	484,808	49,800	25,193
Retirement benefit obligations		586,727	689,558	224,844	274,806
Provision for decommissioning costs	25	2,267,589	2,501,967	-	-
Deferred tax liabilities, net	24	3,023,833	2,969,173	-	-
Other non-current liabilities	26	899,951	792,497	3,884	2,047
Total non-current liabilities		100,876,141	95,313,345	23,830,647	34,398,899
Total liabilities		127,895,314	111,603,454	40,425,943	41,242,419

The accompanying notes are an integral part of these consolidated and separate financial statements.

EGCO GROUP
บมจ. อีจัดโอ จำกัด (มหาชน)
Electricity Genera... Public Company Limited

STATEMENT OF FINANCIAL POSITION

Electricity Generating Public Company Limited As at 31 December 2021

	Note	Consolidated financial statements 2021 Baht'000	Consolidated financial statements 2020 Baht'000	Separate financial statements 2021 Baht'000	Separate financial statements 2020 Baht'000
Liabilities and equity (continued)					
Equity					
Share capital					
Authorised share capital					
- 530,000,000 ordinary shares at par of Baht 10 per share		5,300,000	5,300,000	5,300,000	5,300,000
Issued and paid-up share capital					
- 526,465,000 ordinary shares paid-up at Baht 10 per share		5,264,650	5,264,650	5,264,650	5,264,650
Premium on share capital		8,601,300	8,601,300	8,601,300	8,601,300
Premium on treasury stock		47,373	47,373	47,373	47,373
Surplus from acquisition of non-controlling interests		(218,689)	(218,689)	-	-
Retained earnings					
Appropriated					
- Legal reserve	27	530,000	530,000	530,000	530,000
Unappropriated		102,746,547	102,196,276	53,916,008	54,447,222
Other components of equity		(3,530,315)	(14,177,707)	(648,210)	(1,566,448)
Total equity attributable to the owners of the parent		113,440,866	102,243,203	67,711,121	67,324,097
Non-controlling interests		595,820	591,038	-	-
Total equity		114,036,686	102,834,241	67,711,121	67,324,097
Total liabilities and equity		241,932,000	214,437,695	108,137,064	108,566,516

The accompanying notes are an integral part of these consolidated and separate financial statements.

EGCO GROUP
บมจ. ผลิตไฟฟ้า จำกัด (มหาชน)
Electricity Generating Public Company Limited

STATEMENT OF INCOME

Electricity Generating Public Company Limited For the year ended 31 December 2021

	Notes	Consolidated financial statements 2021 Baht'000	Consolidated financial statements 2020 Baht'000	Separate financial statements 2021 Baht'000	Separate financial statements 2020 Baht'000
Sales and services income	28	33,102,515	30,700,606	-	-
Lease income under power purchase agreements		2,800,890	2,877,065	-	-
Costs of sales and services	29	(27,560,244)	(25,257,850)	-	-
Gross profit		8,343,161	8,319,821	-	-
Dividend and other income	30	2,233,530	2,412,689	9,069,043	10,201,868
Impairment loss on assets	31	(1,006,919)	(1,608,501)	(544,409)	(174,145)
Impairment loss on financial assets from related parties	31	-	-	(144,019)	-
Gains (losses) on exchange rates, net		1,070,642	860,816	67,265	(25,365)
Gains (losses) on remeasurement of financial instruments, net		(1,398,009)	1,792,608	(416,657)	203,470
Administrative expenses		(2,645,952)	(2,612,842)	(1,146,720)	(1,138,522)
Finance costs	32	(8,248,241)	(4,220,656)	(3,862,148)	(1,654,380)
Share of profit from investments in associates and joint ventures, net	16.1	6,428,190	4,838,035	-	-
Profit before income tax		4,776,402	9,781,970	3,022,355	7,412,926
Income tax expense	33	(659,348)	(1,022,100)	-	-
Profit for the year		4,117,054	8,759,870	3,022,355	7,412,926
Profit attributable to:					
Owners of the parent		4,103,840	8,733,030	3,022,355	7,412,926
Non-controlling interests		13,214	26,840	-	-
Profit for the year		4,117,054	8,759,870	3,022,355	7,412,926
Basic earnings per share - owners of the parent (Baht)	34	7.80	16.59	5.74	14.08

The accompanying notes are an integral part of these consolidated and separate financial statements.

STATEMENT OF COMPREHENSIVE INCOME

Electricity Generating Public Company Limited For the year ended 31 December 2021

	Note	Consolidated financial statements 2021 Baht'000	Consolidated financial statements 2020 Baht'000	Separate financial statements 2021 Baht'000	Separate financial statements 2020 Baht'000
Profit for the year		4,117,054	8,759,870	3,022,355	7,412,926
Other comprehensive income (expense)					
Items that will not be reclassified subsequently to profit or loss					
- Remeasurements of post-employment benefit obligations		114,359	(81,200)	50,603	(25,040)
Less Income tax relating to other comprehensive income (expense)		(18,193)	12,587	-	-
- Share of other comprehensive income of associates and joint ventures accounted for using the equity method, net of income tax	16.1	21,404	10,526	-	-
Items that will be reclassified subsequently to profit or loss					
- Cost of hedging		(26,104)	43,388	-	-
- Cash flow hedges		2,333,043	(1,518,178)	867,635	(787,467)
Less Income tax relating to other comprehensive income (expense)		(156,697)	26,985	-	-
- Share of other comprehensive income (expense) of associates and joint ventures accounted for using the equity method, net of income tax	16.1	6,333,032	(1,220,720)	-	-
- Exchange difference on translation		2,050,393	(576,287)	-	-
Other comprehensive income (expense) for the year, net of tax		10,651,237	(3,302,899)	918,238	(812,507)
Total comprehensive income for the year		14,768,291	5,456,971	3,940,593	6,600,419
Total comprehensive income attributable to:					
Owners of the parent		14,751,232	5,432,304	3,940,593	6,600,419
Non-controlling interests		17,059	24,667	-	-
Total comprehensive income for the year		14,768,291	5,456,971	3,940,593	6,600,419

The accompanying notes are an integral part of these consolidated and separate financial statements.

EGCO GROUP
บมจ. ผลิตไฟฟ้า จำกัด (มหาชน)
Electricity Generating Public Company Limited

STATEMENT OF CHANGES IN EQUITY

Electricity Generating Public Company Limited For the year ended 31 December 2021

		Consolidated financial statements															
		Attributable to owners of the parent															
								Other components of equity									
						Retained earnings		Other comprehensive income (expense)									
	Note	Issued and paid-up share capital Baht'000	Premium on share capital Baht'000	Premium on treasury stock Baht'000	Surplus from acquisition of non-controlling interests Baht'000	Appropriated - legal reserve Baht'000	Unappropriated Baht'000	Remeasurements of post-employment benefit obligations Baht'000	Cost of hedging Baht'000	Cash flow hedges Baht'000	Income tax relating to other comprehensive income (expense) Baht'000	Share of other comprehensive income (expense) of associates and joint ventures Baht'000	Exchange difference on translation Baht'000	Total other components of equity Baht'000	Total owners of the parent Baht'000	Non-controlling interests Baht'000	Total equity Baht'000
Opening balance as at 1 January 2021		5,264,650	8,601,300	47,373	(218,689)	530,000	102,196,276	(265,955)	(37,092)	(5,099,194)	457,751	(4,580,369)	(4,652,848)	(14,177,707)	102,243,203	591,038	102,834,241
Changes in equity for the year																	
Total comprehensive income (expense) for the year		-	-	-	-	-	4,103,840	114,359	(24,345)	2,327,134	(174,585)	6,354,436	2,050,393	10,647,392	14,751,232	17,059	14,768,291
Dividends paid	35	-	-	-	-	-	(3,553,569)	-	-	-	-	-	-	-	(3,553,569)	-	(3,553,569)
Dividends paid of subsidiaries		-	-	-	-	-	-	-	-	-	-	-	-	-	-	(12,277)	(12,277)
Closing balance as at 31 December 2021		5,264,650	8,601,300	47,373	(218,689)	530,000	102,746,547	(151,596)	(61,437)	(2,772,060)	283,166	1,774,067	(2,602,455)	(3,530,315)	113,440,866	595,820	114,036,686
Opening balance as at 1 January 2020		5,264,650	8,601,300	47,373	(218,689)	530,000	96,753,550	(184,957)	(78,431)	(3,580,939)	414,082	(3,370,175)	(4,076,561)	(10,876,981)	100,101,203	601,969	100,703,172
Changes in equity for the year																	
Total comprehensive income (expense) for the year		-	-	-	-	-	8,733,030	(80,998)	41,339	(1,518,255)	43,669	(1,210,194)	(576,287)	(3,300,726)	5,432,304	24,667	5,456,971
Dividends paid	35	-	-	-	-	-	(3,290,304)	-	-	-	-	-	-	-	(3,290,304)	-	(3,290,304)
Dividends paid of subsidiaries		-	-	-	-	-	-	-	-	-	-	-	-	-	-	(35,598)	(35,598)
Closing balance as at 31 December 2020		5,264,650	8,601,300	47,373	(218,689)	530,000	102,196,276	(265,955)	(37,092)	(5,099,194)	457,751	(4,580,369)	(4,652,848)	(14,177,707)	102,243,203	591,038	102,834,241

The accompanying notes are an integral part of these consolidated and separate financial statements.

EGCO GROUP
บมจ. อิเล็กทริซิตี้ เจเนอเรติ้ง (มหาชน)
Electricity Generating Public Company Limited

STATEMENT OF CHANGES IN EQUITY

Electricity Generating Public Company Limited For the year ended 31 December 2021

		Separate financial statements								
					Retained earnings		Other components of equity			
							Other comprehensive income (expense)			
	Note	Issued and paid-up share capital Baht'000	Premium on share capital Baht'000	Premium on treasury stock Baht'000	Appropriated - legal reserve Baht'000	Unappropriated Baht'000	Remeasurements of post-employment benefit obligations Baht'000	Cash flow hedges Baht'000	Total other components of equity Baht'000	Total equity Baht'000
Opening balance as at 1 January 2021		5,264,650	8,601,300	47,373	530,000	54,447,222	(148,059)	(1,418,389)	(1,566,448)	67,324,097
Changes in equity for the year										
Total comprehensive income for the year		-	-	-	-	3,022,355	50,603	867,635	918,238	3,940,593
Dividends paid	35	-	-	-	-	(3,553,569)	-	-	-	(3,553,569)
Closing balance as at 31 December 2021		5,264,650	8,601,300	47,373	530,000	53,916,008	(97,456)	(550,754)	(648,210)	67,711,121
Opening balance as at 1 January 2020		5,264,650	8,601,300	47,373	530,000	50,324,600	(123,019)	(630,922)	(753,941)	64,013,982
Changes in equity for the year										
Total comprehensive income (expense) for the year		-	-	-	-	7,412,926	(25,040)	(787,467)	(812,507)	6,600,419
Dividends paid	35	-	-	-	-	(3,290,304)	-	-	-	(3,290,304)
Closing balance as at 31 December 2020		5,264,650	8,601,300	47,373	530,000	54,447,222	(148,059)	(1,418,389)	(1,566,448)	67,324,097

The accompanying notes are an integral part of these consolidated and separate financial statements.

STATEMENT OF CASH FLOWS

Electricity Generating Public Company Limited For the year ended 31 December 2021

	Notes	Consolidated financial statements 2021 Baht'000	Consolidated financial statements 2020 Baht'000	Separate financial statements 2021 Baht'000	Separate financial statements 2020 Baht'000
Cash flows from operating activities					
Profit before income tax		4,776,402	9,781,970	3,022,355	7,412,926
Adjustments to reconcile profit before income tax to net cash provided by operations:					
- Depreciation and amortisation	31	3,123,867	3,131,380	36,558	34,441
- Allowance for obsolescence of spare parts		32,781	22,964	-	-
- Retirement benefit expenses		93,023	84,669	30,830	31,337
- Reversal of provision for decommissioning costs		(132,771)	-	-	-
- Interest income		(174,082)	(260,383)	(2,471,685)	(2,518,916)
- Interest expense and other finance costs		3,713,886	3,869,345	1,402,552	1,472,726
- Impairment loss on assets	31	1,006,919	1,608,501	544,409	174,145
- Reversal of impairment loss on financial assets		(21,061)	(1,006)	-	-
- Impairment loss on financial assets from related parties	31	-	-	144,019	-
- Losses on exchange rates, net		3,714,118	291,175	2,392,349	181,655
- Gains (losses) on remeasurement of financial instruments, net		1,307,703	(1,821,125)	416,657	(203,470)
- Gains on write-off and disposal of building and equipment, net		(258)	(167,880)	-	(167,694)
- Dividend income from subsidiaries, associates and joint ventures	16.5	-	-	(6,322,682)	(7,185,684)
- Share of profit from investments in associates and joint ventures, net	16.1	(6,428,190)	(4,838,035)	-	-
Cash flows before changes in operating assets and liabilities		11,012,337	11,701,575	(804,638)	(768,534)
Changes in operating assets and liabilities: (excluding the effects of acquisition or disposal of subsidiaries)					
- Trade receivables		(2,227,626)	795,787	-	-
- Lease receivables under power purchase agreements from a related party		722,598	766,825	-	-
- Other receivables		(168,628)	89,390	(32,799)	(336)
- Fuel and spare parts and supplies		(219,443)	(249,046)	-	-
- Other non-current assets		(59,460)	(28,293)	(36,211)	(11,212)
- Trade payables		1,872,229	(350,858)	-	-
- Other payables		337,881	115,935	(227,166)	(38,783)
- Retirement benefit paid		(85,178)	(77,912)	(30,189)	(14,981)
- Other non-current liabilities		58,561	(63,638)	1,837	(18,603)
Cash generated from (used in) operations		11,243,271	12,699,765	(1,129,166)	(852,449)
- Withholding tax refunded		129	8,720	-	7,355
- Tax paid		(790,124)	(996,828)	-	-
Net cash receipts from (payments in) operating activities		10,453,276	11,711,657	(1,129,166)	(845,094)

The accompanying notes are an integral part of these consolidated and separate financial statements.

STATEMENT OF CASH FLOWS

Electricity Generating Public Company Limited For the year ended 31 December 2021

	Notes	Consolidated financial statements 2021 Baht'000	Consolidated financial statements 2020 Baht'000	Separate financial statements 2021 Baht'000	Separate financial statements 2020 Baht'000
Cash flows from investing activities					
Decrease of share capital of an associate	16.1	-	431,609	-	-
Additions of investment in joint ventures	16.1	(1,866,041)	(811,884)	(45,000)	-
Acquisitions of investments in associates and joint ventures	16.1	(14,356,606)	(13,462,184)	(267,789)	(1,240,000)
Net cash payments for financial assets measured at amortised cost		(843,438)	(2,420,638)	(387,684)	(1,789,863)
Net cash receipts from financial assets used as collateral measured at amortised cost		719,541	318,175	-	-
Interest received		96,438	192,362	299,778	195,124
Advance payments for purchase of equipment		(59,660)	-	-	-
Payments for purchase of equipment and construction in progress		(642,180)	(247,420)	(28,831)	(35,619)
Proceeds from disposal of property and equipment		278,408	280,640	277,500	280,359
Payments for purchase of of intangible assets		(1,687)	(3,573)	-	-
Proceeds from long-term loans to related parties	37.5	26,596	619	203,769	273,000
Payments for long-term loans to related parties	37.5	(3,482,939)	-	-	-
Dividends received from subsidiaries, associates and joint ventures	16.5	5,940,468	6,407,101	6,485,844	7,003,124
Net cash receipts from (payments in) investing activities		(14,191,100)	(9,746,802)	6,537,587	4,686,125
Cash flows from financing activities					
Interests paid		(3,484,400)	(3,784,952)	(432,858)	(460,729)
Proceeds from short-term loans from financial institutions		2,808,400	6,037,958	-	-
Payments for short-term loans from financial institutions		(2,808,400)	(6,076,958)	-	-
Proceeds from long-term loans from financial institutions	22.1.2	18,130,331	7,873,505	-	-
Payments for long-term loans from financial institutions	22.1.2	(7,305,489)	(5,926,429)	(1,607,148)	(400,000)
Payments for long-term loan from other company	22.2.1	(107,477)	(111,150)	-	-
Payments for principal elements of lease payments		(76,665)	(49,840)	(9,293)	(4,548)
Payments for deferred financing fee and other finance cost		(151,305)	(66,701)	(34,671)	(29,728)
Dividends paid to shareholders and non-controlling interest		(3,564,932)	(3,325,087)	(3,552,683)	(3,289,511)
Net cash receipt from (payments in) financing activities		3,440,063	(5,429,654)	(5,636,653)	(4,184,516)
Net decrease in cash and cash equivalents		(297,761)	(3,464,799)	(228,232)	(343,485)
Beginning balance		17,236,750	20,487,548	3,682,900	4,026,385
Effect of exchange rate changes		958,804	(217,608)	-	-
Ending balance		17,897,793	16,805,141	3,454,668	3,682,900

The accompanying notes are an integral part of these consolidated and separate financial statements.

STATEMENT OF CASH FLOWS

Electricity Generating Public Company Limited For the year ended 31 December 2021

	Notes	Consolidated financial statements 2021 Baht'000	Consolidated financial statements 2020 Baht'000	Separate financial statements 2021 Baht'000	Separate financial statements 2020 Baht'000
Cash and cash equivalents as at 31 December are made up as follows:					
- Cash in hand, deposits at financial institutions - maturities within three months		3,540,039	3,790,857	59,325	36,785
- Short-term investments in promissory notes - maturities within three months		14,357,754	13,445,893	3,395,343	3,646,115
		17,897,793	17,236,750	3,454,668	3,682,900
Supplementary information:					
- Payables for purchase of property, plant and equipment		16,696	11,198	7,048	2,187
- Reclassification of advance payments for spare parts to property, plant and equipment		-	19,924	-	-
- Receivable from disposal of power plants		-	277,500	-	277,500
- Payable for decommissioning costs of power plants		-	195,000	-	195,000
- Offset of payments on long-term loans from financial institutions against dividends received from a subsidiary	16.5, 22.1.2	-	-	-	280,877
- Offset of payments on long-term loans from financial institutions against interest receivables from long-term loans to a subsidiary	22.1.2, 37.5	-	-	565,688	279,229
- Offsett of interest paid on long-term loans from financial institutions against dividends received from a subsidiary	16.5	-	-	-	115,242
- Offset of interest paid on long-term loans from financial institutions against long-term loans to a subsidiary	37.5	-	-	16,127	401,939
- Offset of interest paid on long-term loans from financial institutions against interest receivables from long-term loans to a subsidiary	37.5	-	-	931,956	474,970

The accompanying notes are an integral part of these consolidated and separate financial statements.

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NOTES TO THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

Electricity Generating Public Company Limited For the year ended 31 December 2021

1 General information

Electricity Generating Public Company Limited (the Company) is a public limited company which is listed on the Stock Exchange of Thailand and is incorporated and resident in Thailand. The address of its registered office is 14th and 15th floors, EGCO Tower, 222, Vibhavadi Rangsit Road, Tungsonghong, Laksi, Bangkok 10210.

The Company is listed on the Stock Exchange of Thailand. For reporting purposes, the Company and its subsidiaries are referred to as the Group.

The principal business operation of the Group is the generation of electricity for sales to the government sector and industrial users.

These consolidated and separate financial statements were authorised for issue by the president on 28 February 2022.

2 Basis of preparation

The consolidated and separate financial statements have been prepared in accordance with Thai Financial Reporting Standards (TFRS), and the financial reporting requirements issued under the Securities and Exchange Act.

The consolidated and separate financial statements have been prepared under the historical cost convention except as disclosed in the accounting policies below.

The preparation of financial statements in conformity with Thai generally accepted accounting principles requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of applying the Group's accounting policies and to disclose the areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the consolidated and separate financial statements are disclosed in Note 8.

An English version of the consolidated and separate financial statements have been prepared from the statutory financial statements that are in the Thai language. In the event of a conflict or a difference in interpretation between the two languages, the Thai language statutory financial statements shall prevail.

3 New and amended financial reporting standards

3.1 New and amended financial reporting standards that are effective for accounting period beginning on or after 1 January 2021 and related to the Group.

a) **Revised Conceptual Framework for Financial Reporting** added the following key principals and guidance:

- Measurement basis, including factors in considering difference measurement basis
- Presentation and disclosure, including classification of income and expenses in other comprehensive income
- Definition of a reporting entity, which maybe a legal entity, or a portion of an entity; and
- Derecognition of assets and liabilities

The amendment also includes the revision to the definition of an asset and liability in the financial statements, and clarification to the prominence of stewardship in the objective of financial reporting.

b) **Amendment to TFRS 3, Business combinations** amended the definition of a business which requires an acquisition to include an input and a substantive process that together significantly contribute to the ability to create outputs. The definition of the term 'outputs' is amended to focus on goods and services provided to customers and to exclude returns in the form of lower costs and other economic benefits.

c) **Amendment to TFRS 9, Financial instruments and TFRS 7, Financial instruments: disclosures** amended to provide relief from applying specific hedge accounting requirements to the uncertainty arising from interest rate benchmark reform such as IBOR. The amendment also requires disclosure of hedging relationships directly affected by the uncertainty.

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d) **Amendment to TAS 1, Presentation of financial statements and TAS 8, Accounting policies, changes in accounting estimates and errors** amended to definition of materiality. The amendment allows for a consistent definition of materiality throughout the Thai Financial Reporting Standards and the Conceptual Framework for Financial Reporting. It also clarified when information is material and incorporates some of the guidance in TAS 1 about immaterial information.

The Group has adopted the aforementioned amended financial reporting standards since 1 January 2021. The adoption of these standards does not have significant impact to the Group.

3.2 Amended financial reporting standards that are effective for accounting periods beginning on or after 1 January 2022 and related to the Group. The Group has not yet adopted these standards.

Interest rate benchmark (IBOR) reform - phase 2, amendments to TFRS 9, TFRS 7, TFRS 16 and TFRS 4, and accounting guidance, financial instruments and disclosures for insurance business provide relief measures addressing issues that might affect financial reporting during the reform, including the effects of changes to contractual cash flows or hedging relationship arising from the replacement of one benchmark with an alternative benchmark.

Key relief measures of the phase 2 amendments are as follows:

- When changing the basis for determining contractual cash flows for financial assets and financial liabilities (including lease liabilities), changes that are necessary as a direct result of the IBOR reform and which are considered economically equivalent, will not result in an immediate gain or loss in the statement of income. TFRS 16 has also been amended to require lessees to use a similar practical expedient when accounting for lease modifications that change the basis for determining future lease payments as a result of the IBOR reform.
- Hedge accounting relief measures will allow most TFRS 9 hedge relationships that are directly affected by the IBOR reform to continue. However, additional ineffectiveness might need to be recorded.

Moreover, TFRS 7 requires additional disclosure about:

- The nature and extent of risks arising from the IBOR reform to which the entity is exposed to.
- How the entity manages those risks.
- The entity's progress in transitioning from the IBOR to alternative benchmark rates and how the entity is managing this transition.

The Group's management is currently assessing the impact of adoption of these standards.

4 Accounting policies

The accounting policies used in the preparation of the consolidated and separate financial statements as follows:

4.1 Principles of consolidation

4.1.1 Subsidiaries

Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are consolidated from the date on which control is transferred to the Group until the date that control ceases.

In the separate financial statements, investments in subsidiaries are accounted for using cost method less allowance for impairment (if any).

4.1.2 Associates

Associates are all entities over which the Group has significant influence but not control or joint control. Investments in associates are accounted for using the equity method of accounting.

In the separate financial statements, investments in associates are accounted for using cost method less allowance for impairment (if any).

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4.1.3 Joint arrangements

Investments in joint arrangements are classified as either joint operations or joint ventures depending on the contractual rights and obligations of each investor, rather than the legal structure of the joint arrangements.

Joint operations

A joint operation is a joint arrangement whereby the Group has rights to the assets, and obligations for the liabilities relating to the arrangement. The Group recognises its direct right to the assets, liabilities, revenues and expenses of joint operations and its share of any jointly held or incurred assets, liabilities, revenues and expenses. These have been incorporated in the Group's financial statement line items.

Joint ventures

A joint venture is a joint arrangement whereby the Group has rights to the net assets of the arrangement. Interests in joint ventures are accounted for using the equity method.

In the separate financial statements, investments in joint ventures are accounted for using cost method less allowance for impairment (if any).

4.1.4 Equity method

The investment is initially recognised at cost which is consideration paid and directly attributable costs.

The Group's subsequently recognises shares of its associates and joint ventures' profits or losses and other comprehensive income in the profit or loss and other comprehensive income, respectively. The subsequent cumulative movements are adjusted against the carrying amount of the investment.

When the Group's share of losses in associates and joint ventures equals or exceeds its interest in the associates and joint ventures, the Group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the associates and joint ventures.

4.1.5 Changes in ownership interests

The Group treats transactions with non-controlling interests that do not result in a loss of control as transactions with equity owners of the Group. A difference between the amount of the adjustment to non-controlling interests to reflect their relative interest in the subsidiary and any consideration paid or received is recognised within equity.

If the ownership interest in associates and joint ventures is reduced but significant influence and joint control is retained, only a proportionate share of the amounts previously recognised in other comprehensive income is reclassified to profit or loss where appropriate. Profit or loss from reduce of the ownership interest in associates and joint ventures is recognise in profit or loss.

When the Group losses control, joint control or significant influence over investments, any retained interest in the investment is remeasured to its fair value, with the change in carrying amount recognised in profit or loss. The fair value becomes the initial carrying amount of the retained interest which is reclassified to investment in an associate, or a joint venture or a financial asset accordingly.

4.1.6 Intercompany transactions on consolidation

Intra-group transactions, balances and unrealised gains on transactions are eliminated. Unrealised gains on transactions between the Group and its associates and joint ventures are eliminated to the extent of the Group's interest in the associates and joint ventures. Unrealised losses are also eliminated in the same manner unless the transaction provides evidence of an impairment of the asset transferred.

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4.2 Business Combination

The Group applies the acquisition method to account for business combinations with an exception on business combination under common control. The consideration transferred for the acquisition of a subsidiary comprises:

- Fair value of the assets transferred
- Liabilities incurred to the former owners of the acquiree
- Equity interests issued by the Group

Identifiable assets and liabilities acquired and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date.

On an acquisition-by-acquisition basis, the Group initially recognises any non-controlling interest in the acquiree either at fair value or at the non-controlling interest's proportionate share of the acquiree's net assets.

The excess of the consideration transferred, the amount of any non-controlling interest recognised and the acquisition-date fair value of any previous equity interest in the acquiree (for business combination achieved in stages) over the fair value of the identifiable net assets acquired is recorded as goodwill. In the case of a bargain purchase, the difference is recognised directly in profit or loss.

Acquisition-related cost

Acquisition-related cost are recognised as expenses in consolidated financial statements.

Step-up acquisition

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is re-measured to fair value at the acquisition date; any gains or losses arising from such re-measured are recognised in profit or loss.

Changes in fair value of contingent consideration paid/received

Subsequent changes to the fair value of the contingent consideration that is an asset or liability is recognised in profit or loss. Contingent consideration that is classified as equity is not re-measured.

4.3 Foreign currency translation

4.3.1 Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates (the functional currency). The financial statements are presented in Thai Baht, which is the Company's functional currency and the Group's and the Company's presentation currency.

4.3.2 Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transaction.

Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the profit or loss.

When a gain or loss on a non-monetary item is recognised in other comprehensive income, any exchange component of that gain or loss is recognised in other comprehensive income. Conversely, when a gain or loss on a non-monetary item is recognised in profit and loss, any exchange component of that gain or loss is recognised in profit and loss.

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4.3.3 Group companies

The results and financial position of each of the Group's entities (none of which has the currency of a hyper-inflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- Assets and liabilities for each statement of financial position presented are translated at the closing rate at the date of that statement of financial position.

- Income and expenses of each statement of income and statement of comprehensive income are translated at average exchange rates; and

- All resulting exchange differences are recognised in other comprehensive income.

Goodwill arose on or after 1 January 2013 and fair value adjustments arising on the acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and translated at the closing rate at the date of that statement of financial position.

4.4 Cash and cash equivalents

In the statements of cash flows, cash and cash equivalents includes cash in hand, deposits held at call, other short-term highly liquid investments with maturities of three months or less from acquisition date.

4.5 Trade receivables

Trade receivables are amounts due from customers for goods sold or services performed in the ordinary course of business. They are generally due for settlement within 30 days and therefore are all classified as current.

Trade receivables are recognised initially at the amount of consideration that is unconditional unless they contain significant financing components, they are recognised at fair value. The Group holds the trade receivables with the objective to collect the contractual cash flows and therefore measures them subsequently at amortised cost.

4.6 Fuel and spare parts and supplies

4.6.1 Fuel

Fuel includes coal and diesel. Fuel is stated at the lower of cost or net realisable value. Cost is determined by the moving average basis method.

4.6.2 Spare parts and supplies

Spare parts that do not meet definitions of property, plant and equipment are stated at cost less allowance for obsolescence. Cost is determined by the moving average basis method.

The allowance for capital spare parts that are used for specific plant equipment in power plants is made on a specific basis.

The allowance for common spare parts is made on an aging analysis.

4.7 Financial assets

4.7.1 Classification

The Group classifies its debt instrument financial assets in the following measurement categories depending on i) business model for managing the asset and ii) the cash flow characteristics of the asset whether they represent solely payments of principal and interest (SPPI).

- those to be measured subsequently at fair value (either through other comprehensive income or through profit or loss); and
- those to be measured at amortised cost.

The Group reclassifies debt investments when and only when its business model for managing those assets changes.

For investments in equity instruments, the Group has an irrevocable election at the time of initial recognition to account for the equity investment at fair value through profit or loss (FVPL) or at fair value through other comprehensive income (FVOCI) except those that are held for trading, they are measured at FVPL.

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4.7.2 Recognition and derecognition

Regular way purchases, acquires and sales of financial assets are recognised on trade-date, the date on which the Group commits to purchase or sell the asset. Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the Group has transferred substantially all the risks and rewards of ownership.

4.7.3 Measurement

At initial recognition, the Group measures a financial asset at its fair value plus, in the case of a financial asset not at FVPL, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at FVPL are expensed in profit or loss.

Financial assets with embedded derivatives are considered in their entirety when determining whether the cash flows are solely payment of principal and interest.

4.7.4 Debt instruments

Subsequent measurement of debt instruments depends on the Group's business model for managing the asset and the cash flow characteristics of the financial assets. There are three measurement categories into which the Group classifies its debt instruments:

- Amortised cost: Financial assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortised cost. Interest income from these financial assets is included in other income using the effective interest rate method. Any gain or loss arising on derecognition is recognised directly in profit or loss and presented in other gains (losses) together with gains (losses) on exchange rates, net. Impairment losses are presented as a separate line item in the statement of income.

- FVOCI: Financial assets that are held for i) collection of contractual cash flows; and ii) for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at FVOCI. Movements in the carrying amount are taken through other comprehensive income (OCI), except for 1) the recognition of impairment gains or losses, 2) interest income using the effective interest method, and 3) gains (losses) on exchange rates, net which are recognised in profit or loss. When the financial assets are derecognised, the cumulative gain or loss previously recognised in OCI is reclassified from equity to profit or loss and recognised in other gains (losses). Interest income is included in other income. Impairment losses are presented as a separate line item in the statement of income.

- FVPL: Financial assets that do not meet the criteria for amortised cost or FVOCI are measured at FVPL. A gain or loss on a debt investment that is subsequently measured at FVPL is recognised in profit or loss and presented net within gains (losses) on remeasurement of financial instruments, net in the period in which it arises.

4.7.5 Equity instruments

The Group measures all equity investments at fair value. Where the Group has elected to present fair value gains and losses on equity instruments in OCI, there is no subsequent reclassification of fair value gains and losses to profit or loss following the derecognition of the investment. Dividends from such investments continue to be recognised in profit or loss as dividend income when the right to receive payments is established.

Changes in the fair value of financial assets at FVPL are recognised in gains (losses) on remeasurement of financial instruments, net in the statement of income.

Impairment losses (and reversal of impairment losses) on equity investments are reported together with changes in fair value.

4.7.6 Impairment

The Group applies the simplified approach and general approach from TFRS9 in recognition of impairment of trade receivables, lease receivables under power purchase agreements and other receivables, which applies lifetime expected credit loss, from initial recognition, for all trade receivables, lease receivables under power purchase agreements and other receivables.

To measure the expected credit losses by using simplified approach, the management grouped the receivables based on shared credit risk characteristics and the days past due. The expected credit loss rates are based on payment profiles, historical credit losses as well as forward-looking information and factors that may affect the ability of the customers to settle the outstanding balances. In addition to the simplified approach, the management applies the general approach, which is to consider the individual assessments by using the discounted cashflow method. For this, management uses an estimate debtor's future cash flows based on the original effective interest rate.

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For other financial assets carried at amortised cost and FVOCI, the Group applies TFRS 9 general approach in measuring the expected credit loss of those financial assets. Under the general approach, the 12-month or the lifetime expected credit loss is applied depending on whether there has been a significant increase in credit risk since the initial recognition.

The significant increase in credit risk (from initial recognition) assessment is performed every end of reporting period by comparing i) expected risk of default as of the reporting date and ii) estimated risk of default on the date of initial recognition.

The Group assesses expected credit loss by taking into consideration forward-looking information and past experiences. The expected credit loss is a probability-weighted estimate of credit losses (probability-weighted present value of estimated cash shortfall). The cash shortfall is the difference between all contractual cash flows that are due to the Group and all cash flows expected to receive, discounted at the original effective interest rate.

When measuring expected credit losses, the Group reflects the following:

- probability-weighted estimated uncollectible amounts
- time value of money; and
- supportable and reasonable information as of the reporting date about past experience, current conditions and forecasts of future situations.

Impairment and reversal of impairment losses are recognised in profit or loss as a separate line item.

4.8 (Group of) non-current assets held-for-sale

Non-current assets (or disposal groups) are classified as assets held-for-sale when their carrying amount will be recovered principally through a sale transaction and a sale is considered highly probable. They are measured at the lower of the carrying amount and fair value less costs to sell.

An impairment loss is recognised for write-down of the asset (or disposal group) to fair value less costs to sell. A gain is recognised for any subsequent increases in fair value less costs to sell of an asset (or disposal group), but not in excess of any cumulative impairment loss previously recognised.

Non-current assets (including those that are part of a disposal group) are not depreciated or amortised.

4.9 Investment property

Land and buildings of the Group that are held for long-term rental or for capital appreciation or both, and that are not occupied by the companies in the Group, are classified as investment property.

Investment property is measured initially at its cost including related transaction and borrowing costs.

Subsequent expenditure is capitalised to the asset's carrying amount only when it is probable that future economic benefits associated with the expenditure will flow to the Group and the cost of the item can be measured reliably. All other repair and maintenance costs are expensed when incurred. When part of an investment property is replaced, the carrying amount of the replaced part is derecognised.

Subsequently, the investment property is carried at cost less accumulated depreciation and impairment (if any).

Land is not depreciated. Depreciation on other investment properties is calculated using straight-line method to allocate their costs over their estimated useful lifes.

4.10 Property, plant and equipment

Property, plant and equipment are initially recorded at cost. Subsequently, plant and equipment are stated at historical cost less accumulated depreciation and impairment (if any). The costs of property, plant and equipment comprise both the purchase price and any costs directly attributable to bringing the assets to location and condition necessary for them to be capable of operating in the manner intended by management. These can include the initial estimate of the costs of dismantling and removing the item and restoring the site on which they are located, the obligation for which the Group incurs either when the items are acquired or as a consequence of having used the items during a particular period.

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Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognised. All other repairs and maintenance are charged to profit or loss when incurred.

Depreciation is calculated using the straight-line method to allocate their cost to their residual value over their estimated useful lives, except land which is considered to have an indefinite life, as follows:

	Years
Buildings and structures	10 to 20
Power plants	21 to 50
Substation and transmission system	20 to 25
Capital spare parts	5 to 25
Operating and maintenance equipment	5
Office equipment, furniture and computers	3 to 10
Motor vehicles	5

The assets' residual values and useful lives are reviewed and adjusted if appropriate, at the end of each reporting period.

Where the carrying amount of asset is greater than its estimated recoverable amount, it is written down immediately to its recoverable amount.

Gains and losses on disposals of assets are determined by comparing proceeds with the carrying amount and are recognised in the profit or loss.

4.11 Goodwill

Goodwill represents the excess of the consideration transferred over the fair value of the Group's share of the net identifiable assets and liabilities and contingent liabilities of the acquired subsidiary undertaking or joint venture or associate at the date of acquisition.

Goodwill on acquisitions of subsidiaries is separately reported in the consolidated statement of financial position. Goodwill on acquisitions of joint ventures or associates is included in investments in joint ventures or associates and is tested for impairments part of the overall balance.

Goodwill is tested annually for impairment and carried at cost less accumulated impairment losses. Impairment losses on goodwill are not reversed. Gains and losses on the disposal of an entity include the carrying amount of goodwill relating to the entity sold.

Goodwill is allocated to cash generating units for the purpose of impairment testing. The allocation is made to those cash generating units or groups of cash generating units that are expected to benefit from the business combination in which the goodwill arose, identified according to operating segment.

4.12 Intangible assets

4.12.1 Right in Power Purchase Agreements and Right to use the transmission facilities

The right in Power Purchase Agreements (PPA) arising on the acquisitions of businesses, are amortised by using straight-line method over the periods of the PPA which are between 15 and 25 years.

The right to use transmission facilities is an expenditure paid to acquire a right to use the transmission facilities which are amortised by using straight-line method over the useful life of 15 to 25 years, which is in accordance with the periods of the PPA.

4.12.2 Licences for operating power plants

Licences for operating power plants arising on the acquisitions of businesses, which are amortised by using straight-line method over the periods of the licences for operating power plants, which are 25 to 35 years.

4.12.3 Favourable contract assets

Favourable contract assets are recognised as identifiable assets of an acquiree as part of the purchase price allocation at the acquisition date. The favourable contract assets incurred from an excess of the fair value of long-term liquefied natural gas purchase contracts than purchase values specified in such contracts. The favourable contract assets are amortised based on unit of liquefied natural gas used in electricity generation.

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4.12.4 Rights to operate oil pipeline transportation system

Rights to operate oil pipeline transportation system arising on the acquisitions of businesses, which are amortised by using straight-line method over the periods of oil pipeline transportation services, which are approximately 40 years.

