



Annual Report 2018
Electricity Generating Public Company Limited

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PURSUIT OF
PERFORMANCE
EXCELLENCE

PURSUIT OF EXCELLENCE

PURSUIT OF
COMMUNITY
TRUSTWORTHINESS

PURSUIT OF
PEOPLE
EXCELLENCE

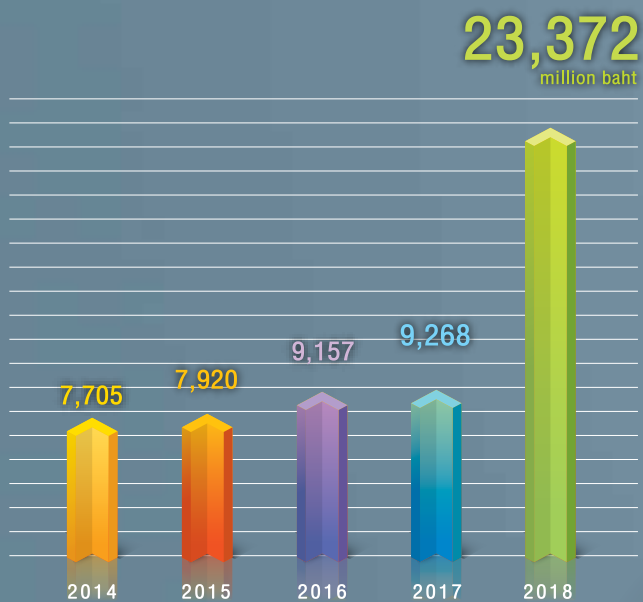
EGCO Group is committed to operating sustainable business based on the principles of good corporate governance to create growth and increase value to its shareholders while caring for the community, society and environment and enhancing knowledge and expertise of employees to drive the organization towards achieving excellence in all dimensions continually.



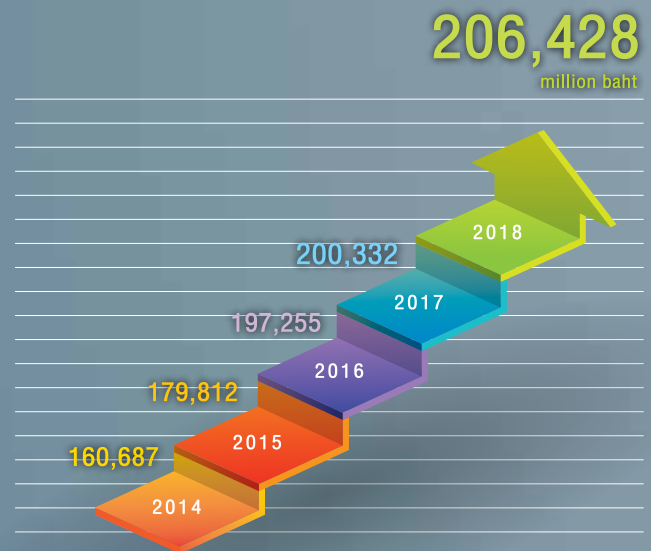
PURSUIT OF PERFORMANCE EXCELLENCE

EGCO Group is committed to operating sustainable business by considering a balance of economic, social and environmental dimensions based on the principles of good corporate governance. In 2018, EGCO Group delivered robust operating results.

Operating profits grew consistently



Assets increased consistently





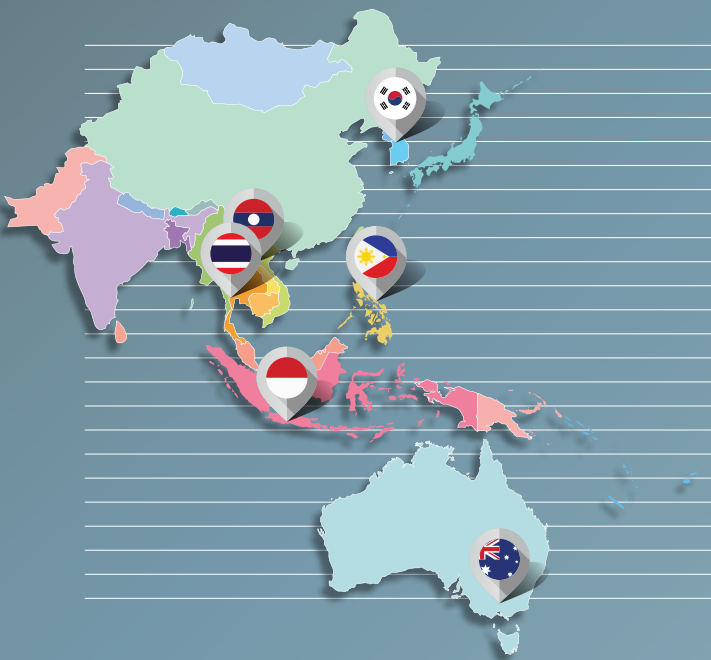
PURSUIT OF PERFORMANCE EXCELLENCE

In 2018, EGCO Group implemented 3 strategies:

- Manage commercially operated power plants at maximum efficiency
- Manage the projects under construction to be completed on schedule
- Expand investments in the Asia Pacific region continuously

Expand investments in Asia Pacific continuously

49% investment in Paju Energy Service Co., Ltd., South Korea



Manage projects under construction efficiently



160 MWe Xayaburi
in Lao PDR
Completed construction

97.45%

Scheduled commercial
operation in Q4/2019



222.95 MWe San Buenaventura in the Philippines
Completed construction

97.38%

Scheduled commercial
operation in Q4/2019



161 MWe Nam Theun 1
in Lao PDR
Completed construction

46.79%

Scheduled commercial
operation in Q2/2022

*Data as of December 31, 2018

Awards and Recognition from Domestic and International Institutes



THSI 2018 for the 4th consecutive year

EGCO Group received Thailand Sustainability Investment (THSI) 2018 or passed the assessment criteria to be the “sustainable stock” or the listed company with outstanding performance on environmental, social and governance for the 4th consecutive year.

Full 100 score for Annual General Meeting
of Shareholders Quality Assessment

Excellent score of 95 for Corporate
Governance Report of Thai Listed Company
Assessment (CGR)

Khanom Power Plant was certified as
a member of Thailand's Private Sector Collective
Action Coalition Against Corruption (CAC)

SET THSI INDEX

Selected as 1 of 45 stocks with sustainable
operation in SET THSI Index

Forbes Global 2000

In 2018, EGCO Group was assessed and
ranked by Forbes Magazine as

1 of 2000

WORLD'S LARGEST PUBLIC COMPANIES

based on sales, profit, assets and market value

1 of 250

BEST REGARDED COMPANIES

based on trustworthiness, social responsibility,
management and product and service efficiency

1 of 250

GROWTH CHAMPIONS

with the highest compound annual growth rate in
revenues between 2014 and 2017

PURSUIT OF COMMUNITY TRUSTWORTHINESS

EGCO Group is committed to operating power business while having concerns about community, social and environmental impacts. Its goals include the development of environmental management and harmonious living with the community as well as the building of confidence, acceptance and trust of community and society everywhere the company operates by participating in the community and social development covering 3 major areas:

Promote and develop
“**community wellbeing**”
in the areas
surrounding
power plants

Promote learning
in energy and
environmental
conservation
among “**youth**”

Conserve natural
resources
“**watershed forest**”



Khanom Learning Center

EGCO Group has renovated the decommissioned Khanom Power Plant Unit 1 in Nakhon Sri Thammarat province, which is a special power plant built on a large vessel completely assembled in Japan and the first and only in Thailand whose commercial operation contract expired, as an energy and environment learning center for youth, community and interested persons. It will open to visitors in 2019.



Youth Development Project

It is a 5-year project (2017-2021) aiming at improving capabilities among youth surrounding EGCO Group power plants by focusing on the use of its key competency in electricity generation, in terms of both locations of power plants and knowledge and fostering collaboration with local communities to jointly develop youth through 3 major activities:

Health: promote health among youth

Head & Hand: improve energy and environmental skills

Heart: raise awareness of energy and environmental conservation





PURSUIT OF PEOPLE EXCELLENCE

In 2018, EGCO Group was rated by Forbes Global 2000 as
WORLD'S BEST EMPLOYERS

1 of 500 best employers in the world
based on basic information on employee awareness



Focus on enhancing competitiveness among employees to accommodate both domestic and international business expansion



Improve capacity of employees at all levels in preparedness for their performance to deliver excellent results and respond to business goals and pursue career advancement constantly



Increase employee commitment and retain employees continually



Vision

TO BE A MAJOR SUSTAINABLE THAI POWER COMPANY
DOING BUSINESS IN THAILAND AND THE ASIA PACIFIC REGION,
WITH FULL COMMITMENT
TO ENVIRONMENT PROTECTION
AND SOCIAL DEVELOPMENT SUPPORT

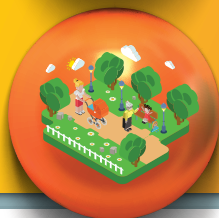
Mission



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



To offer reliable power supply



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



Message from the Chairman

2018 was a year of challenges. While domestic power industry growth remained limited, demand for electricity in the three electricity authority's systems was lower due to uncertain weather and season change. At the beginning of the year, unexpected cold weather and longer rain had affected power consumption. Users' power consumption behavior has also been changed because more users become Independent Power Supplies (IPS) while there is an increase in the number of Small Power Producers (SPP). Power reserve was so high that the government had to slow down purchase of renewable electricity. Against the backdrop of such situations, the power business has to cope with the change and be prepared for any situation.

With consideration to the limited domestic opportunity, EGCO has focused our investment in overseas markets and expanding from ASEAN to the Asia-Pacific, our current targeted area. The power demand trend in this region continues to grow, with higher investment opportunity in both fossil fuel power plants, using natural gas and coal, for example, and renewable power plants, using solar power, wind power and geothermal power, etc. as resources. However, such opportunity also comes with higher competition.

Considering technology disruption and its impact, EGCO has prepared ourselves by closely monitoring and analyzing changing technologies in the power business, studying the opportunity in new and related businesses or leveraging on existing business and expertise, and promoting employees' creativity and innovation creation. This move will enable EGCO to succeed during this transition time.

Amidst such challenges, in the past year, EGCO has successfully invested 49 percent in Paju Energy Services Co., Ltd., the owner and operator of **Paju Combined Cycle Power Plant** in Gyeonggi Province, **South Korea**, through the partnership with SK E&S Co., Ltd., a specialist in LNG business. This partnership not only allowed EGCO to expand our business to a new market in the Asia-Pacific, but also opened the door for the Company to enter into LNG business, a highly potential business in Thailand and other countries in this region in the future.

In addition to creating continuous growth for the shareholders, EGCO has always focused on operating our business under good corporate governance principle, transparency, and social responsibility. EGCO is a power producer in Thailand and across the Asia-Pacific, relying heavily on natural resources in our power generation activity. We realize that our responsibility towards community, society and the environment is very important. We have been involved in **improving quality of life of the people living in communities surrounding our power plants everywhere we operate.**

We have continuously promoted youth's education and learning on energy and the environment by introducing the Youth Development Project and Khanom Power Plant Learning Center. We have participated in preserving and rehabilitating the country's major watershed forests through **Thai Conservation of Forest Foundation**, a charitable organization established and supported by EGCO, throughout the past over 10 years.

Our contribution and dedication to the society and business have earned EGCO recognition from organizations in and outside Thailand. We received **Drive Award 2018 - Management** jointly held by the MBA Student Alumni Association and the MBA Degree Program under the Faculty of Commerce and Accounting, Chulalongkorn University. We have been granted **Thailand Sustainability Investment (THIS) 2018** for the fourth consecutive year by the Stock Exchange of Thailand, which is a clear proof of our outstanding environmental, social and governance (ESG) and strong performance. We have been awarded the **Sustainability Report Award 2018 Recognition** from the Thai Listed Companies Association in cooperation with the Securities and Exchange Commission and Thaipat Institute. Our stock has been included in the **ESG 100 Resources Category** for the fourth consecutive year also from Thaipat Institute. In addition, EGCO was one out of the 2,000 largest listed companies in the world in **Forbes Global 2000** in 2018. At the **Corporate Governance Rating (CGR 2018)**, EGCO has also been rated the Excellent with high score of 95.

On behalf of the directors, management and all employees, I wish to extend my sincerest appreciation to our shareholders, joint investors, partners, customers, communities and all supporters for your trust and support for EGCO. Please rest assured that EGCO will continue to operate our business that will support sustainability in the long run and mutual growth of the Company, shareholders and all stakeholders.



Mr. Witoon Kulcharoenwirat
Chairman of the Board of Directors



Message from the President

EGCO has a strong commitment to enhancing our business excellence in all areas and with consideration to the economic, environmental and social development balance. Under this direction, the Company has successfully maintained our growth with better than expected performance in 2018. Our total assets totaled 206,428 million baht, an increase of 6,096 million baht from 2017. Net profit was 21,073 million baht, an increase of 9,255 million baht or 78%. For the operating profit, the Company posted 23,372 million baht, an increase of 14,104 million baht or 152% compared to the previous year. Major factors contributing to high profitability are the gains on sale of investment amounted 14,177 million baht. The Company, however, recorded the normal operating profit of 9,195 million baht, a decrease of 73 million baht.

At the end of 2018, EGCO runs 26 operating power plants with total equity contracted capacity of 4,260 MW in 5 countries across the Asia Pacific region. There are 3 projects under construction with total equity contracted capacity of 544 MW which will gradually start commercial operations in 2019 and 2022.

2018 Operating Performance

Enhance National power security

One of our main targets is to maintain availability payment within the Group in order to generate sufficient electricity supply in all countries we operate by 2018. Most of our power plants in Thailand and overseas generally have higher availability payment than specified in the power purchase agreement and annual target. This not only positively support the company's operating performance, but also enhance national power security.

Support Anti-corruption

In terms of good corporate governance and anti-corruption commitment, EGCO has been a member of Thailand's Private Sector Collective Action against Corruption (CAC) and has encouraged our subsidiaries to join the network. Khanom Electricity Generating Co., Ltd., our subsidiary, has already joined CAC. In addition, EGCO hosted the Supplier Day to communicate with our contractors and suppliers on EGCO's commitment to transparent and fair procurement process, and to supporting joint business operations, all based on good corporate governance principles which have always been our focus.

Preserve and rehabilitate the environment

It is our goal to increase renewable power to 30% of the total power generated by 2026. In 2018, EGCO's 16 renewable energy power plants generating electricity to the system, representing total equity contracted capacity of 873 MW, accounted to 20.49% of the Company's total equity contracted capacity.

In addition, the Company has been actively involved in the preservation and rehabilitation of watershed forests nationwide through Thai Conservation of Forest Foundation. Over 70,000 rai of watershed forests have already been preserved while another 1,300 rai in Chiang Mai and Chaiyaphum Provinces are underway and scheduled for completion in 2021.

Nurture the people for the future

To prepare our company for sustainable growth amidst rapid changes, EGCO introduced the "EGCO Group Innovation Team Challenge" in 2018. The concept and innovation competition encouraged our employees to apply their knowledge, capability and creativity in conceiving new ideas and innovations that will drive the organization towards sustainable growth. Trainings were held to prepare employees and executives well for the work in this technological disruption era.

Improve quality of life in community

Believing in harmony living, EGCO has been actively engaged in quality of life improvement activities held in communities surrounding EGCO's power plants. Such activities cover six areas: local employment, children and youth development, skill development to support locals' career advancement, health promotion, infrastructure and utility development, and natural resource and environment development. Over 90% of local contractors and suppliers were hired. The Company also implemented 89 community and social development projects in the total amount of 312 million baht. More importantly, the company has raised 366 million baht for the Power Plant Development Fund.

Over the past 2 decades, EGCO has been strongly committed to operating and managing our organization towards excellence and sustainability. We have received full support from all stakeholders. On behalf of EGCO's management and employees, I wish to express my deepest appreciation for your trust, confidence and support, which inspires us to continue to grow EGCO into the future.



Mr. Jakgrich Pibulpairoj
President

2018 Highlights

Award and Recognition

EGCO

- 2018 AGM, full score of 100, evaluated by Thai Investors Association.
- Being rated “Excellent” in Corporate Governance Rating (CGR) with the score of 95 out of 100 by the Thai Institute of Directors (IOD).
- Thailand Sustainability Investment Award (THSI) 2018 or sustainable stock for the year 2018 for the 4th consecutive as EGCO is a listed company with a market capitalization of over 100,000 million baht that operates sustainably with regard to the Environmental, Social and Governance (ESG).
- 1 of 45 stocks listed in the sustainability index “SET THSI” as a listed company that operates sustainably by the Stock Exchange of Thailand.
- Assessment from the Thaipat Institute to be in the ESG 100 Securities category resources continued for the 4th year as a listed company with outstanding performance in the Environmental, Social and Governance (ESG).
- Sustainability Report Award 2018 “Recognition” hosted by Thai Listed Companies Association in cooperation with the Securities and Exchange Commission as well as Thaipat Institute.

Khanom Electricity Generating Company Limited (KEGCO)

- Outstanding Industry Award for Quality Management in the year 2018, by the Ministry of Industry.
- National Safety Award 2018 by Department of Labour Protection and Welfare, by Ministry of Labour.
- Corporate Governance Standard Award of the year 2018 by Department of Business Development, Ministry of Commerce
- Receiving membership certification from Collective Action Coalition Against Corruption (CAC).

Roi-Et Green Company Limited (RG)

- National Safety Health and Environment Award for the 9th consecutive year, by Ministry of Labour.
- Award for Boiler Efficiency in the Industrial Sector, the prototype factory group A by Ministry of Industry.

EGCO Engineering and Service Company Limited (ESCO)

- Excellent performance evaluation from the “Turnaround 5 GSP # 3” of the year 2018 in QSHE Day from Rayong Gas Separation Plant, PTT Public Company Limited.

Activities for Shareholders and Investors

A. Shareholders' Meeting

April 19, 2018	2018 Annual General Shareholders' Meeting
April 27, 2018	2017 Final Dividend Payment at 3.50 baht per share
September 14, 2018	2018 Interim Dividend Payment at 3.50 baht per share and Special Dividend Payment at 2.50 baht per share

B. Opportunity Day/Analyst Meeting

March 5, 2018	Opportunity Day/Analyst Meeting No. 1/2018 to announce 2017 annual performance
May 30, 2018	Opportunity Day/Analyst Meeting No. 2/2018 to announce 2018's first quarter performance
August 23, 2018	Opportunity Day/Analyst Meeting No. 3/2018 to announce 2018's second quarter performance
November 28, 2018	Opportunity Day/Analyst Meeting No. 4/2018 to announce 2018's third quarter performance

C. Investor Meeting

August 29-31, 2018	Thailand Focus 2018 in Bangkok by SET
November 15-18, 2018	SET in the City 2018 in Bangkok by SET

D. Knowledge Sharing and Site Visit

February 19, 2018	Newsletter to Shareholders & Investors
April 20, 2018	Newsletter to Shareholders & Investors
June 20-21, 2018	Shareholders Site Visit to Banpong Power Plant at Ratchburi Province
July 16, 2018	Newsletter to Shareholders & Investors
October 24, 2018	Newsletter to Shareholders & Investors
November 29 - December 1, 2018	Analysts Site Visit to Quezon Power Plant and San Buenaventura Project (under construction) at the Philippines



Activities for Employees

Communication Day #1 between President and Employees	January 29
Knowledge sharing activities "Office Syndrome"	March 19
Annual Health Check-up for Employees	March 27
Songkran Festival and Water Blessing Ceremony	April 10
EGCO Group's 26 th Anniversary Celebration	May 11
"EGCO Group Innovation Team Challenge" Contest	June 19 - December
Safety Day	August 15-16
Basic Fire Drill Training	August 23
Knowledge sharing "Energy Conservation Awareness"	August 28
Communication Day #2 between President and Employees	August 28
EGCO Healthy Project	September 1 - November 30
Annual Fire Drills and Evacuation	September 12
EGCO Group Sports Day @ "KEGCO"/ Khanom	September 27-29
Annual Ceremony for Paying Respect at Shrine of Lord Brahma (Phra Phrom)	October 1
EGCO Group's Annual Merit Making for Robe Offering (Pha Pa) Ceremony	October 26-27
New Year Celebration and Annual Party, Sport Relation and Merit Making Ceremony	December 21

Activities for Community and Society

Promotion of learning about energy and environmental conservation among the “Youth”

January - December	Khanom Learning Center Project, Nakhon Sri Thammarat Province (2017-2023). Renovation of the decommissioned Khanom Power Plant Unit 1 as a power plant learning center, presenting the history of Khanom Unit 1 barge power plant, knowledge on energy types, and power production process. The learning center will be officially opened for service in 2019.
January - December	Youth Development Project (2017-2021) <ul style="list-style-type: none"> • The Vocational Scholarships Presentation Ceremony and Orientation Study Trip to power plants for 2nd Batch Students. • Development of Public Utilities for Youth Sanitation Activity • Energy and Environmental Conservation Youth Camp Activity • Energy and Environmental Conservation Student Project Competition

Promotion and development of “quality of life of communities” surrounding power plants

January - December	Khanom Power Plant Sustainable Agricultural Demonstration and Learning Center Occupational skills development for elderly and handicapped people to earn a sufficient income from sustainable agriculture. The product quality development and agricultural products distribution were conducted.
January - December	NED-CSR Learning Center, Lopburi Solar power plant To disseminate and pass on knowledge on the use of solar energy with agriculture in households to reduce expenses and promote self-dependence in terms of resource capital cost.
January - December	Skill and Occupation Development Project, Quezon Power Plant, the Philippines Production and distribution of products from local communities all thru the year.
January - December	Quality of Life Improvement and Occupational Skills Development Project, Nam Theun 2 Power Plant, Lao PDR. The project included education development for youth, promotion of sanitary and health, public facilities improvement, and local products development and distribution.

Conservation of “watershed forest” natural resources by The Thai Conservation Forest Foundation

January - December	Restoration of 1,300 Rais of Watershed Forests Projects within 5 Years (2017-2021)
March 17-24, October 16-19	“EGCO Forest Youth and Thai Rak Pa Camp” Project 51st batch was held at Doi Inthanon National Park, Chiangmai Province, and 52nd batch was held at Khao Luang National Park, Nakhon Sri Thammarat Province.
December 7	The Hand Over and Opening Ceremony of “Yod Doi Nature Trail”, in collaboration with The Department of National Park and Plant Conservation, at Doi Inthanon National Park, Changmai Province.

Shareholder Structure

EGCO is a listed company on the Stock Exchange of Thailand (SET). Details of its registered capital as of December 31, 2018 were shown below.

- 1) Registered Capital : 5,300 million baht comprising 530,000,000 ordinary shares with the par value at 10 baht per share.
- 2) Paid Up Capital : 5,264.65 million baht comprising 526,465,000 ordinary shares with the par value at 10 baht per share.

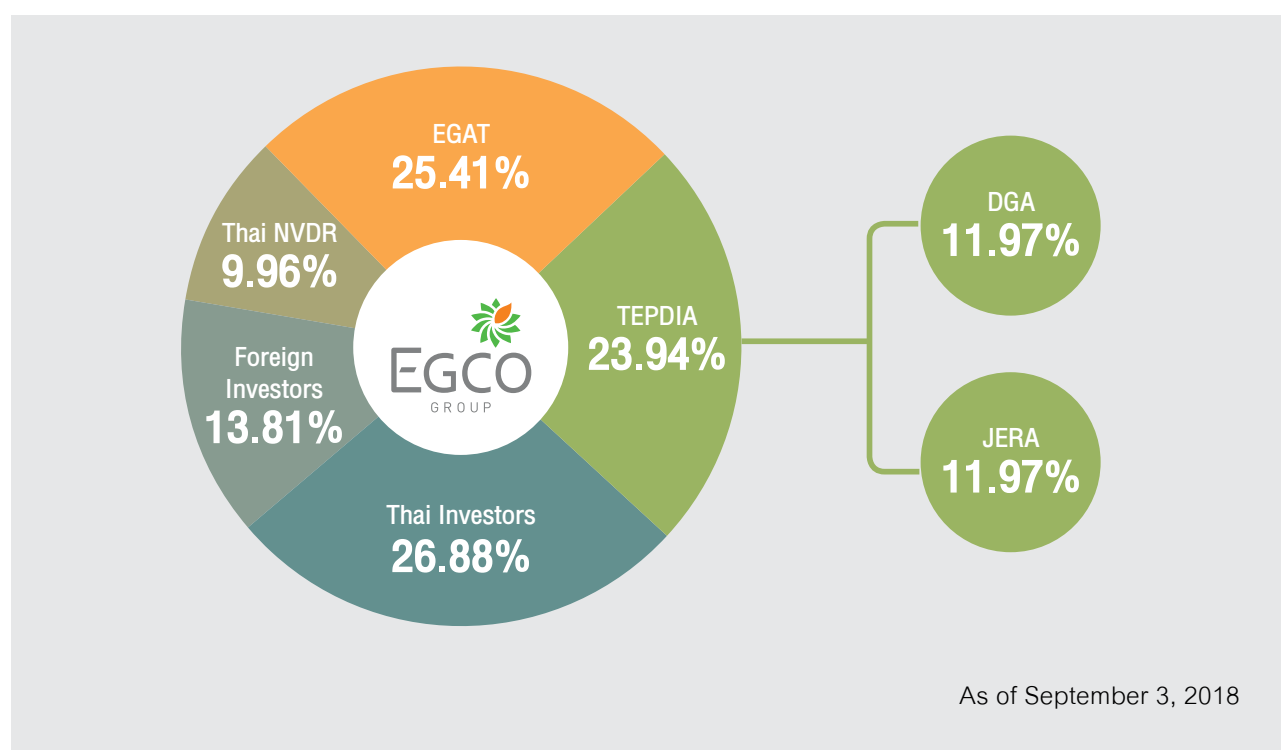
The top 10 shareholders as of September 3, 2018, the closing date of shareholders' roster for the right to receive the interim dividend payment, were as follows.

No.	Shareholders	Shares	% of Total
1	Electricity Generating Authority of Thailand	133,773,662	25.41
2	TEPDIA Generating B.V.	126,054,178	23.94
3	Social Security Office	12,182,800	2.31
4	Bualuang LTF	10,678,100	2.03
5	STATE STREET EUROPE LIMITED	10,481,517	1.99
6	SOUTH EAST ASIA UK (TYPE C) NOMINEES LIMITED	8,374,152	1.59
7	Bualuang LTF 75/25	5,749,100	1.09
8	Mr. Suwan Aisuriyakornthep	4,162,300	0.79
9	Bualuang Flexible RMF	3,555,100	0.68
10	AIA COMPANY LIMITED - EQ3-P	3,531,100	0.67

* Excluding 52,417,905 shares under Thai NVDR Company Limited which accounted for 9.96% of the total outstanding shares. Such NVDR holders 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 of EGCO's major controlling shareholders are as follows:

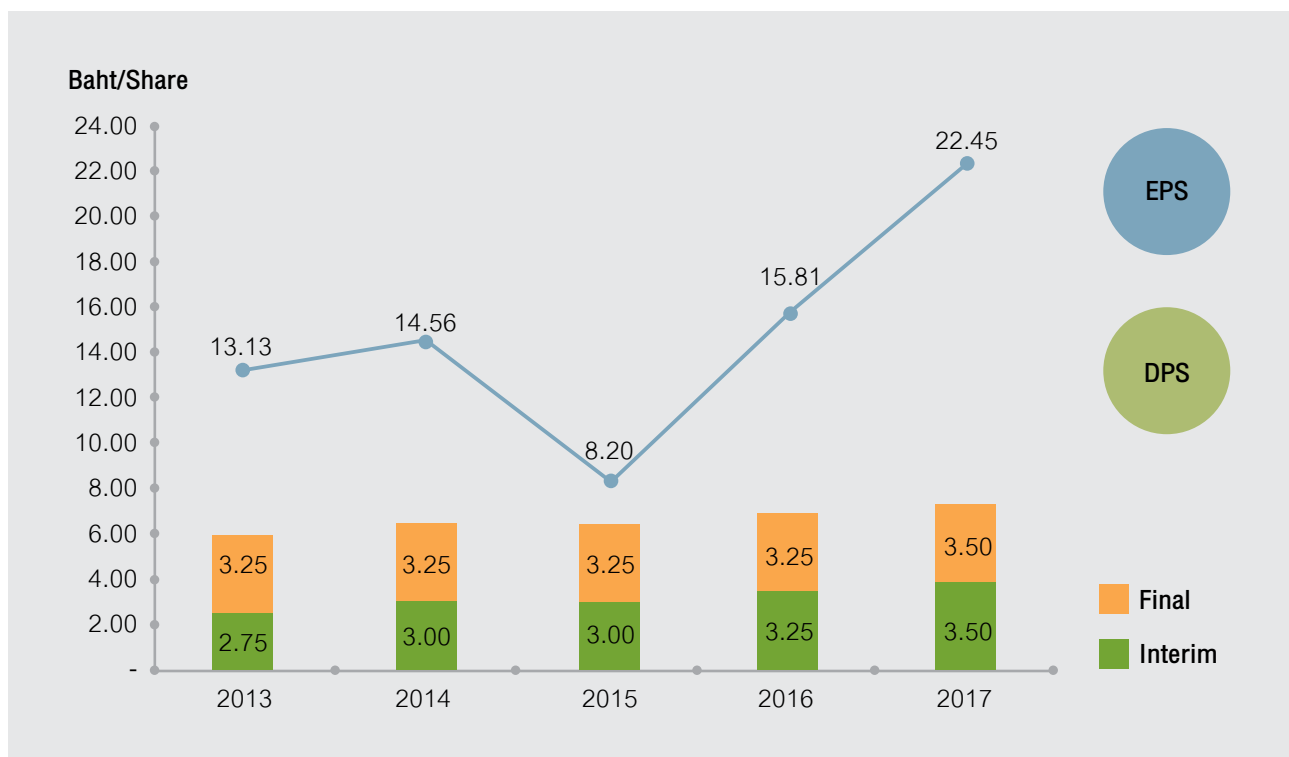
1. **Electricity Generating Authority of Thailand ("EGAT"):** EGAT is a state utility which has the mission in generating, acquiring and sales of bulk electric energy through its transmission network. EGAT also provides the operation and maintenance services and invests in electricity related business. EGAT holds 25.41% of EGCO's outstanding shares and has 4 representative directors out of 15 directors in EGCO.
2. **TEPDIA Generating B.V. ("TEPDIA"):** TEPDIA is established in order to invest in EGCO comprising 2 shareholders as follows:
 - 2.1 **DGA Thailand B.V. ("DGA Thailand"),** a wholly owned subsidiary of Mitsubishi Corporation (MC), a global integrated business enterprise that develops and operates businesses areas virtually every industry, indirectly holds 11.97% of voting right of EGCO's outstanding shares via TEPDIA Generating B.V.. DGA Thailand has 2 representative directors out of EGCO's 15 directors.
 - 2.2 **Tokyo Electric Power Company International B.V. ("TEPCO International"),** a wholly owned subsidiary of JERA Co., Inc. ("JERA"), jointly established by TEPCO Fuel and Power, Inc. and Chubu Electric Power Co., Inc. JERA invests strategically and integrating in fuel procurement, fuel trading and thermal power plants by expanding business in Japan and overseas. TEPCO International indirectly holds 11.97% of voting right of EGCO's outstanding via TEPDIA Generating B.V. TEPCO International has 2 representative directors out of EGCO's 15 directors.



Dividend Payment

The dividend payment policy of EGCO Group specifies that shareholders receive dividend twice a year at the rate of 40% of the net profits of the total financial statements after income tax is deducted or at the amount that gradually and consequently increase without necessary caused such as the future business expansion of the Company in other projects, or dividend payment substantially affecting the normal operations of the Company whereby dividend paid shall not exceed the accrued profits of separate financial statements.

The comparison of the dividend payment between 2013 and 2017 is as follows:



Year	2013	2014	2015	2016	2017
Earnings per share (baht)	13.13	14.56	8.20	15.81	22.45
Dividend per share (baht)	6.00	6.25	6.25	6.50	7.00
Dividend payout Ratio (%)	46	43	76	41	31



Dividend Payment of the Subsidiaries

Since year 2007, the Board of Directors set the dividend payment policy for EGCO subsidiaries to dividend out 4 times a year at the rate of 100% of their net profits after income tax and legal reserve. The dividend payment should take into account their year-ended performance, normal operation and provision stated in the loan agreement.

Sustainable Business Operations



Sustainable Business Operations



EGCO Group's vision is to be a leading sustainable Thai power company with full commitment to environment protection and social development, or in other words, operation with a strong and steady growth and acceptance and trust from stakeholders and the public based on good corporate governance and accountability to stakeholders. Policies have clearly been established in writing and publicized on the Company's website as follows:

Sustainable Business Operation Policy

- 1) Be committed to excellent operations, covering economic, environmental, community, and social dimensions.
- 2) Reduce negative impacts and increase positive impacts on stakeholders, environment, community, and society, as well as business process of the organization.
- 3) Promote development of business and social innovations to enhance efficiency and effectiveness, together with value added to the organization and stakeholders.
- 4) Promote sustainable development of business counterparts involving ethical business operation with transparency and without fraud or corruption, respect for human rights, caring for safety and occupational health, and environmental management.

The Company has also established specific policies, including human rights policy, intellectual property policy, whistleblowing policy, anti-corruption policy, occupational health, safety and environment policy, and community, social development engagement policy, tax policy and information disclosure policy.

1. Human Rights Policy

The Company requires that its directors, management and employees fully respect for the following human rights.

- The Company encourages all employees to exercise their rights of citizenship in accordance with the constitution and relevant laws.

- Employees' personal information shall be kept confidential. Disclosure or transfer of personal information such as employees' biodata, health record, working experience, etc. without the permission of such employee is considered a violation of the Code of Conduct and may result in disciplinary action except when it is done in accordance with the Company's regulations or legal requirements.
- The Company does not support the violation of human rights and any frauds.
- Employees must refrain from any deliberate discrimination or harassment in word or action against others on the basis of race, gender, religion, age, and physical or mental disability.

2. Intellectual Property Policy

The Company will comply with the legal requirements on intellectual property and copyrights. Any work or information belonging to third parties, obtained or to be used within the Company, shall be verified to ensure no infringement of intellectual property rights of others.

- Any work that is performed under EGCO Group is considered EGCO Group's intellectual property.
- All the intellectual properties which include the work in progress, innovation in all formats and so on shall be returned to EGCO Group once an employee vacates the office.
- Employees who use the Company's computers shall only use the licensed and authorized software program of the Company to avoid violating intellectual property of others.
- Employees must check beforehand that the work or information that belongs to third parties can be used within EGCO Group without infringement of intellectual property rights of others.

3. Whistleblowing Policy

The Company has made available channels for whistleblowers, including employees and other stakeholders, to report on any suspected violation of law or code of conduct or fraudulent behavior or wrongful conduct of a person in the organization. A mechanism for the protection of whistleblowers is also put in place. To ensure whistleblower trust, information obtained from whistleblowers will be kept confidential and known only among responsible parties.

4. Anti-Corruption Policy

The Company is strongly committed to preventing and countering all forms of corruption, both directly and indirectly, by insisting that "corruption is an unacceptable act in business conduct whether with the government sector and the private sector." (Details of anti-corruption policy are under the topic of Corporate Governance).

5. Occupational Health, Safety and Environment Policy

The Company is committed to setting up safety, occupational health, and environment management system with ongoing development. An operational framework is in place, covering operations of the Company's employees at all levels and those of its contractors as follows:

1. Execute and develop appropriate safety, occupational health, and environment management system in compliance with applicable laws and regulations.
2. Develop an operational framework to determine and review objectives and targets as well as monitor and assess the results of safety, occupational health, and environment operation.
3. Be aware of prevention and improvement of activities which may affect safety, occupational health, and environment operation.
4. Support appropriate use of resources for drawing up safety, occupational health, and environment management system.

6. Community and Social Development Engagement Policy

Participation in community development

1. Promote and develop quality of community life nearby power plants for their well-being by taking into account communities' participation and needs.
2. Instill and promote awareness of responsibility to the community in employees and relevant persons.
3. Consistently disseminate information on operating results to the community and the public.
4. Seek to regularly exchange knowledge and share experiences from working with other agencies for further improvement of operation.

Participation in social development

1. Taking part in social development by conducting projects or activities for the society that are consistent with core competencies of the organization.
2. Encourage employees and relevant persons to be aware of, understand, and take part in operation to stimulate their participation in social development.
3. Execute projects or activities continuously to bring about actual and sustainable benefits to the society.
4. Seek to regularly exchange knowledge and share experiences from working with other agencies for further improvement of operation.

7. Tax Policy

Aiming to comply with tax regulations with efficient tax management for the utmost benefits to the Company and create value to its shareholders, the Company places importance on compliance to relevant laws and regulations. This will help reduce the tax risks caused by complicated transactions and support EGCO's stable pace forwarding to sustainability, gaining acceptance from the society and keeping an image of good corporate citizen.

In 2017, the Company established an "Information Disclosure Policy and Practices" in writing. Realizing that the Company's all information affects to the decision-making of investors, stakeholders and the public, EGCO has set up guidelines of disclosure of both financial and non-financial information including positive and negative information through accessible channels in a correct, complete, and timely manner and in accordance with relevant laws and regulations.

8. Information Disclosure Policy

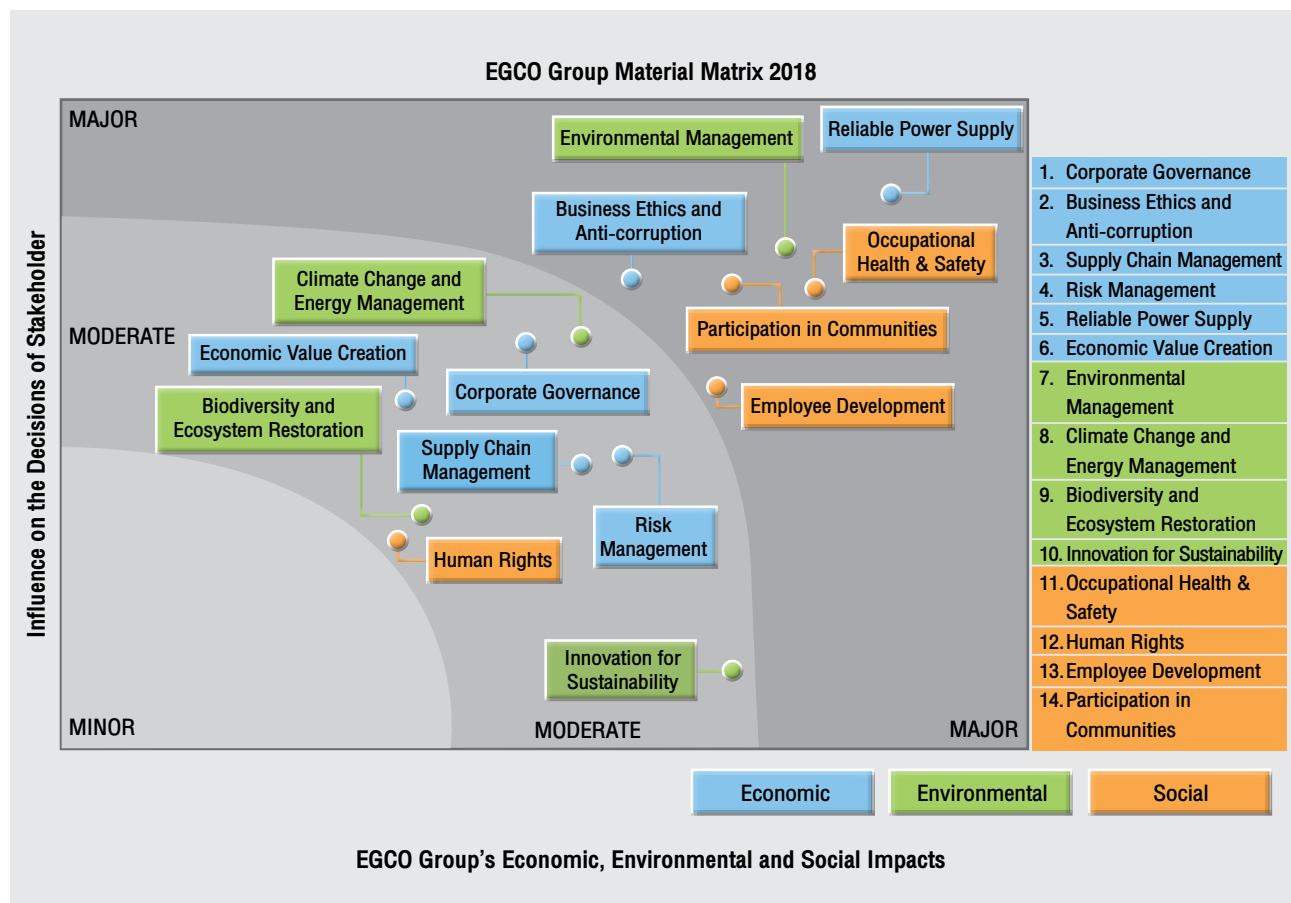
Considering that significant information has resulted in decisions of investors, stakeholders and general public, EGCO has set the policy and practice guidelines on information disclosure both financial and non-financial information and both positive and negative information through various channels that stakeholders can equally access. The completed, correct and update information is prepared to be aligned with relevant laws and regulations. *(Please see more details about the information disclosure policy and practice guidelines in the Corporate Governance topic.)*

Material Issues of Sustainability and Framework

EGCO Group determines its material issues of sustainability drawn from the analysis of positive and negative impacts of the organization on the stakeholders, society and environment throughout its business process. It also applies sustainable development principles in defining and prioritizing the key sustainability issues of the organization, as well as drawing up its targets of sustainable business operation, covering economic, social, and environmental dimensions to enhance stability of the electricity system, build strong community and society, ensure environmental sustainability and be a good corporate citizen for sustainable growth as follows:

Material Issues of Sustainability of EGCO Group

- Reliable power supply
- Business ethics and anti-corruption
- Environmental management
- Participation in communities
- Employee development
- Occupational health and safety



Target of Sustainable Business Operation

Economy

- ROE is not lower than 10%.
- Plant availability is better than specified in power purchase agreement (PPA) and target set forth.
- Fuel use efficiency is better than that in PPA.
- The Company's corporate governance and business ethics are developed to be equivalent to global standards.
- Encourage business partners to adhere the anti-corruption policy and practice guidelines and join the anti-corruption network.

Society

- Local workforce employment rate, including local contractors and contracted parties, is not lower than 80%.
- Projects are carried on continuously to improve quality of life for communities nearby power plants.
- Stability of electricity system and users is enhanced with plant availability better than PPA and annual target.
- Continually and thoroughly develop employees at all levels to ensure they have knowledge and capabilities.
- Develop and improve safety standards with zero accident covering operations of the Company's employees, contractors, suppliers and surrounding communities.

Environment

- Environmental quality of power plants is better than standards set by laws.
- Investments are made in renewable energy power projects.
- Abundance of ecosystem and biodiversity in all EGCO Group's power plant areas is maintained and restored.
- The Company continuously joins conservation of major watershed forests through operation of Thai Conservation of Forest Foundation.

EGCO Group Sustainability Operation Roadmap for 5 years (2014-2018)

Roadmap					
Work	2014	2015	2016	2017	2018
<ul style="list-style-type: none"> • Review of business process and impacts on stakeholders • Review of EGCO Group sustainability operation • Validation by experts • Determination of material issues of sustainability 					
<ul style="list-style-type: none"> • Establishment of a sustainable business operation policy • Designation of person in charge and review of target and plan • Improvement of method to report to top executives 					
<ul style="list-style-type: none"> • Preparation of an operation manual 					
<ul style="list-style-type: none"> • Extension to business counterpart 					
<ul style="list-style-type: none"> • Promotion of innovation development 					

EGCO Group developed its operation manual for 4 material issues of sustainability, namely anti-corruption, occupation health, safety and environment, participation in development of communities nearby power plants and corporate risk management.

In addition, EGCO also developed its **Code of Conduct for Business Partners** and **Criteria for Application of Code of Conduct for Business Partners** to promote cooperation among business counterparts to operate business with ethics in the aspects of anti-corruption, community and social responsibility, and occupational health, safety, and environment.

After sustainability efforts extension to its subsidiaries and business counterparts, by extended the anti-corruption practices to Engineering & Service Co., Ltd. (ESCO) in 2016 and Khanom Electricity Generating Co., Ltd. in 2017, respectively. In 2018, EGCO organized the Supplier Day aiming to communicate with contractors and suppliers on EGCO Group's commitment to transparent and fair procurement process. Moreover, EGCO also conducted the EGCO Group Innovation Team Challenge 2018 competition to encourage creativity and innovation mindsets amongst employees in creating innovative ideas and innovations. *(Please see more details about the Promotion of innovation development in the Sustainability Report 2018, Innovation for Sustainability topic and Personnel Development topic.)*

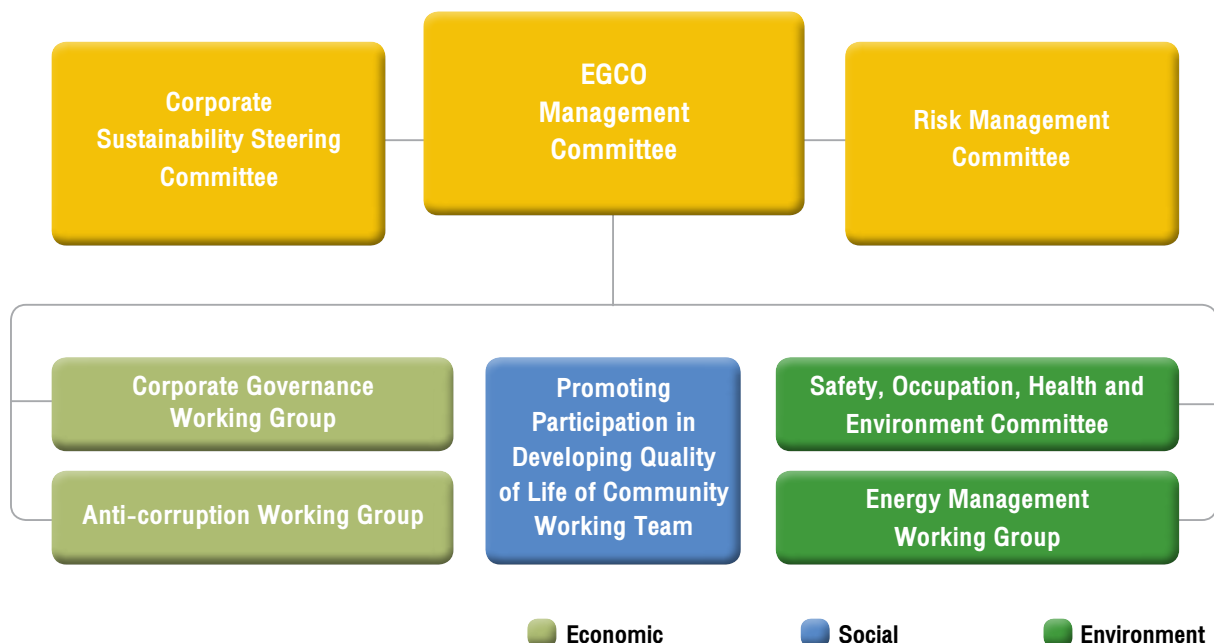
Management for Business Sustainability Operation

EGCO Group developed the management structure for business sustainability operation to monitor business operation according to guidelines and policies set forth, at both Board of Directors level and management level to ensure the Group's efficient operation with ongoing development and improvement.

At the Board level, EGCO Group established a Corporate Governance and Social Responsibility Committee as a supporting committee to monitor sustainability operation.

At the management level, EGCO Group established a Corporate Sustainability Steering Committee chaired by Senior Executive Vice President - Strategy and Asset Management and comprising top executives at the level of Executive Vice President from all function groups as members to conduct an analysis of standards and practice guidelines on corporate sustainability as well as set plans and targets for improvements of work processes towards EGCO Group's sustainability. The committee reports progress and suggestions to EGCO Management Committee: EMC as shown in the management structure.

In addition, EGCO appointed the Risk Management Committee, Corporate Governance Working Group, Anti-corruption Working Group, Promoting participation in Developing Quality of Life of Community Working Team, Safety, Occupation, Health and Environment Committee and Energy Management Working Group which are responsible for developing the operational process to be in accordance with sustainable development principles covering economic, social and environmental aspects as shown below:



Monitoring and Inspection of Sustainable Business Operation

Under sustainability management policy and guidelines, top executives in EGCO Management Committee (EMC) have primary duties to set sustainability practice guidelines with due regard to responsibilities to all stakeholders in decision-making process and business operation process of the organization, pass on such practice to each committee or working group, as well as define responsibilities and monitor operation results to ensure efficiency. Performance evaluation is conducted regularly and appropriately for operation in each area.

For companies or power plants in which EGCO Group has less than 50% shareholding, EGCO Group oversees their sustainability business operations through their boards of directors. EGCO Group top executives assigned to sit on those boards of directors have the duty to monitor and ensure their operations are in line with EGCO Group sustainability management guidelines.

Responsibility for and Participation with Stakeholders

Management Direction

EGCO realizes the importance of business operation by focusing on stakeholders, including individuals or organizations that might be affected positively or negatively by the Company's business operation. We regard it as a policy to be responsible for and treat all stakeholders fairly with importance attached to review of identification of stakeholders in line with the changing business landscape or substantial business expansion, and commitment to developing continuous participation and communication with stakeholders to ensure fairness to all stakeholders in business operation. Practice guidelines on stakeholders are laid down in writing and disseminated on the Company's website for public acknowledgement.

Stakeholders of EGCO Group



Policy and Practice Guidelines on Stakeholders

1. Treatment of Shareholders Policy

The Company has respect for and strictly safeguards the basic rights of shareholders.

- Support shareholders in accessing information in an adequate and appropriate manner.
- Encourage shareholders to attend the meeting and exercise their voting rights in the shareholders' meeting.
- Refrain from any action that infringes or derogates the rights of shareholders.
- Strive to foster growth based on actual potential or capabilities of the Company so that the shareholders can receive sustainable returns from work efficiency and good operating results of the Company.

2. Treatment of Employees Policy

The Company recognizes the value of human resources and strives to ensure that employees are proud of the organization by working in a participatory atmosphere and with progress in career path on an equitable basis. Employees are developed and promoted to have knowledge and capabilities on a comprehensive and continual basis to create value and maintain business excellence.

- The Company will treat all employees with respect for honor and dignity.
- The Company will recruit personnel to various positions with fairness by taking into account the required qualifications for each position, educational background, experience, and other requirements necessary for the job and without discrimination on the basis of gender, age, race, and religion.
- The Company will determine employee compensation and benefits which are fair and appropriate for job descriptions and conditions, work performance, and the Company's ability to pay such compensation.
- The Company will encourage employees to participate in training and development activities to improve their proficiency and create better career opportunities.
- The Company realizes that good communication will bring about efficiency and good working relationship. Thus, the Company will facilitate employees' access to relevant news regularly at a suitable time and as best as possible.
- The Company will make available to employees communication channels through which they may raise suggestions and file work-related grievances. All suggestions and grievances will be seriously considered and remedial actions will be determined for the benefits of all parties and good working relationships.

3. Provision of Service to Customers Policy

The Company will abide by its commitment to all customers by

- Strictly comply with conditions agreed upon with customers and deliver quality and reliable services.
- Deliver services according to the specified standards with efficiency and politeness.
- Give customers advice on efficient use of electricity.

4. Procurement of Products and Services Policy

The Company intends to ensure standard procurement of products and services and is committed to maintaining and developing sustainable relationships with business partners and contract partners to deliver products and services which are worth the money, technical quality, and mutual trust. The Company will treat all business partners and contract partners by

- Competing on the basis of equitable access to data.
- Having criteria in place for evaluation and selection of business partners and contract partners.
- Executing contracts of appropriate forms.
- Having management and monitoring systems in place to ensure complete fulfillment of contract conditions and to prevent frauds or other malpractice in all stages of the procurement process.
- Making punctual payment to business partners and contract partners according to mutually agreed terms.

5. Treatment of Creditors Policy

The Company will abide by its commitment to all creditors by

- Ensure strict compliance with loan agreements and no concealment of true financial status.
- Take remedial actions promptly in case where there is any situation that may affect the creditors, such as the Company's insecure financial status or possible business dissolution.

6. Treatment of Competitors Policy

The Company conducts business on a fair play basis and does not seek confidential information of competitors in a dishonest or inappropriate way, such as offering bribes to employees of competitors, and damage reputation of competitors by way of false allegation.

7. Participation in Community and Social Development Policy

7.1 Participation in development of communities surrounding power plants

- Promote and develop the quality of life of communities nearby power plants for their well-being by taking into account community participation and community needs.
- Instill and promote employees and related parties' awareness of responsibility for the communities.
- Consistently disseminate information on operating results to the communities and the public.
- Seek knowledge and experience sharing opportunities with other agencies for further improvement of operation regularly.

7.2 Participation in social development

- Taking part in social development by conducting projects or activities for the society that are consistent with core competencies of the organization.
- Encourage employees and related persons to be aware of, understand, and take part in operation to stimulate their participation in social development.
- Execute projects or activities continuously to bring about actual and sustainable benefits to the society.
- Seek knowledge and experience sharing opportunities with other agencies for further improvement of operation regularly.

8. Treatment of Business Partners Policy

The Company will abide by its commitment to all business partners by

- Operate business with accountability, transparency, fairness, and integrity in business cooperation.
- Disclose no confidential information of business partners without their consents.
- Respect for intellectual property rights and ensure no intellectual property infringement.

9. Treatment of Contractors/Subcontractors Policy

The Company will abide by its commitment to all contractors/subcontractors by

- Conduct business on an equitable, transparent, fair and honest basis.
- Ensure strict compliance with the conditions in the trade agreements in accordance with the Code of Conduct.
- Take or offer no benefits in a dishonest or inappropriate way to contractors/subcontractors in accordance with the anti-corruption policy.
- Require contractors/subcontractors to abide by and be aware of safety, occupational health and environment as well as comply with labor and human rights standards.

10. Treatment of Government Agencies Policy

The Company will abide by its commitment to all government agencies by

- Strictly comply with relevant laws and regulations.
- Disclose complete information as required by laws.
- Cooperate and build good relationships with government agencies.

11. Treatment of Private Development Organizations Policy

The Company will abide by its commitment to all private development organizations by

- Disclose information in a complete, adequate and timely manner.

Stakeholders' Expectations and Stakeholder Engagement Approaches

EGCO has conducted both official and unofficial surveys on stakeholders' expectations. The official surveys include satisfaction surveys and channels for voicing complaints, while the unofficial ones are ad hoc meetings, visits, or information from various media. The information derived from these sources is used for consideration in drawing up a roadmap and operation plan aiming to properly and comprehensively address the expectations of each stakeholder group.

Stakeholders	Expectations	Stakeholder Engagement Approaches
1. Shareholders and Investors	<ul style="list-style-type: none"> • Sustainable return on investment • Commitment to good corporate governance principles • Risk management • Respect for and safeguarding of rights with equitable treatment • Disclosure of genuine, complete and sufficient information in a timely manner • Compliance with relevant laws • Professional and honest executives 	<ul style="list-style-type: none"> • Shareholders' meetings • Preparation of annual reports • Power plant visits • Quarterly analyst meetings • One-on-One meetings • Conference calls • Roadshows • LIFE quarterly magazine • Acceptance of complaints through designated channels • Information dissemination through the Company's website

Stakeholders	Expectations	Stakeholder Engagement Approaches
2. Employees	<ul style="list-style-type: none"> • Compensation and benefits compared with peers in the same industry • Support of career paths • Capability development • Job security • Good and safe working environment 	<ul style="list-style-type: none"> • Annual compensation surveys of general labor markets and power plant business groups • Arrangement of trainings to enhance knowledge and skills necessary to perform the job • Business update meetings • Communication Day • Employee relations and team building activities • Arrangement of activities for public benefits • Internal communication through various channels such as e-newsletters, intranet, bulletin boards, posters, and wire broadcasting • Employee satisfaction surveys on internal communication • Employee engagement surveys
3. Customers	<ul style="list-style-type: none"> • Power generation and distribution as specified in Power Purchase Agreements (PPAs) • Provision of correct information on production and transport system • Power supply stability • Reasonable price • Operations not affecting the community, society and environment 	<ul style="list-style-type: none"> • Meetings for exchange of information and opinions with Transmission Control Unit of Electricity Generating Authority of Thailand (EGAT) • EGAT Group relationship building activities • Meetings with customers in industrial estates to develop a production plan in response to customers' needs
4. Creditors	<ul style="list-style-type: none"> • Strict fulfillment of conditions in loan agreements • Repayment capacity in a complete, accurate, and punctual manner • No concealment of true financial status • Fair and equitable treatment of all creditors • No solicitation, acceptance, or payment of any wrongful benefits 	<ul style="list-style-type: none"> • Clearly communicate to create mutual understanding in compliance with the loan agreement's conditions • Meetings for exchange of opinions • Power plant visits • Report of non-fulfillment of conditions in loan agreements to creditors in advance and mutual participation in the search for solutions to the problems

Stakeholders	Expectations	Stakeholder Engagement Approaches
5. Competitors	<ul style="list-style-type: none"> • Conduct of business within the competition framework • Free, transparent, and fair competition • Strict compliance with good corporate governance principles • Conduct of business according to international standards 	<ul style="list-style-type: none"> • Receipt of information from public forum • Dissemination of information through the Company's website, annual reports, and other publications • Commitment to becoming one of the companies receiving public praise for compliance with good corporate governance principles
6. Community and Society	<ul style="list-style-type: none"> • Conduct of business with responsibility, safety and good environment • Disclosure of factual information without concealment • Participation in the improvement of the quality of life of communities 	<ul style="list-style-type: none"> • Meetings of Tri-party Committee (only power plants under EIA) • Power Development Fund meetings • Power plant visits of students and communities • Project for development of quality of life of communities in the form of tri-party cooperation among power plants, government agencies, and communities in the areas • SUKJAI quarterly magazine • Acceptance of complaints through designated channels • Survey communities' opinions and get their suggestions for further improvement of operation
7. Business Partners	<ul style="list-style-type: none"> • Financial strength • Knowledge and expertise of personnel • Fair and transparent business operation • Synergy of strengths of each company 	<ul style="list-style-type: none"> • Meetings • Company visits • Mutual activities • Channels for raising complaints, opinions, and suggestions
8. Contractors/ Subcontractors	<ul style="list-style-type: none"> • Operating business as good business alliances and maintaining good relationships • Fair and equitable treatment with focus on mutual benefits • Appropriate and acceptable payment period • Financial stability 	<ul style="list-style-type: none"> • Meetings • Company visits • Activities for public benefits • Channels for raising complaints, opinions, and suggestions

Stakeholders	Expectations	Stakeholder Engagement Approaches
9. Government Agencies	<ul style="list-style-type: none"> • Compliance with relevant laws, rules and regulations • Environmental management • Care for and support of community activities • Prevention of and resistance to corruption, and conduct of business with fairness • Disclosure of correct, complete, and sufficient information 	<ul style="list-style-type: none"> • Meetings • Company visits • Channels for raising complaints, opinions, and suggestions • Support government agencies' activities and operations
10. Private Development Organizations	<ul style="list-style-type: none"> • Conduct of business having the least possible impact on the environment and community • Participation in caring for the environment and development of the community • Disclosure of correct, complete, and sufficient information in a timely manner 	<ul style="list-style-type: none"> • Environmental conservation projects of Thai Conservation of Forest Foundation • Company visits • Channels for raising complaints, opinions and suggestions

Business Operations in 2018

1. Shareholders and Investors

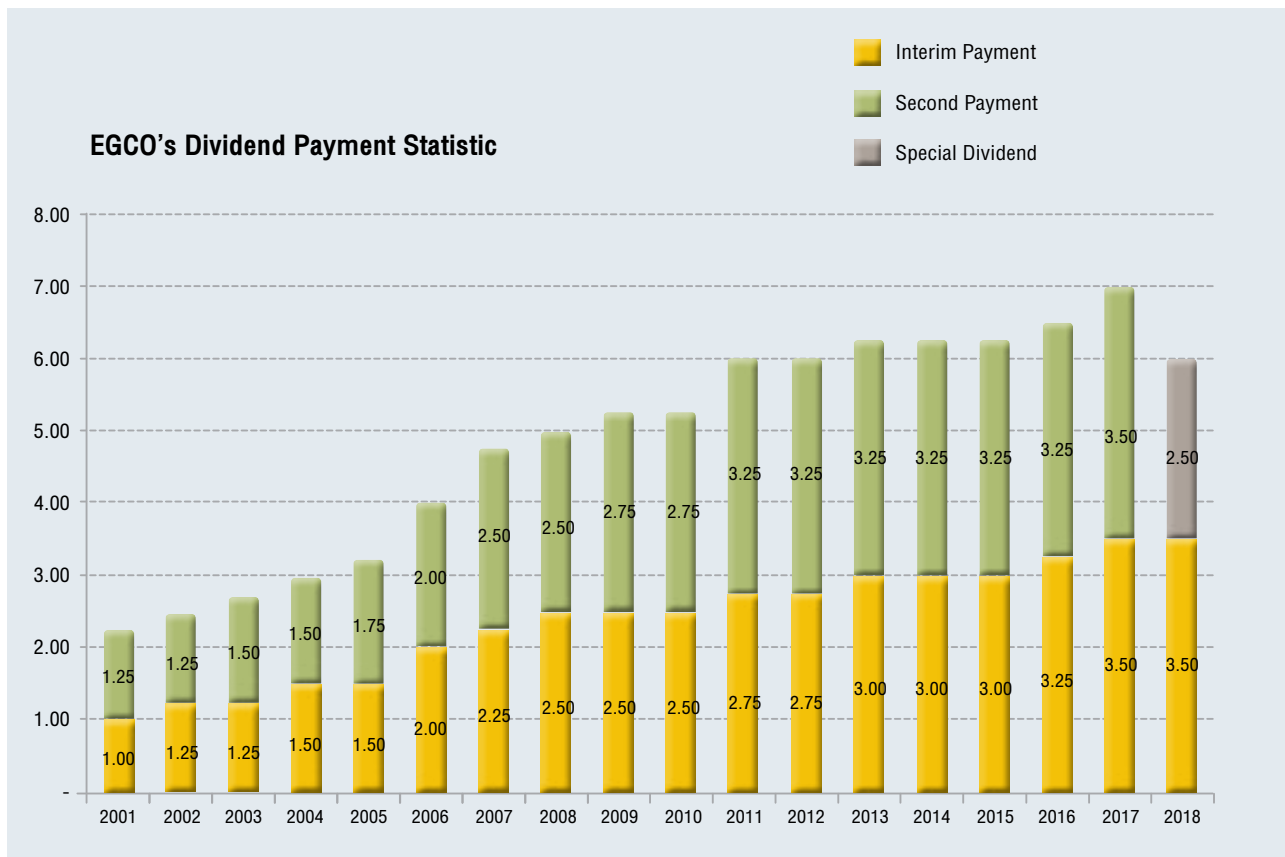
EGCO states in its Code of Conduct to foster growth based on genuine competencies or capabilities so that shareholders can gain sustainable returns from the effective and solid operational performance of the Company. EGCO respects the rights of shareholders and investors to equally access necessary information for their assessment of the Company, and will disclose its operating results and financial status as well as accurate supporting information as required by the Stock Exchange of Thailand (SET) and the Securities and Exchange Commission (SEC).

Share Price

EGCO's average share price in 2018 was 231.09 Baht per share, up from 2017 by 6.94%, and closing highest at 255 Baht on December 21, 2018 and lowest at 216 Baht on January 5, 2018. The price-earning ratio (P/E ratio) as of December 28, 2018 was 5.54.

Dividend payment

EGCO has a policy of dividend payment to shareholders twice a year at the rate of approximately 40% of the net profits after deduction of income tax in consolidated financial statements, or in an amount that gradually increases, provided that there is no other fund utilization necessity like future business expansion through various projects or the dividend payment would not materially affect normal operation of the Company. Also, dividend payment shall not exceed retained earnings in separate financial statements.



Management of Shareholder Relationships

EGCO has in place an investor relations unit to take charge of providing shareholders with accurate, complete, and sufficient information in a timely manner, so that shareholders, investors, and analysts can equally access information, and compiling opinions and comments from shareholders and investors on a regular basis. Shareholders and investors may directly contact the Investor Relations Unit for additional information or to voice opinions at Tel. 0 2998 5150-53 or email: ir@egco.com. Moreover, EGCO has made available communication channels and activities among shareholders, investors, and top executives of the Company, as follows:

- **Investors and Executives Meetings**

EGCO arranges a quarterly meeting for presentation of the Company's operating results to investors and analysts. The President, Senior Executive Vice Presidents, and other top executives, are always available for the meeting to provide information and answer all questions raised.

- **Power Plant Visits**

EGCO organizes EGCO Group's power plant visits for shareholders and investors to enable them to understand its business operation and meet the Company's executives on a yearly basis. In 2018,

EGCO invited shareholders and investors to visit Banpong power plant, Ratchaburi Province and gave them the power plant overview. Additionally, the Company brought analysts and institutional investors to visit Quezon and San Buenaventura power plants.

- **One-on-One Meetings**

EGCO has held one-on-one meetings with investors and analysts, in which top executives and Investor Relations unit regularly participate as requested by investors and analysts. In case they cannot attend in person, a conference call can be arranged with the schedule set to be convenient for all parties concerned.

- **Roadshows**

In 2018, EGCO, in collaboration with SET, met individual investors and institutional investors both domestically and internationally.

- **Magazine for Shareholders**

EGCO has published "LIFE", a quarterly magazine for shareholders as a channel for providing information on operating results, activities carried out by EGCO Group together with activity calendar, and other essential information to shareholders. Shareholders can also obtain the Company's news and information through E-mail Alerts on EGCO Group's website.

- **EGCO Group's Website**

EGCO has compiled information disseminated during roadshows, quarterly operating results presented to analysts, and video/audio clips from analyst meetings in both Thai and English versions on EGCO Group's website (Webcast) right after such meeting or event.

In addition, EGCO has regularly updated its website so that shareholders and investors have access to most recent information with convenience and maximum benefits. Some of the information is as below:

- 1) Updated and historical share price
- 2) List of analysts with analysis articles on EGCO share price
- 3) Analyst meeting schedule and so on

2. Employees

EGCO Group is well aware that employees are the key success factor of the organization. The Company has thus laid great emphasis on employees' well-being and potential development on a regular and continuous basis. In 2018, EGCO Group continued its human resource development roadmap with focus on enhancement of business knowledge and understanding for all employees so that they were equipped with capabilities to accommodate business expansion and had pride in being part of the organization.

The Company's responsibility for employees can be classified into 5 major areas as below:

- **Compensation and Benefits**

EGCO Group has in place a fair compensation system according to duties, responsibilities, and capabilities of employees to retain its best and talented employees. It also provides benefits and welfare for employees and family members mainly based on employees' necessity and demand and under proper rationale and principles. EGCO's annual pay increase for employees at all levels takes into account the following 2 main components:

- o Organization's success, average pay increase of peers in the same industry, and economic condition in that particular year
- o Work performance and efforts of employees

In addition, EGCO Group has regularly studied, analyzed, and compared compensation and benefits of the Group with those of peers in the same industry to ensure that employees receive compensation, benefits, and welfare which are appropriate and competitive in the market. Every year the Company joins hands with HR Power Network consisting of human resource units of companies in the electricity business to consistently exchange ideas and information on human resource management, especially payment of compensation and benefits to employees, and use such information for development and improvement of compensation criteria of the Group.

For the benefits of employees, the Company has set up a **Welfare Committee** composed of members elected by employees with a term of not over 2 years to be representatives of employees for welfare management and offer opportunity for the employees to have a communication channel to give suggestions and raise work-related grievances, living, and welfare. Their suggestions will be seriously considered and corrective measures will be worked out for the benefits of all parties and building of good relationships. So far, there has been no reporting or complaining of violation of human rights and unfair treatment of labor.

- **Competency development for career advancement**

Due to continued business growth of EGCO Group, employees have opportunities to grow in their career path. In addition to management of compensation and benefits for employees, the Company gives importance to employees' progress in their career path. Promotion to higher positions and levels is conducted based on clear criteria and in accordance with the human resource management policy which is employee-based. The consideration process is undertaken by a committee comprising related executives who jointly and reasonably consider, select and express opinions. In addition, the Company is committed to developing its potential employees to accommodate business expansion and growth.

To prepare the Company for sustainable growth amidst rapid changes, EGCO introduced the "EGCO Group Innovation Team Challenge" competition in 2018. The concept and innovation competition encouraged the employees to promote teamwork and apply their knowledge, capability and creativity in conceiving new ideas and innovations that will drive the organization towards sustainable growth. While the innovations will be implemented in working or business processes that helps increase in operation efficiency for employees and their business units, including create both financial values/benefits and non-financial values/benefits for the Group.

The Company has continued to provide in-house training courses to develop employees' competencies at all levels in accordance with the Company's competitive environment, as well as encourage innovative mindsets. Highlights of training courses were "Practical Innovation" and "Prototyping and Testing" both aiming to give employees knowledge and understanding on innovation framework and design thinking that can be used as guidelines for creating and developing innovative ideas. An "Application of COSO ERM Framework" course was also conducted to sustainably create added values for the Company.

In addition, the training programs to enhance employees and executives' necessary skills were arranged such as 2 batches of "Effective Business Presentation" and the executive development programs for succeeding higher-level positions; for examples, "Executive Program for SVPs" and "Coaching Program for EVPs".

In 2018, EGCO reviewed the criteria for employee promotion to offer its best and talented employees more opportunities for career advancement. Also, the employee compensation and benefits system was surveyed to ensure appropriate and competitive for the employees working overseas. Regarding employee learning and development, EGCO increased a training budget and required superiors and subordinates to jointly review, discuss, and develop individual development plans for employees at all levels to further accommodate business growth and career advancement.

- **Employee Relations**

EGCO Group realizes the importance of individual uniqueness and teamwork, the Group thus promotes corporate values and culture for employees to accept and respect each other's differences in order to lead to good collaboration and teamwork.

EGCO Group believes that good relationship takes part in bringing happiness to employees at work. Employees, who are happy at work and have capabilities as continuously trained and developed for the assigned jobs, will be able to produce efficient and effective outputs to enable the organization to eventually reach the targets set forth.

In 2018, EGCO Group organized Employee Relations activities as follows:

- **Communication Day:** A semi-formal event held quarterly for the President and employees for updates of news, information, and movements inside and outside the organization, and as an opportunity for employees to share ideas and opinions as well as enquire about various issues with the executives.
- **EGCO Group Sport Day:** In 2018, Khanom power plant in Nakhon Sri Thammarat Province hosted a sport competition to strengthen the Group employees' friendship and teamwork.

Other activities were also arranged to strengthen internal relationships such as New Year's party, and religious and cultural activities such as offering of robes to Buddhist monks off-season and after Buddhist Lent. In 2018, the Company held merit-making ceremonies on the auspicious occasion, made offerings to the Brahma or Phra Phrom shrine, offered food and robes to the monks, organized an event celebrating Songkran festival and a water blessing ceremony to ask for blessings from the former executives, held a company anniversary party, conducted activities to promote its core values as well as supported club activities of employees, namely Photo Club, Dhamma Practice Club, Golf Club, and Sports and Recreation Club.

Moreover, in 2018, EGCO Group communicated news, information, and movements of the organization in respect of business operation, social responsibility, and internal activities to employees via diverse forms of communication channels like e-newsletters, intranet, bulletin boards, posters, and wire broadcasting. This aimed to foster a learning society and encourage employee engagement in business and activities.

- **Safety, occupational health, and environment**

EGCO Group is well aware of the importance of safety, occupational health, and environment. "EGCO Group Safety, Occupational Health and Environment Standards Manual" has therefore been developed for EGCO employees and power plants in the Group together with persons concerned to follow. This is based on the management principles of prevention of work-related accidents, injuries, and sickness, alongside building of consciousness and understanding of safety, occupational health, and good environment at workplace among employees and persons concerned on a regular basis.

