

1. Policy and Overall Business Operation

Overall Picture of Business Operation

Electricity Generating Public Company Limited or EGCO is a holding company. Its main source of revenues is from the dividend income from subsidiaries and share of profits from joint ventures which operates their business in accordance with EGCO's business plan. EGCO aims to develop power projects with either long- term or short-term power purchase agreement ("PPA") both in Thailand and the Asia Pacific region or conduct other related business.

The main responsibilities of EGCO as a holding company are business development, strategic and policy planning, human resources management, accounting and budgeting, and public relations of EGCO Group's companies. Besides, EGCO has also rendered internal audit and legal services to its subsidiaries which mainly take responsibilities on the power generation and sale, service provision, and operation and maintenance.

1.1 Business Target

EGCO focuses to continue building upon its portfolio of power generation assets within both the domestic and Asia Pacific markets by development of new power projects or acquisition of existing power plant projects under the company investment plan which concerns shareholders' return maximization with the acceptable level of risk. In essence, the Company's corporate vision is:

"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"

In this regard, EGCO has identified its key target as follows:

- 1) Return: Achieve the return on equity (ROE) at 10%,
- 2) Growth: Maintain average earning growth at 6% per year,
- 3) Organizational Excellence: Be considerate to society and environment, be considerate to stakeholders, and be active in good corporate governance.

EGCO's investment strategy aims to expand its investment in new power plant projects in Asia Pacific region, primarily focusing on ASEAN. Such strategy also includes the expansion of existing operating power plants, joint venture with local strategic partners, increase of domestic investment in small independent power plant producer (SPP) and very small power plant producer (VSPP); as well as acquisition of operating assets from which EGCO could generate immediate income. EGCO places importance on managing the projects under construction so that the projects could be complete as planned and within the budget. EGCO also pays attention to asset management to ensure performance efficiency of operating assets and the expected revenues.

1.2 Background and Major Development

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 electricity generating sector. On March 23, 1994, EGCO was transformed into a public company and then listed on the Stock Exchange of Thailand (“SET”) on January 16, 1995.

In order to support the private sector’s role in energy business, EGAT reduced its shareholding in EGCO by divesting part of shares to strategic shareholders. On June 30, 1998, CLP Power International Limited (“CLP”) engaging in energy business in the Asia region and being a subsidiary of CLP Holdings Limited which is listed on Hong Kong Stock Exchange, purchased EGCO’s 78 million shares or 14.92% from EGAT. On July 23, 2008, EGAT transferred the shares to CLP Power Projects (Thailand) Limited (“CLPT”) which engaged in energy business in Thailand and a subsidiary of CLP Power International Limited so that shareholding of EGAT and CLPT in EGCO accounted for 25.41% and 22.42% respectively.

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

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

Significant Events in 2014

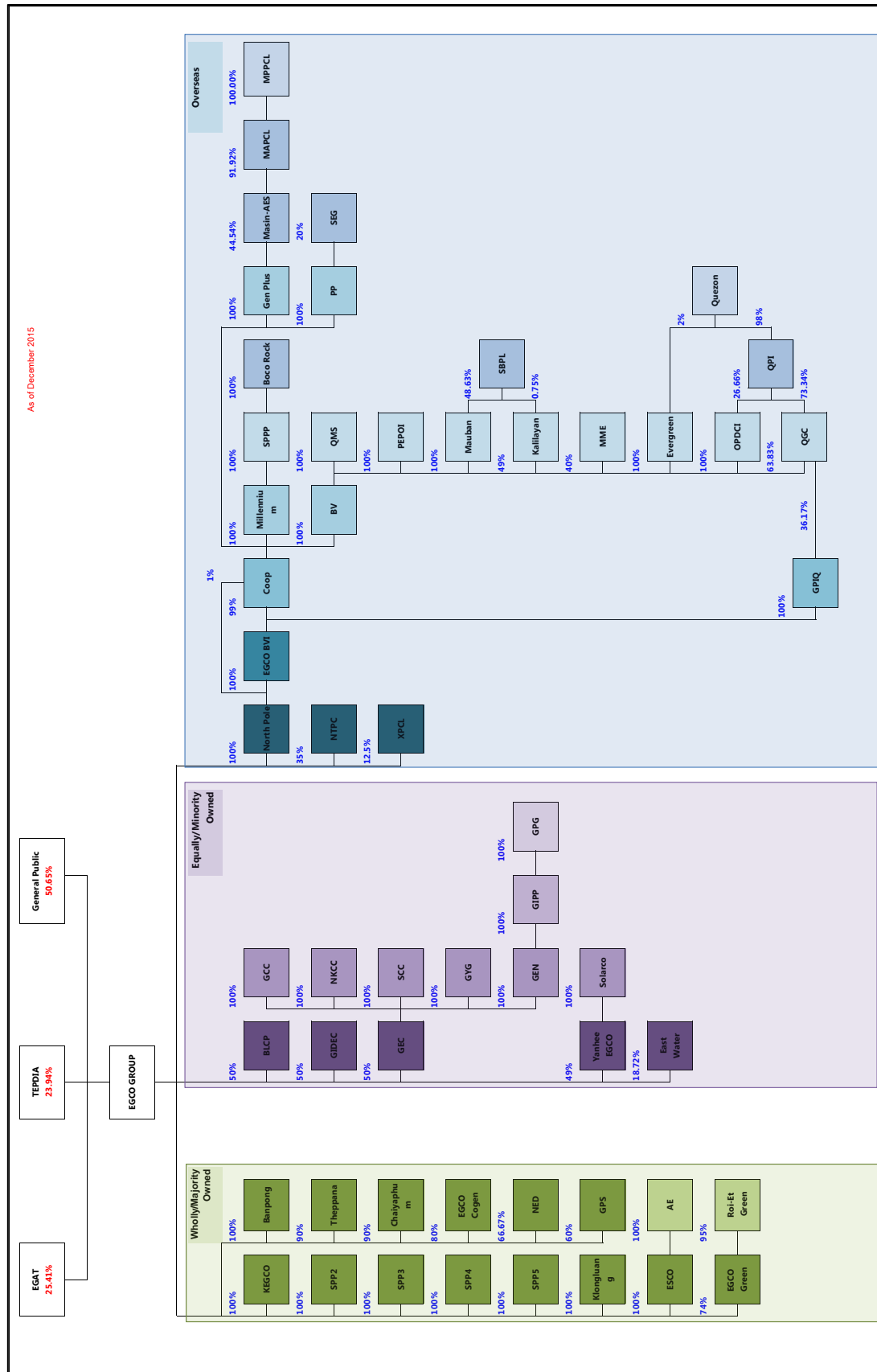
In 2015, EGCO Group operated 23 power plants in both Thailand and abroad with contracted capacity was 3,808.94 MW equity. EGCO mainly sold power of 2,739.65 MW to EGAT, 88.32 MW to PEA, 80.82 MW to Industrial Users (IUs) and the rest 900.15 MW to overseas customers. Highlights in 2015 were as follows:

1. February 4, 2015, EGCO has invested in solar power plant project by acquiring additional shares of 33.33% of the total common shares in the Natural Energy Development Company Limited (“NED”) from Diamond Generating Asia, Limited, a former shareholder. EGCO has shares in NED up to 66.67%.
2. May 20, 2015, San Buenaventura Power Limited Company (“SBPL”), which EGCO holds a 49% indirect ownership interest, received Power Supply Agreement (“PSA”) approval from the Energy Regulatory Commission of the Philippines selling to Manila Electric Company (“MERALCO”). The term of the PSA is 20 years from Commercial Operation Date which is expected in the first quarter of 2019. SBPL is a coal-fired power plant located in the Philippines with installed capacity 455 MW.
3. August 31, 2015, EGCO Engineering and Service Company Limited, a wholly owned subsidiary of EGCO, sold all of 25,597,096 common shares or 74.19% in EGCOM

Tara Company Limited to Universal Utility Company Limited, a wholly owned subsidiary of Eastern Water Resources Development and Management Public Company Limited.

4. October 1, 2015, EGCO purchased a 2% indirect ownership interest in Quezon Power (Philippines) Limited Co., (QPL) from PMR Holding Corp. Following the completion of the purchase, EGCO increased holding from 98% to 100% indirect ownership interest in QPL.

1.3 Shareholders' Structure (as of December 31, 2015)



2. Business Characteristics

Revenue Structure

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

Unit : Million Baht						
Product Service	Transaction	% Shareholding	2015		2014 (Restated)	
			Revenue	%	Revenue	%
Electricity	EGCO Cogen	80.00%				
	Capacity Charge		254.08	1.01%	246.15	1.00%
	Energy Charge		2,054.10	8.20%	2,267.43	9.25%
	Solarco	49.00%				
	Energy Charge		411.46	1.64%	436.55	1.78%
	SPP 2	99.99%				
	Energy Charge		56.42	0.23%	60.41	0.25%
	SPP 3	99.99%				
	Energy Charge		56.02	0.22%	59.52	0.24%
	SPP 4	99.99%				
	Energy Charge		42.50	0.17%	45.84	0.19%
	SPP 5	99.99%				
	Energy Charge		57.93	0.23%	60.93	0.25%
	Boco Rock ^{/A}	100.00%				
	Energy Charge		814.67	3.25%	42.43	0.17%
	Theppana	90.00%				
	Energy Charge		37.25	0.15%	40.81	0.17%
Finance lease income under power purchase agreements	Rayong power plant ^{/B}		-	-	264.32	1.08%
	KEGCO	99.99%	268.52	1.07%	354.70	1.45%
	Roi-Et Green	70.30%	28.18	0.11%	31.56	0.13%
Operating lease income under power purchase agreements	Quezon ^{/C}	100.00%	3,669.38	14.65%	3,556.33	14.51%
Lease service income under power purchase agreements	Rayong power plant		-	-	900.58	3.67%
	KEGCO	99.99%	608.64	2.43%	683.07	2.79%
	Roi-Et Green	70.30%	239.58	0.96%	355.82	1.45%
	Quezon	100.00%	6,568.89	26.23%	6,963.30	28.40%
Income from service concession and service arrangement under a water purchase agreement	EGCOM Tara ^{/D}	74.19%	211.79	0.85%	303.67	1.24%
Service	ESCO	99.99%	746.16	2.98%	527.39	2.15%
Interest Income	ESCO		7.28	0.03%	19.82	0.08%
	Solarco		21.92	0.09%	13.09	0.05%
	KEGCO		14.18	0.06%	9.64	0.04%
	Rayong Power Plant, EGCO Cogen, Roi-Et Green, SPP2, SPP3, SPP4, SPP5, Quezon, Theppana, Boco Rock, Banpong, Klongluang, Chaiyaphum, ESCO, EGCOM Tara, PEOI, QMS and Northpole		29.68	0.12%	27.80	0.11%