4.12.5 Development expenditure

Development expenditure is recognised as intangible assets when the Group can reliably measure the expenditure attributable to its development and can demonstrate that it is technically, financially, commercially, and resourcefully feasible; and the Group intends to and has the ability to complete the development for the purpose of using or selling.

Development costs previously recognised as an expense are not recognised as an asset in a subsequent period.

Capitalised development costs are amortised when the asset is ready to use or sell by applying a straight-line method over the period of its expected benefit.

4.13 Impairment of assets

Assets that have an indefinite useful life are tested annually for impairment, or more frequently if events or changes in circumstances indicate that it might be impaired. Assets that are subject to amortisation are reviewed for impairment whenever there is an indication of impairment. An impairment loss is recognised for the amount by which the carrying amount of the assets exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs of disposal and value in use.

Where the reasons for previously recognised impairments no longer exist, the impairment losses on the assets concerned other than goodwill is reversed.

4.14 Leases

Leases - where the Group is the lessee

Leases are recognised as a right-of-use asset and a corresponding liability at the date at which the leased asset is available for use by the Group. Each lease payment is allocated between the liability and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term.

The Group allocates the consideration in the contract to the lease and non-lease components based on their relative stand-alone prices. However, for leases of real estate for which the Group is a lessee, it has elected not to separate lease and non-lease components and instead accounts for these as a single lease component.

Assets and liabilities arising from a lease are initially measured on a present value basis. Lease liabilities include the net present value of the following lease payments:

- fixed payments (including in-substance fixed payments), less any lease incentives receivable
- variable lease payment that are based on an index or a rate
- amounts expected to be payable by the lessee under residual value guarantees
- the exercise price of a purchase option if the lessee is reasonably certain to exercise that option, and
- payments of penalties for terminating the lease, if the lease term reflects the lessee exercising that option.

Lease payments to be made under reasonably certain extension options are also included in the measurement of the liability.

The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be determined, the lessee's incremental borrowing rate is used, being the rate that the lessee would have to pay to borrow the funds necessary to obtain an asset of similar value in a similar economic environment with similar terms and conditions.

The Group is exposed to potential future increases in variable lease payments based on an index or rate, which are not included in the lease liability until they take effect. When adjustments to lease payments based on an index or rate take effect, the lease liability is reassessed and adjusted against the right-of-use asset.

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Right-of-use assets are measured at cost comprising the following:

- the amount of the initial measurement of lease liability
- any lease payments made at or before the commencement date less any lease incentives received
- any initial direct costs, and
- restoration costs.

Payments associated with short-term leases and leases of low-value assets are recognised on a straight-line basis as an expense in profit or loss. Short-term leases are leases with a lease term of 12 months or less. Low-value assets comprise of office furniture.

Leases - where the Group is the lessor

When assets are leased out under a finance lease, the present value of the lease payments is recognised as a receivable. The difference between the gross receivable and the present value of the receivable is recognised as unearned finance income. Lease income is recognised over the term of the lease which reflects a constant periodic rate of return. Initial direct costs are included in initial measurement of the finance lease receivable and reduce the amount of income recognised over the lease term.

Rental income under operating leases (net of any incentives given to lessees) is recognised on a straight-line basis over the lease term. Initial direct costs incurred in obtaining an operating lease are added to the carrying amount of the underlying asset and recognised as expense over the lease term on the same basis as lease income. The respective leased assets are included in the statement of financial position based on their nature.

4.15 Financial liabilities

4.15.1 Classification

Financial instruments issued by the Group are classified as either financial liabilities or equity securities by considering contractual obligations.

- Where the Group has an unconditional contractual obligation to deliver cash or another financial asset to another entity, it is considered a financial liability unless there is a predetermined or possible settlement for a fixed amount of cash in exchange of a fixed number of the Group's own equity instruments.

- Where the Group has no contractual obligation or has an unconditional right to avoid delivering cash or another financial asset in settlement of the obligation, it is considered an equity instrument.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the reporting date.

4.15.2 Measurement

Financial liabilities are initially recognised at fair value and are subsequently measured at amortised cost.

4.15.3 Derecognition and modification

Financial liabilities are derecognised when the obligation specified in the contract is discharged, cancelled, or expired.

Where the terms of a financial liability are renegotiated/modified, the Group assesses whether the renegotiation/ modification results in the derecognition of that financial liability. Where the modification results in an extinguishment, the new financial liability is recognised based on fair value of its obligation. The remaining carrying amount of financial liability is derecognised. The difference as well as proceed paid is recognised as other gains/(losses) in profit or loss.

Where the modification does not result in the derecognition of the financial liability, the carrying amount of the financial liability is recalculated as the present value of the renegotiated/modified contractual cash flows discounted at its original effective interest rate. The difference is recognised in other gains/(losses) in profit or loss.

4.16 Borrowing costs

General and specific borrowing costs directly attributable to the acquisition, construction or production of qualifying assets (assets that take several time to get ready for its intended use) are added to the cost of those assets less investment income earned from those specific borrowings. The capitalisation of borrowing costs is ceased when substantially all the activities necessary to prepare the qualifying asset for its intended use or sale are complete.

Other borrowing costs are expensed in the period in which they are incurred.

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4.17 Current and deferred income taxes

The tax expense for the period comprises current and deferred income taxes. Tax is recognised in profit or loss, except to the extent that it relates to items recognised in other comprehensive income or directly in equity.

Current tax

The current income tax is calculated on the basis of the tax laws enacted or substantively enacted at the end of the reporting period. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred income tax

Deferred income tax is recognised on temporary differences arising from differences between the tax base of assets and liabilities and their carrying amounts in the financial statements. However, deferred income tax is not recognised for temporary differences arise from:

- initial recognition of an asset or liability in a transaction other than a business combination that affects neither accounting nor taxable profit or loss is not recognised
- investments in subsidiaries, associates and joint arrangements where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred income tax is measured using tax rates of the period in which temporary difference is expected to be reversed, based on tax rates and laws that have been enacted or substantially enacted by the end of the reporting period.

Deferred tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets and liabilities and when the deferred tax balances relate to the same taxation authority. Current tax assets and tax liabilities are offset where the entity has a legally enforceable right to offset and intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously.

4.18 Employee benefits

The Group has post-employment benefits consisting of both provident fund and retirement benefits.

4.18.1 Provident fund

The Group operates a provident fund that is a defined contribution plan. The assets are held in a separated fund which is managed by an external fund manager in accordance with the Provident Fund Act B.E. 2530. The provident fund is contributed by employees and by the Group. Contributions to the provident fund are charged to the profit or loss when they are due.

4.18.2 Retirement benefits

The Group provides for post-employment benefits, payable to employees under the labour laws. Typically, defined benefit plans define an amount of retirement benefit that an employee will receive on retirement, usually depends on many factors such as age, years of service and compensation.

The liability in respect of employee benefits is the present value of the defined benefit obligation at the end of the reporting date which is calculated by an independent actuary using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting estimated future cash flows using yields on government bonds that matches the terms and currency of the expected cash outflows.

Remeasurement gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the period in which they arise.

Past-service costs are recognised immediately in profit or loss.

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4.19 Provisions

4.19.1 General provisions

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation, and the amount has been reliably estimate.

4.19.2 Provision for decommissioning costs

The Group recognises provision for decommissioning costs, which are provided at the onset of completion of the project, for the estimate of the eventual costs that relate to the removal. The recognised provision for decommissioning costs are based on future removal cost estimates and incorporate many assumptions such as abandonment times and future inflation rate and discounted to present value at the discount rate estimated by the management. Those are included as part of cost.

4.20 Treasury stock

Treasury stock presented in statements of financial position is carried at cost and shown as a deduction from total equity. Gains on disposal of treasury stock are determined by reference to its carrying amount and are taken to premium on treasury stock. Losses on disposal of treasury stock are determined by reference to its carrying amount and are taken out of premium on treasury stock and retained earnings consecutively.

4.21 Government grants

Government grants are recognised at their fair value where there is a reasonable assurance that the grant will be received and the Group will comply with all attached conditions.

Government grants relating to the compensation of costs are deferred and recognised in profit or loss to match the costs they are intended to compensate.

Government grants relating to the purchase of assets are included in non-current liabilities as other liabilities and are credited to profit or loss on a straight-line basis over the expected lives of the related assets.

4.22 Revenue recognition

Revenue are recorded net of value added tax. They are recognised in accordance with the provision of goods or services, provided that collectability of the consideration is probable.

Multiple element arrangements involving delivery or provision of multiple products or services are separated into distinct performance obligations. Total transaction price of the bundled contract is allocated to each performance obligation based on their relative standalone selling prices or estimated standalone selling prices. Each performance obligation is recognised as revenue on fulfilment of the obligation to the customer as details below.

Revenue under the Power Purchase Agreements (PPA)

(a) Revenue under the PPA which are not classified as lease

- The Group recognises Capacity Payments or Availability Payments which are the revenue for maintaining availabilities of power plants as agreed with EGAT and industrial customers in accordance with terms of PPA. The Group recognises this revenue in profit or loss when rendering services to customer according to the agreements. If the Group receives consideration above the services rendered, the Group recognises the excess consideration as a contract liability. On the other hand, if the Group receives consideration less than the services rendered, the Group recognises the consideration as a contract asset.
- Energy Payments are recognised at a point in time when the controls over the products are transferred to the customers at destinations as stated in the agreements. The revenues from Energy Payments are recognised based on transaction price net of output tax, rebates and discounts.

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(b) Revenue under the Power Purchase Agreements which are classified as lease

- Finance lease income under the power purchase agreements is recognized on an effective interest method over the period of the agreements.
- Service income under finance and operating lease agreements related to power purchase agreements, which comprises revenue for maintaining availabilities of power plants, other service income and Energy Payments received from financial lease receivables and operating lease receivables with respect to the leased assets, is recognised when the services are rendered. If the Group receives consideration above the services rendered, the Group recognises the excess consideration as a contract liability. On the other hand, if the Group receives consideration less than the services rendered, the Group recognises the consideration as a contract asset.
- Contingent rents are recognised in profit or loss in the period in which they are incurred. Contingent rent is that portion of lease payments that is not fixed in amount but varies based on a future factor, such as the amount of use or production.

Other service income

The Group recognises income from other services, net of value added tax. The Group will recognise when there was probable to receive payment when service rendered.

The Group recognises income from service contract which has continuous service attribute on straight-line basis regardless of payment terms in contract.

Interest income

Interest income are recognised on an accrual basis unless collectability is in doubt.

Dividend income

Dividend income is recognised when the right to receive payment is established.

4.23 Dividends distribution

Dividends distribution to the Group's shareholders is recognised as liability in the financial statements in the period in which the dividends are approved by the Company's shareholders and interim dividend are approved by the Board of Directors.

4.24 Derivatives and hedging activities

4.24.1 Embedded derivative and derivatives that do not qualify for hedge accounting

Embedded derivative that is separately accounted for and derivatives that do not qualify for hedge accounting is initially recognised at fair value. Changes in the fair value are included in gains (losses) on remeasurement of financial instruments, net.

Fair value of derivatives is classified as a current or non-current following its remaining maturity.

4.24.2 Hedge accounting

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently remeasured to their fair value at the end of each reporting period. The Group designates certain derivatives as either:

- hedges of the fair value of i) recognised assets or liabilities or ii) unrecognised firm commitments (fair value hedges) or
- hedges of a particular risk associated with the cash flows of i) recognised assets and liabilities and ii) highly probable forecast transactions (cash flow hedges)

At inception of the hedge relationship, the Group documents i) the economic relationship between hedging instruments and hedged items including whether changes in the cash flows of the hedging instruments are expected to offset changes in the cash flows of hedged items and ii) its risk management objective and strategy for undertaking its hedge transactions.

The full fair value of a hedging derivative is classified as a current or non-current asset or liability following the maturity of related hedged item.

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Cash flow hedges that qualify for hedge accounting

The effective portion of changes in the fair value of derivatives that are designated and qualified as cash flow hedges is recognised in the cash flow hedge reserve within equity. The gain or loss relating to the ineffective portion is recognised immediately in gains (losses) on remeasurement of financial instruments, net.

The Group uses derivatives contracts, for example foreign currency forward contracts, cross currency and interest rate swap contracts to hedge forecast transactions. The Group generally designates only the change in fair value related to the spot component as the hedging instrument. Gains or losses relating to the effective portion of the change in the spot component are recognised as the cash flow hedge reserve in the other comprehensive income within equity. The change in the forward element that relates to the hedged item ('aligned forward element') is recognised as the cost of hedging reserve in other comprehensive income within equity.

In some cases, the Group may designate the full change in fair value of the derivatives (including forward points) as the hedging instrument. In such cases, the gains or losses relating to the effective portion of the change in fair value of the entire contract are recognised as the cash flow hedge reserve in the other comprehensive income within equity.

Amounts accumulated in equity are reclassified in the periods when the hedged item affects profit or loss.

When a hedging instrument expires, or is sold or terminated, or when a hedge no longer meets the criteria for hedge accounting, any cumulative deferred gain or loss and deferred costs of hedging in equity at that time remains in equity until the forecast transaction occurs. When the forecast transaction is no longer expected to occur, the cumulative gain or loss and deferred costs of hedging that were reported in equity are immediately reclassified to profit or loss.

4.25 Financial guarantee contracts

Financial guarantee contracts are recognised as a financial liability at the time the guarantee is issued. The liability is initially measured at fair value and subsequently at the higher of:

- the amount determined in accordance with the expected credit loss model under TFRS 9; and
- the amount initially recognised less the cumulative amount of income recognised in accordance with the principles of TFRS 15.

The fair value of financial guarantees is determined based on the present value of the difference in cash flows between a) the contractual payments required under the debt instrument; and b) the payments that would be required without the guarantee, or the estimated amount that would be payable to a third party for assuming the obligations.

Where guarantees in relation to loans or other payables of associates are provided for no compensation, the fair values are accounted for as contributions and recognised as part of the cost of the investment.

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5 Financial risk management

5.1 Financial risk

The Group's activities expose to a variety of financial risks: market risk (including foreign exchange risk, interest rate risk and price risk), credit risk and liquidity risk. The Group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance.

Financial risk management is carried out by the Group Treasury and Finance Division. The Group's policy includes areas such as foreign exchange risk, interest rate risk, credit risk and liquidity risk. The framework parameters are approved by the Board of Directors and uses as the key communication and control tools for treasury team globally.

The Group uses financial instruments and derivatives to minimise the uncertainty over future cash flow from changes in interest rates, foreign exchange rates, volatility in electricity price, and to assist cash and liquidity management. The derivatives comprise interest rate swap contracts, foreign currency forward contracts, cross currency swap contracts, cross currency interest rate swap contracts, and electricity swaption contract.

Trading for speculative purposes is not allowed. All derivative transactions are subject to prior approval by the respective board of director of each company in the Group.

Where all relevant criteria are met, hedge accounting is applied to remove the accounting mismatch between the hedging instrument and the hedged item.

5.1.1 Market risk

a) Foreign exchange risk

The Group is exposed to foreign exchange risk from future commercial transactions, trading transactions purchase of goods and services, net investments in foreign operations, foreign currency borrowings, and net monetary assets and liabilities that are denominated in a currency that is not the entity's functional currency. In respect of foreign exchange risk of the domestic operations, the formulars of the Availability Payments and Energy Payments charged to Electricity Generating Authority of Thailand (EGAT) allows for the minimisation of the impact of foreign exchange rates . For the foreign exchange risk of the overseas operations, the Group receives cash inflow from trade receivables in the same currency as the major liabilities of the Group (Natural Hedge).

Financial instruments used by the Group

The Group seeks to reduce this risk by entering into derivatives contracts when it considers appropriate. The Group uses foreign currency forwards contracts, cross currency swap contracts and cross currency interest rate swap contracts in a consistent manner to hedge firm and anticipated foreign exchange commitments and manage their foreign exchange risk arising from future commercial transactions, trading transactions purchase of goods and services and foreign currency borrowings. The purpose of these hedges is to mitigate the impact of movements in foreign exchange rates on assets and liabilities and the profit and loss account of the Group.

Under the Group's policy, the critical terms of the derivatives contracts used as financial instruments on foreign exchange risk must align with the hedged items.

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Exposure

As at 31 December, the Group has significant exposure to foreign exchange risk that are denominated in a currency that is not the entity's functional currency, expressed in Baht were as follows:

	Consolidated financial statements							
	2021				2020			
	US Dollar Million Baht	Japanese Yen Million Baht	Philippines Peso Million Baht	Swedish Krona Million Baht	US Dollar Million Baht	Japanese Yen Million Baht	Philippines Peso Million Baht	Swedish Krona Million Baht
Cash and cash equivalents	932	-	470	-	5,625	-	298	-
Financial assets measured at amortised cost	1,222	-	-	-	-	-	-	-
Financial assets used as collateral measured at amortised cost	331	43	-	-	441	38	-	-
Trade receivables, net	-	-	813	-	-	-	702	-
Lease receivables under power purchase agreements From a related party, net	8,818	73	-	-	8,424	101	-	-
Trade and other payables	298	82	552	-	284	85	371	-
Long-term loans from financial institutions	63,040	-	-	-	44,951	-	-	-
Debenture	-	5,040	-	-	-	5,042	-	-
Derivatives where the hedge accounting is not applied								
- Foreign currency forward contracts	-	2,616	-	-	-	2,200	-	-
- Cross currency swap contracts	-	4,805	-	-	-	4,321	-	-
Derivatives where the hedge accounting is applied								
- Foreign currency forward contracts	49	292	-	521	60	348	-	664
- Cross currency swap contracts	4,373	-	-	-	4,457	-	-	-
- Cross currency interest rate swap contracts	9,933	-	-	-	9,687	-	-	-

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	Separate financial statements			
	2021		2020	
	US Dollar Million Baht	Japanese Yen Million Baht	US Dollar Million Baht	Japanese Yen Million Baht
Cash and cash equivalents	107	-	1,314	-
Financial assets measured at amortised cost	1,222	-	-	-
Long-term loans from financial institutions	24,122	-	23,434	-
Debenture	-	5,040	-	5,042
Derivatives where the hedge accounting is not applied				
- Cross currency swap contracts	-	4,805	-	4,321

The significant effects of the foreign currency-related hedging instruments on the Group's and the Company's financial position and performance are as follows:

1. Foreign currency forward contracts

	Consolidated financial statements		
	2021		
	Asset (Liability)		
	US Dollar long-term loans Million Baht	Japanese Yen long-term technical service agreement Million Baht	Swedish Krona long-term technical service agreement Million Baht
Carrying amount	1	(49)	(60)
Notional amount	49	292	521
Maturity date	30 June 2030	30 September 2026	16 May 2025
Change in discounted spot value of outstanding hedging instruments since 1 January	-	1	2
Change in value of hedged item used to determine hedge effectiveness	-	(1)	(2)
Hedged rate for outstanding hedging instruments (including forward points)	Baht 32.73 per 1 US Dollar	Baht 32.43 - 39.63 per 100 Yen	Baht 4.17 per 1 Krona

	Consolidated financial statements		
	2020		
	Asset (Liability)		
	US Dollar long-term loans Million Baht	Japanese Yen long-term technical service agreement Million Baht	Swedish Krona long-term technical service agreement Million Baht
Carrying amount	(5)	(58)	(81)
Notional amount	60	348	664
Maturity date	30 June 2030	30 September 2026	16 May 2025
Change in discounted spot value of outstanding hedging instruments since 1 January	1	14	95
Change in value of hedged item used to determine hedge effectiveness	(1)	(14)	(95)
Hedged rate for outstanding hedging instruments (including forward points)	Baht 32.73 per 1 US Dollar	Baht 32.43 - 39.20 per 100 Yen	Baht 4.17 per 1 Krona

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2. Cross currency swap contracts

	Consolidated financial statements		
	2021		
	Asset (Liability)		
	US Dollar long-term loans Million Baht	US Dollar long-term loans Million Baht	US Dollar long-term loans Million Baht
Carrying amount	55	26	(16)
Notional amount	3,311	394	668
Maturity date	28 December 2023	31 December 2028	30 December 2032
Change in fair value of outstanding hedge instruments since 1 January	67	(2)	8
Change in value of hedged item used to determine hedge effectiveness	(67)	2	(8)
Hedged rate for outstanding hedging instruments (including forward points)	1,172 Won per 1 US Dollar	Baht 29.50 per 1 US Dollar	Baht 32.73 per 1 US Dollar
SWAP rate	1.70% - 1.85%	2.60%	1.55%

	Consolidated financial statements	
	2020	
	Asset (Liability)	
	US Dollar long-term loans Million Baht	
Carrying amount	(283)	(101)
Notional amount	3,229	1,228
Maturity date	28 December 2023	31 December 2028 to 30 December 2032
Change in fair value of outstanding hedge instruments since 1 January	71	(121)
Change in value of hedged item used to determine hedge effectiveness	(71)	121
Hedged rate for outstanding hedging instruments (including forward points)	1,172 Won per 1 US Dollar	Baht 29.50 - 32.73 per 1 US Dollar
SWAP rate	1.70% - 1.85%	1.55% - 2.60%

3. Cross currency interest rate swap contracts

	Consolidated financial statements	
	2021	2020
	Asset (Liability)	Asset (Liability)
	US Dollar long-term loans Million Baht	US Dollar long-term loans Million Baht
Carrying amount	(234)	(546)
Notional amount	9,933	9,687
Maturity date	28 December 2023	28 December 2023
Change in fair value of outstanding hedge instruments since 1 January	153	(379)
Change in value of hedged item used to determine hedge effectiveness	(153)	379
Hedged rate for outstanding hedging instruments (including forward points)	1,172 Won per 1 US Dollar	1,172 Won per 1 US Dollar
SWAP rate	2.84% - 2.99%	2.84% - 2.99%

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Sensitivity

As shown in the table above, the Group is primarily exposed to changes in Baht and US Dollar, Baht and Japanese Yen, Korean Won and US Dollar, and US Dollar and Japanese Yen. The sensitivity of profit or loss to changes in the exchange rates arises mainly from financial assets and financial liabilities denominated in US Dollar and Japanese Yen and the impact on other components of equity arises from foreign currency forward contracts and cross currency interest rate swap contracts designated as cash flow hedges. The Group's exposure to other foreign exchange movements is immaterial.

	Consolidated financial statements			
	Impact to net profit		Impact to other components of equity	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Baht to 1 US Dollar exchange rate				
- increase 10% *	(3,444)	(1,289)	(270)	(205)
- decrease 10% *	3,654	914	277	203
Baht to 100 Japanese Yen exchange rate				
- increase 10% *	(500)	(481)	23	28
- decrease 10% *	500	481	(24)	(28)
Korean Won to 1 US Dollar exchange rate				
- increase 10% *	(1,005)	(485)	79	56
- decrease 10% *	1,005	485	(41)	(54)
US Dollar to 100 Japanese Yen exchange rate				
- increase 10% *	710	678	-	-
- decrease 10% *	(713)	(700)	-	-

	Separate financial statements			
	Impact to net profit		Impact to other components of equity	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Baht to 1 US Dollar exchange rate				
- increase 10% *	(2,293)	(2,226)	-	-
- decrease 10% *	2,293	2,226	-	-
Baht to 100 Japanese Yen exchange rate				
- increase 10% *	(504)	(504)	-	-
- decrease 10% *	504	504	-	-
US Dollar to 100 Japanese Yen exchange rate				
- increase 10% *	498	486	-	-
- decrease 10% *	(505)	(510)	-	-

* Holding all other variables constant

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b) Cash flow and interest rate risk

The Group's main interest rate risk arises from long-term borrowings with variable rates, which expose the Group to cash flow risk. The Group's policy is to use interest rate swap contracts, cross currency swap contracts and cross currency interest rate swap contracts to manage the risk when necessary. Generally, the Group enters into long-term borrowings at floating rates and swaps them into fixed rates.

As at 31 December 2021 and 2020, the Group's borrowings at variable rates were mainly denominated in Baht, US dollars, Australian dollar and Euro.

Following to interest rate benchmark reform, there is cessation in several benchmark interest rates including LIBOR, which is applied by the Group as part of the variable rate calculation. The management is in the process of discussing with the financial institutions to use another benchmark interest rate for the loan agreements and related financial instruments. However, as at 31 December 2021, the impact of such change is immaterial to the Group.

The exposure of the Group's interest rate of long-term borrowings from financial institutions before impact of derivatives are as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Long-term loans from financial institutions, net				
- Fixed rate	7,082	5,083	4,000	-
- Floating rate	97,179	82,316	30,108	33,812
Total Long-term loans from financial institutions, net	104,261	87,399	34,108	33,812
Debenture				
- Fixed rate	5,040	5,042	5,040	5,042
Total Debenture	5,040	5,042	5,040	5,042

An analysis by maturities is provided in Note 22.1.3.

Instruments used by the Group

The Group and the Company entered into interest rate swaps contracts covering approximately 87% (2020: 96%) of the variable loan principal outstanding. The fixed interest rates of the swaps range between 0.89% and 5.55% (2020: between 1.55%and 5.55%). As at 31 December 2021, the variable rates of the loans are described in Note 22.

The swap contracts require settlement of net interest receivable or payable between 90 to 180 days. The settlement dates coincide with the dates on which interest is payable on the underlying debt.

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The significant effects of the interest rate-related hedging instruments on the Group financial position and performance are as follows:

Interest rate swaps

	Consolidated financial statements			
	2021		2020	
	Asset (Liability)		Asset (Liability)	
	long-term loans Million Baht	long-term loans Million Baht	long-term loans Million Baht	long-term loans Million Baht
Carrying amount	161	(2,729)	1	(4,749)
Notional amount	16,355	48,980	380	58,035
Maturity date	20 May 2026 to 28 December 2035	24 March 2022 to 30 December 2037	28 December 2035	15 January 2021 to 30 December 2037
Change in fair value of outstanding hedge instruments since 1 January	137	700	1	(1,206)
Change in value of hedged item used to determine hedge effectiveness	(137)	(706)	(1)	1,199
Change in value of hedged item used to determine hedge ineffectiveness	-	6	-	7
SWAP rate	0.89% - 2.70%	2.58% - 5.55%	2.70%	2.63% - 5.55%

	Separate financial statements	
	2021	2020
	Asset (Liability) long-term loans Million Baht	Asset (Liability) long-term loans Million Baht
Carrying amount	(613)	(1,474)
Notional amount	30,122	33,834
Maturity date	24 March 2022 to 30 June 2026	15 January 2021 to 30 June 2026
Change in fair value of outstanding hedge instruments since 1 January	229	(787)
Change in value of hedged item used to determine hedge effectiveness	(235)	780
Change in value of hedged item used to determine hedge ineffectiveness	6	7
SWAP rate	2.58% - 4.06%	2.63% - 4.33%

The significant impact of interest rate hedging instruments on the Group's financial position and performance by entering into cross currency swaps and cross currency interest rate swap was disclosed in Note 5.1.1 a) including with the hedging foreign exchange rate risk.

Sensitivity

Profit or loss is sensitive to higher or lower interest income from cash and cash equivalents, and interest expenses from borrowings as a result of changes in interest rates. Other components of equity changes as a result of an increase or decrease in the fair value of the cash flow hedges of long-term loans.

	Consolidated financial statements			
	Impact to net profit		Impact to other components of equity	
	2021 Million baht	2020 Million baht	2021 Million baht	2020 Million baht
Interest rate - increase 0.5%*	(297)	(190)	1,564	1,642
Interest rate - decrease 0.5%*	283	187	(1,355)	(1,546)

	Separate financial statements			
	Impact to net profit		Impact to other components of equity	
	2021 Million baht	2020 Million baht	2021 Million baht	2020 Million baht
Interest rate - increase 0.5%*	(145)	(145)	286	448
Interest rate - decrease 0.5%*	138	156	(293)	(463)

* Holding all other variables constant

c) Price risk

The Group's exposures to the fluctuations in coal price which is partly consumed as fuel in electricity generation by the power plant incorporated in the Philippines. The Group monitors coal price index in order to plan a purchase of coal at appropriate quantity and price.

In addition, the Group exposes to the fluctuations in the electricity market price in Australia. This is because all electricity supplied to the market is sold at the spot price, which fluctuates in response to supply and demand. To manage electricity price volatility, the Group enters into electricity swaption contract with its customer to fix the price for future electricity sale for a total period of 15 years. However, the Group does not apply the hedge accounting for this transaction. Therefore, the changes in fair value of electricity swaption contract were recognised in profit or loss and presented in gains (losses) on remeasurement of financial instruments, net.

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Sensitivity analysis

The change in electricity forward price will impact the fair value of electricity swaption contract as follows:

	Consolidated financial statement Impact to net profit	
	2021 Million Baht	2020 Million Baht
Electricity forward price		
- increase by 10%*	(268)	(239)
- decrease by 10%*	268	239

* Holding all other variables constant

5.1.2 Credit risk

a) Risk management

Credit risk is managed on a group basis which arises from cash and cash equivalents and contractual cash flows of debt investments carried at amortised cost. For banks and financial institutions, only independently rated parties with a minimum rating of A- are accepted. The Group has policy to limit the transactions with specific financial institutions to reduce potential risks and use excess portion to invest in lower-risk investment. From past experience, the Group has no loss from cash and investment.

For transaction with customers, the Group's sale contracts are made to state-owned enterprises and industrial users under the terms and conditions of the long-term Power Purchase Agreements and the long-term Electricity and Steam Sales and Purchase Agreements. The customers are reliable and have low credit risk. However, management regularly monitors credit term compliance granted to each customer.

The Group's investments in debt instruments are considered to be low risk investments. The Group regularly monitors the credit ratings of the investments for credit deterioration.

b) Security

For some trade receivables the Group may obtain security in the form of guarantees or letters of credit which can be called upon if the counterparty is in default under the terms of the agreement.

c) Impairment of financial assets

The Group and the Company have following financial assets that are subject to the expected credit loss model:

- Cash and cash equivalents
- Trade receivables
- Lease receivables under power purchase agreements
- Other receivables
- Loans to related parties
- Other financial assets measured at amortised cost

Management considered the identified impairment loss on financial assets are immaterial.

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5.1.3 Liquidity risk

Prudent liquidity risk management implies maintaining sufficient cash and marketable securities and the availability of funding through an adequate amount of committed credit facilities to meet obligations when due and to close out market positions. Due to the dynamic nature of the underlying businesses, the Group treasury maintains flexibility in funding by maintaining availability under committed credit lines.

The tables below analyse the Group's financial liabilities into relevant maturity groupings based on their contractual maturities for:

- non-derivative financial liabilities and
- net and gross settled derivative financial instruments for which the contractual maturities are essential for an understanding of the timing of the cash flows.

The amounts disclosed in the table are the contractual undiscounted cash flows. Balances due within 12 months equal their carrying balances as the impact of discounting is not significant.

	Consolidated financial statements				
Maturity of financial liabilities As at 31 December 2021	**Within 1 year Million Baht**	**1 - 5 years Million Baht**	**Over 5 years Million Baht**	**Total Million Baht**	**Carrying amount Million Baht**
Trade payables and other payables	6,598	-	-	6,598	6,598
Lease liabilities	85	270	471	826	603
Long-term loans from financial institutions and interest expenses	15,940	74,713	19,714	110,367	104,541
Debenture and interest expenses	5,073	-	-	5,073	5,060
Total financial liabilities that are not derivatives	27,696	74,983	20,185	122,864	116,802
Derivatives where the hedge accounting is not applied					
- Interest rate swap contracts	72	33	-	105	81
- Foreign currency forward contracts	92	385	28	505	406
- Cross currency swap contracts	11	37	45	93	3
Derivatives where the hedge accounting is applied					
- Interest rate swap contracts	985	2,253	1,579	4,817	2,729
- Foreign currency forward contracts	28	84	-	112	109
- Cross currency swap contracts	1	-	2	3	16
- Cross currency interest rate swap contracts	164	165	-	329	234
Total derivative liabilities	1,353	2,957	1,654	5,964	3,578
Total	29,049	77,940	21,839	128,828	120,380

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Maturity of financial liabilities As at 31 December 2020	Within 1 year Million Baht	1 - 5 years Million Baht	Over 5 years Million Baht	Total Million Baht	Carrying amount Million Baht
			Consolidated financial statements		
Trade payables and other payables	4,365	-	-	4,365	4,365
Lease liabilities	55	145	405	605	528
Long-term loans from financial institutions and interest expenses	13,064	64,926	20,434	98,424	87,689
Debenture and interest expenses	88	5,054	-	5,142	5,063
Total financial liabilities that are not derivatives	17,572	70,125	20,839	108,536	97,645
Derivatives where the hedge accounting is not applied					
- Interest rate swap contracts	50	143	-	193	193
- Foreign currency forward contracts	46	229	-	275	241
Derivatives where the hedge accounting is applied					
- Interest rate swap contracts	1,274	3,006	2,275	6,555	4,749
- Foreign currency forward contracts	40	155	55	250	144
- Cross currency swap contracts	20	117	387	524	384
- Cross currency interest rate swap contracts	155	394	-	549	546
Total derivative liabilities	1,585	4,044	2,717	8,346	6,257
Total	19,157	74,169	23,556	116,882	103,902

Maturity of financial liabilities As at 31 December 2021	Within 1 year Million Baht	1 - 5 years Million Baht	Over 5 years Million Baht	Total Million Baht	Carrying amount Million Baht
			Separate financial statements		
Trade payables and other payables	290	-	-	290	290
Lease liabilities	12	39	17	68	60
Long-term loans from financial institutions and interest expenses	11,596	19,928	4,199	35,723	34,174
Debenture and interest expenses	5,073	-	-	5,073	5,060
Total financial liabilities that are not derivatives	16,971	19,967	4,216	41,154	39,584
Derivatives where the hedge accounting is applied					
- Interest rate swap contracts	431	581	-	1,012	613
Total derivative liabilities	431	581	-	1,012	613
Total	17,402	20,548	4,216	42,166	40,197

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Maturity of financial liabilities As at 31 December 2020	Separate financial statements				
	Within 1 year Million Baht	1 - 5 years Million Baht	Over 5 years Million Baht	Total Million Baht	Carrying amount Million Baht
Trade payables and other payables	512	-	-	512	512
Lease liabilities	6	13	18	37	30
Long-term loans from financial institutions and interest expenses	6,715	28,161	303	35,179	33,886
Debenture and interest expenses	88	5,054	-	5,142	5,063
Total financial liabilities that are not derivatives	7,321	33,228	321	40,870	39,491
Derivatives where the hedge accounting is applied					
- Interest rate swap contracts	588	919	3	1,510	1,474
Total derivative liabilities	588	919	3	1,510	1,474
Total	7,909	34,147	324	42,380	40,965

As at 31 December 2021, the Company had commitments under long-term loans from financial institutions to subsidiaries and joint ventures, as described in Note 38. These commitments must be paid to lenders if the subsidiaries and joint ventures don't comply with the certain procedure and condition of the subsidiaries and joint ventures' long-term loan agreements, according to the principal repayment at maturity as described in Note 22.

However, as at 31 December 2021, managements considered no risks from these commitments since subsidiaries and joint ventures are in a good financial position and can meet the obligations of the long-term loan agreements.

5.2 Capital management

The objectives when managing capital are to safeguard their ability to continue as a going concern, to provide returns for shareholders and benefits for other stakeholders, and maintain an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, the Group has several operational guidelines such as return capital to shareholders, issue new shares which the Group has to comply with requirements in long-term loans and debenture as described in Note 22 and 23.

During the year 2021, the Group's strategy remains unchanged.

As at 31 December, net debt to equity ratios of the Group are as follows:

	Consolidated financial statements	
	2021 Million Baht	2020 Million Baht
Net debt	127,895	111,603
Equity (including non-controlling interests)	114,037	102,834
Net debt to equity ratio	**1.12**	**1.09**

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6 Derivatives and hedging activities

As at 31 December, the Group had derivative contracts as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Current derivative assets				
Derivatives where the hedge accounting is not applied				
- Cross currency swap contracts	137	-	137	-
- Electricity swaption contract	178	223	-	-
Total current derivative assets	315	223	137	-
Non-current derivative assets				
Derivatives where the hedge accounting is not applied				
- Cross currency swap contracts	-	569	-	553
- Electricity swaption contract	749	1,447	-	-
Derivatives where the hedge accounting is applied				
- Interest rate swap contracts	161	1	-	-
- Foreign currency forward contracts	1	-	-	-
- Cross currency swap contracts	81	-	-	-
Total non-current derivative assets	992	2,017	-	553
Current derivative liabilities				
Derivatives where the hedge accounting is not applied				
- Interest rate swap contracts	-	50	-	-
Derivatives where the hedge accounting is applied				
- Interest rate swap contracts	100	89	100	89
Total current derivative liabilities	100	139	100	89
Non-current derivative liabilities				
Derivatives where the hedge accounting is not applied				
- Interest rate swap contracts	81	143	-	-
- Foreign currency forward contracts	406	241	-	-
- Cross currency swap contracts	3	-	-	-
Derivatives where the hedge accounting is applied				
- Interest rate swap contracts	2,629	4,660	513	1,385
- Foreign currency forward contracts	109	144	-	-
- Cross currency swap contracts	16	384	-	-
- Cross currency interest rate swap contracts	234	546	-	-
Total non-current derivative liabilities	3,478	6,118	513	1,385

6.1 Classification of derivatives

Derivatives are for the purpose of hedging against economic risks, not for investment for profit. The Group applies hedge accounting for some derivatives. This qualifies as a cash flow hedge instrument with a hedge ratio of 1:1 based on the relationship of the underlying risk variables between the hedged item and the hedging instrument. However, if a derivative contract doesn't meet the criteria for hedge accounting, it's classified as trading and measured at fair value through profit or loss.

The Group presents fair value of derivative contracts as current and non-current based on each maturity of hedged items.

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6.2 Hedge effectiveness

Hedge effectiveness is determined at the inception of the hedge relationship, and through periodic prospective effectiveness assessments, to ensure that an economic relationship exists between the hedged item and hedging instrument.

Foreign exchange risk

For hedges of foreign currency purchases, the Group enters into hedge relationships where the critical terms of the hedging instrument match exactly with the terms of the hedged item. The Group therefore performs a qualitative assessment of effectiveness. If changes in circumstances affect the terms of the hedged item such that the critical terms no longer match exactly with the critical terms of the hedging instrument, the Group uses the hypothetical derivative method to assess effectiveness.