In 2018, EGCO Group organized annual health check-up for employees and rehearsal of fire drill and evacuation, safety exhibition, information dissemination, and organization of activities to enhance safety knowledge and consciousness. The Safety, Occupational Health and Environment Committee met once a month to consistently monitor the operation.

- **Participation in community and social development**

EGCO Group believes in employee involvement in community and social development activities as a way to develop capabilities and improve self-esteem of employees. Therefore, the Group encourages employees to join hands with communities nearby power plants to initiate and execute activities which are beneficial to the betterment of quality of life and the good environment of the community. This is done by employees being “volunteering staff” to foster the society through activities to improve the quality of life of communities nearby power plants and those to promote power and environment learning among youths, together with conservation of watershed forests. This aims at reinforcing collaboration between EGCO Group employees and private and government agencies, as well as the communities.

In 2018, EGCO Group employees joined social and community activities organized continuously by the organization, namely volunteering in the “Youth Development” project by improving public utilities in schools surrounding EGCO Group’s power plants, an “EGCO Forest Youth Camp” project, and a “Repair and Maintenance of Public Electricity System” project, and so on.

3. Customers

EGCO Group is proud of its roles, duties, and responsibilities as a power producer and distributor to the Electricity Authority of Thailand (EGAT) and industrial estate users, and as an energy service provider in terms of plant operation, maintenance, engineering, and construction, as well as provision of training for power plants and industrial plants both domestically and internationally by jointly delivering quality and reliable products and services at fair prices and with promotion of good relationship. In 2018, its operations in relation to customers included:

Power Business: EGCO Group continues to produce and distribute quality electricity according to electricity system standards in the volume and period specified by EGAT and industrial estate customers to ensure adequate power supplies for the public and its own activities. Most of the Group power plants generally had higher availability payment than specified in the power purchase agreement and annual target. The Company conducted an annual survey of customers’ satisfaction with its products and services and the results showed that customers were satisfied with EGCO Group’s power plant operations at 93.30% on the average.

Power Service Provision Business: Satisfaction with EGCO Group’s service provision was maintained at an excellent level. According to a survey of customers’ satisfaction with its maintenance business, customers were satisfied with EGCO Group employees’ service provision and operations at 96.15%.

4. Creditors

EGCO Group fulfills its obligations to all creditors by strictly complying with the provisions in loan agreements and not concealing its true financial status. In 2018, EGCO Group traveled to meet, exchange viewpoints, and answer questions of creditor executives and teams. It strictly observed conditions and made loan repayments as scheduled. No dispute or event of default was reported.

The creditors were also invited to visit EGCO Group’s operating power plants as follows:

- Meeting with lenders for opinion exchange, and visiting Theppana Wind Farm, Chaiyaphum Province together with talking to the community nearby the power plant.
- The Lenders participated in the commercial opening ceremony of Banpong power plant, Ratchaburi Province.

5. Competitors

EGCO Group operates its business on a fair play basis, without taking advantage of its competitors in a wrongful way. It also provides beneficial opinions concerning regulations and standards for common operating procedures. No access to information of business partners and competitors is made in a dishonest way, nor is business partners' and competitors' reputation tarnished with false accusation. In 2018, EGCO Group had no dispute with any competitors.

6. Community and Society

EGCO Group gives priority to living in harmony with the community, thus emphasizing on participation in promotion and development of quality of life of communities surrounding the power plants and with regard to corporate participation in and demand from communities, covering the following areas:

- Support of local employment
- Promotion of learning among children and youth in communities
- Development of skills beneficial to occupation
- Promotion of community sanitation
- Development of public utilities
- Conservation of natural resources and environment

In 2018, EGCO Group carried out operations on responsibility for community through local employment. Over 90% of contractors and subcontractors were local labor. The Group also developed and implemented 89 projects for the betterment of the quality of life of communities nearby power plants in Thailand and overseas. They comprised 27 projects on promotion of learning among the youth, 11 projects on development of skills beneficial to occupation, 26 sanitation promotion projects, 17 projects on development of public utilities and other supports, and 8 projects on natural resources and environment preservation.

For social responsibility, EGCO Group promoted learning about energy and environment among the youth, as they are in the early ages suitable for learning and growing a sense of goodness, which will contribute to sustainable growth in the future. Besides EGCO Forest Youth Camp project undertaken since 1997 until present, in 2018, EGCO continuously conducted a 5-year project (2017-2021) titled, **"Youth Development"**, as part of the development of children and youth surrounding EGCO Group's power plants project covering 3 areas: youth sanitation promotion, learning and development of energy and environment skills, and awareness raising for energy and environment conservation, to reflect EGCO Group's commitment to participation in development of all communities where the Company operated its business in a continuous manner. In addition, EGCO also developed a **"Khanom Power Plant Learning Center"** project by turning Thailand's only power plant built on a large vessel assembled in Japan, of which the commercial operation contract had been expired, into the power learning center for youths and nearby communities. The learning center will open to visitors in 2019.

7. Business Partners

To be a good business partner, EGCO Group operates business based on fairness, transparency, and accountability by strictly observing the agreements entered into between parties and takes no advantage of partnership through wrongful acts. In 2018, EGCO Group held meetings and visited its partners' businesses to continuously exchange opinions and accept complaints and suggestions. The Company also organized activities to enhance relationships with its business partners such as field trips, and information exchange and team building activities. In 2018, EGCO Group had no dispute with any business partners.

8. Contractors / Subcontractors

EGCO Group places importance on good business partnership, and ensures equality and fairness for contractors/subcontractors. Meetings with contractors/subcontractors are held before starting operations to develop an understanding of scope of operations, work handover, and term of payment agreed upon by both parties, during the operations to ensure conformity to the contracts, and after the operations to conclude and hand over work as well as develop future joint operations. Throughout the operation period, EGCO Group is also open and responsive to opinions and suggestions for the achievement of goals as specified in the contracts.

In addition to placing importance on business cooperation, EGCO has engaged with contractors and suppliers to create understanding on good corporate governance principles by inviting to join a coalition of anti-corruption network alongside responsibility towards the community, society, environment, and all stakeholders through business partner activities and dissemination of “Code of Conduct for EGCO’s suppliers and contractors” for sustainable business operations according to EGCO’s guidelines. EGCO also organized the Supplier Day aiming to communicate with contractors and suppliers on EGCO Group’s commitment to transparent and fair procurement process. In 2018, EGCO Group had no dispute with any contractors/subcontractors.

9. Government Agencies

EGCO Group strictly abides by relevant laws and regulations, discloses complete information as required by laws as well as cooperates and establishes good relationships with government agencies at both national and local levels.

At national level, the Company supports joint operations in various areas such as arrangement of activities with the Ministry of Energy to diffuse knowledge in the field of power business and promote public benefits, cooperation with the Royal Forest Department and Department of National Parks, Wildlife and Plant Conservation under the Ministry of natural Resources and Environment in environmental conservation and restoration, and preservation of religious events with the Ministry of Energy.

For the operation with government agencies at local level, in 2018, EGCO Group always held a meeting with government agencies at local level. The meeting is run by the Community Participation Committee (Tri-party Committee) comprising government agencies, community representatives and company representatives. The issues addressed in the meeting included follow-up of construction progress and operations of power plants, environmental and community development operations, and acceptance of community opinions.

In addition, the Company invited government agencies, community leaders, and general public to visit 2 construction sites of cogeneration power plants, namely Banpong Utilities Co., Ltd., Banpong District, Ratchaburi Province and Klongluang Utilities Co., Ltd., Klongluang District, Pathum Thani Province.

The Company also collaborated with government agencies in community development in a continuous manner such as a collaboration with health promoting hospitals in subdistricts surrounding power plants to provide health check-ups and vocational skills training for the seniors to help them deal with loneliness and generate their own income, which can be considered as part of the development of quality of life of the communities.

The Company has made available channels for raising complaints, opinions and suggestions from government agencies at the local level via telephone number and email as announced in each area as well as via the Community Relations Department at Tel. 0 2998 5670-4 or also email: CR@egco.com.

10. Private Development Organizations

EGCO Group conducts business in full compliance with all applicable laws and regulations, and the least possible impact on the environment and community and takes part in caring for the environment and development of community as well as discloses information in a correct, complete, adequate and timely manner.

In 2018, private development organizations collaborated with Thai Conservation of Forest Foundation (TCOF) which was a charity organization founded and supported by EGCO to undertake projects such as a reforestation project to generate revenues project, an occupation development project, a watershed network project, a nature study trail development project in Chiang Mai province, a Thai Rak Pa Village project in Nakhon Sri Thammarat Province, a forest restoration project to maintain water springs in Chaiyaphum Province and a youth network project in Chiang Mai and Nakhon Sri Thammarat Provinces.

The channels for raising complaints, opinions and suggestions are made available at the headquarters.

Moreover, EGCO considers the media as instrumental to communicate with stakeholders and general public. The Company thus attaches importance to and gives cooperation by disseminating to the media news and information of the Company on a fact-based, equitable and timely basis and responding to the needs of the media. It also cooperates with the media in enhancing knowledge and understanding about electricity industry and business among the public on a consistent basis. EGCO Group's responsibility for and participation with the media is in 3 perspectives as below:

- **Dissemination of the organization's news and movements**

In 2018, EGCO held 2 sessions of press conference on its operating results, business direction and projects progress, 1 sessions of press interview with top executives, 1 natural resources preservation activity for the media, and 29 pieces of press releases, photo releases and articles. Issues and target groups of communication were, for instance, dissemination of information on operations to shareholders, investors, and the public; dissemination of corporate social responsibility information, especially the participation in youth sanitation promotion, support of learning and development of energy and environmental skills; and instilling of consciousness among youths of energy and environment value and participation in conservation efforts. In 2018, 1,103 pieces of news were released, of which 1,014 pieces were business-related, and 89 pieces were related to corporate social responsibility.

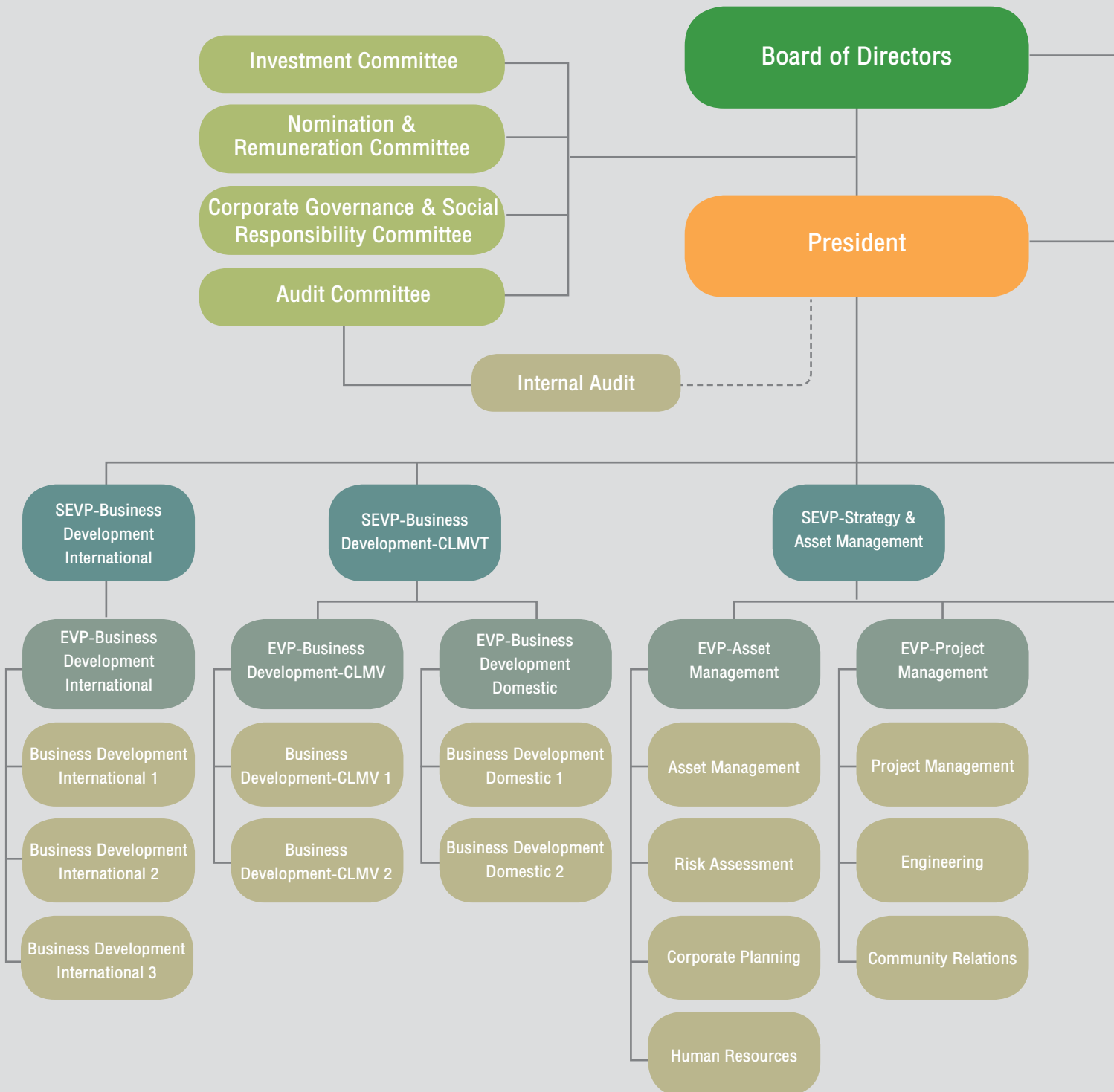
- **Media Relations activities**

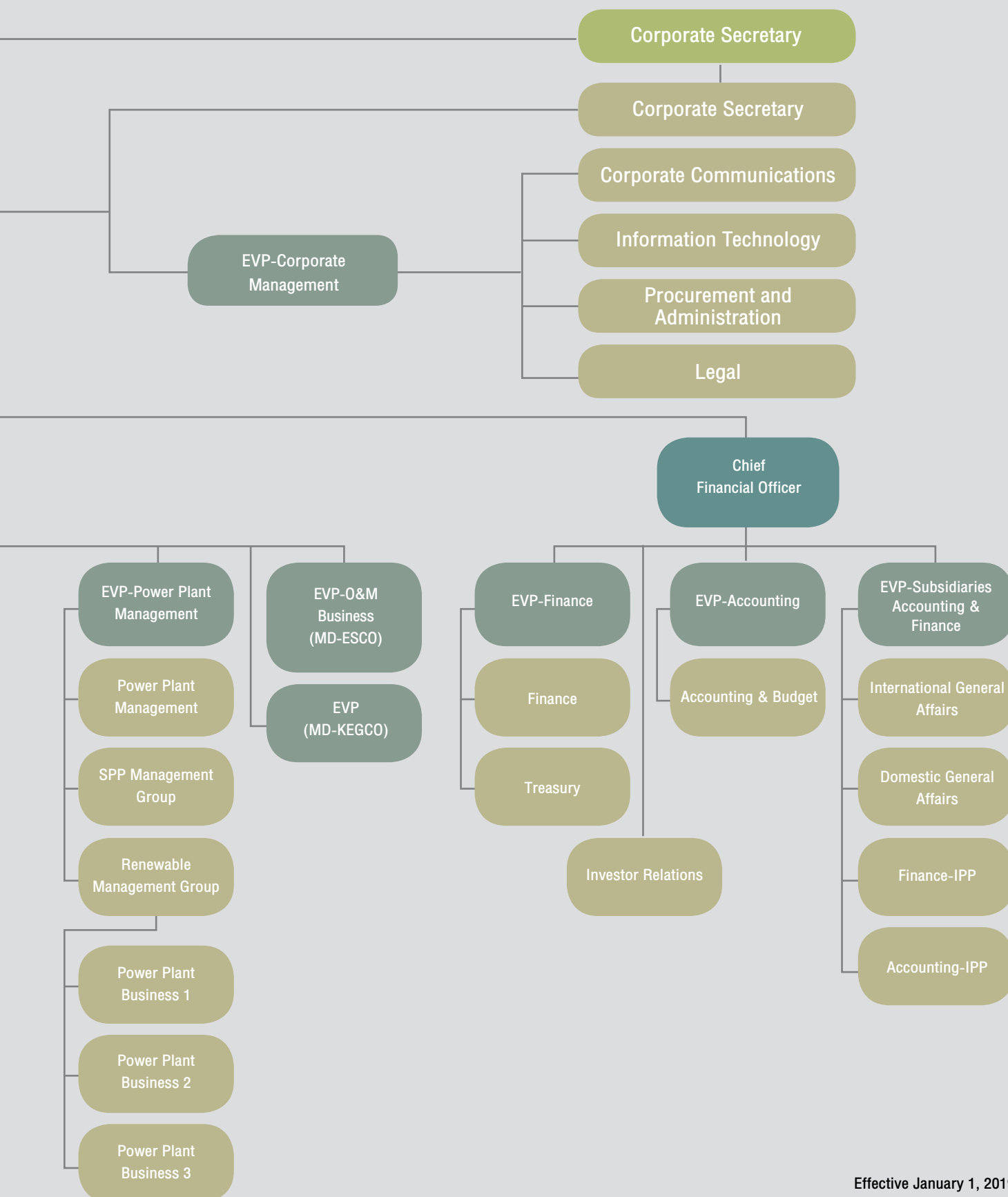
EGCO Group believes that good relationship will help gain trust, acceptance, and good cooperation. In 2018, EGCO Group enhanced relationship between the organization and the media through various activities, such as participating in New Year's party with the media, congratulating the media on their anniversary celebration occasions, and joining hands with the media in public contribution activities like charity golf tournament, etc.

- **Participation in development of the community and society**

Under the concept that each individual plays a role in creating good community and society, EGCO Group has supported social contribution activities initiated and undertaken by members of the press. In 2018, the Company supported 2 activities to promote knowledge and capability development of youth in remote areas.

EGCO's Organization Structure





Management Structure

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

1. 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.

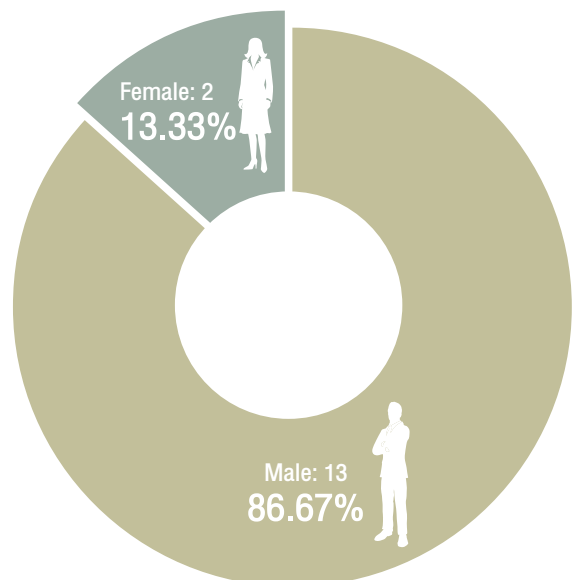
As of December 31, 2018, EGCO's Board comprises 15 directors as follows:

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

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:

- Diversity of gender

	Number	Percentage
Gender		
- Male	13	86.67
- Female	2	13.33
Total	15	100.00



- Diversity of expertise and experiences

Director	Educational Background & Expertise									
	Power Business/ Energy Business/ Engineering	Accounting/ Finance/ Economics	Law	Strategy/Business Planning	Corporate Governance	Internal Control	Enterprise Risk Management	HR Development	IT	Innovation
1. Mr. Witoon Kulcharoenwirat	✓			✓	✓		✓	✓		
2. Ms. Jaruwan Ruangswadipong		✓		✓	✓	✓	✓	✓		
3. Dr. Pasu Loharjun	✓			✓	✓			✓		
4. Assoc.Prof.Dr. Nualnoi Treerat		✓			✓					
5. Prof.Dr. Anya Khanthavit		✓		✓	✓	✓	✓			
6. Mr. Paisan Mahapunnaporn	✓		✓	✓	✓	✓	✓	✓		
7. Assoc.Prof.Dr. Bordin Rassameethes	✓				✓				✓	✓
8. Mr. Wisak Watanasap	✓			✓	✓		✓			
9. Mr. Nikul Silasuwan	✓			✓	✓	✓	✓			
10. Mr. Patana Sangsriroj	✓			✓	✓					✓
11. Mr. Shunichi Tanaka	✓			✓	✓			✓		
12. Mr. Yoichiro Matsumoto	✓		✓	✓	✓					
13. Mr. Hiromi Sakakibara	✓			✓	✓					
14. Mr. Takao Onuki	✓				✓					
15. Mr. Jakgrich Pibulpairoj	✓			✓	✓			✓		
Total Number	12	3	2	12	15	4	6	6	1	2

The Board and their share ownership in EGCO as of December 31, 2018 are as listed below:

Name	Appointment Date	No. of shares		
		Director	Spouse/ Minor Child	Increase/Decrease (Jan 1 - Dec 31, 2018)
1. Mr. Witoon Kulcharoenwirat Chairman	Apr 19, 2018	-	-	-
2. Ms. Jaruwan Ruangswadipong Independent Director	Apr 20, 2016	-	-	-
3. Dr. Pasu Loharjun Independent Director	Apr 19, 2018	-	-	-
4. Assoc.Prof.Dr. Nualnoi Treerat Independent Director	Apr 19, 2018	-	-	-
5. Prof.Dr. Anya Khanthavit Independent Director	Apr 19, 2017	-	-	-

Name	Appointment Date	No. of shares		
		Director	Spouse/ Minor Child	Increase/Decrease (Jan 1 - Dec 31, 2018)
6. Mr. Paisan Mahapunnarn Independent Director	Apr 19, 2017	-	-	-
7. Assoc.Prof.Dr. Bordin Rassameethes Independent Director	Apr 19, 2018	-	-	-
8. Mr. Nikul Silasuwan Director	May 1, 2018	-	-	-
9. Mr. Patana Sangsrisoujana Director	Oct 1, 2018	-	-	-
10.Mr. Wisak Watanasap Director	Apr 19, 2018	-	-	-
11.Mr. Shunichi Tanaka Director	Apr 20, 2016	-	-	-
12.Mr. Yoichiro Matsumoto Director	May 26, 2017	-	-	-
13.Mr. Hiromi Sakakibara Director	Aug 1, 2016	-	-	-
14.Mr. Takao Onuki Director	Jan 1, 2018	-	-	-
15.Mr. Jakgrich Pibulpairoj President	Oct 1, 2017	-	-	-

The list of directors who retired and resigned in 2018 - January 31, 2019 and their share ownership in EGCO are as shown below:

Name	Resigning/ Retiring Date	No. of shares		
		Director	Spouse/ Minor Child	Increase/Decrease (Jan 1, 2018 - Jan 31, 2019)
1. Mr. Ken Matsuda Director	Jan 1, 2018	-	-	-
2. Mr. Sombat Sarntijaree Chairman	Apr 19, 2018	-	-	-
3. Assoc.Prof.Dr. Chotchai Charoenngam Independent Director	Apr 19, 2018	-	-	-
4. Mr. Kornrasit Pakchotanon Director	May 1, 2018	-	-	-
5. Mr. Saharath Boonpotipukdee Director	Oct 1, 2018	-	-	-

(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 filing 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.

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 investment projects, 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.

(3) Chairman

Mr. Witoon Kulcharoenwirat, a representative director of the Electricity Generating Authority of Thailand ("EGAT") is appointed to be the Chairman with his proven knowledge and experiences in energy sector for a long time as EGAT Chairman and his 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. 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.
3. 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 result of the Board's performance appraisal in 2018 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 EGCO'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 specialists to provide in-depth information or take any related actions for the Company in case of the issues affecting significantly 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.

2. Standing Committee

In order to well perform its responsibilities to the shareholders, the Board considers and put in place essential business policy and schedule its meeting monthly except in some circumstances the Board shall call a meeting as a special case or assign the following 4 standing committees (1) Audit Committee, (2) Investment Committee (3) Nomination and Remuneration Committee, and (4) 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 2018, the Board and all sub-committee had reviewed their charters and opined that the Audit Committee charter covered all facets so the revision was not necessary whereas the charters of Nomination and Remuneration Committee, Investment Committee, and Corporate Governance and Corporate Social Responsibility were revised to cover monitoring the corporate risk levels within the levels designated by the Board with effect on January 1, 2019 onwards.

Audit Committee: comprises 3 independent directors. Its mission covers the review of the financial statements, legal compliance, risk management policy, internal control and internal audit systems and appointment 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. In 2018, the responsibilities of the Audit Committee were reviewed and revised as mentioned earlier and the responsibilities of the Audit Committee were described below:

1. Review the accuracy and adequacy of EGCO's financial reporting,
2. Review the appropriateness and effectiveness of 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 EGCO's compliance with Securities and Exchange Acts and Regulations of the SET and any other laws relevant to EGCO's business,
5. Recommend to the Board of Directors the appointment and removal of an independent person to be EGCO'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 EGCO and subsidiaries 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 EGCO,
10. Review EGCO's regulations 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. Review with the Management the preparation of the Management's Discussion and Analysis or MD&A and the disclosure in Annual Report,
14. Review with the Management the risk management policy, the practice compliance with such policy, EGCO's risk management guidelines, as well as consider potential risks and preventive measures of relevant risks including supervise risk levels to comply with the risk levels designated by the Board of Directors,
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's 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. Oversee the Company's practice to ensure that the Company follows the Anti-Corruption measures, review the related measures and internal control,
18. Review reported concerns about fraud or corruption,
19. Review the Audit Committee Charter and conduct 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 directly accountable to EGCO Board of Directors whereas the Board of Directors remains responsible to third persons for the operation of the Company.

Nomination and Remuneration Committee: comprises 5 non-executive directors, 3 of whom are independent directors. NRC appointed Mr. Shunichi Tanaka, 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. Establishment, review, and revision of the Company's regulation on human resource management
2. Establishment, review, and revision of the Nomination and Remuneration Committee Charter
3. Organization restructure of EGCO and EGCO Group's companies in which EGCO has management control (Senior Vice Presidents (SVP) upward)
4. Company's annual manpower planning
5. Structure and composition of the Board of Directors and committees together with the qualifications of their members
6. Recommendation of the list of nominees for the Board of Directors in case of vacancies by rotation and/or in case of casual vacancies
7. Remuneration structure, including meeting allowance, annual bonus, welfare, and other benefits in cash and in kind of EGCO Board of Directors and Board of Directors of EGCO Group's companies in which EGCO has management control
8. Board of Directors assessment form
9. Appointment of EGCO representative directors in EGCO Group's companies and joint venture companies based on the equity proportion or shareholders' agreements
10. Providing the policy on employees' remuneration structure and other benefits in cash and in kind to the representative directors of EGCO Group's companies in which EGCO has management control
11. Scrutiny of the list of nominees for EGCO President in case of vacancy
12. Appointment, promotion, rotation and removal of the Senior Executive Vice Presidents ("SEVP"), Executive Vice Presidents ("EVP") of EGCO and Corporate Secretary
13. Performance evaluation of EGCO President and SEVPs who are contract employees to renew or terminate the contract, and increase salary and determine bonus

14. Performance evaluation of SEVPs who are permanent employees, EVPs and Corporate Secretary to determine remuneration
15. Employees' remuneration structure and other benefits in cash and in kind
16. Corporate bonus criteria
17. Determination of bonus-linked KPI to decide bonus for EGCO and EGCO Group's companies in which EGCO has management control
18. Determination of annual bonus and special bonus
19. Budget for annual salary increase rate of the employees
20. Succession plans of EGCO's EVP upward
21. Early retirement program for the employees of EGCO and EGCO Group's companies in which EGCO has management control
22. Risks associated with human resource management, including preventive measures and mitigations of relevant risks
23. Other issues as assigned by the Board of Directors

Investment Committee: comprises 5 directors and has the responsibility to screen and consider the Management's proposals, especially on 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 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. Establishment, review, and revision of the Company's regulations and principles regarding investment, asset management and financial management
2. Establishment, review, and revision of the Investment Committee Charter
3. Company's strategic plan, business plan, action plan and annual budget
4. Determination of the Corporate KPI, monitoring progress, and assessment of the Corporate KPI
5. Increase or reduction of the registered capital
6. Acquisition, investment, and divestment of Company's assets
7. Operation of the Company's project and asset management pursuant to Regulation on Principle of Arm-Length Relation with Subsidiary, Affiliate, and Joint-Venture companies
8. Funding of EGCO
9. Financial management, profit allocation and significant financial transactions
10. Financial investment outside the Treasury Management Guidelines
11. Procurement and Disposal Material Management
12. Risks associated with investment and finance, including preventive measures and mitigations of relevant risks
13. Other issues as assigned by the Board of Directors 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. The Chairman of the Committee shall be an independent director. 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 policy and practice for the Board's approval
2. Endorse objectives and annual plans, to be in line with the strategic plan, for the Board's approval
3. Encourage and support the compliance of directors, executives and employees with the policy, practices, objectives and plans of CG, CSR and Anti-Corruption
4. Oversee, monitor and appraise the performance to comply with the policy, practices, objectives and approved plans
5. Regularly review and revise CG, CSR and Anti-Corruption policy and practices by comparing to the international standard, and endorse for the Board's approval in order to promote continuous improvement and development
6. Oversee the assessment of Anti-Corruption risks and risk mitigation

Table: Meeting Attendance of the Board of Directors

Name	Meeting Attendance in 2018 (number of times)					
	Board Meeting (12 times)	Non-Executive Director Meeting (1 time)	Audit Committee (14 times)	Investment Committee (11 times)	Nomination and Remuneration Committee (7 times)	Good Corporate Governance and Corporate Social Responsibilities Committee (5 times)
1. Mr. Witoon Kulcharoenwirat ¹	9/9	1/1		8/8		
2. Ms. Jaruwan Ruangswadipong	12/12	1/1	14/14			
3. Dr. Pasu Loharjun ²	8/9	-/1			5/5	4/4
4. Assoc.Prof.Dr. Nualnoi Treerat	11/12	-/1			7/7	5/5
5. Prof.Dr. Anya Khanthavit	12/12	1/1	14/14			
6. Mr. Paisan Mahapunnaporn	12/12	1/1	14/14			
7. Assoc.Prof.Dr. Bordin Rassameethes	10/12	1/1			6/7	4/5
8. Mr. Nikul Silasuwan ³	8/8	1/1		8/8		
9. Mr. Patana Sangsriroujana ⁴	1/3	-/1			1/2	
10. Mr. Wisak Watanasap	12/12	1/1				5/5
11. Mr. Shunichi Tanaka	12/12	1/1		3/3	6/7	
12. Mr. Yoichiro Matsumoto	12/12	1/1		8/8		
13. Mr. Hiromi Sakakibara	12/12	1/1				

Name	Meeting Attendance in 2018 (number of times)					
	Board Meeting (12 times)	Non-Executive Director Meeting (1 time)	Audit Committee (14 times)	Investment Committee (11 times)	Nomination and Remuneration Committee (7 times)	Good Corporate Governance and Corporate Social Responsibilities Committee (5 times)
14. Mr. Takao Onuki	12/12	1/1		11/11		
15. Mr. Jakgrich Pibulpairoj	12/12			11/11		5/5
16. Mr. Sombat Sarntijaree ^{/5}	3/3			3/3		
17. Assoc.Prof.Dr. Chotchai Charoenngam ^{/6}	3/3				2/2	1/1
18. Mr. Kornrasit Pakchotanon ^{/7}	4/4			2/3		
19. Mr. Saharath Boonpotipukdee ^{/8}	9/9				4/5	

Remarks : ^{/1} and ^{/2} appointed on April 19, 2018

^{/3} Appointed on May 1, 2018

^{/4} Appointed on October 1, 2018

^{/5} and ^{/6} retired on April 19, 2018

^{/7} Resigned on May 1, 2018

^{/8} Resigned on October 1, 2018

In 2018, the Board held 12 meetings, with 96.67% of the Board of Directors attending. Individually, each director attended more than 94.68% of the total number of meeting.

3. 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 organization structure was approved by the Board in the meeting no. 10/2016 with effect on January 1, 2019, 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 - (CLMVT):** this group is headed by a Senior Executive Vice President - Business Development - CLMVT (SEVP-CLMVT). Under the SEVP-CLMV, there are two Executive Vice Presidents (EVPs) as follows:
 - (1) Executive Vice President - Business Development - CLMV
 - (2) Executive Vice President - Business Development - Domestic
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. **Strategy and Asset Management Group:** this group is headed by a Senior Executive Vice President - Strategy and Asset Management (SEVP-SAM) 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:** an EVP-Corporate Management supervises Corporate Communications Division, Information Technology Division, Legal Division, and Procurement and Administration 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 at January 31, 2019 is as follows:

Name	Title	No. of shares		
		Management	Spouse/ Minor Child	Increase/ Decrease (Jan 1, 2018 - Jan 31, 2019)
1. Mr. Jakgrich Pibulpairoj	President	-	-	-
2. Mr. John Palumbo	Senior Executive Vice President- Business Development - International	-	-	-
3. Mr. Danuja Simasathien	Chief Financial Officer	-	-	-

Name	Title	No. of shares		
		Management	Spouse/ Minor Child	Increase/ Decrease (Jan 1, 2018 - Jan 31, 2019)
4. Mr. Gumpanart Bumroonggit	Senior Executive Vice President - Strategy & Asset Management	-	-	-
5. Mr. Suvapan Chomchalem	Executive Vice President - Accounting	-	-	-
6. Ms. Somsiri Yoosook	Executive Vice President - Finance	-	-	-
7. Mr. Somkiat Suttiwanich	Executive Vice President - Subsidiaries Accounting and Finance	-	-	-
8. Mr. Amornrat Debhasdin Na Ayudhya	Senior Vice President - Accounting and Budget	-	-	-
9. Ms. Ploy Suksrisomboon	Senior Vice President - International General Affairs Management	-	-	-
10. Mr. Surasak Ganjanakit	Senior Vice President - Domestic General Affairs Management	-	-	-

The list of Management who retired in 2018.

Name	Title	No. of shares		
		Management	Spouse/ Minor Child	Increase/ Decrease (Jan 1 - Dec 31, 2018)
1. Mr. Niwat Adirek	Senior Executive Vice President - Business Development CLMVT	-	-	-

4. 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 2018, 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.

5. Director and Management Remuneration

EGCO sets the policy to reward directors and management with appropriate remuneration. In this regards, 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 2018, 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. 2017 bonus of 25 million baht approved by the shareholders in the 2018'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, 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
Corporate Governance and Corporate Social Responsibility Committee	-	24,000

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 2018 is summarized below:

Name	Board of Director	Standing Committee				Bonus	Total Remuneration
		AC	IC	NRC	CC		
1. Mr. Witoon Kulcharoenwirat	426,875.00	-	404,924.72	-	-	-	831,799.72
2. Ms. Jaruwan Ruangswadipong	480,000.00	650,000.00	-	-	-	1,754,385.96	2,884,385.96
3. Dr. Pasu Loharjun	331,500.00	-	-	267,666.67	120,000.00	-	719,166.67
4. Assoc.Prof.Dr. Nualnoi Treerat	470,000.00	-	-	380,000.00	120,000.00	586,397.50	1,556,397.50
5. Prof.Dr. Anya Khanthavit	480,000.00	520,000.00	-	-	-	1,232,876.71	2,232,876.71
6. Mr. Paisan Mahapunnaporn	480,000.00	520,000.00	-	-	-	1,232,876.71	2,232,876.71
7. Assoc.Prof.Dr. Bordin Rassameethes	460,000.00	-	-	360,000.00	72,000.00	317,231.43	1,209,231.43
8. Mr. Nikul Silasuwan	320,000.00	-	320,000.00	-	-	-	640,000.00
9. Mr. Patana Sangsriroj	100,000.00	-	-	80,000.00	-	-	180,000.00
10. Mr. Wisak Watanasap	480,000.00	-	-	-	120,000.00	-	600,000.00
11. Mr. Shunichi Tanaka	480,000.00	-	132,333.33	450,000.00	-	1,754,385.96	2,816,719.29
12. Mr. Yoichiro Matsumoto	480,000.00	-	327,666.67	-	-	793,078.60	1,600,745.27
13. Mr. Hiromi Sakakibara	480,000.00	-	-	-	-	1,754,385.96	2,234,385.96
14. Mr. Takao Onuki	480,000.00	-	460,000.00	-	-	-	940,000.00
15. Mr. Jakgrich Pibulpairoj	-	-	-	-	-	-	-

The summary of remuneration of retired and resigned directors during 2017-2018 is as follow:

Name	Retirement/ Resigning Date	Number of months in service		Meeting Atten- dance (12 times/ year)	Total Remuneration in 2015			Total Remuneration
					Monthly Retainer and Meeting Allowance		Bonus ¹	
		2016	2017		Director	Standing Committee		
1. Mr. Somphot Kanchanaporn	Apr 19, 2017	4	-	-	-	-	521,509.25	521,509.25
2. Mr. Bandhit Sothipalalit	Apr 19, 2017	4	-	-	-	-	521,509.25	521,509.25
3. Mr. Thanapich Mulapruk	May 5, 2017	5	-	-	-	-	596,010.57	596,010.57
4. Mr. Yasuo Ohashi	May 26, 2017	5	-	-	-	-	696,947.85	696,947.85
5. Mr. Pongstorn Kunanusorn	Oct 1, 2017	10	-	-	-	-	1,312,184.57	1,312,184.57
6. Mr. Chanin Chaonirattisai	Oct 1, 2017	10	-	-	-	-	-	-
7. Mrs. Puangthip Silpasart	Dec 1, 2017	11	-	-	-	-	1,605,383.32	1,608,383.32
8. Mr. Ken Matsuda	Jan 1, 2018	12	-	-	-	-	1,754,385.96	1,754,385.96
9. Mr. Sombat Samtijaree	Apr 19, 2018	12	3	3	173,125.00	165,416.67	2,192,982.46	2,531,524.13
10. Assoc.Prof.Dr. Chotchai Charoenngam	Apr 19, 2018	12	3	3	138,500.00	142,333.33	1,754,385.96	2,035,219.29
11. Mr. Kornrasit Pakchotanon	May 1, 2018	12	4	4	160,000.00	120,000.00	1,754,385.96	2,034,385.96
12. Mr. Saharath Boonpotipukdee	Oct 1, 2018	12	9	9	360,000.00	260,000.00	1,754,386.96	2,374,385.96

Remarks ¹ Bonus of Board of Directors in 2017 was paid in May 2018 as resolved by the Shareholders in the Annual General Meeting for year 2018.

(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.

6. 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 Management's remuneration defined by SEC for 2018 is shown below:

Remuneration	2018
	Management (5 persons) ^{/1}
Total Salary	36,446,520.00
Bonus ^{/2}	13,380,185.78
Provident Fund	3,461,011.22
Total	53,287,717.00

^{/1} 5 executives as defined by SEC are (1) President (2) SEVP - BDI (3) SEVP - CLMVT (4) CFO (5) SEVP - SAM

^{/2} The 2017 bonus was paid in January 2018.

(2) Total Remuneration of Core Subsidiaries' Management

In 2018, 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. (PEPOI) from the commercial operation date (COD).

7. EGCO and Core Subsidiaries' Employees

In 2018, EGCO Group had 366 headcounts, 251 of which were EGCO employees while 115 people worked for subsidiaries namely KEGCO and BPU.

As of December 31, 2018, EGCO has 251 headcounts which include the President, 4 Senior Executive Vice Presidents. The number of employees in each reporting line of EGCO and numbers of subsidiaries' employees are as shown below:

Business Group	No. of Employees (person)
1. President	34
2. Business Development - International	7
3. Business Development - CLMVT	16
4. Strategy and Asset Management	78
5. Accounting and Finance	116
Total of EGCO	251
Subsidiaries' Employees	115
Total	366

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

8. EGCO and 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 subsidiaries' employees in year 2018 is as shown below.

(Unit : Baht)

Remuneration	Amount	
	EGCO	Subsidiaries
Total Salary	287,214,073.61	168,617,778.11
Bonus ^{/1}	157,098,834.96	61,025,066.59
Provident Fund	27,093,037.75	16,549,727.28
Total	471,405,946.32	246,192,571.98

^{/1} The 2017 bonus was paid in January 2018.

Human resource development policy is disclosed in Sustainable Business Operation.

EGCO's Board of Directors

as of December 31, 2018



01

**Mr. Witoon
Kulcharoenwirat**

- Chairman
- Chairman of Investment Committee



02

**Ms. Jaruwan
Ruangswadipong**

- Lead Independent Director
- Chairman of Audit Committee



03

**Assoc. Prof. Dr. Nualnoi
Treerat**

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



04

Prof. Dr. Anya Khanthavit

- Independent Director
- Member of Audit Committee



05

**Mr. Paisan
Mahapunnaporn**

- Independent Director
- Member of Audit Committee



06

07

08

09

10

Dr. Pasu Loharjun

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

Assoc. Prof. Dr. Bordin Rassameethes

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

Mr. Nikul Silasuwan

- Director
- Member of Investment Committee

Mr. Patana Sangsriroujana

- Director
- Member of Nomination and Remuneration Committee

Mr. Wisak Watanasap

- Director
- Member of Corporate Governance and Social Responsibility Committee



11

Mr. Shunichi Tanaka

- Director
- Chairman of Nomination and Remuneration Committee



12

Mr. Yoichiro Matsumoto

- Director
- Member of Investment Committee



13

Mr. Takao Onuki

- Director
- Member of Investment Committee



14

Mr. Hiromi Sakakibara

- Director



15

Mr. Jakgrich Pibulpairoj

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

EGCO's Board of Directors

who Vacated the Office during the Year 2018



01

Mr. Sombat Sarntijaree

- Chairman
- Chairman of Investment Committee
(Retired by rotation in 2018 AGM on April 19, 2018)



02

Assoc. Prof. Dr. Chotchai Charoenngam

- Independent Director
- Chairman of Corporate Governance and Social Responsibility Committee
- Member of Nomination and Remuneration Committee
(Retired by rotation in 2018 AGM on April 19, 2018)



03

Mr. Kornrasit Pakchotanont

- Director
- Member of Investment Committee
(Resigned with effect on May 1, 2018)



04

Mr. Saharath Boonpotipukdee

- Director
- Member of Nomination and Remuneration Committee
(Resigned with effect on October 1, 2018)

EGCO's Board of Directors as of December 31, 2018

Mr. Witoon Kulcharoenwirat (60)

- Chairman
- Chairman of Investment Committee
(Authorized Director)
(Appointed with effect on April 19, 2018)

Education

- Master of Safety Engineering, Kasetsart University
- Master of Transportation Engineering, Chulalongkorn University
- Bachelor of Civil Engineering, Chiang Mai University
- Certificate of Director Certification Program, Thai Institute of Directors Association
- Certificate of Role of Chairman Program, Thai Institute of Directors Association
- Project Acquisition Program, PricewaterhouseCoopers ABAS Ltd.

Working Experience during the recent 5 years

Mar 2018 - Present	Chairman Electricity Generating Authority of Thailand
2014 - Sep 2018	Director General Department of Energy Business, Ministry of Energy
2015 - Apr 2018	Director Ratchburi Electricity Generating Holding PCL.
2015 - Feb 2018	Director Electricity Generating Authority of Thailand
2013 - 2014	Deputy Director General Department of Energy Business, Ministry of Energy

Ms. Jaruwan Ruangswadipong (63)

- Lead Independent Director
- Chairman of Audit Committee

Education

- MBA (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 Director Certification Program,
Thai Institute of Directors Association
- IT Governance for Directors Program,
Thai Institute of Directors Association
- Risk Management: Issues for Boards Program,
Thai Institute of Directors Association
- CG Code Update Program,
PricewaterhouseCoopers ABAS Ltd.
- Project Acquisition Program,
PricewaterhouseCoopers ABAS Ltd.

Working Experience during the recent 5 years

Jun 2017 - Present	Director and Secretary General Federation of Accounting Professions
2017	Senior Capacity Development Consultant German Society for International Cooperation (GIZ)
2013 - 2015	Executive Director and Member of Audit Committee Asian Institute of Technology (AIT)
2015	Inspector General Office of the Auditor General of Thailand

Assoc. Prof. Dr. Nualnoi Treerat (58)

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

Education

- Ph.D. in Economics, Australian National University,
Australia
- Master of Economics of Development,
Australian National University, Australia
- Bachelor of Economics (Hons.), Thammasat University
- Certificate of Director Certification Program,
Thai Institute of Directors Association

Working Experience during the recent 5 years

2014 - Present	Director of Institute of Asian Studies Chulalongkorn University
1985 - Present	Lecturer, Faculty of Economics Chulalongkorn University

Prof. Dr. Anya Khanthavit (56)

- Independent Director
- Member of Audit Committee

Education

- Ph.D. in International Business and Finance, Stern School of Business New York University, USA
- Master of Philosophy in International Business and Finance, Stern School of Business New York University, USA
- Master of Science (Hons.) in Transportation Management, Stern School of Business New York University, 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
- Risk Management: Issues for Boards Program, Thai Institute of Directors Association
- Senior Executive Program, the Capital Market Academy
- CG Code Update Program, PricewaterhouseCoopers ABAS Ltd.
- Strategic Board Master Class Program, Thai Institute of Directors Association

Working Experience during the recent 5 years

Listed Companies in SET

- | | |
|----------------|---|
| 2017 - Present | Director
Kiatnakin Bank PCL. |
| 2012 - Present | Member of Risk Management
Committee
Kiatnakin Bank PCL. |
| 2012 - 2017 | Risk Management Advisor
Kiatnakin Bank PCL. |

Other Organizations

- | | |
|----------------|--|
| 2018 - Present | Director
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
Member of Public Services Subsidy
Board
Ministry of Finance |
| 2012 - Present | Member of the Risk Management
Sub-committee
The Stock Exchange of Thailand |
| 2008 - Present | Professor of Banking and Finance
(Level 11)
Thammasat University |
| 2005 - Present | Member of the Performance
Assessment Committee for State
Enterprises
Ministry of Finance |
| 2002 - Present | Founding Director
Sangvien Foundation |
| 2001 - Present | Member of the Sub-committee on
the Monitoring of Co-operative
Financial Problems
Office of the National and
Anti-Corruption Commission |
| 2016 - 2017 | Director
Thailand Tobacco Monopoly,
Ministry of Finance |
| 2014 - 2018 | Chairman of Audit Committee and
Risk Management Committee
Government Pharmaceutical
Organization |
| 2014 - 2017 | Member of Policy and Public Debt
Management Committee
Ministry of Finance |
| 2012 - 2018 | |

Mr. Paisan Mahapunnaporn (55)

- Independent Director
- Member of Audit Committee

Education

- Master of Laws, Chulalongkorn University
- Bachelor of Laws, Chulalongkorn University
- Certificate of Director Certification Program, Thai Institute of Directors Association
- Risk Management: Issues for Boards Program, Thai Institute of Directors Association
- ASEAN Business and Investment Law Program
- CG Code Update Program, PricewaterhouseCoopers ABAS Ltd.
- ID Forum Program (Tough boardroom situations-ID share lessons learned), Thai Institute of Directors Association
- Corporate Responsibilities and Practices in Anti-Corruption, Faculty of Law, Chulalongkorn University
- Project Acquisition Program, PricewaterhouseCoopers ABAS Ltd.

Working Experience during the recent 5 years

Listed Companies in SET

2011 - 2017 Consultant EMC PCL.

Other Organizations

2016 - Present Director and Member of Audit Committee
Masstec Link Co. Ltd.

2015 - Present Consultant V Food Group

2010 - Present Consultant Piyasombat Group

2011 - 2016 Consultant Green Road Co., Ltd.

2011 - 2016 Consultant Metro Group

2011 - 2016 Consultant
Best Care International Co., Ltd.

2011 - 2016 Specialist The Senate

2011 - 2016 Specialist The Parliament

2011 - 2016 Specialist
The National Legislative Assembly

Dr. Pasu Loharjun (59)

- Independent Director
- Chairman of Corporate Governance and Social Responsibility Committee
- Member of Nomination and Remuneration Committee (Appointed with effect on April 19, 2018)

Education

- Ph.D. in Industrial Engineering and Operations research, Virginia Polytechnic Institute and State University, USA
- Master of Industrial Engineering, Polytechnic Institute of New York, USA
- Bachelor in Electrical Engineering, Chulalongkorn University
- Top Executive Program, Capital Market Academy
- CG Code Update Program, PricewaterhouseCoopers ABAS Ltd.

Working Experience during the recent 5 years

Listed Companies in SET

2015 - Present Chairman
General Environmental
Conservation PCL

Other Organizations

2017 - Present Permanent Secretary
Ministry of Industry

2016 Director General
Department of Industrial Promotion

2014 Director General
Department of Industrial Works

Assoc. Prof. Dr. Bordin Rassameethes (52)

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

Education

- Ph.D. in Management of Technology, Vanderbilt University, USA
- Master of Science in Management, North Carolina State University, USA
- Bachelor of Computer Science, University of Miami, USA
- CG Code Update Program, PricewaterhouseCoopers ABAS Ltd.

Working Experience during the recent 5 years

1993 - Present	Lecturer and Associate Professor Faculty of Business Administration, Kasetsart University
1993 - Present	Consultant for Research Projects Governance Official Units
2015	Acting Vice President Kasetsart University
2013 - 2015	Vice President Kasetsart University, Sri Racha Campus

Mr. Nikul Silasuwan (59)

- Director
- Member of Investment Committee
(Authorized Director)
(Appointed with effect on May 1, 2018)

Education

- Bachelor of Mechanical Engineering, Chiang Mai University
- The Executive Program of Energy Literacy for a Sustainable Future, Thailand Energy Academy
- Public Government Management and Public Law, King Prajadhipok's Institute
- Certificate of Director Certification Program, Thai Institute of Directors Association
- Business Leadership Development, Cornell University
- Strategy 2016 - 2020, Electricity Generating Authority of Thailand
- CG Code Update Program, PricewaterhouseCoopers ABAS Ltd.
- Project Acquisition Program, PricewaterhouseCoopers ABAS Ltd.

Working Experience during the recent 5 years

Jan 2017 - Present	Director District Cooling System and Power Plant Co., Ltd (DCAP)
Oct 2018 - Present	Deputy Governor-Office of the Governor Electricity Generating Authority of Thailand
Oct 2017 - Oct 2018	Director EGAT Diamond Service Co., Ltd.
Oct 2016 - Sep 2018	Deputy Governor-Generation Electricity Generating Authority of Thailand
Oct 2014 - Sep 2016	Assistant Governor-Generation 2 Electricity Generating Authority of Thailand
Oct 2012 - Sep 2014	Director, Nam Phong Power Plant Electricity Generating Authority of Thailand

Mr. Patana Sangsrirojana (58)

- Director
- Member of Nomination and Remuneration Committee (Authorized Director)
(Appointed with effect on October 1, 2018)

Education

- Master of Public and Private Management Program, National Institute of Development Administration
- Bachelor of Engineering (Electrical Engineering), 2nd Class Honors, King Mongkut's Institute of Technology Thonburi, Thailand
- Certificate of Director Certification Program, Thai Institute of Directors Association
- Advanced Oral Communication Course : AOCC (Class 13), Devawongse Voropakarn Institute of Foreign Affairs
- Politics and Governance in Democratic Systems for Executives, King Prajadhipok's Institute
- Executive Energy Management Program, Ministry of Energy
- Smart Marketing for Digital Economy, Institute of Research and Development for Public Enterprises
- National Security Management for Senior Executive, National Intelligence Agency
- PURC, Advanced Program, Public Utility Research Center, USA

Working Experience during the recent 5 years

Oct 2018 - Present	Deputy Governor-Strategy Electricity Generating Authority of Thailand
2018 - Present	Director District Cooling System and Power Plant Co., Ltd (DCAP)
Nov 2017 - Sep 2018	Deputy Governor-Policy and Planning Electricity Generating Authority of Thailand
Oct 2016	Assistant Governor-Transmission System Maintenance Electricity Generating Authority of Thailand

Mr. Wisak Watanasap (59)

- Director
- Member of Corporate Governance and Social Responsibility Committee
(Appointed with effect on January 1, 2018)

Education

- Master of Public Administration Program (MPA), Graduate School of Public Administration, National Institute of Development Administration
- Bachelor of Business Administration, Sukhothai Thammathirat Open University
- Bachelor of Engineering Program in Civil Engineering, Khon Kaen University
- Energy Literacy for a sustainable Future TEA, Thailand Energy Academy
- National Defense Course Class, National Defense College
- ICT Management for Non-ICT Executive NIT, NECTEC Academy
- Certificate of Director Certification Program, Thai Institute of Directors Association

Working Experience during the recent 5 years

Oct 2017 - Present	Inspector General Ministry of Energy
Nov 2014 - Sep 2017	Deputy Directors General, Department of Energy Business Ministry of Energy
Sep 2014 - Nov 2014	Director Division of Energy, Department of Energy Business Ministry of Energy
Dec 2008 - Aug 2014	Director Bureau of Strategic Management, Department of Energy Business Ministry of Energy

Mr. Shunichi Tanaka (53)

- Director
- Chairman of Nomination and Remuneration Committee
(Authorized Director)

Education

- Master of Agricultural Civil Engineering,
Kyushu University Graduate School, Japan

Working Experience during the recent 5 years

Apr 2014 - Present Chief Executive Officer
Diamond Generating Asia, Limited

Apr 2014 - Present Managing Director
TEPDIA Generating B.V.

Jun 2012 - Mar 2014 Power Project Development
in Domestic Market,
New Energy Business
Development Japan Team,
New Energy & Power
Generation Division,
Mitsubishi Corporation

Mr. Yoichiro Matsumoto (41)

- Director
- Member of Investment Committee
(Authorized Director)

Education

- Bachelor of Laws, Kyushu University, Japan
- Building on Talent Program, IMD (Switzerland)
- CG Code Update Program,
PricewaterhouseCoopers ABAS Ltd.

Working Experience during the recent 5 years

May 2017 - Present Director
Khanom Electricity Generating
Co., Ltd.

Apr 2014 - Present Manager of Asset Management
Diamond Generating Asia,
Limited

Jan 2012 - Mar 2014 Manager of Strategic Planning
Unit, Global Environmental &
Infrastructure Business Group
CEO Office
Mitsubishi Corporation

Mr. Takao Onuki (58)

- Director
- Member of Investment Committee
(Authorized Director)
(Appointed with effect on January 1, 2018)

Education

- Bachelor of Economics, Keio University, Japan

Working Experience during the recent 5 years

Jul 2017 - Present	Director, Business Development JERA Energy Development Asia Pte., Ltd.
Jul 2016 - Sep 2017	General Manager, Fukushima Revitalization Headquarters Tokyo Electric Power Company, Inc. (TEPCO)
Jul 2013 - Jun 2016	Chief Representative and General Manager TEPCO Washington Office

Mr. Hiromi Sakakibara (55)

- Director
(Authorized Director)

Education

- Master of Engineering (Electrical Engineering),
Doshisha University, Japan
- Bachelor of Engineering, Doshisha University, Japan

Working Experience during the recent 5 years

Jul 2016 - Present	Senior Vice President, Overseas Business, Energy Infrastructure Group JERA Co., Inc.
Aug 2016 - Nov 2018	Director Khanom Electricity Generating Co., Ltd.
Jul 2012 - Jun 2016	General Manager, Operation Group, International Business Department Chubu Electric Power Company, Inc. (CEPCO)

Mr. Jakgrich Pibulpairoj (57)

- President
- Member of Investment Committee
- Member of Corporate Governance and Social Responsibility Committee
- Chairman of Risk Management Committee
- Chairman of Good Corporate Governance Committee
- Chairman of EGCO Management Committee (Authorized Director)

Education

- Bachelor of Mechanical Engineering, Chulalongkorn University
- Certificate of Director Certification Program, Thai Institute of Directors Association
- Certificate of Director Accreditation Program, Thai Institute of Directors Association
- Advanced Management Program, Harvard Business School, USA
- Leadership Succession Program, Institute of Research and Development for Public Enterprises
- Foreign Affairs Executive Program, Devawongse Vorapakarn Institute of Foreign Affairs
- Advanced Police Command Course, Institute of Police Administration Development
- CG Code Update Program, PricewaterhouseCoopers ABAS Ltd.
- Project Acquisition Program, PricewaterhouseCoopers ABAS Ltd.

Working Experience during the recent 5 years

Dec 2017 - Present	Chairman Gulf Electric PCL.
Nov 2017 - Present	Chairman Khanom Electricity Generating Co., Ltd.
Nov 2017 - Present	Director Xayaburi Power Co., Ltd.
Oct 2017 - Present	Chairman EGCO Engineering and Service Co., Ltd.
Oct 2017 - Present	Director BLCP Power Co., Ltd.
Oct 2016 - Sep 2017	Deputy Governor - Business Development Electricity Generating Authority of Thailand
Mar 2016 - Sep 2017	Director EGAT Diamond Service Co., Ltd., Electricity Generating Authority of Thailand
Oct 2015 - Sep 2016	Assistant Governor-Operation and Maintenance Business Electricity Generating Authority of Thailand
Oct 2013 - Sep 2015	Director, Workshop and Spare Parts Division Electricity Generating Authority of Thailand

EGCO's Board of Directors who Vacated the Office during the Year 2018

Mr. Sombat Sarntijaree (69)

- Chairman
- Chairman of Investment Committee
(Authorized Director)
(Retired by rotation in 2018 AGM on April 19, 2018)

Education

- Master of Mechanical Engineering, Lamar University, Texas, USA
- Bachelor of Mechanical Engineering, Kasetsart University
- Certificate of Director Certification Program, Thai Institute of Directors Association
- Certificate of Role of Chairman Program, Thai Institute of Directors Association
- Senior Executive Program, the Capital Market Academy
- Senior Executive Development Program, General Electric Company, USA
- Public Administrative and Public Law Program, King Prajadhipok's Institute
- Senior Executive Program, Sasin Graduate Institute of Business, Chulalongkorn University
- IT Governance for Directors Program, Thai Institute of Directors Association

Working Experience during the recent 5 years

Listed Companies in SET

2013 - 2014	Chairman of Good Corporate Governance Committee Gunkul Engineering PCL.
2012 - 2014	Independent Director and Member of Audit Committee Gunkul Engineering PCL.

Other Organizations

2012 - Oct 2015	Honorary Director Board of Thai Industrial Standards Institute
2011 - Oct 2015	Honorary Director Board of Energy Fund Administration Institute (EFAI)
Oct 2014 - Dec 2014	Chairman Electricity Generating Authority of Thailand

Assoc. Prof. Dr. Chotchai Charoenngam (55)

- Independent Director
- Chairman of Corporate Governance and Social Responsibility Committee
- Member of Nomination and Remuneration Committee
(Retired by rotation in 2018 AGM on April 19, 2018)

Education

- Ph.D. in Construction Engineering and Project Management, University of Texas at Austin, Texas, USA
- Master of Science (Construction Engineering and Project Management), The University of Kansas, Kansas, USA
- Bachelor of Engineering (Construction Engineering) (Hons.), King Mongkut's University of Technology Thonburi
- Certificate of Director Certification Program, Thai Institute of Directors Association
- Certificate of Anti-Corruption for Executive Program, Thai Institute of Directors Association
- IT Governance for Directors Program, Thai Institute of Directors Association
- Board that Make a Difference Program, Thai Institute of Directors Association
- Risk Management: Issues for Boards Program, Thai Institute of Directors Association

Working Experience during the recent 5 years

2016 - Present	Director Princess Mother's Medical Volunteer (PMMV)
1998 - Present	Associate Professor, Construction Engineering and Infrastructure Management, Faculty of Engineering and Technology Asian Institute of Technology (AIT)

Mr. Kornrasit Pakchotanon (60)

- Director
- Member of Investment Committee
(Authorized Director)
(Resigned with effect on May 1, 2018)

Education

- Bachelor of Mechanical Engineering, Chulalongkorn University
- Certificate of Director Certification Program, Thai Institute of Directors Association
- Certificate of Chartered Director Class, Thai Institute of Directors Association
- Certificate of Role of the Chairman Program, Thai Institute of Directors Association
- Certificate of Financial Statement for Directors, Thai Institute of Directors Association
- The Executive Program of Energy Literacy for a Sustainable Future, Thailand Energy Academy
- Advanced Management Program, Harvard Business School, USA
- Senior Executive Program, Sasin Graduate Institute of Business Administration of Chulalongkorn University
- Public Economics Management for Executives, King Prajadhipok's Institute
- Promotion of Peaceful Society, King Prajadhipok's Institute

Working Experience during the recent 5 years

Jul 2016 - Jun 2018	Chairman EGAT International Co., Ltd.
Jun 2016 - Jun 2018	Governor Electricity Generating Authority of Thailand
Oct 2015 - Jun 2016	Deputy Governor - Generation Electricity Generating Authority of Thailand
Oct 2013 - Sep 2015	Deputy Governor - Business Development Electricity Generating Authority of Thailand

Mr. Saharath Boonpotipukdee (60)

- Director
- Member of Nomination and Remuneration Committee
(Authorized Director)
(Resigned with effect on October 1, 2018)

Education

- Bachelor of Electrical Engineering, Chulalongkorn University
- Energy Literacy for a sustainable Future TEA, Thailand Energy Academy
- ASEAN Government Leaders Program (AGLP), General Electric Management Research and Development institute, Crotonville, New York, USA
- Advanced Management Program, Harvard Business School, USA
- Senior Executive Program, Sasin Graduate Institute of Business Administration of Chulalongkorn University
- Certificate of Director Certification Program, Thai Institute of Directors Association
- The Basic Concept Regarding Conflict Management in Public Policies by Peaceful Means, King Prajadhipok's Institute
- IT Governance for Directors Program, Thai Institute of Directors Association
- Risk Management: Issues for Boards Program, Thai Institute of Directors Association

Working Experience during the recent 5 years

Jul 2017 - Sep 2018	Deputy Governor - Renewable and New Energy, Serving as EGAT Spokesman Electricity Generating Authority of Thailand
Oct 2016 - Jun 2017	Deputy Governor to Office of the Governor, Serving as EGAT Spokesman Electricity Generating Authority of Thailand
Oct 2014 - Sep 2016	Deputy Governor - Corporate Social Affairs, Serving as EGAT Spokesman Electricity Generating Authority of Thailand
Oct 2013 - Sep 2014	Engineer Level 13, under Deputy Governor-Business Development, Appointed as Executive Vice President - Administration Electricity Generating Authority of Thailand

The Positions of the Management and the Control Persons as of December 31, 2018



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. Niwat Adirek

- Senior Executive Vice President - Business Development (CLMVT)
- Risk Management Committee Member
- Good Corporate Governance Committee Member
- EGCO Management Committee



03

Mr. Danuja Simasathien

- Senior Executive Vice President - Chief Financial Officer
- Risk Management Committee Member
- Group Business Committee Member
- EGCO Management Committee



04

Mr. Gumpanart Bumroonggit

- Senior Executive Vice President - Strategy and Asset Management
- Risk Management Committee Member
- Good Corporate Governance Committee Member
- EGCO Management Committee



05

Mr. Suvapan Chomchalerm

- Executive Vice President
- Accounting



06

Ms. Somsiri Yoosook

- Executive Vice President
- Finance



07

Ms. Sirobon Boontaworn

- Senior Vice President
- Accounting and Budget



08

Ms. Ploy Suksrisomboon

- Senior Vice President
- International
General Affairs
Management



09

**Mr. Amornrat Debhasdin
Na Ayudhya**

- Senior Vice President
- Domestic General Affair
Management



10

Ms. Wimolwan Sasanawin

- Executive Vice President
- Business Development
(International)



11

**Ms. Saranya
Kalawantwanich**

- Executive Vice President
- Business Development
(CLMV)



12

**Mr. Chinnavuth
Liurungruang**

- Executive Vice President
- Business Development
(Domestic)



13

**Mr. Thongchai
Chotkajornkiat**

- Executive Vice President
- Corporate Management



14

**Mr. Thawat
Hirancharukorn**

- Executive Vice President
- Asset Management



15

Mr. Parnuwat Gururatana

- Executive Vice President
- Project Management



16

Mr. Pasagorn Sasanawin

- Executive Vice President
- Power Plant
Management



17

Ms. Vasana Vongprommek
• Executive Vice President
- Office of President



18

Mr. Chaisak Tekhuad
• Executive Vice President



19

Ms. Pantipa Moolasart
• Executive Vice President



20

Mr. Suebsak Choorit
• Executive Vice President



21

Mr. Sathit Tanomkul
• Executive Vice President

The Positions of the Management and the Control Persons as of January 1, 2019



01

Mr. Chaisak Tekhuad
• Executive Vice President
- Project Management



02

**Mr. Amornrat Debhasdin
Na Ayudhya**
• Senior Vice President
- Accounting and Budget



03

Mr. Surasak Ganjanakit
• Senior Vice President
- Domestic General Affairs
Management

The Positions of the Management and the Control Persons as of December 31, 2018

Mr. John Matthew Palumbo (56)

- 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, USA

Working Experience during the recent 5 years

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.

2012 - 2016	Director Pearl Energy Philippines Operating, Inc. Quezon Power, Inc.
2012 - 2014	Director Quezon Management Service Inc. Ogden Power Development Cayman, Inc. Quezon Generating Company Limited
2011 - 2014	Director GPI Quezon Limited Company Khanom Electricity Generating Company Limited EGCO Engineering and Service Company Limited
2011 - 2013	Director North Pole Investment Company Limited

Mr. Niwat Adirek (60)

- Senior Executive Vice President
- Business Development (CLMVT)
- Risk Management Committee Member
- Good Corporate Governance Committee Member
- EGCO Management Committee

Education

- Master of Engineering (Electric Power),
Rensselaer Polytechnic Institute, Troy,
New York, USA
- Bachelor of Electrical Engineering,
Chulalongkorn University (Honors)
- Certificate of Technology Transfer in Electrical
Design of Gas Turbine Combined Cycle
Power Plant Black & Veatch International

Working Experience during the recent 5 years

2018	Director Khanom Electricity Generating Company Limited EGCO Engineering and Service Company Limited BLCP Power Limited Nam Theun 1 Power Company Limited Nam Theun 2 Power Company Limited Dawei Electricity Generating Company Management Pte., Ltd.	2013 - 2014	Director Khanom Electricity Generating Company Limited EGCO Engineering and Service Company Limited Millennium Energy B.V. Mauban Holdings Company Inc.
2016 - 2018	Director Star Phoenix Geothermal JV B.V. Star Energy Geothermal Holdings (Salak - Darajat) B.V. Star Energy Geothermal (Salak - Darajat) B.V.	2012 - 2014	Commissioner PT Manambang Muara Enim Company Limited
2014 - 2018	Director Star Energy Geothermal Pte. Ltd. Phoenix Power B.V.	2011 - 2014	Director EGCO International (B.V.I.) Limited Quezon Power, Inc. Quezon Management Service Inc. Quezon Management Company, Limited Quezon Generating Company Limited Ogden Power Development Cayman, Inc. Pearl Energy Philippines Operating, Inc.
2015 - 2018	Commissioner PT Tenaga Listrik Cilegon	2010 - 2014	Director North Pole Investment Company Limited New Growth Cooperatief U.A. New Growth B.V.
2013 - 2015	Director South Pacific Power Pty Limited Boco Rock Wind Farm Pty Limited	2010 - 2013	Director Conal Holdings Corporation Alto Power Management Corporation Northern Mindanao Power Corporation Southern Philippines Power Corporation Western Mindanao Power Corporation Alsing Power Holding Inc.

Mr. Danuja Simasathien (58)

<ul style="list-style-type: none"> • Senior Executive Vice President - Chief Financial Officer • Risk Management Committee Member • Group Business Committee Member • EGCO Management Committee 	2017 - Present	Director Khanom Electricity Generating Company Limited EGCO Engineering and Service Company Limited
Education	2017	Director EGCO International (B.V.I.) Limited
<ul style="list-style-type: none"> - MBA (Operations Management), University of Wisconsin - Madison 	2017 - 2018	Director Nam Theun 1 Power Company Limited
<ul style="list-style-type: none"> - Master of Engineering (Chemical Engineering), Illinois Institute of Technology 	2014	Director EGCOM TARA Company Limited
<ul style="list-style-type: none"> - Bachelor of Engineering (Chemical Engineering), Chulalongkorn University 	2013 - 2014	Director Gulf Cogeneration Company Limited Samutprakarn Cogeneration Company Limited Nong Khae Cogeneration Company Limited
<ul style="list-style-type: none"> - Advanced Certificate Course in Management of Public Economics for Executives, King Prajadhipok's Institute 		
<ul style="list-style-type: none"> - Director Certification Program, Thai Institute of Directors Association 		
Working Experience during the recent 5 years		
2018 - Present Commissioner PT Manambang Muara Enim Company Limited	2012 - 2018	Gulf Yala Green Company Limited Director Sub Yai Wind Farm Company Limited
2018 - Present Director BLCP Power Limited Dawei Electricity Generating Company Management Pte., Ltd.		

Mr. Gumpanart Bumroongit (53)

- Senior Executive Vice President
- Strategy and Asset 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

Working Experience during the recent 5 years

2018 - Present	Director Nam Theun 2 Power Company Limited	2012 - Present	Director Gulf Electric Public Company Limited
2017 - Present	Director Khanom Electricity Generating Company Limited EGCO Engineering and Service Company Limited EGCO Plus Company Limited	2012 - 2018	Director Natural Energy Development Company Limited Quezon Power, Inc. Quezon Management Service Inc. Pearl Energy Philippines Operating, Inc.
2015 - 2018	Director Boco Rock Wind Farm Pty Limited	2012 - Present	Commissioner PT Manambang Muara Enim Company Limited
2013 - Present	Director BLCP Power Limited	2012 - 2016	Director Quezon Generating Company Limited
2013 - 2018	Director GIDEC Company Limited	2012 - 2013	Director Gulf Cogeneration Company Limited Nong Khae Cogeneration Company Limited Samutprakarn Cogeneration Company Limited Gulf Yala Green Company Limited Absolute Power P Company Limited
2013 - 2014	Director Absolute Power P Company Limited NED Wind Company Limited	2012 - 2017	Executive Vice President - Asset Management Electricity Generating Public Company Limited

Mr. Suvapan Chomchalerm (58)

- Executive Vice President - Accounting

Education

- M.Sc. (Accounting), Thammasat University
- B.Sc. (Accounting), Chulalongkorn University
- Certificate of TLCA Executive Development Program, Thai Listed Companies Association
- Certificate of Director Certification Program, Thai Institute of Directors Association
- Certificate of Strategic CFO in Capital Markets Program, Thailand Securities Institute, The Stock Exchange of Thailand

Working Experience during the recent 5 years

2017 - Present	Director Sub Yai Wind Farm Company Limited Nam Theun 1 Power Company Limited
2015 - Present	Director Gulf Electric Public Company Limited
2014 - Present	Director Natural Energy Development Company Limited
2014 - 2017	Director Solarco Company Limited Yanhee EGCO Holding Company Limited
2013 - 2017	Director G-Power Source Company Limited
2012 - Present	Director PT Manambang Muara Enim Company Limited
2012 - 2013	Director SPP Two Company Limited SPP Three Company Limited SPP Four Company Limited SPP Five Company Limited
2011 - 2014	Director Nam Theun 2 Power Company Limited

Ms. Somsiri Yoosook (54)

- Executive Vice President - Finance

Education

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

Working Experience during the recent 5 years

2017 - Present	Director EGCO Plus Company Limited
2016 - Present	Director Nam Theun 2 Power Company Limited
2014 - Present	Director North Pole Investment Company Limited
2014 - 2016	Director Ogden Power Development Cayman, Inc. Quezon Generating Company Limited Quezon Management Service Inc. Pearl Energy Philippines Operating, Inc. Quezon Power, Inc.