Unit : Million Baht						
Product Service	Transaction	% Shareholding	2015		2014 (Restated)	
			Revenue	%	Revenue	%
Others	Solarco		941.72	3.76%	940.30	3.84%
	EGCO		190.11	0.76%	214.86	0.88%
	SPP 2		133.09	0.53%	132.43	0.54%
	SPP 3		132.86	0.53%	131.34	0.54%
	SPP 4		101.50	0.41%	102.04	0.42%
	SPP 5		136.85	0.55%	137.38	0.56%
	KEGCO		128.85	0.51%	67.89	0.28%
	Rayong Power Plant, KEGCO, EGCO Cogen, Roi-Et Green, Quezon, Theppana, Boco Rock					
	Klongluang, Chaiyaphum, ESCO, EGCOM Tara, PEPOI, QMS and Northpole		57.54	0.23%	56.85	0.23%
Share of profit (loss)	BLCP	50.00%	1,929.71	7.70%	1,948.85	7.95%
	GEC	50.00%	1,555.83	6.21%	1,689.08	6.89%
	NTPC	35.00%	1,682.83	6.72%	1,323.02	5.40%
	NED ^E	66.67%	547.73	2.19%	304.48	1.24%
	GPS	60.00%	140.30	0.56%	149.92	0.61%
	Masin-AES ^F	44.54%	324.19	1.29%	121.77	0.50%
	SEG ^G	20.00%	(164.00)	(0.65%)	5.25	0.02%
	MME	40.00%	(23.02)	(0.09%)	(21.74)	(0.09%)
	SBPL ^H	49.00%	(6.18)	(0.02%)	(29.53)	(0.12%)
	GIDEC ^I	50.00%	(34.92)	(0.14%)	(30.46)	(0.12%)
	TLC ^J	49.00%	(4.39)	(0.02%)	-	-
Divestment	Gain from disposal of EGCOM Tara		1,078.92	4.31%	-	-
Total revenues (revenues item in consolidated)			25,048.15	100%	24,514.87	100%

Notes

- ^{/A} EGCO holds an indirect 100% stakes in Boco Rock Wind Farm Pty Limited (Boco Rock). The commercial operation date was on November 28, 2014.
- ^{/B} Rayong Power Plant stopped its operation and electricity sales to EGAT due to the expiration of PPA on December 7, 2014.
- ^{/C} EGCO acquired 100% stakes in Evergreen Power Ventures B.V. (Evergreen), which is a company holds a 2% stakes in Quezon Power (Philippines), Limited Co. (Quezon) on September 30, 2015. As a result, EGCO's stakes in Quezon up to 100%.
- ^{/D} EGCO Engineering and Service Company Limited (ESCO), a wholly owned subsidiary of EGCO, divested all 74.19% stakes in EGCOM Tara Company Limited (EGCOM Tara) on August 31, 2015.
- ^{/E} EGCO acquired 33.33% additional stakes in Natural Energy Development Co., Ltd. (NED) on February 4, 2015. As a result, EGCO's stakes in NED up to 66.67%.
- ^{/F} EGCO acquired 44.54% stakes in Masin-AES Pte. Ltd (Masin-AES) on July 15, 2014.
- ^{/G} EGCO acquired 20% stakes in Star Energy Geothermal Pte. Ltd. (SEG) on July 30, 2014.
- ^{/H} EGCO acquired 49% stakes in San Buenaventura Power Ltd. Co. (SBPL) on February 6, 2014.
- ^{/I} EGCO Invested in Hat Yai Municipal Waste Power Plant Project through the acquisition of 50% stakes in GIDEC Company Limited (GIDEC) on September 28, 2012. The commercial operation date was on December 11, 2014.
- ^{/J} EGCO registered 49% stakes in PT Tenaga Listrik Cilegon (TLC). TLC was incorporated to develop the coal-fired power plant in the Republic of Indonesia.

EGCO's Business Line

1. IPP Group

1.1 Khanom Electricity Generating Company Limited (KEGCO)

EGCO holds 100% stake in KEGCO, which owns and operates Khanom power plant which is the largest private power plant in the southern Thailand, located in Nakhon Si Thammarat province. Currently, it is a 749 MW power plant combining of 75 MW barge-mouthed power unit and 674 MW combined cycle power block using natural gas as the primary fuel to generate and sell all electricity output to EGAT under the 20-year PPA.

On July 25, 2013, KEGCO entered into PPA for the Khanom 4 project (KN4) with EGAT for 25 years. KN4 is a combined cycle power plant using natural gas as primary fuel to generate electricity at installed capacity of 930 MW. The commercial operation date (“COD”) is scheduled on June 19, 2016, which is the same date as the PPA expiration date of the existing power plant.

In 2015, Khanom power plant generated and sold 4,778.15 gigawatt-hour (GWh) electricity output to EGAT. Its annual average Equivalent Availability Factor (EAF) was 94.33%.

1.2 BLCP Power Limited (BLCP)

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

In 2015, BLCP power plant generated and sold 10,784.31 GWh electricity output to EGAT. Its annual average EAF for unit 1 and unit 2 was 91.57% and 92.82%, respectively.

1.3 Gulf Power Generation Company Limited (GPG)

EGCO indirectly holds 50% stake in GPG, which owns and operates an IPP gas-fired power plant, 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-year PPA.

In 2015, KK2 power plant generated and sold 5,073.41 GWh electricity output to EGAT. Its annual average EAF for block 1 and block 2 was 95.92 % and 93.31 %, respectively.

2. SPP Group

2.1 EGCO Cogeneration Company Limited (EGCO Cogen)

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

In 2015, EGCO Cogen power plant generated and sold 682.28 GWh electricity output to EGAT and IUs. Its annual average EAF was 89.18% and the steam output to IUs was 45,824.00 tons.

2.2 Roi-Et Green Company Limited (Roi-Et Green)

EGCO indirectly holds 70.30% stake in Roi-Et Green, 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-year PPA.

In 2015, Roi-Et Green power plant generated and sold 66.47 GWh electricity output to EGAT. Its annual average EAF was 86.91%.

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-year PPA, and remaining electricity along with steam output to IUs under the long-term PPAs.

In 2015, GCC power plant generated and sold 678.24 GWh electricity output to EGAT and IUs. Its annual average EAF was 92.86% and the steam output to IUs was 129,634.23 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-year PPA, and remaining electricity along with steam output to IUs under the long-term PPAs.