In hedges of foreign currency purchases, ineffectiveness may arise if the timing of the forecast transaction changes from what was originally estimated, or if there are changes in the credit risk of the derivative counterparty.

Interest rate risk

The Group enters into interest rate swaps that have similar critical terms as the hedged item, such as reference rate, reset dates, payment dates, maturities and notional amount. The Group does not hedge 100% of its loans, therefore the hedged item is identified as a proportion of the outstanding loans up to the notional amount of the swaps. As all critical terms matched during the year, there is an economic relationship.

Hedge ineffectiveness for interest rate swaps is assessed using the same principles as for hedges of foreign currency purchases. It may occur due to the credit value/debit value adjustment on the interest rate swaps which is not matched by the loan and differences in critical terms between the interest rate swaps and loans.

6.3 Hedging reserves

Hedging reserves comprise hedging costs and cash flow hedge reserves. The cash flow hedge reserve is used to recognise gain/loss relating to the effective portion of the change in fair value of the derivatives for which hedge accounting is applied.

Hedging reserves are listed in other components of equity, which consists of the following hedging instruments.

	Consolidated financial statements			
		Cash flow hedged reserves		
	Cost of hedged reserves(*) Million Baht	Spot component of derivatives(*) Million Baht	Interest rate swaps Million Baht	Total cash flow hedge reserves Million Baht
Opening balance as at 1 January 2020	(78)	(150)	(3,030)	(3,180)
Add: Change in fair value of hedging instruments recognised in OCI	-	(296)	(1,525)	(1,821)
Add: Costs of hedging deferred and recognised in OCI	41	-	-	-
Less: Reclassification from OCI to profit or loss included in				
- Sales and services income	-	4	-	4
- Costs of sales and services	-	24	-	24
- Finance costs	-	(46)	321	275
Less: Deferred income tax	3	(36)	64	28
Closing balance as at 31 December 2020	(34)	(500)	(4,170)	(4,670)
Add: Change in fair value of hedging instruments recognised in OCI	-	(58)	837	779
Add: Costs of hedging deferred and recognised in OCI	(24)	-	-	-
Less: Reclassification from OCI to profit or loss included in				
- Sales and services income	-	9	-	9
- Costs of sales and services	-	29	-	29
- Finance costs	-	165	1,345	1,510
Less: Deferred income tax	1	1	(158)	(157)
Closing balance as at 31 December 2021	(57)	(354)	(2,146)	(2,500)

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	Separate financial statements Cash flow hedged reserves Interest rate swaps Million Baht
Opening balance as at 1 January 2020	(631)
Add: Change in fair value of hedging instruments recognised in OCI	(1,150)
Less: Reclassification from OCI to profit or loss included in finance costs	363
Less: Deferred income tax	-
Closing balance as at 31 December 2020	(1,418)
Add: Change in fair value of hedging instruments recognised in OCI	229
Less: Reclassification from OCI to profit or loss included in finance costs	638
Less: Deferred income tax	-
Closing balance as at 31 December 2021	(551)

(*) Derivatives consist of foreign currency forward, cross currency swap, and cross currency interest rate swap contracts.

6.4 Amounts recognised in profit or loss

In addition to the amounts disclosed in the reconciliation of hedging reserves above, the following amounts were recognised in profit or loss in relation to derivatives presented in Note 6.3.

For the year ended 31 December	Consolidated financial statements		Separate financial statements	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Net gains (losses) on derivatives not qualifying as hedges included in gains (losses) on remeasurement of financial instruments, net	(1,392)	1,800	(411)	210
Ineffective portion of hedging derivatives included in gains (losses) on remeasurement of financial instruments, net	(6)	(7)	(6)	(7)

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7 Fair value

The following table presents financial assets and liabilities that are measured at fair value in each level including fair value of financial assets and financial liabilities. The tables exclude financial assets and liabilities measured at amortised cost where their carrying value approximated fair value.

		Consolidated financial statements			
	Fair Value level	Fair value through profit or loss (FVPL) Million Baht	Amortised cost Million Baht	Total carrying value Million Baht	Fair value Million Baht
As at 31 December 2021					
Assets					
Long-term loans to related parties	2	-	4,730	4,730	5,458
Derivatives where the hedge accounting is not applied					
- Cross currency swap contracts	2	137	-	137	137
- Electricity swaption contract	3	927	-	927	927
Derivatives where the hedge accounting is applied					
- Interest rate swap contracts	2	161	-	161	161
- Foreign currency forward contracts	2	1	-	1	1
- Cross currency swap contracts	2	81	-	81	81
Total assets		1,307	4,730	6,037	6,765
Liabilities					
Long-term loans from financial institutions	2	-	104,261	104,261	104,605
Debenture	2	-	5,040	5,040	5,047
Derivatives where the hedge accounting is not applied					
- Interest rate swap contracts	2	81	-	81	81
- Foreign currency forward contracts	2	406	-	406	406
- Cross currency swap contracts	2	3	-	3	3
Derivatives where the hedge accounting is applied					
- Interest rate swap contracts	2	2,729	-	2,729	2,729
- Foreign currency forward contracts	2	109	-	109	109
- Cross currency swap contracts	2	16	-	16	16
- Cross currency interest rate swap contract	2	234	-	234	234
Total liabilities		3,578	109,301	112,879	113,230

		Separate financial statements			
	Fair value level	Fair value through profit or loss (FVPL) Million Baht	Amortised cost Million Baht	Total carrying value Million Baht	Fair value Million Baht
As at 31 December 2021					
Assets					
Long-term loans to related parties	2	-	50,857	50,857	53,614
Derivatives where the hedge accounting is not applied					
- Cross currency swap contract	2	137	-	137	137
Total assets		137	50,857	50,994	53,751
Liabilities					
Long-term loans from financial institutions	2	-	34,108	34,108	34,258
Debenture	2	-	5,040	5,040	5,047
Derivatives where the hedge accounting is applied					
- Interest rate swap contracts	2	613	-	613	613
Total liabilities		613	39,148	39,761	39,918

		Consolidated financial statements			
	Fair value level	Fair value through profit or loss (FVPL) Million Baht	Amortised cost Million Baht	Total carrying value Million Baht	Fair value Million Baht
As at 31 December 2020					
Assets					
Derivatives where the hedge accounting is not applied					
- Cross currency swap contracts	2	569	-	569	569
- Electricity swaption contract	3	1,670	-	1,670	1,670
Derivatives where the hedge accounting is applied					
- Interest rate swap contracts	2	1	-	1	1
Total assets		2,240	-	2,240	2,240
Liabilities					
Long-term loans from financial institutions	2	-	87,399	87,399	87,682
Debenture	2	-	5,042	5,042	5,079
Derivatives where the hedge accounting is not applied					
- Interest rate swap contracts	2	193	-	193	193
- Foreign currency forward contracts	2	241	-	241	241
Derivatives where the hedge accounting is applied					
- Interest rate swap contracts	2	4,749	-	4,749	4,749
- Foreign currency forward contracts	2	144	-	144	144
- Cross currency swap contracts	2	384	-	384	384
- Cross currency interest rate swap contract	2	546	-	546	546
Total liabilities		6,257	92,441	98,698	99,018

		Separate financial statements			
	Fair value level	Fair value through profit or loss (FVPL) Million Baht	Amortised cost Million Baht	Total carrying value Million Baht	Fair value Million Baht
As at 31 December 2020					
Assets					
Long-term loans to related parties	2	-	51,076	51,076	54,169
Derivatives where the hedge accounting is not applied					
- Cross currency swap contract	2	553	-	553	553
Total assets		553	51,076	51,629	54,722
Liabilities					
Debenture	2	-	5,042	5,042	5,079
Derivatives where the hedge accounting is applied					
- Interest rate swap contracts	2	1,474	-	1,474	1,474
Total liabilities		1,474	5,042	6,516	6,553

Fair value of the following financial assets and financial liabilities measured at amortised cost where their carrying value approximated fair value are as follows:

Consolidated financial statements	Separate financial statements
Financial assets - Cash and cash equivalents - Financial assets measured at amortised cost - Financial assets used as collateral measured at amortised cost - Trade receivables - Lease receivables under power purchase agreements from a related party - Other receivables - Long-term loans to related parties	Financial assets - Cash and cash equivalents - Financial assets measured at amortised cost - Other receivables - Long-term loans to related parties
Financial liabilities - Short-term loans from financial institutions - Trade payables - Other payables - Long-term loans from financial institutions - Long-term loan from other company	Financial liabilities - Other payables - Long-term loans from financial institutions

The different levels have been defined as follows:

Level 1 Fair value of financial instruments refer to quoted prices in active markets for identical assets or liabilities.
Level 2 Fair value of financial instruments assess from valuation techniques which use information that are observable, either directly or indirectly, for the asset or liability
Level 3 Fair value of financial instruments assess from valuation techniques that are not based on observable market data.

There were no transfers between Levels 1, 2 and 3 of fair value level during the year.

7.1 Valuation techniques used to measure fair value level 2

Valuation techniques used to measure fair value level 2 of derivatives are as follows:

- Fair value of interest rate swaps contracts is determined using forward interests extracted from observable yield curves.
- Fair value of foreign currency forward contracts is determined using forward exchange rates that are quoted in an active market.
- Fair value of cross currency swap contracts and cross currency interest rate swap contracts are determined using forward interests extracted from observable yield curves and using forward exchange rates that are quoted in an active market.

7.2 Valuation techniques used to measure fair value level 3

Changes in level 3 derivatives that are measured at fair value are as follows:

	Consolidated financial statements	
	2021	2020
	Electricity swaption contract Million Baht	Electricity swaption contract Million Baht
Opening balance as at 1 January	1,670	(19)
Gains (losses) recognised through profit and loss	(833)	1,580
Exchange difference on translation	90	109
Closing balance as at 31 December	927	1,670

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The following table summarises the quantitative information about the significant unobservable inputs used in level 3 fair value measurements

As at	Fair value			Consolidated financial statements Range of inputs	
	31 December 2021 Million Baht	31 December 2020 Million Baht	Unobservable inputs	31 December 2021	31 December 2020
Electricity swaption contract	927	1,670	Growth rate of cash flows	2.5%	0.70%
			Risk-adjusted discount rate	0.13% - 2.93%	0.13% - 2.04%
			Electricity forward price	45.80 - 112.00 Australian Dollar	39.40 - 143.60 Australian Dollar

Relationship of unobservable inputs to fair value are shown as follows:

			Consolidated financial statements	
			2021	2020
			Change in fair value	
	Unobservable inputs	Movement	Million Baht	Million Baht
Electricity swaption contract	Growth rate of cash flows	Increase 1%	(96)	(121)
		Decrease 1%	94	114
	Risk-adjusted discount rate	Increase 1%	(111)	(198)
		Decrease 1%	125	230
	Electricity forward price	Increase 10%	(268)	(239)
		Decrease 10%	268	239

The Group's valuation process

The Management appoints independent valuation team to discuss and carry out fair value valuation process on quarterly basis.

Significant unobservable inputs of fair value hierarchy level 3 are risk-adjusted discount rate which is refer to the rate of return in the financial market of Australia adjusted by credit risk and electricity forward price which is refer to an energy consulting firm.

8 Critical accounting estimates and judgments

Estimates and judgments are continually evaluated and are based on historical experience and other factors, including expectations or future events that are believed to be reasonable under the circumstances.

During the year 2021, the Group makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are outlined below.

8.1 Fair value of certain financial assets and derivatives

The fair value of financial instruments that are not traded in an active market is determined using valuation techniques. The Group uses judgement to select a variety of methods and make assumptions that are mainly based on market conditions existing at the end of each reporting period. Details of key assumptions used are included in Note 6.

8.2 Impairment of goodwill

Goodwill arising from the acquisition of investment in electricity generation businesses in each country is tested annually for impairment by comparing the carrying amount to the recoverable amount for each cash-generating unit which is determined based on value-in-use calculations. These calculations use a cash flow projection covering the remaining periods of Power Purchase Agreements of the Group in each country and the forecasted electricity tariffs and capacity of the power plants stated in the agreements. Discount rates used are based on the weighted average cost of capital (WACC) of each country.

8.3 Impairment of investments in subsidiaries, associates and joint ventures and related assets

The Group tests impairment of investments in subsidiaries, associates and joint ventures and related assets when events or changes in circumstances indicate that the carrying value of the investment is higher than its recoverable amounts by applying the value-in-use model or fair value less costs of disposal. The value-in-use model involves management's significant judgments with respect to the future operating results of business, projected cash flows, appropriate discount rate to be applied to the projected cash flows. Key assumptions applied in the value-in-use model or fair value less costs of disposal are electricity tariff, assumed capacity of the power plants, growth rate, expected changes to operating expenditures, and the discount rate to be applied to the projected cash flows.

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9 Segment information - consolidated financial statements

The Group has two segments report which are comprised of electricity generation and other businesses. Electricity generation is to operate electricity for sales to the government and industrial users. Other businesses are maintenance and operating services for power plants, engineering service, coal mining business and oil pipeline system business. The segment information is presented on the same basis that used for internal reporting purpose as provided to the chief operating decision maker (the President).

	Consolidated financial statements For the year ended 31 December 2021					
	Electricity generation Million Baht	Other businesses Million Baht	Management Discussion and Analysis report Million Baht	Adjustments Million Baht		Total Million Baht
Sales and services income	37,861	1,103	38,964	(5,861)	(2),(4),(5),(8),(9)	33,103
Lease income under power purchase Agreements	-	-	-	2,800	(5)	2,800
Costs of sales and services	(28,066)	(935)	(29,001)	1,441	(2),(5),(8),(9)	(27,560)
Segment results	9,795	168	9,963	(1,620)		8,343
Dividend and other income	3,119	10	3,129	(895)	(4),(8),(9)	2,234
Loss on impairment of assets	(1,518)	-	(1,518)	511	(1),(9)	(1,007)
Currency exchange gain (losses), net	(4,159)	(109)	(4,268)	5,338	(1),(2),(3),(5),(9)	1,070
Losses on remeasurement of financial instruments, net	(1,648)	-	(1,648)	250	(2)	(1,398)
Administrative expenses	(3,690)	(57)	(3,747)	1,101	(7),(8),(9)	(2,646)
Finance costs	(6,066)	(1)	(6,067)	(2,181)	(2),(9)	(8,248)
Share of profit from investments in associates and joint ventures, net	6,875	882	7,757	(1,329)	(1),(5),(6),(7)	6,428
Profit before income tax expense	2,708	893	3,601	1,175		4,776
Deferred tax income (expense)	(120)	3	(117)	276	(5),(6),(9)	159
Income tax expense	(797)	(20)	(817)	(1)	(9)	(818)
Profit for the year	1,791	876	2,667	1,450		4,117
Attributable to:						
Owners of the parent	1,791	876	2,667	1,437	(5)	4,104
Non-controlling interests	-	-	-	13	(3),(5),(9)	13
Property plant and equipment, net	49,527	70	49,597	-		49,597
Total assets	241,088	844	241,932	-		241,932
Timing of revenue recognition						
At a point in time	8,416	-	8,416	(6,632)	(4),(5),(8),(9)	1,784
Over time	29,445	1,103	30,548	771	(5),(8),(9)	31,319
Total revenue	37,861	1,103	38,964	(5,861)		33,103

(1) Net gains (losses) on exchange rates and finance costs and loss on impairment of assets of associates and joint ventures
(2) Net gains (losses) on exchange rates and remeasurement of financial instruments and finance costs of subsidiaries
(3) Net gains (losses) on exchange rates of non-controlling interests
(4) Adder income
(5) Impact of the adoption of Thai Financial Reporting Standard 16 “Lease”
(6) Deferred tax of subsidiaries, associates and joint ventures
(7) Amortisation of rights in long-term power purchase agreements and fair value uplift of assets from business combination
(8) Related party transaction of subsidiaries, associates and joint ventures
(9) Non-controlling interests

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	Electricity generation Million Baht	Other businesses Million Baht	Management Discussion and Analysis report Million Baht	Adjustments Million Baht		Total Million Baht
Sales and services income	35,843	736	36,579	(5,878)	(2),(4),(5),(8),(9)	30,701
Lease income under power purchase Agreements	-	-	-	2,877	(5)	2,877
Costs of sales and services	(25,972)	(594)	(26,566)	1,308	(2),(5),(8),(9)	(25,258)
Segment results	9,871	142	10,013	(1,693)		8,320
Dividend and other income	3,230	11	3,241	(828)	(4),(8),(9)	2,413
Loss on impairment of assets	(2,400)	-	(2,400)	791	(1),(9)	(1,609)
Currency exchange gains, net	246	8	254	607	(1),(2),(3),(5),(9)	861
Gains on remeasurement of financial instruments, net	1,791	-	1,791	2	(2)	1,793
Administrative expenses	(3,478)	(66)	(3,544)	931	(7),(8),(9)	(2,613)
Finance costs	(6,234)	(2)	(6,236)	2,015	(2),(9)	(4,221)
Share of profit from investments in associates and joint ventures, net	6,235	24	6,259	(1,421)	(1),(5),(6),(7)	4,838
Profit before income tax expense	9,261	117	9,378	404		9,782
Deferred tax income (expense)	(173)	5	(168)	143	(5),(6),(9)	(25)
Income tax expense	(976)	(18)	(994)	(3)	(9)	(997)
Profit for the year	8,112	104	8,216	544		8,760
Attributable to:						
Owners of the parent	8,112	104	8,216	517	(5)	8,733
Non-controlling interests	-	-	-	27	(3),(5),(9)	27
Property plant and equipment, net	49,683	67	49,750	-		49,750
Total assets	213,660	778	214,438	-		214,438
Timing of revenue recognition						
At a point in time	5,016	-	5,016	(3,235)	(4),(5),(8),(9)	1,781
Over time	30,827	736	31,563	(2,643)	(5),(8),(9)	28,920
Total revenue	35,843	736	36,579	(5,878)		30,701

(1) Net gains (losses) on exchange rates and finance costs and loss on impairment of assets of associates and joint ventures
(2) Net gains (losses) on exchange rates and remeasurement of financial instruments and finance costs of subsidiaries
(3) Net gains (losses) on exchange rates of non-controlling interests
(4) Adder income
(5) Impact of the adoption of Thai Financial Reporting Standard 16 “Lease”
(6) Deferred tax of subsidiaries, associates and joint ventures
(7) Amortisation of rights in long-term power purchase agreements and fair value uplift of assets from business combination
(8) Related party transaction of subsidiaries, associates and joint ventures
(9) Non-controlling interests

Geographical information

In presenting geographical information, revenue is based on the geographical location of customers and fixed assets (Property, plant and equipment) are based on the geographical location of the assets.

As at 31 December	Sales and services income		Property, plant and equipment, net	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Thailand	24,143	23,610	24,748	26,389
Philippines	10,845	9,095	19,809	18,360
Australia	915	873	5,040	5,001
Total	35,903	33,578	49,597	49,750

The Group’s main customer is a related party, EGAT, which arises from electricity generation as disclosed in Note 37.1 totalling 58.28% of all the Group’s revenue.

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10 Cash and cash equivalents

As at 31 December	Consolidated financial statements		Separate financial statements	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Cash in hand	1	1	-	-
Deposits held at call with financial institutions	3,435	3,772	59	37
Fixed deposits with financial institutions	104	18	-	-
Short-term investments in promissory notes with maturities within three months	14,358	13,446	3,396	3,646
Total cash and cash equivalents	17,898	17,237	3,455	3,683

As at 31 December 2021, the interest rates on deposits with financial institutions were 0.00% to 0.40% per annum (As at 31 December 2020: 0.00% to 0.38% per annum). The interest rates on short-term investments in promissory notes with maturities within three months were 0.02% to 0.72% per annum (As at 31 December 2020: 0.01% to 1.30% per annum).

11 Financial assets measured at amortised cost

Separate financial statements

As at 31 December 2021, financial assets measured at amortised cost of the Company are comprised of promissory notes with maturity over three months but not later than one year amounting to US Dollar 37 million and Baht 1,161 million, totalling Baht 2,383 million. (As at 31 December 2020: Baht 1,928 million). Short-term investments bear an interest rate at 0.15% to 0.48% per annum (As at 31 December 2020: 0.40% to 0.55% per annum).

Consolidated financial statements

As at 31 December 2021, financial assets measured at amortised cost of the Group are comprised of promissory notes and investment in government bond with maturity over three months but not later than one year amounting to US Dollar 38 million, Korean Won 41,683 million and Baht 1,700 million, totalling Baht 4,128 million. (As at 31 December 2020: US Dollar 0.06 million, Korean Won 32,162 million and Baht 2,370 million, totalling Baht 3,257 million). Short-term investments bear an interest rate from 0.15% to 0.96% per annum (As at 31 December 2020: interest rate from 0.23% to 0.90% per annum).

12 Financial assets used as collateral measured at amortised cost

Consolidated financial statements

As at 31 December 2021, financial assets used as collateral measured at amortised cost are cash reserve for the purpose of repayment of principals and payment of interests due within one year amounting to Baht 799 million (As at 31 December 2020: Baht 931 million) and the remaining balances of Baht 2,275 million represented collateralised deposits maintained in accordance with the loan agreements (As at 31 December 2020: Baht 2,709 million). These cash reserves are provided from the proceeds of sales of electricity and could be used subject to certain lender approvals.

Financial assets used as collateral measured at amortised cost are comprised of deposits at financial institutions, promissory notes and government bond amounting to US Dollar 10 million, Japanese Yen 150 million and Baht 2,700 million, totalling Baht 3,074 million (As at 31 December 2020: US Dollar 15 million, Japanese Yen 133 million and Baht 3,160 million, totalling Baht 3,640 million).

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13 Trade receivables, net

As at 31 December	Note	Consolidated financial statements 2021 Million Baht	Consolidated financial statements 2020 Million Baht	Separate financial statements 2021 Million Baht	Separate financial statements 2020 Million Baht
Trade receivables		2,531	2,030	-	-
Trade receivable from a related party	37.2	1,731	1,149	-	-
Trade receivable from a related party for services under power purchase agreements	37.2	2,800	1,655	-	-
Less Impairment loss		(2)	(23)	-	-
Trade receivables, net		7,060	4,811	-	-

Trade receivables as at 31 December can be analysed as follows:

	Consolidated financial statements 2021 Million Baht	Consolidated financial statements 2020 Million Baht	Separate financial statements 2021 Million Baht	Separate financial statements 2020 Million Baht
Not overdue	7,060	4,811	-	-
Overdue below 3 months	-	-	-	-
Overdue 3 - 6 months	-	-	-	-
Overdue 6 - 12 months	-	-	-	-
Overdue over 12 months	2	23	-	-
	7,062	4,834	-	-
Less Impairment loss	(2)	(23)	-	-
Trade receivables, net	7,060	4,811	-	-

14 Fuel and spare parts and supplies, net

As at 31 December	Consolidated financial statements 2021 Million Baht	Consolidated financial statements 2020 Million Baht	Separate financial statements 2021 Million Baht	Separate financial statements 2020 Million Baht
Fuel	1,214	1,133	-	-
Other specific spare parts	1,317	1,338	-	-
Common spare parts	1,057	889	-	-
Others	94	102	-	-
	3,682	3,462	-	-
Less Allowance for obsolescence	(735)	(702)	-	-
Fuel and spare parts and supplies, net	2,947	2,760	-	-

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15 Other receivables, net

As at 31 December	Note	Consolidated financial statements 2021 Million Baht	Consolidated financial statements 2020 Million Baht	Separate financial statements 2021 Million Baht	Separate financial statements 2020 Million Baht
Current					
Trade receivables from a related party	37.2	226	236	2,543	2,695
Value added tax receivables		243	285	14	1
Prepaid insurance premium		246	168	4	-
Receivable from sale of powerplant		-	277	-	277
Others		545	427	60	35
Total current portion		1,260	1,393	2,621	3,008
Non-current					
Trade receivables from a related party	37.2	703	716	1,257	731
Total non-current portion		703	716	1,257	731
Total other receivables, net		1,963	2,109	3,878	3,739

16 Investments in subsidiaries, associates and joint ventures

As at 31 December	Notes	Consolidated financial statements 2021 Million Baht	Consolidated financial statements 2020 Million Baht	Separate financial statements 2021 Million Baht	Separate financial statements 2020 Million Baht
Investments in subsidiaries		-	-	15,785	15,785
Less Allowance for impairment		-	-	(212)	(187)
Investments in subsidiaries, net	16.2	-	-	15,573	15,598
Investments in associates	16.3	25,050	14,011	3,625	3,357
Investments in joint ventures		95,087	82,986	31,888	31,843
Less Allowance for impairment		(385)	(385)	(4,929)	(4,410)
Investments in joint ventures, net	16.4	94,702	82,601	26,959	27,433
Total investments in subsidiaries, associates and joint ventures, net		119,752	96,612	46,157	46,388

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16.1 The movements of the investments in subsidiaries, associates and joint ventures can be analysed as follows:

For the years ended 31 December	Notes	Consolidated financial statements 2021 Million Baht	2020 Million Baht
Opening net book value		96,612	86,664
Decrease of share capital of an associate		-	(432)
Additions of investment in joint ventures	16.1.3	1,866	812
Acquisitions of investments in associates and joint ventures	16.1.2, 16.1.3	14,357	12,222
Impairment loss on investment in a joint venture	31	-	(88)
Share of profit from investments in associates and joint ventures, net		6,428	4,838
Share of other comprehensive income (expense) of associates and joint ventures			
- Remeasurements of post-employment benefit obligations, net of tax		21	10
- Cash flow hedges, net of tax		358	336
- Exchange difference on translation		5,975	(1,557)
Dividends received from associates and joint ventures	16.5	(5,865)	(6,193)
Closing net book value		119,752	96,612

For the years ended 31 December	Note	Separate financial statements 2021 Million Baht	2020 Million Baht
Opening net book value		46,388	46,562
Addition of investment in a joint venture		45	-
Acquisition of investment in an associate		268	-
Impairment loss on investments in subsidiaries and joint ventures	31	(544)	(174)
Closing net book value		46,157	46,388

16.1.1 The significant movement of the investment in subsidiaries during the year ended 31 December 2021:

Direct holding by the Company

Subsidiary which operates solar electricity generation plants in Thailand

During the year ended 31 December 2021, the Company recognised impairment loss on investments in a subsidiary amounting to Baht 25 million in separate statement as described in Note 18.

16.1.2 The significant movement of the investment in associates during the year ended 31 December 2021:

Direct holding by the Company

Peer Power Company Limited (Peer Power)

On 16 December 2021, the Company entered into an agreement to invest in Peer Power Company Limited (Peer Power) in the proportion of 24.24%. Peer Power is a startup company in the financial technology business (Fintech) which mainly provides online electronic platform for crowdfunding by issuing shares or debentures to investors. The acquisition was completed on 21 December 2021 and the Company fully paid amounting to Baht 268 million for such investments on the same date.

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Indirect holding by the Company

Ares Apex Pooling, LLC (Ares Apex)

On 5 October 2021, the Group entered into certain definitive agreements to be a co-investor in Ares Apex Pooling, LLC (Ares Apex), a co-investor managed by Ares Management Corporation's (NYSE: ARES) Infrastructure and Power strategy, in order to acquire a 17.46% indirect shareholding interest in Apex Clean Energy Holdings, LLC (Apex Holding) which is a private utility-scale renewable development company in the United States of America. The Group made a payment with the fair value of the total consideration transferred amounting to US Dollar 239 million (equivalent to Baht 7,792 million). On 17 November 2021, Ares Apex completely acquired an investment in Apex Holding.

The estimated fair values of identifiable assets acquired and liabilities assumed are US Dollar 115 million (equivalent to Baht 3,774 million) and US Dollar 62 million (equivalent to Baht 2,018 million), respectively. However, the estimated fair value may be adjusted to reflect new information obtained about facts and circumstances that existed as of the acquisition date. As at 31 December 2021, the Group is in the process of determining the fair value of net assets acquired and reviewing purchase price allocation (PPA) which is expected to be finalised within 12 months from the acquisition date.

16.1.3 The significant movement of the investment in joint ventures during the year ended 31 December 2021:

Direct holding by the Company

Joint ventures which operate electricity generation plants in Thailand

During the year ended 31 December 2021, the Company recognised impairment loss on investments in three joint ventures which operates solar power business in Thailand amounting to Baht 170 million and impairment loss on investment in a joint venture which operates coal power plant business in Thailand amounting to Baht 349 million in separate statement of income as described in Note 31.

Innopower Company Limited (Innopower)

On 13 September 2021, the Company together with the Electricity Generating Authority of Thailand and RATCH Group Public Company Limited, established Innopower Company Limited with the objective of operating a business for investing in innovation and future energy technology. The Company has a proportion of 30% shareholding of Baht 600 million in authorised share capital. The Group has paid 25% of the authorised share capital to its shareholding totalling Baht 45 million.

Indirect holding by the Company

Yunlin Holding GmbH (Yunlin) and its subsidiaries

During the year ended 31 December 2021, Yunlin called up the capital increase shares. The Group paid for additional share capital in the same proportion as its original investment totalling Euro 50 million (equivalent to Baht 1,821 million).

Linden Topco LLC (Linden) its subsidiaries

On 29 January 2021, the Group entered into the Purchase and Sale Agreement with AEIF Linden SPV, LLC and Highstar Capital GP IV, L.P. (the sellers) to acquire 28% shareholding interest in Linden Topco LLC and its subsidiaries which operate a 972 MW cogeneration power plant in the United States of America, at a purchase consideration of US Dollar 202 million (equivalent to Baht 6,297 million). The acquisition was completed on 4 June 2021 and the Group made a full payment to the sellers on the same date. The estimated fair value of identifiable assets acquired and liabilities assumed is US Dollar 255 million (equivalent to Baht 7,947 million) and US Dollar 343 million (equivalent to Baht 10,673 million), respectively.

However, the estimated fair value may be adjusted to reflect new information obtained about facts and circumstances that existed as of the acquisition date. As at 31 December 2021, the Group is in the process of determining the fair value of net assets acquired and reviewing purchase price allocation (PPA) which is expected to be finalised within 12 months from the acquisition date.

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16.2 Investments in subsidiaries

The details of the investments in subsidiaries are as follows:

		Separate financial statements							
		Portion of ordinary shares directly held by parent		Portion of ordinary shares held by the Group		Cost Method		Dividend income	
Business		2021 %	2020 %	2021 %	2020 %	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Subsidiaries incorporated in Thailand									
Khanom Electricity Generating Co., Ltd.	Electricity generation	99.99	99.99	-	-	8,005	8,005	705	1,196
EGCO Engineering and Service Co., Ltd.	Power plant operation and maintenance services	99.99	99.99	-	-	400	400	89	38
EGCO Green Energy Co., Ltd.	Investment in biomass fuelled electricity generation plant	74.00	74.00	-	-	129	129	-	-
- Roi-Et Green Co., Ltd.	Husk fuelled electricity generation plant	-	-	95.00	95.00	-	-	-	-
EGCO Cogeneration Co., Ltd.	Electricity cogeneration power plant	80.00	80.00	-	-	892	892	16	80
Theppana Wind Farm Co., Ltd.	Wind electricity generation plant	90.00	90.00	-	-	150	150	10	5
SPP Two Co., Ltd.	Solar electricity generation plant	99.99	99.99	-	-	266	266	4	-
SPP Three Co., Ltd.	Solar electricity generation plant	99.99	99.99	-	-	301	301	62	35
SPP Four Co., Ltd.	Solar electricity generation plant	99.99	99.99	-	-	224	224	6	15
SPP Five Co., Ltd.	Solar electricity generation plant	99.99	99.99	-	-	371	371	2	41
Yanhee EGCO Holding Co., Ltd.	Investment in solar electricity generation plant	100.00	100.00	-	-	5	5	589	355
- Solarco Co., Ltd.	Solar electricity generation plant	-	-	99.98	99.98	-	-	-	-
Klongluang Utilities Co., Ltd.	Electricity cogeneration power plant	99.99	99.99	-	-	1,000	1,000	213	104
Banpong Utilities Co., Ltd.	Electricity cogeneration power plant	99.99	99.99	-	-	2,000	2,000	580	260
Chaiyaphum Wind Farm Co., Ltd.	Wind electricity generation plant	90.00	90.00	-	-	1,532	1,532	64	136

		Separate financial statements							
		Portion of ordinary shares directly held by the Company		Portion of ordinary shares held by the Group		Cost Method		Dividend income	
	Business	2021 %	2020 %	2021 %	2020 %	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
EGCO Plus Co., Ltd. (EGCO Plus) (incorporated in Thailand)	Investment in energy related business	100.00	100.00	-	-	510	510	-	1,052
- New Growth Plus B.V. (incorporated in the Netherlands)	Investment in energy related business	-	-	100.00	100.00	-	-	-	-
- Gen Plus B.V. (incorporated in the Netherlands)	Investment in energy related business	-	-	100.00	100.00	-	-	-	-
- Phoenix Power B.V. (incorporated in the Netherlands)	Investment in energy related business	-	-	100.00	100.00	-	-	-	-
- Millennium Energy B.V. (incorporated in the Netherlands)	Investment in energy related business	-	-	100.00	100.00	-	-	-	-
- South Pacific Power Pty Limited (incorporated in Australia)	Investment in energy related business	-	-	100.00	100.00	-	-	-	-
- Boco Rock Wind Farm Pty Ltd (incorporated in Australia)	Wind electricity generation plant	-	-	100.00	100.00	-	-	-	-
- New Growth B.V. (incorporated in the Netherlands)	Investment in energy related business	-	-	100.00	100.00	-	-	-	-
- Evergreen Power Ventures B.V. (incorporated in the Netherlands)	Investment in energy related business	-	-	100.00	100.00	-	-	-	-
- Pearl Energy Philippines Operating, Inc. (PEPOI) (incorporated in Cayman Islands, migrated to the Netherlands and operated in the Philippines)	Power plant operation and maintenance services	-	-	100.00	100.00	-	-	-	-
- Quezon Power, Inc. (QPI) (incorporated in Cayman Islands, migrated to the Netherlands and operated in the Philippines)	Investment in energy related business	-	-	100.00	100.00	-	-	-	-
- Quezon Power (Philippines) Limited Co. (QPL) (incorporated in the Philippines)	Electricity generation	-	-	100.00	100.00	-	-	-	-
- Quezon Management Service Inc. (QMS) (incorporated in Cayman Islands, migrated to the Netherlands and operated in the Philippines)	Management services	-	-	100.00	100.00	-	-	-	-
- Mauban Holding Company Inc. (Mauban) (incorporated in the Philippines)	Investment in energy related business	-	-	100.00	100.00	-	-	-	-
- Greenwing Energy B.V. (incorporated in the Netherlands)	Investment in energy related business	-	-	100.00	100.00	-	-	-	-
- Blue Diamond B.V. (incorporated in the Netherlands)	Investment in energy related business	-	-	100.00	-	-	-	-	-
- Dawei Electricity Generating Company Management Pte. Ltd. (DEGCOM) (incorporated in Singapore)	Investment in energy related business	-	-	100.00	100.00	-	-	-	-
- EGCO Pearl Co., Ltd. (EGCO Pearl) (incorporated in Taiwan)	Investment in energy related business	-	-	100.00	100.00	-	-	-	-
- EGCO Linden I, LLC (Linden I) (incorporated in United States of America)	Investment in energy related business	-	-	100.00	-	-	-	-	-
- EGCO Linden II, LLC (Linden II) (incorporated in United States of America)	Investment in energy related business	-	-	100.00	-	-	-	-	-
- Green Diamond Limited (Green Diamond) (incorporated in Cayman Islands)	Investment in energy related business	-	-	100.00	-	-	-	-	-
- Blue Moon Limited (Bluemoon) (incorporated in Cayman Islands)	Investment in energy related business	-	-	100.00	-	-	-	-	-
Total investments in subsidiaries						15,785	15,785	2,340	3,317
Less Allowance for impairment (Note 16.1.1)						(212)	(187)	-	-
Total investments in subsidiaries, net						15,573	15,598	2,340	3,317

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All subsidiaries undertakings are included in the consolidation. The proportion of the voting rights in the subsidiary undertakings held directly by the parent company do not differ from the proportion of ordinary shares held. The parent company further does not have any shareholdings in the preference shares of subsidiary undertaking included in the Group.

As at 31 December 2021 and 2020, under the terms and conditions of loan agreements, the common share were pledged as collateral for its long-term loans in each subsidiary.

- Khanom Electricity Generating Co., Ltd.
- Solarco Co., Ltd.
- Chaiyaphum Wind Farm Co., Ltd.
- Klongluang Utilities Co., Ltd.
- Banpong Utilities Co., Ltd.

As at 31 December 2021 and 2020, total non-controlling interest is immaterial.

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16.3 Investments in associates

The details of investments in associates are as follows:

		Consolidated financial statements					
		Portion of ordinary shares held by the Group		Equity Method		Dividend income	
	Business	2021 %	2020 %	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Associate incorporated in the Lao People's Democratic Republic							
Xayaburi Power Company Limited (XPCL)	Hydropower electricity generation	12.50	12.50	3,711	3,607	87	-
Associate incorporated in the Republic of Indonesia							
Star Energy Geothermal Pte. Ltd. (SEG) and its subsidiaries	Investment in geothermal energy power plant business	20.00	20.00	8,651	6,866	-	-
Associate incorporated in the Netherlands							
Star Energy Geothermal (Salak - Darajat) B.V (SEGSD) and its subsidiaries	Investment in geothermal energy power plant business	20.07[(a)]	20.07[(a)]	4,261	3,538	125	535
Associate incorporated in The United States of America							
Ares Apex Pooling, LLC (Ares Apex) and its subsidiaries	Investment in large-scale renewable energy development business	17.46[(b)]	-	8,159	-	-	-
Associate incorporated in Thailand							
Peer Power Company Limited (Peer Power)	Investment in providing online platform for crowdfunding	24.24	-	268	-	-	-
Total investments in associates				25,050	14,011	212	535

(a) The Group has invested 11.89% in Star Phoenix Geothermal JV B.V. (SPGJV), which is an associate of Phoenix Power B.V., and invested more 8.18% through SEG. As a result, the Group has indirect holding 20.07% in SEGSD.

(b) The Group has invested a 29.86% in Ares Apex, where Ares Apex invests in Apex Clean Energy Holdings., LLC (Apex Holding) in the proportion of 58.45%. As a result, the Group has an indirect holding 17.46% in Apex Holding.