Ms. Sirobon Boontaworn (47)

- Senior Vice President - Accounting and Budget

Education

- M.Sc. (Financial Accounting), Chulalongkorn University
- B.Sc. (Accounting), Chiang Mai University

Working Experience during the recent 5 years

2018	Director Solarco Company Limited Yanhee EGCO Holding Company Limited G-Power Source Company Limited
2013 - 2018	Senior Vice President - Accounting and Budget Electricity Generating Public Company Limited

Ms. Ploy Suksrisomboon (51)

- Senior Vice President
- International General Affairs Management

Education

- Master of Science (Management Information System)
Assumption University
- Bachelor of Business Administration (Accounting)
Assumption University
- Certificate of Director Certification Program,
Thai Institute of Directors Association

Working Experience during the recent 5 years

2018 - Present	Director EGCO Pearl Co., Ltd.
2017 - Present	Director New Growth Plus B.V. EGCO Plus Company Limited
2015 - Present	Director Evergreen Power Venture B.V.
2014 - Present	Commissioner PT Manambang Muara Enim Company Limited
2014 - Present	Director Boco Rock Wind Farm Pty Limited South Pacific Power Pty Limited Kalilayan Power Holdings Inc. Mauban Holdings Company Inc. Quezon Management Service Inc. Pearl Energy Philippines Operating, Inc. Quezon Power, Inc. Phoenix Power B.V. Gen Plus B.V. Millennium Energy B.V. New Growth B.V. North Pole Investment Company Limited

2014 - 2018	Director Masin-AES Pte. Ltd. EGCO International (B.V.I.) Limited
2014 - 2017	Director New Growth Cooperatief U.A. Quezon Generating Company Limited GPI-I, LTD. GPI-II, LTD. GPI Quezon Limited Company Ogden Power Development Cayman, Inc. Quezon Management Company, Limited
2014 - 2015	Senior Vice President - Subsidiaries Accounting & Finance Electricity Generating Public Company Limited

Mr. Amornrat Debhasdin Na Ayudhya (53)

- Senior Vice President
- Domestic General Affair Management

Education

- M.Sc. (Information Technology in Business : Accounting
Information System), Chulalongkorn University
- B.B.A. (Accounting), Ramkhamhaeng University

Working Experience during the recent 5 years

2017 - Oct 2018	Finance and Administration Manager Natural Energy Development Company Limited
2013 - 2017	Vice President - Disbursement Electricity Generating Public Company Limited

The Positions of the Management and the Control Persons as of January 1, 2019

Mr. Amornrat Debhasdin Na Ayudhya (53)

- Senior Vice President - Accounting and Budget

Education

- M.Sc. (Information Technology in Business: Accounting Information System), Chulalongkorn University
- B.B.A. (Accounting), Ramkhamhaeng University

Working Experience during the recent 5 years

Nov 2018 - 2018	Senior Vice President - Domestic General Affair Electricity Generating Public Company Limited
2017 - Oct 2018	Finance and Administration Manager Natural Energy Development Company Limited
2013 - 2017	Vice President - Disbursement Electricity Generating Public Company Limited

Mr. Surasak Ganjanakit (55)

- Senior Vice President
- Domestic General Affairs Management

Education

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

Working Experience during the recent 5 years

2011 - 2018	Senior Vice President - Finance & Administration Management EGCO Engineering & Service Company Limited
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The Position of EGCO's Management and the Control Persons in the Subsidiaries and Other Related Companies as of December 31, 2018

	Name	EGCO	Major Subsidiaries		Subsidiaries																
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		
1	Mr. Witoon Kulcharoenwirat	Δ, XX																			
2	Ms. Jaruwan Ruangswadipong	O, I, AA, LID																			
3	Assoc. Prof. Dr. Nualnoi Treerat	O, I, N, C																			
4	Mr. Paisan Mahapunnaporn	O, I, A																			
5	Dr. Pasu Loharjun	O, I, N, CC																			
6	Prof. Dr. Anya Khanthavit	O, I, A																			
7	Assoc. Prof. Dr. Bordin Rassameethes	O, I, N, C																			
8	Mr. Nikul Silasuwan	O, X	Deputy Governor																		
9	Mr. Patana Sangsrirojuna	O, N	Deputy Governor																		
10	Mr. Wisak Watanasap	O, C																			
11	Mr. Shunichi Tanaka	O, NN																			
12	Mr. Takao Onuki	O, X																			
13	Mr. Hiromi Sakakibara	O																			
14	Mr. Yoichiro Matsumoto	O, X		O																	
15	Mr. Jakgrich Pibulpairoj	President, X, C	Engineer Level 14	Δ		Δ															
16	Mr. John Matthew Palumbo	SEVP - Business Development - International																			
17	Mr. Niwat Adirek	SEVP - Business Development - CLMVT			O		O														
18	Mr. Gumpant Bumroonggit	SEVP - Strategy and Asset Management			O		O														
19	Mr. Danuja Simasathien	SEVP - Chief Financial Officer			O		O														
20	Ms. Somsiri Yoosook	EVP - Finance																			
21	Mr. Suvapan Chomchalerm	EVP - Accounting								O											
22	Mr. Sathit Tanomkul	Managing Director					O														
23	Mr. Winchai Tattamanas	FSVP - Legal							O		O							O	O		
24	Mr. Pasagorn Sasanawin	FSVP - SPP Management				Δ		Δ	Δ		O	O	O	O	O	O	O	O	O	O	
25	Ms. Sirobon Boontaworn	SVP - Accounting and Budget																	O		
26	Mr. Amornrat Debbhasdin Na Ayudhya	SVP - Domestic General Affairs Management																			
27	Ms. Ploy Suksrisomboon	SVP - International General Affairs Management																			
28	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 CC = Chairman of Corporate Governance and Social Responsibility Committee C= Corporate Governance and Social Responsibility 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 = North Pole Investment Co., Ltd.
 19 = Nam Theun 2 Power Co., Ltd.
 20 = Gulf Electric Pcl.

21 = Gulf Power Generation Co., Ltd.
 22 = Gulf Cogeneration Co., Ltd.
 23 = Nong Khae Cogeneration Co., Ltd.
 24 = Samutprakarn Cogeneration Co., Ltd.
 25 = Gulf Energy Co., Ltd.
 26 = Gulf IPP Co., Ltd.
 27 = Quezon Power, Inc.
 28 = Pearl Energy Philippines Operating, Inc.
 29 = BLCP Power Limited
 30 = Sub Yai Wind Farm Co., Ltd.

* = Subsidiaries (Core Business)

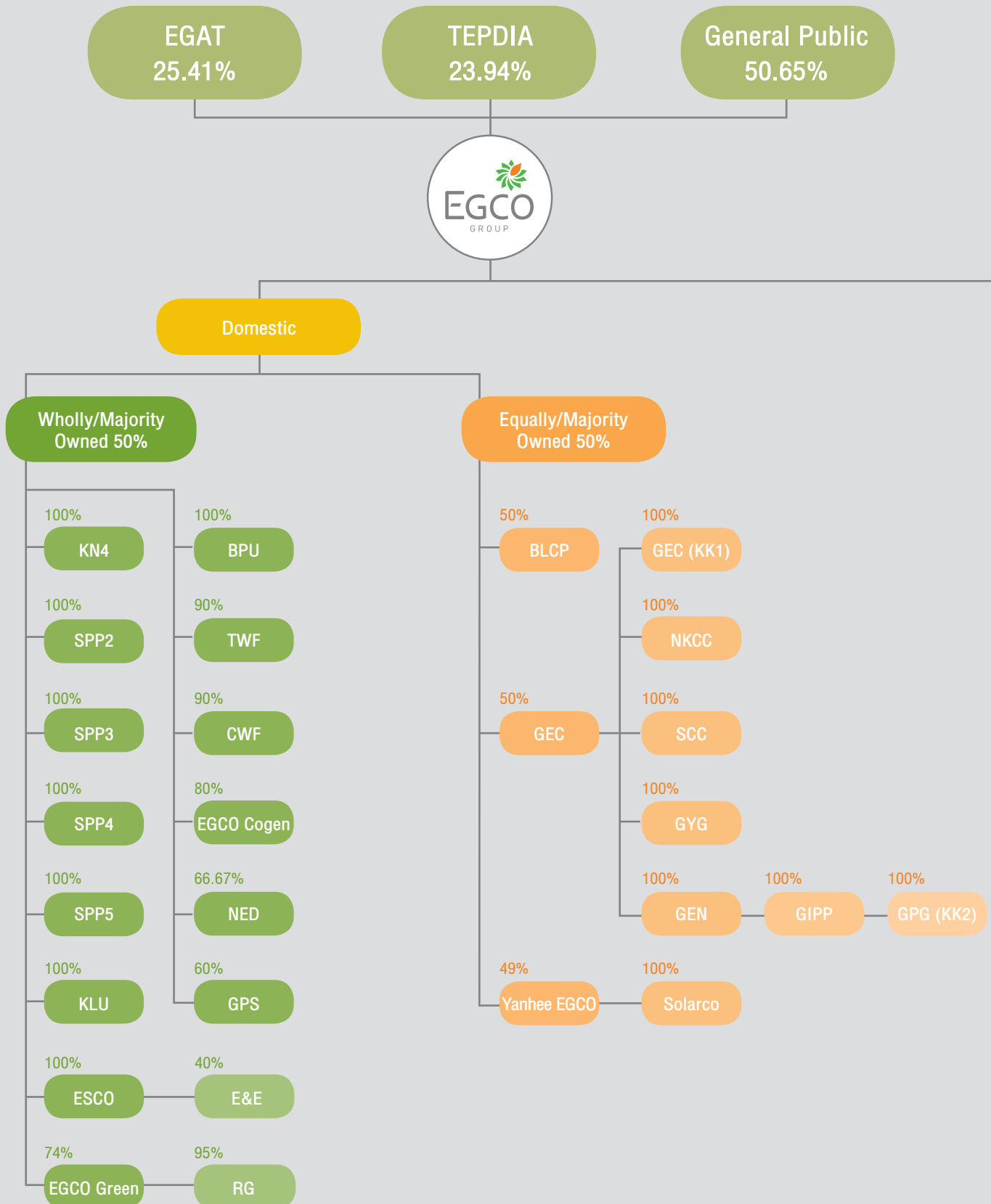
[illegible]

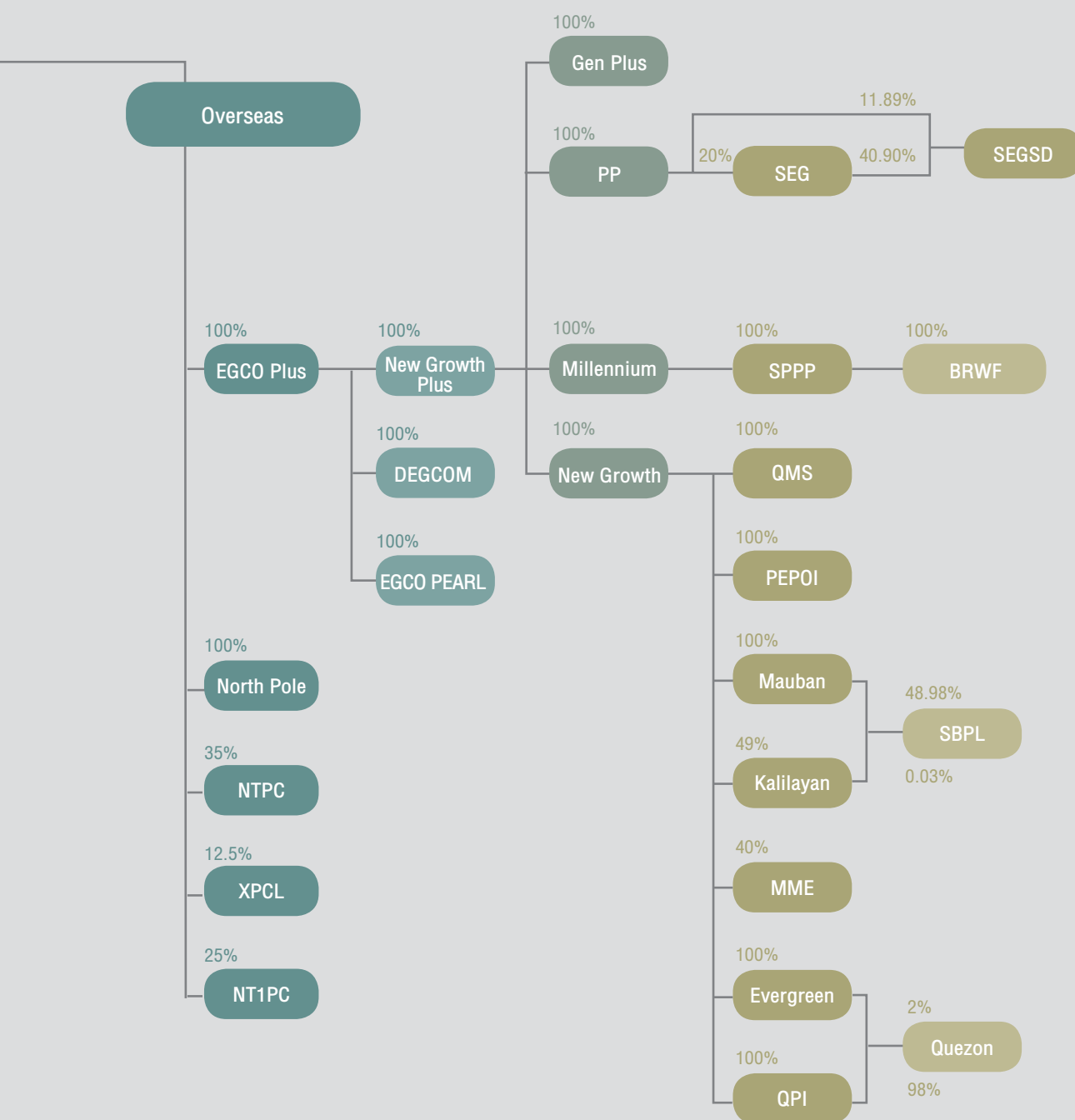
31 = Yanhee EGCO Holding Co., Ltd.
32 = Solarco Co., Ltd.
33 = PT Manambang Muara Enim Co., Ltd.
(Board of Directors)
34 = PT Manambang Muara Enim Co., Ltd.
(Board of Commissioner)
35 = Xayaburi Power Co., Ltd.
36 = Gulf Yala Green Co., Ltd.
37 = New Growth B.V.
38 = Millenium Energy B.V.

39 = Quezon Management Service Inc.
40 = Mauban Holdings Company Inc.
41 = Kalilayan Power Holding Inc.
42 = South Pacific Power Pty Ltd.
43 = Boco Rock Wind Farm Pty Ltd.
44 = Gen Plus B.V.
45 = Phoenix Power B.V.
46 = Star Energy Geothermal Pte. Ltd.
47 = Evergreen Power Venture B.V.
48 = PT Tenaqa Listrik Cilegon (Board of Directors)

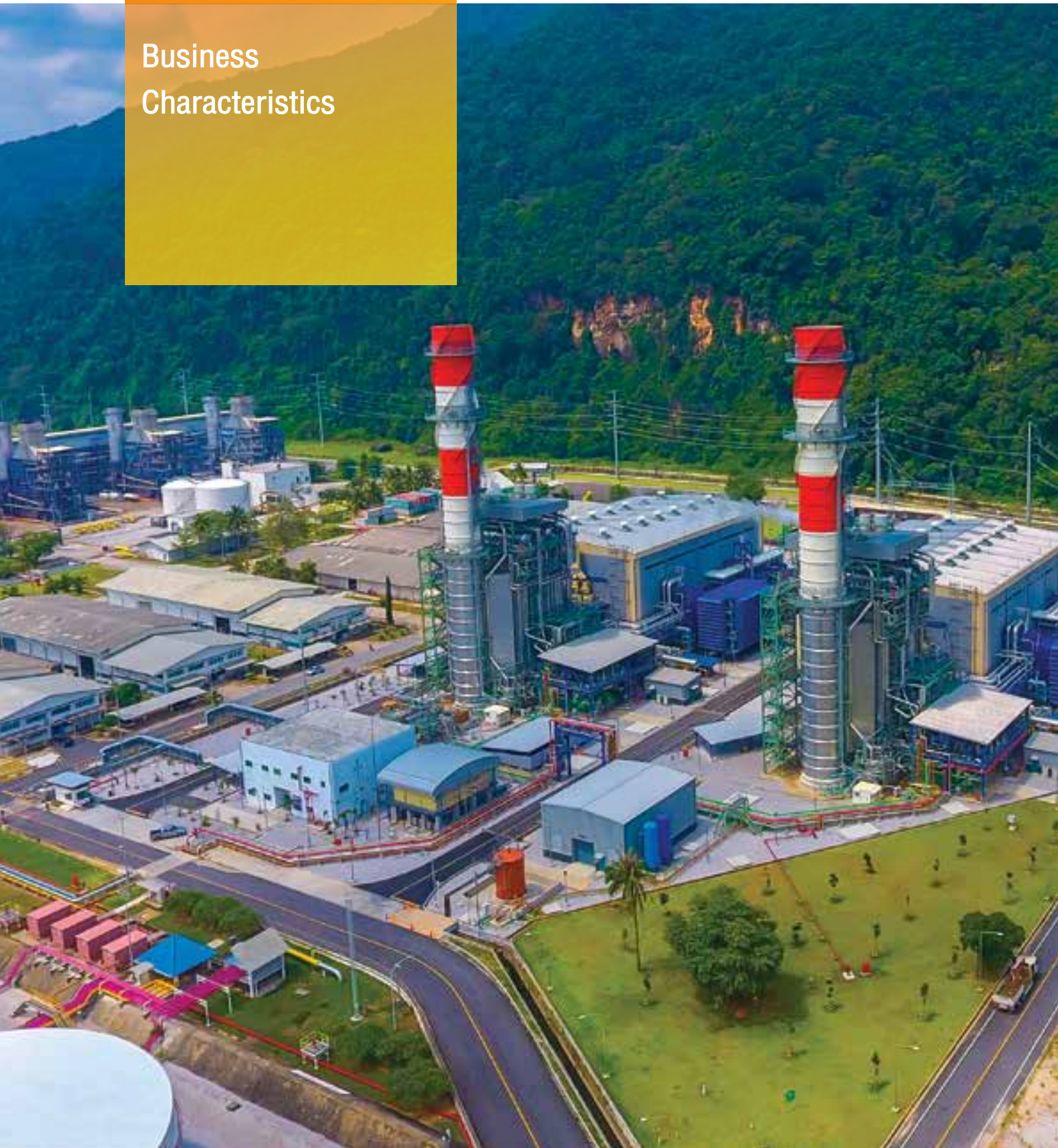
49 = PT Tenaga Listrik Cilegon (Board of Commissioner)
50 = Dawei Electricity Generating Company Management Pte., Ltd.
51 = Star Phoenix Geothermal JV B.V.
52 = Star Energy Geothermal Holdings (Salak-Darajat) B.V.
53 = Star Energy Geothermal (Salak-Darajat) B.V.
54 = Nam Theun 1 Power Co., Ltd.
55 = New Growth Plus B.V.
56 = EGCO Plus Co., Ltd
57 = EGCO Pearl Co., Ltd.
58 = Quezon Power (Philippines) Limited Company *

EGCO's Group Structure and Shareholders





Business Characteristics



Business Characteristics



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 which are located in both Thailand and the Asia Pacific region. EGCO Group companies either operate in the power sector with Power Purchase Agreement (PPA) or conduct energy and related business.

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 54.86% 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 Cogeneration Co., Ltd. (GCC), Nong Khae Cogeneration Co., Ltd. (NKCC), Samutprakarn Cogeneration Co., Ltd. (SCC), 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 715.36 MW equity, representing 16.79% of EGCO's total asset capacity.

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 2.00% of EGCO's total asset capacity.
4. **Overseas Power Producer :** This Group comprises Quezon Power (Philippines) Ltd., Co. (Quezon) in the Philippines, Nam Theun 2 Power Co., Ltd. (NTPC) 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 and Boco Rock Wind Farm Pty Limited (BRWF) in Australia. The combined capacity is 1,122.80 MW equity, representing 26.35% of EGCO's total asset capacity.
5. **Other Businesses :** This Group comprises two operation and maintenance companies being EGCO Engineering & Service Co., Ltd. (ESCO) and Pearl Energy Philippines Operating, Inc. (PEPOI). There is a management service company to Quezon power plant being Quezon Management Services Inc. (QMS). Also, there is a coal mining company being PT Manabung Maura Enim Co., Ltd. (MME).

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

Significant Events in 2018

In 2018, EGCO Group operated 26 power plants in both Thailand and abroad with total contracted capacity of 4,260.48 MW equity. EGCO mainly sold 3,247.00 MW of power to EGAT, 85.07 MW to PEA, 137.39 MW to Industrial Users (IUs) and the rest 791.02 MW to overseas customers. Highlights in 2018 were as follows:

1. On March 14, 2018, EGCO has successfully divested all 18.72% Shares of Eastern Water Resources Development and Management Public Company Limited to Manila Water Company Inc.
2. On March 15, 2018, EGCO has successfully divested all 50% Shares of GIDEC Company Limited to IEC Green Energy Company Limited.
3. On March 20, 2018, EGCO has successfully divested all 49% indirect ownership interest in Masinloc Power Partners Co. Ltd. (MPPCL) to SMC Global Power Holdings Corp.
4. On November 15, 2018, Gen Plus B.V., a wholly owned subsidiary of EGCO, has enter into a Sale and Purchase Agreement to invest in a 49% ownership interest in Paju Energy Service Co., Ltd. (Paju ES) owned by SK E&S Co., Ltd. The investment transaction is expected to be completed in January 2019 and will be subject to relevant closing conditions under the transaction documents.

Paju Energy Service Co. Ltd. owns and operates a combined cycle gas-fired power plant facility with an installed capacity of 1,823 MW, composed of two 911.50 MW combined cycle power blocks, which located in Paju City, Gyeonggi Province, South Korea. The Paju Power Plant commenced operation in February 2017. The facility supplies electricity to Korea Electric Power Corporation, the sole off-taker of wholesale power generation in South Korea, through Korea Power Exchange.

Table EGCO's Business Line:

I. IPP Group	
1.1 Khanom Electricity Generating Company Limited (KEGCO)	
	<p>EGCO holds 100% stake in KEGCO, which owns and operates Khanom power plant which is the largest private power plant in the southern Thailand, located in Nakhon Sri Thammarat Province. It consists of Khanom unit 4 project (KN4) to supply electricity to the national grid. 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.</p> <p>In 2018, KN4 generated and sold 6,080.59 GWh electricity output to EGAT. Its annual average EAF was 91.42%.</p>
1.2 BLCP Power Limited (BLCP)	
	<p>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.</p> <p>In 2018, BLCP power plant generated and sold 10,383.58 GWh electricity output to EGAT. Its annual average EAF for unit 1 and unit 2 was 94.10% and 83.32%, respectively.</p>
1.3 Gulf Power Generation Company Limited (GPG)	
	<p>EGCO indirectly holds 50% stake in GPG, which owns and operates an IPP gas-fired power plant, called Kaeng Khoi 2 (KK2), 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.</p> <p>In 2018, KK2 power plant generated and sold 134.75 GWh electricity output to EGAT. Its annual average EAF for block 1 and block 2 was 95.07% and 87.76%, respectively.</p>
II. SPP Group	
2.1 EGCO Cogeneration Company Limited (EGCO Cogen)	
	<p>EGCO 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.</p> <p>In 2018, EGCO Cogen power plant generated and sold 692.04 GWh electricity output to EGAT and IUs. Its annual average EAF was 95.40% and the steam output to IUs was 45,573.00 tons.</p>

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 2018, Roi-Et Green power plant generated and sold 58.07 GWh electricity output to EGAT. Its annual average EAF was 88.45%.

2.3 Gulf Cogeneration Company Limited (GCC)

EGCO indirectly holds 50% stake in GCC, which owns and operates a SPP cogeneration power plant located in Saraburi province. It is a 110 MW cogeneration power plant with steam supply of 16 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 2018, GCC power plant generated and sold 694.08 GWh electricity output to EGAT and IUs. Its annual average EAF was 94.66% and the steam output to IUs was 116,539.86 tons.

2.4 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 2018, NKCC power plant generated and sold 822.35 GWh electricity output to EGAT and IUs. Its annual average EAF was 93.11% and the steam output to IUs was 160,031.70 tons.

2.5 Samutprakarn Cogeneration Company Limited (SCC)

EGCO indirectly holds 50% stake in SCC, which owns and operates a SPP cogeneration power plant located in Samutprakarn 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 2018, SCC power plant generated and sold 805.59 GWh electricity output to EGAT and IUs. Its annual average EAF was 98.17% and the steam output to IUs was 144,507.45 tons.

2.6 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 2018, GYG power plant generated and sold 165.11 GWh electricity output to EGAT. Its annual average EAF was 92.97%.

2.7 Chaiyaphum Wind Farm Company Limited (CWF)

EGCO holds 90% stake in CWF, which owns and operates an 80 MW wind power plant located in 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 2018, CWF power plant generated and sold 132.10 GWh electricity output to EGAT. Its annual average availability was 99.29%.

2.8 Natural Energy Development Company Limited (NED) (Lopburi Solar Project)

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 a non-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 2018, LSP generated and sold 106.34 GWh electricity output to EGAT. Its annual average availability was 99.36%.

2.9 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 122.10 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 2018, KLU generated and sold 704.17 GWh electricity output to EGAT and IU. Its annual average EAF was 90.30% and the steam output to IUs was 99,925 tons.

2.10 Banpong Utilities Company Limited (BPU)

EGCO holds 100% stake in BPU, which owns and operates a SPP cogeneration power plant located in Pathum Thani 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 2018, BPU generated and sold 1,453.27 GWh electricity output to EGAT and IU. Its annual average EAF was 95.60% and the steam output to IUs was 605,647 tons.

III. VSPP Group

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

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 2018, WSP generated and sold 15.99 GWh electricity output to PEA. Its annual average availability was 99.37%.

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 2018, SPP2 power plant generated and sold 15.25 GWh electricity output to PEA. Its annual average availability was 99.53%.

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 2018, SPP3 power plant generated and sold 15.73 GWh electricity output to PEA. Its annual average availability was 99.69%.

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 2018, SPP4 power plant generated and sold 11.10 GWh electricity output to PEA. Its annual average availability was 98.68%.

3.5 SPP Five Company Limited (SPP5)

EGCO holds 100% stake in SPP5, 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 2018, SPP5 power plant generated and sold 16.01 GWh electricity output to PEA. Its annual average availability was 99.03%.

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 2018, all GPS's solar power plants generated and sold 40.04 GWh electricity output to PEA. Its annual average availability was 99.39%.

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 2018, all Solarco's power plants generated and sold 110.93 GWh electricity output to PEA. Its annual average EAF was 99.58%.

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 2018, TWF power plant generated and sold 12.43 GWh electricity output to PEA. Its annual average EAF was 98.13%.

IV. 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 2018, Quezon power plant generated and sold 2,414.51 GWh electricity output to MERALCO. Its annual average EAF was 80.00%.

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 2018, NTPC power plant generated and sold 5,965.31GWh electricity output to EGAT and 301.21 GWh electricity output to EDL. Its annual average EAF was 96.63% for EGAT and 97.43% 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 2018, SEG power plant generated and sold 1,895.59 GWh electricity output to its customers. Its annual average EAF was 99.98%.

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 Energy Australia Pty Ltd.

In 2018, BRWF power plant generated and sold 366.96 GWh electricity output to the Australian Energy Market Operator (AEMO) and Energy Australia Pty Ltd. Its annual average EAF was 98.54%.

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 2018, Salak power plant generated and sold 3,018.33 GWh electricity output to its customers. Its annual average EAF was 98.30% and Darajat power plant generated and sold 1,971.30 GWh electricity output to its customers. Its annual average EAF was 81.40%

V. 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 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.

5.3 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.

5.4 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 2018 was at 1.24 million tons.



Risk Factors



Electricity Generating PCL or EGCO Group, realizes that the prudent risk analysis and risk management are crucial in building stakeholders' confidences. To ensure that the corporate risk management is effective throughout the organization, the Board of Directors entrusts the Audit Committee to review with Management about risk management policy and compliance, EGCO Group's risk management guidelines, and potential risks as well as preventive measures of such risks.

At the Management level, the appointed Risk Management Committee comprises EGCO's top executives with the President as the chairman of the Committee, all Senior Executive Vice President as members and the Executive Vice President - Asset Management as the secretary. The Risk Management Committee's duties and responsibilities include the oversight of EGCO's risk management compliance with risk management policy and guidelines, promotion and support of enterprise risk management policy as well as regular report to the Audit Committee and the Board of Directors. In the case of significant risk factors arising, the Risk Management Committee shall promptly report to the Audit Committee and the Board of Directors.

In addition, EGCO Group has established Risk Assessment Division that serves as assistant secretary of the Risk Management Committee. The Division has responsibilities for monitoring, and reporting of EGCO Group's risk management practice, cooperating with the risk owners on risk identification, risk assessment, risk response, and reporting matters about EGCO Group's risk management practice to the Risk Management Committee 4 times in 2018. To ensure that the risk management processes are implemented throughout the organization and all divisions are fully aware of risk management importance. EGCO Group announces Risk Management Philosophy which declares that: "EGCO Group believes that despite the risks implicit in doing business, we strive to manage risk efficiently with consideration of balancing risk and return for all stakeholders' benefits. Our risk management shall increase opportunity for achieving corporate goals and creating sustainable corporate values." aims to be applied throughout the organization to support the enterprise risk management, following risk management framework set by the Board of Directors.

In 2018, EGCO Group applied COSO Enterprise Risk Management Framework (COSO ERM) which classified as strategic risk management, operating risk management, financial risk management and compliance risk management. EGCO Group prepared "Risk Management Manual" to be a practical guideline for the organization. Moreover, the organization established Key Risk Indicators which were Leading and Lagging Indicators in risk management, and encouraged EGCO Group's employees to apply Key Risk Indicators with their operations appropriately.

EGCO Group realizes that organization risk management culture is a key factor to achieve enterprise risk management therefore EGCO Group communicates the importance of enterprise risk management through various channels such as annual risk seminar, Risk Management Manual, journals and news, risk management activities, EGCO radio, EGCO billboard and EGCO Group Net. Moreover, EGCO Group is developing E-Learning to extend knowledges and advantages of applying COSO ERM to employees in the future.

A summary of EGCO Group's key risk factors and associated mitigation measures is as follows:

1. Investment Expansion Risk

EGCO Group invests in energy business and related business in both domestic and international markets. The primary sources of income are dividends from subsidiaries and joint ventures. In maintaining and increasing shareholders' value, EGCO Group's strategic plan includes the continuous investment in new projects. Such acquiring and developing projects may entail risks that may affect EGCO Group's investment target as follow:

1.1 Risk from Project Selection

EGCO Group plans to expand its investment to maintain continuous growth. Potential projects of both domestic and overseas are listed in the yearly investment plan including expansion in power generation from fossil and renewable energy. Since project selection is highly important, EGCO Group incorporates project selection process which is responsible by Business Development Units. They are assigned to analyze related factors which include economic policies, political and social policies of the targeted countries, economic situation, industry, financial cost, equipment and construction cost as well as government laws and regulations. Moreover, analysis of the changing environmental factors (Sensitivity Analysis) that affect the projects is also considered so that risk prevention and compensation are accounted in the return of investment analysis.

Furthermore, EGCO Group identifies that new investment opportunities must be reviewed and scrutinized by EGCO Management Committee, a sub-committee of the Board of Directors, as well as Investment Committee to ensure that all material risks are identified and managed before new investment opportunities are submitted to the Board of Directors for consideration.

In 2018, EGCO Group realized gain on disposal of assets (extraordinary) from 3 projects and succeeded in investment in a new project as following:

- On March 14, 2018, EGCO Group disposed its all 18.72 percent ownership interest in Eastern Water Resources Development and Management Public Company Limited (“EASTW”) to Manila Water Company Inc.
- On March 15, 2018, EGCO Group disposed its all 50 percent ownership interest in GIDEC Company Limited (“GIDEC”) to IEC Green Energy Company Limited.
- On March 20, 2018, Gen Plus B.V., a wholly-owned subsidiary of EGCO Group, disposed its all 49 percent indirect holding in Masin-AES Ptd., Ltd, (MPPCL) to SMC Global Power Holdings Corp.
- On November 15, 2018, Gen Plus B.V., a wholly-owned subsidiary of EGCO Group, entered into a sale and purchase agreement to invest in 49 percent ownership interest in Paju Energy Service Co., Ltd. which owned and operated a combined cycle gas-fired power plant facility.

1.2 Overseas Asset Management Risk

Overseas investment creates opportunities for long-term growth of EGCO Group. Nevertheless, there are various factors that may impact the performance of such assets such as economic circumstance, political factors, business environment and local community. EGCO Group’s forecasted earnings can be affected by the unfamiliar business environment in each country. In mitigating these risks, EGCO Group engages competent personnel, who have experience in such particular market, to work at overseas assets to ensure that assets are efficiently managed and earnings are met as targeted.

EGCO Group has assigned competent personnel to work at the assets such as Nam Theun 1 Power Co., Ltd. (“NT1PC”), Nam Theun 2 Power Co., Ltd. (“NTPC”), Quezon Power (Philippines) Ltd., Co. (“Quezon”), San Buenaventura Power Ltd. Co. (“SBPL”), Star Energy Geothermal (Salak - Darajat) and New Growth Plus B.V. (“NGP”). In addition, EGCO Group has hired external specialists who are familiar with the market in Australia to work at Boco Rock Wind Farm Pty Ltd. (“Boco Rock”).

2. Construction Project Management Risk

EGCO Group is well aware of the risk from delays in project construction, which could be caused by contractors, local communities’ resistance or natural disasters. The measurements to lower the likelihood and impacts of such risks include the selection of reputable EPC contractors with tight contracts, the proactive community relations activities, the secure insurance policies which cover the impact from natural disaster. EGCO Group assigns Project Management Team to closely monitor project progress to ensure that project completion is as scheduled.

In 2018, there were three projects under construction: Xayaburi Hydro Power Plant, San Buenaventura Coal-Fired Power Plant and Nam Theun 1 Hydro Power Plant. The mentioned projects are expected to complete construction and COD as scheduled.

3. Operating Risks

3.1 The risk of obtaining lower forecasted earnings than target

Because EGCO Group has given high priority to the risk related to operating assets, to ensure that the invested assets meet the expected performance, Asset Management Unit is assigned to follow up and monitor the performance of each invested project. The accountabilities include the analysis and comparison between the actual return and the planned target. Typical measures imposed to mitigate relevant risks are as follows:

- Establish asset management policies and, where possible, delegate management and personnel to be representatives' directors or management of subsidiaries and invested projects.
- Prepare joint venture companies' performance analysis report to senior management and the Board of Directors consistency to take appropriate actions timely.
- Coordinate with partners for joint-audit activities in invested companies to ensure the adequacy and effectiveness of internal control system.

In 2018, EGCO Group could manage the risk to achieve return on investment according to target.

3.2 Plant Performance Risks

In meeting the PPAs' commitment, EGCO Group's power plants may encounter plant performance risks, caused by personnel, equipment and management approach. The significant performance risks are as summarized below:

3.2.1 Plant efficiency

PPAs stipulate various plant efficiency indicators such as heat rate and failure to meet performance requirements. Unmaintainable efficiency indicators will result in higher cost than specified contract. The cause of such risk can be the malpractice in power plant maintenance. Therefore, EGCO Group sets the plant management policies and systems so that preventive maintenance is carried out continuously in the professional manner. Work procedures placed by plants' management also ensure that all relevant risks are under control. These procedures include as follows:

- Timely inspect and maintain by skillful staffs.
- Set up early warning systems for critical information in plant operation.
- Adequate and well reserve of spare parts.
- Implement quality management systems (ISO 9001:2015) to 14 Power plants to ensure quality operation and comply with PPA such as Khanom, GPG, GCC, KCC, SCC, GYG, NED SPP Two, SPP Three, SPP Four, SPP Five, GPS, Solarco and SEG.

- Continuously develop personnel competencies.

The implementation of such mitigation measures in the previous year resulted in the satisfactory performance of EGCO Group's power plant.

3.2.2 Raw Water Shortage

Raw water shortage can result in power plant stoppages. The risk can be caused by climate change or the delay of rainy season. Using water in operation may affect the public and environment. Consequently, EGCO Group's power plants have to assess their yearly water usage, analyze their water situation, plan for power plant water usage and reserve sufficient water quantities by having their own reservoir with adequate volume to continuously keep power plant fully operation. Moreover, 3Rs principle (Reduce, Reuse and Recycle), is implemented to the organization to maximize water usage efficiency and to reduce environment and public effects. However, there were no raw water shortage problem and public water consumption in prior year.

3.2.3 Fuel Shortage

Fuel shortage can result in plant stoppages, revenue shortfall or penalty payments. The shortage of "coal and biomass" fuel, in particular, could be caused by the increasing demand or price fluctuation.

EGCO Group's measures are implemented to prevent and mitigate such risk as follows:

- EGCO Group's coal fired power plants, BLCP and Quezon have long term coal supply agreement which is adequate for power generation. The suppliers are obliged to supply coal with the quantity and quality as specified in the agreement. In addition, each power plant has reserved coal sufficient for 30-day and 45-day continuous operation respectively.
- EGCO Group's biomass power plants using rice husks and para wood chips as fuel for power generation may face the fuel risk of both inadequate supply and volatile pricing due to uncertainty nature of agricultural product. To mitigate such risk, the power plants expand the fuel sourcing area and procure large amount in the high season at lower price. Roi-Et Green power plant using rice husks and Gulf Yala Green Power Plant consuming para wood chips also reserve the fuel sufficient for 20-day and 14-day continuous operations respectively. Besides, Roi-Et Green has supplied alternative fuels such as sawdust and cassava rhizome to mix with rice husk; similarly, Gulf Yala has supplied chopped para wood roots to mix with para wood chips to reduce fuel costs and diversify the risk of fuel in electricity generation.

3.2.4 Safety, Health, Environment and Social Risk that must comply with International Standards

EGCO Group realizes that the electricity generation process could incur certain risks on the safety, health, environment of staffs and surrounding communities. Consequently, the management has taken the following actions to mitigate any potential negative impacts and reduce the likelihood of such risks:

- Follow corporate social responsibility schemes under EGCO Group's policies.
- Conform to safety, health and environment management manual which specifies guidelines for implementation, monitoring and audit.
- Strictly comply with work manuals and emergency plan, implement training and testing of plan, equipment and warning system.
- Implement Environment Management Systems (ISO 14001:2015) to 10 power plants: Khanom, GPG, BLCP, GCC, NKCC, SCC, GYG, Theppana Wind Farm, Nam Theun 2 and SEG to continuously develop environmental management system.
- Implement Occupational Health and Safety Assessment Series (OHSAS 18001:2015) to 5 power plants: Khanom, BLCP, NED, Nam Theun 2 and SEG to decrease and control health and safety risks associated with employees and stakeholders and to improve company reputation.
- Implement Environmental Standards of UA (EMSCOP) to Quezon Power Plant in Republic of the Philippines.

As the result of constant implementation of such measures, such risks are properly managed.

3.2.5 Risk from Accident, Resistance, Sabotage and Natural Disaster

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

The Management has set the following measures to mitigate and reduce the likelihood of those risks.

- Communicate with staffs to avoid carelessness.
- Timely maintain of all equipment.
- Strengthen relationship with surrounding communities.
- Collaborate with government agencies and local authorities.
- Deploy security plan including regular drills and security equipment such as closed circuit TV and monitoring various devices to always be in use.
- Prepare fire drills and fire evacuation every year to respond to emergency in the EGCO Group's power plants and its Head Office Building.
- Set up business Continuity Plan for Crisis Management with EGCO Head Office Building to ensure that EGCO Group's business operation is continuous and sustainable.

- Secure the insurance policy that covers all risks, property damage, machinery breakdown, business interruption, third party liability and political violence (e.g. the effects of loss from terrorism, sabotage, riot, political conflict, revolution and coup d'état) and disaster events (e.g. flood, storm, earthquake, landslide) to assure that loss from damages in the unexpected case would be properly and adequately protected, covering majority owned power plants and EGCO head office building.

4. Financial Risks

EGCO Group's investment is capital-intensive. Since the partial funding sources are loans from domestic and international financial institutions, foreign exchange rate fluctuation and interest rate fluctuation are important risks. Therefore, the mitigation measures are established as follows:

4.1 Foreign Exchange Rate Fluctuation

EGCO Group has a policy to mitigate currency mismatches for each invested project to prudent levels by matching currencies from funding source and revenue structure. During construction phase, EGCO Group applies an appropriated financial instrument, cross currency swap, to manage the loan currency to match with the development and construction costs.

4.2 Interest Rate Fluctuation

EGCO Group has interest rate fluctuations management policy which is to set the guideline of interest rate exposure mitigation by swapping floating interest rate to fixed interest rate at appropriate level when the swap market is favorable.

4.3 Cash Management from Overseas Investments

Most of EGCO Group's revenues are in US dollars resulting from the excess cash from offshore account which may affect the US dollars cash management. Nevertheless, EGCO Group attempts expansion to overseas for many projects to maximize firm value from US dollars. In addition, cash flow status is regularly forecasted on monthly basis to monitor the balance of cash inflow and outflow as well as to maintain cash in overseas accounts for new potential investments.

5. Corporate Tax Legislation Risk

EGCO Group prioritizes compliance with corporate tax legislation and tax planning to ensure that its tax management has due regard to relevant regulations. Currently, EGCO Group invests in both domestic and international businesses, while each country has different tax criteria, legislation, regulation, tax tariffs, etc. Without well prepared risk analysis and intensive study, EGCO Group may cope with risk extensive damage to its reputation and operations. Therefore, it is vital for the organization to prepare well tax planning and accurate tax payment in compliance with corporate tax legislation. For new investment, EGCO Group must carry out the equivalent analysis and calculate the potential tax liability for that investment before proceeding. Nevertheless, committees will be designated to particularly response to tax and investment legislation in those countries as well.

In addition, EGCO Group has announced tax policies and practices in company website which has been published to acknowledge its stakeholders and to serve as a guideline for EGCO Group's tax management system.

6. Compliance Risk

With operation business in both domestic and overseas, EGCO Group is regulated under related various local laws and regulations as well as international laws. Because the disputation can affect EGCO Group's operation and its corporate image, EGCO Group strictly complies with all related laws and regulations, as well as environment laws and SHE regulations. Moreover, the organization will closely monitor to new issues of governing laws and regulations.

In 2018, EGCO Group had no record of failures to comply with related laws and regulations that involved in its business. In addition, EGCO Group followed up the related new laws and regulations to acknowledge all concerned units on the issues in order to comply with the newly issued conditions and monitored through the legal database for their further compliance.

7. Human Resources Risk

EGCO Group believes that personnel are their most valuable asset and the success factor of the organization. Losing the valuable employees will lead to efficiency impairment and business continuity, not mentioning the increased cost from recruitment, training and development. More importantly, employees' knowledge and expertise in power business are crucial, thus losing competent employees is one of EGCO Group's major concerns. In order to mitigate such risk, EGCO Group introduces.

- Set up Succession Plan Program aiming to develop competent employees for succeeding the key positions including the individual development plan and job rotation.
- Set up Knowledge Sharing and Knowledge Center through the EGCO Group Net.
- Provide fair remuneration in return for employees work performance and efforts contributing to the organization success. EGCO Group compensates its employees with salary according to its salary structure as well as other fringe benefits, designed to be appropriate and competitive in the market with the consideration of employees' knowledge, competency and expertise proper to their job positions. In order to retain good and talented personnel.
- Support activities between management and employees to encourage good relationship within corporation which leads to be a happy workplace.

Such measures are to ensure that EGCO Group's personnel required knowledge and competency relate to the organization which will lead to be a sustainable growth organization.

8. Procurement Procedure Risk

Because EGCO Group determines to make sustainable operations, the providing procedures will be focused on “Suppliers” risk management to cover 3 aspects (ESG), Environment, Social and Governance. Since 2016, the “EGCO Group’s Suppliers Codes of Ethics” has been prepared to encourage our suppliers to be an ethical business in many parts such as anti-corruption, social responsibilities, occupational health and safety and sustainable environmental concerns. Furthermore, EGCO Group has monitored and assessed suppliers’ ESG aspects by Self-Declaration questionnaire to motive our suppliers to consistently maintain ESG standard.

In 2018, EGCO Group held a “Supplier Day” to strengthen relationship among major suppliers aimed to share any necessary information and to improve ESG potential for sustainable business operations. Certainly, EGCO Group determines to organize this activity continuously.



Emerging Risk

1. Global Economic Growth Slowdown Risk

Decreasing region economic growth forecasts in United States of America, People’s Republic of China, Europe and Emerging market, such as Thailand, Republic of Korea, People’s Republic of China, Republic of India, Malaysia, Republic of the Philippines, Taiwan, Republic of Indonesia and Islamic Republic of Pakistan are caused by Tariff, U.S.-China trade war, Brexit and rising interest rate. Definitely, EGCO Group concerns about the situations and prepares the mitigations as follows:

- Assign the authorized operators to invested countries such as Republic of the Philippines and Republic of Indonesia to closely monitor, report and assess the situation to prepare risk mitigation action and to alert the related parties to response with all possible risks.
- Diversify investment portfolio in many countries.
- Invest in various fuels utilization power plants and seek for new business opportunities.

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

Due to the extreme weather over the world, the 23rd United Nations Framework Convention on Climate Change held on November 6-7, 2018 has launched new agreement aimed to fight climate change by reducing greenhouse gas emissions. Thailand not only participated in this conference and signed the agreement which aimed to reduce greenhouse gas emissions around 20-25 percent by 2030 (Compared to the based year 2015) but also committed to review and participate in climate change problem solving every 5 years. Regarding to the agreement, the Government could consider relevant laws and regulations, related to greenhouse gas emissions, within 3-5 years. Also, Thailand Power Development Plan (PDP) could be revised to be aligned with the agreement. To mitigate such risk, EGCO Group not only closely monitors and analyzes the impacts but also aims to increase renewable energy portfolio to achieve 30 percent by 2026 from both domestic and overseas. In 2018, EGCO Group's renewable energy portfolio was 20.49 percent of total electricity generating capacity which could reduce approximately 4.68 hundred thousand tons of carbon dioxide equivalent emissions per year (14 EGCO subsidiaries) and aligned with the Government policy. In addition, EGCO Group will invest in environmental-friendly technology for future investments, promote energy conservation in EGCO Group and reduce greenhouse emission indirectly by doing the business with environmental-friendly partners.

3. Emerging / Disruptive Technology Risk

According to the rapidly change in technologies such as micro grid system, renewable energy system, energy storage system and big data system, the Government aims to achieve commercial smart grid by 2021. Regarding the Thailand Smart Grid Development Master Plan 2016-2021, the Ministry of Energy is assigned to take primary accountability through 3-pillar: (1) Demand Response and Energy Management System, (2) Renewable Energy Forecast and (3) Micro Grid and Energy Storage System. This Government policy will gradually change user behaviors from consumer to be prosumer and Peer to peer. Furthermore, Smart grid could reasonably be expected to influence the industries due to production cost and energy trading scheme that may impact not only the Government authorities that includes Electricity Generating Authority of Thailand, Metropolitan Electricity Authority and Provincial Electricity Authority but also Independent Power Plants. In the other hand, this transformation may provide an opportunity to create value to the organizations also. To mitigate such risk, EGCO Group closely monitors regarding technological changes to develop new businesses by running "Innovation Team Challenge". This contest is aimed to improve teamwork, creativity and competency of EGCO Group employees which will provide sustainable growth and business survival to the organization.

Power Industry and Competition

1. Electricity industry and Economic situation in Thailand

In 2018, Thailand's peak demand in Electricity Generating Authority of Thailand (EGAT)'s system was 28,338 megawatts, occurred on April 24, 2018 at 01.51 pm, lower than the peak demand of 28,578 megawatts in 2017 by 0.85 percent while the peak demand in 3 power authorities system (EGAT, Metropolitan Electricity Authority (MEA) and, Provincial Electricity Authority (PEA)) was 29,968 megawatts, lower than the peak demand of 30,303 megawatts in 2017 by 1.11 percent. A decrease in the peak demand was the consequence of cold weather in the beginning of the year and continuous raining as well as the increase of Independent Power Supply (IPS) and SPP outside the EGAT system. Peak demand for electricity consumption is shown in Figure 1. In the meantime, electricity consumption of the country in EGAT system as of December 2018, including electricity consumption outside EGAT system as of November 2018 stood at 203,006 gigawatt-hours which were 1,840 gigawatt-hours or 0.91 percent increase from 201,166 gigawatt-hours in 2017. A growth of electricity consumption was mainly driven by the expansion of economy and thriving tourism.

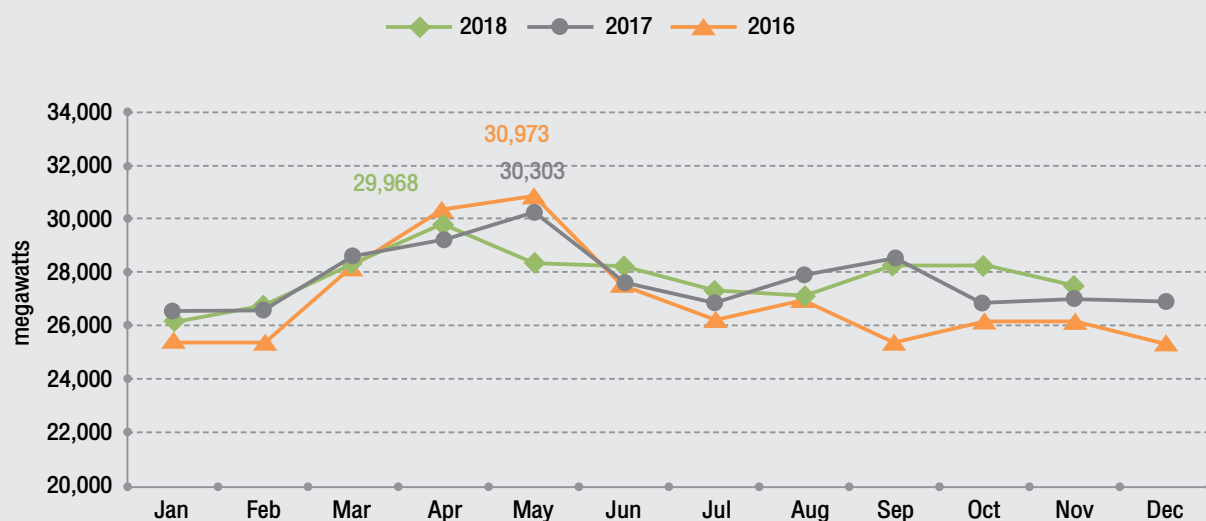


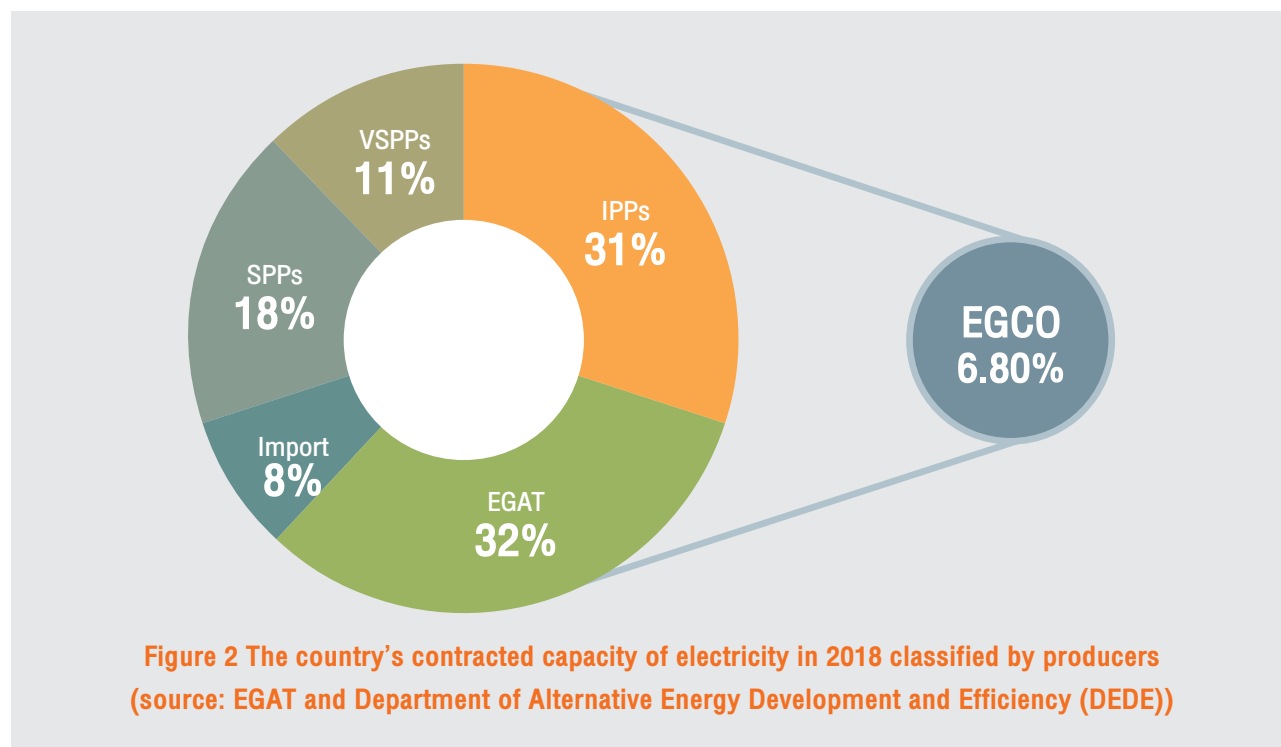
Figure 1 Peak demand for electricity consumption during 2016-2018
(source: Energy Policy and Planning Office (EPPO))

As for economic outlook in 2019, National Economic and Social Development Board (NESDB) forecasted Thailand's economy to expand in the range of 3.50 to 4.50 percent (Mean 4.00), lower than the expansion of 4.2 in 2018. A lower projection is mainly resulted from the uncertainty of trade protection and reciprocal retaliation between the U.S. and China along with an increase in federal funds rate, which negatively affect trading-partner economies, world trade volume, global economy, and Thai exports to grow slower than expected

As of December 31, 2018, the country's contracted capacity in 3 power authorities system was 48,990 megawatts, 15,790 megawatts or 32.23% of which were generated by EGAT power plants, and the remaining from other producers, i.e.

- Independent Power Producers (IPPs) 14,948 megawatts or 30.51 percent
- Small Power Producers (SPPs) 8,757 megawatts or 17.88 percent
- Import from neighboring countries 3,878 megawatts or 7.92 percent
- Very Small Power Producers (VSPPs) as of October 2018 5,617 megawatts or 11.46 percent

EGCO's contracted capacity of electricity sold to EGAT was 3,332.08 megawatts, representing 6.80% of the country's contracted capacity in 3 power authorities system, as presented in Figure 2



In the recent year, the National Energy Policy Council (NEPC) had a plan to draft the new Power Development Plan (PDP) to portray a clear picture of power sector development since some planned power plants in PDP 2015 could not be constructed as planned along with electricity consumption behavior change, influenced by disruptive technology. The objectives of the new PDP aim to strengthen security of power supply for each region, maintain appropriate costs of power generation and focus on reducing environmental and social impacts by lessening carbon dioxide intensity in power generation. The new PDP has been approved by NEPC on January 24, 2019 after public hearing to obtain opinions and comments from private sector and others authorities has already been done.

Regarding the Alternative Energy Development Plan of 2015-2036 (AEDP 2015), power generation from renewable energy (including large hydropower) is targeted to be 19,684 megawatts in 2036. In 2018, the government has announced the plan to suspend the purchase of renewable power during the next five years because the country has sufficient reserve margin. According to the Department of Alternative Energy Development and Efficiency, the current status of renewable energy power plants as of October 2018, which achieved COD was 10,798 megawatts, increased from which of 2017 by 560 megawatts or 5.47 percent.

2. Electricity industry in Asia-Pacific countries

EGCO has envisioned slight growth prospect for domestic electricity industry. Therefore, EGCO has thus worked out expansion plans in Asia-Pacific countries such as the Philippines, Lao PDR, Indonesia and Australia, where the Company has established business bases. Investment of EGCO in each country is shown in Figure 3. To secure sustainable growth, EGCO has also been seeking for investment opportunities in other countries in the Asia Pacific region such as Vietnam, Myanmar, Cambodia, South Korea and Taiwan. To be well prepared for such endeavors, EGCO has consistently kept abreast of electricity industry situation in those targeted countries. The overall industry situations of which are as briefed below.

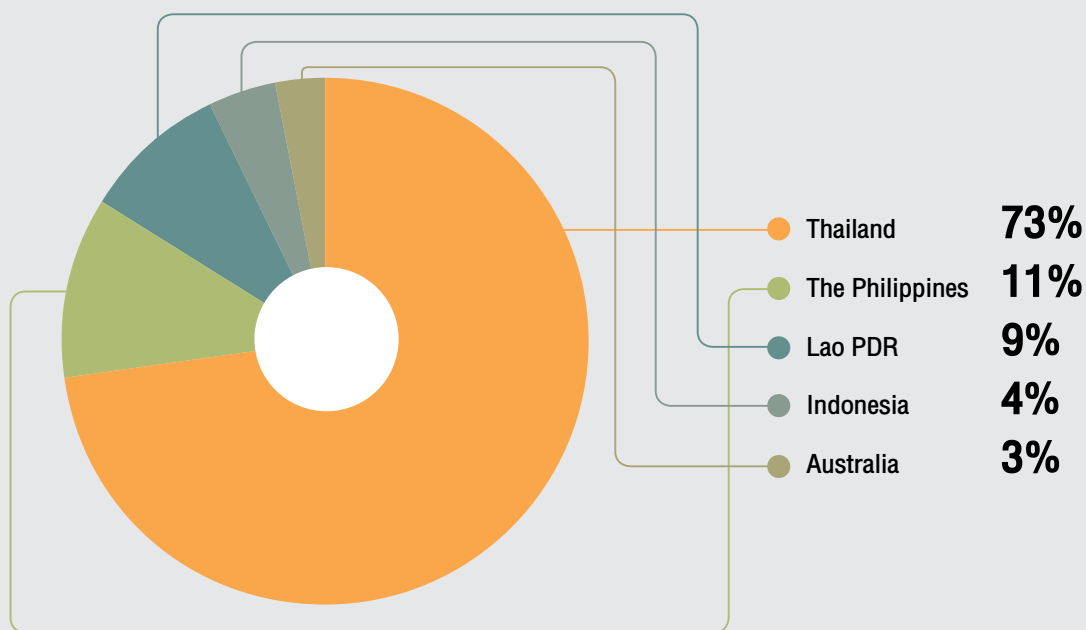


Figure 3 EGCO's equity contracted capacity of electricity in 2018 classified by country

The overview of electricity situations for each country is briefed below.

2.1 The Philippines

The Philippines's installed capacity is approximately 23,000 megawatts, which are primarily from coal-fired power. Peak demand in the Philippines is estimated to increase 5.60 percent annually. Regarding to Power Development Plan 2016-2040, the Philippines plan to expand its generating capacity by 31,000 megawatts by 2025, which focus on power generation from coal-fired power plant. Additionally, the Philippines set target renewable energy generation of 20,000 megawatts by 2025. The investments in renewable energy will be emphasized on solar and wind power.

2.2 Lao People's Democratic Republic (Lao PDR)

Lao PDR's installed capacity is approximately 6,800 megawatts, which are for domestic consumption of 2,400 megawatts and for export to Vietnam and Thailand of 800 megawatts and 3,600 megawatts respectively. The electricity generation is mainly from hydropower plants because of its abundant water resource and mountainous geography, which are suitable for construction of hydroelectric dams. The demand growth of whole country is forecasted to increase 13.20% annually. Moreover, Lao PDR's promotes the investment in power generation from hydropower and alternative renewable energies, such as solar and wind from private sectors, both domestically and overseas.

Presently, Thailand has signed Memorandum of Understanding (MOU) to purchase electricity of 9,000 megawatts from Lao PDR.

2.3 Indonesia

Indonesia's installed capacity is approximately 60,000 megawatts. Coal-fired power plants play an important role as base load generation. Demand growth is estimated to increase 6.80% annually. According to 2018-2027 Power Supply Business Plan (RUPTL), the government has laid down a plan to expand its electricity generating capacity by 56,000 megawatts, which decrease from 2017-2028 Power Supply Business Plan (RUPTL) by 22,000 megawatts as a result of lower demand growth than forecasted in the previous RUPTL. In overall, the additional electricity generating capacity is mainly from coal, geothermal and hydropower, which are the major resources.

2.4 Australia

Australia's installed capacity is approximately 52,000 megawatts. Australia plans to retain 47 percent of total installed capacity from coal-fired power plants in order to maintain energy security and affordable price. Due to energy efficiency and a continuous increase in rooftop PV capacity, demand growth in Australia is estimated to be flat over the 20-year outlook period. Furthermore, the government of Australia puts an effort to increase renewable energy generation to 33,000 gigawatt-hours by 2020, which focus on power generation from wind power and rooftop PV. Power generation from wind power and rooftop PV are forecasted to be more than triple from present by 2028.

2.5 Vietnam

Installed capacity of Vietnam is approximately 42,000 megawatts, which are primarily from coal-fired power and hydropower. Demand growth is estimated to increase 8.40 percent annually. According to revision of power master plan VII, Vietnam's electricity generating capacity is forecasted to increase to 130,000 megawatts by 2030, which mainly focus on investment of coal-fired power plants and natural gas power plants. Additionally, the government of Vietnam put an effort to develop power generation from renewable energy to achieve target of 48,000 megawatts by 2030, with emphasis on solar power, hydropower and wind power.

Vietnam is being under power sector reform, in order to create competitive wholesale and retail power market and to reform power generation corporations of Electricity of Vietnam (EVN).

2.6 Myanmar

Myanmar's installed capacity is approximately 5,700 megawatts, which are mainly generated by hydropower plants. Demand growth in Myanmar is forecasted to increase 9.60 percent annually. With an effort to achieve 100% electrification by 2030, Myanmar is moving forwards to increase energy access in rural areas and secure reliable supply in urban areas and special economic zones (SEZs). Therefore, the government 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, expiration in 2020 with no specific capacity.

2.7 Cambodia

Installed capacity of Cambodia is approximately 2,000 megawatts. Hydro and coal are primary source of fuel supply in Cambodia. Demand growth in Cambodia is forecasted to increase 9.50 percent annually. Cambodia plans to increase 2,600 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.

2.8 South Korea

South Korea's installed capacity is approximately 120,000 megawatts, which are significantly from natural gas and coal-fired power. Demand growth is estimated to increase 1.30 percent annually. South Korea's electricity generating capacity is estimated to increase to 174,000 megawatts. Overall of additional capacity is generated by natural gas power plants and coal fired power plants. Moreover, the government of South Korea has a plan to develop power generation from renewable energy to achieve 20 percent of total capacity by 2030, with target of 31,000 megawatts and 15,000 megawatts from solar power and wind power respectively.

2.9 Taiwan

Taiwan's installed capacity is approximately 42,000 megawatts, which are mainly from natural gas and coal-fired power. The government of Taiwan plans to expand 32,000 megawatts of electricity generating capacity with emphasis on development of natural gas power plant and coal-fired power plant as a based load generation. Furthermore, Taiwan plans to generate 20 percent of total capacity from renewable

energy, with significant portion of solar power and wind power to replace existing nuclear power plants, which will be decommissioned in 2025. In 2020, power generation from renewable energy in Taiwan is expected to be 27,000 megawatts.

3. Competition

Overall picture in 2018 illustrated the active movements of power sector. On the government sector, the National Energy Policy Council or NEPC is drafting the new PDP. On the private sector, power companies are actively seeking for investment opportunities outside Thailand due to limited growth prospect for domestic electricity industry. This resulted in the intensified competition in overseas market. Despite the high competition in power industry, EGCO successfully enhanced its investment in a new project. On November 15, 2018, EGCO by Gen Plus B.V., has signed sale and purchase agreement to invest in a 49 percent ownership interest in Paju Energy Service Co.Ltd. (Paju ES), which owns and operates the Paju combined cycle power plant with an installed capacity of 2x911.5 megawatts, which is located in Paju city, Gyeonggi Province, South Korea. The transaction is expected to be completed by January 2019. Such acquisition not only enables EGCO to receive the immediate income, but also adds the economic value to the company in the long term. EGCO is satisfactorily competitive in power business which was resulted by favorable factors as follows;

- **Human resources**

Competence and expertise of EGCO personnel, experiences of its Board members, and good relationship with business alliances are the keys. EGCO personnel have dependable capabilities and experiences in power industry. Board members are competent persons from diverse business areas, many of whom are knowledgeable and long-time experienced in energy and electricity areas.

- **EGCO's trustworthy**

EGCO has planned to expand its investments to ensure a consistent and sustainable growth. The Company selected to invest in projects that generate good returns at an acceptable risk level, which has resulted in its satisfactory financial status, liquidity, and profit growth. This has helped the Company earn trust and confidence from banks and financial institutions in financially supporting its ongoing investments.

- **Good relationship with communities surrounding power plants**

As power generation may cause impact to nearby communities, EGCO always operates its power plants with full responsibility towards society and environment. EGCO discloses information without concealment, encourages public participation and maintains good relationship with nearby communities. Moreover, it supports local employment for income distribution and the well-being of local people. So far, EGCO has faced no complaints from communities surrounding its power plants.

- **Innovation**

Since EGCO realizes the importance of organizational development to prepare for the disruptive changes in the future, EGCO aims to incubate EGCO personnel with creative and innovative ideas, which can be applied to work process, increase work efficiency and obtain the competitive advantages over competitors.

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	2018		2017	
			Revenue	%	Revenue	%
Electricity	EGCO Cogen	80.00%				
	Capacity Charge		251.73	0.43%	260.93	0.69%
	Energy Charge		1,887.09	3.24%	1,811.21	4.76%
	Solarco	49.00%				
	Energy Charge		359.50	0.62%	363.68	0.96%
	SPP 2	99.99%				
	Energy Charge		48.42	0.08%	47.88	0.13%
	SPP 3	99.99%				
	Energy Charge		49.10	0.08%	48.98	0.13%
	SPP 4	99.99%				
	Energy Charge		34.77	0.06%	35.96	0.09%
	SPP 5	99.99%				
	Energy Charge		50.34	0.09%	51.14	0.13%
	BRWF	100.00%				
	Energy Charge		995.80	1.71%	981.12	2.58%
	TWF	90.00%				
	Energy Charge		32.95	0.06%	31.85	0.08%
	CWF	90.00%				
	Energy Charge		344.01	0.59%	313.22	0.82%
	KLU ^A	99.99%				
	Capacity Charge		392.52	0.67%	185.61	0.49%
	Energy Charge		1,839.02	3.16%	727.22	1.91%
	BPU ^B	99.99%				
	Capacity Charge		839.39	1.44%	219.05	0.58%
	Energy Charge		3,850.55	6.61%	929.47	2.44%
Finance lease income under power purchase agreements	KEGCO	99.99%	3,062.51	5.26%	3,291.22	8.65%
	RG	70.30%	6.23	0.01%	9.59	0.03%
Operating lease income under power purchase agreements	Quezon	100.00%	3,432.99	5.90%	3,606.51	9.48%
Lease service income under power purchase agreements	KEGCO	99.99%	10,543.20	18.10%	9,835.44	25.84%
	RG	70.30%	204.81	0.35%	189.51	0.50%
	Quezon	100.00%	6,236.30	10.71%	6,170.27	16.21%
Service	ESCO	99.99%	1,060.97	1.82%	908.11	2.39%
Interest Income	EGCO PLUS		482.56	0.83%	1.25	0.00%
	EGCO		131.59	0.23%	91.60	0.24%
	KEGCO		25.93	0.04%	29.71	0.08%
	Quezon		15.04	0.03%	0.52	0.00%
	Solarco		8.95	0.02%	10.57	0.03%
	Rayong Power Plant, EGCO Cogen, RG, SPP2, SPP3, SPP4, SPP5, TWF, BRWF, BPU, KLU, CWF, ESCO, PEPOI and QMS		34.88	0.06%	24.50	0.06%

Unit : Million Baht

Product Service	Transaction	% Shareholding	2018		2017	
			Revenue	%	Revenue	%
Others	Solarco ^{/C}		881.73	1.51%	918.86	2.41%
	CWF ^{/C}		465.60	0.80%	434.38	1.14%
	SPP 2 ^{/C}		123.22	0.21%	135.87	0.36%
	SPP 3 ^{/C}		126.73	0.22%	127.82	0.34%
	SPP 4 ^{/C}		89.48	0.15%	93.53	0.25%
	SPP 5 ^{/C}		132.11	0.23%	132.83	0.35%
	EGCO		49.60	0.09%	215.19	0.57%
	EGCO PLUS		20.40	0.04%	0.00	0.00%
	Rayong Power Plant, EGCO Cogen, RG, Quezon, TWF/C, BRWF, BPU, KLU, KEGCO, ESCO, PEPOI and QMS		64.17	0.11%	51.59	0.14%
Share of profit (loss)	BLCP	50.00%	1,167.65	2.01%	1,217.79	3.20%
	GEC	50.00%	1,414.85	2.43%	1,256.21	3.30%
	NTPC	35.00%	1,576.64	2.71%	1,354.77	3.56%
	NED	66.67%	567.82	0.98%	558.24	1.47%
	GPS	60.00%	131.10	0.23%	129.33	0.34%
	Masin-AES ^{/D}	49.00%	-	0.00%	780.78	2.05%
	SEG ^{/E}	20.00%	341.29	0.59%	310.17	0.81%
	MME	40.00%	29.11	0.05%	6.73	0.02%
	SBPL	49.00%	(30.94)	(0.05%)	(5.69)	(0.01%)
	GIDEC ^{/F}	50.00%	(8.67)	(0.01%)	(48.72)	(0.13%)
	SEGSD ^{/G}	11.89%	316.11	0.54%	216.99	0.57%
	NT1PC ^{/H}	25.00%	(16.55)	(0.03%)	(4.06)	(0.01%)
Divestment	Net gain on disposal of Masin-AES ^{/D}		9,810.05	16.85%	-	0.00%
	Net gain on disposal of East Water ^{/I}		4,358.53	7.48%	-	0.00%
	Net gain on disposal of GIDEC ^{/F}		8.67	0.01%	-	0.00%
Dissolution	Net gain on dissolutions of EGCO BVI ^{/J} and TLC ^{/K}		395.32	0.68%	-	0.00%
Total revenues (revenues item in consolidated)			58,235.16	100%	38,058.71	100%

Notes

- /A Klongluang Utilities Company Limited (KLU), which is EGCO holds a 99.99% stakes. The commercial operation date was on July 20, 2017.
- /B Banpong Utilities Company Limited (BPU), which is EGCO holds a 99.99% stakes. The commercial operation date was on October 1, 2017.
- /C Adder is an income, which is supported by the government.
- /D Gen Plus B.V., a wholly owned subsidiary of EGCO, divested all 49% indirect shares in Masin-AES Pte. Ltd (Masin-AES) on March 20, 2018.
- /E Star Energy Geothermal Pte. Ltd. (SEG), which is EGCO holds a 20% indirect ownership interest, acquired 8.18% stakes in Star Energy Geothermal (Salak-Darajat) B.V. (SEGSD) on March 31, 2017.
- /F EGCO divested all 50% shares in GIDEC Company Limited (GIDEC) on March 15, 2018.
- /G EGCO acquired 11.89% stakes in Star Energy Geothermal (Salak-Darajat) B.V. (SEGSD) on March 31, 2017.
- /H EGCO signed a Shareholder's Agreement of Nam Theun 1 Power Company Limited (NT1PC), which is EGCO holds a 25% stakes, in order to develop the Nam Theun 1 Hydropower Plant Project on September 4, 2017.
- /I EGCO divested all 18.72% shares in Eastern Water Resources Development and Management Public Company Limited (East Water) on March 14, 2018.
- /J EGCO International (B.V.I) Limited (EGCO BVI) , which is EGCO holds a 100% stakes, registered for dissolution and liquidation on December 26, 2018.
- /K PT Tenaga Listrik Cilegon (TLC) , which is EGCO holds a 49% stakes, registered for dissolution and liquidation on November 28, 2018.