In 2015, NKCC power plant generated and sold 777.44 GWh electricity output to EGAT and IUs. Its annual average EAF was 89.24 % and the steam output to IUs was 168,319.90 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-year PPA, and remaining electricity along with steam output to IUs under the long-term PPAs.

In 2015, SCC power plant generated and sold 780.86 GWh electricity output to EGAT and IUs. Its annual average EAF was 94.07 % and the steam output to IUs was 123,951.47 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-year PPA.

In 2015, GYG power plant generated and sold 163.57 GWh electricity output to EGAT. Its annual average EAF was 92.86%.

2.7 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 renewable 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 2015, LSP generated and sold 113.39 GWh electricity output to EGAT. Its annual average availability was 99.97%.

3. 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 renewable every 5 years with the same as LSP pricing structure.

In 2015, WSP generated and sold 16.90 GWh electricity output to PEA. Its annual average availability was 99.84%.

3.2 SPP Two Company Limited (SPP 2)

EGCO holds 100% stake in SPP 2, which owns and operates the 8 MW solar power plant located in Saraburi province. SPP 2 has entered into a non-firm PPA with PEA under VSPP program. The PPA is automatically renewable every 5 years with the same as NED's pricing structure. SPP 2 is equipped with solar tracking system.

In 2015, SPP 2 power plant generated and sold 16.58 GWh electricity output to PEA. Its annual average availability was 99.96%.

3.3 SPP Three Company Limited (SPP 3)

EGCO holds 100% stake in SPP 3, which owns and operates the 8 MW solar power plant located in Srisaket province. SPP 3 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. SPP 3 is equipped with solar tracking system.

In 2015, SPP 3 power plant generated and sold 16.57 GWh electricity output to PEA. Its annual average availability was 99.77%.

3.4 SPP Four Company Limited (SPP 4)

EGCO holds 100% stake in SPP 4, which owns and operates the 6 MW solar power plant located in Srisaket province. SPP 4 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. SPP 4 is equipped with solar tracking system.

In 2015, SPP 4 power plant generated and sold 12.61 GWh electricity output to PEA. Its annual average availability was 99.53%.

3.5 SPP Five Company Limited (SPP 5)

EGCO holds 100% stake in SPP 5, which owns and operates the 8 MW solar power plant located in Roi-Et province. SPP 5 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. SPP 5 is equipped with solar tracking system.

In 2015, SPP 5 power plant generated and sold 17.01 GWh electricity output to PEA. Its annual average availability was 99.85%.

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 comprises 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, Petchaboon province.

In 2015, GPS's solar power plants both generated and sold 46.37 GWh electricity output to PEA. Its annual average availability was 99.54%.

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 Yai 1 Solar Project, 3) Sai Yai 2 Solar Project, 4) Sai Phet 1 Solar Project, 5) Sai Phet 2 Solar Project and 6) Sai Phet 3 Solar Project.

In 2015, Solarco's power plants both generated and sold 118.38 GWh electricity output to PEA. Its annual average EAF was 99.13%.

3.8 Theppana Wind Farm Company Limited (Theppana)

EGCO holds 90% stake in Theppana, which owns and operates the 7.5 MW wind power plant located in Chaiyaphum province. Theppana 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 2015, Theppana power plant both generated and sold 12.87 GWh electricity output to PEA. Its annual average EAF was 99.80%.

3.9 GIDEC Company Limited (GIDEC)

EGCO holds 50% stake in GIDEC, which owns and operates 6.7 MW Municipal power plant located in Hat-Yai, Songkhla province. The power plant uses waste as the primary fuel. GIDEC signed 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 7 years from the COD.

In 2015, GIDEC power plant generated and sold 14.68 GWh electricity output to PEA. Its annual average EAF was 65.20%.

4. Overseas Group

4.1 Quezon Power (Philippines) Limited Company (Quezon)

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

In 2015, Quezon power plant generated and sold 3,000.73 GWh electricity output to MERALCO. Its annual average EAF was 84.99%.

4.2 Masinloc Power Partners Co., Ltd. (MPPCL)

EGCO indirectly holds 40.95% stake in MPPCL, which owns and operates a 630 MW pulverized coal-fired power plant using high quality coal imported from Indonesia and Australia as the primary fuel. Under the Power Supply Agreement, it generates and sells electricity output to MERALCO, as well as Electric Cooperatives and Industrial customers.

In 2015, MPPCL generated and sold 4,231.19 GWh electricity output to its customers. Its annual average EAF was 88.60%.

4.3 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-year PPAs starting from its COD.

In 2015, NTPC power plant generated and sold 5,314.11 GWh electricity output to EGAT and 301.82 GWh electricity output to EDL. Its annual average EAF was 97.05% for EGAT and 97.32% for EDL.

4.4 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 2015, SEG power plant generated and sold 1,111.04 GWh electricity output to its customers. Its annual average EAF was 65.19%.

4.5 Boco Rock Wind Farm Pty Limited (Boco Rock)

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

In 2015, Boco Rock power plant generated and sold 318.37 GWh electricity output to the Australian Energy Market Operator (AEMO) and EnergyAustralia Pty Ltd. Its annual average EAF was 99.26%.

5. Other Businesses

5.1 EGCO Engineering & Service Company Limited (ESCO)

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

5.2 Pearl Energy Philippines Operating, Inc. (PEPOI)

EGCO 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 EGCOM Tara Company Limited (EGCOM Tara)

EGCO indirectly holds 74.19% stake in EGCOM Tara. Under a 30 years agreement, EGCOM Tara produces tap water according to Thai Industrial Standard (TIS) and supplies to the 3 water stations of the Provincial Waterworks Authority of Thailand (PWA), namely, Lak Muang Water Station, Damnoen Saduak Water Station and Samut Songkhram Water Station. EGCO divested all EGCOM Tara shares on August 31, 2015.