		Separate financial statements					
		Portion of ordinary shares held by the Company		Cost Method		Dividend income	
	Business	2021 %	2020 %	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Associate incorporated in the Lao People's Democratic Republic							
Xayaburi Power Company Limited (XPCL)	Hydropower electricity generation	12.50	12.50	3,357	3,357	87	-
Associate incorporated in Thailand							
Peer Power Company Limited (Peer Power)	Investment in providing online platform for crowdfunding	24.24	-	268	-	-	-
Total investments in associates				3,625	3,357	87	-

All associates are the limited companies and there is no quoted market price for all shares of associates. The Group has no contingent liability related to the Group's interests in associates.

Summarised financial information for associates

The Group also has interests in immaterial associates that are accounted for using the equity method as follow:

	2021 Million Baht	2020 Million Baht
Aggregate carrying amount of individually immaterial associates	25,050	14,011
Aggregate amounts of associates' share of:		
Impacts from the first-time adoption of new financial reporting standards related to financial statements	-	(68)
Net profit	1,760	778
Other comprehensive income (expense)	1,433	(307)
Total comprehensive income	3,193	403

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16.4 Investments in joint ventures

The details of investments in joint ventures are as follows:

		Consolidated financial statements					
		Portion of ordinary shares held by the Group		Equity Method		Dividend income	
	Business	2021 %	2020 %	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Joint ventures incorporated in Thailand							
Gulf Electric Public Co., Ltd. (GEC) and its subsidiaries	Investment in power projects	50.00	50.00	12,529	13,171	2,054	2,481
BLCP Power Ltd. (BLCP)	Electricity generation	50.00	50.00	5,642	5,252	175	200
Natural Energy Development Co., Ltd. (NED)	Solar electricity generation plant	66.67*	66.67*	2,301	2,397	380	440
G-Power Source Co., Ltd. (GPS)	Solar electricity generation plant	60.00*	60.00*	756	822	107	93
Thai Pipeline Network Company Limited (TPN)	Oil transportation service business with pipeline transportation system (the Company has not yet started its business operations)	44.60*	44.60*	3,208	3,222	-	-
Innopower Company Limited (Innopower)	Investment in innovation and future energy technology business	30.00*	-	45	-	-	-
Joint ventures incorporated in the Philippines							
Kalilayan Power Inc. (KPI)	Investment in energy related business	49.00*	49.00*	-	-	-	-
San Buenaventura Power Ltd., Co. (SBPL)	Electricity generation	49.00*	49.00*	5,581	5,237	696	-
Joint ventures incorporated in the Lao People's Democratic Republic							
Nam Theun 1 Power Company Limited (NT1PC)	Electricity generation (the Company has not yet started its business operations)	25.00*	25.00*	3,064	2,235	-	-
Nam Theun 2 Power Company Limited (NTPC)	Electricity generation	35.00*	35.00*	10,570	9,511	1,180	655
E&E Engineering and Service Co., Ltd (E&E)	Power plant operation and maintenance services	40.00*	40.00*	9	10	-	-
Joint venture incorporated in the Republic of Indonesia							
PT Manambang Muara Enim (MME)	Coal mining	40.00*	40.00*	4,722	3,932	35	-
Joint venture incorporated in Republic of Korea							
Paju Energy Service Co., Ltd (Paju)	Electricity generation	49.00*	49.00*	23,412	23,247	994	1,789
Joint venture incorporated in the Germany							
Yunlin Holding GmbH (Yunlin) and its subsidiaries	Investment in wind electricity generation plant	25.00*	25.00*	16,858	13,950	-	-
Joint venture incorporated in the United States of America							
Linden Topco LLC (Linden) and its subsidiaries	Investment in electricity cogeneration power plant	28.00*	-	6,390	-	32	-
Total investments in joint ventures				95,087	82,986	5,653	5,658
Less Allowance for impairment				(385)	(385)	-	-
Total investments in joint ventures, net				94,702	82,601	5,653	5,658

		Separate financial statements					
		Portion of ordinary shares held by the Company		Cost Method		Dividend income	
	Business	2021 %	2020 %	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Joint ventures incorporated in Thailand							
Gulf Electric Public Co., Ltd. (GEC) and its subsidiaries	Investment in power projects	50.00	50.00	6,673	6,673	2,054	2,481
BLCP Power Ltd. (BLCP)	Electricity generation	50.00	50.00	10,434	10,434	175	200
Natural Energy Development Co., Ltd. (NED)	Solar electricity generation plant	66.67*	66.67*	1,961	1,961	380	440
G-Power Source Co., Ltd. (GPS)	Solar electricity generation plant	60.00*	60.00*	734	734	107	93
Thai Pipeline Network Company Limited (TPN)	Oil transportation service business with pipeline transportation system (the Company has not yet started its business operations)	44.60*	44.60*	3,220	3,220	-	-
Innopower Company Limited (Innopower)	Investment in innovation and future energy technology business	30.00*	-	45	-	-	-
Joint ventures incorporated in the Lao People's Democratic Republic							
Nam Theun 1 Power Company Limited (NT1PC)	Electricity generation (the Company has not yet started its business operations)	25.00*	25.00*	3,251	3,251	-	-
Nam Theun 2 Power Company Limited (NTPC)	Electricity generation	35.00*	35.00*	5,570	5,570	1,180	655
Total investments in joint ventures				31,888	31,843	3,896	3,869
Less Allowance for impairment				(4,929)	(4,410)	-	-
Total investments in joint ventures, net				26,959	27,433	3,896	3,869

* Shareholder Agreements assigned the structure of the business operation and the strategic, operating and financing decisions which required unanimous consent from all parties.

There is no quoted market price for all shares of joint ventures. The Group has no contingent liability related to the Group's interest in joint ventures.

As at 31 December 2021 and 2020, under the terms and conditions of loan agreements of GPS, their common shares were pledged as collateral for their long-term loans.

Summarised financial information for joint ventures

16.4.1 Individually material joint ventures

Set out below are the summarised financial information for the joint ventures that are material to the Group. The information disclosed reflects the amounting presented in the financial statements of the relevant joint ventures (not the Group's shares of those amounts). They have been amended to reflect adjustments made using the equity method, including fair value adjustments and modifications for differences in accounting policies are as follows:

Summarised statement of financial position

As at 31 December	GEC and its subsidiaries		NTPC		PAJU		SBPL		Total	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Current										
Cash and cash equivalents	5,178	6,011	519	405	1,666	4,036	1,922	1,858	9,285	12,310
Other current assets	3,438	2,968	2,347	2,861	9,829	7,164	4,158	3,184	19,772	16,177
Total current assets	8,616	8,979	2,866	3,266	11,495	11,200	6,080	5,042	29,057	28,487
Current financial liabilities	-	-	(590)	(1,058)	(5,447)	(3,381)	(1,597)	(1,442)	(7,634)	(5,881)
Other current liabilities	(833)	(720)	(803)	(563)	(3,291)	(3,753)	(1,321)	(969)	(6,248)	(6,005)
Total current liabilities	(833)	(720)	(1,393)	(1,621)	(8,738)	(7,134)	(2,918)	(2,411)	(13,882)	(11,886)
Non-current										
Non-current assets	18,129	18,852	30,026	28,676	72,935	74,147	31,148	31,015	152,238	152,690
Non-current financial liabilities	-	-	-	(1,556)	(21,926)	(24,514)	(22,189)	(22,641)	(44,115)	(48,711)
Other non-current liabilities	(853)	(769)	(1,299)	(1,592)	(8,834)	(9,001)	(731)	(317)	(11,717)	(11,679)
Total non-current liabilities	(853)	(769)	(1,299)	(3,148)	(30,760)	(33,515)	(22,920)	(22,958)	(55,832)	(60,390)
Net assets	25,059	26,342	30,200	27,173	44,932	44,698	11,390	10,688	111,581	108,901

Summarised statement of comprehensive income

For the years ended 31 December	GEC and its subsidiaries		NTPC		PAJU		SBPL		Total	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Revenue	8,418	9,839	7,768	7,410	32,485	24,595	10,104	8,121	58,775	49,965
Depreciation and amortisation	(302)	(528)	(1,369)	(1,342)	(1,376)	(3,282)	(950)	(918)	(3,997)	(6,070)
Interest income	14	41	28	26	36	65	3	3	81	135
Interest expense	-	(8)	(155)	(411)	(806)	(758)	(1,617)	(1,658)	(2,578)	(2,835)
Profit before income tax	3,556	3,446	3,619	3,664	1,714	1,939	1,650	1,248	10,539	10,297
Income tax expense	(731)	(714)	(232)	(186)	(624)	(310)	15	(14)	(1,572)	(1,224)
Net profit	2,825	2,732	3,387	3,478	1,090	1,629	1,665	1,234	8,967	9,073
Other comprehensive income (expense)	-	(10)	3,011	193	1,171	(202)	459	415	4,641	396
Total comprehensive income	2,825	2,722	6,398	3,671	2,261	1,427	2,124	1,649	13,608	9,469
Dividends received from joint ventures	4,108	4,962	3,371	1,871	2,027	3,652	1,422	-	10,928	10,485

Reconciliation of the summarised financial information

Reconciliation of the summarised financial information presented to the carrying amount of its interest in joint ventures

Summarised financial information	GEC and its subsidiaries		NTPC		PAJU		SBPL		Total	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Opening net assets	26,342	28,582	27,173	25,373	44,698	46,923	10,688	9,039	108,901	109,917
Net profit	2,825	2,732	3,387	3,478	1,090	1,629	1,665	1,234	8,967	9,073
Other comprehensive income (expense)	-	(10)	3,011	193	1,171	(202)	459	415	4,641	396
Dividends	(4,108)	(4,962)	(3,371)	(1,871)	(2,027)	(3,652)	(1,422)	-	(10,928)	(10,485)
Closing net assets	25,059	26,342	30,200	27,173	44,932	44,698	11,390	10,688	111,581	108,901
Group's share in joint ventures (%)	50.00	50.00	35.00	35.00	49.00	49.00	49.00	49.00		
Group's share in joint ventures	12,529	13,171	10,570	9,511	22,017	21,902	5,581	5,237	50,697	49,821
Goodwill	-	-	-	-	1,395	1,345	-	-	1,395	1,345
Joint ventures' carrying amount	12,529	13,171	10,570	9,511	23,412	23,247	5,581	5,237	52,092	51,166

16.4.2 Individually immaterial joint ventures

In addition to the interests in joint ventures disclosed above, the Group also has interests in a number of individually immaterial joint ventures that are accounted for using the equity method are as follows:

	2021 Million Baht	2020 Million Baht
Aggregate carrying amount of individually immaterial joint ventures	42,610	31,435
Aggregate amounts of the Group's share of:		
Impacts from the first-time adoption of new financial reporting standards	-	(466)
Net profit	721	74
Other comprehensive income (expense)	3,018	(1,070)
Total comprehensive income (expense)	3,739	(1,462)

16.5 Dividend receivables from subsidiaries, associates and joint ventures

The movements of the dividend receivables can be analysed as follows:

	Notes	Consolidated financial statements 2021 Million Baht	Consolidated financial statements 2020 Million Baht	Separate financial statements 2021 Million Baht	Separate financial statements 2020 Million Baht
Opening book value, net		532	733	759	959
Dividends declared by subsidiaries	16.2	-	-	2,340	3,317
Dividends declared by associates	16.3	212	535	87	-
Dividends declared by joint ventures	16.4	5,653	5,658	3,896	3,869
Dividends received from subsidiaries, associates and joint ventures		(5,940)	(6,407)	(6,486)	(7,003)
Net of dividends received from a subsidiary with					
- Principal repayment of the Company	22.1.2	-	-	-	(281)
- Interest repayment of the Company		-	-	-	(115)
Impairment loss on dividend receivables from a subsidiary		-	-	(68)	-
Amortisation of discount		10	13	10	13
Closing balance, net		467	532	538	759
Current portion		125	150	147	362
Non-current portion		342	382	391	397
Total dividend receivables from subsidiaries, associates and joint ventures, net		467	532	538	759

17 Investment property, net

As at 31 December	Consolidated financial statements 2021 Million Baht	Consolidated financial statements 2020 Million Baht	Separate financial statements 2021 Million Baht	Separate financial statements 2020 Million Baht
Book value	517	518	720	720
Fair value	982	982	1,240	1,232

As at 31 December 2021, investment property of the Group amounting to Baht 517 million are land held for a currently undetermined future use, land and building held for rent of a third party and land held for future industrial estate development (2020: Baht 518 million). Investment property of the Company amounting to Baht 221 million is land for rent of a subsidiary (2020: Baht 221 million).

Most of the fair value of investment properties is classified as level 2 of the fair value hierarchy valuation using government's compiling appraisal value that are observable, either directly or indirectly. Investment property of the Company for rent of a subsidiary is classified as level 3 of the fair value hierarchy of which the management assessed from discounted cash flow based on the ability to generate future cash flow and the discount rate derived from market rate of return plus credit risk of lessee.

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18 Property, plant and equipment, net

	Consolidated financial statements					
	Land Million Baht	Buildings and land improvements Million Baht	Power plants, substation, transmission system and spare parts Million Baht	Office equipment, furniture, computers and motor vehicles Million Baht	Construction in progress Million Baht	Total Million Baht
As at 1 January 2020						
Cost	1,677	6,208	72,615	631	34	81,165
Less Accumulated depreciation	-	(2,462)	(22,971)	(510)	-	(25,943)
Less Allowance for impairment	-	(84)	(2,357)	-	-	(2,441)
Net book value	1,677	3,662	47,287	121	34	52,781
For the year ended 31 December 2020						
Opening net book value	1,677	3,662	47,287	121	34	52,781
Additions	-	8	208	31	21	268
Transfer, net	-	6	1	1	(8)	-
Reclassification to non-current assets held-for-sale, net	-	-	(426)	-	-	(426)
Increase in decommissioning costs	-	-	581	-	-	581
Depreciation	-	(159)	(2,409)	(46)	-	(2,614)
Impairment loss on assets	-	-	(1,239)	-	-	(1,239)
Exchange difference on translation	-	(1)	400	-	-	399
Closing net book value	1,677	3,516	44,403	107	47	49,750
As at 31 December 2020						
Cost	1,677	5,236	68,490	600	47	76,050
Less Accumulated depreciation	-	(1,647)	(22,667)	(493)	-	(24,807)
Less Allowance for impairment	-	(73)	(1,420)	-	-	(1,493)
Net book value	1,677	3,516	44,403	107	47	49,750

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	Consolidated financial statements					
	Land Million Baht	Buildings and land improvements Million Baht	Power plants, substation, transmission system and spare parts Million Baht	Office equipment, furniture, computers and motor vehicles Million Baht	Construction in progress Million Baht	Total Million Baht
As at 1 January 2021						
Cost	1,677	5,236	68,490	600	47	76,050
Less Accumulated depreciation	-	(1,647)	(22,667)	(493)	-	(24,807)
Less Allowance for impairment	-	(73)	(1,420)	-	-	(1,493)
Net book value	1,677	3,516	44,403	107	47	49,750
For the year ended 31 December 2021						
Opening net book value	1,677	3,516	44,403	107	47	49,750
Additions	-	5	180	29	433	647
Transfer, net	-	-	417	62	(479)	-
Decrease in decommissioning costs	-	-	(287)	-	-	(287)
Depreciation	-	(160)	(2,404)	(38)	-	(2,602)
Impairment loss on assets	-	-	(242)	-	-	(242)
Exchange difference on translation	-	203	2,122	1	5	2,331
Closing net book value	1,677	3,564	44,189	161	6	49,597
As at 31 December 2021						
Cost	1,677	5,603	72,397	686	6	80,369
Less Accumulated depreciation	-	(1,966)	(26,509)	(525)	-	(29,000)
Less Allowance for impairment	-	(73)	(1,699)	-	-	(1,772)
Net book value	1,677	3,564	44,189	161	6	49,597

	Separate financial statements					
	Land Million Baht	Buildings and land improvements Million Baht	Power plants, substation, spare parts and transmission system Million Baht	Office equipment, furniture, computers and motor vehicles Million Baht	Construction in progress Million Baht	Total Million Baht
As at 1 January 2020						
Cost	189	1,020	4,874	247	33	6,363
Less Accumulated depreciation	-	(804)	(3,229)	(185)	-	(4,218)
Less Allowance for impairment	-	(84)	(1,334)	-	-	(1,418)
Net book value	189	132	311	62	33	727
For the year ended 31 December 2020						
Opening net book value	189	132	311	62	33	727
Additions	-	-	-	22	15	37
Transfer, net	-	4	-	1	(5)	-
Reclassification to non-current assets held-for-sale, net	-	-	(311)	-	-	(311)
Depreciation	-	(7)	-	(22)	-	(29)
Closing net book value	189	129	-	63	43	424
As at 31 December 2020						
Cost	189	924	-	211	43	1,367
Less Accumulated depreciation	-	(722)	-	(148)	-	(870)
Less Allowance for impairment	-	(73)	-	-	-	(73)
Net book value	189	129	-	63	43	424

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	Separate financial statements				
	Land Million Baht	Buildings and land improvements Million Baht	Office equipment, furniture, computers and motor vehicles Million Baht	Construction in progress Million Baht	Total Million Baht
As at 1 January 2021					
Cost	189	924	211	43	1,367
Less Accumulated depreciation	-	(722)	(148)	-	(870)
Less Allowance for impairment	-	(73)	-	-	(73)
Net book value	189	129	63	43	424
For the year ended 31 December 2021					
Opening net book value	189	129	63	44	424
Additions	-	-	15	19	34
Transfer, net	-	-	62	(62)	-
Depreciation	-	(7)	(20)	-	(27)
Closing net book value	189	122	120	-	431
As at 31 December 2021					
Cost	189	924	288	-	1,401
Less Accumulated depreciation	-	(729)	(168)	-	(897)
Less Allowance for impairment	-	(73)	-	-	(73)
Net book value	189	122	120	-	431

During the year ended 31 December 2021 and 2020, the Group has no borrowing costs capitalised as part of the cost of assets in additions.

As at 31 December 2021, property, plant and equipment with net book value of Baht 40,840 million (including property, plant and equipment reclassified as lease receivables under power purchase agreements amounting to Baht 14,450 million) were mortgaged and pledged as collateral for long-term loans, as described in Note 22.1 (2020: Baht 59,889 million).

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Impairment of power plants and rights in power purchase agreements of subsidiaries in Thailand

During the year ended 31 December 2021, the management assessed that these were the impairment indicators of operating assets of subsidiaries which operate renewable power plants in Thailand. This was because of the less remaining period of adder tariffs as specified in the power purchase agreements which resulted in the significant decrease of the subsidiaries' forecasted revenues. The management performed the impairment testing of subsidiaries' significant assets which are their power plants and right in the long-term power purchase agreements by applying the value-in-use model to calculate the recoverable amounts. The calculation of the recoverable amounts involves management's significant judgements in identifying CGUs and the assumptions applied, which are the electricity tariffs, capacity of the power plants, operating expenditures, capital structure, growth rates and discount rate to be applied to the projected cash flows.

Resulting from the impairment testing, the Group recognised an impairment loss on five subsidiaries' power plants of Baht 242 million in the consolidated statement of income for the year ended 31 December 2021. (2020: Impairment loss on five subsidiaries' power plants of Baht 767 million in the consolidated statement of income and impairment loss on three subsidiaries' right in the long-term power purchase agreements of Baht 98 million).

In addition, the management considered that the impairment loss of subsidiaries' significant assets may cause the impairment loss on investments in subsidiaries which is accounted for using cost method in the separate financial statements. The management further performed the impairment testing and recognised an impairment loss on investments in a subsidiary of Baht 25 million in the separate statement of income.

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19 Intangible assets, net

	Consolidated financial statements		
	Right in long-term power purchase agreements and right to use transmission facilities Million Baht	Licences for operating power plants Million Baht	Total Million Baht
As at 1 January 2020			
Cost	7,021	254	7,275
Less Accumulated amortisation	(3,419)	(71)	(3,490)
Less Allowance for impairment	(250)	-	(250)
Net book value	3,352	183	3,535
For the year ended 31 December 2020			
Opening net book value	3,352	183	3,535
Additions	4	-	4
Amortisation	(455)	(13)	(468)
Impairment loss on assets	(98)	-	(98)
Exchange difference on translation	5	14	19
Closing net book value	2,808	184	2,992
For the year ended 31 December 2021			
Opening net book value	2,808	184	2,992
Additions	2	-	2
Amortisation	(447)	(14)	(461)
Exchange difference on translation	11	4	15
Closing net book value	2,374	174	2,548
As at 31 December 2021			
Cost	7,046	284	7,330
Less Accumulated amortisation	(4,324)	(110)	(4,434)
Less Allowance for impairment	(348)	-	(348)
Net book value	2,374	174	2,548

During the year ended 31 December 2021, the Group did not recognise an impairment loss on the right in long-term power purchase agreements in the consolidated statement of income as described in Note 18 (2020: Baht 98 million).

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20 Goodwill, net

	Consolidated financial statements	
	2021 Million Baht	2020 Million Baht
As at 1 January		
Cost	10,012	10,012
Less Allowance for impairment	(2,096)	(1,913)
Net book value	7,916	8,099
For the years ended 31 December		
Opening net book value	7,916	8,099
Impairment loss on assets	(765)	(183)
Closing net book value	7,151	7,916
As at 31 December		
Cost	10,012	10,012
Less Allowance for impairment	(2,861)	(2,096)
Net book value	7,151	7,916

Goodwill arose from the acquisitions of electricity generation business in Thailand and foreign countries. The Group's management considers the business in each country as a cash generating unit (CGU). Goodwill of Baht 7,130 million (2020: Baht 7,895 million) arising from the acquisition of investment in electricity generation business in the Philippines and remaining of Baht 21 million (2020: Baht 21 million) arising from the acquisition of investment in electricity generation business in Thailand.

Goodwill arose from the acquisition of investment in electricity generation business in each country is tested annually for impairment by comparing the carrying amount to the recoverable amount for each CGU. The recoverable amount is calculated based on value-in-use model by using cash flow projection over periods of Power Purchase Agreements in each country and the electricity tariffs and assumed capacity of the power plant specified in the agreements.

During the year ended 31 December 2021, the Group recognised the impairment loss on goodwill, which arose from the acquisition of electricity generation business in Philippines (Quezon Power (Philippines), Limited Co.), amounting to Baht 765 million in the consolidated statement of income. The recoverable amount was calculated based on value-in-use model by using a cash flow projection covering the remaining Power Purchase Agreement period for 4 years. The cash flows beyond the 4 year-period are extrapolated based on the market price of electricity tariffs and the assumed capacity of the power plant which approved by the management. The discount rate used in the calculation is 5.72% per annum.

During the year ended 31 December 2020, the Group did not recognise the impairment loss on goodwill, which arose from the acquisition of electricity generation business in Philippines (Quezon Power (Philippines), Limited Co. Its recoverable amount was calculated based on value-in-use model by using a cash flow projection covering the remaining Power Purchase Agreement period for 5 years. The cash flows beyond the 5 year-period are extrapolated based on the market price of electricity tariffs and the assumed capacity of the power plant which approved by the management. The discount rate used in the calculation is 5.78% per annum. However, the Group recognised the impairment loss on goodwill, which arose from the acquisition of electricity generation business in Thailand, amounting to Baht 183 million in the consolidated statement of income. Its recoverable amount was calculated based on value-in-use model by using a cash flow projection covering the remaining Power Purchase Agreement period for 18 to 21 years. The cash flow projection is based on the assumed capacity of the power plants and electricity tariffs specified in the Power Purchase Agreements which approved by management. The discount rate used in the calculation was 6.1% per annum.

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21 Other payables

As at 31 December	Note	Consolidated financial statements 2021 Million Baht	Consolidated financial statements 2020 Million Baht	Separate financial statements 2021 Million Baht	Separate financial statements 2020 Million Baht
Trade payables from a related party	37.4	149	48	7	44
Advance received from a related party	37.4	294	261	-	-
Interest payables		300	311	86	95
Value added tax payables		899	746	1	-
Corporate income tax payables		174	179	-	-
Others		996	882	282	469
Total other payables		2,812	2,427	376	608

22 Long-term loans

22.1 Long-term loans from financial institutions, net

22.1.1 The long-term loans from financial institutions are as follows:

As at 31 December	Consolidated financial statements 2021 Million Baht	Consolidated financial statements 2020 Million Baht	Separate financial statements 2021 Million Baht	Separate financial statements 2020 Million Baht
Current portion of long-term loans from financial institutions, net				
Thai Baht	2,391	6,448	400	4,400
US Dollar	11,796	4,354	10,672	1,743
Australian Dollar	379	325	-	-
Less Deferred financing fee	(52)	(61)	(3)	(1)
	14,514	11,066	11,069	6,142
Long-term loans from financial institutions, net				
Thai Baht	24,064	22,454	9,600	6,000
US Dollar	51,244	42,257	13,450	21,691
Euro	11,272	8,260	-	-
Australian Dollar	3,521	3,683	-	-
Less Deferred financing fee	(354)	(321)	(11)	(21)
	89,747	76,333	23,039	27,670
Total long-term loans from financial institutions, net	104,261	87,399	34,108	33,812

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Long-term loans from financial institutions of the Company

The Company has entered into unsecured long-term loan facility agreements with financial institutions amounting to Baht 10,000 million and US Dollar 718 million which equivalents to Baht 24,122 million (2020: Baht 10,400 million and US Dollar 776 million which equivalents to Baht 23,434 million) as follows:

Thai Baht loans

Number	Outstanding balance as at 31 December 2021 (Million Baht)	Outstanding balance as at 31 December 2020 (Million Baht)	Interest rate	Principal repayment term	Interest payment period
1	-	4,000	THBFIX six-month plus a certain margin per annum	Repayment in December 2021	Payment every six months
2	4,000	-	Fixed rate per annum	Repayment in December 2028	Payment every six months
3	2,000	2,400	THBFIX six-month plus a certain margin per annum	Repayment every six months from December 2019	Payment every six months
4	4,000	4,000	THBFIX six-month plus a certain margin per annum	Repayment in December 2023	Payment every six months
Total	10,000	10,400			

US Dollar loans

Number	Outstanding balance as at 31 December 2021 (Million US Dollar)	Outstanding balance as at 31 December 2020 (Million US Dollar)	Interest rate	Principal repayment term	Interest payment period
1	100	100	US LIBOR six-month plus a certain margin per annum	Repayment within October 2022	Payment every six months
2	-	40	US LIBOR six-month plus a certain margin per annum	Repayment within January 2021	Payment every six months
3	200	200	US LIBOR six-month plus a certain margin per annum	Repayment within March 2022	Payment every six months
4	168	186	US LIBOR six-month plus a certain margin per annum	Repayment every six months within March 2025	Payment every six months
5	200	200	US LIBOR six-month plus a certain margin per annum	Repayment within November 2024	Payment every six months
6	50	50	US LIBOR six-month plus a certain margin per annum	Repayment within December 2024	Payment every six months
Total	718	776			

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Long-term loans from financial institutions of the subsidiaries

The subsidiaries have entered into long-term loan facility agreements with financial institutions amounting to Baht 16,455 million, US Dollar 1,159 million which is equivalent to Baht 38,918 million, Euro 299 Million which is equivalent to Baht 11,272 million, and Australian Dollar 161 million which is equivalent to Baht 3,900 million (2020: Baht 18,503 million, US Dollar 771 million which is equivalent to Baht 23,177 million, Euro 225 Million which is equivalent to Baht 8,260 million, and Australian Dollar 174 million which is equivalent to Baht 4,008 million) as follows:

Thai Baht loans

Number	Outstanding balance as at 31 December 2021 (Million Baht)	Outstanding balance as at 31 December 2020 (Million Baht)	Interest rate	Principal repayment term	Interest payment period
1	82	174	THBFIX three-month plus a certain margin per annum	Repayment every three months from September 2012	Payment every three months
2	65	124	THBFIX three-month plus a certain margin per annum	Repayment every three months from June 2012	Payment every three months
3	36	85	THBFIX three-month plus a certain margin per annum	Repayment every three months from June 2012	Payment every three months
4	63	169	MLR six-month less a certain margin per annum	Repayment every three months from June 2012	Payment every three months
5	630	782	Fixed rate per annum	Repayment every six months from June 2014	Payment every six months
6	488	691	THBFIX three-month plus a certain margin per annum	Repayment every three months from June 2014	Payment every three months
7	54	67	Fixed rate per annum	Repayment every six months from June 2014	Payment every six months
8	36	48	THBFIX six-month plus a certain margin per annum	Repayment every six months from March 2014	Payment every six months
9	5,286	5,968	THBFIX six-month plus a certain margin per annum	Repayment every six months from February 2017	Payment every three months
10	1,229	1,360	Fixed rate per annum	Repayment every six months from June 2017	Payment every six months
11	1,397	1,591	THBFIX six-month plus a certain margin per annum	Repayment every six months from June 2017	Payment every six months
12	3,447	3,616	THBFIX three-month plus a certain margin per annum	Repayment every six months from December 2017	Payment every three months
13	3,642	3,828	THBFIX three-month plus a certain margin per annum	Repayment every six months from June 2018	Payment every three months
Total	16,455	18,503			

US Dollar loans

Number	Outstanding balance as at 31 December 2021 (Million US Dollar)	Outstanding balance as at 31 December 2020 (Million US Dollar)	Interest rate	Principal repayment term	Interest payment period
1	-	55	Fixed rate per annum	Repayment every six months from July 2012	Payment every six months
2	15	19	Fixed rate per annum	Repayment every six month from June 2014	Payment every six months
3	168	189	LIBOR six month plus a certain margin per annum	Repayment every six months from February 2017	Payment every six months
4	20	23	Fixed rate per annum	Repayment every six months from June 2017	Payment every six months
5	81	85	LIBOR three month plus a certain margin per annum	Repayment every six months from June 2018	Payment every three months
6	200	200	LIBOR six month plus a certain margin per annum	Repayment within December 2023	Payment every six months
7	200	200	LIBOR six month plus a certain margin per annum	Repayment within January 2024	Payment every six months
8	225	-	LIBOR three month plus a certain margin per annum	Repayment within May 2026	Payment every three months
9	250	-	LIBOR three month plus a certain margin per annum	Repayment within November 2026	Payment every three months
Total	1,159	771			

Euro loans

Number	Outstanding balance as at 31 December 2021 (Million Euro)	Outstanding balance as at 31 December 2020 (Million Euro)	Interest rate	Principal repayment term	Interest payment period
1	225	225	EURIBOR six month plus a certain margin per annum	Repayment within March 2025	Payment every six months
2	44	-	EURIBOR six month plus a certain margin per annum	Repayment within September 2026	Payment every six months
Total	299	225			

Australian Dollar loans

Number	Outstanding balance as at 31 December 2021 (Million Australian Dollar)	Outstanding balance as at 31 December 2020 (Million Australian Dollar)	Interest rate	Principal repayment term	Interest payment period
1	161	174	Floating rate plus a certain margin per annum	Repayment every three months from July 2018	Payment every three months
Total	161	174			

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Long-term loans from financial institutions of the subsidiaries are secured liabilities. The long-term loans are secured over land, buildings, power plants and equipment. The subsidiaries are required to maintain cash reserves which are provided from the proceeds of sales of electricity for the purpose of repayment of principals and payment of interest due within one year (refer to Note 12). In addition, the Power Purchase Agreements, the Asset Purchase Agreements, the Major Maintenance Agreements and insurance policies have been assigned as collateral in accordance with the conditions under the loan agreement. Furthermore, the subsidiaries are required to comply with certain procedure and conditions; for example, maintaining debt to equity ratio at the level as specified in the agreements.

Under the terms and conditions of loan agreements of five subsidiaries, the common shares were pledged as collateral for its long-term loans as described in Note 16.2 and under the terms and conditions of loan agreements of three subsidiaries, these loans were guaranteed by the Company, as described in Note 38.1.

22.1.2 The movement of the long-term loans from financial institutions of the Group

The movement of the long-term loans from financial institutions of the Group for the years ended 31 December can be analysed as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Opening net book value	87,399	84,741	33,812	34,836
Cash flows				
Proceeds from long-term loans	18,130	7,873	-	-
Payments for long-term loans	(7,305)	(5,926)	(1,607)	(400)
Payments for deferred financing fee	(108)	(26)	-	-
Other non-cash movement				
Net of long-term loans repayment with				
- Dividend received from a subsidiary	-	-	-	(281)
- Interest received from subsidiary	-	-	(566)	(279)
Unrealised exchange (gains) losses	5,245	(820)	2,461	(73)
Amortisation of deferred financing fee	87	102	8	9
Exchange difference on translation	813	1,455	-	-
Closing net book value	104,261	87,399	34,108	33,812

22.1.3 Maturity of long-term loans from financial institutions is as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Within 1 year	14,514	11,066	11,069	6,142
Later than 1 year and not later than 5 years	71,646	60,655	19,039	27,370
Later than 5 years	18,101	15,678	4,000	300
Total long-term loans, net	104,261	87,399	34,108	33,812

22.1.4 Credit facilities

Short-term loans

As at 31 December 2021, the Group had the available credit facilities from short-term loans from financial institutions amounting to Baht 6,566 million and US Dollar 20 million in which an available credit facilities for the Company amounting to Baht 4,000 million (As at 31 December 2020: the Group had the available credit facilities from short-term loans from financial institutions amounting to Baht 6,566 million and US Dollar 20 million in which an available credit facilities for the Company amounting to Baht 4,000 million).

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Long-term loans

As at 31 December 2021, the Group and the Company had the available credit facilities from long-term loans from financial institutions amounting to Euro 11 million (As at 31 December 2020: the Group and the Company had no available credit facilities from long-term loans from financial institutions).

22.2 Long-term loan from other company, net

As at 31 December 2021, long-term loan from other company of US Dollar 13 million which is equivalent to Baht 443 million represented cash received from the customer in excess of electricity sales during 2008 and 2017 and the Group has to repay the loan to the customer annually from 2018 until 2025 (as at 31 December 2020 amounting to US Dollar 16 million which is equivalent to Baht 487 million).

22.2.1 The movement of the long-term loan from other company for the year ended 31 December can be analysed as follows:

	Consolidated financial statements	
	2021 Million Baht	2020 Million Baht
Opening net book value	487	574
Cash flows		
Payments for long-term loan	(107)	(111)
Other non-cash movement		
Amortisation of discount	19	23
Exchange difference on translation	44	1
Closing net book value	443	487

22.2.2 Maturity of long-term loan from other company is as follows:

	Consolidated financial statements	
	2021 Million Baht	2020 Million Baht
Within 1 year	116	103
Later than 1 year and not later than 5 years	327	384
Total long-term loans from other company, net	443	487

23 Debenture

Details of debenture are as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Within 1 year	5,040	-	5,040	-
Later than 1 year and not later than 5 years	-	5,042	-	5,042
Total debenture, net	5,040	5,042	5,040	5,042

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The movements of the debenture can be analysed as follows:

For the years ended 31 December	Consolidated and Separate financial statements	
	2021 Million Baht	2020 Million Baht
Opening book value	5,042	4,787
Unrealised exchange (gain) loss	(2)	255
Closing book value	5,040	5,042

Debenture is unsecured debenture amounting to Japanese Yen 17,120 million. The principal will be redeemed within seven years, dated on 10 March 2022. The debenture bears interest at a fixed rate per annum and the payment schedule is every six months. The Company is required to comply with certain procedure and conditions; for example, maintaining debt to equity ratio at the level as specified in the contract.

In addition, the Company entered into a cross currency swap contract with a financial institution to manage exposure arising from fluctuations in currency exchange rate and interest rate of such debenture, from Yen 17,120 million to US Dollar 143 million at a fixed interest rate. However, the transaction did not comply with hedge accounting requirements due to the foreign currency not being converted into the Company's functional currency. Therefore, this contract is recognised as trading derivatives. Changes in fair value are recognised immediately in profit or loss included in gain (loss) on remeasurement of financial instruments.

24 Deferred income taxes

The analysis of deferred tax assets and deferred tax liabilities is as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Deferred tax assets	771	1003	-	-
Deferred tax liabilities	(3,024)	(2,969)	-	-
Deferred income taxes, net	(2,253)	(1,966)	-	-

The movement in the deferred income tax account is as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
As at 1 January	(1,966)	(1,943)	-	-
Charged/(credited) to profit or loss	159	(25)	-	-
Charged/(credited) directly to other comprehensive income	(175)	40	-	-
Exchange difference on translation	(271)	(38)	-	-
As at 31 December	(2,253)	(1,966)	-	-

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The movement in deferred tax assets and liabilities is as follows:

	Consolidated financial statements						
	Provision Million Baht	Tax loss carry forward Million Baht	Allowance for obsolescence Million Baht	Depreciation Million Baht	Financial instruments Million Baht	Others Million Baht	Total Million Baht
Deferred tax assets							
As at 1 January 2020	135	292	96	3,703	493	215	4,934
Charged/(credited) to profit or loss	6	(68)	(55)	(199)	(67)	110	(273)
Charged/(credited) directly to other comprehensive income	13	-	-	-	31	-	44
Exchange difference on translation	-	15	-	-	2	5	22
As at 31 December 2020	154	239	41	3,504	459	330	4,727
As at 1 January 2021	154	239	41	3,504	459	330	4,727
Charged/(credited) to profit or loss	144	17	7	(199)	26	61	56
Charged/(credited) directly to other comprehensive income	(19)	-	-	-	(126)	-	(145)
Exchange difference on translation	1	11	-	-	-	26	38
As at 31 December 2021	280	267	48	3,305	359	417	4,676

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	Consolidated financial statements						
	Lease receivables under power purchase agreements Million Baht	Depreciation and amortisation Million Baht	The assigned fair values of assets acquired in business acquisitions Million Baht	Tax effect of currency translation on tax base Million Baht	Financial Instruments Million Baht	Others Million Baht	Total Million Baht
Deferred tax liabilities							
As at 1 January 2020	3,444	579	2,219	615	9	12	6,878
(Charged)/credited to profit or loss	(163)	(164)	(203)	(122)	388	16	(248)
(Charged)/credited directly to other comprehensive income	-	-	-	-	4	-	4
Exchange difference on translation	-	28	3	2	25	1	59
As at 31 December 2020	3,281	443	2,019	495	426	29	6,693
As at 1 January 2021	3,281	443	2,019	495	426	29	6,693
(Charged)/credited to profit or loss	(29)	30	(190)	297	(211)	-	(103)
(Charged)/credited directly to other comprehensive income	-	-	-	-	30	-	30
Exchange difference on translation	-	19	217	50	21	2	309
As at 31 December 2021	3,252	492	2,046	842	266	31	6,929

	Separate financial statements
	Allowance for obsolescence Million Baht
Deferred tax assets	
As at 1 January 2020	62
Charged/(credited) to profit or loss	(62)
As at 31 December 2020	-
As at 1 January 2021	-
Charged/(credited) to profit or loss	-
As at 31 December 2021	-

	Separate financial statements
	Depreciation and amortisation Million Baht
Deferred tax liabilities	
As at 1 January 2020	62
(Charged)/credited to profit or loss	(62)
As at 31 December 2020	-
As at 1 January 2021	-
(Charged)/credited to profit or loss	-
As at 31 December 2021	-

Deferred tax assets are recognised for tax loss and carry forwards only to the extent that realisation of the related tax benefit through the future taxable profits is probable. As at 31 December 2021, the Group did not recognise deferred income tax assets of Baht 2,486 million (2020: Baht 948 million) in respect of losses amounting to Baht 14,074 million (2020: Baht 4,742 million) that can be carried forward against future taxable income. Losses amounting to Baht 1,813 million will be expired for tax benefit in 2022 (2020: Baht 1,351 million already expired in 2021).