Management Discussion and Analysis

For the Annual Operating Results 2018

Ended December 31, 2018

Note: 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 at Tel: 662-998-5150-3 or Email: ir@egco.com.

1. Power Industry and Competition

1.1 Electricity industry and Economic situation in Thailand

In 2018, Thailand's peak demand in Electricity Generating Authority of Thailand (EGAT)'s system was 28,338 megawatts, occurred on April 24, 2018 at 01.51 pm, lower than the peak demand of 28,578 megawatts in 2017 by 0.85% while the peak demand in 3 power authorities system (EGAT, Metropolitan Electricity Authority (MEA) and Provincial Electricity Authority (PEA) was 29,968 megawatts, lower than the peak demand of 30,303 megawatts in 2017 by 1.11%. A decrease in the peak demand was the consequence of cold weather in the beginning of the year and continuous raining as well as the increase of Independent Power Supply (IPS) and Small Power Producer (SPP) outside the EGAT system. In the meantime, electricity consumption of the country in EGAT system as of December 2018, including electricity consumption outside EGAT system as of November 2018 stood at 203,006 gigawatt-hours which were 1,840 gigawatt-hours or 0.91% increase from 201,166 gigawatt-hours in 2017. A growth of electricity consumption was mainly driven by the expansion of economy and thriving tourism.

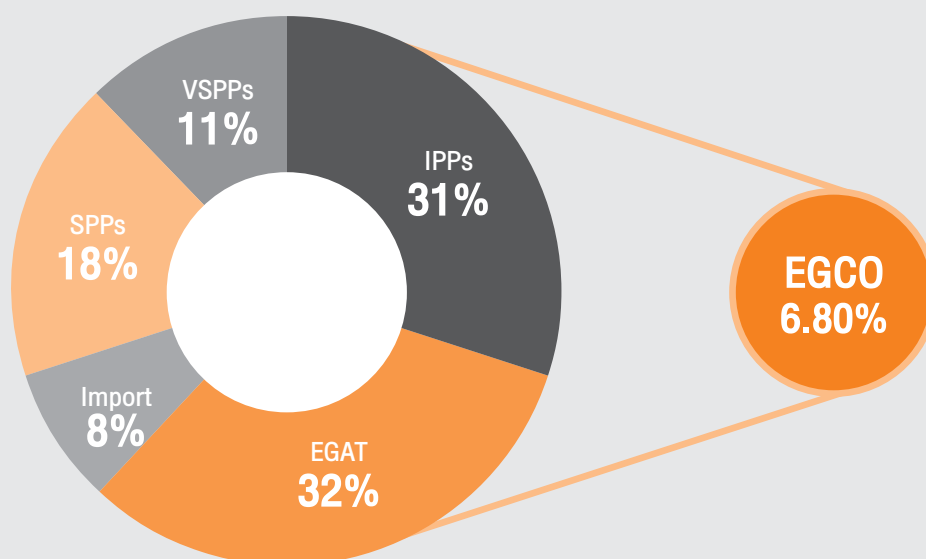
As for economic outlook in 2019, National Economic and Social Development Board (NESDB) forecasted Thailand's economy to expand in the range of 3.50% to 4.50% (Mean 4.00%), lower than the expansion of 4.20% in 2018. A lower projection is mainly resulted from the uncertainty of trade protection and reciprocal retaliation between the United States of America and the People's Republic of China along with an increase in federal funds rate, which negatively affect trading-partner economies, world trade volume, global economy, and Thai exports to grow slower than expected.

As of December 31, 2018, the country's contracted capacity in 3 power authorities system was 48,990 megawatts, 15,790 megawatts or 32.23% of which were generated by EGAT power plants, and the remaining from other producers, i.e.

- Independent Power Producers (IPPs) 14,948 megawatts or 30.51%
- Small Power Producers (SPPs) 8,757 megawatts or 17.88%
- Very Small Power Producers (VSPPs) as of October 2018 5,617 megawatts or 11.46%
- Neighboring Countries Power Producers 3,878 megawatts or 7.92%

EGCO's contracted capacity of electricity sold to EGAT was 3,332.08 megawatts, representing 6.80% of the country's contracted capacity in 3 power authorities system, as presented in Figure 1

Figure 1 The country's contracted capacity of electricity in 2018 classified by producers



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

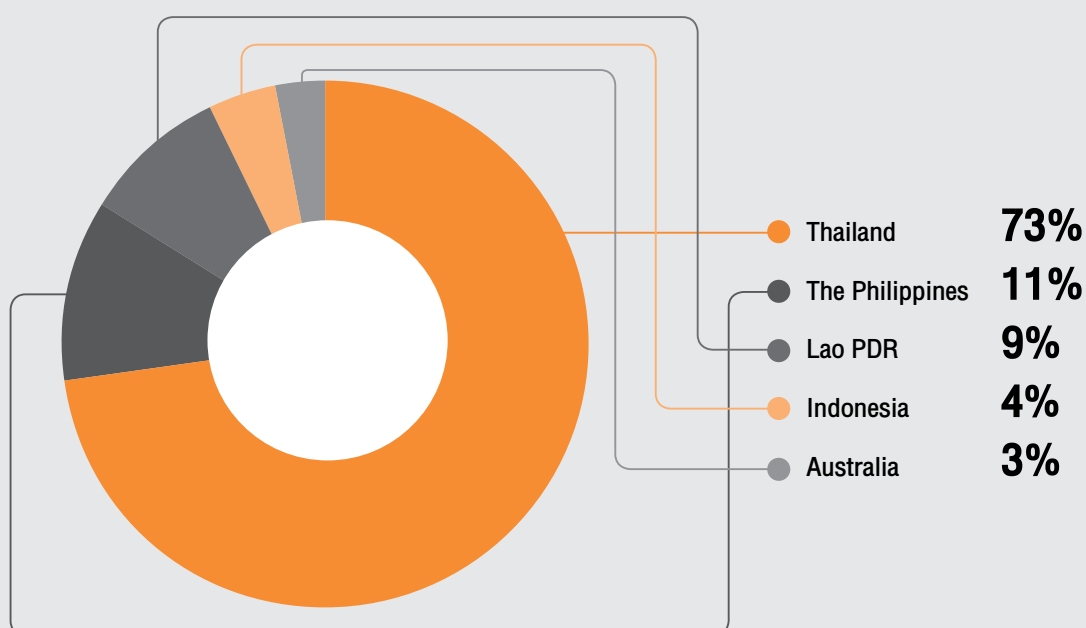
In the recent year, the National Energy Policy Council (NEPC) had a plan to draft the new Power Development Plan (PDP) to portray a clear picture of power sector development since some planned power plants in PDP 2015 could not be constructed as planned along with electricity consumption behavior change, influenced by disruptive technology. The objectives of the new PDP aim to strengthen security of power supply for each region, maintain appropriate costs of power generation and focus on reducing environmental and social impacts by lessening carbon dioxide intensity in power generation. The new PDP has been approved by NEPC on January 24, 2019 after public hearing to obtain opinions and comments from private sector and others authorities has already been done.

Regarding the Alternative Energy Development Plan of 2015-2036 (AEDP 2015), power generation from renewable energy (including large hydropower) is targeted to be 19,684 megawatts in 2036. In 2018, the government has announced the plan to suspend the purchase of renewable power during the next five years because the country has sufficient reserve margin. According to the Department of Alternative Energy Development and Efficiency, the current status of renewable energy power plants as of October 31, 2018, which achieved the commercial operation date (COD) was 10,798 megawatts, increased from which of 2017 by 560 megawatts or 5.47%.

1.2 Electricity industry in Asia-Pacific countries

EGCO has envisioned slight growth prospect for domestic electricity industry. Therefore, EGCO has thus worked out expansion plans in Asia-Pacific countries such as Republic of the Philippines, Laos People's Democratic Republic (Lao PDR), Republic of Indonesia and Commonwealth of Australia, where the company has established business bases. Investment of EGCO in each country is shown in Figure 2. To secure sustainable growth, EGCO has also been seeking for investment opportunities in other countries in the asia pacific region such as Socialist Republic of Vietnam, Union of Myanmar, State of Cambodia, Republic of Korea (South Korea) and Republic of China (Taiwan). To be well prepared for such endeavors, EGCO has consistently kept abreast of electricity industry situation in those targeted countries.

Figure 2 EGCO's equity contracted capacity of electricity in 2018 classified by country



1.3 Competition

Overall picture in 2018 illustrated the active movements of power sector. On the government sector, the National Energy Policy Council or NEPC is drafting the new PDP. On the private sector, power companies are actively seeking for investment opportunities outside Thailand due to limited growth prospect for domestic electricity industry. This resulted in the intensified competition in overseas market. Despite the high competition in power industry, EGCO successfully enhanced its investment in a new project. On November 15, 2018, EGCO by Gen Plus B.V., has signed sale and purchase agreement to invest in a 49% ownership interest in Paju Energy Service Co.Ltd. (Paju ES), which owns and operates the Paju combined cycle power plant with an installed capacity of 1,823 megawatts (consists of 2 units of 911.50 megawatts each), which is located in Paju city, Gyeonggi Province, South Korea. The transaction is completed on January 15, 2019. Such acquisition not only enables EGCO to receive the immediate income, but also adds the economic value to the company in the long term. EGCO is satisfactorily competitive in power business which was resulted by favorable factors as follows;

- **Human resources**

Competence and expertise of EGCO personnel, experiences of its Board members, and good relationship with business alliances are the keys. EGCO personnel have dependable capabilities and experiences in power industry. Board members are competent persons from diverse business areas, many of whom are knowledgeable and long-time experienced in energy and electricity areas.

- **EGCO's trustworthy**

EGCO has planned to expand its investments to ensure a consistent and sustainable growth. The Company selected to invest in projects that generate good returns at an acceptable risk level, which has resulted in its satisfactory financial status, liquidity, and profit growth. This has helped the Company earn trust and confidence from banks and financial institutions in financially supporting its ongoing investments.

- **Good relationship with communities surrounding power plants**

As power generation may cause impact to nearby communities, EGCO always operates its power plants with full responsibility towards society and environment. EGCO discloses information without concealment, encourages public participation and maintains good relationship with nearby communities. Moreover, it supports local employment for income distribution and the well-being of local people. So far, EGCO has faced no complaints from communities surrounding its power plants.

- **Innovation**

Since EGCO realizes the importance of organizational development to prepare for the disruptive changes in the future, EGCO aims to incubate EGCO personnel with creative and innovative ideas, which can be applied to work process, increase work efficiency and obtain the competitive advantages over competitors. For instance, EGCO arranged innovation workshop to encourage the process of innovative thinking to practical innovation including innovation competition "EGCO Group Innovation Team Challenge".

2. Significant events in 2018

2.1 The progress in construction projects

- **Xayaburi Project, a project of the Xayaburi Power Company Limited**, (EGCO holds a 12.50% ownership interest.), is a hydro power plant project, Run-of-River. The project is located in the Laos People's Democratic Republic (Laos PDR). The project has entered into the PPA with EGAT with the contracted capacity of 1,220 MW and Electricite De Laos (EDL) with the contracted capacity of 60 MW for 29 years. The construction of the project has progressed 97.45% (The construction plan was 97.09%). The commercial operation date is scheduled in the fourth quarter of 2019.
- **SBPL Project, a project of San Buenaventura Power Ltd., Co.**, (EGCO holds a 49% ownership interest.), is a 500 MW supercritical coal-fired power plant, in Mauban, Quezon province of Republic of the Philippines. 455 MW of the plant's capacity and energy are contracted to the Manila Electric Company (MERALCO) pursuant to a 20 years power supply agreement which is extendable for up to an additional 5 years. The construction of the project has progressed 97.38% (The construction plan was 96.83%). The commercial operation date is scheduled in the fourth quarter of 2019.

- **NT1PC Project, a project of Nam Theun 1 Power Company Limited** (EGCO holds a 25% ownership interest.), is a hydro power plant project. The project is located on Nam Kading River in Bolikhamxay, Lao PDR. The project has entered into the PPA with EGAT with the contracted capacity of 514 MW and EDL with the contracted capacity of 130 MW for 27 years. The construction of the project has progressed 46.79% (The construction plan was 59.68%). The commercial operation date is scheduled in the second quarter of 2022.

2.2 Additional Investments in Joint Ventures and Associated

- On March 14, 2018, EGCO divested all 18.72% shares in Eastern Water Resources Development and Management Public Company Limited to Manila Water Company Inc. EGCO Group recognised gain on disposal totalling Baht 4,358 million.
- On March 15, 2018, EGCO divested all 50% shares in GIDEC Company Limited to IEC Green Energy Company Limited. EGCO Group recognised gain on disposal totalling Baht 9 million.
- On March 20, 2018, Gen Plus B.V., a wholly owned subsidiary of EGCO, divested all 49% indirect shares in MASINLOC POWER PARTNERS CO. LTD. (MPPCL) to SMC Global Power Holdings Corp. EGCO Group recognised gain on disposal totalling 320 million US dollar, equivalent to Baht 9,810 million.

2.3 Other significant event

- On November 15, 2018, Gen Plus B.V., a wholly owned subsidiary of EGCO, signed the sale and purchase agreement to invest in a 49% ownership interest in Paju Energy Services Co.,Ltd. (Paju ES) owned by SK E&S Co.,Ltd. (SK E&S)., Paju ES owns and operates the Paju combined cycle power plant, which is located in South Korea. The acquisition was completed on January 15, 2019.

3. Business overview

EGCO Group have invested in the Power Producer (PP), Independent Power Producer (IPP), Small Power Producer (SPP), Very Small Power Producer (VSPP), Coal Mining, Operating and Maintenance (O&M), Management and Administrative Services (Management Services). Details of each plant are as follows:

(1) Subsidiaries which can be categorized into 2 businesses:

1. Power Generation

1.1 Local power generation

Khanom Electricity Generating Co., Ltd. (KEGCO)	IPP
EGCO Cogeneration Co., Ltd. (EGCO Cogen)	SPP
Roi-Et Green Co., Ltd. (RG)	SPP
Banpong Utilities Co., Ltd. (BPU)	SPP
Klongluang Utilities Co., Ltd. (KLU)	SPP
Chaiyaphum Wind Farm Co., Ltd. (CWF)	SPP
SPP Two Co., Ltd. (SPP 2)	VSPP
SPP Three Co., Ltd. (SPP 3)	VSPP
SPP Four Co., Ltd. (SPP 4)	VSPP
SPP Five Co., Ltd. (SPP 5)	VSPP

Yanhee EGCO Holding Co., Ltd. (Yanhee EGCO)	Holding Co.
• Solarco Company Limited (Solarco)	VSPP
Theppana Wind Farm Co., Ltd. (TWF)	VSPP
EGCO Plus Co., Ltd. (EGCO Plus)	Holding Co.
1.2 Overseas Power Generation	
Quezon Power (Philippines) Limited Co. (Quezon)	PP
Boco Rock Wind Farm Pty Ltd. (BRWF)	PP
2. Other businesses	
2.1 Local Other Businesses	
EGCO Engineering and Service Co., Ltd. (ESCO)	O&M
2.2 Overseas Other Businesses	
Pearl Energy Philippines Operating Inc. (PEPOI)	O&M
Quezon Management Service Inc. (QMS)	Management Services
(2) Associated in overseas power generation business	
Star Energy Geothermal Pte. Ltd. (SEG)	PP
Star Energy Geothermal (Salak - Darajat) B.V. (SEGSD)	PP
(3) Joint Ventures which can be categorized into 2 businesses:	
1. Power Generation	
1.1 Local power generation	
Gulf Electric Public Company Limited (GEC)	Holding Co.
• Gulf Cogeneration Co., Ltd. (GCC)	SPP
• Nong Khae Cogeneration Co., Ltd. (NKCC)	SPP
• Samutprakarn Cogeneration Co., Ltd. (SCC)	SPP
• Gulf Yala Green Co., Ltd. (GYG)	SPP
• Gulf Power Generation Co., Ltd (GPG)	IPP
BLCP Power Limited (BLCP)	IPP
Natural Energy Development Co., Ltd. (NED)	SPP & VSPP
G-Power Source Co., Ltd. (GPS)	VSPP
1.2 Overseas power generation	
Nam Theun 2 Power Co., Ltd. (NTPC)	PP
San Buenaventura Power Ltd. Co. (SBPL)	PP
Nam Theun 1 Power Co., Ltd. (NT1PC)	PP
2. Others businesses	
• Overseas Other Business	
PT Manambang Muara Enim Co., Ltd. (MME)	Coal Mining

(4) Other long-term investments

- Xayaburi Power Company Limited (XPCL)

As of December 31, 2018, EGCO Group's portfolio consists of 26 operating power plants, with a total contracted capacity of 4,260 MW equity and 3 construction projects, with a total contracted capacity of 544 MW equity.

4. Report and Analysis of the Operating Results

EGCO would like to present analysis of the operating results as follows:

Summary of operating results for the year 2018

Unit : Million Baht

	Power Generation		Others		Total		Change Increase (Decrease)	
	2018	2017	2018	2017	2018	2017	Amount	%
Total Revenues	38,502	32,331	1,254	1,072	39,756	33,403	6,353	19%
Total Expenses	(35,525)	(30,541)	(1,092)	(923)	(36,617)	(31,464)	5,153	16%
Share of Profit (Loss)	5,972	7,264	84	65	6,056	7,329	(1,273)	(17%)
Gain on disposal of investments	14,177	-	-	-	14,177	-	14,177	100%
Profit (Loss) before the effects of foreign exchange, deferred income tax, impairment and lease income	23,126	9,054	246	214	23,372	9,268	14,104	100%
Loss from impairment	(2,619)	(352)	-	-	(2,619)	(352)	(2,267)	(100%)
Profit (Loss) before the effects of foreign exchange, deferred income tax and lease income	20,507	8,702	246	214	20,753	8,916	11,837	100%
Deferred income (expense) tax	(23)	346	2	(1)	(21)	345	(366)	(100%)
Profit (Loss) before the effects of foreign exchange and lease income	20,484	9,048	248	213	20,732	9,261	11,471	100%
Profit (Loss) from foreign exchange	92	3,785	1	-	93	3,785	(3,692)	(98%)
Net profit (Loss) before the impact of lease income	20,576	12,833	249	213	20,825	13,046	7,779	60%
Impact of lease income	248	(1,228)	-	-	248	(1,228)	1,476	100%
Net Profit (Loss)	20,824	11,605	249	213	21,073	11,818	9,255	78%

To focusing on the operating performance, the impacts of lease income were excluded from the analysis of the operating result.

The operating profit of EGCO Group before the effects of foreign exchange, deferred income tax, impairment and lease income for the year 2018 were Baht 23,372 million, increasing by Baht 14,104 million comparing to 2017, which came from an increase in power generation business of Baht 14,072 million and a increase in other business of Baht 32 million. See more details in 4.1 and 4.2 as follows;

4.1 The Analysis of the Operating Results in Power Generation business

Profit (loss) before the effects of foreign exchange, deferred income tax, impairment and lease income for the year 2018 of power generation business increased by Baht 14,072 million, comparing 2017. This was mainly due to an increase in the operating results of EGCO Plus, EGCO, BPU, SEGSD, KLU, CWF, NTPC, SEG and GPG. On the other hand, those of Quezon, KEGCO and BLCP were decreased as follows:

EGCO Plus (Include Gen Plus B.V. and North Pole):

Unit : Million Baht

	2018	2017	Change Increase (Decrease)	
			Amount	%
Electricity revenue	-	-	-	-
Other income	10,738	6	10,732	100%
Total revenues	10,738	6	10,732	100%
Cost of sale	-	-	-	-
Other expenses	(355)	(223)	132	59%
Total expenses	(355)	(223)	132	59%
Profit (Loss) before the effects of foreign exchange, deferred income tax, impairment and lease income	10,383	(217)	10,600	100%

- **EGCO Plus** : The operating result was increased by Baht 10,600 million mainly due to recognition of gain on disposal of 49% indirect shares in MPPCL amount Baht 9,810 million and recognition of gain on liquidation of 100% indirect shares in EGCO BVI. Additionally, other income and interest income were increased from cash received from the disposal of shares in MPPCL. Meanwhile, administrative expense was increased.

EGCO:

Unit : Million Baht

	2018	2017	Change Increase (Decrease)	
			Amount	%
Electricity revenue	-	-	-	-
Other income	4,937	609	4,328	100%
Total revenues	4,937	609	4,328	100%
Cost of sale	-	-	-	-
Other expenses	(3,682)	(4,176)	(494)	(12%)
Total expenses	(3,682)	(4,176)	(494)	(12%)
Profit (Loss) before the effects of foreign exchange, deferred income tax, impairment and lease income	1,255	(3,567)	4,822	100%

- **EGCO** : The operating result was increased by Baht 4,822 million mainly due to recognition of gain on disposal in East Water and GIDEC in the amount of Baht 4,358 million and Baht 9 million, respectively. Interest income and other income were increased. Additionally, a decrease in expenses, caused by the stopped amortization of right to PPA for MPPCL. Meanwhile, dividend income from East Water was decreased since the disposal of investment. Interest expense was increased.

BPU:

Unit : Million Baht

	2018	2017	Change Increase (Decrease)	
			Amount	%
Electricity revenue	4,690	1,149	3,541	100%
Other income	5	-	5	100%
Total revenues	4,695	1,149	3,546	100%
Cost of sale	(3,911)	(946)	2,965	100%
Other expenses	(438)	(178)	260	100%
Total expenses	(4,349)	(1,124)	3,225	100%
Profit (Loss) before the effects of foreign exchange, deferred income tax, impairment and lease income	346	25	321	100%

- **BPU** : The operating result was increased by Baht 321 million. This was resulted from the commencement of BPU on October 1, 2017.

SEGSD:

Unit : Million Baht

	2018	2017	Change Increase (Decrease)	
			Amount	%
Electricity revenue	1,297	963	334	35%
Other income	-	1	(1)	(100%)
Total revenues	1,297	964	333	35%
Cost of sale	(262)	(160)	102	64%
Other expenses	(691)	(586)	105	18%
Total expenses	(953)	(746)	207	28%
Profit (Loss) before the effects of foreign exchange, deferred income tax, impairment and lease income	344	218	126	58%

- **SEGSD** : The operating result was increased by Baht 126 million due to EGCO's indirect shares in SEGSD at 11.89%, since March 31, 2017, therefore recognized the share of profit according to the increasing investment.

KLU:

Unit : Million Baht

	2018	2017	Change Increase (Decrease)	
			Amount	%
Electricity revenue	2,231	913	1,318	100%
Other income	7	1	6	100%
Total revenues	2,238	914	1,324	100%
Cost of sale	(1,889)	(781)	1,108	100%
Other expenses	(262)	(135)	127	94%
Total expenses	(2,151)	(916)	1,235	100%
Profit (Loss) before the effects of foreign exchange, deferred income tax, impairment and lease income	87	(2)	89	100%

- **KLU:** The operating result was increased by Baht 89 million. This was resulted from the commencement of KLU on July 20, 2017.

CWF:

Unit : Million Baht

	2018	2017	Change Increase (Decrease)	
			Amount	%
Electricity revenue	726	673	53	8%
Other income	8	4	4	100%
Total revenues	734	677	57	8%
Cost of sale	(327)	(332)	(5)	(2%)
Other expenses	(217)	(230)	(13)	(6%)
Total expenses	(544)	(562)	(18)	(3%)
Profit (Loss) before the effects of foreign exchange, deferred income tax, impairment and lease income	190	115	75	65%

- **CWF :** The operating result was increased by Baht 75 million due to higher wind speed, comparing to the same period of previous year, leading to higher electricity generation.

NTPC:

Unit : Million Baht

	2018	2017	Change Increase (Decrease)	
			Amount	%
Electricity revenue	2,987	3,076	(89)	(3%)
Other income	9	5	4	80%
Total revenues	2,996	3,081	(85)	(3%)
Cost of sale	(881)	(918)	(37)	(4%)
Other expenses	(590)	(701)	(111)	(16%)
Total expenses	(1,471)	(1,619)	(148)	(9%)
Profit (Loss) before the effects of foreign exchange, deferred income tax, impairment and lease income	1,525	1,462	63	4%

- **NTPC** : The operating result was increased by Baht 63 million mainly due to interest and corporate income tax expenses were decreased. Meanwhile, a decrease in electricity profit from lower electricity generation, comparing to the same period of previous year.

SEG:

Unit : Million Baht

	2018	2017	Change Increase (Decrease)	
			Amount	%
Electricity revenue	2,049	1,897	152	8%
Other income	-	85	(85)	(100%)
Total revenues	2,049	1,982	67	3%
Cost of sale	(432)	(391)	41	11%
Other expenses	(1,203)	(1,217)	(14)	(1%)
Total expenses	(1,635)	(1,608)	27	2%
Profit (Loss) before the effects of foreign exchange, deferred income tax, impairment and lease income	414	374	40	11%

- **SEG** : The operating result was increased by Baht 40 million mainly due to share of profits from 40.90% (8.18% indirect shares of EGCO) ownership in SEGSD which was invested since March 31, 2017. Meanwhile, other income was decreased as there was an insurance claim from landslide received in 2017.

GPG:

Unit : Million Baht

	2018	2017	Change Increase (Decrease)	
			Amount	%
Electricity revenue				
- Availability Payment (AP)	2,068	2,213	(145)	(7%)
- Energy Payment (EP)	1,062	2,046	(984)	(48%)
Other income	19	27	(8)	(30%)
Total revenues	3,149	4,286	(1,137)	(27%)
Cost of sale	(1,857)	(2,924)	(1,067)	(37%)
Other expenses	(401)	(494)	(93)	(19%)
Total expenses	(2,258)	(3,418)	(1,160)	(34%)
Profit (Loss) before the effects of foreign exchange, deferred income tax, impairment and lease income	891	868	23	3%

- **GPG** : The operating result was increased by Baht 23 million mainly due to a decrease in interest and corporate income tax expenses. Meanwhile, Availability Payment (AP) was decreased according to the PPA and a decrease in electricity profit resulting from the lower dispatch from EGAT, comparing to the same period of previous year.

Quezon (Include PEPOI and QMS):

Unit : Million Baht

	2018	2017	Change Increase (Decrease)	
			Amount	%
Electricity revenue	10,240	10,331	(91)	(1%)
Other income	5	-	5	100%
Total revenues	10,245	10,331	(86)	(1%)
Cost of sale	(5,715)	(5,579)	136	2%
Other expenses	(1,836)	(1,732)	104	6%
Total expenses	(7,551)	(7,311)	240	3%
Profit (Loss) before the effects of foreign exchange, deferred income tax, impairment and lease income	2,694	3,020	(326)	(11%)

- **Quezon** : The operating result was decreased by Baht 326 million mainly due to costs of replacement and dismantling of transmission line and switchyard as part of the construction of SBPL. Additionally, a decrease in electricity profit resulting from the lower electricity generation, comparing to the same period of previous year, caused by an unplanned outage.

KEGCO:

Unit : Million Baht

	2018	2017	Change Increase (Decrease)	
			Amount	%
Electricity revenue				
- Availability Payment (AP)	3,871	4,144	(273)	(7%)
- Energy Payment (EP)	10,317	9,603	714	7%
Other income	33	35	(2)	(6%)
Total revenues	14,221	13,782	439	3%
Cost of sale	(12,008)	(11,255)	753	7%
Other expenses	(1,195)	(1,219)	(24)	(2%)
Total expenses	(13,203)	(12,474)	729	6%
Profit (Loss) before the effects of foreign exchange, deferred income tax, impairment and lease income	1,018	1,308	(290)	(22%)

- **KEGCO** : The operating result was decreased by Baht 290 million mainly due to a decrease in Availability Payment (AP) according to the PPA.

BLCP:

Unit : Million Baht

	2018	2017	Change Increase (Decrease)	
			Amount	%
Electricity revenue				
- Availability Payment (AP)	3,581	3,851	(270)	(7%)
- Energy Payment (EP)	5,288	5,038	250	5%
Other income	90	93	(3)	(3%)
Total revenues	8,959	8,982	(23)	(1%)
Cost of sale	(6,558)	(6,341)	217	3%
Other expenses	(526)	(661)	(135)	(20%)
Total expenses	(7,084)	(7,002)	82	1%
Profit (Loss) before the effects of foreign exchange, deferred income tax, impairment and lease income	1,875	1,980	(105)	(5%)

- **BLCP** : The operating result was decreased by Baht 105 million mainly due to a decrease in Availability Payment (AP) according to the PPA. Meanwhile, interest and administrative expenses were decreased.

Other Subsidiaries in Power Generation business:

Unit : Million Baht

	Rayong Power Plant		Yanhee EGCO		RG		SPP 2		SPP 3		SPP 4		SPP 5	
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Electricity revenue	-	-	1,241	1,282	172	164	170	172	174	177	123	129	178	184
Other income	-	11	9	11	1	1	2	12	2	-	2	1	5	1
Total revenues	-	11	1,250	1,293	173	165	172	184	176	177	125	130	183	185
Cost of sale	-	-	(330)	(328)	(165)	(162)	(53)	(53)	(50)	(49)	(39)	(39)	(50)	(49)
Other expenses	-	(51)	(332)	(360)	(15)	(13)	(41)	(51)	(38)	(45)	(31)	(36)	(40)	(46)
Total expenses	-	(51)	(662)	(688)	(180)	(175)	(94)	(104)	(88)	(94)	(70)	(75)	(90)	(95)
Profit (Loss) before the effects of foreign exchange, deferred income tax, impairment and lease income	-	(40)	588	605	(7)	(10)	78	80	88	83	55	55	93	90

Other Subsidiaries in Power Generation business (continue):

Unit : Million Baht

	TWF		EGCO COGEN		BRWF		Total		Change Increase (Decrease)	
	2018	2017	2018	2017	2018	2017	2018	2017	Amount	%
Electricity revenue	68	67	1,711	1,658	996	981	4,833	4,814	19	1
Other income	1	1	5	2	11	9	38	49	(11)	(22)
Total revenues	69	68	1,716	1,660	1,007	990	4,871	4,863	8	1
Cost of sale	(28)	(27)	(1,571)	(1,441)	(434)	(425)	(2,720)	(2,573)	147	6
Other expenses	(19)	(26)	(62)	(73)	(392)	(481)	(970)	(1,182)	(212)	(18)
Total expenses	(47)	(53)	(1,633)	(1,514)	(826)	(906)	(3,690)	(3,755)	(65)	(2)
Profit (Loss) before the effects of foreign exchange, deferred income tax, impairment and lease income	22	15	83	146	181	84	1,181	1,108	73	7

Other Joint Ventures in Power Generation business:

Unit : Million Baht

	GPS (JV)		GEC (JV)		NED (JV)		GIDEC* (JV)		Masin-AES** (JV)		Other*** (JV)		Total		Change Increase (Decrease)	
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	Amount	%
Electricity revenue	268	286	3,915	3,723	915	927	11	73	-	7,473	-	-	5,109	12,482	(7,373)	(59)
Other income	1	3	46	26	10	12	-	1	-	-	-	7	57	49	8	16
Total revenues	269	289	3,961	3,749	925	939	11	74	-	7,473	-	7	5,166	12,531	(7,365)	(59)
Cost of sale	(93)	(97)	(3,438)	(3,166)	(238)	(242)	(12)	(72)	-	(4,416)	-	-	(3,781)	(7,993)	(4,212)	(53)
Other expenses	(38)	(56)	(223)	(237)	(116)	(136)	(7)	(50)	-	(1,659)	(78)	(38)	(462)	(2,176)	(1,714)	(79)
Total expenses	(131)	(153)	(3,661)	(3,403)	(354)	(378)	(19)	(122)	-	(6,075)	(78)	(38)	(4,243)	(10,169)	(5,926)	(58)
Profit (Loss) before the effects of foreign exchange, deferred income tax, impairment and lease income	138	136	300	346	571	561	(8)	(48)	-	1,398	(78)	(31)	923	2,362	(1,439)	(61)

* Divested ordinary shares in GIDEC on March 15, 2018.

** Divested ordinary shares in MPPCL on March 20, 2018.

*** SBPL and NT1PC are under construction.

4.2 The Analysis of the Operating Results in Other businesses

Profit (loss) before the effects of foreign exchange, deferred income tax, impairment and lease income for the year 2018 in other businesses increased by Baht 32 million comparing to 2017. The details are as follows:

Subsidiaries and Joint Ventures in Other business:

Unit : Million Baht

	ESCO (Sub)		MME (JV)		Total		Change Increase (Decrease)	
	2018	2017	2018	2017	2018	2017	Amount	%
Revenue	-	-	698	565	698	565	133	24%
Service income	1,244	1,063	-	-	1,244	1,063	181	17%
Other income	10	9	43	4	53	13	40	100%
Total revenues	1,254	1,072	741	569	1,995	1,641	354	22%
Cost of sale	(977)	(809)	(581)	(448)	(1,558)	(1,257)	301	24%
Other expenses	(115)	(114)	(76)	(56)	(191)	(170)	21	12%
Total expenses	(1,092)	(923)	(657)	(504)	(1,749)	(1,427)	322	23%
Profit (Loss) before the effects of foreign exchange, deferred income tax, impairment and lease income	162	149	84	65	246	214	32	15%

5. Report and Analysis of Financial Position

Comparing the Statements of Financial Position as at December 31, 2018 to the Statements of Financial Position as at December 31, 2017 is shown below:

	Consolidated Financial Statement (Million Baht)			
	Year		Change Increase (Decrease)	
	2018	2017	Amount	%
Assets				
Current Assets	51,353	39,543	11,810	30%
Investments in joint ventures and associated, net and advance payments for investment	55,167	49,325	5,842	12%
Property, plant and equipment, net	56,361	61,723	(5,362)	(9%)
Other non-current assets	43,547	49,741	(6,194)	(12%)
Total Assets	206,428	200,332	6,096	3%
Liabilities				
Current Liabilities	6,720	7,689	(969)	(13%)
Long-term loans and debenture (including current portion of long-term loans)	91,865	97,664	(5,799)	(6%)
Other current liabilities	6,993	8,123	(1,130)	(14%)
Total Liabilities	105,578	113,476	(7,898)	(7%)
Shareholders' Equity				
Parent's shareholders' equity	100,239	86,238	14,001	16%
Non-controlling interests	611	618	(7)	(1%)
Total Shareholders' Equity	100,850	86,856	13,994	16%
Total Liabilities and Shareholders' Equity	206,428	200,332	6,096	3%

5.1 Asset Analysis

As of December 31, 2018 the total assets were Baht 206,428 million, increasing by Baht 6,096 million or 3% from the year 2017. The details are as follows:

- Current assets increased by Baht 11,810 million or 30%. This was caused by cash, cash equivalents and short-term investments increased by Baht 27,556 million from gain on disposal in MPPCL, East Water and GIDEC. Trade receivable and trade receivable from a related party rose by Baht 554 million. In addition, spare parts and supplies of Quezon and KEGCO increased by Baht 482 million. KEGCO's financial lease receivable increased by Baht 484 million. Meanwhile, assets held for sale decreased by Baht 16,590 million from disposal of share in MPPCL which was completed in Q1/2018. Dividend receivable from BLCP and other current assets decreased by Baht 408 million and Baht 268 million, respectively.

- Investments in joint ventures and associated (net) and advance payment for investment increased by Baht 5,842 million or 12% mainly due to an investment in NT1PC, SBPL and an advance payment for investment in Paju ES. Additionally, recognition of share of profits after dividend deduction from joint ventures and associated.
- Property, plant and equipment (net) decreased by Baht 5,362 million or 9% mainly due to asset's write-off of Quezon, BRWF, Rayong Power Plant and KEGCO.
- Other non-current assets decreased in the amount of Baht 6,194 million or 12%. This was caused by the disposal of share in East Water amount Baht 3,869 million. Impairment of goodwill of Quezon amount Baht 1,347 million. KEGCO's financial lease receivable decreased by Baht 716 million. A decrease of deferred expenses and dividend receivable from BLCP by Baht 582 million and Baht 306 million, respectively. Whereas, the investment in Xayaburi and other non-current assets increased by Baht 479 million and Baht 147 million, respectively.

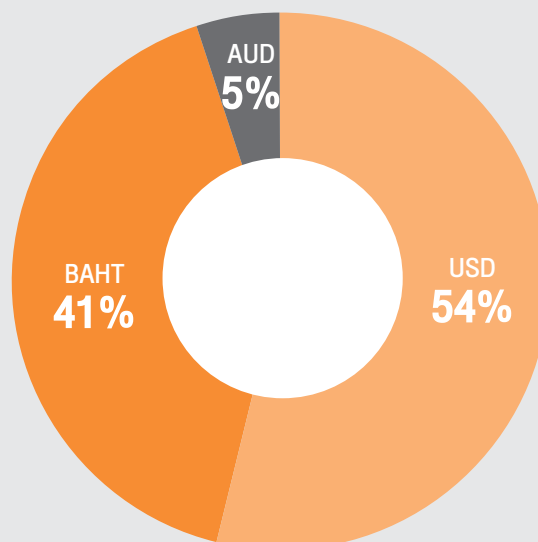
5.2 Liability Analysis

As of December 31, 2018 the total liabilities were Baht 105,578 million, decreasing by Baht 7,898 million or 7% from the year 2017. The details are as follows:

- Current liabilities decreased in the amount of Baht 969 million or 13% mainly due to short-term loan repayment of EGCO in the amount of Baht 1,029 million. Other current liabilities decreased by Baht 774 million mainly from retention of BPU, CWF and KLU. Whereas, trade payable and trade payable to a related party of KEGCO, KLU and BPU rose by Baht 833 million.
- Long-term loans and debenture decreased by Baht 5,799 million or 6% mainly due to the principle repayment of long-term loan of Quezon, KEGCO and BRWF.

* Outstanding long-term loans are as follows:

- USD loans : US dollars 1,444 million, equivalent to Baht 47,068 million
- Baht loans : Baht 35,681 million
- AUD loans : Australian dollars 202 million, equivalent to Baht 4,590 million



Loan maturities schedule as at December 31, 2018

Unit : Million Baht

Maturity	EGCO	KEGCO	BPU	Quezon	BRWF	CWF	KLU	Yanhee EGCO	SPP 2,3,4,5	TWF	Total
Within 1 year	8,930	14,706	343	1,544	363	340	162	416	390	32	27,226
2 - 5 years	28,220	-	1,471	3,436	4,170	1,622	672	1,710	854	132	42,287
Over 5 years	5,520	-	5,382	-	-	2,402	3,081	734	77	72	17,268
Total	42,670	14,706	7,196	4,980	4,533	4,364	3,915	2,860	1,321	236	86,781

* Debenture : Yen 17,120 million, redeems within 7 years from the issuance date, had a cross currency swap to US Dollar 143.05 million

- Other non-current liabilities decreased by Baht 1,130 million or 14% mainly due to deferred income tax liabilities decreased by Baht 828 million. Provision for decommissioning costs and advance payment to contractor of Quezon decreased by Baht 433 million and Baht 23 million, respectively. Meanwhile, other non-current liabilities increased by Baht 154 million.

5.3 Shareholders' Equity Analysis

As of December 31, 2018, total Shareholders' Equity were Baht 100,850 million increasing by Baht 13,994 million or 16% from the year 2017. The main reasons are as follows: Firstly, EGCO's operating profit in Income Statement increased by Baht 21,073 million. Secondly, the effect from the translation adjustment of currencies to Thai Baht for offshore subsidiaries, associated and joint ventures increased by Baht 302 million. Thirdly, share of other comprehensive income of associates and joint ventures was Baht 36 million. Fourthly, a decrease by dividend payment in the amount of Baht 5,001 million. Fifthly, the reversal of the gain from the valuation of available-for-sale investments and the loss on remeasurements of post-employee benefit obligations were Baht 2,395 million and Baht 14 million, respectively. Lastly, a decrease by non-controlling interests in the amount of Baht 7 million.

5.4 Cash Flow Analysis

As of December 31, 2018 cash and cash equivalents were Baht 34,877 million, increasing by Baht 28,090 million comparing to December 31, 2017. The details are as follows:

Unit: Million Baht

Net cash <u>received from</u> operating activities	11,253
Net cash <u>received from</u> investing activities	31,589
Net cash <u>payment for</u> financing activities	(15,714)
Gain from the effect of foreign exchange rate	962
Net increase in cash	<u>28,090</u>

- Net cash received from operating activities** was Baht 11,253 million from operating of EGCO and its subsidiaries.
- Net cash received from investing activities** was Baht 31,589 million. The amount of Baht 31,650 million was received from disposal of shares in MPPCL, East Water and GIDEC. The dividend received from joint ventures and other company were Baht 4,378 million. Cash receipts from interest income was Baht

787 million. Cash receipts from short-term and long-term investments were Baht 360 million. Cash receipts from short-term and long-term investments used as collateral and cash receipts from land expropriation were Baht 177 million and Baht 12 million, respectively. Meanwhile, cash payment in advance investment in Paju ES was Baht 2,428 million. The construction costs and development costs of BPU, CWF and KLU were Baht 1,149 million. Equity injection in XPCL was Baht 470 million. The investment in NT1PC and SBPL were Baht 1,053 million and 675 million, respectively.

- **Net cash payment for financing activities** was Baht 15,714 million, resulted from the principal repayment of short-term and long-term loans totalling Baht 22,030 million, interest payment of loans and financing fees totalling Baht 4,308 million and the dividend payment to shareholders amounting to Baht 5,050 million. Meanwhile, the loan draw down was Baht 15,674 million.

6. Financial Ratios

Profitability Ratios

	2018	2017	Change Increase/ (Decrease)
Gross Profit Ratio (%)	32.82	36.07	(3.25)
Operating Profit Ratio before FX (%)	51.23	29.12	22.11
Profit Ratio before FX (%)	26.49	14.08	12.41
Profit before FX per share (Baht)	39.38	17.59	21.79

Trade receivables aging summary

Aging periods of trade receivables as at December 31, 2018 are shown in the table below:

Unit : Million Baht

	2018	2017	Change Increase/(Decrease)	
			Amount	%
Current	2,041	1,966	75	4%
Overdue less than 3 months	8	-	8	100%
Overdue between 3 - 6 months	68	3	65	100%
Overdue between 6 - 12 months	-	-	-	-
Overdue more than 12 months	-	-	-	-
Trade receivables, net	2,117	1,969	148	8%

Leverage Ratio and Liquidity Ratio

	2018	2017	Change Increase/ (Decrease)
Debt to equity ratio (Time)			
- Consolidated	1.05	1.31	(0.26)
- Company	0.80	0.80	-
Book value per share (Baht)			
- Consolidated	190.40	163.81	26.59
- Company	115.80	120.83	(5.03)
Current ratio (Time)			
- Consolidated	1.51	2.26	(0.75)
- Company	0.38	1.71	(1.33)
Interest Coverage Ratio (Time)			
- Company	3.61	5.56	(1.95)

7. Future Plans

EGCO continues to develop business in response to the company's sustainable growth. The company focuses on power projects due to its knowledge and expertise in power business. Having a strong intention to carry on its power generation business with accountability to the society, environment, and stakeholders, EGCO has set a new vision: "To be a major sustainable Thai power company doing business in Thailand and the Asia Pacific region, with full commitment to environment protection and social development support". To ensure its sustainable growth and accountability to the stakeholders, EGCO aims to maintain the return on equity (ROE) at 10% minimum and drive the business based on three main strategies: Business, Society and Environment, and Corporate Governance, which can be summarized as follows:

- **Business Strategy:** EGCO will focus on asset management to ensure maximum efficiency of the existing power plant in order to guarantee its highest performance and to benefit all shareholders as planned; managing projects under construction to be completed as scheduled and within the planned budget; and seeking new investment opportunities through acquisition of commercially operating assets to immediately recognize incomes; as well as developing new projects within the existing plant sites and pursuing greenfield project investments for long-term income generation. Moreover, EGCO Group aims to increase renewable energy portfolio to achieve 30% by 2026 from both domestic and overseas.
- **Society and Environment Strategy:** EGCO has full commitment for environment protection and has strong intention to decrease negative impacts and increase positive impacts along with EGCO business processes. Our target is to enhance EGCO's environmental management and coexistence in harmony with local community.
- **Corporate Governance Strategy:** EGCO will conduct its business management with good corporate governance representing the key indicator of the efficiency, fairness, transparency and responsibility towards environment, society and every stakeholder.

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 41 and 43 of the Notes to Financial Statements for the year ended December 31, 2018.

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.
- Financial assistance to Group companies or business partners such as loans, guarantee, etc. will be conducted prudently to ensure the utmost benefits of the Group companies. Fees will be charged at the market rate as at the transaction date.
- For business transactions having 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.
- Directors and executives with potential conflicts of interest are not allowed to vote or attend the meeting.

Related Transactions in 2018

EGCO's related transactions in 2018 were normal business transactions and there was no profit siphoning between EGCO or its subsidiaries, joint ventures and parties with potential conflicts of interest. Each transaction was duly approved under the transparent process and the persons with potential conflicts of interests were not involved in the decision making. Such transactions were well justified that they were carried out for the best interest of the Company like the transactions with any third parties. The checking and audit systems also ensured that all transactions were carried out in line with the established process.

Details of related transactions in 2018 that may pose conflicts of interest are as follows:

1. Related Transactions with EGAT

In carrying out EGCO Group's businesses and services, there were transactions relating to the power sales and maintenance services between EGCO Group and EGAT, a major shareholder which owns 25.41 percent of EGCO stakes and has 4 representative directors on EGCO Board. However, all the transactions followed the established process and were in line with the disclosure and other requirements of the SET and The Securities and Exchange Commission (SEC). The following are the transactions in 2018 in detail:

1.1 Electricity Sales with EGAT

Six subsidiaries of EGCO namely KEGCO, KLU, BPU, EGCO Cogen, RG and CWF were engaged in the Power Purchase Agreement ("PPA") with EGAT. The PPA term is 25 years, 25 years, 25 years, 21 years, 21 years and 5 years and continued for a period of 5 years automatically, respectively.

Such transactions were considered justified as power generation was EGCO Group's core business and EGAT was the sole wholesale buyer in Thailand. In addition, the pricing and conditions of those transactions were in accordance with the standardized contracts endorsed by concerned government agencies.

Companies	Relationship	Transaction value for the year ended December 31, 2018 (million Baht)			
		Sales of electricity	Finance lease income under PPA	Service income under PPA	Trade receivable, Finance lease receivable and Trade receivable for services income under PPA
EGCO Cogen	Subsidiaries	1,245	-	-	231
KEGCO		-	3,063	10,543	2,148
RG		-	6	205	40
CWF		344	-	-	137
KLU		1,839	-	-	373
BPU		3,905	-	-	750

Since EGCO has recorded the share of profits from joint venture companies using equity method, the value of such transactions is not shown in the consolidated financial statements. The values of the related transactions between joint venture companies and EGAT are shown in the following table.

Companies	Relationship	Transaction value for the year ended December 31, 2018 (million Baht)			
		Sales of electricity	Finance lease income under PPA	Service income under PPA	Trade receivable, Finance lease receivable and Trade receivable for services income under PPA
GEC Group	Joint Ventures	3,674	1,659	1,470	803
BLCP		-	2,096	5,288	887
NTPC		3,093	-	-	457
NED		915	-	-	165

1.2 Operation and Maintenance Services with EGAT

EGCO Group has engaged in the operation and maintenance agreements with EGAT which are defined as the normal transactions to support its business operations of which are defined as the normal transactions of which the general trading items and conditions are applied. The fee can be calculated from the venue of assets or the referred price in accordance with SET's guidelines.

- KEGCO has entered into a PPA with EGAT for back up power. The agreement has been effective since June 19, 2016

Companies	Relationship	Transaction value for the year ended December 31, 2018 (million Baht)	
		Back up Power Fee	Account Payables
KEGCO	Subsidiaries	19	1

- KEGCO has entered into a Maintenance Agreement and Service Agreement with EGAT

Companies	Relationship	Transaction value for the year ended December 31, 2018 (million Baht)	
		Maintenance/ Services Fee	Account Payables
KEGCO	Subsidiaries	40	1

- GEC Group has engaged EGAT as its advisor for maintenance works and back up power. The fee was charged in accordance with standard price for those contractual fees.

Companies	Relationship	Transaction value for the year ended December 31, 2018 (million Baht)		
		Back up Power Fee	Maintenance Advisory Fee	Account Payables
GEC Group	Joint Ventures	79	6	7

- BLCP has engaged EGAT as its advisor for maintenance works and back up power. The fee was charged in accordance with standard price for those contractual fees.

Companies	Relationship	Transaction value for the year ended December 31, 2018 (million Baht)		
		Back up Power Fee	Maintenance Advisory Fee	Account Payables
BLCP	Joint Ventures	31	-	14

2. Related Transactions between EGCO and TEPDIA Generating B.V. (TEPDIA)

In carrying out EGCO Group's businesses and services, there were transactions relating to the technical service agreements between EGCO and TEPDIA, a major shareholder which owns 23.94 percent of EGCO stakes and has 4 representative directors on EGCO Board. However, all the transactions followed the established process and were in line with the disclosure and other requirements of the SET and SEC. The following are the transactions in 2018 in detail:

2.1 Operation and Maintenance Services

- KEGCO has entered into Major Maintenance Agreement with Mitsubishi Corporation which holds some stakes in TEPDIA and Mitsubishi Corporation Machinery, Inc, a subsidiary of Mitsubishi Corporation which indirectly holds some stakes in TEPDIA, in order for the latter to provide maintenance services to the power plant. 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 June 19, 2016 with the contract amount 18,560 million JPY.

Companies	Relationship	Transaction value for the year ended December 31, 2018 (million Baht)	
		Operation / Maintenance Services Fee	Account Payables
KEGCO	Subsidiaries	515	102

- KEGCO has entered into long-term technical service agreement with JERA Co., Inc a joint venture of Tokyo Electric Power Company which indirectly holds some stakes in TEPDIA. The agreements is effective for a period of 25 years, commencing from June 19, 2016 with the contract amount of 0.42 million US Dollar per year.

Companies	Relationship	Transaction value for the year ended December 31, 2018 (million Baht)	
		Technical Services Fee	Account Payables
KEGCO	Subsidiaries	14	3

- KEGCO has entered into technical service agreement with Mitsubishi Corporation with the amount of 22 million Yen.

Companies	Relationship	Transaction value for the year ended December 31, 2018 (million Baht)	
		Technical Services Fee	Account Payables
KEGCO	Subsidiaries	3	1

2.2 Purchases of Spareparts Agreement

- KEGCO has entered into purchases of spareparts agreement with Mitsubishi Corporation Machinery, Inc, a subsidiary of Mitsubishi Corporation which indirectly holds some stakes in TEPDIA. The total contract price is 1,947 million.

Companies	Relationship	Transaction value for the year ended December 31, 2018 (million Baht)	
		Spareparts	Account Payables
KEGCO	Subsidiaries	-	-

Remark : There is no transaction during the year 2018

- KEGCO has entered into purchases of spareparts agreement with Mitsubishi Corporation, which holds some stakes in TEPDIA. The contract price in 2015 is 34 million Baht and in 2018 is 31 million Yen.

Companies	Relationship	Transaction value for the year ended December 31, 2018 (million Baht)	
		Spareparts	Account Payables
KEGCO	Subsidiaries	-	-

Remark : There is no transaction during the year 2018

3. Related Transactions between EGCO and Group Companies

EGCO has entered into the following agreements with Group Companies where EGCO is a major shareholder and in which EGCO's executives are appointed as directors and executives.

- 3.1 Office Building Rental and Service Agreements with 16 companies namely KEGCO, ESCO, EGCO Cogen, RG, CWF, BPU, KLU, Solarco, SPP2, SPP3, SPP4, SPP5, Yanhee EGCO, TWF, EGCO PLUS and NED. The provision of space and the scope of services are specified in a yearly contract.

Such transactions were considered justified as EGCO maximized its building space usage and the fee was charged at the same market rate which charged to any third parties.

- 3.2 Management Service Agreement with KEGCO, ESCO, EGCO Cogen, EGCO Green, RG, EGCO PLUS, PEPOI, Quezon, TWF, SPP2, SPP3, SPP4, SPP5, Yanhee EGCO, Solarco, CWF, BPU, KLU, BLCP, GPS, NED, KPI, NTPC and SBPL. The scopes of work cover internal audit, legal counseling, Board's secretarial work, IT, public and community relations and financial work (except ESCO).

- 3.3 Land Rental Agreement for construction with KLU.

Such transactions were justified as those Group companies did not have internal staff to take care of such work while EGCO had the expertise and capability to provide the services. The service fee was charged in accordance with the actual operating hours based on the cost plus basis.

Companies	Relationship	Transaction values for the year ended December 31, 2018 (million Baht)
		Financial Statements
KEGCO	Subsidiaries	45
ESCO		5
EGCO Cogen		9
EGCO Green		1
RG		9
CWF		8
PEPOI		23
Quezon		9
TWF		2
SPP2		5
SPP3		5
SPP4		4
SPP5		5
Yanhee EGCO		2
Solarco		16
BPU		12
KLU		20
EGCO PLUS		4
Total for Subsidiaries		184
NTPC	Joint Ventures	2
BLCP		14
GPS		7
NED		4
SBPL		3
KPI		1
Total for Joint Ventures		31

4. Financial Support to related business partners

EGCO has provided financial support to subsidiaries and joint ventures in proportional to its ownership in such companies. Such supports are normal business practices and are aimed at optimizing shareholders' returns. The transactions were approved by the Board under the Company's Table of Authority and disclosed in the notes to financial statements as of December 31, 2018.

4.1 Loan

Companies	Relationship	Transaction values by December 31, 2018 (million Baht)	Terms and conditions
SPP 2	Subsidiaries	103	On January 7, 2013, EGCO entered into the loan agreement providing the loan of 103 million Baht to SPP 2. Such loan has fully drawn down. The principal payment will be made on January 11, 2037 at the interest rate of MLR plus a certain margin, payable on a quarterly basis.
SPP 3	Subsidiaries	80	On January 7, 2013, EGCO entered into the loan agreement to provide the loan of 105 million Baht to SPP 3. SPP 3 has repaid the loan amounting 25 million Baht. The principal payment will be made on September 20, 2036 at the interest rate of MLR plus a certain margin, payable on quarterly basis.
SPP 4	Subsidiaries	80	On January 7, 2013, EGCO entered into the loan agreement to providing the loan of 80 million Baht to SPP4. The full facility had been drawn down. The principal payment will be made on September 20, 2036 at the interest rate of MLR plus a certain margin, payable on a quarterly basis.
SPP 5	Subsidiaries	78	On January 7, 2013, EGCO entered into loan agreement to providing the loan of 78 million Baht to SPP 5. The full facility had been drawn down. The principal payment will be made on March 27, 2037 at the interest rate of MLR plus a certain margin, payable on a quarterly basis.
Yanhee EGCO	Subsidiaries	1,032	On October 22, 2012, EGCO entered into the loan agreement to provide the loan of 1,720 million Baht to Yanhee EGCO. The full facility had been drawn down. The principal payment will be made at equal installment on a yearly basis at the interest rate of MLR, payable on a yearly basis.
TWF	Subsidiaries	18	On October 8, 2012, EGCO entered into the loan agreement providing the loan of 31 million Baht to TWF. TWF has repaid the loan amounting 11 million Baht. The principal will be paid at a lump sum on the 10 th anniversary of the COD, at the interest rate of MLR minus a certain margin. The Interest payment should be made every 6 months starting from the COD.
CWF	Subsidiaries	150	On December 14, 2016, EGCO entered into the loan agreement providing the loan of 293 million Baht to CWF. CWF drew down the loan amounting 150 million Baht. The principal will be paid at a lump sum on the 10 th anniversary of the COD, at the interest rate of MLR. The Interest payment should be made every 6 months starting from 2019

Companies	Relationship	Transaction values by December 31, 2018 (million Baht)	Terms and conditions
BPU	Subsidiaries	710	On September 7, 2015, EGCO entered into the loan agreement providing the loan of 1,000 million Baht to BPU. BPU drew down the loan amounting 710 million Baht. The principal will be paid at a lump sum by the year 2038, at the interest rate of MLR. The Interest payment should be made every 6 months starting from 2019.
KLU	Subsidiaries	400	On May 22, 2015, EGCO entered into the loan agreement providing the loan of 500 million Baht to KLU. KLU drew down the loan amounting 400 million Baht. The principal will be paid at a lump sum by the year 2038, at the interest rate of MLR. The Interest payment should be made every 6 months starting from 2019.
XPCL	Other long-term investments	1,231	On 2 August 2016, EGCO entered into a 1,231 million Baht long-term loan agreement with Xayaburi Power Company Limited ("XPCL") for construction of a power plant, the principal repayments and interest payments beginning in the year of 2021. The loan bears an interest at the rate of MLR plus a certain margin. XPCL drew down the full loan amount of the facility.

4.2 Commitments and Liabilities

EGCO's liability under Standby Letter of Credit, Buyer Guarantee and Corporate Guarantee for its subsidiaries, joint ventures and Associates as at December 31, 2018 as follows:

TWF

EGCO was liable under the Letter of Guarantee for the electricity sales proposal to PEA, Land Lease Guarantee to the Agricultural Land Reform Office, Chaiyaphum province, with the total amount of 5 million Baht.

KEGCO

EGCO has the liability under the Standby Letter of Credit issued by Hongkong and Shanghai Banking Corporation (HSBC) to guarantee the decommissioning of Khanom Project 1-3 in the amount of 662 million Baht and also has the liability under 2 Standby Letters of Credit issued by Mizuho Corporate Bank to guarantee the debt obligation in reserve accounts for Khanom Project 4 in the amount of 16 million USD (equivalent to 527 million Baht) and 542 million Baht, respectively.

SPP2

EGCO has the liability under the Standby Letter of Credit amounted to 77 million Baht, issued by Kasikorn Bank to guarantee the debt obligation in reserve accounts for SPP2 Project.

SPP3

EGCO has the liability under the Standby Letter of Credit amounted to 85 million Baht, issued by Kasikorn Bank to guarantee the debt obligation in reserve accounts for SPP3 Project.

SPP4

EGCO has the liability under the Standby Letter of Credit amounted to 64 million Baht, issued by Kasikorn Bank to guarantee the debt obligation in reserve accounts for SPP4 Project.

SPP5

EGCO has the liability under the Standby Letter of Credit amounted to 37 million Baht, issued by Kasikorn Bank to guarantee the debt obligation in reserve accounts for SPP5 Project.

NTPC

EGCO has the liability under 2 standby letters of credit issued by Mizuho Corporate Bank to guarantee the debt obligation in reserve accounts for Nam Theun project 2, in the amount of 5 million USD (equivalent to 155 million Baht) and 632 million Baht, respectively.

GPS

EGCO has the liability under the Standby Letter of Credit amounted to 89 million Baht, issued by Kasikorn Bank to guarantee the debt obligation in reserve accounts for GPS.

SBPL

EGCO has the liability under the Standby Letter of Credit amounted to 122 million USD equivalent to 3,990 million Baht, issued by BNP Paribas to guarantee the capital payment for SBPL project.

SEGSD

EGCO has provided a guarantee from March 31, 2017 to December 31, 2037 of up to 23.96 million USD (equivalent to 781 million Baht) for an associate's obligations as the buyer under share sales and purchase agreements for geothermal operations in Indonesia. The guarantee will be for up to 23.78 million USD (equivalent to 776 million Baht) from January 1, 2038 to December 31, 2049. A subsidiary will pay 5 million USD (equivalent to 164 million Baht) to Star Energy Group Holding Pte Ltd. during 2040 to 2047 in accordance with the relevant consortium agreement to be released from obligations.

Gen Plus B.V.

EGCO has provided a corporate guarantee to GEN Plus B.V.'s creditors under the principle amount of 400 million USD (equivalent to 13,046 million Baht), including interest and other expenses occurred due to Gen Plus B.V. defaulting.

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.

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. 2550, 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, 2018, in compliance with the Thai Financial Reporting Standards under the Accounting Profession Act B.E. 2547. 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 2018 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 Financial Reporting Standards and all governing laws and regulations.



Mr. Witoon Kulcharoenwirat
Chairman

Financial Overview

Consolidated Financial Statements

Restated

	2018	2017	2016	2015	2014
FINANCIAL PERFORMANCE (Million Baht)					
Sales and service income	35,522	30,018	22,794	15,914	16,897
Other income	2,652	2,268	1,888	1,893	1,849
Net gain on disposal investments in subsidiary and joint ventures	9,819	-	-	1,079	-
Net gain on disposal investment in marketable securities	4,358	-	-	-	-
Net gain on dissolutions of subsidiary and joint ventures	395	-	-	-	-
Cost of sales and services	26,606	21,332	14,840	9,934	10,227
Administrative expenses and income taxes	6,414	3,480	4,091	3,610	3,694
Finance costs	4,009	(210)	3,610	6,657	2,794
Share of profit (loss) from investments in associates and joint ventures	5,488	5,773	6,062	5,948	5,461
Profit (loss) from discontinued operation, net of income tax	-	-	-	115	171
Net Profit (loss) attributable to Non-controlling interests	43	45	60	87	140
Fx gain (loss)	(89)	(1,594)	178	(342)	144
Net Profit (loss) attributable to owners of the parent	21,073	11,818	8,321	4,319	7,667
Net Profit (loss) attributable to owners of the parent before the effects of Foreign Exchange (FX) gain (loss), Deferred Tax, Impairment, Lease Income ⁽¹⁾ and Income from service concession ⁽²⁾	23,372	9,268	9,157	7,920	7,705
FINANCIAL POSITION (Million Baht)					
Total assets	206,428	200,332	197,255	179,812	160,687
Total liabilities	105,578	113,476	114,657	102,062	86,468
Equity attributable to the owners	100,239	86,238	81,973	77,242	73,264
Non-controlling interests	611	618	625	508	955
Issued and paid-up share capital	5,265	5,265	5,265	5,265	5,265
PER SHARE DATA (Baht)					
Earnings per share	40.03	22.45	15.81	8.20	14.56
Book Value	190.40	163.81	155.70	146.72	139.16
Dividend	9.50 ⁽³⁾	7.00	6.50	6.25	6.25
RATIO ANALYSIS					
Liquidity ratio (Time)	1.51	2.26	1.49	1.22	0.91
Cash flows liquidity ratio (Time)	0.44	0.71	0.62	0.36	0.54
Gross profit ratio (%)	25.10	28.94	34.90	37.58	39.48
Earnings ratio (%)	36.19	31.05	27.06	17.24	31.27
Return on equity ratio (%)	22.60	14.05	10.45	5.74	10.75
Return on assets ratio (%)	10.36	5.95	4.41	2.54	5.25
Debt to equity ratio (Time)	1.05	1.31	1.39	1.31	1.17

Remarks:

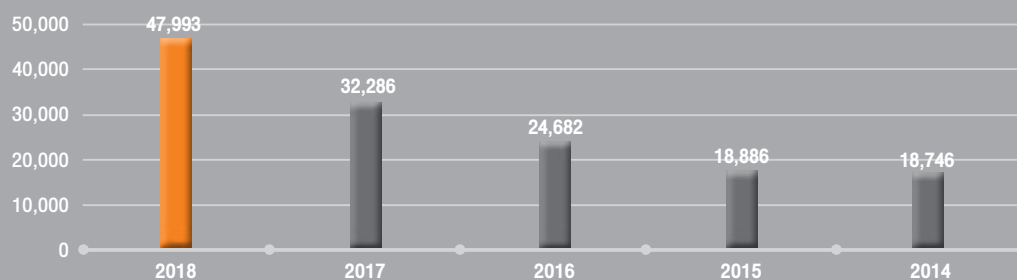
(1) TFRIC 4 Determining whether an arrangement contains a lease

(2) TFRIC 12 Service concession arrangements

(3) Subject to the approval of the 2019 Shareholders' Annual General Meeting for the appropriation of net profit and the payment of dividend.

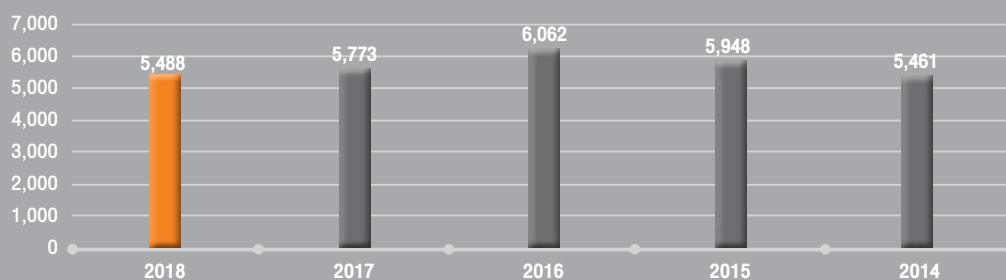
Total Revenues

Unit : Million Baht



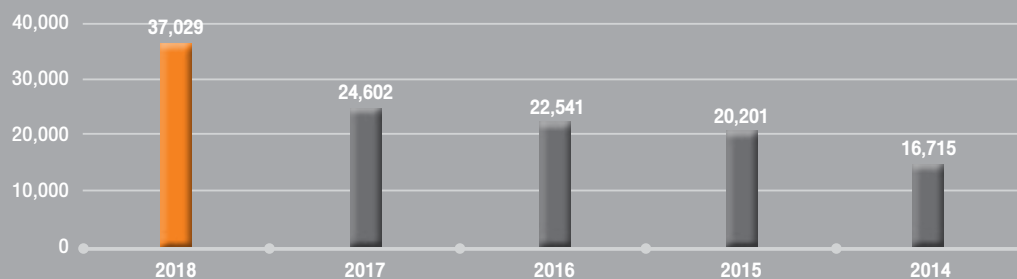
Share of profit from investments in associates and joint ventures

Unit : Million Baht



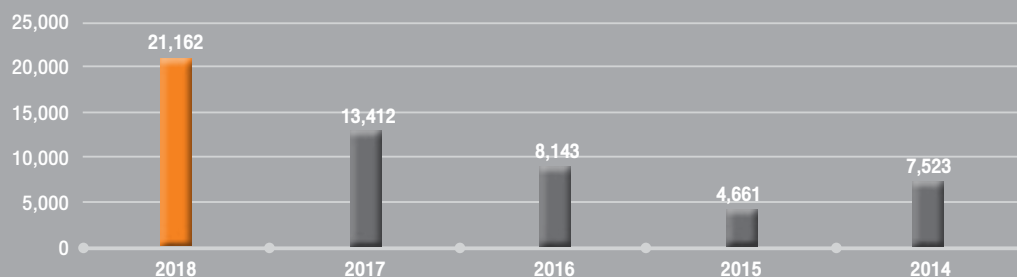
Total Expenses excluding Currency Exchange Gains or Losses

Unit : Million Baht



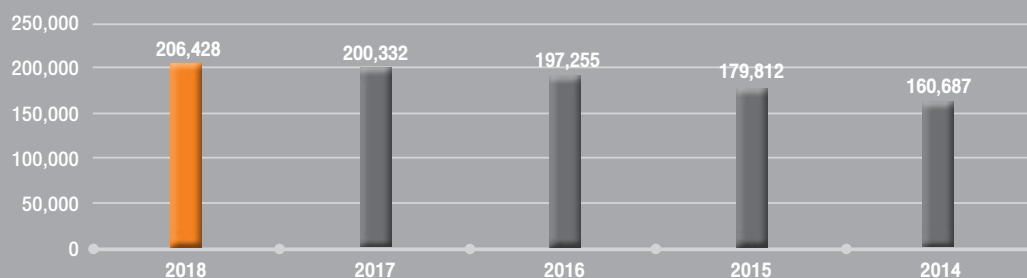
Net Profit excluding Currency Exchange Gains or Losses

Unit : Million Baht



Total Assets

Unit : Million Baht



Independent Auditor's Report

To the shareholders of Electricity Generating Public Company Limited

My opinion

In my opinion, the consolidated financial statements of Electricity Generating Public Company Limited ("the Company") and its subsidiaries ("the Group") and the separate financial statements of the Company present fairly, in all material respects, the consolidated and separate financial position of the Group and of the Company as at 31 December 2018 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 ("TFRSs").

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 2018;
- 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 a summary of significant accounting policies.