5.5 Eastern Water Resources Development and Management Public Company Limited (East Water)

EGCO holds 18.72% stake in East Water, which is responsible for developing and operating water supply including the main raw water pipe networks in the Thailand Eastern Seaboard area.

5.6 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 140 million tons. The sales volume of MME in 2015 was at 1.03 million tons.

2.1 EGCO's Products and Services

EGCO invests in 2 business types, being power generation business and other business. EGCO's power business can be divided into 4 groups namely (1) Independent Power Producer ("IPP") Group, (2) Small Power Producer ("SPP") Group, (3) Very Small Power Producer ("VSPP"), (4) Oversea Power Generation Group. EGCO's other business comprises 4 types of business which are (1) maintenance and operation business, (2) management service business, (3) water business and (4) coal mine business. EGCO Business is detailed as follows:

2.1.1 Power Generation Business

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

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

A. Types of Power Plant

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

1. A hydro power plant generates electricity by the use of force and water compression to rotate water turbines.

A power plant under this category is Nam Theun 2 Power Plant.

2. A thermal power plant produces electricity using heat derived from combustion. The fuels used in this type of plant can be natural gas, coal, or fuel oil which generate heat to water until it becomes high-pressure steam. This steam will later rotate the steam turbine attached to the shafts of the power generator where electricity is produced. It takes several hours each time to operate such a process from boiling the water in a kiln to start up the power generator. Therefore, it is suitable for using as a base load plant.

Power plants under this category are Khanom Power Plant 2, BLCP Power Plant 1 and 2, Quezon, and Masinloc.

3. A combined cycle power plant combines the use of a gas turbine machine and a steam turbine machine by transporting heat from exhaust gases coming out from a hot gas turbine machine to the boiler, then transferring the heat to water, boiling it, and turning it into steam. This steam will later rotate the steam turbine attached to the shafts of the power generator where electricity is produced.

Power plants under this category are Khanom Combined Cycle Power Plant 3 and GPG Power Plants 1 and 2.

4. A cogeneration power plant is a medium-size power plant producing both electrical power and thermal energy at the same time. At the plant, primary energy is converted to electrical power and the thermal energy which will become useful heat energy within the same process according to thermodynamics.

Power plants of this type are EGCO Cogen Power Plant, GCC Power Plant, NKCC Power Plant and SCC Power Plant.

5. A renewable energy power plant uses non-conventional energy such as wind energy, solar power, mini hydro and geothermal power. It can also use agricultural waste or waste materials, waste from agricultural or industrial product manufacturing, products made from agricultural waste or waste materials, garbage, woods from reforestation for fuel, or waste fuel, for example, steam left from the manufacturing process of industrial or agricultural products such as heat exhaust gases, or by-product energy such as dynamic power which is a product from reducing the pressure of natural gas.

Power plants under this type are Roi-Et Green Power Plant where rice husk is used as fuel, GYG Power Plant where parawood is used as fuel, GIDEC where waste is used as primary fuel, NED, GPS, Solarco, SPP 2, SPP 3, SPP 4, and SPP 5 using solar power, Theppana Wind Farm and Boco Rock Wind Farm using wind power, and SEG (Star Energy Geothermal) using geothermal power.

B. Tariff Rate

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

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

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

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

1. Capacity payment is based on the monthly contracted capacity and charged on each customer regardless of whether such customer actually buys electricity or not. However, the capacity payment applicable to EGAT is different from that applicable to customers in general. The capacity payment in case of EGAT is

based on its long run avoided capacity cost due to its purchase of power from SPPs while that applicable to customers in general is calculated from contracted capacity that varies to the tariff structure of PEA.

2. Energy payment is the payment for the actual net electrical output. Energy payment charged on EGAT covers variable operating cost while that applicable to customers in general is charged according to the tariff structure of PEA.

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

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

Overseas Group

1. The Philippines

Power tariff to be charged from Meralco is divided into 4 main components as below:

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

The tariff charged under the specified formula is calculated partially on USD and partially on Peso.

2. Laos PDR

Power tariff to be charged from EGAT is divided into 2 components as below:

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

3. Indonesia

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

4. Australia

Power tariff is paid by EnergyAustralia to Boco Rock wind farm divided into 2 components as below:

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

C. Rights and Privileges

In addition to the PPA with EGAT and PEA, the Board of Investment also granted the tax privileges to all IPPs and SPPs in the Group with significant information as follows:

Privileges

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

Conditions:

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

Tax privileges to all IPPs are detailed as follows:

Power Plant	Promotion Certificate	Date of Promotion Granted	Privileges	Registered Capital of at Least	Location
KEGCO	No. 1742/1996 dated November 6, 1996	September 26, 1996	September 26, 1996-September 25, 2004	4,710 million baht	Nakorn Si Thammarat Province
BLCP	No. 1499/2000 dated August 21, 2000	October 1, 1998	October 1, 2006-September 30, 2014	12,000 million baht	Rayong Province
GPG	No. 1660(2)/2005 dated July 25, 2005	June 3, 2005	November 3 2006-November 2, 2014	1,850 million baht and shall increase the registered capital of at least Baht 9,030 million	Saraburi Province

Tax privileges to all SPPs are detailed as follows.