25 Provision for decommissioning costs

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Opening balance	2,502	1,982	-	115
Provision increased (decreased)	(287)	581	-	-
Additional provision - Finance costs	73	65	-	-
Cash payment for decommissioning cost	(1)	(1)	-	-
Reclassification to other payable	(80)	(115)	-	(115)
Reversal of the provisions	(133)	-	-	-
Exchange difference on translation	194	(10)	-	-
Closing balance	2,268	2,502	-	-

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26 Other non-current liabilities

As at 31 December	Note	Consolidated financial statements 2021 Million Baht	Consolidated financial statements 2020 Million Baht	Separate financial statements 2021 Million Baht	Separate financial statements 2020 Million Baht
Advances received from a related party	37.4	784	747	-	-
Others		116	45	4	2
Total other non-current liabilities		900	792	4	2

27 Legal reserve

For the years ended 31 December	Consolidated financial statements 2021 Million Baht	Consolidated financial statements 2020 Million Baht	Separate financial statements 2021 Million Baht	Separate financial statements 2020 Million Baht
Opening balance	530	530	530	530
Appropriation during the year	-	-	-	-
Closing balance	530	530	530	530

Under the Public Companies Act B.E. 2535, the Company is required to set aside as a legal reserve at least 5% of its net profit after accumulated deficit brought forward (if any) until the reserve is not less than 10% of the registered capital. The legal reserve is non-distributable.

28 Sales and services income

For the years ended 31 December	Consolidated financial statements 2021 Million Baht	Consolidated financial statements 2020 Million Baht	Separate financial statements 2021 Million Baht	Separate financial statements 2020 Million Baht
Sales of electricity	21,426	19,098	-	-
Service income under power purchase agreements	10,645	10,930	-	-
Services income	1,032	673	-	-
Total sales and services income	33,103	30,701	-	-

29 Cost of sales and services

For the years ended 31 December	Consolidated financial statements 2021 Million Baht	Consolidated financial statements 2020 Million Baht	Separate financial statements 2021 Million Baht	Separate financial statements 2020 Million Baht
Cost of sales of electricity	15,167	13,267	-	-
Cost of services under power purchase agreements	11,446	11,387	-	-
Cost of services	947	604	-	-
Total cost of sales and services	27,560	25,258	-	-

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30 Dividend and other income

For the years ended 31 December	Note	Consolidated financial statements 2021 Million Baht	Consolidated financial statements 2020 Million Baht	Separate financial statements 2021 Million Baht	Separate financial statements 2020 Million Baht
Dividend income from subsidiaries, associates and joint ventures	16.5	-	-	6,323	7,186
Interest income		174	260	2,472	2,519
Rental and service income		64	42	268	256
Adder*		1,812	1,838	-	-
Others		184	273	6	241
Total other income		2,234	2,413	9,069	10,202

* The adder represented income received from Electricity Generating Authority of Thailand (EGAT) and Provincial Electricity Authority (PEA)

31 Expense by nature

The following expenditure items have been charged in arriving at net profit:

For the years ended 31 December	Consolidated financial statements 2021 Million Baht	Consolidated financial statements 2020 Million Baht	Separate financial statements 2021 Million Baht	Separate financial statements 2020 Million Baht
Depreciation and amortisation	3,124	3,131	37	34
Impairment loss on investments in subsidiaries and joint ventures	-	88	544	174
Impairment loss on goodwill	765	183	-	-
Impairment loss on property, plant and equipment and intangible assets	242	1,337	-	-
Impairment loss on financial assets from related parties	-	-	144	-
Major repair and maintenance expenses of power plants	1,113	713	-	-
Staff costs	2,180	2,170	536	552

32 Finance costs

For the years ended 31 December	Consolidated financial statements 2021 Million Baht	Consolidated financial statements 2020 Million Baht	Separate financial statements 2021 Million Baht	Separate financial statements 2020 Million Baht
Interest expenses	1,690	2,362	602	960
Interest expenses - derivatives	1,760	1,244	757	473
Net losses on exchange rates from financing activities	4,534	351	2,460	182
Other finance costs	264	264	43	39
Total finance costs	8,248	4,221	3,862	1,654

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33 Income tax

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Current tax	818	997	-	-
Deferred tax	(159)	25	-	-
Total income tax expense	659	1,022	-	-

The tax on the Group's profit before tax differs from the theoretical amount that would arise using the basic tax rate of the home country of the parent company as follows:

	Consolidated financial statements		Separate financial statements	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Profit before tax	4,776	9,782	3,022	7,413
Tax calculated at a tax rate of	20%	20%	20%	20%
The result of the accounting profit multiplied by the income tax rate	955	1,956	604	1,483
Tax effect of :				
Income not subject to tax	(254)	(460)	(1,270)	(1,440)
Expenses not deductible for tax purpose	307	85	180	108
Revenues that are granted income tax exemption or expenses that are deductible at a greater amount	(568)	(918)	-	(456)
Utilisation of unrecognised tax losses	(2)	(2)	-	-
Tax losses for the year for which no deferred income tax assets was recognised	1,370	829	486	305
Share of profit of investments accounted for using the equity method	(1,286)	(967)	-	-
Difference on tax rate in which countries the Group operated	137	499	-	-
Income tax	659	1,022	-	-

The weighted average applicable tax rate for the Group and the Company were 13.80% and 0.00%, respectively (2020: 10.45% and 0.00%, respectively).

34 Earnings per share

Basic earnings per share is calculated by dividing the net profit for the year attributable to shareholders by the weighted average number of ordinary shares issued and paid-up during the year, net of treasury stock.

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Net profit attributable to owners of the parent (Thousand Baht)	4,103,840	8,733,030	3,022,355	7,412,926
Weighted average number of ordinary share in issue (Thousand shares)	526,465	526,465	526,465	526,465
Basic earnings per share (Baht)	7.80	16.59	5.74	14.08

The Group has no dilutive potential ordinary shares in issue during the periods presented, therefore, no diluted earnings per share are presented.

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35 Dividends

At the Annual General Shareholders' meeting on 19 April 2021, the shareholders approved the payment of dividends in respect of the operating results for the six-month period ended 31 December 2020 for 526,465,000 shares at Baht 3.50 per share, totalling Baht 1,843 million. These dividends were paid to shareholders on 27 April 2021. In addition, the shareholders acknowledged the interim dividend payment in respect of the operating results for the first six-month period of 2020 at Baht 3.00 per share for 526,465,000 shares, totalling Baht 1,579 million. These dividends were paid to the shareholders on 17 September 2020.

At the Board of directors' meeting on 16 August 2021, the directors approved the interim dividend payment in respect of the operating results for the six-month period ended 30 June 2021 at Baht 3.25 per share for 526,465,000 shares, totalling Baht 1,711 million. These dividends were paid to the shareholders on 10 September 2021.

At the Board of directors' meeting on 2 April 2020, the directors approved the interim dividend payment in respect of the operating results for the six-month period ended 31 December 2019 at Baht 3.25 per share for 526,465,000 shares, totalling Baht 1,711 million. These dividends were paid to the shareholders on 23 April 2020 and at the Annual General Shareholders' meeting on 20 July 2020, the shareholders acknowledged such interim dividend payment.

At the Board of directors' meeting dated 20 August 2020, the directors approved the payment of interim dividends in respect of the operating results for the six-month period ended 30 June 2020 for 526,465,000 shares at Baht 3.00 per share, totalling Baht 1,579 million. These dividends were paid to shareholders on 17 September 2020.

36 Promotional privileges

The Group has been granted promotional privileges by the Office of the Board of Investment under promotion certificates in respect of electricity. These ten subsidiaries have been granted exemption from certain taxes and duties as detailed in the certificates including exemption from corporate income tax for a period of eight years from the date of first revenue. As promoted entities, these subsidiaries are required to comply with the terms and conditions specified in the promotion certificates.

37 Related party transactions

Individuals and entities that directly or indirectly control or are controlled by or are under common control with the Company, including investment entities, associates, joint venture and individuals or entities having significant influence over the Company, key management personnel, including directors and officers of the Company and close members of the family of these individuals and entities associated with these individuals also constitute related parties.

In considering each possible related-party relationship, attention is directed to the substance of the relationship, and not merely the legal form.

The major shareholders of the Company are the Electricity Generating Authority of Thailand (EGAT) and TEPDIA Generating B.V., which is an associate between Tokyo Electric Power Company (TEPCO) and Diamond Generating Asia, Limited. holding 25.41% and 23.94% of the Company's shares, respectively. The remaining shares of the Company are widely held.

The information on the Company's subsidiaries, associates and joint ventures is provided in Note 16.

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The following material transactions were carried out with related parties:

37.1 Sales of electricity

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Sales of electricity				
- Major shareholder	7,478	7,026	-	-
Lease income under power purchase agreements				
- Major shareholder	2,800	2,877	-	-
Service income under power purchase agreements				
- Major shareholder	10,645	10,930	-	-

37.2 Trade receivable from a related party and other receivables from related parties

As at 31 December	Consolidated financial statements		Separate financial statements	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Trade receivable				
- Major shareholder	1,731	1,149	-	-
Trade receivable from services under power purchase agreements				
- Major shareholder	2,800	1,655	-	-
Other receivables - Interest receivables, net				
- Subsidiaries	-	-	2,828	2,279
- Associates	379	341	379	341
- Joint ventures	27	-	-	-
- Major shareholder	1	1	-	-
	407	342	3,207	2,620
Other receivables - dividend receivables, net				
- Subsidiaries	-	-	71	227
- Joint ventures	467	532	467	532
	467	532	538	759
Other receivables - others				
- Subsidiaries	-	-	52	43
- Joint ventures	55	78	3	3
	55	78	55	46

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37.3 Lease receivables under power purchase agreements from a related party, net

As at 31 December	Consolidated financial statements			
	Minimum payment		Present value of Minimum payment	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Lease receivables under power purchase agreements from a related party				
- Less than 1 year	4,381	4,211	1,680	1,467
- 1 - 5 years	14,698	15,001	2,714	3,001
- Over 5 years	31,793	33,138	13,030	12,945
	50,872	52,350	17,424	17,413
Less Deferred financial revenue	(33,448)	(34,937)		
Present value of minimum payment	17,424	17,413		
Lease receivables under power purchase agreements from a related party can be analysed as follows:				
- Current portion			1,680	1,467
- Non-current portion			15,744	15,946
			17,424	17,413

37.4 Trade payables from and amounts due to related parties

As at 31 December	Consolidated financial statements		Separate financial statements	
	2021 Million Baht	2020 Million Baht	2021 Million Baht	2020 Million Baht
Trade payable				
- Major shareholder	1	5	-	-
- Other related party	101	106	-	-
	102	111	-	-
Other payables				
- Subsidiaries	-	-	7	44
- Joint ventures	149	48	-	-
	149	48	7	44
Advance received				
- Joint ventures				
- Current portion	294	261	-	-
- Non-current portion	784	747	-	-

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37.5 Long-term loans to related parties

As at 31 December	Consolidated financial statements 2021 Million Baht	Consolidated financial statements 2020 Million Baht	Separate financial statements 2021 Million Baht	Separate financial statements 2020 Million Baht
Long-term loans to related parties				
- Subsidiaries				
- Due within 1 year	-	-	182	186
- Due over 1 year	-	-	49,469	49,659
	-	-	49,651	49,845
- Associates				
- Due within 1 year	18	7	18	7
- Due over 1 year	1,187	1,224	1,187	1,224
	1,205	1,231	1,205	1,231
- Joint ventures				
- Due within 1 year	-	-	-	-
- Due over 1 year	3,457	-	-	-
	3,457	-	-	-
- Major shareholder				
- Due within 1 year	1	1	-	-
- Due over 1 year	66	67	-	-
	67	68	-	-
Total Long-term loans to related parties	4,729	1,299	50,856	51,076

The movements of long-term loans to related parties can be analysed as follows:

For the years ended 31 December 2021	Consolidated financial statements Million Baht	Separate financial statements Million Baht
Opening net book value	1,299	51,076
Cash flows		
Repayments during the year	(27)	(204)
Additions during the year	3,483	-
Other non-cash movement		
Net offset principal repayment with interest payment of the Company (*)	-	(16)
Exchange difference on translation	(26)	-
Ending balance	4,729	50,856

Separate financial statements

On 1 June 2019, the Company and EGCO Plus, a subsidiary of the Company, entered into a long-term loan agreement to convert a note receivable issued by EGCO Plus into a long-term loan to EGCO Plus amounting to Baht 49,094 million. The loan bears interest at a fixed rate per annum. The principal repayment will be made on the lender's instructions with maturity within 10 years commencing from 1 June 2019, and the interest payment period is every year within the last business day of May.

(*) During the year ended 31 December 2021, the Company instructed EGCO Plus to pay interest and principal to the Company's lenders totalling US Dollar 29 million and US Dollar 18 million, (equivalent to Baht 948 million and Baht 566 million) respectively and net offset against the long-term loan to a subsidiary and its interest receivable in Thai Baht at an amount equivalent to the US Dollar payment, in accordance with the conditions specified in the Company's instructions. For the year ended 31 December 2021, EGCO Plus fully paid for such amounts. Therefore, the Company net off these transactions against the long-term loans to a subsidiary and its interest receivables in amount of Baht 16 million and Baht 1,498 million, respectively.

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Consolidated financial statements

On 17 April 2020, a subsidiary entered into long-term loan agreement with a joint venture. The credit facility is Euro 18 million with fixed interest rate per annum. The interest repayment is made every six months and the principal repayment is made within 5 years. During the year end 31 December 2021, the joint venture fully drew down such credit facility.

On 1 June 2021, a subsidiary entered into long-term loan agreement with a joint venture. The credit facility is Euro 108 million with fixed interest rate per annum. The interest repayment is made every six months and the principal repayment is made within 10 years. During the year end 31 December 2021, the joint venture drew down the loan in amount of Euro 74 million.

37.6 Interest income and Dividend income

	Consolidated financial statements		Separate financial statements	
For the years ended 31 December	**2021 Million Baht**	**2020 Million Baht**	**2021 Million Baht**	**2020 Million Baht**
Interest income				
- Subsidiaries	-	-	2,374	2,401
- Associate	65	69	65	69
- Joint ventures	27	-	-	-
- Major shareholder	8	8	-	-
	100	77	2,439	2,470
Dividend income				
- Subsidiaries	-	-	2,340	3,317
- Associate	-	-	87	-
- Joint ventures	-	-	3,896	3,869
	-	-	6,323	7,186

37.7 Directors and managements remuneration

	Consolidated financial statements		Separate financial statements	
For the years ended 31 December	**2021 Million Baht**	**2020 Million Baht**	**2021 Million Baht**	**2020 Million Baht**
Short-term employee benefits	118	72	76	67
Post-employment benefits	5	4	2	4
Total director and managements remuneration	123	76	78	71

38 Commitments and significant agreements

38.1 Commitments

a) As at 31 December 2021, the Company had commitments under the Counter Guarantee and Standby Letters of Credit issued on behalf of the Company to subsidiaries and joint ventures for their obligations under long-term loan facility agreements with financial institutions amounting to US Dollar 845 million, Euro 320 million, Philippine Peso 1,200 million, Taiwan Dollar 557 million, Korean Won 122,876 million and Baht 4,128 million, totalling Baht 49,635 million (As at 31 December 2020: US Dollar 320 million, Euro 225 million, Philippine Peso 1,209 million, Taiwan Dollar 2,279 million, Korean Won 122,909 million and Baht 3,101 million, totalling Baht 27,802 million).

b) According to the Power Purchase Agreements (PPAs) between the Company's subsidiaries and the Electricity Generating Authority of Thailand (EGAT) which period between 21 years and 25 years, the subsidiaries have to provide bank guarantees, totalling Baht 830 million. The collateral is to be returned to such subsidiaries upon the expiry of the agreements (As at 31 December 2020: Baht 830 million).

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c) The Company has provided a guarantee of up to US Dollar 23.96 million (equivalent to Baht 805 million) from 31 March 2017 to 31 December 2037 and up to US Dollar 23.78 million (equivalent to Baht 799 million) from 1 January 2038 to 31 December 2049 for an associate's obligations as the buyer under share sales and purchase agreements for geothermal operations in Indonesia. A subsidiary will pay US Dollar 5 million to Star Energy Group Holding Pte Ltd. During the year 2040 to the year 2047 in accordance with the relevant consortium agreement to be released from obligations.

38.2 Significant agreements

38.2.1 Power Purchase Agreements (PPAs)

Six subsidiaries have entered into seven PPAs with EGAT. The agreements are effective for periods of 21 years to 25 years, commencing from the Commercial Operations Dates. The sales quantity and its price must be complied with conditions specified in agreements.

Six subsidiaries have entered into eleven PPAs with the Provincial Electricity Authority (PEA) under the Very Small Power Producer (VSPP) scheme. The sales quantity and its price must be complied with conditions specified in agreements. The PPAs are effective for periods of 5 years and are automatically renewable every 5 years.

A subsidiary in the Philippines has entered into a PPA and a Transmission Line Agreement (TLA) with a purchaser in the Philippines. The PPA is effective for a period of 25 years, commencing from the Commercial Operations Date.

A subsidiary in Australia has entered into a PPA with a purchaser in Australia. The PPA is effective for a period of 10 years commencing from November 2014 and can be extended for additional 5 years.

38.2.2 Fuel Purchase Agreements

Four subsidiaries have entered into Gas Purchase Agreements with PTT Public Company Limited (PTT). The agreements are effective for a period between 21 years and 25 years, commencing from the Commercial Operations Dates. The sales quantity and its price must be complied with conditions specified in agreements.

A subsidiary in the Philippines has entered into Coal Supply Agreements (CSAs) with two contractors. Under the CSAs, the subsidiary has to purchase coal as specified in the agreements. The CSAs are effective for periods of 15 years and 25 years, respectively, commencing from the Commercial Operations Date.

38.2.3 Operation and Maintenance Agreements

A subsidiary has entered into power plant operation and maintenance, and power plant equipment maintenance agreements with 7 subsidiaries and 2 joint ventures of the Group. The agreements are effective for a period between 3 years and 6 years.

Two subsidiaries have entered into maintenance service agreement with three constructors. The agreements are effective for a period of 11 years commencing from 26 June 2013 and 12 years commencing from 19 June 2016.

Two subsidiaries have entered into a long-term technical service agreement for power plant and equipment maintenance. The agreements are effective for a period between 6 years and 8 years, commencing from the Commercial Operations Dates which can be extended from the maturity date upon the conditions specified in the agreements.

38.2.4 Joint development agreement

The Company, EGAT International Company Limited and RATCH Group Public Company Limited entered into a joint development agreement of Quang Tri 1 thermal power plant project (the project) in the Socialist Republic of Vietnam. The Company has a 30% shareholding interest in the project. The project is currently in the greenfield development phase with an expected Commercial Operating Date in 2025.

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39 Events after the reporting date

a) On 5 January 2022, the subsidiary entered into a long-term loan agreement with the financial institution with credit facility of Euro 50 million. The interest rate is EURIBOR plus a certain margin per annum. The interest payment is made every six months and the principal repayment is made within 39 months from the date of loan agreement. This loan is guaranteed by the Company.

b) On 26 January 2022, the subsidiary entered into a PPA with EGAT under the Small Power Producer (SPP) scheme for a period of 25 years, commencing from the Commercial Operations Dates. The subsidiary also entered into Letter of Guarantee amounting to Baht 214 million as security under PPA before the Commercial Operations Dates with EGAT.

c) On 24 February 2022, the Company entered into long-term loan agreements with two financial institutions with credit facilities of US Dollar 160 million. The interest rate is SOFR plus a certain margin per annum. The interest payment is made every three months and the principal repayment is due within five years from the agreement date.

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MANAGEMENT DISCUSSION AND ANALYSIS

EXECUTIVE SUMMARY

Summary of operating results for 2021 of EGCO Group

Operating results (unit: THB million)	Q4/20	Q3/21	Q4/21	Change		2020	2021	Change
				QoQ	YoY			YoY
Total Revenue	9,113	10,185	13,029	28%	43%	39,819	42,093	6%
Share of Profit (Loss)	694	2,607	1,376	(47%)	98%	6,259	7,757	24%
Operating Profit (Loss)*	1,097	3,209	2,163	(33%)	97%	8,738	**10,218	17%
Net Profit	1,804	1,074	935	(13%)	(48%)	8,733	***4,104	(53)%
Basic Earnings per Share	3.43	2.04	1.77	(13%)	(48%)	16.59	7.80	(53)%

Remark: * Operating Profit (Loss): Profit (Loss) before the effects of foreign exchange, deferred tax, impairment, financial instruments and lease income.

** *The operating profit of EGCO Group for 2021 was THB 10,218 million, increased by 17% or THB 1,480 million compared to 2020 mainly due to Quezon, XPCL and SBPL were higher electricity sales. SEG and SEGSD were higher sales unit price of electricity and steam. MME was higher export of coal and coal unit price. Additionally, the operating profit was increased from the acquisition of Apex and Linden Topco.*

*** *The net profit of EGCO Group for 2021 was THB 4,104 million, decreased from the previous year. Mainly due to the conversion of foreign-denominated debt to Thai Baht as a result of Bath depreciation and the changing of the fair value of financial instruments. Both of the above items were the accounting impacts, which had no impact on cash flow and operations.*

The operating profit for 3-month period of Q4/2021 was THB 2,163 million, increased by 97% or THB 1,066 million compared to Q4/2020 mainly due KEGCO and Paju ES were higher electricity sales. MME was higher export of coal and coal unit price. Additionally, the operating profit was increased from the acquisition of Apex and Linden Topco. However, the operating profit of SBPL was decreased due to scheduled maintenance in Q4/2021.

The operating profit for 3-month period of Q4/2021 was decreased by 33% or THB 1,046 million compared to Q3/2021 mainly due to SBPL, NTPC and BLCP were lower electricity sales due to maintenance. Additionally, XPCL was lower water flow.

However, MME was higher export of coal and coal unit price. Additionally, the operating profit was increased from the acquisition of Apex.

Net profit for 3-month period of Q4/2021 was decreased by 13% or THB 139 million compared to Q3/2021 mainly due to EGCO Group recognized of loss from impairment and an unrealized of net loss from the changing of the fair value of financial instruments. However, the Baht appreciation, as a result, EGCO Group recognized an unrealized of foreign exchange gain from the conversion of foreign-denominated debt to Thai Baht.

INDUSTRY AND ECONOMIC SITUATION

Economic Situation

Global economy remains vulnerable to renewed outbreaks of COVID-19. The ongoing pandemic continues to shape the path for global economic activity, with severe outbreaks continuing to weigh on growth in many countries. According to the World Bank, the global economy is witnessing an exceptionally strong but highly uneven rebound as a result of highly unequal vaccination access. Economic growth is concentrated in a few major economies, with most emerging market and developing economies falling behind. The global economy is forecasted to expand by 5.6 percent in 2021, the strongest post-recession pace in 80 years. For Thai economy in 2021, it is expected to expand by 0.9 percent, primarily as a result of reopening the country for tourism, relaxation of containment measures in several areas and the continual economic policy packages for mitigating impact and increasing purchasing power measures including particularly the "Half-half" scheme phase 3. For the 2022 forecast, the Thai economy is expected to recover more pronouncedly from a low base in 2021, mostly due to a restoration of domestic demand following an improved outbreak situation and advances in vaccine distribution. Furthermore, significant supporting factors include tourist recovery as a result of relaxing foreign travel restrictions, as well as exports and industrial expansion as a result of global economic and trade recovery. However, key risks to economic outlook include the uncertainty of COVID-19 outbreaks from virus mutations, weak financial conditions of the households and business sectors, as well as volatility in the global economic and financial environment due to increased inflation pressure.

Industry Situation

Thailand's electricity industry situation in 2021, the peak demand in 3 power authority system (Electricity Generating Authority of Thailand (EGAT), Metropolitan Electricity Authority (MEA) and, Provincial Electricity Authority (PEA)) was 31,023 megawatts, occurred on March 31, 2021, at 14.49 pm, recovered from the peak demand of 30,342 megawatts in 2020 by 2.2 percent. This is a result of an increase in the electricity consumptions in the industrial sector and household from reopening country and economic recovery.

For electricity situation in targeted countries such as Republic of Indonesia, Socialist Republic of Vietnam, Republic of the Philippines, Lao People's Democratic Republic, Commonwealth of Australia, Republic of Korea, Republic of China (Taiwan) and The United States of America. The peak demand of each country increased from the low base of 2021 due to reopening economy as well as easing of containment measures. Furthermore, the energy master plan of each country tends to be revised to in line with the recent COP 26 agreement to limit global temperature rise far below 2 degrees Celsius, ideally 1.5 degrees Celsius, relative to pre-industrial levels as well as the COVID-19 impact to electricity demand. Energy master plan of each country is expected to reduce reliance on conventional energy and shift toward renewable energy in order to reduce Green House Gas (GHG) emissions, with a greater focus on the impact of climate change.

SIGNIFICANT EVENTS

Investment Expansion

ERIE

On January 11, 2021, the Electricity Generating Public Company Limited ("EGCO") entered into the joint project development contract with Industrial Estate Authority of Thailand for development of EGCO Rayong Industrial Estate ("ERIE"). ERIE, an industrial estate of approximately 621 Rais situated in Map Ta Phut, Tambon Huay Pong, Amphoe Muang, Rayong Province, shall effectively utilize EGCO's existing land which has already equipped with natural gas piping system, transmission line, substation, and raw water pipes. The location of ERIE in the Eastern Economic Corridor zone is beneficial privileges which attracts further investment. In addition, these beneficial factors shall create growth opportunity in utilities related businesses in Rayong Power Plant area such as water and waste management, smart grid, solar rooftop and solar floating. ERIE has aimed to be a smart and green industrial estate, expectedly to start operating in 2023.

Linden Topco

On January 29, 2021, EGCO Linden II, LLC, a wholly owned subsidiary of EGCO, entered into a purchase and sale agreement with AEIF Linden SPV, LLC and Highstar Capital GP IV, L.P. to acquire a 28% ownership interest in Linden Topco LLC ("Linden Topco"). The investment was completed on June 4, 2021. The transaction marks the first investment by EGCO in the United States, enabling EGCO to position itself for new investment opportunities in this large market with over 1,100 GW of installed capacity and vast opportunities in renewable and natural gas-fired power facilities.

Linden Topco indirectly owns a 972 MW natural gas-fired combined cycle cogeneration facility ("Linden Cogen Facility"), sited in the State of New Jersey, the United States. The Linden Cogen Facility consists of Linden 1-5 (800 MW) which sell energy, capacity, and ancillary services into the New York System Operator (NYISO-Zone J), and Linden 6 (172 MW) which sells energy and capacity to PJM PS North power market in New Jersey. These are two of the most congested and capacity constrained power markets in the United States.

The Linden Cogen Facility also supplies steam and electricity under a long-term contract to large investment grade industrial off-takers at the co-located Bayway refinery anchored by Philipps 66. The Linden Cogen Facility enjoys advantaged fuel supply resulting from its physical location in the city of Linden, New Jersey, and access to abundant sources of natural gas via multiple pipelines.

Acquisition of LNG Shipper License

On July 22, 2021, Energy Regulatory Commission (ERC) approved EGCO to acquire the LNG Shipper License to import the Liquefied Natural Gas (LNG) in the greatest amount of 200,380 tons per year with 10 years validity. This approval will enable EGCO to supply such fuel to the 3 power plants in its Group Companies, comprising Banpong power plant, the combined-cycle power plant in Ratchaburi province with a total installed capacity of 256 MW and a fuel consumption of 54,000 tons per year, Klongluang power plant, the combined-cycle power plant in Pathum Thani province with a total installed capacity of 122 MW and a fuel consumption of 27,000 tons per year, and EGCO Cogeneration power plant, the SPP replacement in Rayong province with the installed capacity of approximately 100-120 MW and a fuel consumption of 119,000 tons per year in place of the existing site of which the PPA will expire in 2024. This import of LNG will support the fuel cost management for power generation and open investment opportunities for EGCO Group in fuel business. The import of LNG is expected to proceed in 2025 hereafter after considering the related factors.

Innopower

On September 13, 2021, The Electricity Generating Authority of Thailand ("EGAT"), RATCH Group Public Company Limited ("RATCH") and EGCO jointly established a joint venture called Innopower Company Limited ("Innopower") with the investment portions of 40%, 30%, and 30%, respectively. The objective of Innopower is to enhance innovative researches and inventions co-developed either among EGAT Group or by strategic partners for commercial purposes through its R&D Spin-off unit. The joint venture company also aims to invest in Start-up business, a new wave of energy industry, enabling EGAT Group to handle with and respond to the abrupt changes in energy industry in timely, appropriate, and sustainable manners. Innopower is operated by 4 major departments: 1. Collaborator; 2. Incubator; 3. Accelerator; and 4. Corporate Venture Capital (CVC). Furthermore, the investment conforms to EGCO's corporate strategy to expand its investment to relating new S-Curve businesses as well as building innovation network and Start-up business. Also, it will strengthen smart energy solution business in which EGCO intends to develop the electric vehicle (EV) technology and battery storage for EV.

Apex

On October 5, 2021, EGCO Plus Company Limited ("EGCO Plus"), a wholly owned subsidiary of EGCO, entered into certain definitive agreements to acquire a 17.46% indirect interest in Apex Clean Energy Holdings, LLC ("Apex") as a co-investor in an investment vehicle managed by Ares Management Corporation's (NYSE: ARES) Infrastructure and Power strategy. The parties have entered into agreements to acquire a majority stake in Apex. The Transaction was completed on November 17, 2021.

Apex is recognized as a leader in utility-scale clean energy project development- commercializing more than US$10 billion of projects since its founding in 2009, and in clean energy sales to the commercial and industrial market over the past decade.

The investment marks the first large scale investment in renewable energy project development and ownership by EGCO Group in the United States. The Apex investment enables the EGCO Group to support the implementation of a number of new utility-scale renewable energy projects (including wind, solar and storage facilities) in one of the largest markets in the world which has over 1,100 GW of installed capacity and expanding opportunities in renewable energy. The investment is consistent with EGCO Group's Cleaner, Smarter and Stronger to Drive Sustainable Growth initiative which targets carbon neutrality by 2050 in support of the global low-carbon goals.

Peer Power

On December 21, 2021, EGCO invested in Peer Power Company Limited ("Peer Power") for acquiring a stake of 24.24% of the total issued number of shares of the Company on a fully diluted basis. Peer Power is a fintech startup established in 2016, focusing on an online electronic platform for bond and equity crowdfunding that connects investors to Small and Medium-sized Enterprises. Peer Power is the first platform which has obtained the first crowdfunding license from the Securities and Exchange Commission since 2019.

EGCO plans to introduce blockchain technology, which Peer Power has been developing to enhance its business efficiency and reduce the cost in its financial services, into blockchain-based energy trading platform to support the incoming changes in decentralized energy trend. In addition, EGCO will collaborate with Peer Power benefiting from our core business competency in power sector to further provide renewable energy source for Peer Power's Data center.

Other events

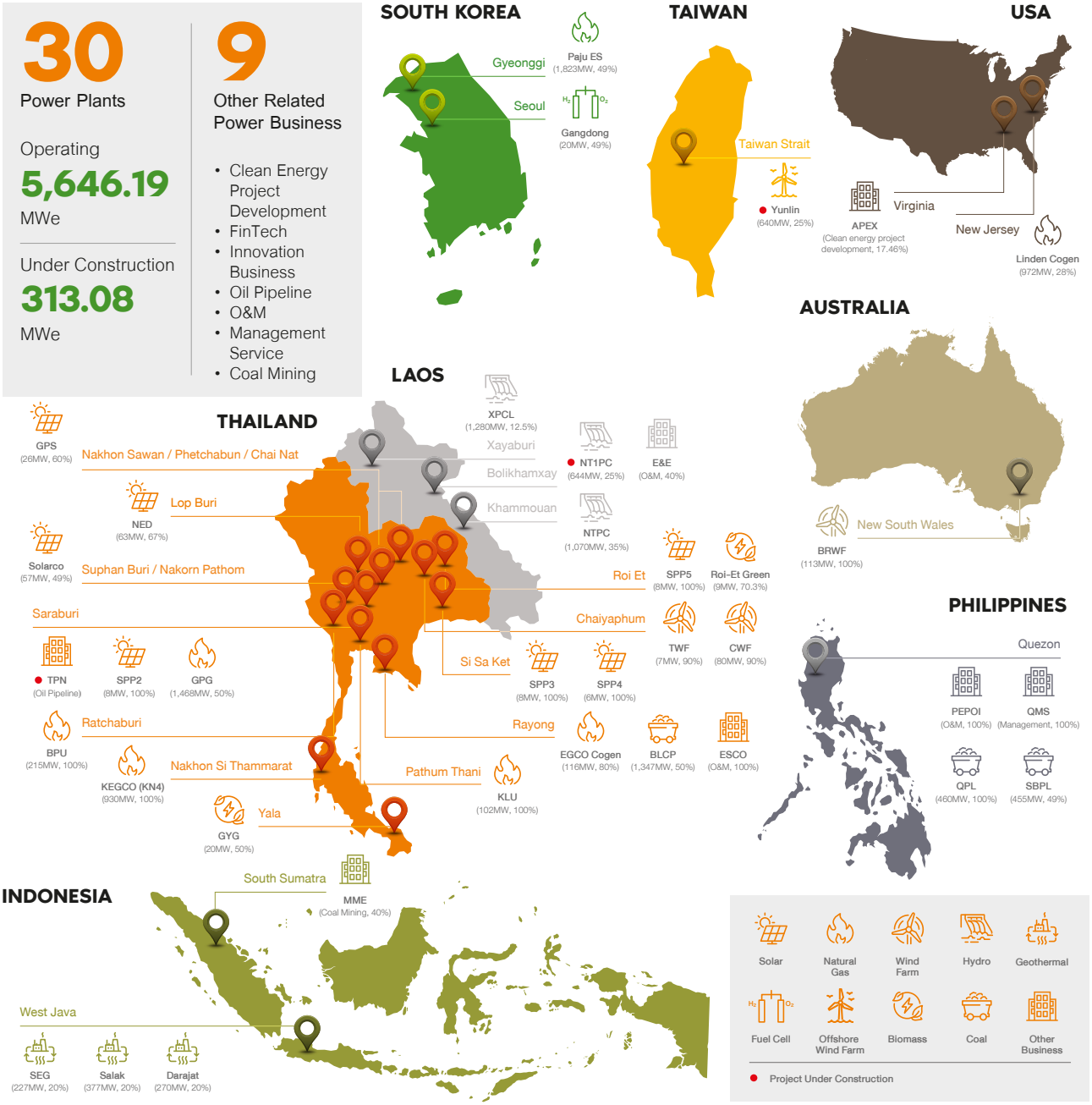
NKCC

On October 12, 2021, the 21-year PPA between Nong Khae Cogeneration Co., LTD. (NKCC) and Electricity Generating Authority of Thailand (EGAT) was expired. NKCC was a combined cycle power plant in Saraburi Province of Gulf Electric Public Company Limited (GEC) in which EGCO holds a 50% ownership interest and which had entered into the PPA with EGAT with the contracted capacity of 113 MW. NKCC stopped its operation and electricity sales to EGAT on the same day.

BUSINESS OVERVIEW

EGCO Group have invested in the Independent Power Producer (IPP), Overseas Power Producer (PP), Small Power Producer (SPP), Very Small Power Producer (VSPP), and Other Business (OTH) comprises Coal Mining, Oil Transportation Service with pipeline transportation system (Oil Transportation Service), Operating and Maintenance (O&M), Management and Administrative Services (Management Services), Financial Technology (Fintech), Innovation Research (Innovation) and Clean Energy Project Development.

As of 31 December 2021, EGCO Group's portfolio has total capacity of 5,959.27 MW equity consists of 30 domestic and overseas power plants, operating power plants, with a total capacity of 5,646.19 MW equity and construction projects, with a total capacity of 313.08 MW equity and there are 9 other related power business. Details of each plant are as follows:



REPORT AND ANALYSIS OF THE OPERATING RESULTS

Summary of operating results for 2021, Ended of December 31, 2021

Operating results (unit: THB million)	Q4/20	Q3/21	Q4/21	Change		2020	2021	Change
				QoQ	YoY			YoY
Total Revenue	9,113	10,185	13,029	28%	43%	39,819	42,093	6%
Total Expenses	(8,710)	(9,583)	(12,242)	28%	41%	(37,340)	(39,632)	6%
Share of Profit (Loss)	694	2,607	1,376	(47%)	98%	6,259	7,757	24%
Operating Profit (Loss)*	**1,097**	**3,209**	**2,163**	**(33%)**	**97%**	**8,738**	****10,218**	**17%**
Loss from impairment	(2,400)	-	(1,518)	-	(37%)	(2,400)	(1,518)	(37%)
Profit (Loss) before the effects of financial instruments, foreign exchange, deferred income tax and lease income	**(1,303)**	**3,209**	**645**	**(80%)**	**(150%)**	**6,338**	**8,700**	**37%**
Impact of financial instruments	817	(176)	(371)	111%	(145%)	1,791	(1,648)	(192%)
Profit (Loss) before the effects of foreign exchange, deferred income tax and lease income	**(486)**	**3,033**	**274**	**(91%)**	**(156%)**	**8,129**	**7,052**	**(13%)**
Deferred income (expense) tax	110	(244)	52	(121%)	(53%)	(168)	(117)	(30%)
Profit (Loss) before the effects of foreign exchange and lease income	**(376)**	**2,789**	**326**	**(88%)**	**(187%)**	**7,961**	**6,935**	**(13%)**
Profit (Loss) from foreign exchange	2,141	(2,670)	557	(121%)	(74%)	254	(4,268)	(1,780%)
Net Profit (Loss) before the impact of lease income	**1,765**	**119**	**883**	**642%**	**(50%)**	**8,215**	**2,667**	**(68%)**
Impact of lease income	39	955	52	(95%)	33%	518	1,437	177%
Net Profit (Loss)	1,804	1,074	935	(13%)	(48%)	8,733	***4,104	(53%)

Remark: * Operating Profit (Loss): Profit (Loss) before the effects of foreign exchange, deferred tax, impairment, financial instruments and lease income.