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 Federation of Accounting Professions under the Royal Patronage of his Majesty the King's Code of Ethics for Professional Accountants together with the ethical requirements 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 judgment, 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
<p>Goodwill impairment assessment</p> <p>Refer to Note 3.1 Impairment of goodwill and Note 19 Goodwill.</p> <p>As at 31 December 2018, the Group had goodwill of Baht 10,012 million less a provision for impairment of Baht 1,852 million. This is a net book value of Baht 8,160 million, which represents 3.93% of the total consolidated assets. Goodwill arose from the acquisitions of electricity generation businesses in Thailand and other countries. Management considered the businesses located in each country as cash generating unit (CGU). Goodwill mostly arose from the acquisition of an electricity generation business in the Philippines amounting to Baht 9,725 million less provision for impairment of Baht 483 million. The Group recognised additional impairment loss of goodwill amounting to Baht 1,347 million. Consequently, as at 31 December 2018, the Group had goodwill arose from the acquisition of an electricity generation business in the Philippines amounting to Baht 7,895 million in the consolidated financial statements.</p> <p>Management tests the impairment of goodwill annually and calculates its recoverable amount by applying the value-in-use model. This model involves significant judgements made by management in respect to the future operating results of business, projected cash flows and the discount rate to be applied to the projected cash flows. Key assumptions applied in the value-in-use model are electricity tariffs, assumed capacity of the power plants, profit growth rates, expected changes to operating expenditures, capital structure and the market risk obtained from available public information.</p> <p>I focused on the valuation of goodwill 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.</p>	<p>I carried out the following procedures to assess the impairment testing of goodwill arising from the acquisition of the electricity generation business in the Philippines.</p> <ul style="list-style-type: none"> • Satisfied myself as to the appropriateness of management's identification of the CGUs and the continued satisfactory operation of the Group's control over the impairment testing process. • 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 electricity tariffs, assumed capacity of the power plants, operating expenditures, and discount rate. My procedures included comparing those assumptions to the underlying agreements, external sources, foreign exchange rate forecasts and the approved business plan. • Assessed reasonableness of the business plan by comparing the 2018 plan with actual results. • Assessed the discount rate, taking into account independently obtained data from available public information of companies in the industry to see whether the discount rate used by the management was within the acceptable range. • Tested the sensitivity analysis of key assumptions in the model prepared by the management in order to assess factors sensitive to assumptions and the potential impact of range possible outcomes. <p>Based on the procedures above, I found that the key assumptions used by management in the assessment of the recoverable amount were reasonable.</p>

Key audit matter	How my audit addressed the key audit matter
<p><i>Impairment assessment of property, plant and equipment</i></p> <p>Refer to Note 3.2 Impairment of property, plant and equipment and Note 17 Property, plant and equipment.</p> <p>As at 31 December 2018, the Group's and the Company's power plants, net book valued before recognised impairment loss at Baht 2,103 million and Baht 1,225 million respectively, have ceased operations and no longer sold electricity to Electricity Authority of Thailand because the power purchase agreements were expired. The management appointed an independent valuer to appraise the residual values of the power plants. Management plans to sell the power plants to third parties.</p> <p>The appraised residual values of the power plants involve management's significant judgements and assumptions. These include the characteristics and conditions of individual assets, expected disposal period, and the list of total assets expected to be disposed to the third parties. Management provided this information to the independent valuer.</p> <p>Management noted that the residual values prepared by the independent valuer were significantly lower than prior years and, therefore, their carrying values were higher than the recoverable amounts. The recoverable amounts were determined by applying the fair value less costs to sell model. The additional provision for impairment of Baht 1,443 million and Baht 914 million were recognised in the 2018 consolidated and separate statements of income. As a result, as at 31 December 2018 the Group's and the Company's net book value of ceased power plants were Baht 660 million and Baht 311 million, respectively.</p> <p>I focused on the residual values of ceased power plants due to their significant values and the nature of management's judgements involved in determining the appropriate level of impairment of asset to be recorded.</p>	<p>I carried out the following procedures in relation to management's impairment assessment of the ceased power plants.</p> <ul style="list-style-type: none"> • Challenged management and the independent valuer on the characteristics of individual assets and their overall quality, geographic location, expected disposal period, the list of total assets expected to be disposed to the third parties and desirability of the assets as a whole. • Assessed the methodologies used by both management and the independent valuer to estimate the residual values of the power plants. • Evaluated the competencies and capabilities of the independent valuer including the terms of engagement to determine whether there were any matters that might affect objectivity or impose scope limitations on their work. • Tested, on a sample basis, the accuracy and relevance of the input data provided by management. • Considered the appropriateness of the residual values estimated by the independent valuer and challenged management for the appropriateness of significant movements in the valuations. <p>Based on the procedures above, I found that the key assumptions used by management in the assessment of the fair value less costs to sell were reasonable.</p>

Key audit matter	How my audit addressed the key audit matter
<p><i>Impairment assessment of investments in joint ventures</i></p> <p>Refer to Note 3.3 Impairment of investments in subsidiaries, associates and joint ventures.</p> <p>The Company, as the holding company, invests in shareholding interests of six direct joint ventures which generate and sell electricity under power purchase agreements. The total cost of investments in these joint ventures in separate statement of financial position before recognised impairment loss was Baht 27,196 million. However, these investments are accounted under the equity method of accounting in the consolidated financial statements.</p> <p>As at 31 December 2018, the cost of investment in a joint venture presented in the separate financial statement was significantly higher than their net equity value. Management considered this as an impairment indicator of investment in a joint venture and therefore performed impairment testing on this investment by applying the value-in-use model in the calculation of recoverable amount. This model involves management's significant judgements with respect to the future operating results of business, projected cash flows and discount rate to be applied to the projected cash flows. Key assumptions applied in the value-in-use model are electricity tariff, assumed capacity of the power plants, growth rate, expected changes to operating expenditures, the market risk obtained from available public industry information and projected dividend payouts of a joint venture.</p> <p>As a result of management's impairment testing, the recoverable amount of this investment is lower than the carrying value. Therefore, the Company recognised provision for impairment of such investment in a joint venture amounting to Baht 1,580 million in the 2018 separate financial statement.</p> <p>I focused on the valuation of the investment in a joint venture which is a coal-fired power plant in Thailand because the joint venture's carrying book value of Baht 10,434 million is significant and 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.</p>	<p>I carried out the following procedures to assess the impairment testing of the investment in a joint venture which is a coal-fired power plant.</p> <ul style="list-style-type: none"> Assessed the appropriateness of management's identification of the indicators for impairment of investment in a joint venture. Held discussions with management to understand the basis for assumptions applied to the cash flow projections. Challenged management's significant assumptions used in the impairment testing, especially the electricity tariffs, assumed capacity of the power plants, operating expenditures, discount rate, and dividend payout forecast. My procedures included comparing those assumptions to the underlying agreements, external sources, foreign exchange rate forecasts, the projected available cash flows for future dividend payments and the approved business plan. Assessed the discount rate, taking into account independently obtained data from available public information of companies in the industry to see whether the discount rate used by management was within the acceptable range. Tested the sensitivity analysis of key assumptions in the model prepared by management in order to assess factors sensitive to assumptions and the potential impact of range possible outcomes. <p>Based on the procedures above, I found that the key assumptions used by management in the assessment of the recoverable amount were reasonable.</p>

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 TFRSs, 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 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 judgment 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.

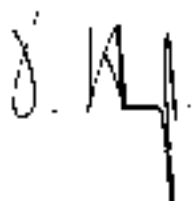
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group and the Company's ability to continue as a going 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.



Vichien Khingmontri
Certified Public Accountant (Thailand) No. 3977
Bangkok
22 February 2019

Statement of Financial Position

Electricity Generating Public Company Limited As at 31 December 2018

	Notes	Consolidated financial statements		Separate financial statements	
		2018 Baht	2017 Baht	2018 Baht	2017 Baht
Assets					
Current assets					
Cash and cash equivalents	6	34,876,629,903	6,786,801,686	2,922,235,474	1,751,427,342
Short-term investments	7				
- Deposits at financial institutions		99,207,136	458,866,530	-	-
- Held-to-maturity securities		2,183,826	4,519,619	-	-
Short-term investments used as collateral	8	4,374,850,539	4,546,622,078	-	-
Trade receivables, net	9	2,117,332,435	1,969,255,856	-	-
Trade receivable from a related party	41.2	1,490,725,069	1,339,329,729	-	-
Trade receivable from a related party for services under finance lease	41.3	2,187,833,559	1,704,373,843	-	-
Current portion of finance lease receivable from a related party	41.4	1,353,186,019	1,169,027,241	-	-
Current portion of dividend receivables from subsidiaries and joint ventures	15.5	306,232,048	714,331,898	306,232,048	714,331,898
Current portion of long-term loans to a related party	41.7	-	-	172,000,000	172,000,000
Amounts due from related parties	41.5	315,017,502	244,480,853	170,023,043	103,062,263
Fuel and spare parts and supplies, net	10	3,004,168,342	2,521,726,885	413,038	461,951
Non-current assets held-for-sale	11	-	16,589,593,686	-	-
Other current assets	12	1,225,673,154	1,493,876,839	58,130,561	199,973,277
Total current assets		51,353,039,532	39,542,806,743	3,629,034,164	2,941,256,731
Non-current assets					
Finance lease receivable from a related party, net	41.4	17,646,390,680	18,362,942,881	-	-
Long-term investments in marketable securities	13	-	3,868,988,276	-	3,861,895,556
Dividend receivables from subsidiaries and joint ventures	15.5	7,000,334,365	7,306,566,365	7,227,242,077	7,533,474,077
Long-term loans to related parties, net	41.7	-	-	2,478,962,357	2,598,962,357
Long-term loans to other company	14	1,231,200,000	1,231,200,000	1,231,200,000	1,231,200,000
Long-term investments used as collateral		282,300	282,300	-	-
Investments in subsidiaries, net	15.2	-	-	64,249,221,126	64,899,188,343
Investments in associates	15.3	11,184,690,428	10,554,089,613	-	-
Interests in joint ventures, net	15.4	41,554,497,037	38,042,391,214	25,615,336,100	25,504,261,560
Other long-term investments	13	3,239,924,205	2,760,543,500	3,199,133,625	2,760,103,500
Investment property	16	448,602,691	448,602,691	669,885,990	669,885,990
Property, plant and equipment, net	17	56,361,353,014	61,723,550,408	706,010,781	1,600,064,347
Intangible assets, net	18	4,347,194,064	4,841,391,029	-	-
Goodwill, net	19	8,159,983,769	9,506,983,769	-	-
Deferred tax assets, net	25	686,007,678	774,495,308	-	-
Advance payment for investment	41.6	-	728,520,362	-	728,520,362
Other non-current assets	20	3,214,308,856	639,190,408	569,454,900	423,525,678
Total non-current assets		155,074,769,087	160,789,738,124	105,946,446,956	111,811,081,770
Total assets		206,427,808,619	200,332,544,867	109,575,481,120	114,752,338,501

For Director




The notes to the consolidated and separate financial statements on pages 178 to 251 are an integral part of these financial statements.

Statement of Financial Position

Electricity Generating Public Company Limited As at 31 December 2018

	Notes	Consolidated financial statements		Separate financial statements	
		2018	2017	2018	2017
		Baht	Baht	Baht	Baht
Liabilities and equity					
Current liabilities					
Short-term loans from financial institutions	21	121,365,000	1,150,000,000	-	1,150,000,000
Trade payables		3,973,789,834	3,148,524,791	-	-
Trade payables to related parties	41.2	107,401,816	95,924,323	-	-
Amounts due to related parties	41.5	23,399,164	27,105,871	17,227,624	13,920,138
Current portion of long-term loans from financial institutions, net	23	27,225,628,439	9,782,918,049	8,930,198,090	-
Other current liabilities	22	2,493,568,228	3,267,184,745	544,262,037	557,062,283
Total current liabilities		33,945,152,481	17,471,657,779	9,491,687,751	1,720,982,421
Non-current liabilities					
Long-term loans from financial institutions, net	23	59,555,729,159	82,831,450,051	33,740,019,458	43,142,689,570
Long-term loans from a related party	41.8	-	22,937,302	-	-
Debenture	24	5,084,006,560	5,026,945,600	5,084,006,560	5,026,945,600
Retirement benefit obligations	26	398,279,041	404,363,236	161,294,981	166,018,209
Provision for decommissioning costs	27	1,375,071,901	1,808,066,021	115,490,000	437,176,000
Deferred tax liabilities, net	25	3,602,293,107	4,430,857,896	-	598,880,947
Other non-current liabilities	28	1,616,926,556	1,479,787,538	19,836,342	45,192,730
Total non-current liabilities		71,632,306,324	96,004,407,644	39,120,647,341	49,416,903,056
Total liabilities		105,577,458,805	113,476,065,423	48,612,335,092	51,137,885,477

The notes to the consolidated and separate financial statements on pages 178 to 251 are an integral part of these financial statements.

Statement of Financial Position

Electricity Generating Public Company Limited As at 31 December 2018

	Notes	Consolidated financial statements		Separate financial statements	
		2018 Baht	2017 Baht	2018 Baht	2017 Baht
Liabilities and equity (continued)					
Equity					
Share capital					
Authorised share capital					
- 530,000,000 ordinary shares at par of Baht 10 per share		5,300,000,000	5,300,000,000	5,300,000,000	5,300,000,000
Issued and paid-up share capital					
- 526,465,000 ordinary shares paid-up at Baht 10 per share		5,264,650,000	5,264,650,000	5,264,650,000	5,264,650,000
Premium on share capital		8,601,300,000	8,601,300,000	8,601,300,000	8,601,300,000
Premium on treasury stock		47,373,035	47,373,035	47,373,035	47,373,035
Surplus from acquisition of non-controlling interests		(218,688,716)	(218,688,716)	-	-
Retained earnings					
Appropriated					
- Legal reserve	29	530,000,000	530,000,000	530,000,000	530,000,000
Unappropriated		87,760,338,805	71,688,431,168	46,626,311,459	46,861,663,313
Other components of equity		(1,745,589,813)	325,261,410	(106,488,466)	2,309,466,676
Total equity attributable to the owners of the parent		100,239,383,311	86,238,326,897	60,963,146,028	63,614,453,024
Non-controlling interests	30	610,966,503	618,152,547	-	-
Total equity		100,850,349,814	86,856,479,444	60,963,146,028	63,614,453,024
Total liabilities and equity		206,427,808,619	200,332,544,867	109,575,481,120	114,752,338,501

The notes to the consolidated and separate financial statements on pages 178 to 251 are an integral part of these financial statements.

Statement of Income

Electricity Generating Public Company Limited For the year ended 31 December 2018

	Notes	Consolidated financial statements		Separate financial statements	
		2018 Baht	2017 Baht	2018 Baht	2017 Baht
Sales and services income	31, 41.1	35,522,201,320	30,017,962,559	-	-
Cost of sales and services	32	(26,606,096,862)	(21,331,842,664)	-	-
Gross profit		8,916,104,458	8,686,119,895	-	-
Other income	33	2,651,990,811	2,268,207,467	5,825,290,248	7,962,673,826
Net gain on disposal of investments in joint ventures		9,818,715,117	-	-	-
Net gain on disposal of investment in marketable securities		4,358,525,905	-	4,358,525,905	-
Net gain on dissolutions of a subsidiary and a joint venture		395,316,889	-	-	-
Net gain (losses) on currency exchange		(89,130,586)	(1,593,717,394)	8,975,037	(154,209,977)
Administrative expenses		(5,475,672,694)	(2,905,226,268)	(3,854,667,054)	(1,536,127,244)
Finance costs	35	(4,009,454,063)	209,992,404	(1,572,500,140)	1,567,648,573
Share of profit from investments in associates and joint ventures, net	15.1	5,488,408,391	5,772,539,998	-	-
Profit before income tax expense		22,054,804,228	12,437,916,102	4,765,623,996	7,839,985,178
Income tax expense	36	(938,347,089)	(574,822,561)	-	18,606,965
Profit for the year		21,116,457,139	11,863,093,541	4,765,623,996	7,858,592,143
Attributable to:					
Owners of the parent		21,072,883,487	11,818,280,707	4,765,623,996	7,858,592,143
Non-controlling interests		43,573,652	44,812,834	-	-
Profit for the year		21,116,457,139	11,863,093,541	4,765,623,996	7,858,592,143
Earnings per share for the year	37	40.03	22.45	9.05	14.93

The notes to the consolidated and separate financial statements on pages 178 to 251 are an integral part of these financial statements.

Statement of Comprehensive Income

Electricity Generating Public Company Limited For the year ended 31 December 2018

	Note	Consolidated financial statements		Separate financial statements	
		2018	2017	2018	2017
		Baht	Baht	Baht	Baht
Profit for the year		21,116,457,139	11,863,093,541	4,765,623,996	7,858,592,143
Other comprehensive income					
Items that will not be reclassified subsequently to profit or loss					
- Remeasurements of post-employment benefit obligations, net of income tax		(14,028,950)	(11,834,763)	(20,431,374)	(12,309,014)
- Share of other comprehensive income (expense) of associates and joint ventures accounted for using the equity method, net of income tax	15.1	32,602,166	(27,220,126)	-	-
Items that will be reclassified subsequently to profit or loss					
- Unrealised gains on investments in marketable securities - available-for-sale, net of income tax		-	149,492,731	-	149,492,731
- Reclassification of gain on available-for-sale investment to profit or loss, net of income tax		(2,395,523,768)	-	(2,395,523,768)	-
- Share of other comprehensive income (expense) of a joint venture accounted for using the equity method, net of income tax	15.1	3,681,256	(1,831,276)	-	-
- Exchange difference on translation		302,338,455	(4,120,030,249)	-	-
Other comprehensive income (expense) for the year, net of tax		(2,070,930,841)	(4,011,423,683)	(2,415,955,142)	137,183,717
Total comprehensive income for the year		19,045,526,298	7,851,669,858	2,349,668,854	7,995,775,860
Total comprehensive income attributable to:					
Owners of the parent		19,002,032,264	7,806,857,024	2,349,668,854	7,995,775,860
Non-controlling interests		43,494,034	44,812,834	-	-
Total comprehensive income for the year		19,045,526,298	7,851,669,858	2,349,668,854	7,995,775,860

The notes to the consolidated and separate financial statements on pages 178 to 251 are an integral part of these financial statements.

Statement of Changes in Equity

Electricity Generating Public Company Limited For the year ended 31 December 2018

Consolidated financial statements														
Attributable to owners of the parent														

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The notes to the consolidated and separate financial statements on pages 178 to 251 are an integral part of these financial statements.

Statement of Changes in Equity

Electricity Generating Public Company Limited For the year ended 31 December 2018

	Note	Separate financial statements									
		Retained earnings					Other components of equity				
		Issued and paid-up share capital		Premium on share capital		Premium on treasury stock		Appropriated - legal reserve		Available-for-sale investments	
		Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht
Opening balance as at 1 January 2017		5,264,650,000	8,601,300,000	47,373,035	530,000,000	42,544,384,293	2,246,031,037	(73,748,078)	2,172,282,959	59,159,990,287	
Changes in equity for the year		-	-	-	-	7,870,901,157	149,492,731	(12,309,014)	137,183,717	8,008,084,874	
Total comprehensive income for the year		-	-	-	-	(3,553,622,137)	-	-	-	(3,553,622,137)	
Dividends paid											
Closing balance as at 31 December 2017		5,264,650,000	8,601,300,000	47,373,035	530,000,000	46,861,663,313	2,395,523,768	(86,057,092)	2,309,466,676	63,614,453,024	
Opening balance as at 1 January 2018		5,264,650,000	8,601,300,000	47,373,035	530,000,000	46,861,663,313	2,395,523,768	(86,057,092)	2,309,466,676	63,614,453,024	
Changes in equity for the year		-	-	-	-	4,765,623,996	(2,395,523,768)	(20,431,374)	(2,415,955,142)	2,349,668,854	
Total comprehensive income for the year		-	-	-	-	(5,000,975,850)	-	-	-	(5,000,975,850)	
Dividends paid	38										
Closing balance as at 31 December 2018		5,264,650,000	8,601,300,000	47,373,035	530,000,000	46,626,311,459	-	(106,488,466)	(106,488,466)	60,963,146,028	

The notes to the consolidated and separate financial statements on pages 178 to 251 are an integral part of these financial statements.

Statement of Cash Flows

Electricity Generating Public Company Limited For the year ended 31 December 2018

	Notes	Consolidated financial statements		Separate financial statements	
		2018 Baht	2017 Baht	2018 Baht	2017 Baht
Cash flows from operating activities					
Profit before income tax		22,054,804,228	12,437,916,102	4,765,623,996	7,839,985,178
Adjustments to reconcile profit before income tax to net cash provided by operations:					
- Depreciation and amortisation		3,165,223,851	2,865,120,047	57,638,073	59,704,948
- Allowance for obsolescence of spare parts		31,209,312	30,190,492	43,949	48,227
- Retirement benefit expenses	26	57,338,711	53,057,708	15,684,949	18,974,762
- Reversal of retirement benefit obligations	26	-	-	(12,724,331)	(45,632,960)
- Reversal of provision for decommissioning costs	27	(371,086,000)	-	(321,686,000)	-
- Reversal of advance received for purchase of spare parts		-	-	(23,922,430)	-
- Interest income		(698,956,645)	(288,031,972)	(313,510,524)	(227,228,232)
- Finance costs		4,351,481,013	4,322,666,958	1,826,245,871	1,718,925,965
- Unrealised loss (gains) on exchange rates		(22,537,864)	(2,333,118,447)	55,962,577	(3,035,887,277)
- Loss on impairment of investment in a subsidiary	15.1	-	-	663,056,302	-
- Losses on impairment of investment in joint ventures	15.1	-	-	1,580,000,000	175,416,028
- Losses on impairment of goodwill	19	1,347,000,000	22,000,000	-	-
- Losses on impairment of property, plant and equipment	17	1,616,776,496	329,533,131	913,520,903	308,613,453
- Losses (gains) on write-off and disposal of equipment		422,067,585	175,755,655	(531,836)	(1,989,320)
- Net gain on disposal of investments in joint ventures		(9,818,715,117)	-	-	-
- Net gain on disposal of investment in marketable securities		(4,358,525,905)	-	(4,358,525,905)	-
- Net gain on dissolutions of a subsidiary and a joint venture		(395,316,889)	-	-	-
- Dividends received from other company		-	(155,721,595)	-	(155,721,595)
- Dividends received from subsidiaries and joint ventures	15.5	-	-	(5,255,131,565)	(7,329,884,539)
- Share of profit from investments in associates and joint ventures, net	15.1	(5,488,408,391)	(5,772,539,998)	-	-
Cash flows before changes in operating assets and liabilities		11,892,354,385	11,686,828,081	(408,255,971)	(674,675,362)
Changes in operating assets and liabilities: (excluding the effects of acquisition or disposal of subsidiaries)					
- Trade receivables and trade receivable from a related party		(301,390,572)	(1,155,810,277)	-	-
- Trade receivable from a related party for services under finance lease		(483,459,716)	(124,368,940)	-	-
- Finance lease receivable from a related party		587,328,190	682,566,966	-	-
- Amounts due from related parties		(70,536,649)	(151,305,380)	10,120,241	4,458,171
- Fuel and spare parts and supplies		(513,146,159)	(138,736,089)	4,964	1,663,212
- Other current assets		160,142,340	(109,743,633)	22,319,852	(12,238,344)
- Other non-current assets		(8,984,730)	(28,889,091)	(2,181,600)	(2,720,000)
- Trade payables and trade payables to related parties		836,758,587	1,099,545,934	-	(2,909,178)
- Amounts due to related parties		24,497,087	27,406,462	17,125,974	101,650
- Retirement benefit paid	26	(70,458,889)	(41,778,862)	(28,115,220)	(6,138,034)
- Other current liabilities and other non-current liabilities		51,371,805	265,013,271	(70,981,525)	24,824,591
Cash generated from (used in) operations		12,104,475,679	12,010,728,442	(459,963,285)	(667,633,294)
- Withholding tax refunded		147,048,975	158,067,124	147,048,975	11,071,622
- Tax paid		(998,066,156)	(1,148,995,041)	-	-
Net cash receipts from (payments in) operating activities		11,253,458,498	11,019,800,525	(312,914,310)	(656,561,672)

The notes to the consolidated and separate financial statements on pages 178 to 251 are an integral part of these financial statements.

Statement of Cash Flows

Electricity Generating Public Company Limited For the year ended 31 December 2018

	Notes	Consolidated financial statements		Separate financial statements	
		2018 Baht	2017 Baht	2018 Baht	2017 Baht
Cash flows from investing activities					
Acquisition of investments in subsidiaries and joint ventures		(1,728,577,093)	(2,728,485,481)	(1,553,587,349)	(4,926,157,088)
Cash payment in advance for additional share capital of joint ventures	41.6	(2,427,830,235)	(728,520,362)	-	(728,520,362)
Cash receipts from disposal of investments in joint ventures		26,424,224,132	-	24,583,971	-
Cash receipt from redemption of a subsidiary's shares		-	-	486,910,915	-
Net cash receipt from (payments in) short-term and long-term investments used as collateral		177,148,086	(391,392,100)	-	-
Interest received		786,952,481	212,338,493	149,900,610	110,307,050
Net cash receipts from short-term investments		359,659,394	150,561,618	-	-
Net cash receipts from (payments in) long-term investments in marketable securities		5,226,016,728	(4,084,317)	5,226,016,728	-
Acquisition of other long-term investments		(470,181,194)	(695,020,500)	(439,030,125)	(695,020,500)
Net cash payments in purchases of equipment, construction in progress and investment property		(1,132,436,118)	(3,942,070,588)	(72,217,049)	(51,827,336)
Net cash payments in purchases of intangible assets		(16,339,800)	(116,996,900)	-	-
Cash receipt from land expropriation		11,778,584	-	-	-
Cash payments in long-term loans to related parties	41.7	-	-	(60,000,000)	(1,050,000,000)
Cash receipts from long-term loans to related parties	41.7	-	-	180,000,000	175,000,000
Dividends received from subsidiaries and joint ventures	15.5	4,378,120,772	5,191,707,804	5,969,463,415	7,818,145,736
Dividends received from other company		-	155,721,595	-	155,721,595
Net cash receipts from (payments in) investing activities		31,588,535,737	(2,896,240,738)	9,912,041,116	807,649,095
Cash flows from financing activities					
Interest paid		(4,231,503,535)	(4,444,284,339)	(1,688,698,724)	(1,648,863,982)
Proceeds from short-term loans from financial institutions	21.1	3,393,645,067	4,275,000,000	500,000,000	2,795,500,000
Payments on short-term loans from financial institutions	21.1	(4,427,983,750)	(3,125,000,000)	(1,650,000,000)	(1,645,500,000)
Proceeds from long-term loans from financial institutions	23.3	12,280,888,007	9,852,410,972	7,243,639,000	8,597,200,000
Payments on long-term loans from financial institutions	23.3	(17,601,645,272)	(8,095,698,499)	(7,833,457,500)	(3,665,300,000)
Payments on deferred financing fee		(76,979,754)	(24,482,467)	-	(12,655,000)
Dividends paid to shareholders		(5,050,481,522)	(3,605,336,103)	(4,999,801,450)	(3,552,675,557)
Net cash receipts from (payments in) financing activities		(15,714,060,759)	(5,167,390,436)	(8,428,318,674)	867,705,461
Net increase in cash and cash equivalents		27,127,933,476	2,956,169,351	1,170,808,132	1,018,792,884
Beginning balance		6,786,801,686	4,487,429,447	1,751,427,342	732,634,458
Effect of exchange rate changes		961,894,741	(656,797,112)	-	-
Ending balance		34,876,629,903	6,786,801,686	2,922,235,474	1,751,427,342
Cash and cash equivalents are made up as follows:					
- Cash in hand and deposits at financial institutions - maturities within three months		29,995,431,144	5,133,719,271	196,984,082	1,050,407,605
- Short-term investments in promissory notes - maturities within three months		4,881,198,759	1,653,082,415	2,725,251,392	701,019,737
		34,876,629,903	6,786,801,686	2,922,235,474	1,751,427,342

The notes to the consolidated and separate financial statements on pages 178 to 251 are an integral part of these financial statements.



Statement of Cash Flows

Electricity Generating Public Company Limited For the year ended 31 December 2018

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
	Baht	Baht	Baht	Baht
Non-cash transactions				
- Reclassification of spare parts to property, plant and equipment	7,838,245	53,644,595	-	-
- Payables for purchases of property, plant and equipment (included retention)	40,475,266	456,391,623	19,295,013	14,938,488
- Reclassification of intangible assets to property, plant and equipment	-	980,247,075	-	-
- Reclassification of advance payments for construction of power plants to property, plant and equipment	-	96,318,981	-	-
- Reclassification of property, plant and equipment to spare parts	-	124,716,784	-	-
- Reclassification of advance payment for investment to investment	728,520,362	144,002,000	728,520,362	144,002,000
- Reclassification of long term loan to other company to investment	-	838,598,835	-	-
- Reclassification of advance rental income to property, plant and equipment	128,552,187	203,112,641	-	-
- Receivable from disposal of property, plant and equipment	16,075,000	-	-	-
- Contingent consideration paid for investment in a joint venture	-	66,449,200	-	66,449,200

The notes to the consolidated and separate financial statements on pages 178 to 251 are an integral part of these financial statements.

Notes to the Consolidated and Separate Financial Statements

Electricity Generating Public Company Limited For the year ended 31 December 2018

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 222, EGCO Tower, 14th and 15th floor, 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 22 February 2019.

2 Accounting policies

The principal accounting policies applied in the preparation of these consolidated and separate financial statements are set out below.

2.1 Basis of preparation

The consolidated and separate financial statements have been prepared in accordance with Thai generally accepted accounting principles under the Accounting Act B.E. 2543, being those Thai financial reporting standards issued under the Accounting Profession Act B.E. 2547, and the financial reporting requirements of the Securities and Exchange Commission 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 judgement in the process of applying the Group's accounting policies and to disclose the areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed in Note 3.

An English version of the consolidated and separate financial statements has 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.

2 Accounting policies (continued)

2.2 New financial reporting standards, revised financial reporting standards and related interpretations

2.2.1 Revised financial reporting standards are effective for annual periods beginning on or after 1 January 2018

Commencing from 1 January 2018, the Group adopted the revised financial reporting standards effective for annual periods beginning on or after 1 January 2018 and relevant to the Group. The adoption of these standards do not have significant impact on the Group.

2.2.2 New financial reporting standard is effective for annual periods beginning on or after 1 January 2019. The Group has not yet adopted this standard.

Thai Financial Reporting Standard (TFRS) 15 "Revenue from contracts with customers" provides the requirements for the recognition of revenue. This standard will supersede the following standards:

TAS 11 (revised 2017)	Construction Contracts
TAS 18 (revised 2017)	Revenue
TSIC 31 (revised 2017)	Revenue - Barter Transactions Involving Advertising Services
TFRIC 13 (revised 2017)	Customer Loyalty Programmes
TFRIC 15 (revised 2017)	Agreements for the Construction of Real Estate
TFRIC 18 (revised 2017)	Transfers of Assets from Customers

The new standard is based on the principle that revenue is recognised when control of a good or service transfers to a customer, so the notion of control replaces the existing notion of risks and rewards.

An entity recognises revenue in accordance with that core principle by applying the following steps:

- 1) Identify the contract(s) with a customer
- 2) Identify the performance obligations in the contract
- 3) Determine the transaction price
- 4) Allocate the transaction price to the performance obligations in the contract
- 5) Recognise revenue when (or as) the entity satisfies a performance obligation

Key changes to current practice are:

- Any bundled goods or services that are distinct must be separately recognised, and any discounts or rebates on the contract price must generally be allocated to the separate elements.
- Revenue may be recognised earlier than under current standards if the consideration varies for any reasons (such as for incentives, rebates, performance fees, royalties, success of an outcome etc.) - minimum amounts must be recognised if they are not at significant risk of reversal.
- The point at which revenue is able to be recognised may shift: some revenue which is currently recognised at a point in time at the end of a contract may have to be recognised over the contract term and vice versa.
- There are new specific rules on licenses, warranties, non-refundable upfront fees and, consignment arrangements.
- As with any new standard, there are also increased disclosures.

Entities will have the choice to apply this standard retrospectively in accordance with TAS 8 'Accounting Policies', Changes in Accounting Estimates and Errors, subject to the expedients or retrospectively with the cumulative effect recognised as an adjustment to the opening balance of retained earnings of the annual reporting period, which includes the date of initial application with additional disclosures. The Group's management is currently assessing the impact of initial adoption of this financial reporting standards.

2 Accounting policies (continued)

2.2 New financial reporting standards, revised financial reporting standards and related interpretations (continued)

2.2.3 Revised financial reporting standards are effective for annual periods beginning on or after 1 January 2019 and are relevant to the Group. The Group has not yet adopted these standards.

TFRS 2 (revised 2018)	Share-based Payment
TFRS 4 (revised 2018)	Insurance Contracts
TAS 28 (revised 2018)	Investments in Associates and Joint Ventures
TAS 40 (revised 2018)	Investment Property
TFRIC 22	Foreign Currency Transactions and Advance Consideration

TFRS 2 (revised 2018) "Share-based Payment", the amendments clarify;

- The measurement basis for cash-settled share-based payments, vesting conditions, other than market conditions, shall not be taken into account when estimating the fair value of the cash-settled share-based payment at the measurement date. Instead, vesting conditions, other than market conditions, shall be taken into account by adjusting the number of awards included in the measurement of the liability arising from the transaction.
- Where an employer is obliged to withhold an amount for the employee's tax obligation associated with a share-based payment and pay that amount to the tax authority, the whole award will be treated as if it was equity-settled provided it would have been equity-settled without the net settlement feature, and
- The accounting for modifications that change an award from cash-settled to equity-settled.

TFRS4 (revised 2018) "Insurance Contracts" has been amended to provide insurance companies an optional exemption from compliance with TFRS 9 and TFRS 7. The exemption is temporarily effective and not mandatory. Entities who choose to use the exemption must follow the 'financial instruments and disclosure for insurance companies' accounting guidelines to be issued by the Federation of Accounting Professions (upon announcement) until TFRS 17 becomes effective.

TAS 28 (revised 2018) "Investments in Associates and Joint Ventures", the amendment clarifies that the election by venture capital organisations, mutual funds, unit trusts and similar entities to measure investments in associates or joint ventures at fair value through profit or loss should be made separately for each associate or joint venture at initial recognition.

TAS 40 (revised 2018) "Investment Property", the amendments clarify that transfers to, or from, investment property can only be made if there has been a change in use that is supported by evidence. A change in use occurs when the property meets, or ceases to meet, the definition of investment property. A change in intention alone is not sufficient to support a transfer.

TFRIC 22 "Foreign Currency Transactions and Advance Consideration" interpretation provides guidance for determining the exchange rate to be used on the initial recognition of a related asset, expense or income where an entity pays or receives an advance consideration in a foreign currency. The interpretation requires an entity to use the exchange rate at the date on which an entity recognises the non-monetary assets, such as prepayments and advances, or non-monetary liability, such as deferred income arising from the advance consideration. If there are multiple advance payments or receipts of payments, the exchange rate is to be used on the date when each non-monetary asset or liability is recognised.

The Group's management is currently assessing the impact of adoption of these standards.

2.2.4 The Group of financial instruments reporting standards are effective for annual periods beginning on or after 1 January 2020. The Group has not yet adopted these standards.

TAS 32	Financial Instruments: Presentation
TFRS 7	Financial Instruments: Disclosures
TFRS 9	Financial Instruments
TFRIC 16	Hedges of a Net Investment in a Foreign Operation
TFRIC 19	Extinguishing Financial Liabilities with Equity Instruments

2 Accounting policies (continued)

2.2 New financial reporting standards, revised financial reporting standards and related interpretations (continued)

2.2.4 The Group of financial instruments reporting standards are effective for annual periods beginning on or after 1 January 2020. The Group has not yet adopted these standards. (continued)

The above new standards and interpretations will supersede the following standards:

TAS 101	Bad and Doubtful Debts
TAS 103	Disclosures in the Financial Statements of Bank and Similar Financial Institutions
TAS 104	Accounting for Troubled Debt Restructuring
TAS 105	Accounting for Investment in Debts and Equity securities
TAS 106	Accounting for Investment Companies
TAS 107	Financial Instruments: Disclosure and Presentation

TAS 32 "Financial Instruments: Presentation", provides the requirements for the presentation financial instruments as liabilities or equity and for offsetting financial assets and financial liabilities. It applies to the classification of financial instruments, from the perspective of the issuer, into financial assets, financial liabilities and equity instruments; the classification of related interest, dividends, losses and gains; and the circumstances in which financial assets and financial liabilities should be offset.

TFRS 7 "Financial Instruments: Disclosures", provides the requirements for the disclosure that are intended to enable users to evaluate the significance of financial instruments for an entity's financial position and performance, and to understand the nature and extent of risks arising from those financial instruments to which the entity is exposed during the period and at the end of the reporting period, and how the entity manages those risks.

TFRS 9 "Financial Instruments", establishes principles for the classification, measurement and derecognition of financial assets and financial liabilities, impairment requirement and hedge accounting as follow:

- Classification and measurement:
 - The classification and measurement of debt instrument financial assets has three classification categories, which are amortised cost, fair value through profit or loss and fair value through other comprehensive income. Classification of debt assets will be driven by the entity's business model for managing the financial assets and contractual cash flows characteristics of the financial assets.
 - Equity instrument financial assets shall be measured at fair value through profit or loss. An entity can make an irrevocable election to recognise the fair value change in other comprehensive income without subsequent recycling to profit or loss.
 - Financial liabilities are classified and measured at amortised cost. An entity can choose to measure a liability at fair value through profit or loss when the conditions are met.
 - Derivatives are classified and measured at fair value through profit or loss.
- The impairment requirements relating to the accounting for an entity's expected credit losses on its financial assets measured at amortised cost, investments in debt instruments measured at fair value through other comprehensive income, lease receivables, loan commitments and financial guarantee contracts. It is no longer necessary for a credit event to have occurred before credit losses are recognised. The entity always accounts for expected credit losses which involves a three stage approach. The stage dictates how the entity measures impairment losses and applies the effective interest rate method. Except for trade receivables and contractual assets which apply in TFRS 15 and are no significant financial components and lease receivables, they are permitted to measure by simplified approach for credit impaired consideration.
- The objective of hedge accounting is to represent, in the financial statements, the effect of an entity's risk management activities that use financial instruments to manage exposures arising from particular risks that could affect profit or loss (or other comprehensive income, in the case of investments in equity instruments for which an entity has elected to present changes in fair value in other comprehensive income). This approach aims to convey the context of hedging instruments for which hedge accounting is applied in order to allow insight into their purpose and effect.

2 Accounting policies (continued)

2.2 New financial reporting standards, revised financial reporting standards and related interpretations (continued)

2.2.4 The Group of financial instruments reporting standards are effective for annual periods beginning on or after 1 January 2020. The Group has not yet adopted these standards. (continued)

TFRIC 16 “Hedges of a Net Investment in a Foreign Operation”, clarifies the accounting treatment in respect of net investment hedging, provides guidance on identifying the foreign currency risks that qualify as a hedged risk. Clarifying that hedging instruments that are hedges of a net investment in a foreign operation may be held anywhere in the group not only by the parent. This includes the guidance on how an entity should determine the amount to be reclassified from equity to profit or loss for both the hedging instrument and the hedged item.

TFRIC 19 “Extinguishing Financial Liabilities with Equity Instruments”, provides the requirements for accounting treatment when the entity issues equity instruments to a creditor to extinguish all or part of a financial liability. The equity instruments issued shall be measured at fair value. The entity shall remove a financial liability (or part of a financial liability) from its statement of financial position when it is extinguished in accordance with TFRS 9. The difference between the carrying amount of the financial liability (or part of a financial liability) extinguished and the fair value of equity instruments issued shall be recognised in profit or loss.

The Group's management is currently assessing the impact of initial adoption of these standards.

2.3 Group accounting - investments in subsidiaries, associates and joint arrangements

2.3.1 Subsidiaries

Subsidiaries are all entities (including structured 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 fully consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases.

The Group applies the acquisition method to account for business combinations except business combinations under common control. The consideration transferred for the acquisition of a subsidiary is the fair value of the assets transferred, the liabilities incurred to the former owners of acquiree and the equity interests issued by the Group. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Acquisition-related costs are expensed as incurred. Identifiable assets acquired and liabilities 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 recognises any non-controlling interest in the acquiree at the non-controlling interest's proportionate share of the acquiree's net assets.

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-measurement are recognised in profit or loss.

Any contingent consideration to be transferred by the Group is recognised at fair value at the acquisition date. Subsequent changes to the fair value of the contingent consideration that is deemed to be an asset or liability is recognised either in profit or loss or as a change to other comprehensive income. Contingent consideration that is classified as equity is not re-measured, and its subsequent settlement is accounted for within equity.

2 Accounting policies (continued)

2.3 Group accounting - investments in subsidiaries, associates and joint arrangements (continued)

2.3.1 Subsidiaries (continued)

The excess of the consideration transferred, the amount of any non-controlling interest in the acquiree and the acquisition-date fair value of any previous equity interest in the acquiree over the fair value of the identifiable net assets acquired is recorded as goodwill. If the total of consideration transferred, non-controlling interest recognise and previously held interest measured is less than the fair value of the net assets of the subsidiary acquired in the case of a bargain purchase, the difference is recognised directly in profit or loss.

Intercompany transactions, balances and unrealised gains or loss on transactions between Group companies are eliminated. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the transferred asset. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

A list of the Group's subsidiaries is shown in Note 15.

2.3.2 Transaction with non-controlling interests

The Group treats transactions with non-controlling interests as transactions with equity owners of the Group. For purchases from non-controlling interests, the difference between any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded in equity.

2.3.3 Disposal of subsidiaries

When the Group ceases to have control it shall ceased to consolidate its subsidiaries. Any retained interest in the entity is re-measured to its fair value, with the change in carrying amount recognised in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognised in other comprehensive income in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities.

2.3.4 Associates

Associates are all entities over which the Group has significant influence but not control, generally accompanying a shareholding of between 20% and 50% of the voting rights. Investments in associates are accounted for using the equity method of accounting.

A list of the Group's principal associates is shown in Note 15.

2.3.5 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 financial statements under the appropriate headings.

Joint venture

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.

A list of the Group's joint ventures is shown in Note 15.

2 Accounting policies (continued)

2.3.6 Accounting under equity method

Under the equity method, the investment is initially recognised at cost, and the carrying amount is increased or decreased to recognise the investor's share of the profit or loss of the investee after the date of acquisition. The Group's investment in associates includes goodwill identified on acquisition.

If the ownership interest in associates and joint ventures is reduced but significant influence 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 reduction of the ownership interest in associates and joint ventures is recognised in profit or loss.

The Group's share of its associates and joint ventures' post-acquisition profits or losses is recognised in the profit or loss, and its share of post-acquisition movements in other comprehensive income is recognised in other comprehensive income. The cumulative post-acquisition 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, together with any long-term interests that, in substance, form part of the entity's net investment in the associates or 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.

The Group determines at each reporting date whether there is any objective evidence that the investments in the associates and joint ventures are impaired. If this is the case, the Group calculates the amount of impairment as the difference between the recoverable amount of the investments and its carrying value and recognises the amount adjacent to share of profit (loss) of associates and joint ventures in profit or loss.

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 unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of associates and joint ventures have been changed where necessary to ensure consistency with the policies adopted by the Group.

2.3.7 Separate financial statements

In the separate financial statements, investments in subsidiaries, associates and joint ventures are accounted for at cost less impairment. Cost is adjusted to reflect changes in consideration arising from contingent consideration amendments. Cost also includes direct attributable costs of investment.

A test for impairment on investments in subsidiaries, associates and joint ventures is carried out when there is a factor indicating that investments might be impaired. If the carrying value of the investments is higher than its recoverable amount, impairment loss is charged to the profit or loss.

2.4 Foreign currency translation

2.4.1 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 functional and presentation currency of the Group.

2.4.2 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.

2 Accounting policies (continued)

2.4 Foreign currency translation (continued)

2.4.3 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 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.

2.5 Accounting for Derivatives

The Group is party to derivative financial instruments, which mainly comprise interest rate swap contracts, foreign currency forward contracts, and cross currency swap contracts.

Interest Rate Swap Contracts

Interest rate swap contracts protect the Group from movements in interest rates. Any differential to be paid or received on the interest rate swap contracts is recognised as a component of finance costs as incurred.

Foreign Currency Forward Contracts

The Group enters into foreign currency forward contracts to protect its exposure from movements in exchange rates. Foreign currency forward contracts establish a predetermined exchange rate ("forward rate") at which the Group will pay foreign currency amounts on a predetermined future date.

To reduce the exposure from fluctuations in exchange rate in payable, the forward contract receivables under these contracts are translated into Baht at closing rates on the statement of financial position date. The foreign currency amounts payables under these contracts are translated into Baht at the forward rate. Unrealised gains or losses that result from the translation are recognised as part of the gains or losses on exchange rate.

To reduce the exposure from fluctuations in exchange rate in receivable, the forward contract payables under these contracts are translated into Baht at closing rates on the statement of financial position date. The foreign currency amounts receivables under these contracts are translated into Baht at the forward rate. Unrealised gains or losses that result from the translation are recognised as part of the gains or losses on exchange rate.

Any premiums or discounts equal to the difference between the exchange rates and the forward rates at the inception of the contracts are amortised over the contract's period. The foreign currency amounts receivable and payable have been presented net in the consolidated statement of financial position.

Cross Currency Swap Contracts

The Group enters into cross currency swaps contracts to protect its exposure from movements in exchange rates and interest rates.

To reduce the exposure from fluctuations in exchange rate in payable, the cross currency swap receivables under these contracts are translated into Baht at closing rates on the statement of financial position date. The cross currency swap payables under these contracts are translated into Baht at the forward rate. Unrealised gains or losses that result from the translation are recognised as part of the finance costs.

To reduce the exposure from fluctuations in exchange rate in receivable, the cross currency swap payables under these contracts are translated into Baht at closing rates on the statement of financial position date. The cross currency swap receivables under these contracts are translated into Baht at the forward rate. Unrealised gains or losses that result from the translation are recognised as part of the finance costs.

2 Accounting policies (continued)

2.5 Accounting for derivatives (continued)

Cross Currency Swap Contracts (continued)

Any premiums or discounts equal to the difference between the exchange rates and the forward rates at the inception of the contracts are amortised over the contract's period. The foreign currency amounts receivable and payable have been presented net as in the consolidated statement of financial position.

Disclosure about financial instruments to which the Group is a party is provided in Note 40.

2.6 Cash and cash equivalents

In the statements of cash flows, cash and cash equivalents includes cash in hand, deposits held at call with financial institutions, other short-term highly liquid investments with original maturities of three months or less.

2.7 Trade receivables

Trade receivables are recognised initially at original invoice amount and subsequently measured at the remaining amount less allowance for doubtful receivables based on a review of all outstanding amounts at the year-end. The amount of the allowance is the difference between the carrying amount and the amount expected to be collectible. Bad debts are recognised in profit or loss as part of administrative expenses.

2.8 Fuel and spare parts and supplies

2.8.1 Fuel

Fuel includes coal and diesel. Cost is calculated on the moving average basis.

2.8.2 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 calculated on the moving average basis.

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 generally provided based on an aging analysis.

2.9 Non-current assets held-for-sale

Non-current assets (or disposal Group) are classified as assets held-for-sale when their carrying amount is to be recovered principally through a sale transaction and a sale is considered highly probable. They are stated at the lower of the carrying amount and fair value less cost to sell.

2 Accounting policies (continued)

2.10 Other investments

Investments other than investments in subsidiaries, associates and joint ventures are classified into the following four categories: trading investments; held-to-maturity investments; available-for-sale investments; and general investments. The classification is dependent on the purpose for which the investments were acquired. Management determines the appropriate classification of its investments at the time of the purchase and re-evaluates such designation on a regular basis.

- Investments that are acquired principally for the purpose of generating a profit from short-term fluctuations in price are classified as trading investments and included in current assets.
- Investments with fixed maturity that the management has the intent and ability to hold to maturity are classified as held-to-maturity.
- Investments intended to be held for an indefinite period of time, which may be sold in response to liquidity needs or changes in interest rates, are classified as available-for-sale.
- Investments in non-marketable equity securities are classified as general investments.

All categories of investment are initially recognised at cost, which is equal to the fair value of consideration paid plus transaction cost.

Trading investments and available for sale investments are subsequently measured at fair value. The unrealised gains and losses of trading investments are recognised in profit or loss. The unrealised gains and losses of available-for-sale investments are recognised in other comprehensive income.

Held-to-maturity investments are carried at amortised cost using the effective yield method less impairment loss.

General investments are carried at cost less impairment loss.

A test for impairment is carried out when there is a factor indicating that an investment might be impaired. If the carrying value of the investment is higher than its recoverable amount, impairment loss is charged to profit or loss.

On disposal of an investment, the difference between the net disposal proceeds and the carrying amount is charged or credited to the profit or loss. When disposing of part of the Group's holding of a particular investment in debt or equity securities, the carrying amount of the disposed part is determined by the weighted average carrying amount of the total holding of the investment.

2.11 Investment property

Property that is held for long-term rental or for capital appreciation or both, and that is not occupied by the companies in the Group, is classified as investment property. Investment property also includes property that is being constructed or developed for future use as investment property or land held for a currently undetermined future use. Investment property of the Group is land held for a currently undetermined future use. The Group has not determined that it will use the land as owner-occupied property or as capital appreciation.

Investment property is measured initially at its cost including related transaction costs. Subsequently, the investment property is carried at cost less accumulated impairment losses (if any).

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.

2 Accounting policies (continued)

2.12 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. Their costs also 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.

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 during the financial period in which they are incurred.

Depreciation is calculated using the straight-line method to write off the cost of each asset to its residual value over its estimated useful life, 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.

Borrowing costs that are directly attributable to the acquisition or construction of a qualifying asset are capitalised as part of the cost of that asset, during the period of time required to complete and prepare the asset for its intended use. All other borrowing costs are recognised as expenses in the statement of income. Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalisation.

All other borrowing costs are recognised in profit or loss.

2.13 Goodwill

Goodwill represents the excess of the consideration transferred over the fair value of the Group's share of the net identifiable assets 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 and of joint ventures or associates is included in investments in joint ventures or associates in the consolidated statement of financial position and impairment test included in investment in joint ventures or investment in associates.

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.

2 Accounting policies (continued)

2.14 Intangible assets

2.14.1 Right in Power Purchase Agreements and Right to use the transmission facilities

The right in Power Purchase Agreements ("PPA") arising on acquisitions of subsidiaries, 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 PPA.

2.14.2 Licenses for operating power plants

Licenses for operating power plants arising on the acquisition of a subsidiary, which is amortised by using straight-line method over the periods of the licenses for operating power plants, which is 25 years.

2.14.3 Development expenditure

Development expenditure is recognised as an expense as incurred. Costs incurred on development projects are recognised as intangible assets when it is probable that the project will be a success considering its commercial and technological feasibility, and only if the cost can be measured reliably. Other development expenditure is recognised as an expense as incurred. Development expenditure previously recognised as an expense is not recognised as an asset in a subsequent period. Development expenditure that has been capitalised is amortised from the commencement of the commercial operation on a straight-line basis over the estimated useful life of assets.

2.15 Impairment of assets

Assets that have an indefinite useful life, for example goodwill, are not subject to amortisation and are tested annually for impairment. Assets that are subject to amortisation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. 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 to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest level for which there are separately identifiable cash flows. Non-financial assets other than goodwill that suffered an impairment are reviewed for possible reversal of the impairment at each reporting date.

2.16 Long-term lease

The determination of whether an arrangement is or contains a lease shall be based on the substance of the arrangement, and not merely the legal form. It requires an assessment of whether (a) the fulfilment of the arrangement is dependent on the use of specific assets and (b) the arrangement conveys a right to use such assets.

If the arrangement is a lease or contains a lease, payments and other consideration required by the arrangement shall be separated into those for the lease and those for other elements (e.g. for services and the cost of inputs) on the basis of their relative fair values. The lease element of the arrangement shall be classified as a finance lease or an operating lease.

Leases - where the Group is the lessee

Leases of property, plant or equipment where the Group has substantially all the risks and rewards of ownership are classified as finance leases. Finance leases are capitalized at the inception of the lease at the lower of the fair value of the leased property and the present value of the minimum lease payments. Each lease payment is allocated between the liability and finance charges so as to achieve a constant rate on the finance balance outstanding. The corresponding rental obligations, net of finance charges, are included in other long-term payables. The interest element of the finance cost is charged to profit or loss over the lease period so as to achieve a constant periodic rate of interest on the remaining balance of the liability for each period. The property, plant or equipment acquired under finance leases is depreciated over the shorter period of the useful life of the asset and the lease term.

Long-term leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are charged to profit or loss on a straight-line basis over the period of the lease.

2 Accounting policies (continued)

2.16 Long-term lease (continued)

Leases - where the Group is the lessor

Leases in which a significant portion of risks and rewards of ownership are retained by the lessee are classified as finance lease. 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. Finance lease income (interest income from finance leases) is recognised over the term of the lease using the net investment method, which reflects a constant periodic rate of return. The recognition follows accounting policy in Note 2.24.

Leases in which a significant portion of risks and rewards of ownership are retained by lessor are classified as operating leases. Assets leased out under operating leases are included in property, plant and equipment in the statement of financial position. They are depreciated over their expected useful lives on a basis consistent with other similar property, plant and equipment owned by the Group. The recognition follows accounting policy in Note 2.24.

2.17 Service concession arrangements between government and private entity in providing public services

A service concession arrangement is an arrangement involves an operator constructing and/or upgrading, operating and maintaining infrastructure used to provide a public service for a specified period of time. The operator is paid for its services over the period of the arrangement. The arrangement is governed by a contract that sets out performance standards, mechanisms for adjusting prices and arrangements for arbitrating disputes. The grantor controls (through ownership, beneficial entitlement or otherwise) any significant residual interest in the infrastructure at the end of the term of the arrangement.

The Group, as the operator for constructing and operating infrastructure, recognises receivable arising from a service concession arrangement to the extent that it has an unconditional right to receive cash or another financial asset from or at the direction of the grantor, for the construction of concession assets. Receivable recognised as a result of the service concession arrangement are measured at fair value upon initial recognition.

2.18 Borrowings

Borrowings are recognised initially at the fair value of the proceeds received, net of the transaction costs incurred. Borrowings are subsequently stated at amortised cost using the effective yield method; any difference between the proceeds (net of transaction costs) and the redemption value is recognised in profit or loss over the period of the borrowings.

Fees paid on the establishment of loan facilities are recognised as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawn down. In this case, the fee is deferred until the draw-down occurs. To the extent there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is capitalised as a pre-payment for liquidity services and amortised over the period of the facility to which it relates.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liabilities for at least 12 months after the end of reporting date.

2.19 Current and deferred income taxes

The tax expense for the period comprises current and deferred tax. 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. In this case the tax is also recognised in other comprehensive income or directly in equity, respectively.

The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the end of reporting period in the countries where the entities within the Group operate and generate taxable income. 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.

2 Accounting policies (continued)

2.19 Current and deferred income taxes (continued)

Deferred income tax is recognised, using the liability method, on temporary differences arising from differences between the tax base of assets and liabilities and their carrying amounts in the financial statements. However, the deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantially enacted by the end of the reporting period and are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled.

Deferred income 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 income tax is provided on temporary differences arising from investments in subsidiaries and associates, except 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 assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income tax assets and liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities where there is an intention to settle the balances on a net basis.

2.20 Employee benefits

The Group has post-employment benefits consisting of both defined benefit and defined contribution plans. A defined contribution plan is a pension plan under which the Group pays fixed contributions into a separate entity. The Group has no legal or constructive obligations to pay further contributions if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods. A defined benefit plan is a pension plan that is not a defined contribution plan. Typically defined benefit plans define an amount of pension benefit that an employee will receive on retirement, usually dependent on one or more factors such as age of employee, years of service and compensation.

2.20.1 Defined benefit plan - retirement benefits

The Group provides for post-employment benefits, payable to employees under the labour laws applicable in Thailand and other countries in which the Group has its operations. The liability in respect of employee benefits is the present value of the defined benefit obligation which is calculated by an independent actuary in accordance with the actuarial technique. The present value of the defined benefit obligation is determined by discounting estimated future cash flows using yields on government bonds which have terms to maturity approximating the terms of the related liability. The estimated future cash flows shall reflect employee salaries, turnover rate, mortality, length of service and other factors. Actuarial gains or 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.

2.20.2 Defined contribution plan - provident fund

The Group operates a provident fund that is a defined contribution plan. The assets are held in a separate fund which is managed by an external fund manager in accordance with the Provident Fund Act B.E. 2530. The provident fund is funded by payments from employees and by the Group. Contributions to the provident fund are charged to the profit or loss in the year to which they relate.

2 Accounting policies (continued)

2.21 Provisions

2.21.1 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 a reliable estimate of the amount can be made.

2.21.2 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 of the power and water plants. 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 costs are included as part of the power plants.

2.22 Treasury stock

Treasury stock presented in the consolidated and separate financial statements is carried at cost and shown as a deduction from total shareholders' 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 to "Premium on treasury stock" and "Retained earnings" consecutively.

2.23 Revenue recognition

Sales is shown net of discounts. Sales under the Power Purchase Agreements ("PPA") comprise Availability Payments and Energy Payments. Availability Payments are recognised according to the terms set out in the Power Purchase Agreement. Energy Payments are calculated based on electricity delivered. Sales under the Electricity and Steam Sales/Purchase Agreements with industrial users are recognised on delivery of electricity and steam and customer acceptance.

Finance lease income under power purchase agreements is recognised on an effective interest method over the period of the agreements. Rental income from operating lease under power purchase agreements is recognised in the statement of income on a straight-line basis over the period of the agreements.

Service income under finance and operating lease agreements related to power purchase agreements, which comprises other service income and Energy Payments received from finance lease receivable and operating lease receivable with respect to the leased assets, is recognised when the services have been rendered.

Contingent rents are recognised in the statement of income 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.

Revenue from construction services is recognised using the percentage of completion method. The stage of completion is measured by reference to the relationship that the contract costs incurred for work performed to date bear to the estimated total costs for the contract. Revenue from other services is recognised when the services have been rendered in accordance with the terms of the agreements or invoices have been issued.

Interest income is recognised on an accrual basis unless collectability is in doubt.

Dividend income is recognised when the right to receive payment is established.

2 Accounting policies (continued)

2.24 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 over the period necessary to match them with the costs they are intended to compensate.

Government grants relating to the purchase of property, plant and equipment 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.

2.25 Dividends distribution

Dividends are recorded in the financial statements in the period in which they are approved by the shareholders or the Board of Directors.

3 Critical accounting estimates and judgements

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.

3.1 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 tariffs and capacity stated in the agreements. Discount rates used are based on pre-tax WACC of each country (refer to note 19).

3.2 Impairment of property, plant and equipment

The Group tests impairment of property, plant and equipment whenever events or changes in circumstances indicate that the carrying amount of asset is greater than its estimated recoverable amount. Recoverable amount is the higher of fair value less costs to sell and its value in use. The calculation of fair value less costs to sell involves significant judgements and assumptions of the management in respect to characteristics and conditions of individual asset, expected disposal period, including the list of total assets expected to be disposed. The value-in-use calculates from a cash flow projection covering the remaining periods of Power Purchase Agreement, tariffs, capacity and discounted rate.

3.3 Impairment of investments in subsidiaries, associates and joint ventures

The Group tests impairment of investments in subsidiaries, associates and joint ventures whenever events or changes in circumstances indicate that the carrying amount of asset is greater than its estimated recoverable amount which calculated by using value-in-use method. Value in use involves the future operating results of business, projected cash flows, discount rate to be applied to the projected cash flows and dividend projected payouts of subsidiaries, associates and joint ventures.

3.4 Fair value estimation on acquisition of investment in a joint venture

The Group estimates fair value of net assets acquired under business combination since the valuation methodology and assumptions used in the financial model involved significant management judgement. Key assumptions used include the electricity tariffs, assumed capacity of the power plants, growth rate, expected changes to operating expenditures, the projected available cash flows for future, the approved business plan and the market risk obtained from available public industry information.

4 Capital risk management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, the Group has alternative practices include returning capital to shareholders, issuing new shares or selling assets to reduce debt.

5 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 and coal mining 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").

For the year ended 31 December 2018					
	Electricity generation Baht	Other businesses Baht	Consolidated financial statements Baht	Adjustments Baht	Management Discussion and Analysis report Baht
Sales and services income	34,525,188,175	997,013,145	35,522,201,320	2,630,593,422	38,152,794,742
Cost of sales and services	(25,629,506,029)	(976,590,833)	(26,606,096,862)	(1,147,741,720)	(27,753,838,582)
Segment results	8,895,682,146	20,422,312	8,916,104,458	1,482,851,702	10,398,956,160
Other income	2,642,205,616	9,785,195	2,651,990,811	(1,444,217,062)	1,207,773,749
Net gain on disposal of investments in joint ventures	9,818,715,117	-	9,818,715,117	-	9,818,715,117
Net gain on disposal of long-term investment in marketable securities	4,358,525,905	-	4,358,525,905	-	4,358,525,905
Net gain on dissolutions of a subsidiary and a joint venture	395,316,889	-	395,316,889	-	395,316,889
Net gains (losses) on currency exchange	(89,130,954)	368	(89,130,586)	182,122,673	92,992,087
Administrative expenses	(5,408,014,922)	(67,657,772)	(5,475,672,694)	(457,628,767)	(5,933,301,461)
Finance costs	(4,009,454,063)	-	(4,009,454,063)	(501,802,054)	(4,511,256,117)
Share of profit from investments in associates and joint ventures, net	5,404,209,086	84,199,305	5,488,408,391	566,968,342	6,055,376,733
Profit before income tax expense	22,008,054,820	46,749,408	22,054,804,228	(171,705,166)	21,883,099,062
Deferred tax income (expense)	104,262,224	2,193,132	106,455,356	(127,165,045)	(20,709,689)
Income tax expense	(1,002,408,195)	(42,394,250)	(1,044,802,445)	7,126,748	(1,037,675,697)
Profit for the year	21,109,908,849	6,548,290	21,116,457,139	(291,743,463)	20,824,713,676
Attributable to:					
Owners of the parent	21,066,335,197	6,548,290	21,072,883,487	(248,169,811)	20,824,713,676
Non-controlling interests	43,573,652	-	43,573,652	(43,573,652)	-
Segment of fixed assets	56,273,589,724	87,763,290	56,361,353,014		
Unallocated assets	149,204,448,784	862,006,821	150,066,455,605		
Consolidated total assets	205,478,038,508	949,770,111	206,427,808,619		

(1) Net currency exchange gains (losses) and finance costs of associates and joint ventures

(2) Net currency exchange gains (losses) and finance costs of subsidiaries

(3) Net currency exchange gains (losses) of non-controlling interests

(4) Adder income

(5) Impact of the adoption of TFRIC 4 "Determining whether an arrangement contains a 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

5 Segment information - consolidated financial statements (continued)

	For the year ended 31 December 2017					Management Discussion and Analysis report Baht
	Electricity generation Baht	Other businesses Baht	Consolidated financial statements Baht		Adjustments Baht	
Sales and services income	29,142,142,001	875,820,558	30,017,962,559	2,674,294,120	(4),(5),(8),(9)	32,692,256,679
Cost of sales and services	(20,524,100,346)	(807,742,318)	(21,331,842,664)	(1,197,820,580)	(5),(8),(9)	(22,529,663,244)
Segment results	8,618,041,655	68,078,240	8,686,119,895	1,476,473,540		10,162,593,435
Other income	2,259,687,859	8,519,608	2,268,207,467	(1,557,590,965)	(4),(8),(9)	710,616,502
Net gain (losses) on currency exchange	(1,593,686,839)	(30,555)	(1,593,717,394)	5,379,042,018	(2),(3),(5),(9)	3,785,324,624
Administrative expenses	(2,848,935,079)	(56,291,189)	(2,905,226,268)	(960,150,400)	(6),(7),(8),(9)	(3,865,376,668)
Finance costs	209,992,404	-	209,992,404	(4,472,894,297)	(2),(9)	(4,262,901,893)
Share of profit from investments in associates and joint ventures, net	5,710,351,882	62,188,116	5,772,539,998	1,556,705,590	(1),(5),(6),(7)	7,329,245,588
Profit before income tax expense	12,355,451,882	82,464,220	12,437,916,102	1,421,585,486		13,859,501,588
Deferred tax income	592,019,246	1,502,249	593,521,495	(248,322,883)	(5),(6),(9)	345,198,612
Income tax expense	(1,127,344,457)	(40,999,599)	(1,168,344,056)	10,559,278	(9)	(1,157,784,778)
Profit for the year	11,820,126,671	42,966,870	11,863,093,541	1,183,821,881		13,046,915,422
Attributable to:						
Owners of the parent	11,775,313,837	42,966,870	11,818,280,707	1,228,634,715	(5)	13,046,915,422
Non-controlling interests	44,812,834	-	44,812,834	(44,812,834)	(3),(5),(9)	-
Segment of fixed assets	61,629,957,185	93,593,223	61,723,550,408			
Unallocated assets	137,891,000,383	717,994,076	138,608,994,459			
Consolidated total assets	199,520,957,568	811,587,299	200,332,544,867			

(1) Net currency exchange gains (losses) and finance costs of associates and joint ventures

(2) Net currency exchange gains (losses) and finance costs of subsidiaries

(3) Net currency exchange gains (losses) of non-controlling interests

(4) Adder income

(5) Impact of the adoption of TFRIC 4 "Determining whether an arrangement contains a 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 are based on the geographical location of the assets.

	Sales and services income		Fixed assets	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Thailand	24,793,155,364	19,227,767,717	30,011,910,656	32,851,248,139
Philippines	9,733,248,535	9,809,071,223	20,338,809,950	21,665,057,070
Australia	995,797,421	981,123,619	6,010,632,408	7,207,245,199
Total	35,522,201,320	30,017,962,559	56,361,353,014	61,723,550,408

The Group's main customer is a related party which arises from electricity generation totalling 59.54% of all the Group's revenue.

6 Cash and cash equivalents

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Cash in hand	213,568,058	1,295,119	10,037	10,037
Deposits held at call with financial institutions	3,286,525,179	4,465,826,310	196,974,045	1,050,397,568
Fixed deposits with financial institutions	26,495,337,907	666,597,842	-	-
Short-term investments in promissory notes with maturities within three months	4,881,198,759	1,653,082,415	2,725,251,392	701,019,737
Total cash and cash equivalents	34,876,629,903	6,786,801,686	2,922,235,474	1,751,427,342

As at 31 December 2018, the interest rates on deposits with financial institutions were 0.10% to 0.75% per annum (As at 31 December 2017: 0.10% to 0.80% per annum). The interest rates on short-term investments in promissory notes with maturities within three months were 0.90% to 2.08% per annum (As at 31 December 2017: 0.75% to 1.50% per annum).

7 Short-term investments

Short-term investments are comprised of deposits at financial institutions with maturities over three months but not later than one year and held-to-maturity securities.

Deposits at financial institutions

The deposits at financial institutions of the Group are comprised of deposits at financial institutions and promissory notes issued by local financial institutions. As at 31 December 2018, deposits at financial institutions and promissory notes bore interest at rates from 0.38% to 1.40% per annum (As at 31 December 2017: interest rate range from 0.85% to 1.75% per annum).

Held-to-maturity securities

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Debt securities	2,183,826	4,519,619	-	-
Total	2,183,826	4,519,619	-	-

8 Short-term investments used as collateral

As at 31 December 2018, the majority of the deposits at financial institutions used as collateral are those of ten subsidiaries (As at 31 December 2017: ten subsidiaries). They comprise cash reserves required to be maintained under their loan agreements for the purpose of repayment of principals and payment of interest due within one year. These cash reserves are provided from the proceeds of sales of electricity.

As at 31 December 2018, the Group had deposits at financial institutions used as collateral amounting to US Dollar 16 million, Japanese Yen 314 million and Baht 3,781 million which are totally equivalent to Baht 4,375 million (As at 31 December 2017: US Dollar 15 million, Japanese Yen 245 million and Baht 3,980 million which are totally equivalent to Baht 4,547 million). These included the cash reserve for the purpose of repayment of principals and payment of interest due within one year amounting to Baht 2,591 million (As at 31 December 2017: Baht 2,228 million) and the remaining balance of Baht 1,784 million (As at 31 December 2017: Baht 2,319 million) represented collateralised deposits maintained in accordance with the loan agreements but which could be used subject to certain lender approvals.

9 Trade receivables, net

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Trade receivables	719,185,533	642,386,461	-	-
Trade receivable from operating lease	264,610,491	266,529,144	-	-
Trade receivable from services under operating lease	1,154,931,895	1,082,840,778	-	-
	2,138,727,919	1,991,756,383	-	-
<u>Less</u> Allowance for doubtful accounts	(21,395,484)	(22,500,527)	-	-
Trade receivables, net	2,117,332,435	1,969,255,856	-	-

Trade receivables as at 31 December can be analysed as follows:

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Not overdue	2,040,588,280	1,966,317,422	-	-
Overdue below 3 months	8,363,203	-	-	-
Overdue 3 - 6 months	68,380,952	2,938,434	-	-
Overdue 6 - 12 months	-	-	-	-
Overdue over 12 months	21,395,484	22,500,527	-	-
	2,138,727,919	1,991,756,383	-	-
<u>Less</u> Allowance for doubtful accounts	(21,395,484)	(22,500,527)	-	-
Trade receivables, net	2,117,332,435	1,969,255,856	-	-

10 Fuel and spare parts and supplies, net

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Fuel	1,326,840,808	896,454,157	-	-
Other specific spare parts	1,452,516,014	1,491,311,897	-	-
Common spare parts	938,214,610	940,091,253	3,832,526	3,837,490
Spare parts in transit	1,046,000	7,763,282	-	-
	3,718,617,432	3,335,620,589	3,832,526	3,837,490
<u>Less</u> Allowance for obsolescence	(714,449,090)	(813,893,704)	(3,419,488)	(3,375,539)
Fuel and spare parts and supplies, net	3,004,168,342	2,521,726,885	413,038	461,951

11 Non-current assets held-for-sale

On 17 December 2017, the Group reclassified its investment in a joint venture, which is Masin-AES Ptd., Ltd. ("Masin-AES") to present as non-current asset held-for-sale since the Group entered into a Share Purchase Agreement with SMC Global Power Holding Corp. to sell its 49% indirect holding in Masin-AES by US Dollar 850 million. On 20 March 2018, the Group completely transferred shares and fully received the consideration paid for such shares. Consequently, the Group recognised net gain on disposal of its investment in a joint venture of US Dollar 320 million (equivalent to Baht 9,810 million) in the consolidated statement of income for the year ended 31 December 2018.

12 Other current assets

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Withholding tax receivables	24,700,357	156,893,666	14,663,208	154,358,520
Value added tax receivables	587,666,677	734,535,206	10,334,912	1,604,408
Prepaid insurance premium	78,178,867	81,004,992	-	1,428,818
Accrued income	77,051,029	76,068,866	-	-
Interest receivables	19,934,804	6,161,312	8,805,424	1,348,220
Advanced payments for spare parts	95,018,427	142,525,815	-	-
Cross currency swap contract receivables	2,286,251	2,723,331	-	-
Interest rate swap contract receivables	21,984,510	1,915,603	21,984,510	1,915,603
Others	318,852,232	292,048,048	2,342,507	39,317,708
Total other current assets	1,225,673,154	1,493,876,839	58,130,561	199,973,277

13 Long-term investments in marketable securities and other long-term investments

The movement of the long-term investments in marketable securities and other long-term investments can be analysed as follows:

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Opening net book value	6,629,531,776	5,748,085,390	6,621,999,056	5,740,112,642
Additions	473,181,194	699,104,817	439,030,125	695,020,500
Disposal	(3,861,895,556)	-	(3,861,895,556)	-
Amortisation	(130,719)	-	-	-
Transfer to short-term investments	(746,352)	(4,050,923)	-	-
Unrealised exchange losses	(455,768)	(22,352)	-	-
Changes in fair value of available-for-sale investments	-	186,865,914	-	186,865,914
Exchange difference on translation	439,630	(451,070)	-	-
Closing net book value	3,239,924,205	6,629,531,776	3,199,133,625	6,621,999,056

As at 31 December, long-term investments in marketable securities and other long-term investments are as follows:

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
<i>Long-term investments in marketable securities</i>				
Debt securities	-	7,092,720	-	-
Equity securities	-	867,490,823	-	867,490,823
Changes in fair value of investments	-	2,994,404,733	-	2,994,404,733
Total long-term investments in marketable securities	-	3,868,988,276	-	3,861,895,556
<i>Other long-term investments</i>				
Other debt securities	31,348,450	-	-	-
Other equity securities	3,208,575,755	2,760,543,500	3,199,133,625	2,760,103,500
Total other long-term investments	3,239,924,205	2,760,543,500	3,199,133,625	2,760,103,500
Total long-term investments in marketable securities and other long-term investments	3,239,924,205	6,629,531,776	3,199,133,625	6,621,999,056

13 Long-term investments in marketable securities and other long-term investments (continued)

Long-term investments in marketable securities

On 19 February 2018, the Company entered into a Share Purchase Agreement with Manila Water Company Inc. to sell its 18.72% shareholding in Eastern Water Resource Development and Management Public Company Limited. On 14 March 2018, the shares were completely transferred and the Company fully received the consideration paid for such shares. Consequently, the Company recognised net gain on the disposal of its investment in marketable securities of Baht 4,359 million in the consolidated and separate statement of income for the year ended 31 December 2018.

Other long-term investments

Other long-term investment in equity securities mainly represented an investment in Xayaburi Power Company Limited ("XPCL") in the proportion of 12.5% shareholding interest in XPCL. In order to become a joint developer of the Xayaburi hydropower project. XPCL was awarded a concession agreement by the government of the Laos People's Democratic Republic ("Laos PDR") to design, develop, construct and implement a run-of-the-river dam power project with an installed capacity of 1,285 MW for 29 years after the commercial operation date.

During the year ended 31 December 2018, XPCL issued additional ordinary shares and the Company paid for additional shares in the same proportion as its original investment, totalling Baht 439 million (2017: Baht 695 million). As at 31 December 2018, investment in XPCL was Baht 3,197 million (As at 31 December 2017: Baht 2,758 million).

14 Long-term loans to other company

On 2 August 2016, the Company entered into a Baht 1,231 million long-term loan agreement with Xayaburi Power Company Limited ("XPCL") for construction of a power plant. The term of the agreement is for 15 years from 2016 with principal repayments and interest payments beginning in the year of 2021. The loan bears an interest at the rate of MLR plus a certain margin for the period before the commercial operations date and will bear an interest at the rate of MLR thereafter. XPCL drew down the full loan amount of the facility.