Power Plant	Promotion Certificate	Date of Promotion Granted	Privileges	Registered Capital of at Least	Location
EGCO Cogen	No. 1230/1999 dated June 7, 1999 and the revised version No. 5106/2000 (2-1230/2000, 6379/2002), (3-1230/1999), and 6753/2002 (411230/2002) dated May 31, 2000, October 3, 2002 and November 2002, respectively	January 10, 2003	January 10, 2003-January 9, 2011	Not less than 1 million baht and shall pay up the full amount of register capital of not less than 1,200 million baht before commercial operation date.	Rayong Province
Roi-Et Green	No. 1660(1) 2001 dated October 19, 2001 and revised version No. 6871/2003 (2-1660 (1) 2001) dated November 7, 2003	April 25, 2003	April 25, 2003 - April 24, 2011	Not less than 180 million baht and shall pay up the full amount of registered capital before commercial operation date	Roi-Et Province
GCC	No. 1279/1997 dated May 2, 1997 and 3 revised versions - No. 4553/1999 (2-1279/1997) dated April 8, 1999 - No 6013/1999 (3-1279/1997) Dated December 2, 1999 - No. 5279/2000 (4-1279/1997) dated June 20, 2000	July 21, 1998	July 21, 1998- July 20, 2004	N/A	Saraburi Province
NKCC	No. 1594/1998 dated December 28, 1998 and a	June 1, 2000	June 1, 2000- May 31, 2008	N/A	Saraburi Province

Power Plant	Promotion Certificate	Date of Promotion Granted	Privileges	Registered Capital of at Least	Location
	revised version, No. 4735/2001 (2-1594/1998) dated March 7, 2001				
SCC	No. 1761/1998 dated December 15, 1998 and a revised version, No. 4100/2001 (2-1761/1998) dated January 17, 2001	April 1, 1999	April 1, 1999 – March 31, 2007	N/A	Samutprakarn Province
GYG	No. 1549(2)/2004 dated July 9, 2004	November 7, 2007	November 7, 2004-November 6, 2014	Not less than 1 million baht	Yala Province
NED (LSP)	No. 1443(1) 2553 dated April 12, 2010	March 10, 2010	December 22, 2011 - December 23, 2019	Not less than 1,990 million baht	Lopburi Province

Tax privileges to all VSPPs are detailed as follows.

Power Plant	Promotion Certificate	Date of Promotion Granted	Privileges	Registered Capital of at Least	Location
SPP2	No. 1502(1)/2011 dated April 26, 2011	May 7, 2010	May 2, 2012 - May 3, 2020	Not less than 196.7 million baht	Saraburi Province
SPP3	No. 1503(1)/2011 dated April 26, 2011	May 7, 2010	February 21, 2012 - February 22, 2020	Not less than 197.5 million baht	Srisaket Province
SPP4	No. 1504(1)/2011 dated April 26, 2011	April 27, 2010	January 24, 2012 - January 25, 2020	Not less than 148.7 million baht	Srisaket Province
SPP5	No. 1505(1)/2011 dated April 26, 2011	May 7, 2010	June 22, 2012 - June 23, 2020	Not less than 198.4 million baht	Saraburi Province
GPS	No. 1883(1)/2011 dated June 28,	March 22,	March 1, 2012 -	Not less than	Nakhon Sawan

Power Plant	Promotion Certificate	Date of Promotion Granted	Privileges	Registered Capital of at Least	Location
(Ta Khit)	2011	2011	March 2, 2020	750 million baht	Province
GPS (Ta Sang)	No. 1884(1)/2011 dated June 28, 2011	March 22, 2011	March 2, 2012 - March 3, 2020	Not less than 750 million baht	Nakhon Sawan Province
GPS (Dong Khon)	No. 1882(1)/2011 dated June 28, 2011	March 22, 2011	March 5, 2012 - March 6, 2020	Not less than 750 million baht	Chai Nat Province
GPS (Bueng Sam Phan)	No. 1881(1)/2011 dated June 28, 2011	March 22, 2011	February 1, 2013 - February 2, 2021	Not less than 750 million baht	Petchaboon Province
NED (WSP)	No. 1142(1)/2011 dated February 3, 2011	July 9, 2010	May 1, 2012 - May 2, 2020	Not less than 2,281 million baht	Lopburi Province
Theppana	No. 2499(1)/2012 dated October 10, 2012	June 26, 2012	July 18, 2012 - July 19, 2020	Not less than 114 million baht	Chaiyaphum Province
Solarco (Sai Yai 1)	No. 1181(1)/2013 dated February 5, 2013	December 26, 2012	November 18, 2013 - November 19, 2021	Not less than 825 million baht	Nakhon Pathom Province
Solarco (Sai Yai 2)	No. 1182(1)/2013 dated February 5, 2013	December 26, 2012	November 18, 2013 - November 19, 2021	Not less than 825 million baht	Nakhon Pathom Province
Solarco (Sai Kyo)	No. 1183(1)/2013 dated February 5, 2013	December 26, 2012	December 16, 2013 - December 17, 2021	Not less than 825 million baht	Suphan Buri Province
Solarco (Sai Phet 1)	No. 1184(1)/2013 dated February 5, 2013	December 26, 2012	December 16, 2013 - December 17, 2021	Not less than 1,650 million baht	Nakhon Pathom Province
Solarco (Sai Phet 2)	No. 1185(1)/2013 dated February 5, 2013	December 26, 2012	December 16, 2013 - December 17, 2021	Not less than 1,650 million baht	Nakhon Pathom Province
Solarco	No. 1186(1)/2013 dated February 5,	December 26,	November 18, 2013 -	Not less than 1,650 million	Nakhon Pathom

Power Plant	Promotion Certificate	Date of Promotion Granted	Privileges	Registered Capital of at Least	Location
(Sai Phet 3)	2013	2012	November 19, 2021	baht	Province

D. Process

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

1) Capacity, Net Generation and Capacity Factor

The capacity, net generation and capacity factor of IPPs during 2012-2014 is as shown below:

	Units	2015	2014	2013
KEGCO				
Available capacity ^{/1}	Million kWh	6,360	5,407	5,711
Dispatching net generation ^{/2}	Million kWh	4,778	5,257	5,188
Capacity Factor (%)	%	75.13	97.24	90.84
Increasing rate of net generation (%)	%	(9.11)	1.34	(2.30)
BLCP				
Available capacity ^{/1}	Million kWh	11,084	10,776	10,841
Dispatching net generation ^{/2}	Million kWh	10,784	10,825	10,157
Capacity Factor (%)	%	97.81	100.46 ^{/3}	93.69
Increasing rate of net generation (%)	%	(0.38)	6.58	(5.68)
GPG				
Available capacity ^{/1}	Million kWh	12,471	11,942	12,529
Dispatching net generation	Million kWh	5,073	6,150	9,323
Capacity Factor (%)	%	40.68	51.50	74.41
Increasing rate of net generation (%)	%	(17.51)	(34.03)	(14.06)

Notes

^{/1} Available capacity of each plant in each year is calculated from the total number of hours deducted by the number of hours of planned maintenance outage.

^{/2} Dispatching net generation in each year depends on the generating availability of the plant and the order from the control center of EGAT based on the electricity requirement at each period of time.

2) **Raw Material**

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

(1) **Natural gas**

Natural gas is a primary fuel used for both thermal and combined cycle plants. Under the PPAs, EGAT will initially procure natural gas for KEGCO, the payment shall be made by EGAT directly to PTT Public Company Limited (“PTT”). The heat rate in the power generation must not exceed that specified under the PPAs. In case the actual heat rate is higher than the specified rate, the company has to bear the increase of the natural gas cost. Once it directly enters into fuel supply agreements with PTT, it would be responsible for the payment for the natural gas and pass it on to EGAT through the calculation formula of energy payment.

PTT is a fuel supplier for GPG Power Plant with the contracted amount and price as indicated in the Fuel Supply Agreement between PTT and GPG. The fuel cost will be passed through in the Energy Payment based on the contracted heat rate as stated in the PPA with EGAT

(2) **Coal**

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

(3) **Heavy oil**

The Khanom power plant (KEGCO) will use heavy oil as primary fuel instead of natural gas for its Barges 2 power plant. The natural gas is used when the usual primary fuel is insufficient. The plant reserves heavy oil for serving 7 days of full generation.

(4) **Diesel oil**

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

(5) **Water**

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

KEGCO’s primary source of water used in the thermal plant comes from Ban Klang canal and the secondary source comes from Tha Tok canal. A reservoir had been built to accommodate water reserve of 0.4 million cubic meters upon area of 111 rai 3 ngan 42 square wah along the Ban Klang canal, about 10 kilometers.

from the power plant, which can well cope with shortage of water during dry season. Moreover, the additional reservoir, Ban Bang Koo, was located 6 kilometers from the plant with the capacity of 0.4 million cubic meters upon area of 114 rai 1 ngan 19.10 square wah.

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

GPG’s primary source of water used in the power plant comes from Pasak River. A reservoir has also been built to accommodate water reserve of 1.3 million cubic meters upon area of 120 rai. Within this reserved capacity, the power plant is able to sustain its normal operation for 30 days. Moreover, GPG has water treatment plant to produce tap water with the capacity of 54,413 cubic meters per day.

(6) Chemicals

Most chemicals used in power plants are for improving water quality, such as, hydrazine for boilers, and hydrochloric acid (HCL), sulfuric acid (H_2SO_4) and sodium hydroxide (NaOH) for use in regenerating resin and treating wastewater, as well as polyaluminium chloride (PAC) and ferric chloride ($FeCl_3$) for tap water system.

2.1.2 Other Businesses

There are 5 companies in other business group of EGCO comprises 2 operation and maintenance companies, being EGCO Engineering & Service Co., Ltd. (“ESCO”) and Pearl Energy Philippines Operating, Inc. (“PEPOI”); a management service company, being Quezon Management Services Inc. (“QMS”); a water supply company, being Eastern Water Resources Development and Management Public Co., Ltd. (“East Water”); and a coal mining company, being PT Manabung Maura Enim Co., Ltd. (“MME”).

1) Service Business – ESCO and PEPOI

A. ESCO

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

Service

Power Plant Operation and Maintenance Services (O&M)

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

Maintenance Services

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

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

Engineering & Construction Services

ESCO has a qualified team of engineer to provide services on civil, mechanical, electrical and control and the testing and installation. The particular strength lies in installation and conducting test on power plant main system such as gas turbine, steam turbine, generator, HRSG, boiler and balance of plant. ESCO services also cover turnkey of small to medium projects such as pumping stations and power distribution substations.

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

B. PEPOI

EGCO 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.

2) Management Services Business for Power Plant – QMS

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

3) Water Business - East Water

EGCO holds shares in Eastern Water Resources Development and Management Public Company Limited (“East Water”). At the end of December 31, 2015, EGCO holds 18.72% of shares in East Water which is responsible for supplying raw water in the Eastern Seaboard of Thailand covering 7 provinces namely, Rayong, Chonburi, Chachoengsao, Prachinburi, Srakaew, Chantaburi and Trad.

4) Coal mining company - MME

EGCO indirectly holds 40% stake in MME, which owns and operates a coal mining project (an open-pit mine), located in Muara Enim, South Sumatra, Indonesia. It is awarded a concession agreement from Indonesian government for 28 years since March 2010 to March 2038. It has mineable coal reserves of 140 million tons.

2.2 Marketing and Competition

Electricity

1) Electricity generating and transmission system

EGAT is responsible for electricity generation and transmission to respond to demand countrywide. It has its own power plants for power generation and also purchases power supply from private producers, Lao PDR and Malaysia. It then sells electricity to Metropolitan Electricity Authority (MEA), Provincial Electricity Authority (PEA), and other direct customers (some industrial plants designated by the Royal Decree). EGAT dispatches electricity through high-voltage power stations. MEA and PEA will undertake the distribution and retailing to the general public. Electricity is purchased from EGAT at the interconnection point and then transmitted to substations for further distribution to consumers.