The operating profit* of EGCO Group for 2021 was THB 10,218, increased by 17% or THB 1,480 million compared to 2020. Additionally, the operating profit for 3-month period of Q4/2021 was THB 2,163 million, increased by 97% or THB 1,066 million compared to Q4/2020.

However, the operating profit of EGCO Group for 3-month period of Q4/2021 was decreased by 33% or THB 1,046 million compared to Q3/2021. Significant operating results are as follows:

THE OPERATING RESULTS OF INDEPENDENT POWER PRODUCER (IPP)

KEGCO

Operating result (unit: THB million)	Q4/20	Q3/21	Q4/21	Change		2020	2021	Change
				QoQ	YoY			YoY
Electricity revenue								
- Availability Payment (AP)	903	866	1,095	26%	21%	3,902	3,844	(1%)
- Energy Payment (EP)	2,196	2,388	3,844	61%	75%	10,456	10,231	(2%)
Other income	5	4	140	3,400%	2,700%	30	152	407%
Total Revenue	**3,104**	**3,258**	**5,079**	**56%**	**64%**	**14,388**	**14,227**	**(1%)**
Cost of sales	(2,632)	(2,945)	(4,229)	44%	61%	(12,096)	(12,147)	0%
Other expenses	(228)	(210)	(199)	(5%)	(13%)	(939)	(816)	(13%)
Total Expenses	**(2,860)**	**(3,155)**	**(4,428)**	**40%**	**55%**	**(13,035)**	**(12,963)**	**(1%)**
Operating Profit (Loss)	244	103	651	532%	167%	1,353	1,264	(7%)

- **The operating profit Q4/21 QoQ and YoY** were increased by 532% or THB 548 million and 167% or THB 407 million respectively, mainly due to higher electricity dispatch from EGAT and higher Availability Payment (AP).
- **The operating profit 12M/21 YoY** was decreased by 7% or THB 89 million mainly due to lower electricity sales and Availability Payment (AP), caused by scheduled maintenance in Q1/2021 and Q3/2021.

GPG

Operating result (unit: THB million)	Q4/20	Q3/21	Q4/21	Change		2020	2021	Change
				QoQ	YoY			YoY
Electricity revenue								
- Availability Payment (AP)	348	546	353	(35%)	1%	2,078	1,946	(6%)
- Energy Payment (EP)	239	237	632	167%	164%	1,004	1,438	43%
Other income	1	2	1	(50%)	-	12	4	(67%)
Total Revenue	**588**	**785**	**986**	**26%**	**68%**	**3,094**	**3,388**	**10%**
Cost of sales	(404)	(403)	(818)	103%	102%	(1,641)	(2,101)	28%
Other expenses	(55)	(110)	(58)	(47%)	5%	(373)	(353)	(5%)
Total Expenses	**(459)**	**(513)**	**(876)**	**71%**	**91%**	**(2,014)**	**(2,454)**	**22%**
Operating Profit (Loss)	129	272	110	(60%)	(15%)	1,080	934	(14%)

- **The operating profit Q4/21 QoQ and 12M/21 YoY** were decreased by 60% or THB 162 million and 14% or THB 146 million respectively, mainly due to a decrease in Availability Payment (AP) according to the PPA, including scheduled maintenance in Q4/2021, resulting in higher maintenance cost. Meanwhile, higher electricity dispatch from EGAT.

BLCP

Operating result (unit: THB million)	Q4/20	Q3/21	Q4/21	Change		2020	2021	Change
				QoQ	YoY			YoY
Electricity revenue								
- Availability Payment (AP)	286	522	416	(20%)	45%	1,767	1,819	3%
- Energy Payment (EP)	1,123	1,510	1,718	14%	53%	5,331	5,589	5%
Other income	62	52	71	37%	15%	280	243	(13%)
Total Revenue	**1,471**	**2,084**	**2,205**	**6%**	**50%**	**7,378**	**7,651**	**4%**
Cost of sales	(1,479)	(1,874)	(2,075)	11%	40%	(6,480)	(6,870)	6%
Other expenses	(118)	(108)	(112)	4%	(5%)	(450)	(422)	(6%)
Total Expenses	**(1,597)**	**(1,982)**	**(2,187)**	**10%**	**37%**	**(6,930)**	**(7,292)**	**5%**
Operating Profit (Loss)	(126)	102	18	(82%)	(114%)	448	359	(20%)

- **The operating profit Q4/21 QoQ** was decreased by 82% or THB 84 million mainly due to higher fuel cost during Outside Contracted available hours (CAH), including maintenance, resulting in higher maintenance cost.
- **The operating profit Q4/21 YoY** was increased by 114% or THB 144 million mainly due to higher Availability Payment (AP), caused by lower maintenance comparing to the same period of the previous year.
- **The operating profit 12M/21 YoY** was decreased by 20% or THB 89 million mainly due to maintenance, resulting in higher maintenance cost. However, higher electricity sales.

THE OPERATING RESULTS OF OVERSEAS POWER PRODUCER (PP)

Paju ES

Operating result (unit: THB million)	Q4/20	Q3/21	Q4/21	Change		2020	2021	Change
				QoQ	YoY			YoY
Electricity revenue	2,725	3,862	4,228	9%	55%	12,052	15,396	28%
Other income	216	100	240	140%	11%	497	681	37%
Total Revenue	**2,941**	**3,962**	**4,468**	**13%**	**52%**	**12,549**	**16,077**	**28%**
Cost of sales	(2,579)	(3,637)	(3,986)	10%	55%	(10,460)	(14,043)	34%
Other expenses	(304)	(218)	(347)	59%	14%	(862)	(1,082)	26%
Total Expenses	**(2,883)**	**(3,855)**	**(4,333)**	**12%**	**50%**	**(11,322)**	**(15,125)**	**34%**
Operating Profit (Loss)	58	107	135	26%	133%	1,227	952	(22%)

- **The operating profit Q4/21 YoY** was increased by 133% or THB 77 million mainly due to higher electricity sales unit price than fuel unit cost.
- **The operating profit 12M/21 YoY** was decreased by 22% or THB 275 million mainly due to higher fuel unit cost than electricity sales unit price, including maintenance, resulting in higher maintenance cost.

XPCL

Operating result (unit: THB million)	Q4/20	Q3/21	Q4/21	Change		2020	2021	Change
				QoQ	YoY			YoY
Electricity revenue	390	599	369	(38%)	(5%)	1,508	1,743	16%
Other income	-	1	3	200%	-	2	4	100%
Total Revenue	**390**	**600**	**372**	**(38%)**	**(5%)**	**1,510**	**1,747**	**16%**
Cost of sales	(181)	(153)	(154)	1%	(15%)	(656)	(612)	(7%)
Other expenses	(170)	(170)	(192)	13%	13%	(744)	(696)	(6%)
Total Expenses	**(351)**	**(323)**	**(346)**	**7%**	**(1%)**	**(1,400)**	**(1,308)**	**(7%)**
Operating Profit (Loss)	39	277	26	(91%)	(33%)	110	439	299%

- **The operating profit Q4/21 QoQ** was decreased by 91% or THB 251 million mainly due to lower electricity sales caused by lower seasonal water level including higher administrative expenses.
- **The operating profit 12M/21 YoY** was increased by 299% or THB 329 million mainly due to higher water flow, resulting in higher electricity sales. Moreover, financial cost was decreased.

Quezon

Operating result (unit: THB million)	Q4/20	Q3/21	Q4/21	Change		2020	2021	Change
				QoQ	YoY			YoY
Electricity revenue	2,081	2,524	3,228	28%	55%	8,934	10,684	20%
Other income	(1)	3	(5)	(267%)	400%	-	-	-
Total Revenue	**2,080**	**2,527**	**3,223**	**28%**	**55%**	**8,934**	**10,684**	**20%**
Cost of sales	(1,007)	(1,397)	(1,928)	38%	91%	(4,591)	(5,937)	29%
Other expenses	(316)	(265)	(329)	24%	4%	(1,249)	(1,071)	(14%)
Total Expenses	**(1,323)**	**(1,662)**	**(2,257)**	**36%**	**71%**	**(5,840)**	**(7,008)**	**20%**
Operating Profit (Loss)	757	865	966	12%	28%	3,094	3,676	19%

- **The operating profit Q4/21 QoQ** was increased by 12% or THB 101 million mainly due to higher electricity dispatch, including lower maintenance than Q3/2021.
- **The operating profit Q4/21 and 12M/21 YoY** were increased by 28% or THB 209 million and 19% or THB 582 million respectively, mainly due to higher electricity dispatch and lower scheduled maintenance, comparing to the same period of the previous year. Additionally, income tax rate was reduced according to the economic stimulus of the Philippines.

NTPC

Operating result (unit: THB million)	Q4/20	Q3/21	Q4/21	Change		2020	2021	Change
				QoQ	YoY			YoY
Electricity revenue	484	985	532	(46%)	10%	2,545	2,688	6%
Other income	2	-	5	-	150%	8	10	25%
Total Revenue	**486**	**985**	**537**	**(45%)**	**10%**	**2,553**	**2,698**	**6%**
Cost of sales	(237)	(258)	(325)	26%	37%	(960)	(1,009)	5%
Other expenses	(73)	(86)	(97)	13%	33%	(324)	(322)	(1%)
Total Expenses	**(310)**	**(344)**	**(422)**	**23%**	**36%**	**(1,284)**	**(1,331)**	**4%**
Operating Profit (Loss)	176	641	115	(82%)	(35%)	1,269	1,367	8%

- **The operating profit Q4/21 QoQ** was decreased by 82% or THB 526 million mainly due to lower electricity sales, caused by maintenance, resulting in higher maintenance cost.
- **The operating profit Q4/21 YoY** was decreased by 35% or THB 61 million mainly due to maintenance, resulting in higher maintenance cost. However, higher electricity sales.
- **The operating profit 12M/21 YoY** was increased by 8% or THB 98 million mainly due to higher electricity sales according to higher water level.

SBPL

Operating result (unit: THB million)	Q4/20	Q3/21	Q4/21	Change		2020	2021	Change
				QoQ	YoY			YoY
Electricity revenue	1,131	1,532	1,145	(25%)	1%	3,979	4,951	24%
Other income	-	2	-	-	-	2	2	-
Total Revenue	**1,131**	**1,534**	**1,145**	**(25%)**	**1%**	**3,981**	**4,953**	**24%**
Cost of sales	(686)	(961)	(895)	(7%)	30%	(2,481)	(3,282)	32%
Other expenses	(224)	(220)	(237)	8%	6%	(876)	(878)	1%
Total Expenses	**(910)**	**(1,181)**	**(1,132)**	**(4%)**	**24%**	**(3,357)**	**(4,160)**	**24%**
Operating Profit (Loss)	221	353	13	(96%)	(94%)	624	793	27%

- **The operating profit Q4/21 QoQ and YoY** were decreased by 96% or THB 340 million and 94% or THB 208 million respectively, mainly due to lower electricity dispatch, caused by scheduled maintenance in Q4/2021.
- **The operating profit 12M/21 YoY** was increased by 27% or THB 169 million mainly due to higher electricity dispatch, caused by lower maintenance comparing to the same period of the previous year.

Others Overseas Power Producer (PP): NT1PC, BRWF, SEG, SEGSD, GDFC, Yunlin and Linden Topco

Operating result (unit: THB million)	Q4/20	Q3/21	Q4/21	Change		2020	2021	Change
				QoQ	YoY			YoY
Electricity revenue	943	2,402	2,199	(8%)	133%	4,129	6,904	67%
Other income	(3)	16	18	13%	(700%)	-	71	-
Total Revenue	**940**	**2,418**	**2,217**	**(8%)**	**136%**	**4,129**	**6,975**	**69%**
Cost of sales	(299)	(1,183)	(1,282)	8%	329%	(1,115)	(3,261)	192%
Other expenses	(684)	(647)	(692)	7%	1%	(2,248)	(2,387)	6%
Total Expenses	**(983)**	**(1,830)**	**(1,974)**	**8%**	**101%**	**(3,363)**	**(5,648)**	**68%**
Operating Profit (Loss)	(43)	588	243	(59%)	(665%)	766	1,327	73%

- **The operating profit Q4/21 QoQ** was decreased by 59% or THB 345 million mainly due to
  - Linden Topco was decreased by THB 175 million mainly due to scheduled maintenance in Q4/2021.
  - BRWF was decreased by THB 136 million mainly due to lower electricity sales, caused by lower wind speed, including maintenance.
  - GDFC was decreased by THB 36 million mainly due to higher fuel unit cost.
- **The operating profit Q4/21 YoY** was increased by 665% or THB 286 million mainly due to
  - SEG and SEGSD were increased by THB 300 million mainly due to higher sales unit price of electricity and steam, including lower maintenance comparing to the same period of the previous year. Moreover, lower financial cost.
  - BRWF was increased by THB 29 million mainly due to higher electricity sales, caused by lower maintenance comparing to the same period of the previous year.
  - Linden Topco was decreased by THB 43 million mainly due to scheduled maintenance in Q4/2021.
- **The operating profit 12M/21 YoY** was increased by 73% or THB 561 million mainly due to
  - SEG and SEGSD were increased by THB 390 million mainly due to higher sales unit price of electricity and steam, including lower maintenance comparing to the same period of the previous year. Moreover, lower financial cost.
  - Linden Topco was increased by THB 103 million. This was resulted from the acquisition 28% of Linden Topco on June 4, 2021.
  - GDFC was increased by THB 56 million. The commencementof GDFC on October 1, 2020.

THE OPERATING RESULTS OF SMALL POWER PRODUCER (SPP)

Small Power Producer (SPP): EGCO Cogen, RG, BPU, KLU, CWF, GYG, NKCC and NED

Operating result (unit: THB million)	Q4/20	Q3/21	Q4/21	Change		2020	2021	Change
				QoQ	YoY			YoY
Electricity revenue	2,493	3,078	3,063	(1%)	23%	12,058	11,498	(5%)
Other income	13	45	35	(22%)	169%	82	108	32%
Total Revenue	**2,506**	**3,123**	**3,098**	**(1%)**	**24%**	**12,140**	**11,606**	**(4%)**
Cost of sales	(2,002)	(2,471)	(2,567)	4%	28%	(9,733)	(9,281)	(5%)
Other expenses	(281)	(270)	(266)	(1%)	(5%)	(1,235)	(1,067)	(14%)
Total Expenses	**(2,283)**	**(2,741)**	**(2,833)**	**3%**	**24%**	**(10,968)**	**(10,348)**	**(6%)**
Operating Profit (Loss)	223	382	265	(31%)	19%	1,172	1,258	7%

- **The operating profit Q4/21 QoQ** was decreased by 31% or THB 117 million mainly due to
  - BPU was decreased by THB 65 million mainly due to higher fuel unit cost, including scheduled maintenance in Q4/2021.
  - GYG and NKCC* were decreased by THB 50 million mainly due to scheduled maintenance in Q4/2021.
  - EGCO Cogen was decreased by THB 29 million mainly due to lower electricity sales, caused by maintenance. Moreover, higher fuel unit cost.
  - CWF was increased by THB 29 million mainly due to higher electricity sales, caused by higher wind speed.
- **The operating profit Q4/21 YoY** was increased by 19% or THB 42 million mainly due to
  - BPU was increased by THB 83 million mainly due to higher electricity sales, caused by higher electricity dispatch from EGAT, including lower scheduled maintenance comparing to the same period of the previous year.
  - NED was increased by THB 10 million mainly due to higher electricity sales, caused by higher irradiation.
  - EGCO Cogen was decreased by THB 28 million mainly due to higher fuel unit cost.
  - GYG, NKCC and SCC* were decreased by THB 18 million mainly due to scheduled maintenance in Q4/2021.
- **The operating profit 12M/21 YoY** was increased by 7% or THB 86 million mainly due to
  - BPU was increased by THB 105 million mainly due to higher electricity sales, caused by higher electricity dispatch from EGAT, including lower scheduled maintenance comparing to the same period of the previous year.
  - KLU was increased by THB 39 million mainly due to higher electricity sales, caused by lower scheduled maintenance comparing to the same period of the previous year.

Remark: * SCC and NKCC stopped its operation and electricity sales to EGAT on August 23, 2020 and October 12, 2021 respectively.

THE OPERATING RESULTS OF VERY SMALL POWER PRODUCER (VSPP)

Very Small Power Producer (VSPP): SPP2, SPP3, SPP4, SPP5, TWF, Solarco and GPS

Operating result (unit: THB million)	Q4/20	Q3/21	Q4/21	Change		2020	2021	Change
				QoQ	YoY			YoY
Electricity revenue	528	516	551	7%	4%	2,269	2,236	(1%)
Other income	2	1	1	-	(50%)	11	4	(64%)
Total Revenue	**530**	**517**	**552**	**7%**	**4%**	**2,280**	**2,240**	**(2%)**
Cost of sales	(168)	(149)	(151)	1%	(10%)	(650)	(591)	(9%)
Other expenses	(102)	(102)	(94)	(8%)	(8%)	(448)	(403)	(10%)
Total Expenses	**(270)**	**(251)**	**(245)**	**(2%)**	**(9%)**	**(1,098)**	**(994)**	**(9%)**
Operating Profit (Loss)	260	266	307	15%	18%	1,182	1,246	5%

- **The operating profit Q4/21 QoQ** was increased by 15% or THB 41 million mainly due to solar power plants were higher irradiation and TWF was higher wind speed.
- **The operating profit Q4/21 YoY** was increased by 18% or THB 47 million mainly due to solar power plants were higher irradiation.
- **The operating profit 12M/21 YoY** was increased by 5% or THB 64 million mainly due to solar power plants were higher irradiation. Moreover, lower financial cost.

THE OPERATING RESULTS OF OTHER BUSINESSES (OTH)

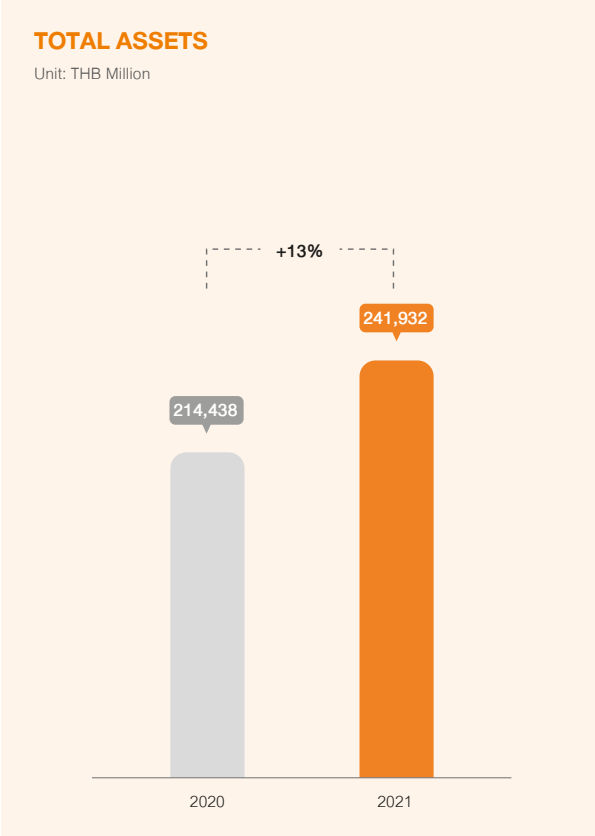
Other Businesses (OTH): ESCO, PEPOI, QMS, MME, EE, TPN, Apex and Innopower

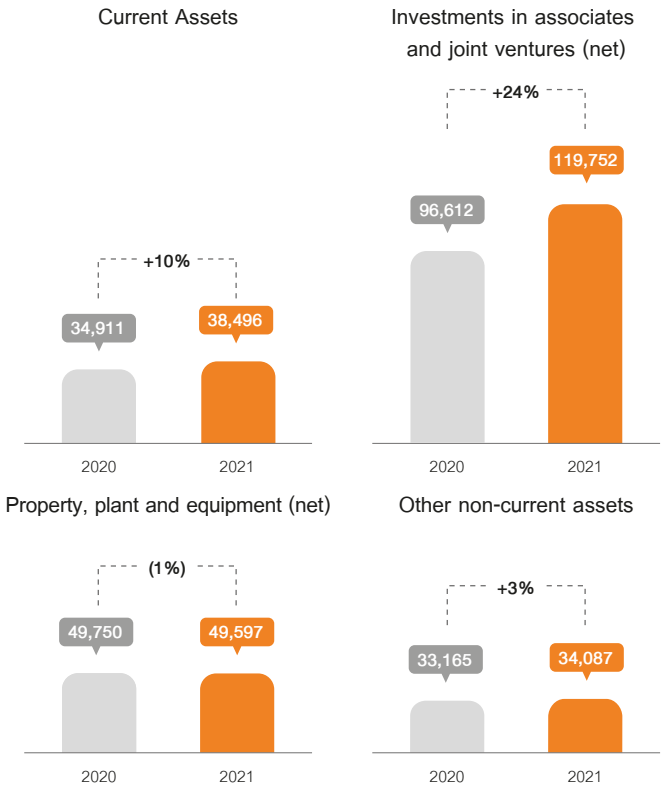
Operating result (unit: THB million)	Q4/20	Q3/21	Q4/21	Change		2020	2021	Change
				QoQ	YoY			YoY
Electricity revenue	576	807	1,470	82%	155%	2,103	3,795	80%
Other income	7	32	82	156%	1,071%	20	124	520%
Total Revenue	**583**	**839**	**1,552**	**85%**	**166%**	**2,123**	**3,919**	**85%**
Cost of sales	(419)	(470)	(777)	65%	85%	(1,658)	(2,336)	41%
Other expenses	(56)	(107)	(165)	54%	195%	(226)	(433)	92%
Total Expenses	**(475)**	**(577)**	**(942)**	**63%**	**98%**	**(1,884)**	**(2,769)**	**47%**
Operating Profit (Loss)	108	262	610	133%	465%	239	1,150	381%

- **The operating profit Q4/21 and 12M/21 YoY** were increased by 465% or THB 502 million and 381% or THB 911 million respectively, mainly due to the acquisition 17.46% of Apex on October 5, 2021. Moreover, MME was higher coal production and higher export of coal, including higher coal unit price.

REPORT AND ANALYSIS OF FINANCIAL POSITION

Comparing the Statements of Financial Position as at December 31, 2021 to December 31, 2020 is shown below:





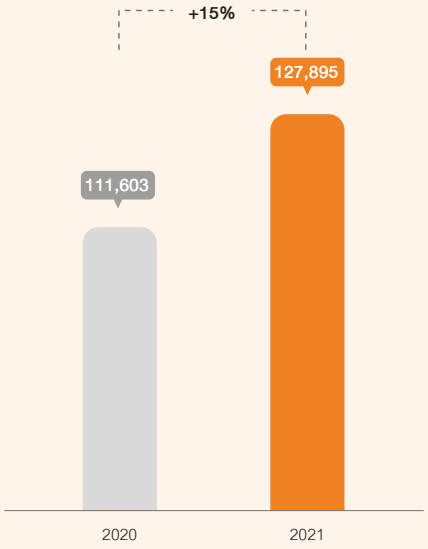
Asset Analysis

As of December 31, 2021, total assets of EGCO Group were Baht 241,932 million, increasing by 13% or Baht 27,494 million from the year 2020. The details are as follows:

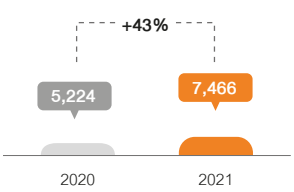
- Current Assets was increased by 10% or Baht 3,585 million mainly due to an increased in cash and cash equivalents by Baht 661 million, trade receivable by Baht 2,249 million and financial assets measured at amortised cost by Baht 273 million.
- Investments in associates and joint ventures (net) was increased by 24% or Baht 23,140 million mainly due to an investment in associates and joint ventures. Additionally, recognition of share of profits after dividend deduction from associates and joint ventures.
- Property, plant and equipment (net) was decreased by 1% or Baht 153 million mainly due to depreciation. Additionally, the assets residual values and useful lives are reviewed and adjusted if appropriate, at the end of each reporting period.
- Other non-current assets was increased by 3% or Baht 922 million mainly due to an increased in long-term loans to subsidiaries and associates by Baht 3,419 million. Meanwhile, derivative assets was decreased by Baht 1,025 million.

TOTAL LIABILLITIES

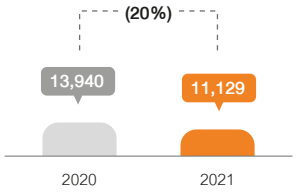
Unit: THB Million



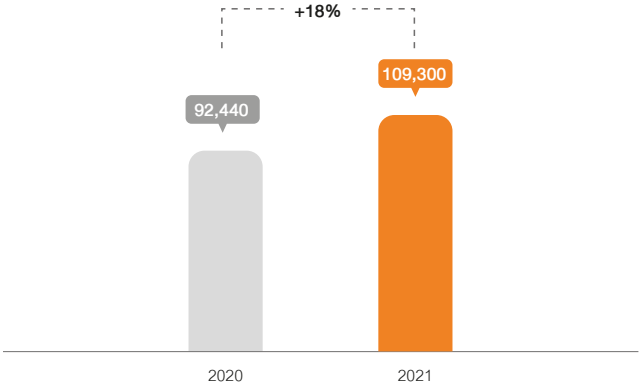
Current Liabilities



Other current liabilities



Long-term loans and debenture
(including current portion of long-term loans)



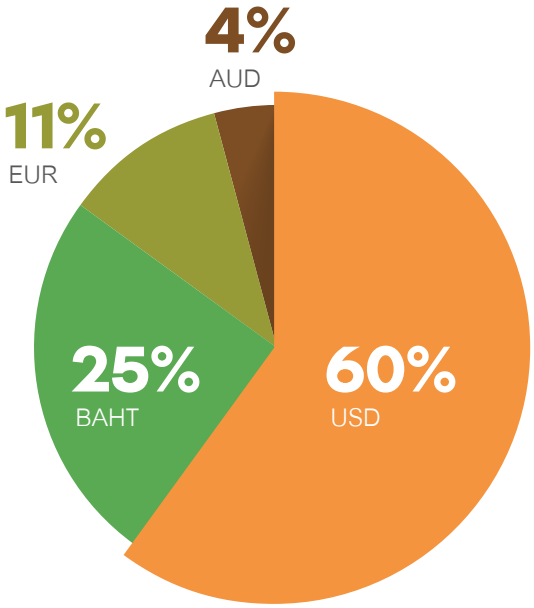
Liability Analysis

As of December 31, 2021, the total liabilities of EGCO group were Baht 127,895 million, increasing by 15% or Baht 16,292 million from the year 2020. The details are as follows:

- Current Liabilities increased by 43% or Baht 2,242 million mainly due to an increased of trade payable and trade payable to a related party by Baht 2,046 million and other current liabilities by Baht 208 million.
- Long-term loans and debenture increased by 18% or Baht 16,860 million mainly due to the increase in long-term loans for Investment in associates and joint ventures.

Outstanding long-term loans are as follows:

- USD loans: US dollar 1,877 million, equivalent to Baht 63,040 million
- Baht loans: Baht 26,455 million
- Euro loans: Euro 299 million, equivalent to Baht 11,272 million
- AUD loans: Australian dollar 161 million, equivalent to Baht 3,900 million



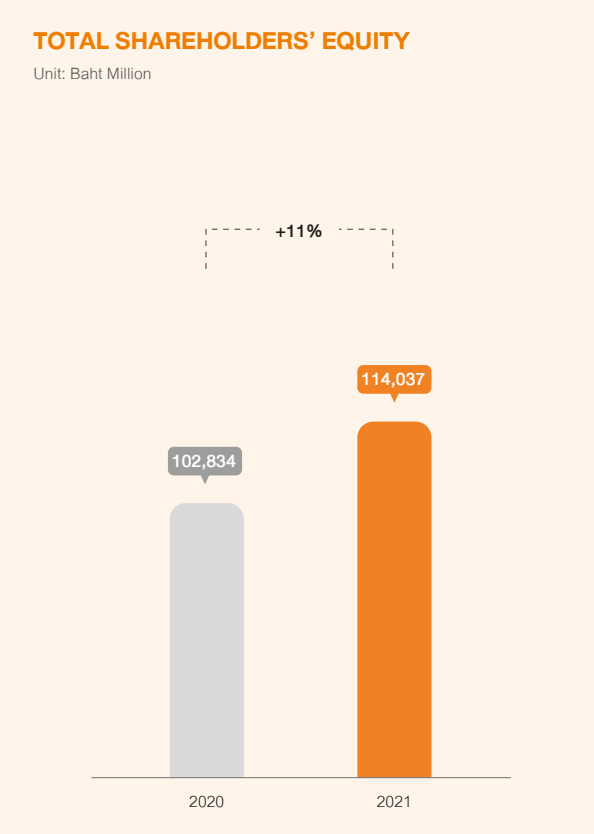
Loan maturities schedule as at December 31, 2021

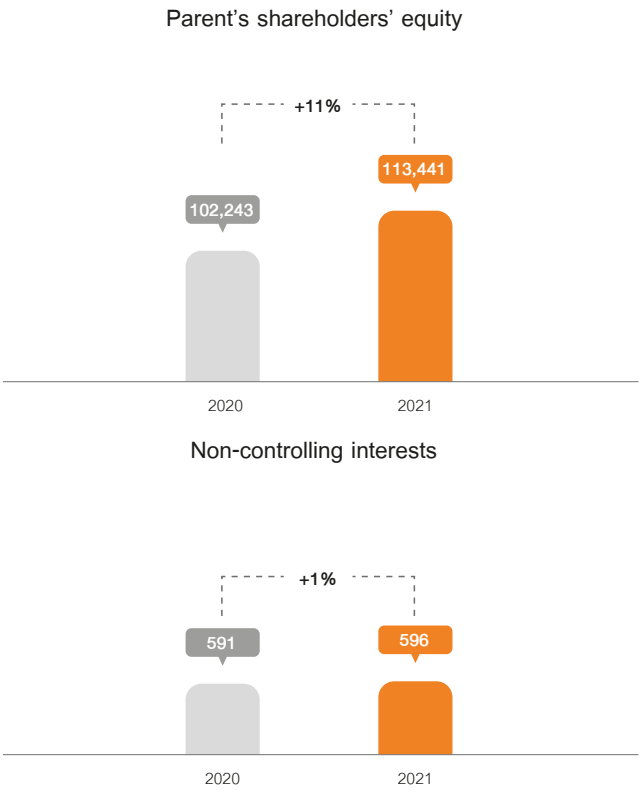
Unit: THB Million

Maturity	EGCO	EGCO PLUS	KEGCO	BPU	BRWF	CWF	KLU	YEH	SPP2-5	TWF	TOTAL
Within 1 year	11,072	-	1,456	415	379	426	191	452	135	39	14,565
2 - 5 years	19,050	40,663	3,346	1,693	3,521	1,882	796	793	111	60	71,915
Over 5 years	4,000	-	6,115	4,247	-	1,003	2,459	322	-	41	18,187
Total	34,122	40,663	10,917	6,355	3,900	3,311	3,446	1,567	246	140	104,667

Debenture is unsecured debenture amounting to Japanese Yen 17,120 million, redeems within 7 years from the issuance date, had a cross currency swap to US Dollar 143 million.

- Other non-current liabilities decreased by 20% or Baht 2,811 million mainly due to derivative liabilities and provision for decommissioning costs decreased by Baht 2,639 million and Baht 234 million, respectively.
- Commitments and commitments off-balance sheet were described in Notes to the Financial Statements on key commitments and significant agreement.





Shareholders' Equity Analysis

As of December 31, 2021, total Shareholders' Equity of EGCO Group were Baht 114,037 million increasing by 11% or Baht 11,203 million from the year 2020 mainly due to an increased in unappropriated retained earnings by Baht 550 million, other components of equity by Baht 10,648 million and non-controlling interests by Baht 5 million.

CASH FLOW ANALYSIS

As of December 31, 2021, cash and cash equivalents were THB 17,898 million, increasing by THB 661 million comparing to December 31, 2020. The details are as follows:

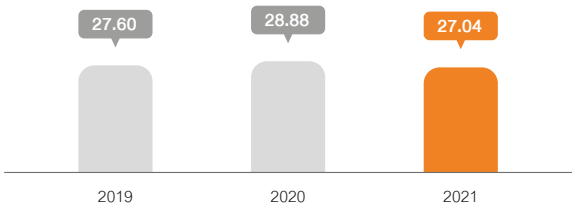
Cash Flow (unit: THB million)	Year 2021
Net cash received from operating activities	10,453
Net cash payment for investing activities	(14,191)
Net cash received from financing activities	3,440
Net cash and cash equivalents (before effect of foreign exchange rate)	**(298)**
Gain from the effect of foreign exchange rate	959
Net cash and cash equivalents	**661**
Net cash and cash equivalents at the beginning of the period (as of January 1, 2021)	17,237
Net cash and cash equivalents at the end of the period (as of December 31, 2021)	**17,898**

- **Net cash received from operating activities** was THB 10,453 million from operating of EGCO and its subsidiaries.
- **Net cash payment for investing activities** was THB 14,191 million, mainly due to cash payment for investment of joint ventures was THB 16,223 million, net cash payment in long-term loans to related party was THB 3,456 million and cash payments for purchases of equipment and assets under construction were THB 701 million. However, the dividend received was THB 5,940 million and cash received from disposal of buildings and equipment were THB 278 million.
- **Net cash received from financing activities** was THB 3,440 million, mainly due to net cash received from loans and payments of short-term and long-term loans were 10,717 million. Meanwhile, interest payment of loans and financing fees totaling THB 3,636 million and dividend payment to shareholders was THB 3,564 million.

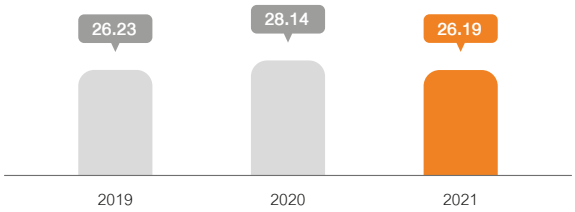
KEY FINANCIAL RATIOS

Profitability Ratios

Gross Profit Ratio (%)

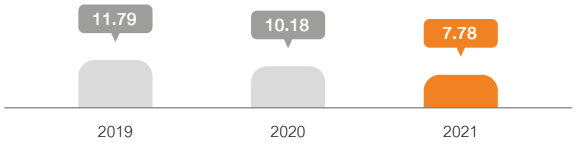


Operating Profit Ratio* (%)

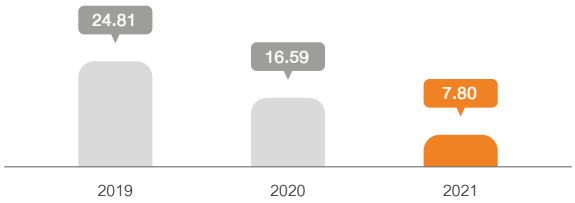


Remark: * Operating Profit (loss) before the effects of foreign exchange, interest expenses, income tax and impairment.

Profit Ratio Before FX (%)

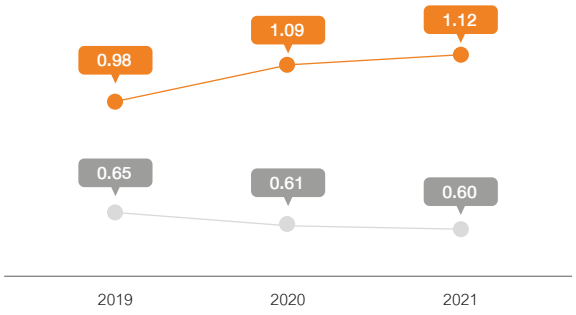


Net Profit per Share (THB)

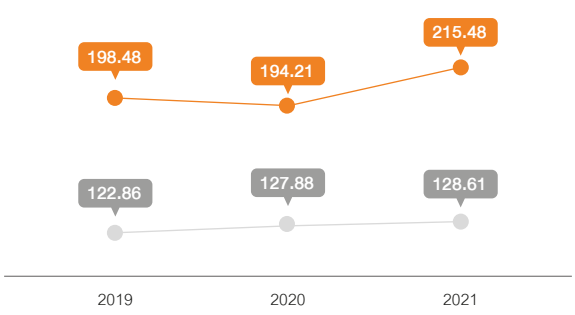


Leverage Ratio and Liquidity Ratio

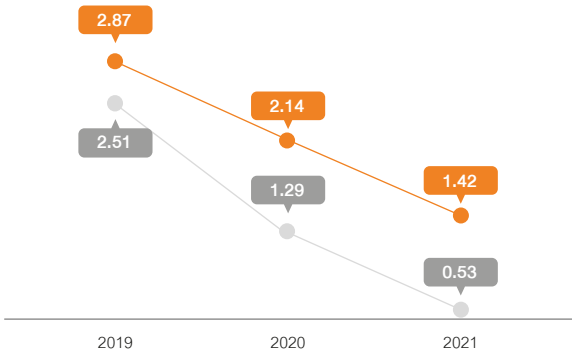
Debt to Equlity Ratio (times)



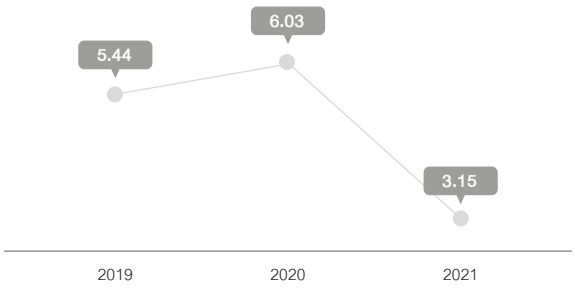
Book Value per Share (THB)



Current Ration (times)



Interest Coverage Ratio (Times)



Consolidated Separate

Trade receivables aging summary

Aging periods of trade receivables as at December 31, 2021, are shown in the table below

Unit: THB Million

	2020	2021	Change	
			Amount	%
Current	4,811	7,060	2,249	46%
Overdue less than 3 months	-	-	-	-
Overdue between 3-6 months	-	-	-	-
Overdue between 6-12 months	-	-	-	-
Overdue more than 12 months	23	2	(21)	(91%)
	4,834	7,062	2,228	46%
Less Allowance for doubtful accounts	(23)	(2)	21	(91%)
Trade receivables, net	4,811	7,060	2,249	47%

THE PROGRESS IN CONSTRUCTION PROJECTS

The Extension of the Petroleum Pipeline System to the Northeastern Region Project (TPN)

Type of project
The extension of the petroleum pipeline system

Location
Saraburi-Khon Kaen, Thailand

SCOD
Q1/2022

Transport capacity
5,443
million liters/year (potentially increase to 7,330 million liters in the future)

% Progress
96.32%
(The construction plan was 98.76%)

Yunlin Project (Yunlin)

Type of power plant
Renewable power plant

Location
Taiwan Strait approximately 8 km west of the coast of Yunlin County in Taiwan

Installed capacity
640
MW

SCOD Q4/2021–Q4/2023
(There were 4 Wind Turbines in operation at the end of 2021 and the project has started recognizing revenue since early November 2021)

% Progress
71.30%
(The construction plan was 86.32%)

NT1PC Project (NT1PC)

Type of power plant
Renewable power plant

Location
Bolikhamxay Province, Lao PDR

SCOD
Q2/2022

Total contracted capacity
644.30 MW
(514.30 MW with EGAT and additional 130 MW with EDL)

% Progress
96.67%
(The construction plan was 96.73%)

FUTURE PLANS

To achieve corporate vision: “To be a major sustainable Thai energy company with full commitment to environment protection and social development support”, EGCO drives the business through corporate strategies based on Balanced Scorecard concept in four strategic perspectives: finance, customer, internal process and learning and growth, that will be major drivers for EGCO’s future sustainable growth.