15 Investments in subsidiaries, associates and joint ventures

As at 31 December	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Investments in subsidiaries	-	-	64,912,277,428	64,899,188,343
<u>Less</u> Allowance for impairment	-	-	(663,056,302)	-
Investments in subsidiaries, net (Note 15.2)	-	-	64,249,221,126	64,899,188,343
Investments in associates (Note 15.3)	11,184,690,428	10,554,089,613	-	-
Investments in joint ventures	41,554,497,037	38,042,391,214	27,195,336,100	25,679,677,588
<u>Less</u> Allowance for impairment	-	-	(1,580,000,000)	(175,416,028)
Investments in joint ventures, net (Note 15.4)	41,554,497,037	38,042,391,214	25,615,336,100	25,504,261,560
Total investments in subsidiaries, associates and joint ventures, net	52,739,187,465	48,596,480,827	89,864,557,226	90,403,449,903

15 Investments in subsidiaries, associates and joint ventures (continued)

15.1 The movements of the investments in subsidiaries, associates and joint ventures can be analysed as follows:

	Consolidated financial statements	
	2018 Baht	2017 Baht
Opening net book value	48,596,480,827	63,208,285,293
Acquisitions of investment in an associate	-	3,505,811,626
Acquisitions of investment in joint ventures (Note 15.1.2)	2,390,648,257	107,979,950
Disposal of investment in a joint venture	(15,915,328)	-
Loss on dissolution of a joint venture	(34,484,286)	-
Reclassification of investment in a joint venture to non-current assets held-for-sale (Note 11)	-	(16,589,593,686)
Share of profit from investments in associates and joint ventures, net	5,488,408,391	5,772,539,998
Share of other comprehensive income (expense) of associates and joint ventures accounted for using the equity method		
- Unrealised gain (loss) on investments in marketable securities		
- available-for-sale of a joint venture, net of income tax	3,681,256	(1,831,276)
- Remeasurements of post-employment benefit obligations, net of income tax	32,602,166	(27,220,126)
Dividends received from joint ventures	(3,663,788,922)	(5,027,940,234)
Exchange difference on translation	(58,444,896)	(2,351,550,718)
Closing net book value	52,739,187,465	48,596,480,827

	Separate financial statements	
	2018 Baht	2017 Baht
Opening net book value	90,403,449,903	85,442,257,643
Increase in share capital of subsidiaries (Note 15.1.1)	500,000,000	5,028,628,338
Acquisition of investment in a joint venture (Note 15.1.2)	1,715,658,511	107,979,950
Decrease in share capital of a subsidiary (Note 15.1.1)	(486,910,915)	-
Disposal of investment in a joint venture (Note 15.1.2)	(24,583,971)	-
Impairment of investment in subsidiaries (Note 15.1.1)	(663,056,302)	-
Impairment of investment in a joint venture (Note 15.1.2)	(1,580,000,000)	(175,416,028)
Closing net book value	89,864,557,226	90,403,449,903

15.1.1 The significant movement of the investments in subsidiaries during the year ended 31 December 2018:

Direct holding by the Company***EGCO Plus Co., Ltd ("EGCO Plus")***

During the year ended 31 December 2018, EGCO Plus called for payment on additional share capital and the Company paid for additional share capital in the same portion as its original investment, totalling Baht 500 million.

North Pole Investment Company Limited ("North Pole")

During the year ended 31 December 2018, North Pole registered to decrease its share capital of US Dollar 32.97 million (equivalent to Baht 1,137 million) for reversal of the deficits amounting to US Dollar 18.02 million (equivalent to Baht 650 million). The Company already received the remaining capital reduction amounting to US Dollar 14.95 million (equivalent to Baht 487 million). Consequently, the Company recognised loss on impairment of its investment in a subsidiary of Baht 650 million in the separate statement of income for the year ended 31 December 2018.

In addition, on 27 December 2018, the Directors of North Pole had a resolution to approve the dissolution of North Pole. As a result, North Pole completely registered for the dissolution with Ministry of Finance and Economic Development on the same date. As at 31 December 2018, North Pole has been under the process of liquidation.

15 Investments in subsidiaries, associates and joint ventures (continued)

15.1 The movements of the investments in subsidiaries, associates and joint ventures can be analysed as follows: (continued)

15.1.1 The significant movement of the investments in subsidiaries during the year ended 31 December 2018: (continued)

Direct holding by the Company (continued)

EGCO Green Energy Co., Ltd. ("EGCO Green")

During the year ended 31 December 2018, the Company recognised the decrease in carrying amount of its investment in EGCO Green totalling Baht 13.07 million which is equivalent to its recoverable amount. The recoverable amount is determined based on value-in-use calculation using discounted cash flow projection that covered the remaining Power Purchase Agreement ("PPA") period of Roi-Et Green Co., Ltd. which is a subsidiary of EGCO Green. The Company recognised loss on impairment of its investment in a subsidiary in the separate statement of income for the year ended 31 December 2018.

Indirect holding by the Company

Agro Energy Company Limited ("AE")

On 10 May 2018, AE registered with the Ministry of Commerce for dissolution and liquidation according to the resolution at the Shareholders' Meeting of AE dated on 27 April 2018. Consequently, the process of liquidation was completed during the year ended 31 December 2018.

EGCO Pearl Co., Ltd. ("EGCO Pearl")

On 12 September 2018, EGCO Pearl was incorporated to invest in electricity generation in Taiwan. The Group holds 100% of its total registered share capital amounting to Taiwan Dollar 0.15 million (equivalent to Baht 0.16 million). The Group fully paid for such share capital.

EGCO International (B.V.I) Limited ("EGCO BVI")

On 26 December 2018, EGCO BVI registered for dissolution and liquidation with BVI Financial Services Commission according to the resolution at the Shareholders' Meeting of EGCO BVI dated on 4 December 2018. Consequently, liquidation process completed during the year ended 31 December 2018.

15.1.2 The significant movement of the investments in joint ventures during the year ended 31 December 2018:

Direct holding by the Company

Nam Theun 1 Power Company Limited ("NT1PC")

On 4 September 2017, the Company has entered into a Shareholders' Agreement for Nam Theun 1 Power Company Limited ("NT1PC") in order to develop the Nam Theun 1 Hydropower Plant Project. As a result, the Company has a direct portion of 25% in NT1PC. On 8 September 2017, NT1PC called for registered shares under the agreement and the Company paid for such investment totalling US Dollar 1.25 million, equivalent to Baht 42 million. However, once Phonesack Group Company Limited ("Phonesack"), one of the NT1PC's shareholders, is able to comply with the terms of the shareholders agreement; the Company has an obligation to pay US Dollar 2 million, equivalent to Baht 66 million to Phonesack. The Company fully paid for such obligation in the first quarter of 2018.

The detail of investment is described below:

	Consolidated financial information Million Baht
Portion of fair value of net assets acquired	3
Right in concession agreement (presented in investments in joint ventures)	92
Goodwill (presented in investments in joint ventures)	13
Total purchase consideration	108

15 Investments in subsidiaries, associates and joint ventures (continued)
15.1 The movements of the investments in subsidiaries, associates and joint ventures can be analysed as follows: (continued)
15.1.2 The significant movement of the investments in joint ventures during the year ended 31 December 2018: (continued)
Direct holding by the Company (continued)
Nam Theun 1 Power Company Limited ("NT1PC") (continued)

Right in concession agreement will be amortised using straight-line method through the remaining term of concession agreement of NT1PC.

During the year ended 31 December 2018, NT1PC completely registered additional share capital. As a result, the Company reclassified advance payment for investment to investment in a joint venture totalling US Dollar 22 million, equivalent to Baht 729 million as the details described in note 41.6. In addition, NT1PC called for payment on additional share capital and the company paid for additional share capital in the same portion as its original investment totalling US Dollar 30 million, equivalent to Baht 987 million.

GIDEC Company Limited ("GIDEC")

On 15 March 2018, the Company entered into a Share Purchase Agreement with IEC Green Energy Company Limited to sell its entire shares held in GIDEC totalling Baht 25 million. During the year ended 31 December 2018, the Company has fully received such payment. Consequently, the Group recognised net gain on disposal of its investment in a joint venture at equity method of Baht 8 million in the consolidated statement of income for the year ended 31 December 2018.

BLCP Power Company Limited ("BLCP")

During the year ended 31 December 2018, the Company recognised the decrease in carrying amount of its investment in BLCP totalling Baht 1,580 million which is equivalent to its recoverable amount. The recoverable amount is determined based on value-in-use calculation using a discounted cash flow projection over the remaining Power Purchase Agreement ("PPA") period. The Company recognised a loss on the impairment of its investment in a joint venture in the separate statement of income for the year ended 31 December 2018.

Indirect holding by the Company
PT Tenaga Listrik Cilegon ("TLC")

On 28 November 2018, TLC registered with the Ministry of Laws and Human rights for dissolution and liquidation according to the resolution at the Shareholders' Meeting of TLC dated on 28 October 2018. Consequently, the process of liquidation was completed during the year ended 31 December 2018.

San Buenaventura Power Ltd., Co. ("SBPL")

During the year ended 31 December 2018, SBPL called for payment on additional share capital and the Group paid for additional share capital in the same proportion as its original investment totalling Peso 1,089 million, equivalent to Baht 675 million.

15 Investments in subsidiaries, associates and joint ventures (continued)

15.2 Investments in subsidiaries

The details of the investments in subsidiaries are as follows:

Subsidiaries incorporated in Thailand

Khanom Electricity Generating Co., Ltd.
EGCO Engineering and Service Co., Ltd.
- Agro Energy Co., Ltd.
EGCO Green Energy Co., Ltd.
- Roi-Et Green Co., Ltd.
EGCO Cogeneration Co., Ltd.
Theppana Wind Farm Co., Ltd.
SPP Two Co., Ltd.
SPP Three Co., Ltd.
SPP Four Co., Ltd.
SPP Five Co., Ltd.
Yanhee EGCO Holding Co., Ltd.
- Solarco Co., Ltd.
Klongluang Utilities Co., Ltd.
Bangpong Utilities Co., Ltd.
Chaiyaphum Wind Farm Co., Ltd.

Business	Portion of ordinary shares directly held by parent		Portion of ordinary shares held by the Group		Cost Method		Dividend income	
	2018	2017	2018	2017	2018	2017	2018	2017
	%	%	%	%	Million Baht	Million Baht	Million Baht	Million Baht
Electricity generation	99.99	99.99	-	-	8,005	8,005	940	752
Power plant operation and maintenance services	99.99	99.99	-	-	400	400	171	97
Trading/ delivery of natural scrap	-	-	-	99.99	-	-	-	-
Investment in biomass fuelled electricity generation plant	74.00	74.00	-	-	129	129	13	7
Husk fuelled electricity generation plant	-	-	95.00	95.00	-	-	-	-
Electricity cogeneration power plant	80.00	80.00	-	-	892	892	180	188
Wind electricity generation plant	90.00	90.00	-	-	151	151	-	12
Solar electricity generation plant	99.99	99.99	-	-	266	266	35	25
Solar electricity generation plant	99.99	99.99	-	-	301	301	20	16
Solar electricity generation plant	99.99	99.99	-	-	224	224	3	9
Solar electricity generation plant	99.99	99.99	-	-	371	371	58	46
Investment in solar electricity generation plant	100.00	100.00	-	-	5	5	199	344
Solar electricity generation plant	-	-	99.98	99.98	-	-	-	-
Electricity cogeneration power plant	99.99	99.99	-	-	1,000	1,000	-	-
Electricity cogeneration power plant	99.99	99.99	-	-	2,000	2,000	-	-
Wind electricity generation plant	90.00	90.00	-	-	1,532	1,532	-	-

15 Investments in subsidiaries, associates and joint ventures (continued)

15.2 Investments in subsidiaries (continued)

The details of the investments in subsidiaries are as follows: (continued)

Business	Portion of ordinary shares directly held by parent		Portion of ordinary shares held by the Group		Cost Method		Dividend income	
	2018	2017	2018	2017	2018	2017	2018	2017
	%	%	%	%	Million Baht	Million Baht	Million Baht	Million Baht
North Pole Investment Company Limited (North Pole) (Incorporated in the Republic of Mauritius)	100.00	100.00	-	-	49,126	49,613	-	1,456
- EGCO International (B.V.I.) Limited (Incorporated in the British Virgin Islands)	-	-	-	100.00	-	-	-	-
EGCO Plus Co., Ltd. (EGCO Plus) (Incorporated in Thailand)	100.00	100.00	-	-	510	10	-	-
- New Growth Plus B.V. (Incorporated in the Netherlands)	-	-	100.00	100.00	-	-	-	-
- Gen Plus B.V. (Incorporated in the Netherlands)	-	-	100.00	100.00	-	-	-	-
- Phoenix Power B.V. (Incorporated in the Netherlands)	-	-	100.00	100.00	-	-	-	-
- Millennium Energy B.V. (Incorporated in the Netherlands)	-	-	100.00	100.00	-	-	-	-
- South Pacific Power Pty Limited (Incorporated in Australia)	-	-	100.00	100.00	-	-	-	-
- Boco Rock Wind Farm Pty Ltd (Incorporated in Australia)	-	-	100.00	100.00	-	-	-	-
- New Growth B.V. (Incorporated in the Netherlands)	-	-	100.00	100.00	-	-	-	-
- Evergreen Power Ventures B.V. (Incorporated in the Netherlands)	-	-	100.00	100.00	-	-	-	-
- Pearl Energy Philippines Operating, Inc. (PEPOI) (Incorporated in Cayman Islands, migrated to the Netherlands and operated in the Philippines)	-	-	100.00	100.00	-	-	-	-
- Quezon Power, Inc. (QPI) (Incorporated in Cayman Islands, migrated to the Netherlands and operated in the Philippines)	-	-	100.00	100.00	-	-	-	-
- Quezon Power (Philippines) Limited Co. (QPL) (Incorporated in the Philippines)	-	-	100.00	100.00	-	-	-	-
- Quezon Management Service Inc. (QMS) (Incorporated in Cayman Islands, migrated to the Netherlands and operated in the Philippines)	-	-	100.00	100.00	-	-	-	-
- Mauban Holding Company Inc. (Mauban) (Incorporated in the Philippines)	-	-	100.00	100.00	-	-	-	-
- Dewei Electricity Generating Company Management Pte. Ltd. (DEGCOM) (Incorporated in Singapore)	-	-	100.00	100.00	-	-	-	-
- EGCO Pearl Co., Ltd. (EGCO Pearl) (Incorporated in Taiwan)	-	-	100.00	-	-	-	-	-
Total investments in subsidiaries					64,912	64,899	1,619	2,952
Less: Allowance for impairment					(663)	-	-	-
Total investments in subsidiaries, net					64,249	64,899	1,619	2,952

15 Investments in subsidiaries, associates and joint ventures (continued)

15.2 Investments in subsidiaries (continued)

The details of investments in subsidiaries are as follows: (continued)

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 2018 and 2017, under the terms and conditions of loan agreement, the common share were pledged as collateral for its long-term loans in each subsidiary.

- Khanom Electricity Generating Co., Ltd.
- Solarco Co., Ltd.
- Chaiphaphum Wind Farm Co., Ltd.
- Klongluang Utilities Co., Ltd.
- Banpong Utilities Co., Ltd.

The total non-controlling interest for the year is Baht 611 million, of which Baht 290 million is for EGCO Cogeneration Co., Ltd. and Baht 196 million is for Chaiphaphum Wind Farm Co., Ltd. and Baht 107 million is for EGCO Green Energy Co., Ltd. and Baht 18 million is not material.

As at 31 December 2018, dividends receivables from subsidiaries amounting to Baht 227 million were recognised in the separate financial statements (As at 31 December 2017: Baht 227 million).

15 Investments in subsidiaries, associates and joint ventures (continued)

15.3 Investments in associates

The details of investments in associates are as follows:

	Business	Consolidated financial statements							
		Portion of ordinary shares held by the Group		Cost Method		Equity Method		Dividend income	
		2018 %	2017 %	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht
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	6,617	6,617	7,350	7,025	-	-
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*	20.07*	3,506	3,506	3,835	3,529	-	-
Total investments in associates				10,123	10,123	11,185	10,554	-	-

* 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.

15 Investments in subsidiaries, associates and joint ventures (continued)

15.3 Investment in associates (continued)

Investment in Star Energy Geothermal Pte. Ltd. ("SEG")

SEG is an associate between Phoenix Power B.V., which is a subsidiary of the Company and Star Energy Group Holdings Pte Ltd. SEG's business is investor in geothermal energy power plant business in the Republic of Indonesia. The Group has a 20% interest in SEG.

Investment in Star Energy Geothermal (Salak-Darajat) B.V. ("SEGSD")

SEGSD is an associate of the Group through Star Phoenix Geothermal JV. B.V. and Star Energy Geothermal Pte. Ltd. which is an associate of the Group together with AC Energy Holding. SEGSD's business is investor in geothermal energy power plant business in the Republic of Indonesia. The Group has a 20.07% interest in SEGSD.

Summarised financial information for associates

The Group also has interests in immaterial associates that are accounted for using the equity method as follow;

	2018 Baht	2017 Baht
Aggregate carrying amount of individually immaterial associates	11,184,690,428	10,554,089,613
Aggregate amounts of associates' share of:		
Profit from continuing operations	657,396,511	527,159,855
Other comprehensive expense	(26,795,696)	(431,311,758)
Total comprehensive income	630,600,815	95,848,097

15 Investments in subsidiaries, associates and joint ventures (continued)

15.4 Investments in joint ventures

The details of investments in joint ventures are as follows:

	Business	Consolidated financial statement							
		Portion of ordinary shares held by the Group		Cost Method		Equity Method		Dividend income	
		2018	2017	2018	2017	2018	2017	2018	2017
		%	%	Million Baht	Million Baht	Million Baht	Million Baht	Million Baht	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	14,055	14,098	1,461	1,503
BLCP Power Ltd. (BLCP)	Electricity generation	50.00	50.00	10,434	10,434	6,741	6,627	1,050	1,500
Natural Energy Development Co., Ltd. (NED)	Solar electricity generation plant	66.67*	66.67*	1,961	1,961	2,563	2,335	340	376
G-Power Source Co., Ltd. (GPS)	Solar electricity generation plant	60.00*	60.00*	734	734	874	818	76	105
GIDEC Co., Ltd (GIDEC)	Electricity generation from waste power	-	50.00	-	200	-	25	-	-
Joint ventures incorporated in the Philippines									
Kallayan Power Inc. (KPI)	Investment in energy related business	49.00*	49.00*	2	2	1	1	-	-
San Buenaventura Power Ltd., Co. (SBPL)	Electricity generation (not yet commenced operations)	49.00*	49.00*	1,303	629	1,113	480	-	-
Joint venture incorporated in Singapore									
Masin-AES Pte. Ltd. (Masin-AES) and its subsidiaries	Investment in coal-fired power plant business	-	-**	-	-**	-	-**	-	630
Joint venture incorporated in the Lao People's Democratic Republic									
Nam Theun 1 Power Company Limited (NT1PC)	Electricity generation (not yet commenced operations)	25.00*	25.00*	1,824	108	1,884	104	-	-
Nam Theun 2 Power Company Limited (NTPC)	Electricity generation	35.00*	35.00*	5,570	5,570	8,471	7,645	710	894
Joint venture incorporated in the Republic of Indonesia									
PT Manabang Muara Enim (MME)	Coal mining	40.00*	40.00*	6,029	6,029	5,852	5,872	27	20
PT Tenaga Listrik Cilegon (TLC)	Development of Coal Power Plant (not yet commenced operation)	-	49.00*	-	41	-	37	-	-
Total investments in joint ventures				34,530	32,381	41,554	38,042	3,664	5,028
Less Allowance for impairment				(1,580)	(175)	-	-	-	-
Total investments in joint ventures, net				32,950	32,206	41,554	38,042	3,664	5,028

* Shareholder Agreements assigned the structure of the business operation and the strategic, operating and financing decisions which required unanimous consent from all parties.

** Transferred investment in Masin-AES to non-current assets held-for-sale (Note 11)

As at 31 December 2018 and 2017, under the terms and conditions of BLCP and GPS loan agreements, their common shares were pledged as collateral for their long-term loans.

As at 31 December 2018, dividends receivable from joint ventures amounting to Baht 7,307 million were recognised in the consolidated and separate financial statements (As at 31 December 2017: Baht 8,021 million)

15 Investments in subsidiaries, associates and joint ventures (continued)

15.4 Investments in joint ventures (continued)

Direct holding by the Company

Investment in Gulf Electric Public Company Limited ("GEC")

GEC is a joint venture between the Company and J-Power Holdings (Thailand) Company Limited ("JPHT") and Mitr Power (Thailand) Company Limited. GEC's business is the generation of electricity for sales to Electricity Generating Authority of Thailand (EGAT) and industrial users under long-term purchasing agreements, in which the Group has a 50% ownership interest.

Investment in BLCP Power Ltd. ("BLCP")

BLCP is a joint venture between the Company and Banpu Coal Power Limited. BLCP's business is to generate electricity from the coal fire electricity generating plant for sales to EGAT under long-term purchasing agreement, in which the Group has a 50% ownership interest.

Investment in Nam Theun 1 Power Company Limited ("NT1PC")

NT1PC is a joint venture between the Company, the government of Lao PDR (through EDL-Generation Public Company) and Phonesack Group Co., Ltd. NT1PC's business is generation of electricity for sales to EGAT and Electricite Du Laos ("EDL"), in which the Group has a 25% ownership interest.

Investment in Nam Theun 2 Power Company Limited ("NTPC")

NTPC is a joint venture between the company, the government of Lao PDR (through Lao Holding State Enterprise) and EDF International. NTPC's business is the generation of electricity for sales to EGAT and Electricite Du Laos ("EDL"), in which the Group has a 35% ownership interest.

Investment in Natural Energy Development Co., Ltd. ("NED")

NED is a joint venture between the Company, CLP Thailand Renewables Limited. The joint venture is governed by a joint venture agreement and the Group has a 66.67% ownership interest. NED's business is to generate electricity from its solar power plant for sales to EGAT and Provincial Electricity Authority ("PEA").

Investment in G-Power Source Co., Ltd. ("GPS")

GPS is a joint venture between the Company and Gunkul Engineering Public Company Limited. GPS's business is the solar electricity generation plant for sales to PEA, in which the Group has a 60% ownership interest.

Investment in GIDEC Company Limited ("GIDEC")

GIDEC is a joint venture between the Company and IEC Green Energy Co., Ltd. GIDEC's business is the electricity generation from waste power for sales to PEA, in which the Group has 50% ownership interest. (Note 15.1.2)

Indirect holding by the Company

Investment in PT Manambang Muara Enim ("MME")

MME is a joint venture between New Growth B.V., which is a subsidiary of the Company and PT Alarm Karya Nusantara and PT Manunggal Power. MME's business is the operator in a coal mine located in South Sumatra, Indonesia, in which the Group has a 40% ownership interest.

Investment in Kalilayan Power Inc. ("KPI")

KPI is a joint venture between New Growth B.V., which is a subsidiary of the Company and Meralco PowerGen Corporation. KPI's business is investor in a power project in the Philippines, in which the Group has a 49% ownership interest.

Investment in San Bvenarenturd Power Ltd., Co. ("SBPL")

SBPL is a joint venture between Mauban Holding Company, Inc, which is a subsidiary of the Group and MPG Mauban LP Corp. SBPL's business is to develop the power plant project the Philippines, in which the Group has a 49% ownership interest.

15 Investments in subsidiaries, associates and joint ventures (continued)

15.4 Investments in joint ventures (continued)

Indirect holding by the Company (continued)

Investment in PT Tenaga Listrik Cilegon ("TLC")

TLC is a joint venture between Phoenix Power B.V., which is a subsidiary of the Company and PT Barito Wahana Lestari. TLC's business is to develop the coal fired power plant project in Indonesia, in which the Group has 49% ownership interest. (Note 15.1.2)

15 Investments in subsidiaries, associates and joint ventures (continued)

15.4 Investments in joint ventures (continued)

Summarised financial information for joint ventures

15.4.1 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		BLCP		NTPC		Total	
	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht
Current								
Cash and cash equivalents	3,265	1,502	59	95	321	351	3,645	1,948
Other current assets	7,612	9,514	12,715	15,206	3,420	3,176	23,747	27,896
Total current assets	10,877	11,016	12,774	15,301	3,741	3,527	27,392	29,844
Current financial liabilities	(1,116)	(1,794)	(1,276)	(2,883)	(4,074)	(3,675)	(6,466)	(8,352)
Other current liabilities	(1,342)	(1,361)	(16,757)	(17,379)	(395)	(406)	(18,494)	(19,146)
Total current liabilities	(2,458)	(3,155)	(18,033)	(20,262)	(4,469)	(4,081)	(24,960)	(27,498)
Non-current								
Non-current assets	21,448	23,122	20,566	21,267	33,446	34,199	75,640	78,588
Non-current financial liabilities	(609)	(1,782)	(871)	(2,151)	(7,197)	(11,278)	(8,677)	(15,211)
Other non-current liabilities	(1,147)	(1,005)	(955)	(901)	(1,318)	(525)	(3,420)	(2,431)
Total non-current liabilities	(1,756)	(2,787)	(1,826)	(3,052)	(8,515)	(11,803)	(12,097)	(17,642)
Net assets	28,111	28,196	13,481	13,254	24,203	21,842	65,795	63,292

15 Investments in subsidiaries, associates and joint ventures (continued)

15.4 Investments in joint ventures (continued)

Summarised financial information for joint ventures (continued)

15.4.1 Individually material joint ventures (continued)

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: (continued)

Summarised statement of comprehensive income for the years ended 31 December

	GEC and its subsidiaries		BLCF		NTPC		Total	
	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht
Revenue	13,605	15,409	14,768	15,067	8,836	9,163	37,209	39,639
Depreciation and amortisation	(1,070)	(922)	(2,140)	(2,128)	(1,380)	(1,447)	(4,590)	(4,497)
Interest income	77	89	54	73	25	16	156	178
Interest expense	(157)	(249)	(197)	(368)	(1,017)	(1,304)	(1,371)	(1,921)
Profit from continuing operations	3,606	3,271	2,554	1,855	4,717	4,102	10,877	9,228
Income tax expense	(776)	(759)	(219)	581	(211)	(232)	(1,206)	(410)
Post-tax profit from continuing operations	2,830	2,512	2,335	2,436	4,506	3,870	9,671	8,818
Other comprehensive income (expense)	7	(3)	(8)	(920)	(118)	(1,737)	(119)	(2,660)
Total comprehensive income	2,837	2,509	2,327	1,516	4,388	2,133	9,552	6,158

15 Investments in subsidiaries, associates and joint ventures (continued)

15.4 Investments in joint ventures (continued)

Summarised financial information for joint ventures (continued)

15.4.1 Individually material joint ventures (continued)

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: (continued)

Reconciliation of the summarised financial information presented to the carrying amount of its interest in joint ventures

Summarised financial information	GEC and its subsidiaries		BLCP		NTPC		Total	
	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht
Opening net assets 1 January	28,196	28,692	13,254	14,738	21,842	22,264	63,292	65,694
Profit for the year	2,830	2,512	2,335	2,436	4,506	3,870	9,671	8,818
Other comprehensive income (expense)	7	(3)	(8)	(920)	(118)	(1,737)	(119)	(2,660)
Dividends	(2,922)	(3,005)	(2,100)	(3,000)	(2,027)	(2,555)	(7,049)	(8,560)
Closing net assets	28,111	28,196	13,481	13,254	24,203	21,842	65,795	63,292
Portion of investment in common shares by the Group	50.00	50.00	50.00	50.00	35.00	35.00		
Carrying value	14,055	14,098	6,741	6,627	8,471	7,645	29,267	28,370

15 Investments in subsidiaries, associates and joint ventures (continued)**15.4 Investments in joint ventures (continued)****15.4.2 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:

	2018 Baht	2017 Baht
Aggregate carrying amount of individually immaterial joint ventures	12,287,733,772	9,672,706,634
Aggregate amounts of the Group's share of:		
Profit from continuing operating	228,794,750	134,351,414
Other comprehensive income (expense)	45,983,745	(45,385,850)
Total comprehensive income	274,778,495	88,965,564

15.5 Dividends receivable from subsidiaries and joint ventures

The movements of the dividends receivable can be analysed as follows:

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Opening balance	8,020,898,263	8,184,665,833	8,247,805,975	8,736,067,172
Dividends declared by subsidiaries	-	-	1,618,814,560	2,952,190,070
Dividends declared by joint ventures	3,663,788,922	5,027,940,234	3,636,317,005	4,377,694,469
Dividends received from subsidiaries and joint ventures	(4,378,120,772)	(5,191,707,804)	(5,969,463,415)	(7,818,145,736)
Closing balance	7,306,566,413	8,020,898,263	7,533,474,125	8,247,805,975
Current portion	306,232,048	714,331,898	306,232,048	714,331,898
Non-current portion	7,000,334,365	7,306,566,365	7,227,242,077	7,533,474,077
Total dividends receivable from subsidiaries and joint ventures	7,306,566,413	8,020,898,263	7,533,474,125	8,247,805,975

16 Investment property

	Consolidated financial statements		Separate financial statements	
As at 31 December	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Book value	448,602,691	448,602,691	669,885,990	669,885,990
Fair value	941,621,925	941,621,925	1,183,901,333	1,176,072,392

Investment property of the Group amounting to Baht 448.60 million is land held for a currently undetermined future use. Investment property of the Company amounting to Baht 221.28 million is land for rent of a subsidiary.

17 Property, plant and equipment, net

	Consolidated financial statements				
	Land Baht	Buildings and land improvements Baht	Power plants, substation, transmission system and spare parts Baht	Office equipment, furniture, computers and motor vehicles Baht	Construction in progress Baht
As at 1 January 2017					
Cost	1,695,128,132	5,612,171,233	65,356,179,515	779,070,107	84,457,902,694
Less Accumulated depreciation	-	(2,099,953,224)	(18,853,472,932)	(575,493,428)	(21,528,919,584)
Less Allowance for impairment	-	-	(508,993,638)	-	(508,993,638)
Net book value	1,695,128,132	3,512,218,009	45,993,712,945	203,576,679	62,419,989,472
For the year ended 31 December 2017					
Opening net book value	1,695,128,132	3,512,218,009	45,993,712,945	203,576,679	62,419,989,472
Additions	-	25,226,975	295,141,395	36,279,798	4,130,657,060
Disposals, net	-	-	(178,746,044)	(1,482)	(178,747,526)
Write-off, net	(1,170,923)	(330,996)	(1,658,769)	(16,833)	(9,037,521)
Transfer, net	-	771,024,584	13,477,787,204	(5,010,214)	-
Transfer from intangible assets	-	-	53,644,595	-	302,816,381
and spare parts, net	-	-	30,233,522	-	30,233,522
Increase in provision for decommissioning costs	-	-	(2,138,754,084)	(54,859,497)	(2,362,876,371)
Depreciation	-	(169,262,790)	(245,173,158)	-	(329,533,131)
Allowance for impairment of assets	-	(84,359,973)	(2,039,542,685)	(1,965,664)	(2,279,951,478)
Exchange difference on translation	-	(187,476,208)	-	-	-
Closing net book value	1,693,957,209	3,867,039,601	55,246,644,921	178,002,787	61,723,550,408
As at 31 December 2017					
Cost	1,693,957,209	6,220,431,767	75,953,750,279	689,971,932	85,296,017,077
Less Accumulated depreciation	-	(2,269,032,193)	(19,952,938,562)	(511,969,145)	(22,733,939,900)
Less Allowance for impairment	-	(84,359,973)	(754,166,796)	-	(838,526,769)
Net book value	1,693,957,209	3,867,039,601	55,246,644,921	178,002,787	61,723,550,408

17 Property, plant and equipment, net (continued)

	Consolidated financial statements					
	Land Baht	Buildings and land improvements Baht	Power plants, substation, transmission system and spare parts Baht	Office equipment, furniture, computers and motor vehicles Baht	Construction in progress Baht	Total Baht
As at 1 January 2018						
Cost	1,693,957,209	6,220,431,767	75,953,750,279	689,971,932	737,905,890	85,296,017,077
<u>Less</u> Accumulated depreciation	-	(2,269,032,193)	(19,952,938,562)	(511,969,145)	-	(22,733,939,900)
<u>Less</u> Allowance for impairment	-	(84,359,973)	(754,166,796)	-	-	(838,526,769)
Net book value	1,693,957,209	3,867,039,601	55,246,644,921	178,002,787	737,905,890	61,723,550,408
For the year ended 31 December 2018						
Opening net book value	1,693,957,209	3,867,039,601	55,246,644,921	178,002,787	737,905,890	61,723,550,408
Additions	-	9,677,832	132,451,642	18,493,013	214,091,404	374,713,891
Disposals, net	-	-	(163,187,775)	(1,379,092)	-	(164,566,867)
Write-offs, net	-	(152,072)	(274,633,120)	(264,359)	(12,660)	(275,062,211)
Transfer, net	-	186,847,321	614,037,160	(4,307,344)	(796,577,137)	-
Transfer to intangible asset	-	-	-	-	(7,584,000)	(7,584,000)
Decrease in decommissioning costs	-	-	(100,568,279)	-	-	(100,568,279)
Depreciation	-	(186,527,226)	(2,434,267,207)	(55,149,444)	-	(2,675,943,877)
Allowance for impairment of assets	-	-	(1,616,776,496)	-	-	(1,616,776,496)
Exchange difference on translation	-	(16,681,785)	(872,074,208)	1,073,391	(8,726,953)	(896,409,555)
Closing net book value	1,693,957,209	3,860,203,671	50,531,626,638	136,468,952	139,096,544	56,361,353,014
As at 31 December 2018						
Cost	1,693,957,209	6,375,153,875	74,424,587,001	654,377,031	139,096,544	83,287,171,660
<u>Less</u> Accumulated depreciation	-	(2,430,590,231)	(21,526,488,615)	(517,908,079)	-	(24,474,986,925)
<u>Less</u> Allowance for impairment	-	(84,359,973)	(2,366,471,748)	-	-	(2,450,831,721)
Net book value	1,693,957,209	3,860,203,671	50,531,626,638	136,468,952	139,096,544	56,361,353,014

Separate financial statements



EGCO
Electricity Generating Public Company Limited



EGCO
Electricity Generating Public Company Limited

17 Property, plant and equipment, net (continued)

During the year ended 31 December 2018, the Group recognised impairment loss for power plants in the consolidated and separate financial statements totalling Baht 1,443 million and Baht 914 million, respectively. Resulting from the ceasing of their operation and electricity sales to EGAT, the management determined the recoverable amount using fair value less cost to sell by the independent valuer.

In addition, the Group recognised impairment loss for power plant totalling Australian Dollar 7 million (equivalent to Baht 174 million) resulted from the decrease in cash flow projection based on the decrease in tariffs and units produced. Consequently, the management determined the recoverable amount using fair value less cost to sell.

During the year ended 31 December 2018, the Group has no borrowing costs which were capitalised and included in additions (2017: Baht 274 million).

As at 31 December 2018, property, plant and equipment with net book value of Baht 69,244 million (including property, plant and equipment reclassified as finance lease receivable amounting to Baht 17,351 million) were mortgaged and pledged as collateral for long-term loans, as described in Note 23.1 (2017: Baht 72,255 million).

18 Intangible assets, net

Consolidated financial statements

	Right in long-term power purchase agreements and right to use transmission facilities Baht	Licences for operating power plants Baht	Total Baht
As at 1 January 2017			
Cost	7,454,578,869	299,034,329	7,753,613,198
<u>Less</u> Accumulated amortisation	(2,129,323,037)	(38,043,256)	(2,167,366,293)
Net book value	5,325,255,832	260,991,073	5,586,246,905
For the year ended 31 December 2017			
Opening net book value	5,325,255,832	260,991,073	5,586,246,905
Additions	122,419,900	-	122,419,900
Transfer	(386,766,569)	-	(386,766,569)
Amortisation	(489,745,601)	(14,318,052)	(504,063,653)
Exchange difference on translation	26,933,058	(3,378,612)	23,554,446
Closing net book value	4,598,096,620	243,294,409	4,841,391,029
As at 31 December 2017			
Cost	7,217,165,258	295,655,717	7,512,820,975
<u>Less</u> Accumulated amortisation	(2,619,068,638)	(52,361,308)	(2,671,429,946)
Net book value	4,598,096,620	243,294,409	4,841,391,029
For the year ended 31 December 2018			
Opening net book value	4,598,096,620	243,294,409	4,841,391,029
Additions	8,755,800	-	8,755,800
Transfer	7,584,000	-	7,584,000
Amortisation	(473,643,308)	(15,505,946)	(489,149,254)
Exchange difference on translation	(2,423,602)	(18,963,909)	(21,387,511)
Closing net book value	4,138,369,510	208,824,554	4,347,194,064
As at 31 December 2018			
Cost	7,109,220,325	270,838,711	7,380,059,036
<u>Less</u> Accumulated amortisation	(2,970,850,815)	(62,014,157)	(3,032,864,972)
Net book value	4,138,369,510	208,824,554	4,347,194,064

19 Goodwill, net

	Consolidated financial statements Baht
As at 1 January 2018	
Cost	10,011,800,065
<u>Less</u> Provision for impairment	(504,816,296)
Net book value	9,506,983,769
For the year ended 31 December 2018	
Opening net book value	9,506,983,769
Impairment loss	(1,347,000,000)
Closing net book value	8,159,983,769
As at 31 December 2018	
Cost	10,011,800,065
<u>Less</u> Provision for impairment	(1,851,816,296)
Net book value	8,159,983,769

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 9,725 million arising from the acquisition of investment in electricity generation business in the Philippines and remaining of Baht 287 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 unit which is based on value-in-use. These calculations use a cash flow projection over periods of Power Purchase Agreements in each country and the tariffs and capacity in the agreements.

During the year ended 31 December 2018, the Group recognised the impairment loss on goodwill, which arose from the acquisition of electricity generation business in Quezon Power (Philippines) Limited Co. in the Philippines, amounting to Baht 1,347 million as part of administrative expenses in the consolidated statement of income. The recoverable amount was calculated based on value-in-use by using a cash flow projection covering the remaining Power Purchase Agreement period for 7 years. The cash flow projection is based on the power plant capacity and tariffs under the Power Purchase Agreement. Cash flows beyond the 7 years were extrapolated using the market price of electricity sales and the power plant's capacity, which approved by management. The discount rate used in the calculation was 6.42% per annum.

20 Other non-current assets

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Deposits	14,197,660	13,994,707	11,528,149	11,551,549
Deferred finance cost for undrawn down long-term loans from financial institutions	-	10,105,713	-	4,061,750
Interest receivables	193,578,793	112,913,689	193,578,793	112,913,689
Cross currency swap contract receivables	384,086,096	314,748,589	349,249,682	280,512,017
Advance payment for investment*	2,427,830,235	-	-	-
Others	194,616,072	187,427,710	15,098,276	14,486,673
Total other non-current assets	3,214,308,856	639,190,408	569,454,900	423,525,678

* On 15 November 2018, the Group has entered into a Shared Purchase Agreement with SK&E Co., Ltd. to purchase an investment in Paju Energy Service Co., Ltd. which operates a cogeneration power plant in South Korea. As a result, the Group has a direct portion of 49%. On the same date, the Group paid for an advance payment for such investment amounting to Korean Won 84,769 million, equivalent to Baht 2,428 million. As at 31 December 2018, the Group has been under the process of completing the purchase of such investment which expected to be completed within January 2019. (Note 44 (C))

21 Short-term loans from financial institutions

21.1 Remaining balance of short-term loans from financial institutions

As at 31 December	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Thai Baht	-	1,150,000,000	-	1,150,000,000
US Dollar	121,365,000	-	-	-
Total short-term loans from financial institutions	121,365,000	1,150,000,000	-	1,150,000,000

The movement of the short-term loans from financial institutions for the year ended 31 December 2018 can be analysed as follows:

	Consolidated financial statements Baht	Separate financial statements Baht
Opening book value	1,150,000,000	1,150,000,000
Cash flows		
Proceeds from short-term loans	3,393,645,067	500,000,000
Payments on short-term loans	(4,427,983,750)	(1,650,000,000)
Other non-cash movement		
Exchange difference on translation	5,703,683	-
Closing book value	121,365,000	-

The Group has entered into short-term loan agreements with financial institutions which are unsecured liabilities.

21.2 Credit facilities

As at 31 December 2018, the Group had the available credit facilities from short-term loans from financial institutions amounting to Baht 6,582 million and US Dollar 16 million in which an available credit facilities for the Company amounting to Baht 4,000 million (As at 31 December 2017: the Group had the available credit facilities from short-term loans amounting to Baht 4,932 million and US Dollar 95 million in which an available credit facilities for the Company amounting to Baht 2,850 million and US Dollar 75 million).

22 Other current liabilities

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Interest payables	460,395,623	335,253,288	222,912,153	108,625,033
Value added tax payables	598,163,572	599,320,509	-	396,782
Corporate income tax payables	215,949,310	266,511,509	-	-
Construction payables	-	4,624,166	-	-
Retention payables	-	938,878,487	-	-
Interest rate swap contract payables	81,291,838	126,153,529	40,016,915	50,456,926
Cross currency swap contract payables	529,270	3,567,718	-	-
Advance received	121,868,325	99,458,695	-	-
Others	1,015,370,290	893,416,844	281,332,969	397,583,542
Total other current liabilities	2,493,568,228	3,267,184,745	544,262,037	557,062,283

23 Long-term loans from financial institutions, net

23.1 The long-term loans from financial institutions are as follows:

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Current portion of long-term loans from financial institutions, net				
Thai Baht	8,919,512,853	1,982,874,566	200,000,000	-
US Dollar	18,187,189,105	2,432,109,690	8,730,731,077	-
Australian Dollar	373,697,654	5,477,302,632	-	-
<u>Less</u> Deferred financing fee	(254,771,173)	(109,368,839)	(532,987)	-
	27,225,628,439	9,782,918,049	8,930,198,090	-
Long-term loans from financial institutions, net				
Thai Baht	26,761,932,992	35,681,445,845	12,800,000,000	13,000,000,000
US Dollar	28,880,948,056	47,694,727,125	20,986,369,384	30,219,424,000
Australian Dollar	4,215,812,948	-	-	-
<u>Less</u> Deferred financing fee	(302,964,837)	(544,722,919)	(46,349,926)	(76,734,430)
	59,555,729,159	82,831,450,051	33,740,019,458	43,142,689,570
Total long-term loans from financial institutions, net	86,781,357,598	92,614,368,100	42,670,217,548	43,142,689,570

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 13,000 million and US Dollar 911 million which equivalents to Baht 29,717 million (2017: Baht 13,000 million and US Dollar 920 million which equivalents to Baht 30,219 million) as follows:

Thai Baht loans

Number	Outstanding balance As at 31 December 2018 (Million Baht)	Outstanding balance As at 31 December 2017 (Million Baht)	Interest rate	Principal repayment term	Interest payment period
1	4,000	4,000	THBFIX six-month plus a certain margin per annum	Repayment in December 2021	Payment every six months
2	3,000	3,000	THBFIX six-month plus a certain margin per annum	Repayment every six months from December 2019	Payment every six months
3	2,000	2,000	THBFIX six-month plus a certain margin per annum	Repayment in June 2023	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	13,000	13,000			

23 Long-term loans from financial institutions, net (continued)
23.1 The long-term loans from financial institutions are as follows: (continued)

Long-term loans from financial institutions of the Company (continued)

US Dollar loans

Number	Outstanding balance As at 31 December 2018 (Million US Dollar)	Outstanding balance As at 31 December 2017 (Million US Dollar)	Interest rate	Principal repayment term	Interest payment period
1	250	480	BBA LIBOR six-month plus a certain margin per annum	Repayment within December 2019	Payment every six months
2	100	100	US LIBOR six-month plus a certain margin per annum	Repayment within December 2020	Payment every six months
3	100	100	US LIBOR six-month plus a certain margin per annum	Repayment within October 2022	Payment every six months
4	40	40	US LIBOR six-month plus a certain margin per annum	Repayment within January 2021	Payment every six months
5	200	200	US LIBOR six-month plus a certain margin per annum	Repayment within March 2022	Payment every six months
6	221	-	US LIBOR six-month plus a certain margin per annum	Repayment every six months within March 2025	Payment every six months
Total	911	920			

23 Long-term loans from financial institutions, net (continued)

23.1 The long-term loans from financial institutions are as follows: (continued)

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 22,681 million, US Dollar 533 million which is equivalent to Baht 17,351 million and Australian Dollar 202 million which is equivalent to Baht 4,590 million (2017: Baht 24,664 million, US Dollar 608 million which is equivalent to Baht 19,907 million and Australian Dollar 216 million which is equivalent to Baht 5,477 million) as follows:

Thai Baht loans

Number	Outstanding balance As at 31 December 2018 (Million Baht)	Outstanding balance As at 31 December 2017 (Million Baht)	Interest rate	Principal repayment term	Interest payment period
1	372	464	THBFIX three-month plus a certain margin per annum	Repayment every three months from September 2012	Payment every three months
2	339	443	THBFIX three-month plus a certain margin per annum	Repayment every three months from June 2012	Payment every three months
3	246	324	THBFIX three-month plus a certain margin per annum	Repayment every three months from June 2012	Payment every three months
4	369	449	MLR six-month less a certain margin per annum	Repayment every three months from June 2012	Payment every three months
5	1,066	1,198	Fixed rate per annum	Repayment every six months from June 2014	Payment every six months
6	1,070	1,247	THBFIX three-month plus a certain margin per annum	Repayment every three months from June 2014	Payment every three months
7	92	103	Fixed rate per annum	Repayment every six months from June 2014	Payment every six months
8	73	86	THBFIX six-month plus a certain margin per annum	Repayment every six months from March 2014	Payment every six months
9	7,327	7,957	THBFIX six-month plus a certain margin per annum	Repayment every six months from February 2017	Payment every three months
10	1,599	1,708	Fixed rate per annum	Repayment every six months from June 2017	Payment every six months
11	1,938	2,092	THBFIX six-month plus a certain margin per annum	Repayment every six months from June 2017	Payment every six months
12	3,960	4,151	THBFIX three-month plus a certain margin per annum	Repayment every six months from December 2017	Payment every three months
13	4,230	4,442	THBFIX three-month plus a certain margin per annum	Repayment every six months from June 2018	Payment every three months
Total	22,681	24,664			

23 Long-term loans from financial institutions, net (continued)**23.1 The long-term loans from financial institutions are as follows: (continued)***Long-term loans from financial institutions of the subsidiaries (continued)*US Dollar loans

Number	Outstanding balance As at 31 December 2018 (Million US Dollar)	Outstanding balance As at 31 December 2017 (Million US Dollar)	Interest rate	Principal repayment term	Interest payment period
1	155	200	Fixed rate per annum	Repayment every six months from July 2012	Payment every six months
2	25	29	Fixed rate per annum	Repayment every six month from June 2014	Payment every six months
3	232	252	LIBOR six month plus a certain margin per annum	Repayment every six months from February 2017	Payment every six months
4	27	28	Fixed rate per annum	Repayment every six months from June 2017	Payment every six months
5	94	99	LIBOR three month plus a certain margin per annum	Repayment every six months from June 2018	Payment every three months
Total	533	608			

Australian Dollar loans

Number	Outstanding balance As at 31 December 2018 (Million Australian Dollar)	Outstanding balance As at 31 December 2017 (Million Australian Dollar)	Interest rate	Principal repayment term	Interest payment period
1	-	216	Floating rate plus a certain margin per annum	Repayment every quarter	Payment every three months in the power plant construction period and every three months after completion
2	202	-	Floating rate plus a certain margin per annum	Repayment every quarter	Payment every three months
Total	202	216			

Long-term loans 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 principal and payment of interest due within one year (refer to Note 8). 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 contract.

23 Long-term loans from financial institutions, net (continued)

23.2 Interest rate risk management

The detail of interest rate swap contract for long-term loans from financial institutions of the Group are shown in Note 40.1.

The interest rate exposure on the long-term loans from financial institutions of the Group before taking account of interest rate swap contract are as follows:

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Long-term loans from financial institutions, net				
- at fixed rates	9,390,431,536	11,268,360,604	-	-
- at floating rates	77,390,926,062	81,346,007,496	42,670,217,548	43,142,689,570
Total long-term loans from financial institutions, net	86,781,357,598	92,614,368,100	42,670,217,548	43,142,689,570

After taking account of interest rate swaps, the range of weighted average effective interest rates of the long-term loans from financial institutions of the Group were from 1.04% to 4.79% per annum for US Dollar loans, 5.72% per annum for Australian Dollar loans and from 3.80% to 5.72% per annum for Thai Baht loans. (2017: from 1.00% to 4.75% per annum for US Dollar loans, 6.16% per annum for Australian Dollar loans and from 3.82% to 6.06% per annum for Thai Baht loans).

After taking account of interest rate swaps, the weighted average effective interest rate of the long-term loans from financial institutions of the Company were 3.48% per annum for US Dollar loans and 3.80% per annum for Thai Baht loans. (2017: 3.19% per annum for US Dollar loans and 3.82% per annum for Thai Baht loans).

23.3 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	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Opening net book value	92,614,368,100	95,334,577,400	43,142,689,570	40,795,313,073
Cash flows				
Proceeds from long-term loans	12,280,888,007	9,852,410,972	7,243,639,000	8,597,200,000
Payments on long-term loans	(17,601,645,272)	(8,095,698,499)	(7,833,457,500)	(3,665,300,000)
Other non-cash movement				
Unrealised exchange losses (gains)	(308,436)	(3,853,581,109)	87,494,961	(2,599,576,001)
Additions of deferred financing fee	(72,934,339)	(30,942,427)	(4,061,750)	(12,843,250)
Amortisation of deferred financing fee	164,469,131	191,730,665	33,913,267	27,895,748
Exchange difference on translation	(603,479,593)	(784,128,902)	-	-
Closing net book value	86,781,357,598	92,614,368,100	42,670,217,548	43,142,689,570

23 Long-term loans from financial institutions, net (continued)**23.4 Maturity of long-term loans is as follows:**

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Within 1 year	27,225,628,439	9,782,918,049	8,930,198,090	-
Later than 1 year and not later than 5 years	42,287,259,805	52,764,283,956	28,219,712,457	35,551,470,300
Later than 5 years	17,268,469,354	30,067,166,095	5,520,307,001	7,591,219,270
Total long-term loans, net	86,781,357,598	92,614,368,100	42,670,217,548	43,142,689,570

As at 31 December 2018, a subsidiary has reclassified Baht 13,360 million of the long-term loans to current liabilities and presented as current portion of long-term loans in accordance with accounting standards due to an Event of Default as a result of failure to comply with the financial ratio specified in its Credit Facilities Agreement. However, such subsidiary already received a consent letter from lender on 22 February 2019. Therefore, the Group shall reclassify these liabilities as non-current liabilities in consolidated financial statements in the next period.

23.5 Credit facilities

As at 31 December 2018, the Group had the available credit facilities from long-term loans from financial institutions amounting to US Dollar 400 million. (As at 31 December 2017: the Group had the available credit facilities from long-term loans amounting to Baht 945 million and US Dollar 235 million which included an available credit facilities for the Company amounting to US Dollar 230 million).

24 Debenture

Details of debenture are as follows:

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Debenture	5,084,006,560	5,026,945,600	5,084,006,560	5,026,945,600
<u>Less</u> Current portion of debenture	-	-	-	-
Debenture, net	5,084,006,560	5,026,945,600	5,084,006,560	5,026,945,600

The movements of the debenture for the years ended 31 December 2018 can be analysed as follows:

	Consolidated financial statements Baht	Separate financial statements Baht
Opening book value	5,026,945,600	5,026,945,600
Exchange losses	57,060,960	57,060,960
Closing book value	5,084,006,560	5,084,006,560

On 10 March 2015, the Company issued the specific Japanese Yen and 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 month. 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.

25 Deferred income taxes

The analysis of deferred tax assets and deferred tax liabilities is as follows:

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Deferred tax assets:				
Deferred tax assets to be recovered within 12 months	20,744,270	17,214,170	-	-
Deferred tax assets to be recovered after more than 12 months	665,263,408	757,281,138	-	-
	686,007,678	774,495,308	-	-
Deferred tax liabilities:				
Deferred tax liabilities to be settled within 12 months	(193,035,534)	(194,863,920)	-	-
Deferred tax liabilities to be settled after more than 12 months	(3,409,257,573)	(4,235,993,976)	-	(598,880,947)
	(3,602,293,107)	(4,430,857,896)	-	(598,880,947)
Deferred income taxes, net	(2,916,285,429)	(3,656,362,588)	-	(598,880,947)

The movement in the deferred income tax account is as follows:

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
As at 1 January	(3,656,362,588)	(4,554,067,968)	(598,880,947)	(580,114,728)
Charged/(credited) to profit or loss	106,455,356	593,521,495	-	18,606,965
Charged/(credited) directly to other comprehensive income	595,402,358	(37,345,998)	598,880,947	(37,373,184)
Exchange difference on translation	38,219,445	341,529,883	-	-
As at 31 December	(2,916,285,429)	(3,656,362,588)	-	(598,880,947)

The movement in deferred tax assets and liabilities is as follows:

Consolidated financial statements							
	Provision Baht	Tax loss carry forward Baht	Allowance for obsolescence Baht	Finance costs Baht	Depreciation Baht	Others Baht	Total Baht
Deferred tax assets							
As at 1 January 2018	277,764,131	338,831,174	273,343,121	-	4,102,068,150	158,134,678	5,150,141,254
Charged/(credited) to profit or loss	(153,927,514)	(2,363,045)	(184,019,583)	-	(199,395,780)	(13,825,580)	(553,531,502)
Charged/(credited) directly to other comprehensive income	(3,478,589)	-	-	-	-	-	(3,478,589)
Exchange difference on translation	(353,832)	(26,268,923)	-	-	-	77,090,657	50,467,902
As at 31 December 2018	120,004,196	310,199,206	89,323,538	-	3,902,672,370	221,399,755	4,643,599,065
As at 1 January 2017	307,432,214	286,802,583	266,272,891	90,394,875	4,279,535,988	571,080,540	5,801,519,091
Charged/(credited) to profit or loss	(21,847,232)	60,237,231	7,070,230	(80,265,021)	(177,467,838)	(355,582,079)	(567,854,709)
Charged/(credited) directly to other comprehensive income	27,185	-	-	-	-	-	27,185
Exchange difference on translation	(7,848,036)	(8,208,640)	-	(10,129,854)	-	(57,363,783)	(83,550,313)
As at 31 December 2017	277,764,131	338,831,174	273,343,121	-	4,102,068,150	158,134,678	5,150,141,254

25 Deferred income taxes (continued)

The movement in deferred tax assets and liabilities is as follows: (continued)

	Consolidated financial statements						
	Finance lease receivable Baht	Depreciation and amortisation Baht	Unrealised gains on investments in marketable securities - available-for-sale Baht	The assigned fair values of assets acquired in business acquisitions Baht	Tax effect of currency translation on tax base Baht	Others Baht	Total Baht
Deferred tax liabilities							
As at 1 January 2018	3,701,269,419	931,705,782	598,880,947	2,843,184,785	717,188,598	14,274,311	8,806,503,842
(Charged)/credited to profit or loss	(112,369,055)	(402,220,311)	-	(192,205,836)	49,193,496	(2,385,152)	(659,986,858)
(Charged)/credited directly to other comprehensive income	-	-	(598,880,947)	-	-	-	(598,880,947)
Exchange difference on translation	-	42,706,158	-	(27,025,194)	(3,176,574)	(255,933)	12,248,457
As at 31 December 2018	3,588,900,364	572,191,629	-	2,623,953,755	763,205,520	11,633,226	7,559,884,494
As at 1 January 2017	4,158,926,343	870,537,845	561,507,763	3,318,754,634	1,412,573,776	33,286,698	10,355,587,059
(Charged)/credited to profit or loss	(457,656,924)	70,139,733	-	(201,999,185)	(556,044,946)	(15,814,882)	(1,161,376,204)
(Charged)/credited directly to other comprehensive income	-	-	37,373,184	-	-	-	37,373,184
Exchange difference on translation	-	(8,971,796)	-	(273,570,664)	(139,340,232)	(3,197,505)	(425,080,197)
As at 31 December 2017	3,701,269,419	931,705,782	598,880,947	2,843,184,785	717,188,598	14,274,311	8,806,503,842

25 Deferred income taxes (continued)

The movement in deferred tax assets and liabilities during the year is as follows: (continued)

	Separate financial statements		
	Provision Baht	Allowance for obsolescence Baht	Total Baht
Deferred tax assets			
As at 1 January 2018	78,771,526	166,063,412	244,834,938
Charged/(credited) to profit or loss	(78,771,526)	(103,932,655)	(182,704,181)
As at 31 December 2018	-	62,130,757	62,130,757
As at 1 January 2017	135,653,110	166,176,150	301,829,260
Charged/(credited) to profit or loss	(56,881,584)	(112,738)	(56,994,322)
As at 31 December 2017	78,771,526	166,063,412	244,834,938
	Separate financial statements		
	Depreciation and amortisation Baht	Unrealised gains on investments in marketable securities - available-for- sale Baht	Total Baht
Deferred tax liabilities			
As at 1 January 2018	244,834,938	598,880,947	843,715,885
(Charged)/credited to profit or loss	(182,704,181)	-	(182,704,181)
(Charged)/credited directly to other comprehensive income	-	(598,880,947)	(598,880,947)
As at 31 December 2018	62,130,757	-	62,130,757
As at 1 January 2017	320,436,225	561,507,763	881,943,988
(Charged)/credited to profit or loss	(75,601,287)	-	(75,601,287)
(Charged)/credited directly to other comprehensive income	-	37,373,184	37,373,184
As at 31 December 2017	244,834,938	598,880,947	843,715,885

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. The Group did not recognise deferred income tax assets of Baht 1,172 million (2017: Baht 1,554 million) in respect of losses amounting to Baht 5,858 million (2017: Baht 7,770 million) that can be carried forward against future taxable income. Losses amounting to Baht 120 million will be expired for tax benefit in 2019 (2017: Baht 156 million already expired in 2018).

26 Retirement benefit obligations

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Opening balance	404,363,236	398,817,695	166,018,209	198,814,441
Retirement benefit expenses	46,475,292	44,145,453	11,862,477	14,019,946
Interest costs	10,863,419	8,912,255	3,822,472	4,954,816
Retirement benefit paid	(70,458,889)	(41,778,862)	(28,115,220)	(6,138,034)
Reversal of provision	-	-	(12,724,331)	(45,632,960)
Exchange difference on translation	(3,491,085)	(5,286,239)	-	-
Remeasurements:				
- Losses (gains) from change in assumption	10,527,068	(447,066)	20,431,374	-
Closing balance	398,279,041	404,363,236	161,294,981	166,018,209

The following table is a summary of the assumptions relating to the actuarial technique as at the date of financial statements:

	Consolidated financial statements		Separate financial statements	
	2018 %	2017 %	2018 %	2017 %
Discount rate	2.87 - 7.33	2.27 - 5.74	3.41	2.49
Salary increase rate	5.50 - 10.50	6.00 - 8.00	8.00 - 10.50	6.00
Turnover rate	0.00 - 9.00	0.00 - 11.00	2.00 - 6.00	0.00 - 11.00
Pre-retirement mortality rate	0.04 - 1.83	0.08 - 1.66	0.04 - 1.22	0.08 - 1.66

	Consolidated financial statements		
	Change in assumption	Increase in assumption	Decrease in assumption
Discount rate	1%	Decrease by 5.92 % - 16.71 %	Increase by 6.64 % - 20.28 %
Salary increase rate	1%	Increase by 6.23 % - 19.33 %	Decrease by 5.69 % - 16.34 %
Turnover rate	10%	Decrease by 0.00 % - 3.61 %	Increase by 0.00 % - 3.74 %
Pre-retirement mortality rate	1 Year	Decrease by 0.41 % - 0.87 %	Increase by 0.37 % - 0.79 %

	Separate financial statements		
	Change in assumption	Increase in assumption	Decrease in assumption
Discount rate	1%	Decrease by 8.82 %	Increase by 10.31 %
Salary increase rate	1%	Increase by 9.72 %	Decrease by 8.53 %
Turnover rate	10%	Decrease by 1.91 %	Increase by 1.97 %
Pre-retirement mortality rate	1 Year	Decrease by 0.42 %	Increase by 0.38 %

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. When calculating the sensitivity of the defined benefit obligation to significant actuarial assumptions the same method (present value of the defined benefit obligation calculated with the projected unit credit method at the end of the reporting period) has been applied as when calculating the pension liability recognised within the statement of financial position.

The weighted average durations of the Group's defined benefit obligation are between 9.60 years and 22.80 years.

27 Provision for decommissioning costs

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Opening balance	1,808,066,021	1,807,496,682	437,176,000	437,176,000
Provision increased (decreased)	(100,568,279)	30,233,522	-	-
Additional provision - Finance costs	50,060,467	33,100,320	-	-
Reversal of provision	(371,086,000)	-	(321,686,000)	-
Exchange difference on translation	(11,400,308)	(62,764,503)	-	-
Closing balance	1,375,071,901	1,808,066,021	115,490,000	437,176,000

28 Other non-current liabilities

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Advances received	1,542,555,372	1,444,518,357	-	-
Deposits	3,138,374	3,110,808	838,160	1,310,808
Cross currency swap contract payables	18,632,574	7,093,581	-	-
Other non-current liabilities*	52,600,236	25,064,792	18,998,182	43,881,922
Total other non-current liabilities	1,616,926,556	1,479,787,538	19,836,342	45,192,730

* Other non-current liabilities have been included fair value of preferred shares of the Company's subsidiary which were issued to the third party amounting to Baht 5 million. The preferred shares are financial liabilities according to Thai Accounting Standard 107 "Financial Instrument: Presentation and Disclosures" because they are cumulative preferred shares and the preferred shareholder is entitled to cumulative preferential dividends at amount specified in the shareholder agreement of the subsidiary which is in preference to the holder of the ordinary shares. According to the shareholder agreement, the Company, as the common shareholder, has responsibilities to get the subsidiary to pay dividends to the preferred shareholder with the amount as specified in the shareholders agreement over the 25 years.

29 Legal reserve

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Opening balance	530,000,000	530,000,000	530,000,000	530,000,000
Appropriation during the year	-	-	-	-
Closing balance	530,000,000	530,000,000	530,000,000	530,000,000

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.

30 Non-controlling interests

	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Opening balance	618,152,547	624,890,033	-	-
Share of profit from subsidiaries	43,494,034	44,812,834	-	-
Dividends paid of subsidiaries	(50,680,078)	(51,550,320)	-	-
Closing balance	610,966,503	618,152,547	-	-

31 Sales and services income

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Sales of electricity	10,975,191,227	6,007,314,509	-	-
Finance lease income under power purchase agreements	3,068,737,977	3,300,810,570	-	-
Operating lease income under power purchase agreements	3,432,989,408	3,606,512,529	-	-
Lease service income under power purchase agreements	16,984,310,812	16,195,214,951	-	-
Other services income	1,060,971,896	908,110,000	-	-
Total sales and services income	35,522,201,320	30,017,962,559	-	-

32 Cost of sales and services

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Cost of sales of electricity	9,192,242,476	4,965,168,980	-	-
Cost of operating lease under power purchase agreements	529,698,744	572,702,839	-	-
Cost of services under power purchase agreements	15,900,702,548	14,976,723,159	-	-
Cost of other services	983,453,094	817,247,686	-	-
Total cost of sales and services	26,606,096,862	21,331,842,664	-	-

33 Other income

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Dividend income from subsidiaries and joint ventures (Note 15.5)	-	-	5,255,131,565	7,329,884,539
Dividend income from other companies	-	155,721,595	-	155,721,595
Interest income	698,956,645	158,150,533	313,510,524	227,228,232
Rental and service income	53,234,413	45,335,285	215,760,548	225,171,781
Adder*	1,848,393,846	1,873,486,034	-	-
Others	51,405,907	35,514,020	40,887,611	24,667,679
Total other income	2,651,990,811	2,268,207,467	5,825,290,248	7,962,673,826

* The adder represented income received from Electricity Generating Authority of Thailand ("EGAT") and Provincial Electricity Authority ("PEA")

34 Expense by nature

The following expenditure items have been charged in arriving at net profit:

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Depreciation on plant and equipment	2,675,943,877	2,362,876,371	57,638,073	58,088,509
Amortisation of right in power purchase agreements	489,149,254	504,063,653	-	-
Impairment of investments in joint ventures	-	-	1,580,000,000	175,416,028
Impairment of investments in subsidiaries	-	-	663,056,302	-
Impairment of goodwill	1,347,000,000	22,000,000	-	-
Impairment of property, plant and equipment	1,616,776,496	329,533,131	913,520,903	308,613,453
Major repair and maintenance expenses of power plants	1,007,559,293	941,798,742	-	-
Staff costs	2,115,617,704	2,049,443,513	539,470,433	606,844,922

35 Finance costs

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Interest expenses	4,023,693,045	3,805,853,260	1,716,280,462	1,608,271,797
Net gains on exchange rate from financing activities	(342,026,950)	(4,366,194,299)	(253,745,731)	(3,286,574,538)
Other finance costs	327,787,968	350,348,635	109,965,409	110,654,168
Total finance costs	4,009,454,063	(209,992,404)	1,572,500,140	(1,567,648,573)

36 Income tax expense

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Current tax	1,044,802,445	1,168,344,056	-	-
Deferred tax	(106,455,356)	(593,521,495)	-	(18,606,965)
Total income tax expense	938,347,089	574,822,561	-	(18,606,965)

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:

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Profit before tax	22,054,804,228	12,437,916,102	4,765,623,996	7,839,985,178
Tax calculated at a tax rate of 20%	20%	20%	20%	20%
The result of the accounting profit multiplied by the income tax rate	4,410,960,846	2,487,583,220	953,124,799	1,567,997,036
Tax effect of :				
Income not subject to tax	(2,606,478,168)	(993,527,215)	(1,092,533,570)	(1,500,746,348)
Expenses not deductible for tax purpose	866,027,310	139,831,456	539,635,660	102,366,579
Revenues that are granted income tax exemption or expenses that are deductible at a greater amount	(544,007,896)	(279,265,696)	-	(109,416)
Net losses deductible	(401,340,792)	(204,204,561)	(400,226,889)	(203,786,465)
Tax losses for the year for which no deferred income tax assets was recognised	192,999,408	126,287,094	-	15,671,649
Share of profit of investments accounted for using the equity method	(1,097,681,678)	(1,154,508,000)	-	-
Difference on tax rate in which countries the Group operated	117,868,059	452,626,263	-	-
Income tax	938,347,089	574,822,561	-	(18,606,965)

The weighted average applicable tax rate for the Group and the Company were 4.25% and 0.00%, respectively (2017: 4.62% and 0.24%, respectively).

The tax charged/(credited) relating to component of other comprehensive income is as follows:

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Unrealised gains on investments in marketable securities available-for-sale				
As at 1 January	598,880,947	561,507,763	598,880,947	561,507,763
Charged/(credited) to other comprehensive income	(598,880,947)	37,373,184	(598,880,947)	37,373,184
As at 31 December	-	598,880,947	-	598,880,947

37 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	
	2018 Baht	2017 Baht	2018 Baht	2017 Baht
Net profit attributable to owners of the parent (Baht)	21,072,883,487	11,818,280,707	4,765,623,996	7,858,592,143
Weighted average number of ordinary share in issue (Shares)	526,465,000	526,465,000	526,465,000	526,465,000
Basic earnings per share (Baht)	40.03	22.45	9.05	14.93

The Group has no dilutive potential ordinary shares in issue during the periods presented, so no diluted earnings per share are presented.

38 Dividends

At the Annual General Shareholders' meeting on 19 April 2018, the shareholders approved the payment of dividends in respect of the operating results for the six-month period ended 31 December 2017 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 2018.

At the Board of Directors' meeting on 17 August 2018, the directors approved the payment of interim dividends in respect of the operating results for the six-month period ended 30 June 2018 for 526,465,000 shares at Baht 6.00 per share, totalling Baht 3,159 million. These dividends were paid to shareholders on 14 September 2018.

39 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.

40 Financial risk management

The principal financial risks faced by the Group are interest rate and exchange rate risks. The Group borrows to finance its operations, which involve payments in foreign currencies, at both fixed and floating interest rates.

The objectives of using derivative financial instruments are to reduce the uncertainty over future cash flows arising from movements in interest rates and exchange rate and to manage the liquidity of cash resources. Interest rate exposure is managed through interest rate swap contracts. In respect of currency exchange risk of the domestic operation, the formula for the calculation of the Availability Payments and Energy Payments charged to EGAT allows for the minimisation of the impact of currency exchange. For the exchange rate risks of the overseas operations, the Group receives cash inflow from trade receivables as same currency as the major liabilities of the Group.

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.

40 Financial risk management (continued)

40.1 Financial assets and liabilities

As at 31 December 2018 and 2017, the Group had outstanding foreign currency assets and liabilities as details below.

Consolidated financial statements				
		2018	2017	
	Foreign currency Million	Million Baht	Foreign currency Million	Million Baht
Assets				
US Dollar	988.68	31,920	165.23	5,382
Australian Dollar	32.51	730	28.27	716
Philippine Peso	231.33	140	121.60	79
Japanese Yen	314.35	91	245.43	70
		32,881		6,247
Liabilities				
US Dollar	1,499.70	48,913	1,602.32	52,567
Japanese Yen	17,415.06	5,172	17,751.75	5,212
Australian Dollar	201.80	4,688	217.26	5,500
Philippine Peso	11.47	7	12.98	8
Swedish Krona	0.23	1	27.44	110
Euro	-	-	0.14	6
		58,781		63,403
Separate financial statements				
		2018	2017	
	Foreign currency Million	Million Baht	Foreign currency Million	Million Baht
Assets				
US Dollar	5.42	175	31.97	1,040
Liabilities				
US Dollar	911.15	29,717	920.00	30,219
Japanese Yen	17,120.00	5,084	17,120.00	5,027
		34,801		35,246

Foreign currency assets represent cash and cash equivalents, trade receivables and deposits with financial institutions. Foreign currency liabilities represent trade payables, other payables, interest payables, loans and debenture.

Objectives and significant terms and conditions

In order to manage risks arising from fluctuations in interest rates and currency exchange rates, the Group uses the following derivative financial instruments.

Interest rate swap contract

Interest rate swap contracts manage exposure to fluctuations in interest rates. The Company entered into interest rate swap contracts by converting floating interest rates to fixed interest rates for the total amount of long-term loans of Baht 13,000 million and US Dollar 911 million (equivalent to Baht 29,717 million). The eleven subsidiaries entered into interest rate swap contracts by converting floating interest rates to fixed interest rates for the total amount of long-term loans of Baht 18,530 million and US Dollar 291 million (equivalent to Baht 9,503 million) and Australian Dollar 154 million (equivalent to Baht 3,576 million).

40 Financial risk management (continued)

40.1 Financial assets and liabilities (continued)

Foreign currency forward contract

Foreign currency forward contracts manage exposure to fluctuations in foreign exchange rates. Two subsidiaries entered into foreign currency forward contract for Construction Agreement and Long-Term Services Agreement for power plants of Japanese Yen 10,081 million (equivalent to Baht 467 million and US Dollar 98 million) and Swedish Krona 261 million (equivalent to Baht 1,088 million).

Cross currency swap contract

Cross currency swap contracts manage exposure to fluctuations in foreign exchange rates and interest rates by fixed the foreign rates in advance and convert floating interest rates to fixed interest rates. The Company entered into cross currency swap contracts for total amount of debenture of Japanese Yen 17,120 million (equivalent to US Dollar 143 million) and three subsidiaries entered into such contract for total amount of long-term loans of US Dollar 52 million (equivalent to Baht 1,623 million). In addition, a subsidiary entered into such contract for total amount of long-term loans of Baht 414 million (equivalent to US Dollar 12 million).

The fixed interest rates under the interest rate swap contracts, foreign currency forward contracts and cross currency swap contracts for long-term loans at 31 December were as follows:

Currency	Contract amount (million)		Fixed rates per annum	
	2018	2017	2018	2017
US Dollar	1,214	1,246	2.53-5.09	2.53-4.17
Thai Baht	33,152	34,923	1.00-6.10	1.00-6.10
Australian Dollar	154	168	2.64-4.51	4.40

The remaining notional principal amounts of the outstanding interest rate swap contracts, foreign currency forward contracts and cross currency swap contracts at 31 December were as follows:

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
	Million Baht	Million Baht	Million Baht	Million Baht
Within 1 year	15,155	6,837	8,931	-
Later than 1 year	61,185	78,413	33,786	48,246
	76,340	85,250	42,717	48,246

40.2 Credit risk

The Group has no significant concentrations of credit risk relating to its cash and investments. The Group places its cash and investments with high quality financial institutions. The Group's policy is designed to limit exposure with any one institution and to invest its excess cash in low risk investment accounts. The Group has not experienced any losses on such accounts. For trade receivables, the Group's sales 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.

41 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 TEPCO 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 15.

The following material transactions were carried out with related parties:

41.1 Sales of electricity

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht
Sales of electricity				
- Major shareholder	7,333	3,213	-	-
Finance lease income under PPAs				
- Major shareholder	3,069	3,301	-	-
Lease service income under PPAs				
- Major shareholder	10,748	10,025	-	-

Six subsidiaries have entered into eight Power Purchase Agreements ("PPAs") with EGAT. The agreements are effective for periods of 21 to 25 years. According to the resolutions of the Cabinet meetings dated 23 January 1996, 28 January 2003, 29 May 2003, 25 November 2011, 25 July 2013 and 17 December 2013, respectively, the electricity revenues from such agreements must be calculated on a cost plus margin. There is a limitation on sales of electricity of those subsidiaries to third parties as specified in the agreements.

41 Related party transactions (continued)

The following material transactions were carried out with related parties: (continued)

41.2 Trade receivable from a related party and trade payables to related parties

As at 31 December	Consolidated financial statements		Separate financial statements	
	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht
Trade receivable				
- Major shareholder	1,491	1,339	-	-

Outstanding trade receivable from a related party as at 31 December can be analysed as follows:

As at 31 December	Consolidated financial statements		Separate financial statements	
	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht
Not overdue	1,491	1,339	-	-
Overdue below 3 months	-	-	-	-
Overdue 3 - 6 months	-	-	-	-
Overdue 6 - 12 months	-	-	-	-
Overdue over 12 months	-	-	-	-
	1,491	1,339	-	-
Trade payable				
- Major shareholder	2	5	-	-
- Other related party	105	91	-	-
	107	96	-	-

41.3 Trade receivable from a related party for services under finance lease

As at 31 December	Consolidated financial statements		Separate financial statements	
	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht
Trade receivable from a related party for services under finance lease				
- Major shareholder	2,188	1,704	-	-

Outstanding trade receivable from a related party as at 31 December can be analysed as follows:

As at 31 December	Consolidated financial statements		Separate financial statements	
	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht
Not overdue	2,188	1,704	-	-
Overdue below 3 months	-	-	-	-
Overdue 3 - 6 months	-	-	-	-
Overdue 6 - 12 months	-	-	-	-
Overdue over 12 months	-	-	-	-
	2,188	1,704	-	-

41 Related party transactions (continued)

The following material transactions were carried out with related parties: (continued)

41.4 Finance lease receivable from a related party, net

As at 31 December	Consolidated financial statements			
	minimum payment		Present value of minimum payment	
	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht
Finance lease receivable from a related party				
- Less than 1 year	4,361	4,280	1,353	1,169
- Over 1 - 5 years	16,693	17,550	3,596	3,842
- Over 5 years	38,772	41,639	14,050	14,521
	59,826	63,469	18,999	19,532
<u>Less</u> Deferred financial revenue	(40,827)	(43,937)		
Present value of minimum payment	18,999	19,532		
Finance lease receivable from a related party can be analysed as follows:				
- Current portion of finance lease receivable			1,353	1,169
- Non-current portion of finance lease receivable			17,646	18,363
			18,999	19,532

41.5 Amounts due from and amounts due to related parties

As at 31 December	Consolidated financial statements		Separate financial statements	
	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht
Amounts due from related parties				
- Subsidiaries	-	-	167	100
- Joint ventures	315	244	3	3
	315	244	170	103
Amounts due to related parties				
- Subsidiaries	-	-	17	14
- Joint ventures	23	24	-	-
- Other related party	-	3	-	-
	23	27	17	14
Advance received for purchase of spare parts (presented as other non-current liabilities)	-	-	-	24

41 Related party transactions (continued)

The following material transactions were carried out with related parties: (continued)

41.6 Advance payment for investment

As at 31 December	Consolidated financial statements		Separate financial statements	
	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht
Advance payment for investment				
- Joint venture	-	729	-	729
	-	729	-	729

During the year ended 31 December 2017, a joint venture called for payment on additional share capital and the Company paid for additional share capital in the same portion as its original investment, totalling US Dollar 22 million, equivalent to Baht 729 million. However, as at 31 December 2018, the joint venture completely registered additional share capital. As a result, the Company reclassified advance payment for investment to investment in a joint venture in the related consolidated and separate statement of financial position.

41.7 Long-term loans to related parties and related interests

As at 31 December	Consolidated financial statements		Separate financial statements	
	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht
Long-term loans to related parties				
- Subsidiaries				
- Due within 1 year	-	-	172	172
- Due over 1 year	-	-	2,479	2,599
	-	-	2,651	2,771

The movements of long-term loans to related parties can be analysed as follows:

For the year ended 31 December 2018	Consolidated financial statements	Separate financial statements
	Million Baht	Million Baht
Beginning balance	-	2,771
Increased during the year	-	60
Repayment during the year	-	(180)
Ending balance	-	2,651

41 Related party transactions (continued)

The following material transactions were carried out with related parties: (continued)

41.7 Long-term loans to related parties and related interests (continued)

As at 31 December	Consolidated financial statements		Separate financial statements	
	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht
Interest receivable				
- Subsidiaries	-	-	130	53
	-	-	130	53
For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht
Interest income				
- Subsidiaries	-	-	182	136
	-	-	182	136

41.8 Long-term loans from related parties

As at 31 December	Consolidated financial statements		Separate financial statements	
	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht
Long-term loans from related parties				
- Joint ventures	-	23	-	-

On 6 June 2016, a subsidiary entered into a long-term loan agreement with a joint venture to borrow money amounting to US Dollar 0.68 million (equivalent to Baht 23.93 million). The interest rate on such loan is fixed rate per annum. The principal and interest will be repaid within 6 June 2021.

During the year ended 31 December 2018, a joint venture registered for dissolution and liquidation resulting in net off a long-term loan with capital repayment during the process of liquidation.

41.9 Dividend income

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht
Dividend income				
- Subsidiaries	-	-	1,619	2,952
- Joint ventures	-	-	3,636	4,378
	-	-	5,255	7,330

41 Related party transactions (continued)

The following material transactions were carried out with related parties: (continued)

41.10 Directors and managements remuneration

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2018 Million Baht	2017 Million Baht	2018 Million Baht	2017 Million Baht
Short-term employee benefits	87	116	68	96
Post-employment benefits	5	8	4	8
Total director and managements remuneration	92	124	72	104

42 Fair value**42.1 Fair value estimation**

Financial assets and liabilities carried at fair value, by valuation method. The different levels have been defined as follows:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1).
- Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices) (Level 2).
- Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs) (Level 3).

42.2 Financial assets and liabilities that are measured at fair value

The following table presents the financial assets and liabilities that are measured at fair value as at 31 December 2018 and 2017.

	Consolidated financial statements			
	Level 1 Million Baht	Level 2 Million Baht	Level 3 Million Baht	Total Million Baht
Asset as at 31 December 2018				
Long-term investments in marketable securities	-	-	-	-
Asset as at 31 December 2017				
Long-term investments in marketable securities	3,862	-	-	3,862
	Separate financial statements			
	Level 1 Million Baht	Level 2 Million Baht	Level 3 Million Baht	Total Million Baht
Asset as at 31 December 2018				
Long-term investments in marketable securities	-	-	-	-
Asset as at 31 December 2017				
Long-term investments in marketable securities	3,862	-	-	3,862

There were no transfers between Levels 1, 2 and 3 of fair value level during the year.

During the year ended 31 December 2018, long-term investment in marketable securities has been fully disposed as described in Note 13.

42 Fair value (continued)

42.3 Financial assets and liabilities that are not measured at fair value

The carrying amounts of the following financial assets and financial liabilities approximate their fair values: cash and cash equivalents, short-term investments, trade receivables and payables, amounts due from and due to related parties, other receivables and payables, and short-term loans due to the short maturities of these instruments.

(a) Long-term loans to related parties, long-term loans from financial institutions and debenture

The fair values of long-term loans to related parties, long-term loans from financial institutions and debenture with fixed interest rates have been calculated by level 2.

The contract amounts and fair values are as follows:

	2018		2017	
	Consolidated financial statements		Separate financial statements	
	Contract amount Million Baht	Fair value Million Baht	Contract amount Million Baht	Fair value Million Baht
Asset				
Long-term loans to related parties	-	-	2,292	2,367
Liabilities				
Long-term loans from financial institutions	9,429	9,469	-	-
Debenture	5,084	5,135	5,084	5,135
	2018		2017	
	Consolidated financial statements		Separate financial statements	
	Contract amount Million Baht	Fair value Million Baht	Contract amount Million Baht	Fair value Million Baht
Asset				
Long-term loans to related parties	-	-	2,404	2,451
Liabilities				
Long-term loans from financial institutions	11,355	11,939	-	-
Debenture	5,027	5,091	5,027	5,091

The fair values have been calculated from the net present value of future cash flows discounted by market interest rates using rates at the date of financial statements. The fair values of long-term loans from financial institutions and long-term loans to related parties with floating interest rates approximate their carrying amounts.

The fair values have been calculated using rate quoted by the Group's counterparties at the date of statement of financial position.

42 Fair value (continued)**42.3 Financial assets and liabilities that are not measured at fair value (continued)****(b) Derivatives financial instruments**

The fair values of the derivatives financial instruments have been calculated by level 2.

The fair values of the derivatives financial instruments at the date of financial statements are as follows:

	Consolidated financial statements		Separate financial statements	
	2018	2017	2018	2017
	Million Baht	Million Baht	Million Baht	Million Baht
Assets				
Interest rate swap contracts	602	374	510	354
Foreign currency forward contracts	20	20	-	-
Cross currency swap contracts	477	327	433	299
Liabilities				
Interest rate swap contracts	(2,002)	(2,652)	(154)	(211)
Foreign currency forward contracts	(396)	(397)	-	-
Cross currency swap contracts	(88)	(68)	-	-

The fair values of interest rate swap contracts, foreign currency forward contracts and cross currency swap contracts have been calculated using rates quoted by the Group's counterparties to terminate the contracts at the date of financial statements.

43 Commitments and significant agreements**43.1 Commitments**

- a) As at 31 December 2018, the Company had commitments under the Counter Guarantee and Standby Letters of Credit issued on behalf of the Company to subsidiaries and joint ventures of Baht 6,866 million (2017: Baht 8,386 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 819 million. The collateral is to be returned to such subsidiaries upon the expiry of the agreements.
- c) The Company has provided a guarantee from 31 March 2017 to 31 December 2037 of up to US Dollar 23.96 million (equivalent to Baht 781 million) for an associate's obligations as the buyer under share sales and purchase agreements for geothermal operations in Indonesia. The guarantee will be for up to US Dollar 23.78 million (equivalent to Baht 776 million) from 1 January 2038 to 31 December 2049. A subsidiary will pay US Dollar 5 million to Star Energy Group Holding Pte Ltd. during 2040 to 2047 in accordance with the relevant consortium agreement to be released from obligations.
- d) On 28 December 2018, the Company has provided a guarantee for a subsidiary's obligations as a borrower under long-term loans facility agreements with financial institutions. The guarantee is for up to US Dollar 200 million (equivalent to Baht 6,523 million) from 28 December 2018 to 28 December 2023 and US Dollar 200 million (equivalent to Baht 6,523 million) from 15 January 2019 to 15 January 2024. The subsidiary will pay the full principals and interest within the specified period to be released from the obligations. In addition, the Company has to comply with certain conditions set out in the agreement, i.e. to maintain financial ratio of debt to equity ratio, and interest coverage ratio specified in the agreement.

43 Commitments and significant agreements (continued)

43.2 Significant agreements

In addition to the PPAs with EGAT which is one of the Company's major shareholders as discussed in Note 41, the Group had the following significant agreements:

43.2.1 Power Purchase Agreements ("PPAs")

- a) The six subsidiaries of the Company 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 the agreement. The PPAs are effective for periods of 5 years and are automatically renewable every 5 years.
- b) On 9 October 2014, a subsidiary has entered into PPA with a company. The PPA is effective for a period of seven years starting from scheduled commercial operation date since 20 July 2017. The sales quantity and its price must be complied with the agreement. The agreement can be extended for another 2 years, commencing from the maturity date upon the conditions specified in the agreement.
- c) On 16 October 2014, a subsidiary has entered into PPA with a company. The agreement is effective for a period of 20 years starting from scheduled commercial operation date since 1 October 2017. The sales quantity and its price must be complied with the agreement. The agreement can be extended, commencing from the maturity date upon the conditions specified in the agreement.
- d) An overseas subsidiary of the Company has entered into a PPA with a purchaser in the Philippines. The PPA is effective for a period of 25 years commencing from 30 May 2000. The purchaser is obligated to pay the subsidiary a Monthly Capacity Payment, of at least US Dollar 109 million per year. As at 31 December 2018, the remaining period of the PPA is 7 years.
- e) An overseas subsidiary of the Company has entered into a PPA with a purchaser in Australia. The PPA is effective for a period of 10 years commencing and can be extended for another 5 years from February 2015.

43.2.2 Steam Purchase Agreement

- a) On 16 October 2014, a subsidiary of the Company has entered into Steam Purchase Agreement with a company. The agreement is effective for a period of 20 years commencing from scheduled commercial operation date since 1 October 2017. The sales quantity and its price must be complied with the agreement. The agreement can be extended, commencing the maturity date upon the conditions specified in the agreement.
- b) On 5 April 2016, a subsidiary of the Company has entered into Steam Purchase Agreement with a company. The agreement is effective for a period of 7 years commencing from the scheduled commercial operation date since 20 July 2017. The sales quantity and its price must comply with the agreement. The agreement can be extended for another 2 year, commencing from the maturity date.

43.2.3 Transmission Line Agreement ("TLA")

An overseas subsidiary of the Company has entered into a TLA with a contractor in the Philippines. The TLA is effective for a period of 25 years commencing from 30 May 2000.

43.2.4 Fuel Purchase Agreements

- a) Four subsidiaries have entered into Gas Purchase Agreements with PTT Public Company Limited ("PTT"). The agreement is effective for a period between 21 years and 25 years, commencing from commercial operation date since 28 January 2003, 19 June 2016, 20 July 2017 and 1 October 2017. The sales quantity and its price must be complied with the agreement.
- b) A subsidiary of the Company has entered into a Heavy Fuel Oil Purchase Agreement with PTT. The agreement shall be effective for a period of 3 years from 1 January 2005 to 31 December 2008. The agreement has been extended by one year and can be extended automatically for further one year periods (in the event that there is no cancellation of the automatic extension).
- c) An overseas subsidiary of the Company has entered into two Coal Supply Agreements ("CSAs") with two contractors. Under the CSAs, 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 30 May 2000.

43 Commitments and significant agreements (continued)

43.2 Significant agreements (continued)

43.2.4 Fuel Purchase Agreements (continued)

- d) On 22 December 2016, a subsidiary has entered into Diesel Fuel Supply Agreement with the contractor for purchasing secondary fuel for a new power plant. The agreement is effective for a period of 3 years, commencing 4 April 2017. The sales quantity and its price must be complied with the agreement.

43.2.5 Operation and Maintenance Agreements

- a) A subsidiary of the Company has entered into power plant operation and maintenance, and power plant equipment maintenance agreements with customer. The agreements, totalling Baht 273 million, are effective for 6 years. In addition, the subsidiary has also entered into power plant operation and maintenance, and power plant equipment maintenance agreements with 7 subsidiaries. This agreement is effective for 5 - 6 years. The total contract price is Baht 1,029 million.
- b) On 26 June 2013, a subsidiary of the Company has entered into maintenance service agreement with a contractor for power plant maintenance, which is effective for a period of 11 years commencing from 26 June 2013 to 31 March 2025. As at 31 December 2018, the total commitment under the contract is Australian Dollar 55.02 million.
- c) A subsidiary of the Company has entered into maintenance service agreement with two constructors, which is effective for a period of 12 years commencing from 19 June 2016. The total contract price is Japanese Yen 18,560 million.
- d) On 29 July 2016, a subsidiary has entered into a long-term technical service agreement for maintenance of Gas Turbine SGT 800B, which is effective for a period of 8 years commencing from the scheduled commercial operation date since 1 October 2017. The total contract price is Swedish Krona 338 million which can be extended from the maturity date upon the conditions specified in the agreement.
- e) On 28 February 2017, a subsidiary has entered into a long-term technical services agreement for power plant and equipment maintenance, which is effective for a period of 6 years commencing from the scheduled commercial operation date since 20 July 2017. The total contract price is Baht 55 million and US Dollar 15 million. The agreement can be extended from the maturity date upon the conditions specified in the agreement.
- f) On 15 May 2017, a subsidiary has entered into a long-term maintenance service agreement with a related party for power plant, which is effective for a period of 5 years from 15 May 2017 to 31 December 2022. The total contract price is Baht 667 million.

43.2.6 Rental contracts

- a) A subsidiary has entered into a rental contract with a counterparty in Philippines. This agreement is effective for a period of 25 years commencing from 30 May 2000 and is automatically renewable every 5 years. The contract period is not in excess of 50 years.
- b) A subsidiary has entered into a rental contract with a counterparty in Australia. This agreement is effective for a period of 25 years commencing from 26 June 2013.

44 Post statement of financial position events

- a) On 3 January 2019, 11 January 2019 and 1 February 2019 the Group paid for additional share capital for investment in a joint venture in the same portion as its original investment, totalling Peso 81 million, equivalent to Baht 49 million, 221 million, equivalent to Baht 133 million and Peso 714 million, equivalent to Baht 419 million, respectively.
- b) On 15 January 2019 and 16 January 2019, a subsidiary of the Company has entered into a long-term loan agreement with two financial institutions with total credit facilities of US Dollar 400 million. The interest rate of the loans is LIBOR plus a certain margin per annum. The principals repayment will be made during 28 December 2023 and 15 January 2024, respectively and the interest payment period is every six months.
- c) On 15 January 2019, the Group completed a share purchase in Paju Energy Service Co., Ltd (Note 20). The Group paid for such shares totalling Korean Won 818,899 million (equivalent to Baht 22,497 million). This investment was classified as investment in a joint venture of the Group.
- d) On 18 January 2019 and 14 February 2019, the Company paid for additional share capital for registered shares of 132,637,500 shares in other long-term investment in the same portion as its original investment, totalling Baht 56 million.
- e) At the Company's Board of Directors' meeting dated 22 February 2019, Board of Directors approved a proposal to Annual Shareholders' meeting for the year 2019 held on 18 April 2019 to consider approve the payment of dividends in respect of the operating results for the six-month period ended 31 December 2018 for 526,465,000 shares at Baht 3.5 per share, totalling Baht 1,843 million.

Audit Fee for the year 2018

Audit Fee

In 2018, EGCO and its subsidiaries paid the audit fee amounting to 6,493,200 Baht to the Office of the Auditors, comprising of 2,962,600 Baht for EGCO and 3,530,600 Baht for subsidiaries. No other audit fee had been paid to the auditors or related parties to the auditors and the Auditors' office.

Non-Audit Fee

EGCO and subsidiaries' total non-audit fee was 14,505,098 Baht. The amount of 13,847,033 Baht was already paid. In addition, EGCO would be responsible for the expenses of undelivered work of 658,065 Baht. The details of the non-audit fee were as follows:

1. Payment to the Office of the Auditors:

In 2018, the non-audit fee for BOI auditing, review and certification the financial ratios, and accounting advisory service of EGCO's subsidiaries was 3,405,600 Baht. The fee was already recorded as fee expenses for the Office of the Auditors.

2. Payment to Other Related Parties of the Auditors' Office:

In 2018, the non-audit fee for the advisory services on offshore investment structure and legal advisory service at EGCO was 11,099,498 Baht which was already paid of 10,441,433 Baht to other related parties of the Auditors' office. In addition, EGCO would also be responsible for the expenses of undelivered work of 658,065 Baht.

Management has considered 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 impair the independence and objectivity of the auditors. In this matter, the Audit Committee has considered as the Management proposed.

Corporate Governance



EGCO is committed to operating sustainable business by adhering to good corporate governance principles and business ethics to achieve fairness, efficiency, transparency and accountability in its operations that are free from all types of either direct or indirect corruption. EGCO ensures responsibility towards the community, society, and environment, trust and confidence of shareholders, investors, and all stakeholders to enhance its competitiveness which will lead to financial stability and investments. EGCO also strictly complies with good corporate governance principles.

Good Corporate Governance Policy

The Board of Directors ("the Board") established its good corporate governance principles in writing as guidelines on corporate management for the Board, executives, and employees in a fair, transparent, accountable, and efficient manner. The six principles are as follows:

- Promotion of Best Practice : Promote compliance with good corporate governance principles and Code of Conduct
- Responsibility : Operate 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 annually reviews and improves good corporate governance principles based on the criteria such as the Capital Market Supervisory Board, good corporate governance principles as in line with the Corporate Governance Report of Thai Listed Companies (CGR) of the Thai Institute of Directors (IOD) and ASEAN Corporate Governance Scorecard and in accordance with the changing environment.

In 2018, the Board acknowledged the Corporate Governance Code for Listed Companies 2017 (“CG Code 2017”) of the Securities and Exchange Commission (“SEC”) and reviewed the Company’s corporate governance principles and practice guidelines in comparison with the criteria of ASEAN Corporate Governance Scorecard. The Board then endorsed the revision of the Company’s corporate governance principles and practice guidelines as follows:

1. Develop a written Board Charter
2. Revise duties, responsibilities and authority of the Board and 4 subcommittees such as the Audit Committee, the Investment Committee, the Nomination and Remuneration Committee and the Corporate Governance and Social Responsibility
3. Appoint Ms. Jaruwan Ruangswadipong, Independent Director, as the Lead Independent Director and develop a Lead Independent Director Charter by determining the Lead Independent Director’s duties as below:
 - 1) Chair a meeting of Independent Directors and represent them in the discussion held between the Chairman of the Board and the management on the matters relating to corporate governance and other significant matters as deemed appropriate
 - 2) Held a meeting of Independent Directors at least once a year in which the management, or concerned persons or appropriate persons may be invited to attend the meeting and give explanations and information on relevant matters
 - 3) Act as the main coordinator between the Chairman of the Board, Independent Directors and President on matters relating to the Board
 - 4) Chair a Board meeting in case that the Chairman and Vice Chairman of the Board cannot attend the meeting
 - 5) Collaborate with the Chairman of the Board and the President in determining agenda items to ensure that significant matters are included to be proposed to the Board for consideration and acknowledgement in the Board meeting and the meeting of Non-Executive Directors
 - 6) Coordinate between shareholders who intend to negotiate, discuss or seek advice from the Board, with the collaboration of the Chairman of the Board and the President, and develop a written Lead Independent Director Charter
4. Set a minimum number of meetings each director should attend: at least 75% of meeting attendance for the meetings of the Board and subcommittees held throughout the year
5. Define the diversity of board of directors in terms of race and nationality, other than age, sex, knowledge and expertise, in the criteria and procedures for board nomination

The details of all Committee Charters are made available on the Company’s website.

In 2018, the Board considered the CG Code 2017, regulations and criteria of regulatory agencies, CGR’s criteria and ASEAN CG Scorecard which the Company had yet to accomplish as well as explained reasons and alternative practice guidelines as follows:

Unaccomplished Items	Reasons
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 consisted of 2 directors as representatives of major shareholders and independent directors who were suitable for the Company's business characteristics, especially overseas energy business, requiring knowledge and expertise in energy of representative directors, so that EGCO's successful operations were achieved according to the Company's objectives and strategic plan. The number and proportion of directors also reflected appropriate checks and balances.
A Chairman of the Board shall be an independent director.	<p>Although EGCO's Chairman of the Board was not an independent director, he performed his duties on fair and transparent basis, took the Company's interests into account, and did not sub serve private interests. The Chairman of the Board also encouraged representative directors and independent directors to discuss and express opinions freely and there had never been a case of decisive votes exercised by the Chairman of the Board to pass any resolutions.</p> <p>Moreover, the Board approved to appoint Ms. Jaruwan Ruangswadipong, Independent Director, as a Lead Independent Director to chair a meeting of Independent Directors and represent them in the discussion held between the Chairman of the Board and the Management on matters relating to corporate governance and significant matters as deemed appropriate. The meeting results were reported to the Board.</p>
A Chairman of the Nomination and Remuneration Committee shall be an independent director.	Although the Chairman of the Nomination and Remuneration Committee was not an independent director, he had experience and expertise in management of international organizations beneficial to the formulation of human resource recruitment and development and compensation and benefit packages of directors and employees policies to be able to enhance competitiveness and accommodate expansion of overseas investments in energy as in line with the Company's strategic plan.
Consideration of 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 endorsed the remuneration structure of the Board, executives and employees by linking bonus to the Company's performance according to the KPIs, one of which was long-term growth, despite no ESOP given to employees.

The Board oversaw the Company's compliance with the corporate governance policy and practice guidelines which were adjusted in line with the Company's strategies, vision and mission and based on business ethics, relevant laws, rules and regulations and followed up the performance results which were disclosed in the annual report as follows:

1. Code of Conduct

The Board has considered both national and international best practices as in accordance with the Company's good corporate governance principles and reviewed the Code of Conduct on a yearly basis. The Code of Conduct has been continuously revised since 2003. In 2018, the revised Code of Conduct for Directors, comprising 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, was already appropriate. The Code of Conduct for the employees embraced 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 environment; 7. Anti-corruption and 8. Whistleblowing.

Communication of Good Corporate Governance Policy and Code of Conduct

Good corporate governance policy and principles and Code of Conduct are regularly communicated both internally and externally. For internal communication, they are communicated via channels such as meetings between employees and President (Communication Day), Intranet and wire broadcasting on Fridays at EGCO headquarters. For external communication, they are made available on the Company's website (www.egco.com) and at the exhibition on good governance and anti-corruption in the Company's annual general meeting of shareholders, etc.

In addition, EGCO Group believes that business management based on good corporate governance and ethics, caring for all stakeholders and social and environmental responsibility is crucial for its operational efficiency and can create long-term value for the shareholders. EGCO Group has then defined ethical practice and caring for the stakeholders as important characteristics of good employees which have been incorporated into the following core values:

In 2018, EGCO undertook more activities to promote the implementation of good corporate governance policy across EGCO Group companies as in line with the good corporate governance strategy and foster core values of ethic and integrity among directors, executives and employees to enhance knowledge and understanding, and apply good corporate governance principles and practice guidelines, Code of Conduct and anti-corruption measures in a correct manner as follows:



1. Adding corporate governance and Code of Conduct as one of the topics for director and new employee orientation.
2. Arranging 2 CG Roadshows to enhance knowledge on good corporate governance principles, anti-corruption measures and Code of Conduct for EGCO Group's employees at Headquarters and power plants, alternatively. This year, the activity was held at Khanom Electricity Generating Company Limited in Nakhon Sri Thammarat Province.
3. Arranging CG Day in which EGCO Group's directors, executives and employees, both at Headquarters and in provinces, participated to promote and provide knowledge on good corporate governance principles to EGCO Group's executives and employees. The activity was organized under the carnival theme with game booths where CG knowledge were embedded such as CG dartboards, balloon darts for transparency, wheels of virtue and pole hooking. Also, a play which was performed by senior executives, reflected anti-corruption matters in a clearer manner such as guidance on donations, giving and receiving of gifts, etc. Moreover, this included the activity to make elephants holding trunks pillows to be handed over to the bedridden patients for hand exercises. The satisfaction survey results for this activity accounted for 93%, thus achieving the defined target.



Based on the appraisal results of activities and communication in good corporate governance throughout 2018, directors, executives and employees were satisfied with the activities, had a better understanding of corporate governance and still requested that they were regularly organized.

Monitoring, Overseeing and Performance Appraisal

The directors will receive a director manual and Code of Conduct upon holding a position. All new employees will receive the Code of Conduct from the Human Resources Division to be signed for acknowledgement and strict compliance. Moreover, the President has required employees at all levels to act in compliance with good corporate governance principles and review their compliance activities. In 2017, the Board intended to promote innovations and application of technologies in working process and therefore approved that the employees

completed an online appraisal form to measure knowledge and understanding of good corporate governance principles and practice guidelines and Code of Conduct for the first year. In 2018, the appraisal form was used to measure satisfaction in communication and public relations. Recommendations and opinions from the employees would be used for improvement of activities and future communication. The average score for online appraisal was 87% which could increasingly measure the understanding and awareness of employees in good corporate governance principles and Code of Conduct. Similarly, the Board also approved that employees at all levels signed an online form for acknowledgement of Code of Conduct.

Results of Compliance with Good Corporate Governance Policy

The Board, executives and employees of EGCO Group has strictly and regularly adhered to the good corporate governance policy. In 2018, no non-compliance situation was found. From that commitment, EGCO then earned assessment results and awards according to good corporate governance principles as follows:

- The Annual General Meeting of Shareholders (AGM) Assessment 2018: EGCO received a full score of 100 from the Thai Investor Association.
- “Excellent” for the Corporate Governance Report of Thai Listed Companies (CGR) Assessment Project: EGCO achieved a score of 95 for the assessment conducted by the Thai Institute of Directors Association (IOD).
- Thailand Sustainability Investment (THSI) 2018 Award or sustainable stocks for 4 consecutive years. EGCO is a listed company with market capitalization of over 100,000 million Baht and outstanding performance on environment, social, and governance (ESG) aspects.
- Selected as 1 of the 45 stocks listed in the “SET THSI” Index as a listed company with sustainable operations, arranged by the Stock Exchange of Thailand
- “ESG 100 Company” certificate from Thaipat Institute for 4 consecutive year as a listed company with outstanding performance in environmental, social and governance operations
- “Recognition” for Sustainability Report Award 2018 from the Thai Listed Companies Association in collaboration with the Securities and Exchange Commission and Thaipat Institute

2. Roles and responsibilities of the Board

2.1 Duties of the Board

All Board members completely understand their duties and responsibilities as well as EGCO's nature of business. They shall perform their duties with honesty, prudence, care and for the utmost benefits of the Company and fairness to all shareholders. Directors shall exercise their independent judgment and devote considerable time in performing their duties in accordance with the Company's good corporate governance principles. Directors also play significant roles in formulating corporate policy, vision and mission by working closely with the management in setting both short-term and long-term strategies and monitoring the implementation of corporate strategies as follows:

- 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, set the remuneration rate, monitor and (if necessary) change the key management personnel as well as inspect the management succession plan
- Review the remuneration rate of directors and senior executives and ensure that the Board nomination process is conducted officially and transparently

- Monitor and resolve conflicts of interest which may incur among the management, directors and shareholders as well as ensuring an independent audit, appropriate internal control system, risk monitoring, financial control and legal compliance
- Monitor the effectiveness of the existing corporate governance working methods and implement changes if necessary
- Monitor the information disclosure and communication processes
- Conduct a self-appraisal on performance annually and declare its duties and responsibilities in the annual report

EGCO has 4 subcommittees with different areas of responsibilities according to their knowledge and expertise to help screen clearer job descriptions. The 4 subcommittees are

1. Audit Committee
2. Investment Committee
3. Nomination and Remuneration Committee
4. Good Governance and Social Responsibility Committee

Nomination, Selection and Termination of Directors

The Board realizes that Board composition contributes to its efficient and effective performance of duties to oversee the Company. Criteria and procedures of nomination of qualified persons have been established to ensure that the appointed directors have qualifications, knowledge, competence, experience, independence and time dedication. The Board has defined qualifications of EGCO's directors as follows:

1. General qualifications
 - 1.1 Not over 72 years of age
 - 1.2 Hold a maximum of 3 directorships in SET listed companies
 - 1.3 Have qualifications required by laws, relevant regulations and the Company's Articles of Association
 - 1.4 Exhibit integrity, responsibility and maturity
 - 1.5 Raise comments and suggestions freely without influence and interference from others
 - 1.6 Dedicate full time in overseeing the Company
2. Specific qualifications, comprising necessary skills beneficial for corporate governance which will enable the Company to fulfill the strategic plan and goals, namely:
 - 2.1 Power, energy, and engineering business
 - 2.2 Accounting, finance, economics and business administration
 - 2.3 Law and political science
 - 2.4 Strategic and business planning
 - 2.5 Corporate governance, internal control and risk management
 - 2.6 Human resource management
 - 2.7 Information technology

The nomination procedures are as follows:

1. The nomination of directors will be based on a list of persons nominated by shareholders as the Company grants shareholders the right to propose director nominees, names of current directors, names of director candidates selected by external consultants and IOD's Director Pool.
2. The Nomination and Remuneration Committee is responsible for screening all director nominees by considering qualifications and skill matrix the Company needs and still lacks of, to support strategies and objectives, and create challenges for the Company's success. The Committee also takes into account diversity of directors in terms of sex, age, knowledge, competence, experience and expertise in necessary areas.
3. The Board will consider the re-selection of directors retiring in rotation based on directors' past performance and appraisal results.
4. The Nomination and Remuneration Committee will propose a name list of all qualified director candidates, whether being directors as representatives of shareholders or independent directors, to the Board for appointment in case of a vacancy from any other reasons than the retirement by rotation and to the shareholders' meeting for appointment in case of completion of term of office.

The Board will review the Board structure and composition on a yearly basis.

The Board, appointed at the AGM, comprises no less than 5 directors and no more than 15 directors. No less than half of the directors must have residence in the Kingdom of Thailand. In case of a vacancy from any other reasons than the end of term, the Board shall select a qualified candidate in the next meeting with three-fourths majority votes of directors remaining in office. At each AGM, one-third of the directors shall retire by rotation. If the total number of directors cannot be evenly divided into 3 parts, the number should be closest to the ratio of one-third. In case any director intends to resign from the Company, he or she must submit a resignation letter which will be effective on the date the Company receives the letter.

In order to vote for the early retirement of any director before the end of term, there shall be no less than four-fifths of the votes of shareholders attending the meeting and entitled to vote.

Tenure and Age Limit

EGCO abides by the Public Limited Company Act B.E. 2535 which prescribes that one-third of the directors shall retire by rotation at the AGM. EGCO also specifies the office term of independent directors to be no more than 2 terms or 6 years to maintain the independence of independent directors from the management and shareholders as in line with the best practices, effective from the 2016 AGM date onwards. A director shall be no older than 72 years on the date of appointment. In case the director has already been 72 years old while in office, he or she can remain in office until the expiry of the term.

In 2018, none of EGCO's independent directors served the Company more than 2 terms or 6 years.

Segregation of Authority and Responsibility

The Board has clearly separated the formulation of a good governance policy, which is the Board's duty, from routine management, which is the duty of the management. A Table of Authority, as approved by the Board, was therefore set as practice guidelines that the Board would not intervene in any routine work or business carried out by the management under the President's responsibility.

Policy and Practice in Holding Directorships in Other Companies for Directors and Executives

The Board places importance on performance efficiency of directors. To allow directors to dedicate full time in governing the Company's businesses, the Board has therefore established a policy to limit the number of other listed companies that a director can hold a position. A non-executive director can serve as a director in no more than 3 other listed companies while an executive director can serve no more than 2 listed companies. Currently, none of the directors hold a position in other listed companies in excess of the required number.

Leadership towards Strategic Plan

The Board is involved in setting corporate vision, mission, strategies as well as goals and short-term and long-term business plans which are revised on a yearly basis. The Board and the management participated in the corporate strategy seminars on July 20, 2018 and August 18, 2018. The management gathered the Board's opinions and recommendations to formulate short-term and long-term strategic plan that best addressed the current situation, current and future business challenges, and the Company's risk management as in line with the Company's vision and mission. The strategic plan was developed based on the Balanced Scorecard which embraced 4 perspectives: Financial Perspective, Customer Perspective, Internal Business Process Perspective and Learning and Growth Perspective. This process would lead to the strategic implementation by means of measurement or assessment which would ensure consistency in the Company and highlight the Company's critical success factors. Action plans were also consistent with key performance factors.

Besides the strategic plan for power business which is EGCO's core business, the Board also added new business opportunities to the strategic plan to increase the Company's competency, and included sustainable management concepts comprising the strategies in human resource management, promotion of innovative ideas, participation in sustainability assessment at an international level and good corporate governance so as to ensure that the Company would achieve sustainable growth and responsibility towards the stakeholders.

For long-term goals, the Company will develop Greenfield projects to drive sustainable progress, expand more businesses overseas especially in the countries where the Company has already had its business base, including the Philippines and the Lao People's Democratic Republic, Indonesia and Australia. The Company will also consider new opportunities to invest in other Asian countries, including Myanmar, Vietnam and India as well as set its goal to develop and invest more in renewable energy power plants by 30% of the total number of EGCO Group's power plants in the next ten years or 2026. The Board has also planned to expand its investments in related energy such as LNG business and utilization of Rayong power plant areas such as development of Rayong power plant areas into industrial estates. The Board strives to strengthen corporate management especially in developing employees' potential and capabilities so that they become skillful and have expertise supporting of business growth to be prepared for becoming an energy company in Asia-Pacific region.

Once the Board has approved the strategic plan, the action plan and key performance indicators, the management prepares budget and manpower as in line with such strategic plan and action plan which will then be submitted to the Board for approval of annual budget and manpower. The management has also reported the progress of implementation of annual action plan as well as corporate KPIs to the Board regularly.

The President has also communicated the Company's strategic plan and goals to all employees on "Communication Day", enabling all employees to acknowledge the Company's operation plan and each division's responsibility leading to effective implementation and goal achievement.

Compliance

EGCO oversees its operations through two responsible units, namely (1) Compliance unit under the Corporate Secretary Division, responsible for overseeing EGCO and the Board's compliance with the Securities and Exchange Law, rules, regulations, and notifications of SET, and (2) Law Division, responsible for overseeing compliance with relevant laws.

Internal Control and Internal Audit

The Board has clearly determined duties, responsibilities and authority of executives and employees in writing. Authority is appropriately segregated to ensure checks and balances and safeguarding of the Company's assets for actual benefits. EGCO also sets a correct and timely financial report system. Moreover, EGCO's Internal Audit Division, with Ms. Sudruedee Lertkasem as Senior Vice President of Internal Control Division and Secretary of the Audit Committee, is responsible for auditing EGCO and its subsidiaries in Thailand and overseas, and providing advice to related units to mitigate operational weaknesses while strengthening preventive auditing practices. The Internal Audit Division reports its performance directly to the Audit Committee that is responsible for approving the internal audit plan, appointing, terminating, appraising the performance of Senior Vice President of Internal Audit Division in order to ensure operational independence, and preparing an Internal Audit Division report.

Additionally, the Audit Committee has continuously supported knowledge enhancement of internal auditors through in-house and outside seminars for an exchange knowledge and experience. EGCO encourages all employees in the Internal Audit Division to attend certification programs organized by the Institute of Internal Auditors of Thailand (IIA) such as Certified Internal Auditor (CIA) and Certified Professional Internal Auditor of Thailand (CPIAT). The employees in the Internal Audit Division attended trainings and seminars as follows:

1. Value Creation and Enhancement for Listed Companies with the New COSO 2017 Enterprise Risk Management (ERM), organized by the Faculty of Commerce and Accountancy, Thammasat University in collaboration with the Stock Exchange of Thailand
2. Application of COSO ERM Framework to create sustainable value added for the organization, the in-house training with the expert lecturer on risk management from the Faculty of Commerce and Accountancy, Thammasat University
3. PwC Thailand Symposium 2018 'Managing Challenges to unleash corporate growth, organized by PricewaterhouseCoopers ABAS Ltd.
4. PwC Forensics Seminar and Procurement Fraud, eDiscovery and Robotic Process Automation (RPA), organized by PricewaterhouseCoopers ABAS Ltd.
5. Minimizing Cyber Risk in Digital Transformation Age, organized by JP Insurance Plc. in collaboration with PricewaterhouseCoopers ABAS Ltd.
6. Catch up with Big Data analytics for business decisions, organized by Kasetsart University
7. Application of technologies as audit tools for efficiency and effectiveness, organized by the Federation of Accounting Professions
8. "Revised IFRS 15: Revenue from Contracts with Customers and IFRS 16: Leases", the in-house training with the expert lecturer from PricewaterhouseCoopers ABAS Ltd.
9. CIA Review, organized by the Federation of Accounting Professions

Appointment and Remuneration of Auditor

The Audit Committee is responsible for selecting, nominating and terminating the Company's independent auditor, as well as determining the audit fee which afterwards have to be finalized and approved in the AGM. In 2018, the Board and the Audit Committee considered that the auditors from PricewaterhouseCoopers ABAS Co., Ltd. ("PwC") performed their duties with professionalism, independence, impartiality, auditing experience especially in power generation business and auditing consistency, and knew all the Group companies very well. PwC also provided good audit services, gave beneficial advice, achieved a satisfactory standard of auditing, and delivered auditing work quickly and punctually. Moreover, PwC, as a well-known audit services provider using international standards on auditing, was widely recognized and had its accounting and auditing offices located in the countries in which EGCO invested in businesses. It was therefore deemed appropriate to appoint PwC as EGCO Group's auditor for the year 2018 and determine the audit fee of 4,341,600 Baht and other actual expenses incurred from the audit performed in Thailand of not exceeding 175,000 Baht. The Company assumed responsibility of actual travel expense payment, incurred from the audit performed in the countries in which the Company invested in businesses, as deemed appropriate. In the 2018 AGM, the meeting mutually approved the appointment and remuneration of auditor as proposed by the Board.

Risk Management

The Board entrusts the Audit Committee to work with the management in reviewing the risk management policy, implementation and guidelines of EGCO Group under corporate goals of satisfactory return, growth and corporate excellence. EGCO regularly presents a risk management report, issues, and recommendations to the Audit Committee at least twice a year and report them to the Board regularly for consideration of the adequacy of risk management system and effectiveness of risk management so that strategies, plans, and management approaches can be adjusted promptly. Recognizing the importance of risk management on EGCO Group's corporate governance, the Board thus approved that risk management and assessment tasks were separated from the Planning Division and establishing a new division, namely Risk Management Division, to monitor risk management operating results throughout the organization in alignment with EGCO Group's policy and guidelines as well as conduct a risk assessment and report the results to related committees pursuant to each committee's responsibility. The Risk Management Division then reports to the Executive Vice President-Asset Management under the supervision of the Senior Vice President-Strategy and Asset Management Group.

EGCO has established a risk management framework as follows:

- A Risk Management Committee comprises EGCO's management with the President as the Committee Chairman. The objectives are to review EGCO Group's risk management policy and monitor its implementation; to closely monitor and assess risk management according to EGCO Group's risk management approaches; and to report the results to the Audit Committee and the Board, respectively. Each power plant also has its own Risk Management Committee to monitor and manage its own risks and to better address the overall policy and business conditions of each power plant.
- Risk management is under the Risk Assessment Division's responsibility to ensure that it efficiently addresses EGCO Group's current business circumstances as well as collaborates with risk owners and presents a risk management report to the Risk Management Committee on a quarterly basis and to the Audit Committee at least twice a year.

- Risk management is embedded into the work process. The Company assesses risks from internal and external factors that may affect goals and risk probability and impact, establishes risk mitigation measures, develops operational plans to manage such risks, and raises awareness of risk management within the organization as part of the corporate culture, enabling all employees to be aware of risk management in their operations.

EGCO Group has adopted the risk management policy and manual as the Company's guidelines since 2001 and reviewed the risk management policy on a regular basis, in accordance with EGCO Group's risk management philosophy to be applied throughout the organization and the COSO Enterprise Risk Management Integrated Framework. Risk management assessment is also included as one of the elements for internal control assessment. The results of the 2018 assessment indicated that EGCO Group appropriately implemented the risk management system. More details can be found in the "Risk Factors" section.

Information Technology Systems

The Board has placed emphasis on information technology systems by requiring the management to conduct a study on the use of information technology in support of EGCO's new businesses in a proper, correct, complete and safe manner. In 2018, the Information Technology Division improved information technology systems for higher operational efficiency as follows:

- Next-Generation Firewall to prevent cyber attacks and threats and information leakage
- Backup System to avoid damages that may arise in case of data damage or loss so that backup data can be promptly restored
- Protect and Control Documents System

Conflicts of Interest

The Board has a policy to avoid conflicts between personal interest and corporate interest, which is prescribed in the good corporate governance principles, to be used as practice guidelines as follows:

- Directors or employees intending to serve as directors or advisors of other companies or organizations shall not have any conflict of interest with the persons' direct responsibility and shall inform the Board before engaging in any organizations.
- Directors shall promptly notify the Board of conflicts of interest (if any) in details and refrain from participating in the discussion or voting on such matter; or shall be absent from the meeting on such agenda; or shall not request documents relating to the meeting; or resign from the Board.
- Directors and executives shall report any changes in their securities holdings to the regulatory agency. The Corporate Secretary is assigned to report the security holdings of directors and executives at the Board meeting. Directors and executives shall also report their own and related persons' interests to the Company. The Corporate Secretary will use the information as reference to monitor and ensure that directors and executives perform their duties with integrity. The Corporate Secretary has to submit a copy of the report to the Chairman of the Board and Chairman of the Audit Committee for acknowledgement.
- Employees shall not borrow money from the Company's business partners, individuals, or juristic persons who have business with the Company, except from the financial institutions, as it may have an impact on the employees' performance as the Company's representatives.

- The steps for entering into a connected transaction as well as clearly disclosing such transaction shall be strictly executed as required by SEC's and SET's notifications. The Corporate Secretary shall verify the type of transaction and the approval authority and then submit the reports to the Audit Committee for acknowledgement.

EGCO also assigns the Audit Committee to consider and provide opinions on connected transactions by considering the appropriateness of transactions and comparing each item with transactions made with other outsiders. The Audit Committee is required to present the information and opinions to the Board and/or shareholders for consideration based on the criteria set by SET and the Capital Market Supervisory Board. The Committee shall ensure that information disclosure is complete to confirm all related parties that the connected transactions are made based on the best benefits of the Company and its shareholders.

Overseeing the Operations of Subsidiaries and Associate Companies

In order to ensure that EGCO Group's holding business operations meet the policy, goals, and appropriate returns for shareholders, the Board has set rules for overseeing subsidiaries and associate companies in writing as guidelines to monitor the Group companies with the following details:

1. Monitor EGCO Group companies' operations through appointed representatives who serve as directors or shareholders of its subsidiaries and associate companies. The appointment of the representatives shall be approved by the Nomination and Remuneration Committee.
2. Specify the duties of EGCO representatives as follows:
 - 2.1 Monitor the preparation of guidelines for the management of subsidiaries or associate companies for scrupulous and efficient operations
 - 2.2 In case of any major events, EGCO Board has the right to approve such matter with the exception of urgent cases which shall be firstly proposed to the Board for acknowledgement
 - 2.3 Propose the following matters to EGCO Board for approval prior to execution
 - Nomination and removal of the President and Senior Executive Vice President
 - Determination of President's remuneration
 - Preparation, improvement or change of important rules
 - Capital increase or decrease
 - Business operations of the Company's new investments
 - Business operations affecting or competing with the business of EGCO or Group companies
 - Expansion of business operations other than core business
 - 2.4 Require the management to report on business performance and major events of the Group companies which are included as an agenda for acknowledgement in the Board meeting.

2.2 Board Meeting

To ensure its responsibility towards the shareholders, the Board has reviewed significant business policies and corporate calendar and come to a mutual agreement to hold a monthly meeting. An extra meeting can be organized if there is any major unplanned event. The Board can authorize

subcommittees to screen or approve the management's activities within the delegated authority. The Board has included business performance report as one of the meeting agenda items for the Board meeting in order that the Board can follow up with the business progress and provide their recommendations in case of any deviation from the approved plan or budget.

The Board sets meeting dates and agenda for the entire year in advance to enable directors to allocate their time to attend all meetings. The Chairman and the President jointly consider and select meeting agenda items while each director can propose an agenda to the Chairman and discuss independently at the meeting. The Board meeting notice is delivered to directors at least 7 days in advance except in an urgent case to preserve the rights or benefits of the Company. All meeting documents with sufficient information will be sent to the directors in advance to allow adequate time to contemplate the information. The agenda is set according to the priority; namely, follow-up matters, matters for consideration and matters for acknowledgement, to optimize the meeting time for the Board. The quorum requires no less than two-thirds of the total number of directors to pass resolutions. However, a director who has a potential conflict of interest shall not receive any related document and shall not take part in any Board discussion on that topic as well as voting on such item.

The Chairman shall allocate adequate time for the management to present matters and for directors to carefully discuss significant issues. The meeting minutes are prepared in writing. After the meeting, the secretary of the meeting shall prepare the Board's resolution and submit to the Board within 3 days to confirm the meeting resolutions. Then the draft minutes of meeting are submitted for the Board's review within 14 days after the meeting and prior to the approval in the next Board meeting. As such, the approved meeting minutes and agenda documents are kept systematically as confidential document at the Corporate Secretary Division in both hard copy form and electronic form in order to be convenient for accessing. It is the directors' responsibility to attend every meeting, unless they have valid reason for their absence. Each director is required to attend at least 75% of Board and subcommittee meetings each year. In 2018, the Board held a total of 12 meetings. Each meeting lasted approximately 3 hours and the attendance rate was around 96.67%.

Since some of EGCO's directors do not reside in Thailand; therefore, the Group has established the policy to allow those directors to attend meetings through teleconference in order that EGCO can benefit from their opinions and recommendations. However, this type of attendance is not considered the meeting quorum and those who attend the meeting via teleconference do not have the right to vote. In 2018, there was no teleconference.

The Board encourages the President to invite Senior Executive Vice Presidents to attend all Board meetings. Other executives are also welcomed to join the meetings to provide insights and additional information on the related agenda item. This, in turn, enables the Board to know each executive better and subsequently can use this useful information for the succession plan. The Board can also request for additional important information from the President, the Corporate Secretary or other executives within the extent of the established policy. The Board and subcommittees can hire independent advisors for the benefits of the business at the Company's expenses. To provide an opportunity for directors to freely discuss and share opinions on various issues which will bring greater benefits to the Company, the Company held a Board meeting without presence of executives at least once a year; this year, such Board meeting held on November 23, 2018. The Board discussed and approved the revision of authority of subcommittees and senior executives as in line with EGCO's strategic plan. The Chairman of the Board communicated the guidelines to the President for acknowledgement and further formulation of strategic plan and operational plan.

In 2018, the Independent Director Committee held one meeting on January 19, 2018 to nominate Ms. Jaruwan Ruangswadipong to the Board for appointment as the Lead Independent Director as well as to propose the Lead Independent Director Charter the Board for consideration. The Board, in its meeting no. 1/2018, approved the matters as proposed by the Independent Director Committee.

2.3 Board Self-Assessment

The Board regularly conducts self-assessments on a yearly basis, allowing all directors to jointly consider their previous year's performance and problems for further improvement of the Board's performance efficiency. The Board approved the self-appraisal form reviewed by the Nomination and Remuneration Committee. In 2018, the Board approved the entire board assessment form by giving more weight to the good governance responsibility. The assessment form covers the performance of each area of the Board's responsibility and fits to the Company's business characteristics and conditions, including Code of Conduct and business ethics of the Company. The assessment forms comprise 3 sets, namely the collective self-appraisal form, the subcommittee appraisal form and the individual self-appraisal form. The following evaluation criteria are calculated in percentage of the total score for each item. The Board self-assessment forms will be sent to the Corporate Secretary to evaluate and conclude a total score. The criteria are as follows:

1. Excellent for the score between 90-100
2. Very Good for the score between 80-89
3. Good for the score between 70-79
4. Moderate for the score below 69

The score results and the Board's recommendations for each category will be implemented for further performance improvement each year.

Collective Self-Appraisal

The collective self-appraisal form comprises 6 topics; namely, (1) Structure and composition of the Board such as the number of directors, the sufficiency of knowledge and experience, the appropriateness of independent directors, the appropriateness of executive directors, and the qualifications of each subcommittee; (2) The Board's roles, duties and responsibilities, including consideration of strategic plan, connected transactions, conflicts of interest, corporate governance policy revision and implementation, Code of Conduct, performance appraisal and remuneration; (3) The Board meetings such as agenda setting and completeness of documents; (4) Director's performance, including regular meeting attendance and participation; (5) The relationship with the management (6) Self-development of directors and executives, including the management's succession plan. The appraisal results showed that the Board performed its duties in compliance with the Company's good corporate governance principles and Code of Conduct, participation in policy, vision and business plan setting and annual budget preparation. The results also confirmed the appropriateness of the structure and composition of the Board. The Board meetings were held with high efficiency, with average score of 92.35% or "Excellent".

Subcommittee Appraisal

The subcommittee appraisal comprises 4 committees, namely the Audit Committee, the Investment Committee, the Nomination and Remuneration Committee and the Corporate Governance and Social Responsibility Committee. Their performance appraisal is a self-appraisal survey conducted in line with the good corporate governance principles and their specific duties and responsibilities of each committee. The appraisal covers 3 areas, namely (1) structure and qualifications of the committee;

(2) committee's performance and efficiency; (3) roles, duties and responsibilities of the committee. From the survey result, it could be concluded that the Investment Committee, the Nomination and Remuneration Committee and the Corporate Governance and Social Responsibility Committee had an appropriate composition and performed their duties as required by the Company's Charter. The details of their scoring were as follows:

- Investment Committee 90.67%
- Nomination and Remuneration Committee 91.65%
- Corporate Governance and Social Responsibility Committee 99.17%

As for the Audit Committee appraisal which is conducted annually, the collective self-appraisal approach has been employed; using the appraisal form for the Audit Committee issued by SEC. The form comprises 2 parts, including (1) the overall performance and (2) the specific tasks. The result of the Audit Committee self-appraisal in 2018 indicated that the composition, qualifications and performance of the Audit Committee were in line with the requirements stated in SET guidelines, international best practices and duties as prescribed in the Audit Committee Charter. The Audit Committee reported the self-appraisal result in 2018 to the Board for acknowledgement in the Board meeting no. 1/2019 on January 24, 2019.

Individual Self-Appraisal

The individual self-appraisal form comprises 3 topics, namely (1) structure and qualifications of the Board, knowledge and experience that match the nature of business; (2) roles, duties and responsibilities of the Board as required by laws and the Company's charter as well as self-development; and (3) Board meeting, including information preparedness during the meeting. The average score of the individual self-appraisal in all areas is 92.68% which is in excellent level. This can be concluded that the directors have appropriate qualifications, deliberately performed their duties and responsibilities in accordance with the directors' best practices, thus resulting in efficient Board meeting.

Use of Appraisal Results for Director Development

From the appraisal results, the Board considered that corporate governance was vital for efficient operations, stakeholders' confidence and sustainable corporate values. In 2018, the Board dedicated more time to review good corporate governance principles and improve EGCO's corporate governance principles and practice guidelines to be in line with rules and regulations of regulatory agencies and criteria for assessment of domestic and overseas corporate governance to uplift EGCO Group's corporate governance standards which could be comparable to international standards and competitive in the ASEAN region as stipulated in the Company's strategic plan.

2.4 Performance Appraisal of the President and Executives

President's performance is collectively appraised by all non-executive directors against the Company's performance results, implementation of policy assigned by the Board and individual's competencies. Factors for consideration include the following:

- Qualitative indicators such as leadership, relationship with the Board, risk management and internal control, human resource management, good corporate governance and Code of Conduct
- Key Performance Indicators (KPIs) against each year's performance and achievements as stipulated in long-term plans
- Capabilities to enhance business development each year

The Nomination and Remuneration Committee is responsible for approving the performance appraisal of the Senior Executive Vice Presidents and Executive Vice Presidents based on their individual achievement against the specified performance indicators.

2.5 Remuneration of Directors and Executives

EGCO has set directors' remuneration at an appropriate rate by considering remuneration criteria based on the Company's performance, assigned responsibility and comparison with other organizations in the same business sector and size. The remuneration comprises 3 parts: fixed remuneration, meeting allowance and bonus which will be given once a year and tied to shareholder's value to the Company. The Nomination and Remuneration Committee is responsible for considering preliminary remuneration scheme to be approved by the Board before proposing to the annual general meeting of shareholders for approval. It is EGCO's policy to disclose each director's remuneration for transparency. Directors who serve as subcommittee members are also entitled to earn extra remuneration to match their increased duties and responsibilities. Executives who sit in the Board and subcommittees are not entitled to any director remuneration.

The Board, comprising all non-executive directors, is responsible for determining the remuneration scheme for the President and approving the Company's remuneration structure. The Board periodically conducts the survey concerning executive remuneration to ensure that its payment rate is competitive and adequate enough to attract and maintain qualified executives.

The remuneration scheme for the President, consisting of monthly remuneration and bonus, will be considered based on the monthly remuneration of executives in the same industry and annual performance appraisal. The President's bonus will be based on the results of KPIs comprising each year's KPIs and KPIs according to long-term goals set in the strategic plan to generate future growth. The President's remuneration scheme is therefore aligned with EGCO's major objectives and goals and both short-term and long-term benefits of the Company.

Details of remuneration of directors and executives are disclosed under "Remuneration of Directors and Executives" in "Management Structure" section.

2.6 Development of Directors and Executives

The Board pays close attention to continuous development of directors and executives to foster their efficiency and effectiveness. Details are as follows:

Orientation: New directors' orientation is arranged and lectured by the President with focus on good corporate governance, anti-corruption policy, Code of Conduct for directors, electrical industry, business characteristics, EGCO Group's businesses, structure and composition of the Board and subcommittees, organizational chart and the management. A director manual is also given to individual director for practice guidelines to provide new directors with good understanding of the Company's business and related regulations. A meeting with executives is arranged to allow new directors to inquire for in-depth information on the Company's business. The Company also encourages new directors to attend related trainings held by IOD and others.

Director Development: The Board has a policy to continuously improve knowledge and capabilities of directors. In 2018, the Company's directors attended trainings and seminars held by IOD and other institutes and shared knowledge among themselves as follows:

- Director Certification Program (DCP) held by IOD, aiming at enabling directors to understand their roles and duties according to the laws and be aware of potential risk issues as well as roles of directors in the risk assessment and risk mitigation planning. Two directors attended this course.

- Independent Director Forum (ID Forum) held by IOD under the topic “Tough boardroom situations-independent directors share lessons learned”, offering independent directors opportunities to share experience in different duties and allowing them to apply ideas coming from such experience or problem-solving techniques to the performance of duties properly. Two directors attended this course.
- Strategic Board Master Class (SBM 5/2018) held by IOD, to enhance directors’ understanding of roles and duties of directors in determining the Company’s strategies and directions and encourage them to implement those strategies effectively. One director attended this course.
- Lecture on CG code update held by PricewaterhouseCoopers ABAS Ltd. (PwC), to enhance directors’ better understanding of the new CG Code 2017 which emphasizes the roles and duties of directors. 8 directors attended this course.
- Lecture on Project Acquisition held by PricewaterhouseCoopers ABAS Ltd. (PwC), to provide an overview of business development activities, relevant transactions in the financial statements and steps for the preparation of project due diligence in terms of finance, account & tax and purchase price allocation principles according to financial reporting standards. 5 directors attended this course.
- Lecture on A Proposed Competitive Valuation Technique for EGCO, A Real Option Approach, given by Prof.Dr. Anya Khanthavit, Independent Director, to share experiences in project value assessment methodology among directors to broaden new perspectives on investment project consideration. 5 directors attended this course.

Executive Development and Succession Plan

The Board ensures that EGCO has implemented executive development programs to improve knowledge and skills for executives to perform their duties more efficiently and to assign appropriate and challenging jobs. The Board determines a policy and criteria in selecting the President and his/her successor in the event of any emergency or the retirement of the President. The selection process is fair and transparent and the candidates will be assessed from their knowledge, competency, experience, ethical values and leadership. The Nomination and Remuneration Committee is responsible for nominating the qualified persons to be the President.

The President is authorized by the Board to select knowledgeable, competent and experienced executives in accordance with the qualifications identified by the Nomination and Remuneration Committee. The appointment of the executives is in compliance with the Company’s regulations on Work Rules 2010 and the resolutions of the Board.

In 2018, the Company executed a succession plan for executives at Executive Vice President level to ascend to positions at Senior Executive Vice President level in different areas in replacement of those who retired and for executives at Senior Vice President level to ascend positions at Executive Vice President level. In addition, the Board entrusted the Nomination and Remuneration Committee to follow up the progress of succession planning. In this regard, the Nomination and Remuneration Committee prescribed that the report on the execution of succession plan shall be set as an annual agenda item.

3. Rights of Shareholders

EGCO values and respects shareholders as well as institutional investors, as the securities investors and the owners of the Company. Therefore, EGCO encourages all shareholders to exercise their

basic rights including the right to share profits, the right to buy, sell or transfer the share, the right to receive adequate Company's information, and the right to attend and vote at the shareholders' meetings for appointment or removal of directors, determination of directors' remuneration, appointment of auditor and determination of audit fee and consideration of other significant issues affecting the Company as well as inquiries and opinions in the shareholders' meetings.

Besides promoting shareholders and institutional investors to exercise such basic rights, EGCO endeavors to ensure equitable treatment to shareholders such as providing updated information via the Company's website in both Thai and English as well as newsletters and shareholders' site visits. It can be assured that EGCO shall not, at any period of time, violate or deprive the shareholders' rights.

3.1 Shareholders' Meeting

The Board considers the Annual General Meeting of Shareholders ("AGM") a very important event. AGM is held within 4 months from the Company's closing date of accounting period to accommodate shareholders' participation in monitoring the Company's performance. An extraordinary general meeting of shareholders can be held by the Board on a case by case basis to consider a special agenda that affects or involves the shareholders' interests and requires the shareholders' approval. In 2018, EGCO's AGM was held on April 19, 2018 at Vibhavadee Ballroom, Centara Grand Hotel at Central Plaza Ladprao, Bangkok. There was no extraordinary general meeting of shareholders during the year. EGCO's AGM was arranged in accordance with AGM Checklist issued by the Thai Investors Association, Listed Companies Association and SEC as follows:

Before the Shareholders' Meeting Date

EGCO provided shareholders with complete meeting documents in advance to support their decision making. Shareholders were encouraged to attend the meeting and EGCO strived to facilitate shareholders' exercise of voting rights, in case they could not attend the meeting as follows:

- Meeting schedule and agenda were distributed via SET portal and EGCO's website on February 23, 2018 before delivering the meeting documents by post, 55 days prior to the AGM date. The record date for the rights to attend the meeting and receive dividends was also detailed in the meeting notice.
- Meeting notice and agenda, in both Thai and English, were sent to shareholders by clearly separating each agenda item as prescribed in Chapter 4 of EGCO's Articles of Association: Shareholders' Meeting. The appointment of directors and consideration of directors' remuneration were under separate agenda items. Each agenda item consisted of background, objective and rationale, Board's opinions, number of votes needed, policy and criteria of determination of remuneration, policy and criteria of director nomination, profiles of nominated directors, details of previous minutes, conditions and procedures of attending the meeting, 3 proxy forms (form A, B and C), as required by the Department of Business Development, Ministry of Commerce and an annual report, which were delivered to shareholders on March 16, 2018, 34 days before the AGM date. Notice and supporting documents were published for 3 consecutive days in 2 Thai and 1 English newspapers to notify shareholders in advance, so that they could have adequate information before attending the meeting. Also, other relevant details were published on EGCO's website before sending hard copies to shareholders in order to allow them to have enough time to review such information. Meeting notices were delivered to shareholders by post 27 days prior to the AGM date. Contact numbers were also provided for further inquiries and for proposing additional information relating to the appointment of directors, as in compliance with the best practice guidelines by SEC and SET.

- To encourage the institutional investors' attendance, the Investor Relations Unit coordinated with the institutional investors on their submission of registration documents to EGCO 7 days in advance for document checking in order to facilitate the administrative procedures on the actual meeting day.
- Providing shareholders with communication channels to forward their inquiries on meeting agenda in advance to cs@egco.com or facsimile number 0 2998 5999 ext. 5020-5025 to ensure the shareholders' utmost benefits and full legal rights.

On the Shareholders' Meeting Date

EGCO strongly encouraged shareholders to exercise their rights by attending and voting at the shareholders' meeting. The meeting was conducted in a transparent, correct, and accountable manner ranging from the registration, vote counting to result announcement, in order not to violate or deprive of the shareholders' rights. Shareholders' inquiries and opinions were welcomed and taken into consideration as follows:

- Directors, executives and external auditors from PricewaterhouseCoopers ABAS (PwC) attended the AGM altogether in order to answer shareholders' questions and acknowledge their opinions. For the AGM 2018, 15 directors including the Chairman and directors attended the meeting which accounted for 100% of the total number of the Board members. The Chairman of the Board, the Chairmen of all subcommittees and the President together with senior executives also attended the meeting and explained details of information regarding agenda items and answered shareholders' questions.
- EGCO identified the names of directors having conflicts of interest in respect to any agenda item in the meeting notice. Those directors were not present in the meeting while any given agenda item was being considered.
- Shareholders and institutional investors' facilitation was EGCO's first priority. The map of the meeting venue was attached to the meeting notice and several registration counters were appropriately and adequately provided for shareholders' convenience.
- Exhibition on EGCO's business was arranged to provide full details of the Company's business operations to shareholders. Shareholders' inquiries were warmly welcomed and clarified by the executives, Investor Relations Unit, Accounting and Finance Unit and Business Development Unit.
- One volunteer shareholder was invited to observe the vote counting process. Representatives from the Thai Investors Association also observed the meeting.
- Shareholders, who registered after the meeting had already started, were allowed to vote for the ongoing and the remaining agenda items.
- The shareholders' meeting was convened according to the sequence of the agenda. Each agenda presentation included the background, supporting rationale and recommendation. The significant information and details were included in the meeting notice delivered to shareholders, without any ad hoc agenda during the meeting.
- Shareholders were equitably treated and were allowed to raise questions and opinions. All questions were addressed and clarified by the Chairman and completely recorded in the minutes of the meeting.
- Baker & McKenzie Co., Ltd. was hired as an inspector to audit shareholders' or their representatives' registration documents, meeting quorum, compliance of the voting and vote counting procedures with the Company's Articles of Association, as well as to inspect shareholders' ballot collection and voting results. In this regard, the inspector reported that the meeting and the voting procedures

were transparent and in compliance with the Company's Articles of Association, relevant laws and SET's best practices of good governance. In addition, the inspector reported that EGCO highly respected the rights of its shareholders to actively participate in the meeting and voice out their opinions as well as efficiently facilitated shareholders in all matters.

- AGM quality assessment questionnaires were disseminated to gather feedbacks for future improvements for the best interests of the Company and its shareholders. The result of the 2018 survey indicated that the shareholders were satisfied with meeting notice, meeting facilitation, and meeting conduct.

For the AGM 2018, there were 503 shareholders attending in person and 1,119 shareholders by proxies, representing 405,066,541 shares which accounted for 76.9408% of the total issued shares.

After the Shareholders' Meeting Date

- After the AGM, EGCO concluded resolutions for each agenda item to shareholders and SET via SET Portal according to SET's criteria of information disclosure. In 2018, meeting resolutions were notified before 9.00 a.m. on April 20, 2018, the day after the AGM.
- EGCO also prepared minutes of the meeting which recorded name list of directors and executives together with their titles, auditors and meeting inspector attending the meeting, voting and vote counting procedures, voting card instructions, the Board's recommendations, inquiries and recommendations of shareholders and clarifications from the management. Details on the number of approvals, disapprovals, abstentions and voided ballots, and resolutions of each agenda item were also included and sent out for shareholders' review on EGCO's website: www.egco.com on May 2, 2018 which occurred within 14 days after the meeting date as required by SET's criteria. Moreover, EGCO disseminated images and sounds recorded in the meeting on its website for absent shareholders' acknowledgement.
- EGCO coordinated with its securities registrar, Thailand Securities Depository Co., Ltd. (TSD), to ensure that shareholders received dividend in a complete and accurate manner.
- Recommendations and opinions raised by the shareholders and inspectors were taken for further consideration and continuous improvement of the AGM.

3.2 Company Visit and Knowledge Enhancement for Shareholders and Investors

Shareholders and investors are invited to visit the Company and meet the executives to enhance their understanding of business and follow up the progress of the Company's business operations. In 2018, company visits were continuously arranged for investors, analysts and investors, of which the details can be found in the Information Disclosure and Transparency section.

4. Equitable Treatment of Shareholders

4.1 Equitable Treatment

The Board regularly takes care of shareholders' interests, treats all shareholders, foreign shareholders, and institutional investors, in a fair and equitable manner, and ensures that shareholders are well informed of EGCO's important decisions as governed by laws or Articles of Association as follows:

- The Board allowed shareholders to propose an agenda item and nominate a qualified director candidate by announcing via SET Portal and on EGCO's website. The criteria and procedures were set clearly, transparently and in line with additional guidelines on the minor shareholders' rights regulated by SET. The shareholders had the rights to propose the qualified director candidate during September 1 - December 31, 2017 (about 8 months prior to the AGM). The minimum share was

fixed at 0.05% of the Company's total shares (equivalent to 263,233 shares as of September 1, 2017). This was applicable for either a sole or combined shareholders, which was lower than SET's recommendation of 5% shareholding. However, in the 2018 AGM, there was neither proposal of AGM agenda item nor proposal of qualified director candidate.

- EGCO preserved the rights of all shareholders and no agenda item would be added at the shareholders' meeting without prior notice to ensure that the shareholders had adequate information ahead of time. Shareholders had the rights to vote according to the number of shares on a "one share one vote" basis and no share had any privilege which overran the rights of other shareholders.
- Ballots were employed in vote counting for all agenda items for transparency and accountability. The appointment of individual director was done by shareholders. Baker & McKenzie Co., Ltd. was invited as an inspector to ensure that the shareholders' meeting 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 through proxy. The 3 proxy forms as introduced by the Department of Business Development, Ministry of Commerce were provided and 3 Company's independent directors who did not have conflicts of interest with the AGM agenda could be alternatively appointed as volunteer proxies. The proxy forms were made available for shareholders on EGCO's website.
- Since most shareholders attending the AGM were Thai, the meeting was, therefore, conducted in Thai. However, in order to facilitate foreign shareholders, EGCO prepared the meeting notice and supporting documents in both Thai and English versions. English interpreters were also available in the meeting room.
- Minutes of the meeting were disseminated via SET Portal and the Company's website within 14 days from the meeting date to allow shareholders for revision.
- The Board realized that some shareholders could not access the minutes of the meeting on SET Portal or EGCO's website; therefore, a hard copy of the minutes of the 2018 AGM was mailed to each shareholder for revision.

4.2 Prevention of Improper Use of Internal Information

EGCO has strictly established guidelines on prevention of improper use of internal information in the Code of Conduct and good corporate governance principles in writing for directors and employees in order to prevent an improper use of internal information to illegally benefit oneself or others or cause any damages to shareholders. An internal control system has been established to prevent information leakage to the public before it is officially announced. Such measure and control system 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 in accordance with related rules and regulations. An employee performing insider trading for oneself or for other family member is considered a breach 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 SET, SEC, and relevant laws, and equally disclose information to the shareholders and/or the public.
- Directors and employees shall not make improper use of information acquired by virtue of the directors' and employees' position or cause damage to the Company.
- Matters such as trade secrets or any sensitive business information shall not be disclosed to any outsiders.
- Directors and employees who possess the internal information relating to financial statements shall refrain from their own security trading within 45 days before and 24 hours after the information

disclosure. As for other significant information, they shall refrain from stock trading from the day of acknowledgement and 24 hours after disclosing information to SET. The Corporate Secretary will be responsible for sending emails to remind the directors, executives and related employees of the period prohibiting stock trading before every fiscal budget announcement.