For investment direction, EGCO maintains the same investment directions, which are power generation, fuel and other infrastructure and smart energy solution. EGCO has committed to drive the operations based on sustainable development. EGCO positioned ourselves to be “Cleaner, Smarter and Stronger to drive sustainable growth becoming carbon neutral by 2050”. In addition to power generation business, we vertically integrate to LNG business, provided value-added to our existing business. Furthermore, we have strategic move in new S-curve business to diversify investment and embrace opportunities arising from disruptive technology. Securing funding and improving financial competitiveness are critical for supporting new investment and implementing successful strategies. Financial technology (Fintech) is one of the fastest expanding technology, with advancements in practically every aspect of finance. We intend to study and embrace digitalization in Fintech in order to support new business. EGCO's operational excellence is another key success factor for achieving competitive Return on Equity (ROE). We continuously drive to be the best in the class operation and optimize value of portfolio by asset improvement, proactive portfolio management, exploring opportunities for valuable divestment and enhancing Operation & Maintenance (O&M) synergy. To ensure EGCO's sustainable growth and align with our strategic positioning, we would like to transform the organization while strengthening the human resource foundation to provide effective organizational structure, people management and capacity building. Along with information technology and innovation, it serves as a significant platform to support new normal operations and boost work efficiency. Additionally, best sustainability practices are being developed in order to integrate sustainability to our daily operation. Overall, corporate strategies would be implemented in order to ensure long-term growth and, ultimately, to provide sustainable value to stakeholders.

For future plan, EGCO allocated investment budget to expand our business in power generation by Merger and Acquistion (M&A) and development of new power plants in targeted country, where have high electricity demand growth and vast opportunities in natural gas and renewable energy. In addition to power generation, we allocated the investment budget to invest fuel & other infrastructure and smart energy solution business such as LNG infrastructure, Solar Solution, and Industrial Estate, which create incremental value to EGCO. The future investment would be aligned with our position and the long-term target as “Cleaner, Smarter and Stronger to drive sustainable growth becoming carbon neutral by 2050”.

APPENDIX

Definitions

AP Availability Payment is the electricity revenues that EGAT pays to IPP and will be paid "when the power plant is ready to dispatch (available)" such as entire investment cost, loans, interest, shareholders' return and fixed operating cost.

EP Energy Payments is the revenues that will be received after electricity is generated and transmitted to EGAT's transmission system, EP comprises 2 major parts: fuel payment and variable operating and maintenance payment (VOM).

FX Foreign Exchange

MW Megawatt

PPA Power Purchase Agreement

SCOD Scheduled Commercial Operation Date

EGCO' Businesses and Projects

IPP	
BLCP	BLCP Power Co., Ltd
GPG	Gulf Power Generation Co., Ltd
KEGCO	Khanom Electricity Generating Co., Ltd.

PP	
BRWF	Boco Rock Wind Farm Pty Ltd.
GDFC	Gangdong Fuel Cell Power Plant
Linden Topco	Linden Topco LLC
NT1PC	Nam Theun 1 Power Co., Ltd.
NTPC	Nam Theun 2 Power Co., Ltd.
Paju ES	Paju Energy Services Co., Ltd.
Quezon	Quezon Power (Philippines) Co., Ltd
SBPL	San Buenaventura Power Co., Ltd.
SEG	Star Energy Geothermal Pte. Ltd.
SEGSD	Star Energy Geothermal (Salak-Darajat) B.V.
XPCL	Xayaburi Power Co., Ltd.
Yunlin	Yunlin Holding GmbH Co., Ltd.

SPP	
BPU	Banpong Utilities Co., Ltd.
CWF	Chaiyaphum Wind Farm Co., Ltd.
EGCO Cogen	EGCO Cogeneration Co., Ltd.
GYG	Gulf Yala Green Co., Ltd.
KLU	Klongluang Utilities Co., Ltd.
NKCC	Nong Khae Cogeneration Co., Ltd.
NED	Natural Energy Development Co., Ltd.
RG	Roi-Et Green Co., Ltd.
SCC	Samutprakarn Cogeneration Co., Ltd.

VSPP	
GPS	G-Power Source Co., Ltd.
SOLARCO	Solarco Co., Ltd.
SPP 2	SPP Two Co., Ltd.
SPP 3	SPP Three Co., Ltd.
SPP 4	SPP Four Co., Ltd.
SPP 5	SPP Five Co., Ltd.
TWF	Theppana Wind Farm Co., Ltd.

OTH	
Apex	Apex Clean Energy Holdings, LLC
E&E	E&E Engineering and Service Co., Ltd.
ESCO	EGCO Engineering and Service Co., Ltd.
Innopower	Innopower Co., Ltd.
MME	PT Manambang Muara Enim Co., Ltd.
PEPOI	Pearl Energy Philippines Operating Inc.
QMS	Quezon Management Service Inc.
TPN	Thai Pipeline Network Co., Ltd.

THE OPERATING RESULTS OF OVERSEAS POWER PRODUCER (PP)

Operating result 2021 (unit: THB million)	SEG	SEGSD	GDFC	Linden Topco	BRWF	Others*
Electricity revenue	2,113	1,329	521	1,998	915	28
Other income	(10)	7	1	2	-	71
Total Revenue	**2,103**	**1,336**	**522**	**2,000**	**915**	**99**
Cost of sales	(445)	(272)	(434)	(1,602)	(508)	-
Other expenses	(1,037)	(602)	(32)	(295)	(279)	(142)
Total Expenses	**(1,482)**	**(874)**	**(466)**	**(1,897)**	**(787)**	**(142)**
Operating Profit (Loss)	621	462	56	103	128	(43)

Remark: * NT1PC and Yunlin

THE OPERATING RESULTS OF SMALL POWER PRODUCER (SPP)

Operating result 2021 (unit: THB million)	NED	BPU	CWF	KLU	GEC Group	EGCO COGEN	RG
Electricity revenue	881	4,684	677	2,374	1,113	1,596	173
Other income	1	3	2	10	90	1	1
Total Revenue	**882**	**4,687**	**679**	**2,384**	**1,203**	**1,597**	**174**
Cost of sales	(236)	(3,998)	(327)	(2,006)	(984)	(1,544)	(186)
Other expenses	(83)	(374)	(161)	(241)	(145)	(51)	(12)
Total Expenses	**(319)**	**(4,372)**	**(488)**	**(2,247)**	**(1,129)**	**(1,595)**	**(198)**
Operating Profit (Loss)	563	315	191	137	74	2	(24)

THE OPERATING RESULTS OF VERY SMALL POWER PRODUCER (VSPP)

Operating result 2021 (unit: THB million)	Solarco	GPS	SPP3	SPP5	SPP2	SPP4	TWF
Electricity revenue	1,240	315	165	172	157	116	71
Other income	2	1	-	-	1	-	-
Total Revenue	**1,242**	**316**	**165**	**172**	**158**	**116**	**71**
Cost of sales	(325)	(85)	(40)	(45)	(41)	(28)	(27)
Other expenses	(245)	(37)	(27)	(29)	(30)	(21)	(14)
Total Expenses	**(570)**	**(122)**	**(67)**	**(74)**	**(71)**	**(49)**	**(41)**
Operating Profit (Loss)	672	194	98	98	87	67	30

THE OPERATING RESULTS OF OTHER BUSINESSES (OTH)

Operating result 2021 (unit: THB million)	MME	Apex	PEPOI	ESCO	QMS	Others *
Electricity revenue	1,342	581	615	1,103	148	6
Other income	17	78	18	10	-	1
Total Revenue	**1,359**	**659**	**633**	**1,113**	**148**	**7**
Cost of sales	(728)	(137)	(415)	(935)	(116)	(5)
Other expenses	(177)	(87)	(71)	(79)	(11)	(8)
Total Expenses	**(905)**	**(224)**	**(486)**	**(1,014)**	**(127)**	**(13)**
Operating Profit (Loss)	454	435	147	99	21	(6)

Remark: * TPN, EE and Innopower

Remark: This Management Discussion and Analysis (MD&A) was made to disclose information and the vision of the management in order to assist investors to better understand the company's financial status and operation. It also supports the "Good Corporate Governance Project" of the Securities and Exchange Commission (SEC).

An English version of the MD&A has been prepared from the Thai version. In the event of a conflict or a difference in interpretation between the two languages, the Thai version shall prevail.

The objective of this MD&A is to present the information and the explanation of financial status and operating results as of the date hereof. However, the information provided in this MD&A may vary if any factors or situation are changed in the future; the investors are, therefore, required to have their own discretion regarding the usage of this information for any purpose. For further detail, please contact Investor Relations Division of the Electricity Generating Public Company Limited (EGCO) at Tel: 662-998-5150-3 or Email: ir@egco.com.

AUDIT FEE FOR THE YEAR 2021

AUDIT FEE

In 2021, EGCO and its subsidiaries paid the audit fee of 6,576,900 Baht to the Office of the Auditors, comprising EGCO's and subsidiaries' audit fees of 2,847,400 Baht and 3,729,500 Baht, respectively. No other audit fee had been paid to the auditors or related parties to the Auditors and the Auditors' office.

NON-AUDIT FEE

In 2021, EGCO's and subsidiaries' total non-audit fee was 10,699,800 Baht which was already paid of 5,449,800 Baht. In addition, EGCO would also be responsible for the expenses of undelivered work of 5,250,000 Baht. The details of the non-audit fee were as follows:

1. Payment to the Office of the Auditors

   The non-audit fee for BOI auditing, financial covenant ratio review and services in relation to offering of debt securities was 6,499,800 Baht which was already paid of 1,249,800 Baht to the Office of the Auditors. In addition, EGCO would also be responsible for the expenses of undelivered work of 5,250,000 Baht.

2. Payment to Other Related Parties of the Auditors' Office

   The non-audit fee for the advisory services for account, finance, and tax due diligence on onshore investment was 4,200,000 Baht which was already paid to other related parties of the Auditor's office.

Management agreed that the engagements of the office of the Auditors and its related parties to provide the non-audit work did not involve any conflict of interest or any review of their own work which would contaminate the independence judgment of the auditors, and this has been approved by the Audit Committee.

SECTION
04

OTHER INFORMATION

GENERAL INFORMATION

GENERAL INFORMATION

Name	Electricity Generating Public Company Limited (EGCO)
Business	Holding Company focusing on power business and other related business
Registration	0107537000866 (Previously Number Listed Co. 333)
Sector	Energy and Utilities
Industry	Resources
Registered Capital	THB 5,300 million
Paid up capital	THB 5,264.65 million
Par Value	THB 10
Foreign Limit	44.82%
% Free Float	50.02% as at March 11, 2021
Head Office	14th, 15th Floor, EGCO Tower, 222, Vibhavadi Rangsit Rd., Tungsonghong, Laksi, Bangkok 10210, Thailand.
Home Page	www.egco.com
Tel.	0 2998 5000
Fax.	0 2998 5999
Board of Directors	Email address: directors@egco.com
Audit Committee	Email address: auditcommittee@egco.com
Corporate Secretary	0 2998 5020-7 Email address: cs@egco.com
Investor Relations Contact	0 2998 5147-8 Email address: ir@egco.com

REFERENCE PERSONS

Regulator	**Securities and Exchange Commission, Thailand** 333/3 Vibhavadi Rangsit Road, Chomphon, Chatuchak, Bangkok 10900, Thailand Tel.: +66 (0) 2033 9999 Fax.: +66 (0) 2033 9660 E-mail: info@sec.or.th Website: www.sec.or.th
Regulator	**The Stock Exchange of Thailand** The Stock Exchange of Thailand Building, 93 Ratchadaphisek Road, Dindaeng, Bangkok 10400, Thailand Tel.: +66 (0) 2009 9000 Fax.: +66 (0) 2009 9991 SET Call Center: +66 (0) 2009 9999 E-mail: SETCallCenter@set.or.th Website: www.set.or.th
Share and Debenture Registrar	**Thailand Securities Depository Company Limited** 93 Ratchadaphisek Road, Dindaeng, Bangkok 10400, Thailand Tel.: +66 (0) 2009 9000 Fax.: +66 (0) 2009 9991 Call Center: +66 (0) 2009 9999 E-mail: SETContactCenter@set.or.th Website: www.set.or.th/tsd
Auditor	1. Ms. Amornrat Pearmpoonvatanasuk, Certified Public Accountant (Thailand) No. 4599 2. Mr. Vichien Khingmontri, Certified Public Accountant (Thailand) No. 3977 3. Ms. Rodjanart Banyatananusard, Certified Public Accountant (Thailand) No. 8435 **PricewaterhouseCoopers ABAS Limited** 179/74-80 Bangkok City Tower, 15th Floor, South Sathorn Road, Bangkok 10120, Thailand Tel.: +66 (0) 2844 1000 Fax.: +66 (0) 2286 5050

SUBSIDIARIES

COMPANY	BUSINESS	REGISTERED SHARE CAPITAL (MILLION BAHT)	PAR VALUE (BAHT)	PAID-UP SHARE CAPITAL (MILLION BAHT)	OWNER-SHIP INTEREST (DIRECT+ INDIRECT) (%)
Khanom Electricity Generating Company Limited (KEGCO)					
Office 12th Floor, EGCO Tower Tel.: +66 (0)2998 5000 Fax.: +66 (0) 2955 0931 Site Office 112 Moo 8, Tongnean, Khanom, Nakhon Sri Thammarat 80210, Thailand Tel.: +66 (0) 7552 9173, +66 (0) 7552 9179 Fax.: +66 (0) 7552 8358	IPP Electricity Generating and supply business using Natural gas	8,395	10	8,005.02	99.99
EGCO Engineering & Service Company Limited (ESCO)					
Office 13th Floor, EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2955 0933 Site Office 35 Rayong Highway No. 3191 Huay Pong, Mueang Rayong, Rayong 21150, Thailand Tel.: +66 (0) 3868 2611-4 Fax.: +66 (0) 3868 2823	Engineering, operation and maintenance services for power plants and manufacturers	400	10	400	99.99
Dawei Electricity Generating Company Management Pte., Ltd. (DEGCOM)					
(EGCO Plus is the company's 100% direct shareholder) Office EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Overseas Office 60 PayaLebar Road, #08-43, PayaLebar Square, Singapore, 409051	Holding company focusing on investment in electricity generating companies in Myanmar	1.80[/1] *(60,000 USD)*	-	1.80[/1] *(60,000 USD)*	100
New Growth Plus B.V. (NGP)					
(EGCO Plus is the company's 100% direct shareholder) Office EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Overseas Office Gustav Mahlerlaan 1212, 1081 LA, Amsterdam, The Netherlands	Holding company focusing on investment in electricity generating companies in foreign countries	46.409.05[/1] *(1,543,059,337 USD)*	30.08[/1] *(1 USD)*	46.409.05[/1] *(1,543,059,337 USD)*	100

COMPANY	BUSINESS	REGISTERED SHARE CAPITAL (MILLION BAHT)	PAR VALUE (BAHT)	PAID-UP SHARE CAPITAL (MILLION BAHT)	OWNER-SHIP INTEREST (DIRECT+ INDIRECT) (%)
New Growth B.V. (New Growth)					
(EGCO Plus is the company's 100% indirect shareholder) Office EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Overseas Office Gustav Mahlerlaan 1212, 1081 LA, Amsterdam, The Netherlands	Holding company focusing on investment in electricity generating companies in foreign countries	0.93[/1] *(30,894 USD)*	-	0.93[/1] *(30,894 USD)*	100
Quezon Power, Inc. (QPI)					
(EGCO Plus is the company's 100% indirect shareholder) Office EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Philippines Office 14th Floor, Zuellig Building, Makati Avenue corner Paseo de Roxas Makati City 1225, Philippines Netherlands Office Gustav Mahlerlaan 1212, 1081 LA, Amsterdam, The Netherlands	Holding company focusing on investment in electricity generating companies in Philippines	6.67[/1] *(200,000 USD)*	-	6.67[/1] *(200,000 USD)*	100
Quezon Power (Philippines), Limited Co. (Quezon)					
(EGCO Plus is the company's 100% indirect shareholder) Makati Office 14th Floor, Zuellig Building, Makati Avenue corner Paseo de Roxas Makati City 1225, Philippines Overseas Office Barangay, Cagsiay I, Mauban, Quezon, 4330, Philippines	IPP Electricity Generating and supply business using Coal	6,920.89[/1] *(207,641,268 USD)*	-	6,920.89[/1] *(207,641,268 USD)*	100
Pearl Energy Philippines Operating, Inc. (PEPOI)					
(EGCO Plus is the company's 100% indirect shareholder) Office EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Philippines Office Barangay, Cagsiay I, Mauban, Quezon, 4330, Philippines Netherlands Office Gustav Mahlerlaan 1212, 1081 LA, Amsterdam, The Netherlands	Operation and Maintenance of QPL and SBPL Power Plant	6.67[/1] *(200,000 USD)*	-	6.67[/1] *(200,000 USD)*	100

COMPANY	BUSINESS	REGISTERED SHARE CAPITAL (MILLION BAHT)	PAR VALUE (BAHT)	PAID-UP SHARE CAPITAL (MILLION BAHT)	OWNER-SHIP INTEREST (DIRECT+ INDIRECT) (%)
Quezon Management Service Inc. (QMS)					
(EGCO Plus is the company's 100% indirect shareholder) Office EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Philippines Office 14th Floor Zuellig Building, Makati Avenue corner Paseo de Roxas, Makati City 1225, Philippines Netherlands Office Gustav Mahlerlaan 1212, 1081 LA, Amsterdam, The Netherlands	Management service for QPL and SBPL Power Plant	3.41/3 *(5,260,000 PESO)*	-	3.41/3 *(5,260,000 PESO)*	100
Mauban Holdings Company Inc. (Mauban)					
(EGCO Plus is the company's 100% indirect shareholder) Office EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Overseas Office 14th Floor Zuellig Building, Makati Avenue corner Paseo de Roxas, Makati City 1225, Philippines	Holding company focusing on investment in electricity generating companies in Philippines	3,835.10/3 *(5,910,156,900 PESO)*	64.89/3 *(100 PESO)*	3,688.88/3 *(5,684,815,989 .93 PESO)*	100
Evergreen Power Venture B.V. (Evergreen)					
(EGCO Plus is the company's 100% indirect shareholder) Office EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Overseas Office Gustav Mahlerlaan 1212, 1081 LA, Amsterdam, The Netherlands	Holding company focusing on investment in electricity generating companies in Philippines	0.00/1 *(1 USD)*	30.08/1 *(1 USD)*	0.00/1 *(1 USD)*	100
Millennium Energy B.V. (Millennium)					
(EGCO Plus is the company's 100% indirect shareholder) Office EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Overseas Office Gustav Mahlerlaan 1212, 1081 LA, Amsterdam, The Netherlands	Holding company focusing on investment in electricity generating companies in foreign countries	0.00/1 *(1 USD)*	30.08/1 *(0.01 USD)*	0.00/1 *(1 USD)*	100

COMPANY	BUSINESS	REGISTERED SHARE CAPITAL (MILLION BAHT)	PAR VALUE (BAHT)	PAID-UP SHARE CAPITAL (MILLION BAHT)	OWNER-SHIP INTEREST (DIRECT+ INDIRECT) (%)
South Pacific Power Pty Limited (SPPP)					
(EGCO Plus is the company's 100% indirect shareholder) Office EGCO Tower Tel: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Overseas Office One International Towers, Watermans Quay, Barangaroo, New South Wales 2000, Australia Tel.: +61 2 8266 0000 Fax.: +61 2 8286 3128	Holding company focusing on investment in electricity generating companies in Australia	2,663.11/4 *(110,506,987 AUD)*	24.098/4 *(1 AUD)*	2,249.96/4 *(93,366,987 AUD)*	100
Boco Rock Wind Farm Pty Limited (BRWF)					
(EGCO Plus is the company's 100% indirect shareholder) Office EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Overseas Office One International Towers, Watermans Quay, Barangaroo, New South Wales 2000, Australia Tel.: +61 2 8266 0000 Fax.: +61 2 8286 3128	Electricity Generating and Supply Business using Wind Power	2,526.24/4 *(104,832,047 AUD)*	24.098/4 *(1 AUD)*	2,090.45/4 *(86,747,980 AUD)*	100
Gen Plus B.V. (Gen Plus)					
(EGCO Plus is the company's 100% indirect shareholder) Office EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Overseas Office Gustav Mahlerlaan 1212, 1081 LA, Amsterdam, The Netherlands	Holding company focusing on investment in electricity generating companies in foreign countries	0.00/1 *(1 USD)*	30.08/1 *(1 USD)*	0.00/1 *(1 USD)*	100
Phoenix Power B.V. (PP)					
(EGCO Plus is the company's 100% indirect shareholder) Office EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Overseas Office Gustav Mahlerlaan 1212, 1081 LA, Amsterdam, The Netherlands	Holding company focusing on investment in electricity generating companies in foreign countries	0.00/1 *(100 USD)*	30.08/1 *(1 USD)*	0.00/1 *(100 USD)*	100

COMPANY	BUSINESS	REGISTERED SHARE CAPITAL (MILLION BAHT)	PAR VALUE (BAHT)	PAID-UP SHARE CAPITAL (MILLION BAHT)	OWNER-SHIP INTEREST (DIRECT+ INDIRECT) (%)
Greenwing Energy B.V. (Greenwing)					
(EGCO Plus is the company's 100% indirect shareholder) Office EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Overseas Office Gustav Mahlerlaan 1212, 1081 LA, Amsterdam, The Netherlands	Holding company focusing on investment in electricity generating companies in foreign countries	0.00[1] *(100 USD)*	30.08[1] *(1 USD)*	0.00[1] *(100 USD)*	100
Blue Diamond B.V. (Blue Diamond)					
(EGCO Plus is the company's 100% indirect shareholder) Office EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Overseas Office Gustav Mahlerlaan 1212, 1081 LA, Amsterdam, The Netherlands	Holding company focusing on investment in electricity generating companies in foreign countries	0.00[1] *(100 USD)*	30.08[1] *(1 USD)*	0.00[1] *(100 USD)*	100
EGCO Linden I LLC (Linden I)					
(EGCO Plus is the company's 100% direct shareholder) Office 1675 South State Street, Suite B, Dover, Delaware 19901, USA	Holding company focusing on investment in electricity generating companies in foreign countries	-[1] *(- USD)*		-[1] *(- USD)*	100
EGCO Linden II LLC (Linden II)					
(EGCO Plus is the company's 100% indirect shareholder) Office 1675 South State Street, Suite B, Dover, Delaware 19901, USA	Holding company focusing on investment in electricity generating companies in foreign countries	-[1] *(- USD)*		-[1] *(- USD)*	100
Green Diamond Limited (Green Diamond)					
(EGCO Plus is the company's 100% direct shareholder) Office Grand Pavilion, Hibiscus Way, 802 West Bay Road, Grand Cayman, KY1-1205, Cayman Islands	Holding company focusing on investment in electricity generating companies in foreign countries	0.00[1] *(99 USD)*	30.08[1] *(1 USD)*	0.00[1] *(99 USD)*	100

COMPANY	BUSINESS	REGISTERED SHARE CAPITAL (MILLION BAHT)	PAR VALUE (BAHT)	PAID-UP SHARE CAPITAL (MILLION BAHT)	OWNER-SHIP INTEREST (DIRECT+ INDIRECT) (%)
EGCO Cogeneration Company Limited (EGCO Cogen)					
Office 13th Floor, EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Site Office 222 Moo 8, Mabkha, Nikhom Phattana, Rayong 21180, Thailand Tel.: +66 (0) 3863 7051-57 Fax.: +66 (0) 3863 7063	SPP Electricity and steam generating and supply business using Natural gas	1,060	10	1,060	80
EGCO Green Energy Company Limited (EGCO Green)					
Office EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999	Holding company focusing on power business	175	10	175	74
Roi-Et Green Company Limited (RG)					
(EGCO Green is the company's 95% shareholder) Office 13th Floor, EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Site Office 222 Moo 10, Nua-Muang, Mueang Roi Et, Roi Et 45000, Thailand Tel.: +66 (0) 4351 9825-6 Fax.: +66 (0) 4351 9827	SPP Electricity Generating and Supply Business using Biomass as primary fuel	180	10	180	70.30
SPP Two Company Limited (SPP 2)					
Office 10th Floor, EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Site Office 160 Moo 5 Salaeng Phan, Wang Muang, Saraburi 18220, Thailand	VSPP Electricity Generating and Supply Business using Solar Power	196.7	10	196.7	99.99
SPP Three Company Limited (SPP 3)					
Office 10th Floor, EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Site Office 85 Moo 3 Thakhlo, Benchalak, Srisaket 33110, Thailand	VSPP Electricity Generating and Supply Business using Solar Power	197.5	10	197.5	99.99
SPP Four Company Limited (SPP 4)					
Office 10th Floor, EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Site Office 86 Moo 3, Thakhlo, Benchalak, Srisaket 33110, Thailand	VSPP Electricity Generating and Supply Business using Solar Power	148.7	10	148.7	99.99

COMPANY	BUSINESS	REGISTERED SHARE CAPITAL (MILLION BAHT)	PAR VALUE (BAHT)	PAID-UP SHARE CAPITAL (MILLION BAHT)	OWNER-SHIP INTEREST (DIRECT+ INDIRECT) (%)
SPP Five Company Limited (SPP 5)					
Office 10th Floor, EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Site Office 128 Moo 2, Khu Mueang, Mueang Suang, Roi Et 45220, Thailand	VSPP Electricity Generating and Supply Business using Solar Power	198.4	10	198.4	99.99
Theppana Wind Farm Company Limited (TWF)					
Office 10th Floor, EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Site Office 555 Moo 1, Watabaek, Thepsathit, Chaiyaphum 36230, Thailand	VSPP Electricity Generating and Supply Business using Wind Power	157.32	100	145.23	90
Yanhee EGCO Holding Company Limited (Yanhee EGCO)					
Office 10th Floor, EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999	Holding Company investing in electricity generating from Solar Power	10.01	100	10.01	49
Solarco Company Limited (Solarco)					
(Yanhee EGCO is the company's 100% shareholder) Office 10th Floor, EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Site Office Branch 1 317, 318 Moo 1, Bang Ta Then, Song Pee Nong, Suphanburi 72110 Branch 2 155, 156 Moo 17, Bang Luang, Bang Lane, Nakhonpathom 73190 Branch 3 157, 158 Moo 17, Bang Luang, Bang Lane, Nakhonpathom 73190 Branch 4 94, 95 Moo 1, HinMool, Bang Lane, Nakhonpathom 73190 Branch 5 96, 97 Moo 1, HinMool, Bang Lane, Nakhonpathom 73190 Branch 6 98, 99 Moo 1, HinMool, Bang Lane, Nakhonpathom 73190	VSPP Electricity Generating and Supply Business using Solar Power	1,650	100	1,650	49

COMPANY	BUSINESS	REGISTERED SHARE CAPITAL (MILLION BAHT)	PAR VALUE (BAHT)	PAID-UP SHARE CAPITAL (MILLION BAHT)	OWNER-SHIP INTEREST (DIRECT+ INDIRECT) (%)
Chaiyaphum Wind Farm Company Limited (CWF)					
Office 10th Floor, EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Site Office 190 Moo 9, Subyai, Subyai, Chaiyaphum 36130, Thailand	SPP Electricity Generating and Supply Business using Wind Power	1,514	100	1,514	90
Klongluang Utilities Company Limited (KLU)					
Office 11th Floor, EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Site Office 1/9 Moo 3, Klongnueng, Klongluang, Pathumthani 12120, Thailand	SPP Electricity and steam generating and supply business using Natural gas	1,000	10	1,000	99.99
Banpong Utilities Company Limited (BPU)					
Office 11th Floor, EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Site Office 19/300 Moo19, ThaPha, Banpong, Ratchaburi 70110, Thailand	SPP Electricity and steam generating and supply business using Natural gas	2,000	10	2,000	99.99
EGCO Plus Company Limited (EGCO Plus)					
Office EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999	Holding company focusing on investment in electricity generating companies in foreign countries	510	10	510	100
EGCO Pearl Co., Ltd. (EGCO Pearl)					
(EGCO Plus is the company's 100% direct shareholder) Office: EGCO Tower Tel.: +66 (0) 998 5000 Fax.: +66 (0) 998 5999 Overseas Office 4F., No.200, Sec.1, Keelung Rd., Xinyi Dist., Taipei City110, Taiwan	Holding company focusing on investment in electricity generating companies in Taiwan	0.15/5 *(150,000 TWD)*	10.02/5 *(10 TWD)*	0.15/5 *(150,000 TWD)*	100

JOINT VENTURES

COMPANY	BUSINESS	REGISTERED SHARE CAPITAL (MILLION BAHT)	PAR VALUE (BAHT)	PAID-UP SHARE CAPITAL (MILLION BAHT)	OWNER-SHIP INTEREST (DIRECT+ INDIRECT) (%)
Gulf Electric Public Company Limited (GEC)					
Office 8th Floor, M. Thai Tower, All Seasons Place, 87 Wireless Road, Lumpini, Pathumwan, Bangkok 10330, Thailand Tel.: +66 (0) 2654 0155 Fax.: +66 (0) 2654 0156-7	Holding company focusing on IPP and SPP	14,000	10	13,784.35	50
Gulf Energy Company Limited (GEN)					
(GEC is the company's 100% shareholder) Office 8th Floor, M. Thai Tower, All Seasons Place, 87 Wireless Road, Lumpini, Pathumwan, Bangkok 10330, Thailand Tel.: +66 (0) 2654 0155 Fax.: +66 (0) 2654 0156-7	Holding company focusing on IPP	9,782	10	9,782	50
Gulf IPP Company Limited (GIPP)					
(GEC is the company's 100% shareholder) Office 8th Floor, M. Thai Tower, All Seasons Place, 87 Wireless Road, Lumpini, Pathumwan, Bangkok 10330, Thailand Tel.: +66 (0) 2654 0155 Fax.: +66 (0) 2654 0156-7	Holding company focusing on IPP	9,779	10	9,779	50
Gulf Power Generation Company Limited (GPG)					
(GEC is the company's 100% shareholder) Office 8th Floor, M. Thai Tower, All Seasons Place, 87 Wireless Road, Lumpini, Pathumwan, Bangkok 10330, Thailand Tel.: +66 (0) 2654 0155 Fax.: +66 (0) 2654 0156-7 Site Office 64 Moo 2, Ban Pa, Kaeng Khoi, Saraburi 18110, Thailand Tel.: +66 (0) 3626 2403-9 Fax.: +66 (0) 3626 2402	IPP Electricity Generating and supply business using Natural gas	9,607	10	9,607	50

COMPANY	BUSINESS	REGISTERED SHARE CAPITAL (MILLION BAHT)	PAR VALUE (BAHT)	PAID-UP SHARE CAPITAL (MILLION BAHT)	OWNER-SHIP INTEREST (DIRECT+ INDIRECT) (%)
Gulf Cogeneration Company Limited (GCC)					
(GEC is the company's 100% shareholder) Office 8th Floor, M. Thai Tower, All Seasons Place, 87 Wireless Road, Lumpini, Pathumwan, Bangkok 10330, Thailand Tel.: +66 (0) 2654 0155 Fax.: +66 (0) 2654 0156-7	SPP Electricity and steam generating and supply business using Natural gas	850	10	850	50
Nong Khae Cogeneration Company Limited (NKCC)					
(GEC is the company's 100% shareholder) Office 8th Floor, M. Thai Tower, All Seasons Place, 87 Wireless Road, Lumpini, Pathumwan, Bangkok 10330, Thailand Tel.: +66 (0) 2654 0155 Fax.: +66 (0) 2654 0156-7 Site Office 111/11 Moo 7, Nongplamor, Nong Khae, Saraburi 18140, Thailand Tel.: +66 (0) 3637 3676 Fax.: +66 (0) 3637 3691	SPP Electricity and steam generating and supply business using Natural gas	1,241.72	74	1,241.72	50
Samutprakarn Cogeneration Company Limited (SCC)					
(GEC is the company's 100% shareholder) Office 8th Floor, M. Thai Tower, All Seasons Place, 87 Wireless Road, Lumpini, Pathumwan, Bangkok 10330, Thailand Tel.: +66 (0) 2654 0155 Fax.: +66 (0) 2654 0156-7 Site Office 745 Moo 2, Bang Pu Mai, Mueang Samutprakarn, Samutprakarn 10280, Thailand Tel.: +66 (0) 2709 0751 Fax.: +66 (0) 2709 1842	SPP Electricity and steam generating and supply business using Natural gas	981.54	76	981.54	50

COMPANY	BUSINESS	REGISTERED SHARE CAPITAL (MILLION BAHT)	PAR VALUE (BAHT)	PAID-UP SHARE CAPITAL (MILLION BAHT)	OWNER-SHIP INTEREST (DIRECT+ INDIRECT) (%)
Gulf Yala Green Company Limited (GYG)					
(GEC is the company's 100% shareholder) Office 8th Floor, M. Thai Tower, All Seasons Place, 87 Wireless Road, Lumpini, Pathumwan, Bangkok 10330, Thailand Tel.: +66 (0) 2654 0155 Fax.: +66 (0) 2654 0156-7 Site Office 80 Moo 1, Pron, Mueang Yala, Yala 95160, Thailand Tel.+66 (0) 7325 2721 Fax+66 (0) 7325 2722	SPP Electricity Generating and Supply Business using Biomass Power	460	10	460	50
BLCP Power Limited (BLCP)					
Office No. 9, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Rayong 21150, Thailand Tel.: +66 (0) 3892 5100, Fax.: +66 (0) 3892 5199	IPP Electricity Generating and supply business using Coal	12,010	100	12,010	50
Nam Theun 2 Power Company Limited (NTPC)					
Office Unit 9, Tat Luang Road, Nongbone Village, P.O. Box 5862, Vientiane, Lao PDR Tel.: (856-21) 263 900 Fax.: (856-21) 263 901	IPP Electricity Generating and supply business using Hydro power	14,998.95[/1] *450,000,000 (USD)*	3,333.1[/1] *100 (USD)*	12,449.13[/1] *373,500,000 (USD)*	35
G-Power Source Company Limited (GPS)					
Office 10th Floor, EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Site Office Branch 1 11/1, 111, 111/1 Moo 11, Dong Khon, Sankhaburi, Chai Nat 17140 Branch 2 11/1, 11/11 Moo 5 ,Ta Khit, BanphotPhisai, Nakhon Sawan 60180 Branch 3 11, 11/1 Moo 2, Ta Sang, BanphotPhisai, Nakhon Sawan 60180 Branch 4 311, 311/1 Moo 2, Sap Samo Thot, Bueng Sam Phan, Phetchabun 67160	VSPP Electricity Generating and Supply Business using Solar Power	930	100	930	60

COMPANY	BUSINESS	REGISTERED SHARE CAPITAL (MILLION BAHT)	PAR VALUE (BAHT)	PAID-UP SHARE CAPITAL (MILLION BAHT)	OWNER-SHIP INTEREST (DIRECT+ INDIRECT) (%)
Natural Energy Development Company Limited (NED)					
Office 188 Moo 3, Wang Ploeng, Khok Samrong, Lopburi 15120, Thailand Site Office 188 Moo 3, Wang Ploeng, Khok Samrong, Lopburi 15120, Thailand	SPP Electricity Generating and Supply Business using Solar Power	2,304	10	2,283	66.67
PT Manambang Maura Enim (MME)					
(EGCO Plus is the company's 40% indirect shareholder) Office Gedung Puri Matari 2 Lantai 1, Jl. H.R. Rasuna Said Kav. H1-H2, Jakarta Selatan 12920 Site Office Lawang Kidul and Tanjung Enim, Muara Enim City, Sumatera Selatan (South Sumatra) Province 12920, Indonesia	COAL MINING industry, covering coal mining, coal trading and shipping.	1,721.03[/2] *750,000,000 (Thousand Rupiah)*	2,294.7[/2] *1,000 (Thousand Rupiah)*	430.26[/2] *187,500,000 (Thousand Rupiah)*	40
Kalilayan Power Inc. (Kalilayan)					
(EGCO Plus is the company's 49% indirect shareholder) Office EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Overseas Office 62 H. Dela Costa Street, Barangay Daungan Mauban, Quezon Province, Philippines	Holding company focusing on investment in electricity generating companies in Philippines	5.84[/3] *(9,000,000 PESO)*	6.489[/3] *(10 PESO)*	5.84[/3] *(9,000,000 PESO)*	49
San Buenaventura Power Ltd (SBPL)					
(EGCO Plus is the company's 49% indirect shareholder) Office EGCO Tower Tel.: +66 (0) 2998 5000 Fax.: +66 (0) 2998 5999 Overseas Office 62 H. Dela Costa Street, Barangay Daungan Mauban, Quezon Province, Philippines	IPP Electricity Generating and supply business using Coal	8,708.45[/3] *(13,420,331,000 PESO)*	-	8,708.45[/3] *(13,420,331,000 PESO)*	49