- Directors or senior executives together with spouses and minor children who wish to trade the Company's stock shall inform the Corporate Secretary at least one day prior to the trading.
- Information disclosure to the public that will affect the business as well as EGCO's stock price must be approved by the President. The President or the assigned person will be solely authorized to disclose such information.
- 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 while the unit owning such information will be responsible for providing necessary fact sheets.

4.3 Prevention of Conflicts of Interest

EGCO has set the guidelines on disclosure of directors' and management's interests to ensure transparency and prevent conflicts of interest as follows:

- Directors shall promptly notify the Company when they or their family members are involved with or hold shares in any entity which may incur benefits or conflicts of interest with EGCO; acquire direct or indirect interests in any contract made with the Company or hold shares of the Company or any of its affiliates. Directors and executives with potential conflicts of interest shall refrain from discussing or voting on such agenda.
- Directors and executives shall report their security holding on a regular basis at every Board's meeting. In the meeting agenda, it shall be stated that directors and executives, including their spouses and minor children, as well as related parties under section 258 of the Securities and Exchange Act B.E. 2535, have the responsibility to prepare and disclose any changes arising from purchase, sale, transfer or acceptance of transfer of securities to SEC within 3 days from the day of purchase/sale of securities.

Moreover, the Board, in its meeting no. 9/2018, acknowledged the new criteria of SEC pursuant to the Notification No. SorJor 28/2018 Re: Preparation of Report on Changes to the Securities and Derivatives Holding of Director, Executive, Auditor, Plan Preparer and Plan Administrator, effective from August 15, 2018.

- Directors and senior executives shall prepare a report on their interests, including that of any related parties to comply with the notification of the Capital Market Supervisory Board No. Tor Jor 2/2552, effective from July 1, 2009 which indicates that directors and senior executives shall submit the quarterly report on interests in EGCO's business. In case there are any changes in the interests during the quarter, the Corporate Secretary shall be informed promptly. In addition, the Corporate Secretary shall submit a copy of such report to the Chairman of the Board and the Chairman of the Audit Committee within 7 working days after getting such report. In 2018, all directors and senior executives prepared the report on their interests and informed the Chairman of the Board and the Chairman of the Audit Committee for their acknowledgement.

5. Role of Stakeholders

5.1 Rights of Stakeholders

Besides the rights of shareholders, the Board also takes great care of the rights of all groups of stakeholders and gives priority to issues that affect its business both internally and externally as well as corporate social and environmental responsibility. Therefore, the Board has clearly established

guidelines to respond to the requirements of each group of stakeholder in EGCO's good corporate governance policy and Code of Conduct to be abided by directors, management and employees. Details of the policy and Code of Conduct is concluded in "Corporate Governance" section. The treatment of employees and stakeholders is disclosed in the Sustainability Report.

Employees

EGCO has formulated an employee policy with focus on recruitment and selection of employees which shall proceed through the recruitment and selection processes according to the employment policy which offers opportunities to all interested persons who possess knowledge, expertise and potential appropriate for their job positions and especially good attitudes towards the surrounding people, duties and responsibilities and the Company. The employees will act like "givers" who willingly help others and make contributions to the public. Once the organization is filled with smart and good people, they will then advance the organization with cordiality and goodwill. EGCO has also supported employment of local people to promote job creation and revenue generation in the communities in which EGCO operates its business. Since 2017, EGCO has supported the implementation of projects for the disabled in the provinces where power plants are located to replace payments of fund contributions. With respect to employee care, EGCO assures a safe working environment and appropriate and fair remuneration and welfare. EGCO supports its people to continuously enhance knowledge and capabilities through trainings. To live in harmony with the surrounding communities, Employees are encouraged to participate in community and social development activities such as taking part in projects for the communities surrounding the Company and power plants in which EGCO operates its business. Activities between employees and executives are organized to foster good relationship which will further lead to a happy workplace. EGCO has developed a communication plan called "HR Communication" to correctly and clearly communicate welfare, benefits, performance assessment, career path, etc. to the employees. With the Company's employee caring, in 2018, there was no dispute or lawsuit between EGCO and employees. Also, there was no accident that caused work absence in all subsidiaries.

Customers

In 2018, there was no dispute or lawsuit between EGCO or its subsidiaries and the customers. As for the power generating business, EGCO Group could generate the contracted electricity with higher Equivalent Availability Factors (EAF) than that prescribed in the Power Purchase Agreement (PPA) and customers were satisfied with EGCO Group's operations of power plants. For the maintenance business, EGCO Group's service was rated "excellent" with the average score of 96.15 from the customer's satisfaction survey.

Creditors

EGCO has fairly, responsibly and transparently treated all its creditors by strongly complying with all of the loan provisions and correctly disclosing Company's true financial status. In case that there is any suspected event to affect its creditors, the Company will take immediate action to prevent and correct the matter.

In 2018, EGCO and its subsidiaries fully complied with all the loan provisions and never failed to meet payment terms.

Suppliers and Contractors

EGCO is committed to operating sustainable business by adhering to good corporate governance principles to ensure equality, fairness, strict compliance with contracts or conditions as agreed, efficient, transparent, and accountable management system, and non-involvement in all forms of

corruption by following the anti-corruption policy alongside responsibility towards the community, society, environment and all stakeholders.

EGCO has developed a “Code of Conduct for EGCO’s suppliers and contractors” which serves as a basis for screening and monitoring suppliers and contractors to ensure that they conduct their business based on good corporate governance principles and give priority to fair treatment of labor and respect for human rights. In 2018, EGCO organized a supplier and contractor relationship activity to exchange knowledge on good corporate governance principles and to inform suppliers and contractors of its commitment to operating sustainable business by holding to good corporate governance principles. This is to ensure fair business management and efficient and transparent management system, and promote its suppliers and contractors to conduct business in an ethical manner in terms of anti-corruption, corporate social responsibility, human rights, and occupational health and safety as well as taking into account sustainable impacts on the environment. Suppliers and contractors are required to sign the Code of Conduct during the procurement process. In 2018, there was no dispute or lawsuit between EGCO or its subsidiaries and the suppliers and contractors.

Competitors

EGCO conducts its business ethically on a transparent, accountable and corruption-free basis. The Company does not employ an inappropriate approach to gain confidential information of its competitors such as offering a bribe to the competitors’ employees and attacking competitors’ reputation with false allegations.

In 2018, there was neither dispute nor lawsuit between EGCO or its subsidiaries and the competitors.

Community and Society

EGCO Group operates its business with strong commitment to the community and society, especially in which the Company is located. As stated in the Company’s mission to become a good and caring citizen, it is therefore the duties and responsibilities of all executives and employees to disclose truthful and up-to-date information, create a benevolent working environment with respect to local norms, traditions, and culture as well as participating in improving good quality of life to make a local community and society a pleasant place to live. This will eventually lead to sustainable development of the society at large. Since its establishment, EGCO has continuously executed various community and social contribution projects and activities which can be categorized in 3 main areas; namely the development of the quality of life for local communities surrounding power plants, the promotion of energy and environment, and the watershed conservation. There were 89 community and 1 social contribution projects. EGCO has also launched a quarterly newsletter “Sukjai” as one of the communication channels to strengthen good relationship with the communities surrounding its power plants as well as continuously supported the operation of Thai Rak Pa Foundation which was established to promote the sustainable watershed conservation conducted in collaboration with alliance networks from all sectors. In 2018, Thai Rak Pa Foundation continuously pursued watershed conservation and restoration tasks in 3 areas. In the northern part of the country, Thai Rak Pa Foundation supported the conservation of approximately 72,000 rai of watershed forests of communities living in Doi Inthanon National Park, Chiang Mai Province and encouraged people living in Mae Cham District, Chiang Mai Province to join the forestation and income generation project by reducing the use of 605 rai of areas for single croppings. In the southern part of the country, EGCO supported the conservation of 30,000 rai of watershed forests of communities living in Khao Luang National Park, Nakhon Sri Thammarat Province. In the northeastern part of the country, EGCO carried out a project of 320-rai Lam Pa Thao watershed forest restoration in Chaiyaphum Province.

In 2018, there was neither dispute nor lawsuit between EGCO or its subsidiaries and people in the communities surrounding power plants and NGOs.

5.2 Observation of Human Rights

The Company requires that its directors, executives and employees fully respect for human rights, laws and traditional and cultural differences as follows:

- The Company treats all employees with respect and honor. It provides communication channels for employees to submit work-related inquiries, recommendations and complaints which will be seriously considered. The solution to the problem will then be given in order to benefit and promote pleasant working relations among all concerned parties.
- The Company encourages all employees to exercise their rights of citizenship in accordance with the constitution and relevant laws.
- Employees' personal information shall be kept confidential. Disclosure or transfer of personal information such as employees' biodata, health record, working experience, etc. without the permission of such employee is considered a violation of the Code of Conduct and may result in disciplinary action except when it is done in accordance with the Company's regulations or legal requirements.
- The Company does not support the violation of human rights and any frauds.
- Employees must refrain from any deliberate discrimination or harassment in word or action against others on the basis of race, gender, religion, age and physical or mental disability.

In addition, EGCO Group has defined clear guidelines for staff employment both for the Company and its business partners to strictly conform to the Labor Act of Prohibition of Child Labor or Abusive Hiring. Also, the working process and environment are carefully designed to give priority on safety and occupational health issues. In the previous year, there was neither report nor complaint on the violation of human rights.

EGCO has established a Welfare Committee to accept opinions and recommendations that are beneficial and necessary for the current situation. Such opinions and recommendations are implemented for further improvements of employees' benefits and welfare.

5.3 Intellectual Property or Copyright

EGCO has a policy to comply with the laws on intellectual property or copyright. Careful checking is required before using the work or information that belongs to the third party so as to prevent the violation of intellectual property of others. Moreover, the Company has set practice guidelines for using personal computers and Company's notebooks and desktop computers. Employees must comply with copyright law to prevent violation of intellectual property and apply only software permitted by the Company. Also, they must not download or upload prohibited software via the Internet. The Information Technology Division, which is responsible for maintaining information technology, has required employees to sign a policy and procedure acknowledgement form every time new computers are installed.

5.4 Anti-corruption

The Board places importance on good corporate governance within the management framework of ethics, transparency and accountability. The control, audit and prevention processes of all direct and indirect forms of corruption are in place. Additionally, the Anti-corruption Measures Manual is established as guidelines for EGCO Group and also published to outsiders.

In 2018, the Board focused on fostering mutual cooperation within EGCO Group to conduct business without corruption. The Board therefore established an Anti-corruption Committee of EGCO Group, comprising representatives from EGCO and Group companies to implement the Board's policy into practice, communicate and raise consciousness, and foster mutual cooperation among the Group companies to conduct business without corruption. The Board also encouraged and supported its subsidiaries to apply for membership of the Collective Action Coalition Against Corruption ("CAC"). This year, Khanom Electricity Generating Co., Ltd., a subsidiary of EGCO Group, applied for membership of CAC and was certified for the CAC membership on May 17, 2018.

EGCO went through the assessment process to renew its CAC membership in June 2018. The CAC Committee required EGCO to improve the information on corruption risk assessment and internal control measures. Such information was already improved and is in the consideration process of the Committee. The assessment results are expected within the first quarter of 2019.

Communication and Implementation of Anti-corruption Policy and Measures

1. The Corporate Secretary Division disseminated articles related to anti-corruption policy and practice guidelines to the employees via wire broadcasting on the last Friday of each month. The articles were stored on the Company's Intranet for retrievability.
2. CG talk, CG Roadshow and CG Day were arranged for the employees at Headquarters and those in the Group companies to articulate the anti-corruption policy and practice guidelines.
3. The Anti-corruption Working Committee, comprising representatives from different agencies and subsidiaries, jointly analyzed and assessed the causes and chances of risks that may lead to corruption in the Group companies' business processes as well as established measures against corruption. Such risk assessment was then submitted to the Corporate Governance and Social Responsibility Committee and the Audit Committee to ensure that EGCO and Group companies had in place systematic and effective anti-corruption measures.

Trainings

1. EGCO Group's executives and employees joined "Anti-corruption Day 2018" under the concept of "Thai People's Awareness Against Corruption", organized by the Anti-corruption Organization of Thailand, and attended the seminar on "Thai People's Awareness Against Corruption" given by professional speakers from different agencies at Pirach Hall, BITEC Phase 2, Bangkok International Trade & Exhibition Centre (BITEC).
2. Two participants, comprising 1 director and 1 operator, attended the course on Responsibility and Practice Guidelines of Private Organizations in the Fight Against Corruption, organized by the Faculty of Law, Chulalongkorn University, for a total of 16 hours.



Whistleblowing

EGCO has made available channels for whistleblowers, including employees and other stakeholders, to report on any suspected violation of law or Code of Conduct or fraudulent behavior or wrongful conduct of a person in the organization. A mechanism for the protection of whistleblowers and accused persons is also put in place. To ensure whistleblower's trust, information obtained from

whistleblowers will be kept confidential and known only among responsible parties. The complaint matters are as follows:

- Wrongful act against relevant laws, rules or regulations and business ethics
- Corruption and bribery
- Suspected actions that may involve money laundering, wrongful actions related to accounting, finance, control and auditing

Whistleblowing channels and procedures: The whistleblower can report via 2 channels:

- Channel 1: by email to one of the following committees:
 - The Audit Committee at auditcommittee@egco.com
 - The Good Governance Working Committee at GoodGovernance@egco.com
 - The Board of Directors at directors@egco.com
- Channel 2: by post addressing one of the committees at the following address:

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

EGCO has set whistleblowing process, protection of whistleblowers and those being accused, penalty consideration and clue reporting, and clearly published such details in the Anti-corruption Measures Manual.

In 2018, the Board received 1 complaint letter. The Chairman of the Board assigned the Audit Committee to examine and investigate such complaint according to the processes and methods. Based on the investigation, it was found that such matter related to non-compliance with rules which did not fall within the scope of wrongful acts against business ethics and anti-corruption policy and there were no significant damage value affecting the Company's operations. The Company already took disciplinary action against the wrongdoer.

Monitoring, Reviewing and Assessment

The Anti-Corruption Working Committee is responsible for monitoring, reviewing and assessing risks on a yearly basis. When new risks are identified, the Working Committee shall prepare a prevention plan and guidelines to control such risks and report to the Audit Committee who is responsible for overseeing the implementation of anti-corruption measures and reviewing measures and related internal control activities. Moreover, the Internal Audit Division is responsible for reporting wrongdoings or violations of the Company's Code of Conduct to the Audit Committee on a quarterly basis. The Audit Committee then reports such matter to the Board through the Audit Committee's report which is included in the agenda of the Board Meeting at all times.

Anti-corruption Plan in 2019

EGCO still has a policy to promote EGCO Group companies to be certified as members of CAC. The policy is communicated to EGCO's subsidiaries by its representatives holding director and management positions in the Group companies. EGCO has also set goals to have all of its subsidiaries certified as CAC's members. In addition, to raise anti-corruption awareness of employees in the Group companies, EGCO has a plan to enhance their anti-corruption knowledge via an e-learning system in which the employees' levels of understanding will be assessed.

5.5 Social and Environmental Responsibility

As Thailand's first large private power producer, EGCO is committed to driving its business progress and sustainability. EGCO has not only carefully operated its business to support sustainable corporate growth, but also realized that environmental and social sustainability is the key to success. It has clearly set in its vision and mission the commitment to social responsibility as part of its role and responsibilities as the good corporate citizen. It will select power generating technology that effectively controls possible impacts on the environment and society arising from climate change and global warming; and strictly comply with laws and standards related to the environment in order to control pollution and waste, fairly treat stakeholders, and be involved in social development activities in the communities surrounding the power plants and operate business with good governance to ensure efficient, fair, transparent and accountable operations. Such measures will not only enhance confidence among shareholders, stakeholders and all concerned parties, but also promote sustainable growth and increase long-term competitiveness. EGCO has reported the details of progress of social and environmental responsibility activities in the "Responsibility towards the Community and Society and the Responsibility towards the Environment" sections of the sustainability report.

5.6 Communication Channels

All stakeholders can raise their opinions, recommendations and other concerns non-related to anti-corruption to EGCO via the following channels:

Channels	Electronic mails	Telephone numbers
Board of Directors	directors@egco.com	-
Audit Committee	auditcommittee@egco.com	-
Corporate Secretary	cs@egco.com	0 2998 5020-6
Corporate Communications Division	corp_com@egco.com	0 2998 5130-7
Investor Relations Unit	ir@egco.com	0 2998 5150 - 5153

The mailing address is Electricity Generating Public Company Limited, EGCO Tower, 222, Vibhavadi Rangsit Road, Tungsonghong, Laksi, Bangkok 10210.

The Corporate Secretary is responsible for receiving documents sent to the Board and then forwarding them to relevant committees or directors. Issues and recommendations will be summarized and submitted to the Board on a quarterly basis, except for documents addressing the Audit Committee which will be directly forwarded to the Audit Committee without screening. Electronic mails sent to auditcommittee@egco.com can be accessed solely by the Audit Committee.

6. Information Disclosure and Transparency

In 2018, the Board reviewed and improved the information disclosure policy and practice guidelines. It viewed that the information disclosure policy and practice guidelines, which were revised in 2017, were proper and aligned with rules and regulations of regulatory agencies, SEC's good corporate governance principles and revised criteria for assessment of good corporate governance as well as accommodated changing circumstances and corresponded to the roles of communication technologies and online media. The information disclosure policy and practice guidelines cover written information prepared in both Thai and English and non-written information and communication methods used by EGCO such as meetings, conference calls, interviews and all communication channels including online media like websites and Facebook.

6.1 Practice Guidelines for Information Disclosure and Confidentiality of Different Types of Information, including:

1. Disclosure of Material Non-Public Information
2. Disclosure of Forward Looking Information
3. Disclosure of Material Public Information
4. Disclosure of Non-Material Information
5. Disclosure of Information Affecting Business or Competition
6. Disclosure of Irregular Information such as rumour and data leakage
7. Disclosure of Information via Online Social Networks

6.2 Information Disclosure Channels

EGCO constantly updates significant information via the following channels:

- Regulatory agencies: SET's website (www.set.or.th) and SEC's website (www.sec.or.th)
- Shareholders, individual investors, securities analysts and institutional investors
 - Press Conference to investors and analysts
 - Road Show
 - Company visit
 - Delivery of meeting notice by post
- Mass media: PR news, newspaper, advertising media, journals and television
- Online media
- Annual report and Form 56-1
- Management Discussion and Analysis
- EGCO's website at www.egco.com

6.3 Responsible Units and Persons for Information Disclosure

- Responsible units for information disclosure
 - Corporate Secretary Division : To SEC, SET, and major shareholders
 - Investor Relations Unit : To minor shareholders, securities analysts, institutional investors and individual Investors
 - Corporate Communication Division : To media, NGOs and general public
- Responsible Persons for Information Disclosure
 - President
 - Senior Executive Vice President, Accounting and Finance Group
 - Senior executives assigned by the President

6.4 Information Disclosure of Concerned Units

In 2018, EGCO continuously and regularly communicated information and activities under the communication plan as in line with EGCO's strategies and business directions and took into account the quality of disclosed information via different units as follows:

Investor Relations Unit

The Investors Relations Unit is responsible for equally and fairly communicating to all institutional investors, shareholders as well as analysts and consistently sets its annual investor relations plan. Considering that equitable treatment of shareholders is very important, EGCO has provided information with duly care to ensure that all stakeholders equally receive the information. The quiet period, when no information or answer to questions related to performance forecast is given to analysts and investors, is 14 days before releasing the financial statements. In case earnings preview is arranged before disclosure of financial statements, EGCO will get it completed before the quiet period.

To ensure adherence to Principle 7: Ensure Disclosure and Financial Integrity of SEC's CG Code, the Board assigned the Investor Relations Unit to develop a Code of Conduct for EGCO's Investor Relations Practitioners as a framework and practice guidelines for investor relations practitioners. Significant issues were as follows:

1. Disclosure of significant and necessary information in a correct, 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

EGCO also emphasizes information disclosure via investor relations activities. The executives have participated in the activities by presenting information and meeting with investors in order to create a good understanding towards the Company's management, foster good relationship with investors as well as encouraging continuous exchange of opinions. The main activities in 2018 were as follows:

Activities	Number of Activities
Quarterly analyst meeting	4
Shareholders and investors' visit to Ban Pong Cogeneration Power Plant	2
Analysts and institutional investors' visit to Quezon and San Buenaventura (under construction) Thermal Power Plants	1
National and international seminars and meetings with investors and securities analysts	12
Communication via emails and phones	4 times per day
Preparation of "Life" quarterly newsletter as a channel to communicate with shareholders on the company's significant activity and performance	4

In this regard, activities for investors and shareholders are stated in the 2018 Highlight Performance: Activities for Shareholders and Investors section.

Corporate Communications Division

The Corporate Communications Division is responsible for communicating the Company's movements, activities and cooperation with other organizations to all media and the public. Major events in 2018 included 2 sessions of press conference on its operating results, business direction and progress on projects, 1 sessions of press interview and meeting with senior executives, 1 activity on environmental conservation for the media, and 29 pieces of published public relations news and articles.

Corporate Secretary Division

The Corporate Secretary Division is responsible for disclosing information as required by SET and SEC in a correct, complete and transparent manner and proceeded through procedures. In 2018, 17 notifications were submitted to SET.

EGCO ensures that the information appeared on the website is always correct, complete and up-to-date. Efficiency of information disclosure is assessed by questionnaires every time the meetings with shareholders, investors, and analysts are held as guidelines for improvement of efficiency of information disclosure and investor relations affairs. In addition, EGCO delivers a feedback form on annual report together with the annual report and notice of the shareholders' annual general meeting to inquire about the quality of annual reporting, additional documents needed and questions to be answered by directors and executives in the next shareholders' annual general meeting. In this regard, the Company receives positive feedback from shareholders.

6.5 Financial Statement Preparation

EGCO is responsible for preparing financial reports that are accurate, complete and transparent and protecting the Company's assets against loss or utilization of unauthorized persons, and preventing corruption and unusual operations to be in line with Thailand's generally accepted accounting standards and relevant laws and regulations as well as enhancing stakeholders' confidence in financial reports. The Board has then assigned the Audit Committee to oversee preparation of EGCO's financial reports which must be correct, complete and in compliance with relevant laws and notifications, and regular implementation of appropriate accounting policy. The Audit Committee requires a meeting with the auditor, without the presence of the management, at least once a year to inquire and seek opinions from the auditor on matters related to financial reports. The Board also prepares a report on the Board's responsibility towards the financial reports which covers significant matters 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 2018, EGCO appointed auditors from the PricewaterhouseCoopers ABAS Ltd., who were professional experts with independence and impartiality, and experience in accounting audit, as the Company's auditor to enhance confidence among the Board and shareholders that the Company's financial reports reflected true, correct and reliable financial status and business performance in all aspects.

EGCO also prepares a Management Discussion and Analysis to provide analytic information on the Company's financial status, business performance and major changes to investors and securities analysts on a quarterly basis. 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 the financial statements and the auditor's report) which is included in the Company's annual report to ensure that the materiality appeared in other information and financial statements, and knowledge gained from the auditing of auditors does not significantly contradict the facts. Then, the financial reports prepared by the management, the report of the Board's responsibilities for the financial reports, and the auditor's report are correct, reliable and consistent.

It should be noted that EGCO has never been demanded by SEC to restate the financial statements. In addition, the Company has disclosed quarterly and annual financial statements to shareholders and investors before the due date.

Audit Committee's Report

The Audit Committee of EGCO consists of independent directors who are knowledgeable and experienced in law, accounting and finance, management and energy business as follows.

- | | |
|------------------------------|----------|
| 1. Ms. Jaruan Ruangswadipong | Chairman |
| 2. Prof.Dr. Anya Khanthavit | Member |
| 3. Mr. Paisan Mahapunnaporn | Member |

The Audit Committee has performed its duties assigned by the Board, as prescribed in the Audit Committee Charter which aligned with the regulations of the Stock Exchange of Thailand (SET) regarding Audit Committee's Qualification and Scope of Duties and Responsibilities B.E. 2558 and regularly reported the committee's meeting resolutions to the Board of Directors.

In 2018, the Audit Committee held 14 meetings with all Committee members attended.

In carrying out its duties, the Audit Committee had expressed the opinions that;

1. EGCO's financial reports were accurate, complete, and reliable.
2. EGCO's internal control systems were appropriate and adequate.
3. EGCO had fully complied with the Securities and Exchange Acts, SET regulations as well as other governing laws.
4. EGCO's auditors were qualified, knowledgeable and independent.
5. Information disclosure of the connected transactions or any conflict of interest was accurate and adequate.
6. In performing its assigned duties, the Audit Committee viewed that its composition, qualifications, and responsibilities aligned with the Audit Committee's Charter.
7. EGCO corporate governance is well in place and the whistleblower system has been set up to include the communication channels for shareholders and employees to directly access to the Audit Committee to report complaints or suspects in financial reports or internal control systems.

Summary of the Audit Committee's Activities in 2018:

Review of financial statements

- Reviewed the quarterly and annual financial statements for 2018 with the external auditors and the Management. The Audit Committee also asked the auditors about the accuracy and completeness of the financial statements and significant adjustments which affected the financial statements to ensure that the financial statements complied with the generally accepted accounting principles and that the information disclosed in the financial statements was adequate, accurate, reliable, and complied with governing laws and regulations.

- Reviewed the Management Discussion and Analysis (MD&A) with the Management to ensure its accuracy, completeness, adequacy and that the disclosed information benefitted the investment decision of the shareholders and investors.
- Held exclusive meetings with the external auditors in the absence of the Management to ensure their independence.
- Considered non-audit services performed by the group companies' audit firm for EGCO and subsidiaries that such services were not significant to potentially influence the independence of the auditor.

Review of the internal control systems

In the Board's meeting no. 1/2019 on January 24, 2019, the Board considered and assessed the sufficiency of internal control based on the result of the internal control assessment by the Management by using the internal control assessment form which was aligned with SEC's guidelines and reviewed by the Audit Committee. The Board agreed with the Audit Committee that

1. The internal control system of EGCO was considered appropriate and adequate. Sufficient personnel were assigned to uphold the internal control system and that the internal control system was properly set to monitor the subsidiaries' operations in order to safeguard EGCO's and subsidiaries' assets from misuse or unauthorized use by the Directors, the Management or employees.
2. In the previous year, the Board and the Audit Committee received report from the external auditor that there was no any significant deficiency in internal control systems.

Oversight of Internal Audit

- Approved the scope of work and annual audit plan.
- Reviewed the internal audit report of the Internal Audit Division, which was directly reported to the Audit Committee.
- Reviewed budget, manpower, the professional development of internal auditors, KPI and performance assessment of Chief Internal Auditor as well.

Compliance Review

Reviewed with the Management to ensure that EGCO's activities were conducted in compliance with the Securities and Exchange Acts, SET Regulations as well as other governing laws. It also acknowledged the representation statements of the employees, management and the President for the year 2018 that their respective tasks and duties well complied with the governing laws.

Review of Connected Transactions

Considered the connected transactions or any transactions that may cause conflicts of interest to comply with rules and regulations of SET and that such transactions were reasonable, best beneficial to EGCO and approved by authorized persons having no interest in such transactions. In 2018 there were no related transactions which required the endorsement of the Audit Committee prior to the approval of the Board and the Shareholders.

Review of Risk Management

The Audit Committee reviewed with the Management the risk management policy, execution and risk management guidelines. Also the committee recommended the alignment of the risk management plan with the strategic plan in presenting to the Board of Directors.

Review of Good Corporate Governance

- Further enhanced EGCO's good corporate governance practices and considered whistleblower related to fraud or corruption such as providing the channel for employees and shareholders to direct their complaints, reports on suspected violation of laws and Code of Conduct and questions about the financial statements and internal control systems by email to the Audit Committee via auditcommittee@egco.com. Whistleblower system was also set up to include the whistleblower's protection measures and to treat all complaints with the appellant and confidentiality protections.
- Considered and acknowledged the compliance statement on Code of Conduct of EGCO employees. The representation process and the content of the statement ensured that EGCO's compliance with Code of conduct and relevant laws were well regarded.

Audit Committee's Self Assessment

Conducted its annual self assessment using the Audit Committee's self assessment form which aligned with SET's guidelines. The 2018 assessment which resulted that composition, qualifications, and performance of the Audit Committee well aligned with the Audit Committee Charter and the SET's guidelines, were reported to the Board.

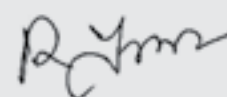
Review of the Audit Committee Charter

The Audit Committee, in its meeting no. 12/2018 on November 12, 2018 reviewed and endorsed the Audit Committee Charter. Such review aimed to ensure that its assigned duties were achieved and that its duties and responsibilities aligned with international and SET best practice and appropriated for EGCO's business.

Appointment of the external auditors

The Audit Committee in its Meeting No. 11/2012 on September 11, 2012 decided and resolved that from 2013 onward, the selection of EGCO's auditor by comparing the qualifications and audit fees among the leading audit firms would be conducted every 3 years. In 2019, the selection of EGCO Group's auditors was due according to the resolution of the Committee and through the selection of the procurement committee due to its qualifications and competitive fees. Pricewaterhouse Coopers ABAS Ltd., was selected to be EGCO group's auditors in 2019.

The Audit Committee reviewed the result of the auditors' selection and auditors' past performance and opined that auditors from the audit firm, Pricewaterhouse Coopers ABAS Ltd., performed their duties independently and satisfactorily, well qualified with extensive experiences and would therefore propose the appointment of Ms. Amornrat Pearmpoonvatanasuk Certified Public Accountant (Thailand) No. as 4599, Mr. Vichien Khingmontri Certified Public Accountant (Thailand) No. 3977, Mr. Boonrueng Lerdwiseswit Certified Public Accountant (Thailand) No. 6552 were proposed as 2019 EGCO's auditors to the Board of Directors, to be further submitted for the shareholders' approval.



Ms. Jaruwan Ruangswadipong
Chairman of the Audit Committee

Investment Committee's Report

As of December 31, 2018, the Investment Committee consisted of 5 directors appointed by the Board of Directors, namely Mr. Witoon Kulcharoenwirat as Chairman, Mr. Nikul Silasuwan,

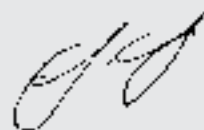
Mr. Yoichiro Matsumoto, Mr. Takao Onuki and Mr. Jakgrich Pibulpairoj, President. All of them had expertise and experience in power and energy business and management both domestically and internationally. The Senior Vice President of the Corporate Secretary Division was assigned to serve as the Secretary to the Committee.

In 2018, the Investment Committee held 11 meetings to consider significant issues assigned by the Board of Directors as shown in the Investment Committee Charter. The meeting results were regularly reported to the Board of Directors for acknowledgement which can be summarized as follows:

1. The Committee considered investments in both domestic and international power projects and proper sources of funds by taking into account the alignment between the strategic plans and reasonable returns. In 2018, the Committee considered and approved the investment of a 49% ownership in Paju Energy Service Co., Ltd. ("Paju ES"), a subsidiary of SK E&S Co., Ltd. ("SK E&S"). Paju ES operates the Paju Power Plant, a combined cycle gas-fired power facility with an installed capacity of 2 x 911.5 MW ("Paju Power Plant") which is located in Paju City, Gyeonggi Province, South Korea. The investment enabled EGCO to recognize higher revenues immediately as the Paju Power Plant has commenced its commercial operation date since February 2017 and supplied electricity to Korea Electric Power Corporation (KEPCO), the sole power buyer in South Korea, through Korea Power Exchange (KPX), the operator of power market in South Korea. Moreover, this investment offered EGCO an opportunity for LNG-related business synergies, LNG imports, gas-fired power plants and renewable energy investments as well as its emergence in South Korean market which represented the growth in power and energy demand.
2. To optimize the Company's asset management, the Committee considered and endorsed the proposals of 2 divestment transactions on asset disposition to the Board of Directors for consideration as follows:
 - (1) Disposition of all ordinary shares held by EGCO in East Water, representing 311,443,190 shares or 18.72% of the total shares, to Manila Water Company, Inc., a subsidiary of the Philippine conglomerate Ayala Corporation, at 16.78 Baht per share totaling 5,226,016,728.20 Baht
 - (2) Disposition of all ordinary shares held by EGCO in GIDEC, representing 2,000,000 shares or 50% of the total shares, to IEC Green Energy Co., Ltd. (IEC Green), another shareholder holding a 50% stake in GIDEC, for 24,583,971.18 Baht
3. The Committee considered and proposed to the Board of Directors to approve a special dividend of 2.50 Baht per share allocated from the difference between expected profits from the continuous investments in Masinloc and East Water projects and profits from the disposition of those two assets.

4. The Committee reviewed and revised its duties, responsibilities and authorities to strengthen corporate governance efficiency, with great emphasis on the investment proposals, asset management, strategic plans, action plans and annual budget, as well as corporate KPI setting and follow-up.
5. The Committee scrutinized both short-term and long-term strategic plans, annual action plans, budget and manpower before proposing them to the Board of Directors for approval to ensure that they were in line with the Company's vision, mission and policy and that the budget and manpower were set appropriately to enable the Management to achieve the approved strategic and action plans.
6. The Committee followed up and appraised investment projects to ensure that they aligned with the plan. They also provided guidance and suggestions if there were mismatches between actual performances and plans.
7. The Committee followed up the progress of annual action plans through quarterly reports prepared by the Management and gave advice in case they were not implemented as planned.

The Investment Committee had fulfilled its assignments as stated in the Charter and delegated by the Board of Directors. The Committee had performed its duties with care and diligence for the ultimate benefits of the Company and stakeholders and in accordance with the Company's rules and regulations. The meeting results were constantly reported to the Board of Directors.



Mr. Witoon Kulcharoenwirat
Chairman of the Investment Committee

Nomination and Remuneration Committee's Report

EGCO's Nomination and Remuneration Committee consisted of 5 directors, 3 of whom were independent directors and the other two were non-executive directors. The members of the Nomination and Remuneration Committee were selected based on their knowledge, expertise and experience in human resource management and organization management at both national and international levels.

As of December 31, 2018, the Nomination and Remuneration Committee comprised Mr. Shunichi Tanaka, Director, as Chairman; Dr. Pasu Loharjun, Independent Director, Assoc.Prof.Dr. Nualnoi Treerat, Independent Director, Assoc.Prof.Dr. Bordin Rassameethes, Independent Director and Mr. Patana Sangsrirojana, Director, as Committee Members; and the Senior Vice President of the Corporate Secretary Division as Secretary to the Committee. The Nomination and Remuneration Committee held 7 meetings to consider and provide suggestions to the Board of Directors according to the duties and responsibilities assigned by the Board of Directors as stipulated in the Nomination and Remuneration Committee Charter. The meeting results were regularly reported to the Board of Directors. Its main activities were as follows:

1. **The Committee revised its duties, responsibilities and authority to be proposed to the Board of Directors for consideration. The Board of Directors**, in its meeting no. 11/2018 held on November 23, 2018, approved the revision of its duties, responsibilities, authorities and Charters for improvement of corporate governance efficiency.
2. **Director Nomination and Remuneration**

The Committee nominated new directors for the Board of Directors' approval in case of resignation before the end of their term of office and for the shareholders' appointment in case of retirement by rotation. With the endorsement of the Nomination and Remuneration, the Board of Directors offered the right to shareholders to nominate directors according to the criteria and procedures. The directors were selected based on the individual qualifications of the SET and SEC regulations, diversity of directors in terms of knowledge, capabilities, necessary skills, experience, age and gender, professionalism, time dedication for the Company's business as well as vision and positive attitudes towards the Company which were beneficial to the Company's business operation and supportive of the Company's business strategies. Also, the size, structure and composition of the Board of Directors were properly; considered and fair and transparent nomination processes were carried out to promote good corporate governance and ensure effective management.

The Committee considered and nominated members of the subcommittees to fill vacancies before proposing to the Board of Directors for appointment, taking into account the composition of subcommittees, candidate's knowledge, expertise and experience which would enhance the performance of each subcommittee.

Moreover, the Committee considered and provided suggestions on directors' remuneration for the Board of Directors and subcommittees based on their duties, responsibilities and performance results of the previous year. The directors' remuneration was comparable to the companies of the same size and industry in order to ensure reasonable and attractive remuneration and motivate qualified directors to perform their duties so as to achieve the Company's goals and directions and align with the Company and shareholders' long-term benefits as well as to build shareholders' confidence.

- 3. Self-appraisal of the Board of Directors and the Nomination and Remuneration Committee** The Committee considered and reviewed the Board's self-appraisal forms for both individuals and the whole group and the self-appraisal form of the Committee itself which were revised in 2015 to ensure that the forms still completely covered all required assessment aspects and complied with the SET's best practices. The Board of Directors, in its meeting no. 12/2018 held on December 18, 2018, considered that the Board's self-appraisal forms for both individuals and the whole group were appropriate and then approved the adoption of the forms in 2018.

The Committee conducted its self-appraisal and disclosed appraisal results in the section of Corporate Governance.

4. Succession Planning

The Committee regularly followed up the progress of the succession planning, employee development plans, process and schedule for successor selection to ensure that the qualified successors were appointed in a timely manner to continue the operation and drive the Company towards the vision and strategies as determined by the Board of Directors.

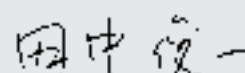
5. Senior Executive Appointment and Employee Remuneration

The Committee was assigned to nominate knowledgeable and qualified persons to be appointed as executives at Executive Vice President and Senior Executive Vice President levels and appraised their performance. The company was also empowered to determine competitive remuneration for employees at all levels to attract competent employees with outstanding performance and boost employee morale. Furthermore it determined employee remuneration including bonus based on the Company's appraisal performance results against the Corporate KPI's set at the beginning of to motivate the employees to work towards the Company's short-term and long-term growth.

6. Welfare Improvement

To ease the employees' financial burden of medical expenditures, retain and motivate employees as well as ensure that EGCO employees' welfare can compete with other power companies, the Committee proposed to the Board of Directors to improve employee welfare in terms of inpatient and outpatient medical fees and insurance premium. The Board of Directors, in its meeting no. 12/2018 held on December 18, 2018, approved the increase of employee welfare as endorsed by the Committee, effective from January 1, 2019 onwards.

The Nomination and Remuneration Committee had performed its duties as prescribed in the Charter and delegated by the Board of Directors with care and diligence as well as fairness and transparency complying with the good corporate governance for the ultimate benefits of the Company and stakeholders.



Mr. Shunichi Tanaka
Chairman of the Nomination
and Remuneration Committee

Corporate Governance and Social Responsibility Committee's Report

EGCO's Corporate Governance and Social Responsibility Committee consisted of 5 directors, 3 of whom were independent directors, 1 non-executive director and the President.

As of December 31, 2018, the Corporate Governance and Social Responsibility Committee comprised Dr. Pasu Loharjun, Independent Director, as Chairman; Assoc.Prof.Dr. Nualnoi Treerat, Independent Director, Assoc.Prof.Dr. Bordin Rassameethes, Independent Director, Mr. Wisak Watanasap, Director and Mr. Jakgrich Pibulpairoj, President, as Committee Members; and the Senior Vice President of the Corporate Secretary Division as the Secretary to the Committee.

The Corporate Governance and Social Responsibility Committee performed its duties as assigned by the Board of Directors. It oversaw and followed up the Company's operations to ensure the compliance with good corporate governance principles and anti-corruption policy and promote the corporate social responsibility policy with focus on equitable treatment to all shareholders, thus leading to sustainable and continuous development.

In 2018, the Corporate Governance and Social Responsibility Committee held 5 meetings which can be summarized as follows:

1. Good Corporate Governance

1.1 The Committee revised its duties, responsibilities and authority to be proposed to the Board of Directors for consideration. The Board of Directors, in its meeting no. 11/2018 held on November 23, 2018, approved the revision of duties, responsibilities, authorities and charter of the Corporate Governance and Social Responsibility Committee which covered corporate governance, anti-corruption and social responsibility operations as follows:

1. Determine the policy and practice guidelines to be proposed to the Board of Directors
2. Set goals and plans as in line with the strategic plans and propose for the Board of Directors' consideration
3. Promote and support the performance of directors, executives and employees in compliance to the policy, practice guidelines, goals and plans
4. Oversee, follow up and appraise the corporate's performance in order to comply with the approved policies, practice guidelines, targets and plans
5. Review the policy and practice guidelines regularly in comparison with the international standards to be proposed to the Board of Directors for continuous improvement
6. Assess potential risks associated with corruption and establish risk control measures

- 1.2 The Committee reviewed the good corporate governance policy and practice guidelines of EGCO Group in comparison with the SEC's Corporate Governance Code (CG Code) 2017 and provided suggestion to the Board of Directors to improve EGCO's corporate governance mechanisms.
- 1.3 The Committee considered and endorsed to the Board of Directors to consider the appointment of the Lead Independent Directors according to the SEC's CG Code 2017, in order to improve EGCO's corporate governance mechanisms and ensure that the Board of Directors' composition and operation contribute to the exercise of discretion. The Lead Independent Directors would be a representative of independent directors in the discussion between the Chairman of the Board of Directors and the management on corporate governance issues. The Lead Independent Director would also serve as a focal point between the shareholders and the Board of Directors. The Board of Directors, in its meeting no. 1/2018 held on January 19, 2018, approved the appointment of the Lead Independent Directors as proposed by the Corporate Governance and Social Responsibility Committee and the Independent Director Committee.
- 1.4 The Committee considered and endorsed to the Board of Directors to consider EGCO's request for recertification as a member of Collective Action Coalition against Corruption (CAC). The Committee also asked the Board of Directors to delegate it to review the filled self-evaluation form before submission to the CAC Committee.
- 1.5 The Committee considered and endorsed corporate governance and anti-corruption plans, followed up the implementation of corporate governance and anti-corruption plans as well as oversaw performance during the operating year to ensure the compliance with the good corporate governance principles and to uplift good corporate governance implementation which can be comparable to international standards according to the defined strategic plans.
- 1.6 The Committee continuously promoted and supported the dissemination, communication, trainings and activities. This year's activities were conducted as follows:
 - CG Roadshow to enhance executives and employees' knowledge and understanding of practice guidelines regarding communication and information disclosure in order to comply with the good corporate governance principles
 - CG Day included game booths and plays in which CG content was embedded
 - "Elephants hold hands" activity aimed to sew elephant-shaped dolls to be handed over to the patients with paresis and paralysis and bed-ridden patients
 - Supplier Day to exchange knowledge and practice guidelines on anti-corruption between suppliers and encourage suppliers to operate business ethically
 - Dissemination of CG knowledge via wire broadcasting and EGCO Groupnet

2. Corporate Social Responsibility for Sustainable Business Operations

2.1 The Committee followed up the progress of answering the assessment questionnaire of the DJSI Corporate Sustainability Assessment (CSA) Coaching Program.

2.2 The Committee endorsed EGCO Group's Corporate Social Responsibility (CSR) plans to add value to the community, society and environment which was part of the EGCO Group's sustainable business policy as follows:

2.2.1 Improvement of quality of life of communities surrounding power plants

The operational framework included the support of local employment, child and youth development, development of occupational skills, hygiene and sanitation promotion for the community, development of public utilities and conservation of natural resources and environment. Each power plant undertook projects/activities suitable for the community context.

2.2.2 Child and youth development project

The Company continued the development of 2 projects approved in 2016, namely Khanom Power Plant Learning Center and EGCO's Power Plants and Children's Schools Project.

2.2.3 Watershed Forest Conservation and Restoration

This project was organized by Thai Rak Pa Foundation, the non-profit foundation. With support from EGCO, the foundation promotes watershed forest conservation and restoration and biodiversity with other networks in the country's important areas, thereby leading to sustainable development.

The Committee reported the meeting results to the Board of Directors for acknowledgement after every meeting as in accordance with the good corporate governance principles.



Dr. Pasu Loharjun
Chairman of the Corporate Governance
and Social Responsibility Committee

Internal Control and Risk Management

The Board has assigned the Audit Committee to be responsible for reviewing and monitoring the adequacy of the internal control system and risk management. For 2018, the Audit Committee reviewed the appropriateness and effectiveness of the internal control system from the internal control system assessment report provided by the Management. This is to ensure that the internal control system of Electricity Generating Public Company Limited (EGCO) and monitoring of the subsidiaries' operation by EGCO is adequate, appropriate by considering compliance with the guidelines of The Securities and Exchange Commission (SEC), The Stock Exchange of Thailand's (SET), and the internal control framework of the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The review of the Audit Committee are covered the internal control in Management Control, Operational Control, Financial Control, and Compliance Control including the audit reports of Internal Audit Division as well as comments of the external auditors on the company's internal control system.

In the matter of risk management, the Audit Committee reviewed and endorsed risk management policy and EGCO Group's risk management philosophy, significant risks of EGCO Group, which proposed the mitigation actions by the management. Such risk contained the risks related to EGCO Group strategies and investments in Asset Management, Management Project Implementation, Financial management, and Organizational Management. The Management shall submit risk management report reviewed by the Audit Committee to the Board for approval regularly. In addition, the Audit Committee continuously monitors risk mitigation to ensure that such risks are managed to acceptable level.

In the Board's meeting no. 1/2019 on January 24, 2019, the Board considered and assessed the internal control by considering the internal control assessment and the SET's Internal control questionnaire evaluation results reviewed by the Audit Committee.

The Board agreed with the Audit Committee that

1. The internal control system of EGCO was considered appropriate and adequate. Sufficient personnel were assigned to uphold the internal control system and that the internal control system was properly set to monitor the subsidiaries' operations in order to safeguard EGCO's and subsidiaries' assets from misuse or unauthorized use by the Directors, the Management, or employees.
2. In the previous year, the Board and the Audit Committee received report from the external auditor that there was no significant deficiency in internal control systems. The 2018 Audit Committee's activities were disclosed under "Audit Committee's Report" in this Annual Report.

The Internal Control System of EGCO complied with COSO Internal Control Integrated Framework Audit were supported by the followings:

1. Control Environment

- Clear vision, mission statements, and business objectives are set by the Board as guidelines for the management and employees. Operation was carried out and constantly reviewed to ensure target achievements in consideration of fair treatment to all stakeholders to create sustainable shareholders' value both in financial and non-financial terms.
- Organization structure was designed by the Board to accommodate business growth, and would be adjusted over time to cope with the business environments.
- The Board set Code of Conduct and the good corporate governance principles in writing to be abided by directors, management and employees and be reviewed periodically. New employees were given the orientation to understand their roles and responsibilities in upholding the practices and to avoid the conflict of interest.
- The Board set regulations, orders and table of authority in writing and publicly announced to be abided by all employees.
- The Board set Anti-Corruption Policy and endorsed the Anti-Corruption Manual to be complied by directors and employees.

2. Risk Assessment

- The Board approved EGCO Group's risk management policy and philosophy and communicated to executives and employees to acknowledge. In addition, the Audit Committee also monitored and gave advice to the Management regarding the implementation of risk management policy and practices including future risks and prevention measures.
- The risk management is regarded as all divisions' and all employees' duties. Meanwhile, Risk Assessment Division was assigned to support the company's integrated risk management to ensure the efficiency and effectiveness of the integrated risk management and in line with EGCO's current business situation. In addition, the Management shall submit risk management report to the Audit Committee before to the Board for regular acknowledgement.
- Risk assessment is based on external and internal factors that might affect the target. Risk likelihood and impact are assessed and prioritized. Key risks are identified, and then risk mitigation measures are implemented to manage such risks. EGCO considers the risk culture as the corporate culture.
- The Audit Committee assigned the Risk Management Committee as the Management to conduct the study in applying the COSO ERM Integrated Framework.
- Risk Assessment Division collaborated with risk owners in preparing a study report to continuously present to the Audit Committee for consideration.

3. Control Activities

Control Activities of EGCO were implemented as follows:

- Authorities and levels of transaction approval were classified in the Table of Authority and reviewed regularly as appropriate.
- Responsible units for transaction approval, operation or account recording, and asset safeguarding were properly segregated for check and balance control.
- EGCO's subsidiaries and joint ventures' performance was regularly monitored by the Management who reported such performance to the Board for acknowledgement on a monthly basis.
- Connected transactions were executed in compliance with SET's regulations, with consideration of all rationales and ultimate benefits of EGCO and that transactions were approved by the authorized approvers who have no conflicts of interest.
- The Corporate Secretary Division was responsible for the company information disclosure to comply with the Securities and Exchange Acts, SET's and SEC's notifications and regulations, and other related laws and regulations.
- EGCO's IT compliance guidelines were to ensure full compliance with computer related crime acts 2017 and other governing laws and regulations, with all employees' acknowledgement and signing the IT compliance statement to confirm their non-violation.

4. Information and Communication

Adequate important information was provided for the decision making of the Board, Committees, and the Management as well as the effective internal communication channels within the company as follows:

- The Board and committee members received the meeting notice together with the meeting documents which contain necessary and sufficient information well before the meeting which was not less than 5 days except for urgent cases. Discussions, recommendations, and remarks from the directors were recorded in the minutes of meetings for future reference or audit trail.
- Meetings among the Audit Committee, external auditors, and concerned Management were held to review the compliance of financial accounting with the General Accepted Accounting Principles and International Accounting Standards.
- Business Update Meetings between the President and the management team of each group were held regularly for progress monitoring and problem solving (if any) which provided all team members adequate information to perform their tasks and make decisions.
- Company's intranet was utilized as internal communication channel for corporate information on policies, regulations, orders, and good corporate governance including Anti-Corruption Manual. In 2018, Anti-Corruption activities were publicized through the company's intranet to educate employees continuously.

- Accounting records and supporting documents of the financial statements are completely kept in orderly manner and that EGCO's document storage is reliable. The auditors who use the stored information had no recommendation on improvement.
- Governing laws, regulations, and orders were kept as compliance database for reference and tracking. Legal Division was responsible for updating such database and providing consultations to responsible units.
- Two-way communication channels are provided to communicate with external parties. EGCO website at www.egco.com was provided as the communication channel for all groups of external stakeholders to reach corporate information. Meetings with investors and analysts were held quarterly as well as press conferences and EGCO newsletters. Stakeholders are also inquiring EGCO's information through the channels mentioned.
- Whistleblower system was stated in EGCO's Code of Conduct and available in EGCO's website to provide shareholders and employees the channel to report suspected violations of the Code of Conduct to the Management, the Audit Committee, and the Board of Directors while message providers would be protected to be reached among responsible working group to provide confidence to message providers.

5. Monitoring

- Asset Management Unit, Power Plant Management Unit, and Project Management Unit are established to take responsibilities for monitoring and overseeing of EGCO group's performance against the KPIs with constant reports to the Management and the Board together with the gap analysis.
- External auditors are encouraged to perform their tasks independently and regularly reported to the Audit Committee.
- EGCO's internal control systems were to be evaluated annually by using the internal control assessment form which was aligned with SEC's guidelines for the evaluation.
- The Management and employees are required to study regulations and Code of Conduct and confirmed their compliance with the company's Code of Conduct via the company's intranet system.
- The adequacy and appropriateness of internal control systems was reviewed, and compliance with Anti-Corruption Policy was monitored by the Internal Audit Division regularly and proposed to the Audit Committee to endorse before proposing to the Board for acknowledgement.
- External auditors' review of internal control on accounting and finance to define the audit approach, timing and scope of work. For 2018, there was no significant finding for improvement on internal control systems.

EGCO values the implementation of the COSO Enterprise Risk Management Integrated Framework (COSO-ERM) for EGCO's risk management by linking with Strategies and holding risk management as a factor that created value for EGCO as follows;

1. Governance & Culture

The management has defined corporate culture including Teamwork, Result-oriented, Stakeholder Concerns, Innovation, and Ethics and Integrity.

The management has continuously set the policy for employee retention to motivate, develop and maintain talented employee by conducting company engagement survey and responding to the survey results by creating activities with a consultant to improve employee relationship.

2. Strategy & Objective Setting

EGCO operates as holding company. The principal business operation is accompanying shareholding in other companies, which are located in both Thailand and the Asia Pacific region. EGCO Group companies either operate in the power sector with Power Purchase Agreement (PPA) or conduct energy and related business.

EGCO determines business strategies to explore investment opportunities in the Asia Pacific region. In 2018, EGCO has investments in the Philippines, Lao PDR, Indonesia and Australia.

3. Performance

The Board approved EGCO Group's risk management philosophy to apply throughout the organization and to support enterprise-wide risk management complying with COSO Enterprise Risk Management Integrated Framework.

The details of risk assessment and risk management of EGCO Group were disclosed under "Risk Factors" in the annual report.

4. Review & Revision

EGCO has assessed substantial changes, reviewed risks and performance, and pursued improvement in Enterprise Risk Management through the provided Internal Control systems.

5. Information, Communication & Reporting

EGCO has developed to leverage information and technology system to improve its efficiency by implementing Business Process Management (BPM) to support activities in Human Resources, Accounting and Budget, and etc. In addition the Performance monitoring system was adopted to monitor the power plant operations in domestic and overseas.

In the Audit Committee's meetings no. 1/2018 on January 17, 2018, the Audit Committee appointed Ms. Sudrudee Lertkasem as the Chief Internal Audit, which was effective on February 1, 2018. Ms. Sudrudee had auditing experiences and analytical skills with professional certificates as Certified Internal Auditor (CIA), Certified Public Accountant of Thailand (CPA) and Certified Professional Internal Audit of Thailand (CPIAT). Her knowledge and expertise would help her succeed in her role.

In this regard, the appointment, rotation, and removal of the Chief Internal Audit are subject to the approval from the Audit Committee.

Report on the donation on behalf of all shareholders who elect to receive the Annual Report in the electronic form

Starting from 2004, the Company had the policy to present the annual report in CD ROM format to save the cost and to reduce tree cutting over the long term. The Company committed to make a donation to the “Thai Forest Conservation Foundation” which had the objective to conserve the environment on behalf of all shareholders who opt for electronic form.

In 2018, the Company donated the cost saving in this regard to the Thai Forest Conservation Foundation on behalf of all shareholders in the amount of 2,220,100 baht.

The Company thanks all our shareholders and stakeholders who have made this donation and the Company looks forward to your support in the future.

General Information

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+ Indirect) (%)
Electricity Generating Public Company Limited (EGCO) Registration 0107537000866 (No.BorMorJor.333) Head Office 14 th , 15 th Floor EGCO Tower, 222, Vibhavadi Rangsit Road, Tungsonghong, Laksi, Bangkok 10210, Thailand Tel. +66 (0) 2998 5000 Fax. +66 (0) 2998 5999 Sector Energy & Utilities Industry Resources Foreign Limit 44.81% Share of Minor Shareholder (% Free Float) 51.90% Website www.egco.com	Holding Company focusing on Power business and others related to power business	5,300	10	5,264.65	-

Subsidiaries

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+ Indirect) (%)
Khanom Electricity Generating Company Limited (KEGCO) Office 12 th Floor, EGCO Tower Tel. +66 (0)2998 5000 Fax. +66 (0) 2955 0931 Site Office 112 Moo 8, Tongnuean, 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 13 th Floor, EGCO Tower Tel. +66 (0) 2998 5000 Fax. +66 (0) 2955 0933 Site Office 35 Rayong Highway No. 3191 Huay Pong, Amphur Muang, 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

Subsidiaries (Cont)

Company		Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+ Indirect) (%)
North Pole Investment Company Limited (North Pole)		Holding company focusing on investment in electricity generating companies in foreign countries	49,290.55 ^{/1}	32.364 ^{/1}	49,290.55 ^{/1}	100
Office	EGCO Tower Tel. +66 (0) 2998 5000 Fax. +66 (0) 2998 5999		(1,523,005,389 USD)	(1 USD)	(1,523,005,389 USD)	
Overseas office	6 th Floor, Tower A, 1 CyberCity, Ebene, Republic of Mauritius					
Dawei Electricity Generating Company Management Pte., Ltd. (DEGCOM)		Holding company focusing on investment in electricity generating companies in Myanmar	1.94 ^{/1}		1.94 ^{/1}	100
Office	EGCO Tower Tel. +66 (0) 2998 5000 Fax. +66 (0) 2998 5999		(60,000 USD)		(60,000 USD)	
Overseas office	60 Paya Lebar Road, #08-43, Paya Lebar Square, Singapore, 409051					
New Growth Plus B.V. (NGP) (EGCO Plus is the company's 100% direct shareholder)		Holding company focusing on investment in electricity generating companies in foreign countries	49,939.57 ^{/1}		49,939.57 ^{/1}	100
Office	EGCO Tower Tel. +66 (0) 2998 5000 Fax. +66 (0) 2998 5999		(1,543,059,337 USD)		(1,543,059,337 USD)	
Overseas office	Gustav Mahlerlaan 1212, 1081 LA, Amsterdam, The Netherlands					
New Growth B.V. (New Growth) (EGCO Plus is the company's 100% indirect shareholder)		Holding company focusing on investment in electricity generating companies in foreign countries	1.02 ^{/1}		1.02 ^{/1}	100
Office	EGCO Tower Tel. +66 (0) 2998 5000 Fax. +66 (0) 2998 5999		(31,488 USD)		(31,488 USD)	
Overseas office	Gustav Mahlerlaan 1212, 1081 LA, Amsterdam, The Netherlands					
Quezon Power, Inc. (QPI) (EGCO Plus is the company's 100% indirect shareholder)		Holding company focusing on investment in electricity generating companies in Philippines	6.47 ^{/1}		6.47 ^{/1}	100
Office	EGCO Tower Tel. +66 (0) 2998 5000 Fax. +66 (0) 2998 5999		(200,000 USD)		(200,000 USD)	
Overseas office						
Philippines	14 th Floor, Zuellig Building					
Overseas office	Makati Avenue corner Paseo de Roxas 1225 Makati City, Philippines					
Netherlands Office	Gustav Mahlerlaan 1212, 1081 LA, Amsterdam, The Netherlands					

Subsidiaries (Cont)

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+ Indirect) (%)
Quezon Power (Philippines), Limited Co. (Quezon) (EGCO Plus is the company's 100% indirect shareholder) Makati office 14 th Floor, Zuellig Building Makati Avenue corner Paseo de Roxas 1225 Makati City, Philippines Overseas office Barangay, Cagsiay I, Mauban Quezon Province, 4330, Philippines	IPP Electricity Generating and supply business using Coal	6,720.10 ¹ (207,641,268 USD)		6,720.10 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 Overseas office Philippines Barangay, Cagsiay I, Mauban, office Quezon, 4330, Philippines Netherlands Gustav Mahlerlaan 1212, 1081 LA, Office Amsterdam, The Netherlands	Operation and Maintenance of QPL	6.47 ¹ (200,000 USD)		6.47 ¹ (200,000 USD)	100
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 Overseas office Philippines 14 th Floor Zuellig Building office Makati Avenue corner Paseo de Roxas 1225 Makati City, Philippines Netherlands Gustav Mahlerlaan 1212, 1081 LA, Office Amsterdam, The Netherlands	Management service for Quezon Power Plant	3.23 ³ (5,260,000 PESO)		3.23 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 14 th Floor Zuellig Building Makati Avenue corner Paseo de Roxas 1225 Makati City, Philippines	Holding company focusing on investment in electricity generating companies	193.16 ³ (315,000,100 PESO)	61.32 ³ (100 PESO)	193.16 ³ (315,000,100 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)	32.364 ¹ (1 USD)	0.00 ¹ (1 USD)	100

Subsidiaries (Cont)

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+ Indirect) (%)
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 Gustav Mahlerlaan 1212, 1081 LA, office Amsterdam, The Netherlands	Holding company focusing on investment in electricity generating companies in foreign countries	0.00 ^{/1} (1 USD)	32.364 ^{/1} (1 USD)	0.00 ^{/1} (1 USD)	100
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 One International Towers, office Waterman 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	2,503.68 ^{/4} (110,366,987 AUD)	22.685 ^{/4} (1 AUD)	2,503.68 ^{/4} (110,366,987 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 One International Towers, office Waterman 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	1,967.88 ^{/4} (86,747,980 AUD)	22.685 ^{/4} (1 AUD)	1,967.88 ^{/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 Gustav Mahlerlaan 1212, 1081 LA, office Amsterdam, The Netherlands	Holding company focusing on investment in electricity generating companies in foreign countries	0.00 ^{/1} (1 USD)	32.364 ^{/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 Gustav Mahlerlaan 1212, 1081 LA, office Amsterdam, The Netherlands	Holding company focusing on investment in electricity generating companies in foreign countries	0.00 ^{/1} (100 USD)	32.364 ^{/1} (1 USD)	0.00 ^{/1} (100 USD)	100

Subsidiaries (Cont)

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+ Indirect) (%)
EGCO Cogeneration Company Limited (EGCO Cogen) Office 13 th 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 13 th Floor, EGCO Tower Tel. +66 (0) 2998 5000 Fax. +66 (0) 2998 5999 Site Office 222 Moo 10, Nua-Muang, Amphur Muang, 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 10 th Floor, EGCO Tower Tel. +66 (0) 2998 5000 Fax. +66 (0) 2998 5999 Site Office 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 10 th Floor, EGCO Tower Tel. +66 (0) 2998 5000 Fax. +66 (0) 2998 5999 Site Office 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 10 th Floor, EGCO Tower Tel. +66 (0) 2998 5000 Fax. +66 (0) 2998 5999 Site Office Thakhlo, Benchalak, Srisaket 33110, Thailand	VSPP Electricity Generating and Supply Business using Solar Power	148.7	10	148.7	99.99
SPP Five Company Limited (SPP 5) Office 10 th Floor, EGCO Tower Tel. +66 (0) 2998 5000 Fax. +66 (0) 2998 5999 Site Office Khu Mueang, Muang Suang, Roi-Et 45220, Thailand	VSPP Electricity Generating and Supply Business using Solar Power	198.4	10	198.4	99.99

Subsidiaries (Cont)

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+ Indirect) (%)
Theppana Wind Farm Company Limited (TWF) Office 10 th Floor, EGCO Tower Tel. +66 (0) 2998 5000 Fax. +66 (0) 2998 5999 Site Office 555 Moo1, 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 10 th 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 10 th 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, Hin Mool, Bang Lane, Nakhonpathom 73190 - Branch 5 96, 97 Moo 1, Hin Mool, Bang Lane, Nakhonpathom 73190 - Branch 6 98, 99 Moo 1, Hin Mool, Bang Lane, Nakhonpathom 73190	VSPP Electricity Generating and Supply Business using Solar Power	1,650	100	1,650	49
Chaiyaphum Wind Farm Company Limited (CWF) Office 10 th 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 11 th 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

Subsidiaries (Cont)

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+ Indirect) (%)
Banpong Utilities Company Limited (BPU) Office 11 th Floor, EGCO Tower Tel. +66 (0) 2998 5000 Fax. +66 (0) 2998 5999 Site Office 19/300 Moo19, Tha Pha, 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 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 City 110, Taiwan	Holding company focusing on investment in electricity generating companies in Taiwan	0.16 ^{/5} (150,000 TWD)	10.545 ^{/5} (10 TWD)	0.16 ^{/5} (150,000 TWD)	100

Joint Ventures:

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+ Indirect) (%)
Gulf Electric Public Company Limited (GEC) Office 11 th Floor, M. Thai Tower 1, All Seasons Place, 87 Wireless Road, Lumpini, Pathumwan, Bangkok 10330, Thailand Tel. +66 (0) 2654 0155 Fax. +66 (0) 2654 0156-7 Website http://www.gulfelectric.co.th	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 8 th Floor, M. Thai Tower 1, 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 8 th Floor, M. Thai Tower 1, 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

Joint Ventures: (Cont)

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+ Indirect) (%)
Gulf Power Generation Company Limited (GPG) (GEC is the company's 100% shareholder) 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
Gulf Cogeneration Company Limited (GCC) (GEC is the company's 100% shareholder) Site office 79 Moo 3, Tandeow, Kaeng Khoi, Saraburi 18110, Thailand Tel. +66 (0) 3624 6203-4 Fax. +66 (0) 3624 6531	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) 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) Site office 745 Moo 2, Bang Pu Mai, Amphur Muang, 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
Gulf Yala Green Company Limited (GYG) (GEC is the company's 100% shareholder) Site office 80 Moo 1, Pron, Amphur Muang, 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	14,563.80 ¹ 450,000,000 (USD)	3,236.4 ¹ 100 (USD)	12,087.95 ¹ 373,500,000 (USD)	35

Joint Ventures: (Cont)

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+ Indirect) (%)
G-Power Source Company Limited (GPS) Office 10 th 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, Banphot Phisai, Nakhon Sawan 60180 - Branch 3 11, 11/1 Moo 2, Ta Sang, Banphot Phisai, 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
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 Tel. +66 (0) 3641 8400 Fax. +66 (0) 3641 8401	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) Head Office Puri Matari 2, 1 st Floor JL.HR. Rasuna Said Kav. H1-2, South Jakarta 12920, Indonesia Site Office Lawang Kidul and Tanjung Enim, Muara Enim City, Sumatera Selatan (South Sumatra) Province 31315, Indonesia	COAL MINING industry, covering coal mining, coal trading and shipping.	1,640.93 ² 750,000,000 (Thousand Rupiah)	2,187.9 ² 1,000 (Thousand Rupiah)	410.23 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 investing in San Buenaventura Power Ltd	5.52 ³ (9,000,000 PESO)		5.52 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	8,615.46 ³ (14,050,000,000 PESO)		1,730.11 ³ (2,821,453,000 PESO)	49

Joint Ventures: (Cont)

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+ Indirect) (%)
Nam Theun 1 Power Company Limited (NT1PC) Overseas office Unit 15, Sithong Road, Pak Thang Village, Sikhottabong District, Vientiane Capital, Lao PDR Tel. +856 (0)21 550 775 Fax. +856 21 550 771	IPP Electricity Generating and supply business using Hydro power	11,446.54 ^{/1} (353,681,227 USD)	40.46 ^{/1} (1.25 USD)	11,446.54 ^{/1} (353,681,227 USD)	25

Associate:

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+ Indirect) (%)
Star Energy Geothermal Pte Ltd (SEG) (EGCO Plus is the company's 20% indirect shareholder) Office 9 Battery Road, #15-01, Straits Trading Building, 049910, Singapore	Holding company focusing on investment in geothermal power plants in Indonesia	3,379.99 ^{/1} (104,436,650 USD)		3,379.99 ^{/1} (104,436,650 USD)	20
Star Energy Geothermal (Salak - Darajat) B.V. (SEGSD) (EGCO Plus is the company's 20.07% indirect shareholder) Office Atrium Building, 8 th Floor, Strawinskylaan 3127, 1077 ZX, Amsterdam, The Netherlands	Holding company focusing on investment in geothermal power plants in Indonesia	0.32 ^{/1} (10,000 USD)		0.32 ^{/1} (10,000 USD)	20.07

Other:

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+ Indirect) (%)
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	25,577.07	12.5

Note : The Exchange rate as at December 28, 2018

^{/1} 1 USD = Baht 32.364

^{/2} 1,000 Rupiah = Baht 2.1879

^{/3} 1 PESO = Baht 0.6132

^{/4} 1 AUD = Baht 22.685

^{/5} 1 TWD = Baht 1.0545

Referenced Persons

Regulator	<p>Securities and Exchange Commission, Thailand 333/3 Viphavadi Rangsit Road, Chomphon, Chatuchak, Bangkok 10900, Thailand</p> <p>Tel +66 (0) 2033 9999 Fax +66 (0) 2033 9660 E-mail: info@sec.or.th Website: www.sec.or.th</p>
Regulator	<p>The Stock Exchange of Thailand 93 Ratchadaphisek Road, Dindaeng, Bangkok 10400, Thailand</p> <p>Tel +66 (0) 2009 9000 Fax +66 (0) 2009 9991 SET Contact Center +66 (0) 2009 9999 E-mail: SETContactCenter@set.or.th Website: www.set.or.th</p>
Share and Debenture registrar	<p>Thailand Securities Depository Company Limited 93 Ratchadaphisek Road, Dindaeng, Bangkok 10400, Thailand</p> <p>Tel +66 (0) 2009 9000 Fax +66 (0) 2009 9991 SET Contact Center +66 (0) 2009 9999 E-mail: SETContactCenter@set.or.th Website: http://www.set.or.th/tsd</p>
Auditor	<ol style="list-style-type: none"> 1. Mr. Vichien Khingmontri Certified Public Accountant (Thailand) No. 3977 2. Mr. Prasit Yuengsrikul Certified Public Accountant (Thailand) No. 4174 3. Mr. Pongthavee Ratanakoses Certified Public Accountant (Thailand) No. 7795 <p>PricewaterhouseCoopers ABAS Limited 15th Floor, Bangkok City Tower, 179/74-80 South Sathorn Road, Bangkok 10120, Thailand</p> <p>Tel +66 (0) 2844 1000 Fax. +66 (0) 2286 5050</p>

Index of articles required for the 56-2 form

(This is prepared in accordance with the Notification of the Capital Market Supervisory Board no. Tor Jor 44/2556 re: Criteria and Conditions of Information Disclosure on financial status and operation performance of Listed Company)

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The investors can find further information of the Listed Company from the Company's Annual Registration Statement (form 56-1) which is posted on www.sec.or.th or www.egco.com, including information in the Sustainability Report.

Glossary

1. Companies	
Alpha Water	Alpha Water and Realty Service Limited
BLCP	BLCP Power Limited
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.
East Water	Eastern Water Resources Development and Management Public Company Limited
E&E	E&E Engineering and Service Company Limited
EGCO, Company	Electricity Generating Public Company Limited
EGCO BVI	EGCO International (B.V.I.) 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.
GCC	Gulf Cogeneration Company Limited
GEC	Gulf Electric Public Company Limited
GEN	Gulf Energy Company Limited
Gen Plus	Gen Plus B.V.
GIDEC	GIDEC Company Limited
GIPP	Gulf IPP Company Limited
GPG	Gulf Power Generation Company Limited
GPIQ	GPI Quezon Limited Company
GPS	G-Power Source Company Limited
Group companies, EGCO Group	Electricity Generating Public Company Limited and its subsidiaries and joint venture companies.
Gunkul	Gunkul Engineering Public Company Limited
GYG	Gulf Yala Green Company Limited
Kalilayan	Kalilayan Power Holdings Inc.
KEGCO	Khanom Electricity Generating Company Limited

KLU	Klongluang Utilities Company Limited
Mauban	Mauban Holdings Company Inc.
MAPCL	Masinloc AES Power Company Limited
Masin-AES	Masin-AES Pte. Ltd.
Millennium	Millennium Energy B.V.
MME	PT Manambang Muara Enim Company Limited
MPPCL	Masinloc Power Partners 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
North Pole	North Pole Investment Company Limited
NT1PC	Nam Theun 1 Power Company Limited
NTPC	Nam Theun 2 Power Company Limited
PEPOI	Pearl Energy Philippines Operating, Inc.
PP	Phoenix Power B.V.
QGC	Quezon Generating Company Limited
QMS	Quezon Management Service Inc.
QPI	Quezon Power, Inc.
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
SPP5	SPP Five Company Limited
SPPP	South Pacific Power Pty Limited
SEG	Star Energy Geothermal Pte. Ltd.
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.
TWF	Theppana Wind Farm Company Limited
TLC	PT Tenaga ListrikCilegon
XPCL	Xayaburi Power Company Limited
Yanhee EGCO	Yanhee EGCO Holding Company Limited

2. 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

3. Other Institutions

COSO	Committee of Sponsoring Organizations of the Treadway Commission
IOD	Thai Institute of Directors
JBIC	Japan Bank for International Corporation

4. Technical Terms

Associated Company	<p>A company that:</p> <p>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.</p>
Controlling Person	<p>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:</p> <p>A) Has direct or indirect voting rights exceeding 25.00% (twenty-five percent) of the total company votes.</p> <p>B) Through its behavior, has control over the appointment or removal of company directors.</p> <p>C) Through its behavior, has de facto control or undue influence over policy, controlling those company members authorized to determine management and operational policies.</p> <p>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.</p>
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



Electricity Generating Public Company Limited

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