COMPANY		BUSINESS	REGISTERED SHARE CAPITAL (MILLION BAHT)	PAR VALUE (BAHT)	PAID-UP SHARE CAPITAL (MILLION BAHT)	OWNER-SHIP INTEREST (DIRECT+ INDIRECT) (%)
Nam Theun 1 Power Company Limited (NT1PC)						
Office	Unit 15, Sithong Road, Pak Thang Village, Sikhottabong District, Vientiane Capital, Lao PDR Tel.: +856 (0)21 550 775 Fax.: +856 (0)21 550 771	IPP Electricity Generating and supply business using Hydro power	13,349.07[/1] *(400,500,000 USD)*	3,333.10[/1] *(100 USD)*	13,349.07[/1] *(400,500,000 USD)*	25
E&E Engineering and Service Company Limited (E&E)						
(ESCO is the company's 40% shareholder) Office	Lao-Thai Friendship Road, Thongkang Village, EDL Training Center Building, Sisattanak District, Vientiane Capital, Lao PDR Tel.: +856 (0)21 316 758-59	Operation and Maintenance of NT1PC, other power plants and industries in the Laps PDR	23.90[/7] *(8,000 Bn. LAK)*	239.04[/7] *(80,000 LAK)*	23.90[/7] *(8,000 Bn. LAK)*	40
Paju Energy Service Company Limited (Paju)						
Office	336-234, Hyuam-ro, Paju-eup, Paju-si, Gyeonggi-do, P.O. Box: 10839, Republic of Korea	IPP Electricity Generating and supply business using Natural gas (Imported LNG)	15,565[/6] *(550 Bn. KRW))*	141.5[/6] *(5,000 KRW)*	15,565[/6] *(550 Bn. KRW))*	49
Thai Pipeline Network Company Limited (TPN)						
Office	349 SJ Infinite I Business Complex 19th Fl. Vibhavadi-Rangsit Rd, Chompon, Chatuchak, Bangkok 10900, Thailand Tel.: +662 408 6230-34 Fax.: +662 408 6235	Oil transportation service business with pipeline transportation system	2,450	100	2,450	44.60

COMPANY	BUSINESS	REGISTERED SHARE CAPITAL (MILLION BAHT)	PAR VALUE (BAHT)	PAID-UP SHARE CAPITAL (MILLION BAHT)	OWNER-SHIP INTEREST (DIRECT+ INDIRECT) (%)
Innopower Company Limited (Innopower)					
Office 53, Moo 2, Charansanitwong Rd., Bang Kruai, Nonthaburi 11130, Thailand Tel.: +66 (0) 2436 4100 E-mail: innopower2021@gmail.com	Holding company focusing on development and investment in innovation, startup, and new wave of energy industry	600	100	150	30
PeerPower Platform Company Limited (Peer Power)					
Office 253 24th Floor, 253 Building, Sukhumvit 21 Rd (Asoke), Khlong Toei Nuea, Watthana, Bangkok 10110, Thailand Tel.: +66 (0) 2026 3514 E-mail: contact@peerpower.co.th	FinTech startup focusing on an online electronic platform for bond and equity crowdfunding	27.95	10	25.40	24.24
Yunlin Holding GmbH (Yunlin)					
Office EGCO Tower Tel.: +66 (0) 2998 5000 Fax: +66 (0) 2998 5999 Taiwan Office 3F., No. 35, Ln. 11, Guangfu N. Rd., Songshan Dist., Taipei City, Taiwan (R.O.C.)	Holding Company investing in electricity generating and supply business using wind power	3.77[/8] (100,000 EUR)	37.7306[/8] (1 EUR)	3.77[/8] (100,000 EUR)	25
Yunneng Win Power Company Limited (Yunnemg)					
(EGCO Plus is the company's 25% indirect shareholder) Office EGCO Tower Tel.: +66 (0) 2998 5000 Fax: +66 (0) 2998 5999 Taiwan Office 3F., No. 35, Ln. 11, Guangfu N. Rd., Songshan Dist., Taipei City, Taiwan (R.O.C.)	Holding Company investing in electricity generating from wind power	20,527.49[/5] (16,983 million TWD)	12.09[/5] (10 TWD)	20,527.49[/5] (16,983 million TWD)	25
Linden Topco LLC (Linden)					
(EGCO Plus is the company's 28% indirect shareholder) Office 1209 Orange Street, Wilmington, DE 19801, USA	IPP Electricity and steam generating and supply business using Natural gas	-	-	-	28

ASSOCIATE

COMPANY	BUSINESS	REGISTERED SHARE CAPITAL (MILLION BAHT)	PAR VALUE (BAHT)	PAID-UP SHARE CAPITAL (MILLION BAHT)	OWNER-SHIP INTEREST (DIRECT+ INDIRECT) (%)
Ares Apex pooling, LLC (Ares Apex)					
(EGCO Plus is the company's 29.86% indirect shareholder) Office 3411 Sliverside Road, Tatnall Building 104 Wilmington, DE 19801, USA	Holding Company investing in electricity generating from Renewable Energy	-/1	-	-/1	29.86
Star Energy Geothermal Pte Ltd (SEG)					
(EGCO Plus is the company's 20% indirect shareholder) Office 120 Robinson Road #08-01, Singapore 068913	Holding company focusing on investment in geothermal power plants in Indonesia	752.74/1 *(22,583,650 USD)*	-	752.74/1 *(22,583,650 USD)*	20
Star Energy Geothermal (Salak-Darajat) B.V. (SEGSD)					
(EGCO Plus is the company's 20.07% indirect shareholder) Office Herikerbergweg 88 1101 CM, Amsterdam, The Netherlands	Holding company focusing on investment in geothermal power plants in Indonesia	0.30/1 *(10,000 USD)*	-	0.30/1 *(10,000 USD)*	20.07
Apex Clean Energy Topco, LLC (Apex Topco)					
(EGCO Plus is the company's 17.46% indirect shareholder) Office 850 New Burton Road, Suite 201, Dover, Delaware 19904, USA	Holding company investing in electricity generating from Renewable Energy	-	-	-	17.46
Xayaburi Power Company Limited (XPCL)					
Office 215 Lanexang Avenue, Ban Siang Yuen Chantaburi, Vientiane, Lao PDR Tel.: (856-21) 223 215, 252 060 Fax.: (856-21) 215 500	IPP Electricity Generating and supply business using Hydro power	26,861	10	26,861	12.5

Note: The Exchange rate as at December 30, 2021

/1	1 USD	=	Baht	33.3310
/2	1,000 Rupiah	=	Baht	2.2947
/3	1 PESO	=	Baht	0.6489
/4	1 AUD	=	Baht	24.0980
/5	1 TWD	=	Baht	1.2087
/6	1 KRW	=	Baht	0.0283
/7	100 LAK	=	Baht	0.2988
/8	1 EUR	=	Baht	37.7306

DISPUTE

In 2020, EGCO and its subsidiaries had no litigation based on the definition of SEC as follows:

- Legal case that has negative impact on EGCO and its subsidiaries with the size larger than 5% of the shareholders' equity as at the end of the accounting year.
- Legal case that has significant impact of which the value cannot be assessed.
- Legal case which is not related to EGCO's normal business.

DETAILS OF SENIOR VICE PRESIDENT - CORPORATE SECRETARY

Ms. Kulkanok Leongsoithong

Age 51

- Corporate Secretary

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) 1,000 shares (0.000190)

EDUCATION

- Master of Arts, University of Kansas, United States of America
- Bachelor of Arts, Chulalongkorn University

TRAINING

2021
- In Land Transport Infrastructure and Investment Opportunity Program, by Mr. Sorapong Paitoonphong, Deputy Permanent Secretary of Ministry of Transport
- ESG Trends in Thailand's Power Business and Ways to Achieve Sustainability Program, PricewaterhouseCoopers ABAS Ltd.
- Transformation to Sustainable Growth Program (Knowledge Sharing among Directors and Management, by Mrs. Wannipa Bhakdibutr, Independent Director)
- Roles of Private Sector's Executives and Officers in Anti-corruption Program, Thai Private Sector Collective Action Against Corruption (CAC)
- Company Secretary Forum: Empowering Board Evaluation by Thai Institute of Director

2020
- Leading Business through Uncertainties, Thai Institute of Director
- Board War Room Series, Thai Institute of Director
- Independent Director Forum (ID Forum), Thai Institute of Director

2019
- Personal Data Protection Act 2020: Process and Practice, Thai Law Training

2018
- CG Workshop, Assist Your BOD in Leading through Disruption with CG Perspective by Deloitte Thailand
- Independent Director Forum (ID Forum): Tough Boardroom Situations-Independent Directors Share Lessons Learned, Thai Institute of Director

2017
- Value Creation and Enhancement for Listed Companies with the New COSO 2017
- Enterprise Risk Management (ERM), Faculty of Commerce and Accountancy, Thammasat University
- EGAT Get Ready Program III, Electricity Generating Authority of Thailand and National Institute of Development Administration

2016
- Board that Make a Difference, Thai Institute of Director
- IT Governance for Directors, Thai Institute of Director

2015
- Corporate Governance for Executives Class 3/2015, Thai Institute of Directors

2014
- The Leadership Grid

2013
- Director Certificate Program, 179/2013, Thai Institute of Directors

2006
- Effective Minutes Taking 4/2006, Thai Institute of Directors

2005
- Corporate Secretary Program 13/2005, Thai Institute of Directors
- Business Law, Thammasat University

2004
- Law and Practice for Company Secretary, Chulalongkorn University

1997
- Mini-MBA, Kasetsart University

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2012–Present Senior Vice President - Corporate Secretary and Corporate Secretary, Electricity Generating Public Company Limited

Responsibility of Corporate Secretary

The Board has appointed Ms. Kulkanok Leongsoithong as the Corporate Secretary with the duty and responsibility as prescribed in the Securities and Exchange Act (No. 4) B.E. 2551. Ms. Kulkanok also serves as the secretary to the Board of Directors and Committees including Investment Committee, Nomination and Remuneration Committee and Corporate Governance and Social Responsibility Committee. The Corporate Secretary has the following functions to assist the Board as well as to coordinate with other parties for subsequent actions under the Board's resolution.

- Provide primary advice pertaining to EGCO's regulations and articles of associations, and monitor to ensure regulatory compliance on a regular basis, and report any significant changes to the directors
- Arrange meetings of the shareholders and the Board in accordance with the laws and regulations, including EGCO's articles of associations and best practices
- Prepare minutes of shareholders' and the Board of Directors' meetings, and follow-up to ensure compliance with resolutions of shareholders' and Board meetings
- Ensure that corporate information disclosure to regulatory agencies is in accordance with the laws and the SEC's and SET's regulations
- Communicate with shareholders of their legitimate rights including EGCO's news;
- Facilitate board's activities including director orientation
- Safeguard EGCO's records such as directors' registration, meeting notices, minutes of meetings, annual reports, notices to shareholders' meetings, shareholders' minutes of meetings and reports on directors' and Management's interest.

In 2021, the Corporate Secretary attended seminars and provided opinions on the hearings hosted by the listed company regulators, Thai Listed Companies Association and the Thai Institute of Directors so that information should be used to enhance the efficiency of the Corporate Secretary and corporate governance tasks e.g. Effective Notice to AGM, Director Nomination Process in Compliance with CG Principles and Putting Circular Economy Principles into Practice etc.

Details of Senior Vice President – Internal Audit

Ms. Jutima Tungcharoendee
Age 48

- Senior Vice President - Internal Audit

DISPUTE None

FAMILY RELATIONSHIP BETWEEN THE MANAGEMENT None

AMOUNT OF SHARES (%) None

EDUCATION
- Bachelor of Business Administration Program in Accounting, Rajamangala Institute of Technology

CERTIFICATE
- Certificate of Professional Internal Auditor of Thailand (CPIAT), The institute of Internal Auditors of Thailand
- Forensic Accounting Certificate (FAC)

WORKING EXPERIENCE DURING THE RECENT 5 YEARS (2017-PRESENT)

2019 - Present	Senior Vice President - Internal Audit, Electricity Generating Public Company Limited
2013 - 2019	Vice President - Internal Audit, Electricity Generating Public Company Limited

GLOSSARY

01 COMPANIES

Apex	Apex Clean Energy Holding Limited Liability Company
Apex TopCo	Apex Clean Energy TopCo Limited Liability Company
Ares Apex	Ares Apex Pooling Limited Liability Company
BLCP	BLCP Power Limited
Blue Diamond	Blue Diamond B.V.
BPU	Banpong Utilities Company Limited
BRWF	Boco Rock Wind Farm Pty Limited
CWF	Chaiyaphum Wind Farm Company Limited
DEGCOM	Dawei Electricity Generating Company Management Pte., Ltd.
DGA	Diamond Generating Asia
DGA HK	Diamond Generating Asia Limited
DGA Thailand	DGA Thailand B.V.
E&E	E&E Engineering and Service Company Limited
EGCO, Company	Electricity Generating Public Company Limited
EGCO Cogen	EGCO Cogeneration Company Limited
EGCO Green	EGCO Green Energy Company Limited
EGCO Plus	EGCO Plus Company Limited
EGCO Pearl	EGCO Pearl Company Limited
ESCO	EGCO Engineering and Service Company Limited
Evergreen	Evergreen Power Venture B.V.
Gangdong	Gangdong Fuel Cell Project
GCC	Gulf Cogeneration Company Limited
GEC	Gulf Electric Public Company Limited
GEN	Gulf Energy Company Limited
Gen Plus	Gen Plus B.V.
GIPP	Gulf IPP Company Limited
GPG	Gulf Power Generation Company Limited
GPS	G-Power Source Company Limited
Green Diamond	Green Diamond Limited
Greenwing	Greenwing Energy B.V.
Group companies, EGCO Group	Electricity Generating Public Company Limited and its subsidiaries and joint venture companies.
Gunkul	Gunkul Engineering Public Company Limited

01 COMPANIES

GYG	Gulf Yala Green Company Limited
Innopower	Innopower Company Limited
Kalilayan	Kalilayan Power Inc.
KEGCO	Khanom Electricity Generating Company Limited
KLU	Klongluang Utilities Company Limited
Linden	Linden TopCo Limited Liability Company
Linden I	EGCO Linden I Limited Liability Company
Linden II	EGCO Linden II Limited Liability Company
Mauban	Mauban Holdings Company Inc.
Millennium	Millennium Energy B.V.
MME	PT Manambang Muara Enim Company Limited
NED	Natural Energy Development Company Limited
New Growth	New Growth B.V.
NGP	New Growth Plus B.V.
NKCC	Nong Khae Cogeneration Company Limited
NT1PC	Nam Theun 1 Power Company Limited
NTPC	Nam Theun 2 Power Company Limited
Paju	Paju Energy Services Company Limited
PEPOI	Pearl Energy Philippines Operating, Inc.
Peer Power	Peer Power Company Limited
PP	Phoenix Power B.V.
QMS	Quezon Management Service Inc.
QPI	Quezon Power, Inc.
Quang Tri 1	Quang Tri 1 Thermal Power Plant Project
Quezon, QPL	Quezon Power (Philippines) Limited Company
RG	Roi-Et Green Company Limited
RYPP	Rayong Power Plant
SBPL	San Buenaventura Power Limited Company
SCC	Samutprakarn Cogeneration Company Limited
Solarco	Solarco Company Limited
SPP2	SPP Two Company Limited
SPP3	SPP Three Company Limited
SPP4	SPP Four Company Limited

01 COMPANIES

SPP5	SPP Five Company Limited
SPPP	South Pacific Power Pty Limited
SPGJV	Star Phoenix Geothermal JV B.V.
SEG	Star Energy Geothermal Pte. Ltd.
SEGHSD	Star Energy Geothermal Holdings (Salak-Darajat) B.V.
SEGSD	Star Energy Geothermal (Salak-Darajat) B.V.
TEPCO	Tokyo Electric Power Company
TEPCO International	Tokyo Electric Power Company International B.V.
TEPDIA	TEPDIA Generating B.V.
TPN	Thai Pipeline Network Company Limited
TWF	Theppana Wind Farm Company Limited
XPCL	Xayaburi Power Company Limited
Yanhee EGCO	Yanhee EGCO Holding Company Limited
Yunlin	Yunlin Holding Gmbh
Yunneng	Yunneng Wind Power Company Limited

02 GOVERNMENT ORGANIZATIONS

EGAT	Electricity Generating Authority of Thailand
EPPO	Energy Policy and Planning Office
ERC	Energy Regulatory Commission
NEPC	National Energy Policy Commission
PEA	Provincial Electricity Authority
PWA	Provincial Waterworks Authority
SEC	Securities and Exchange Commission
SET	Stock Exchange of Thailand

03 OTHER INSTITUTIONS

COSO	Committee of Sponsoring Organizations of the Treadway Commission
IOD	Thai Institute of Directors
JBIC	Japan Bank for International Corporation

04 TECHNICAL TERMS

Associated Company	A company that: An entity that Listed company or its subsidiary has significant influence but not controlling power. Normally, Listed company or its subsidiary hold 20.00% (twenty percent) of more than but not more than 50.00% (fifty percent) of its overall voting stock.
Controlling Person	A shareholder or person who, through its behavior, can significantly influence the policy, management and operations of a listed company. This is irrespective of the source of its authority: through its rights, contracts, or any others. Specially a “controlling person” includes, but it is not limited to, one who: A) Has direct or indirect voting rights exceeding 25.00% (twenty-five percent) of the total company votes. B) Through its behavior, has control over the appointment or removal of company directors. C) Through its behavior, has de facto control or undue influence over policy, controlling those company members authorized to determine management and operational policies. D) Through its behavior, acts or has the power to act in the same manner as the company management. This includes those who hold other positions in the company, but are able to act in the same manner as the company management.
IPP	Independent Power Producer
Major Shareholder	A shareholder, whose shares in a listed company exceeds 10.00% (ten percent) of the listed company’s overall voting shares.
PDP	Power Development Plan
SPP	Small Power Producer
Subsidiary Company	An entity that is controlled by Listed company or its subsidiary
Joint ventures	An entity that Listed company or its subsidiary has contractually agreed sharing of control over an economic activity. The strategic financial and operating decisions relating to the activity require the unanimous consent of the parties sharing control.
VSPP	Very Small Power Producer

GRI CONTENT INDEX

GLOBAL REPORTING INITIATIVE: CORE STANDARDS

GLOBAL REPORTING INITIATIVE		SDG TARGET*	EGCO WEBSITE (URL)/ ONE REPORT 2021 (PAGE)	2021 EXTERNAL ASSURANCE
GRI 102: GENERAL DISCLOSURES (2016)				
102-1	Name of the organization		Corporate Profile History	
102-2	Activities, brands, products, and services		EGCO Group Activities, Products and Services	
102-3	Location of headquarters		EGCO Group Headquarters	
102-4	Location of operations		Investment Map	
102-5	Ownership and legal form		Shareholding Structure	
102-6	Markets served		EGCO Group's Investment	
102-7	Scale of the organization		Value Creation (P. 62-63)	
102-8	Information on employees and other workers	8 (8.5) 10 (10.3)	Performance Summary: Human Resources	
102-9	Supply chain		- Supply Chain Management Overview - Performance Summary: Economic	
102-10	Significant changes to the organization and its supply chain		In 2021, there were no material changes in EGCO's size, structure, ownership or supply chain.	
102-11	Precautionary Principle or approach		Risk and Crisis Management Overview	
102-12	External initiatives		EGCO and Sustainability Development Goals (SDGs)	
102-13	Membership of associations		Performance Summary : Economic	
102-14	Statement from senior decision-maker		Message from Chairman of the Board of Directors and the President (P. 13-14)	
102-16	Values, principles, standards, and norms of behavior	16 (16.3)	EGCO Group Vision and Mission	✓
102-17	Mechanisms for advice and concerns about ethics	16 (16.3)	Business Conduct, Ethics and Compliance Overview	✓
102-18	Governance structure		Corporate Governance Overview	
102-19	Delegating authority		Sustainability Management	
102-20	Executive-level responsibility for economic, environmental, and social topics		Sustainability Management	
102-30	Effectiveness of risk management processes		Risk Management Strategy	

GLOBAL REPORTING INITIATIVE		SDG TARGET*	EGCO WEBSITE (URL)/ ONE REPORT 2021 (PAGE)	2021 EXTERNAL ASSURANCE
102-31	Review of economic, environmental, and social topics		Materiality Assessment (P. 17)	
102-32	Highest governance body's role in sustainability reporting		Sustainability Management	
102-40	List of stakeholder groups		Stakeholder Engagement	
102-41	Collective bargaining agreements	8 (8.8)	Performance Summary: Human Resources	
102-42	Identifying and selecting stakeholders		Stakeholder Engagement	
102-43	Approach to stakeholder engagement		Stakeholder Engagement	
102-44	Key topics and concern raised		Stakeholder Engagement	
102-45	Entities included in the consolidated financial statements		- Performance Summary: Social - Performance Summary: Environment	
102-46	Defining report content and topic boundaries		About this report (P. 16)	
102-47	List of material topics		About this report (P. 17)	
102-48	Restatements of information		About this report (P. 16)	
102-49	Changes in reporting		About this report (P. 16)	
102-50	Reporting period		About this report (P. 16)	
102-51	Date of most recent report		About this report (P. 16)	
102-52	Reporting cycle		About this report (P. 16)	
102-53	Contact point for questions regarding the report		About this report (P. 16)	
102-54	Claims of reporting in accordance with the GRI Standards		About this report (P. 16)	
102-55	GRI content index		GRI and SDGs Content Index (P. 349-355)	
102-56	External assurance		Assurance statement (P. 356-357)	
GRI 103: MANAGEMENT APPROACH (2016)				
103-1	Explanation of the material topic and its boundary		EGCO Sustainability	
103-2	The management approach and its boundary		EGCO Sustainability	
103-3	Evaluation of the management approach		EGCO Sustainability	
GRI 201: ECONOMIC PERFORMANCE (2016)				
201-1	Direct economic value generated and distributed	8 (8.1, 8.2) 9 (9.1, 9.4, 9.5)	- Performance Summary: Economic - Performance Summary: Social	

GLOBAL REPORTING INITIATIVE		SDG TARGET*	EGCO WEBSITE (URL)/ ONE REPORT 2021 (PAGE)	2021 EXTERNAL ASSURANCE
GRI 205: ANTI-CORRUPTION (2016)				
205-2	Communication and training about anti-corruption policies and procedures	16 (16.5)	Performance Summary: Governance	
205-3	Confirmed incidents of corruption and actions taken	16 (16.5)	Performance Summary: Governance	
GRI 206: ANTI-COMPETITIVE BEHAVIOR (2016)				
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	16 (16.3)	Performance Summary: Governance	
GRI 302: ENERGY (2016)				
302-1	Energy consumption within the organization	7 (7.2, 7.3) 8 (8.4) 12 (12.2) 13 (13.1)	Performance Summary: Environment	✓
302-3	Energy Intensity	7 (7.3) 8 (8.4) 12 (12.2) 13 (13.1)	Performance Summary: Environment	✓
302-4	Reduction of energy consumption	7 (7.3) 8 (8.4) 12 (12.2) 13 (13.1)	Performance Summary: Environment	✓
GRI 303: WATER AND EFFLUENTS (2018)				
303-1	Integrations with water as a shared resource	6 (6.3, 6.4, 6.A, 6.B) 12 (12.4)	Sustainable Water	
303-2	Management of water discharge-related impacts	6 (6.3)	Sustainable Water	
303-3	Water withdrawal	6 (6.4)	Performance Summary: Environment	✓
303-4	Water discharge	6 (6.3)	Performance Summary: Environment	✓
303-5	Water consumption	6 (6.4)	Performance Summary: Environment	✓
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	6 (6.6) 14 (14.2) 15 (15.1, 15.5)	Biodiversity	
304-2	Significant impacts of activities, products, and services on biodiversity	6 (6.6) 14 (14.2) 15 (15.1, 15.5)	Biodiversity	

GLOBAL REPORTING INITIATIVE		SDG TARGET*	EGCO WEBSITE (URL)/ ONE REPORT 2021 (PAGE)	2021 EXTERNAL ASSURANCE
304-3	Habitats protected or restored	6 (6.6) 14 (14.2) 15 (15.1, 15.5)	Biodiversity	
GRI 305: EMISSIONS (2016)				
305-1	Direct (Scope 1) GHG emissions	3 (3.9) 12 (12.4) 13 (13.1) 14 (14.3) 15 (15.2)	Performance Summary: Environment	✓
305-2	indirect (Scope 2) GHG emissions	3 (3.9) 12 (12.4) 13 (13.1) 14 (14.3) 15 (15.2)	Performance Summary: Environment	✓
305-4	GHG emissions intensity	13 (13.1) 14 (14.3) 15 (15.2)	Performance Summary: Environment	✓
305-5	Reduction of GHG emissions	13 (13.1) 14 (14.3) 15 (15.2)	Performance Summary: Environment	✓
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	3 (3.9) 12 (12.4) 14 (14.3) 15 (15.2)	Performance Summary: Environment	✓
GRI 306: EFFLUENTS AND WASTE (2016)				
306-3	Significant spills		Performance Summary: Environment	✓
GRI 306: WASTE (2020)				
306-1	Waste generation and significant waste-related impacts	3 (3.9) 6 (6.3) 11 (11.6) 12 (12.4, 12.5)	Waste Management	
306-2	Management of significant waste-related impacts	3 (3.9) 6 (6.3) 11 (11.6) 12 (12.4, 12.5)	Waste Management	
306-3	Waste generated	3 (3.9) 11 (11.6) 12 (12.4, 12.5)	Performance Summary: Environment	✓
306-4	Waste diverted from disposal	3 (3.9) 11 (11.6) 12 (12.4, 12.5)	Performance Summary: Environment	✓
306-5	Waste directed to disposal	3 (3.9) 11 (11.6) 12 (12.4, 12.5)	Performance Summary: Environment	✓

GLOBAL REPORTING INITIATIVE		SDG TARGET*	EGCO WEBSITE (URL)/ ONE REPORT 2021 (PAGE)	2021 EXTERNAL ASSURANCE
GRI 307: ENVIRONMENTAL COMPLIANCE (2016)				
307-1	Non-compliance with environmental laws and regulations	16 (16.3)	Performance Summary: Environment	
GRI 308: SUPPLIER ENVIRONMENTAL ASSESSMENT (2016)				
308-1	New suppliers that were screened using environmental criteria		Performance Summary: Economic	
308-2	Negative environmental impacts in the supply chain and actions taken		Performance Summary: Economic	
GRI 401: EMPLOYMENT (2016)				
401-1	New employee hires and employee turnover	5 (5.1) 8 (8.5, 8.6) 10 (10.3)	Performance Summary: Human Resources	
401-2	Benefit provided to full-time employees that are not provided to temporary or part-time employees	3 (3.2) 5 (5.4) 8 (8.5)	Employee Quality of Life and Well-being	
401-3	Parental leave	5 (5.1, 5.4) 8 (8.5)	Performance Summary: Human Resources	
GRI 403: OCCUPATIONAL HEALTH AND SAFETY (2018)				
403-1	Occupational health and safety management systems	8 (8.8)	Risk Assessment on Occupational Health & Safety	
403-2	Hazard identification, risk assessments, and incident investigation	8 (8.8)	Risk Assessment on Occupational Health & Safety	
403-3	Occupational health services	8 (8.8)	Occupational Health and Safety Committee	
403-4	Worker participation, consultation, and communication on occupational health and safety	8 (8.8) 16 (16.7)	Occupational Health and Safety Committee	
403-5	Worker training on occupational health and safety	8 (8.8)	Risk Assessment on Occupational Health & Safety	
403-6	Promotion of worker health	3 (3.3, 3.5, 3.7, 3.8)	Promotion of Workers' Health and Well-being	
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	8 (8.8)	Risk Assessment on Occupational Health & Safety	
403-8	Workers covered by an occupational health and safety management system	8 (8.8)	Performance Summary: Social	
403-9	Work-related injuries	3 (3.6, 3.9) 8 (8.8) 16 (16.1)	Performance Summary: Social	✓

GLOBAL REPORTING INITIATIVE		SDG TARGET*	EGCO WEBSITE (URL)/ ONE REPORT 2021 (PAGE)	2021 EXTERNAL ASSURANCE
GRI 404: TRAINING AND EDUCATION (2016)				
404-1	Average hours of training per year per employee	4 (4.3, 4.4, 4.5) 5 (5.1) 8 (8.2, 8.5) 10 (10.3)	Performance Summary: Human Resources	
404-2	Programs for upgrading employee skills and transition assistance programs	8 (8.2, 8.5)	Human Capital Development	
404-3	Percentage of employees receiving regular performance and career development reviews	5 (5.1) 8 (8.5) 10 (10.3)	Performance Summary: Human Resources	
GRI 405: DIVERSITY AND EQUAL OPPORTUNITY (2016)				
405-1	Diversity of governance bodies and employees	5 (5.1, 5.5) 8 (8.5)	- Performance Summary: Governance - Performance Summary: Human Resources	
405-2	Ratio of basic salary and remuneration of women to men	5 (5.1) 8 (8.5) 10 (10.3)	Performance Summary: Human Resources	✓
GRI 406: NON-DISCRIMINATION (2016)				
406-1	Incidents of discrimination and corrective actions taken	5 (5.1) 8 (8.8)	- Performance Summary: Social - Performance Summary: Human Resources	
GRI 410: SECURITY PRACTICES (2016)				
410-1	Security personnel trained in human rights policies or procedures	16 (16.1)	Performance Summary: Social	
GRI 411: RIGHTS OF INDIGENIOUS PEOPLES (2016)				
411-1	Incidents of violations involving rights of indigenous peoples	2 (2.3)	Performance Summary: Social	
GRI 412: HUMAN RIGHTS ASSESSMENT (2016)				
412-1	Operations that have been subject to human rights reviews or impact assessments		Performance Summary: Social	
412-2	Employee training on human rights policies or procedures		Performance Summary: Social	
GRI 413: LOCAL COMMUNITIES (2016)				
413-1	Operations with local community engagement, impact assessments, and development program		Performance Summary: Social	

GLOBAL REPORTING INITIATIVE		SDG TARGET*	EGCO WEBSITE (URL)/ ONE REPORT 2021 (PAGE)	2021 EXTERNAL ASSURANCE
GRI 414: SUPPLIER SOCIAL ASSESSMENT (2016)				
414-1	New Suppliers that were screened using social criteria	5 (5.2) 8 (8.8) 16 (16.1)	Performance Summary: Economic	
414-2	Negative social impacts in the supply chain and actions taken	5 (5.2) 8 (8.8) 16 (16.1)	Performance Summary: Economic	
GRI 415: PUBLIC POLICY (2016)				
415-1	Political contributions	16 (16.5)	Performance Summary: Economic	
GRI 418: CUSTOMER PRIVACY (2016)				
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	16 (16.3, 16.10)	Performance Summary: Economic	✓
GRI 419: SOCIOECONOMIC COMPLIANCE (2016)				
419-1	Non-compliance with laws and regulations in the social and economic area	16 (16.3)	Performance Summary: Social	
GRI G4: SECTOR DISCLOSURE: ELECTRIC UTILITIES				
G4-PR5	Customer satisfaction survey results reported for organization		Performance Summary: Economic	
G4-EU1	Installed capacity, broken down by primary energy source and by regulatory regime	7 (7.2)	Performance Summary: Economic	
G4-EU11	Average generation efficiency of thermal plants by energy source and by regulatory regime	7 (7.3) 8 (8.4) 12 (12.2) 13 (13.1) 14 (14.3)	Performance Summary: Economic	
G4-EU30	Average plant availability factor by energy source and by regulatory regime	1 (1.4) 7 (7.1)	Performance Summary: Economic	
SASB IFEU-550a. 1	Number of incident of non-compliance with physical and/or cybersecurity standards or regulations		Performance Summary: Economic	

* Blue text means EGCO's SDG Main Goals (SDG 3, 7, 8, 9, 13)
Green text means EGCO's SDG Supporting Goals (SDG 4, 5, 10, 12)

LRQA Independent Assurance Statement

Relating to Electricity Generating Public Company Limited's Environmental and Social Disclosures within the One Report for the calendar year 2021

This Assurance Statement has been prepared for Electricity Generating Public Company Limited in accordance with our contract but is intended for the readers of this Report.

Terms of engagement

LRQA was commissioned by Electricity Generating Public Company Limited (EGCO) to provide independent assurance on the environmental and social disclosures within its One Report 2021 ("the Report") against the assurance criteria below to a limited level of assurance and at the materiality of the professional judgement of the verifier using LRQA's verification procedure. LRQA's verification procedure is based on current best practice, is in accordance with ISAE 3000 and ISAE 3410 and uses the following principles of - inclusivity, materiality, responsiveness and reliability of performance data.

Our assurance engagement covered twenty-five of EGCO's operations and activities in Thailand, Australia, South Korea, Laos, Indonesia and Philippines and three subsidiary companies in Thailand and Philippines but excluded the data and information of its suppliers, contractors and any third parties mentioned in the Report. Specifically, our assurance engagement, covered the following requirements:

- Reviewing whether the selected environmental and social disclosures within the Report have taken account of the GRI Sustainability Reporting Standards
- Evaluating the reliability of data and information, based on the latest version of the GRI standard applicable to the selected environmental and social disclosures listed below:
  - Environmental: GRI disclosure 302-1, 302-3, 303-1, 303-3, 303-4,303-5, 305-1, 305-2, 305-3, 305-7, 306-3, 306-4, 306-5,306-3 (2016),
  - Social: GRI disclosure: 403-9, 405-2, 418-1

    Note: ESCO, QMS, PEPOI and EGCO head office was covered only for disclosure safety performance 403-9 and disclosure 418-1. Substantiated complaints concerning breaches of customer privacy and losses of customer data were covered only at KLU, RG, BPU, KEGCO, ESCO and disclosure 405-2 Ratio of basic salary and remuneration of women to men was covered only at EGCO head office. PAJU has covered only for GRI 302-1, 302-3,305-1 and 403-9

LRQA's responsibility is only to EGCO. LRQA disclaims any liability or responsibility to others as explained in the end footnote. EGCO's responsibility is for collecting, aggregating, analysing and presenting all the data and information within the report and for maintaining effective internal controls over the systems from which the report is derived. Ultimately, the report has been approved by, and remains the responsibility of EGCO.

LRQA's Opinion

Based on LRQA's approach nothing has come to our attention that would cause us to believe that EGCO has not, in all material respects:

- Met the requirements above
- Disclosed reliable performance data and information for the selected environmental and social disclosures as no errors or omissions were detected
- Covered all the issues that are important to the stakeholders and readers of this Report.

The opinion expressed is formed on the basis of a limited level of assurance and at the materiality of the professional judgement of the verifier.

Note: The extent of evidence-gathering for a limited assurance engagement is less than for a reasonable assurance engagement. Limited assurance engagements focus on aggregated data rather than physically checking source data at sites. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

LRQA's approach

LRQA's assurance engagements are carried out in accordance with our verification procedure. The following tasks were undertaken as part of the evidence gathering process for this assurance engagement:

- Assessing EGCO's approach to stakeholder engagement to confirm that issues raised by stakeholders were captured correctly. We did this through reviewing documents and associated records.

- Reviewing EGCO's process for identifying and determining material issues to confirm that the right issues were included in their report. We did this by benchmarking reports written by EGCO and its peers to ensure that sector specific issues were included for comparability. We also tested the filters used in determining material issues to evaluate whether EGCO makes informed business decisions that may create opportunities that contribute towards sustainable development.
- Auditing EGCO's data management systems to confirm that there were no significant errors, omissions or mis-statements in the report. We did this by reviewing the effectiveness of data handling procedures, instructions and systems, including those for internal verification. We also spoke with those key people responsible for compiling the data and drafting the Report.

Observations

Further observations and findings, made during the assurance engagement, are:

- Stakeholder inclusivity: EGCO continues to maintain its established stakeholder engagement processes, covering all key stakeholders who impact on EGCO. However, we believe that the engagement process should not only cover those stakeholder groups in Thailand but also embrace key stakeholders overseas especially where power plants are located. This we believe will provide EGCO with additional and different perspectives that will enable EGCO to develop a more comprehensive and wider reaching sustainability strategy.
- Materiality: Assessment of materiality is part of EGCO's sustainability framework, including sustainability reporting, and its implementation aligns with other business practices in EGCO Group. However, we note that EGCO intends to alter their methodology of assessing materiality in order to gather more data in the next reporting cycle i.e., to obtain stakeholders' needs and expectations directly rather than from their proxy.
- Responsiveness: EGCO has implemented policy and procedures to address stakeholders' needs and expectations. For example: Climate Change Strategy – EGCO has continued to increase the contracted capacity by adding more renewal power plants over time. However, we believe in the next reporting cycle that EGCO should also disclosure its long-term target for energy mix within its portfolio.
- Reliability: at the aggregated level, EGCO has established and maintained a data collection system for the Group. However, we believe that EGCO should consider establishing a single data collection system, that is applied at each facility, in order to improve the consistency of how data is collected, quantified and calculated.

LRQA's standards, competence and independence

LRQA implements and maintains a comprehensive management system that meets accreditation requirements for ISO 14065 Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition and ISO/IEC 17021 Conformity assessment – Requirements for bodies providing audit and certification of management systems that are at least as demanding as the requirements of the International Standard on Quality Control 1 and comply with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants.

LRQA ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent.

The verification is the only work undertaken by LRQA for EGCO.

Dated: 6 March 2022

Nit Tanasuthiseri
LRQA Lead Verifier

On behalf of LRQA Ltd.
LRQA (Thailand) Limited
22nd Floor, Sirinrat Building, 3388/78 Rama IV Road
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LR reference: BGK47542861058018

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