At present, EGAT's power plants have total capacity of 15,518.13 MW scattering in many regions across the country. Most of them are combined cycle power plants and the second and the third are thermal power plants and hydroelectric power plants respectively.

Since 1992, the government has encouraged private sector to take part in electricity generating. The National Energy Policy Council approved the establishment of Electricity Generating Co., Ltd. (EGCO) and the regulations for the purchase of power from Small Power Producers (SPP) as well as policy regarding the purchase of power from Independent Power Producers (IPP). Power purchase from SPPs and IPPs helps relieve EGAT's investment burden in power generating facility. EGAT holds 25.41% of EGCO's outstanding shares.

2) **Power Generation Situation**

(1) Power Purchase from IPPs

The Power Development Plan VII ("PDP VII") has allowed the private sector's investment in power generation under the IPP scheme. The IPPs can submit their own proposals thereby competition is encouraged in respect of technology, location, generation source, type of fuel used, and power tariff.

List of IPPs that have been under commercial operation in 2015 are shown below:

IPP	Installed capacity (MW)	Fuel
1. Electricity Generating PCL.		
- Khanom Electricity Generating Co., Ltd.	748.20	Heavy oil, Natural gas
2. Ratchaburi Electricity Generating Holding PCL	3,481.00	Heavy oil, Natural gas
3. Global Power Synergy Co., Ltd.	700.00	Natural gas
4. Ratchaburi Electricity Generating Co., Ltd (TECO)	700.00	Natural gas

IPP	Installed capacity (MW)	Fuel
5. Glow IPP Co., Ltd.(BOWIN)	713.00	Natural gas
6. Eastern Power & Electric Co., Ltd.	350.00	Natural gas
7. BLCP Power Co., Ltd. (EGCO investment 50%)	1,346.50	Coal
8. Gulf Power Generation Co., Ltd. (EGCO investment 50%)	1,468.00	Natural gas
9. Ratchaburi Power Co., Ltd.	1,400.00	Natural gas
10. GHECO-One Co., Ltd.	660.00	Coal
11. Gulf JP NS Co., Ltd.	1,600.00	Natural Gas
12. Gulf JP UT Co., Ltd	1,600.00	Natural Gas
Total	14,766.70	

(2) Power Purchase from SPPs

Electricity generated by SPPs is partially for in-plant utilities or for sale to nearby industries, and the remaining portion of 10-90 MW is sold to EGAT. Most SPP power plants mainly use cogeneration system which provided higher efficiency in electricity generation and produce both electricity and steam. The main fuels are natural gas and coal, or renewable energy such as agricultural residue (biomass), waste and biogas. Moreover, power purchase from solar and wind also helps lead to clean electricity generation. In 2015, there are SPPs with total contracted capacity of 5,143.52 MW under firm type basis.

(3) Thailand's total capacity

As of December 31, 2015, the total capacity of the Thailand's power system accounted for 35,814.95 MW, coming from:

Power plant	Installed capacity (MW)	Fuel
1. Total capacity of EGAT Plc.	15,518.13	Heavy oil, Natural Gas, Diesel, Coal
2. Independent Power Producers	14,766.70	Heavy oil, Natural gas, Coal
3. Small Power Producers – Firm type	5,143.52	Heavy oil, Natural gas, Coal
4. Foreign Country		
- Hydroelectric Power Plant: Theun – Hin Bun	434.00	Hydro
- Hydroelectric Power Plant: Huay Hoh	126.00	Hydro
- Hydroelectric Power Plant: NT2 (EGCO holds 35%)	948.00	Hydro
- Hydroelectric Power Plant: Nam Ngum 2	596.60	Hydro
- Coal fired Power Plant: Hongsa	982.00	Coal
- Thailand-Malaysia Transmission Lines	300.00	-
Total installed capacity	38,814.95	

Source: EGAT

(4) **Total of Power Demand**

4.1 Statistics of Power Demand

Peak load demand is the maximum power required in the system during the day in each year, and electricity generation refers to total units of electricity generated in a calendar year. Both values depend on weather condition, period of power consumption, number of consumers, economic condition, etc. The historical data of Peak load demand and electricity generation are summarized in the table below:

Fiscal year	Peak Load Demand			Electricity Generation		
	MW	Increase (Decrease)		Million units	Increase (Decrease)	
		MW	%		Million units	%
2000	14,918.30	1,205.90	8.79	96,780.72	6,366.73	7.04
2001	16,126.40	1,208.10	8.10	103,165.20	6,384.48	6.60
2002	16,681.10	554.70	3.44	108,382.46	5,217.26	5.06
2003	18,121.40	1,440.30	8.63	116,669.98	8,280.70	7.64
2004	19,325.80	1,204.40	6.64	127,756.41	11,086.43	10.22
2005	20,537.50	1,211.70	6.26	134,893.25	9,097.85	5.58
2006	21,064.00	526.50	2.57	142,112.18	7,218.93	5.35
2007	22,586.10	1,522.10	7.22	146,884.92	4,772.74	3.35
2008	22,568.20	(17.90)	(0.08)	148,435.98	1,551.06	1.05
2009	22,044.90	(523.30)	(2.32)	145,214.62	(3,221.36)	(2.17)
2010	24,009.90	1,965.00	8.91	160,138.47	14,924.91	10.28
2011	23,900.21	(109.68)	(0.46)	158,899.80	(1,238.67)	(0.77)
2012	26,121.10	2,220.89	9.29	173,133.02	14,233.22	8.96
2013	26,598.14	477.04	1.83	173,142.35	9.33	0.00
2014	26,942.10	343.96	1.29	177,199.33	4,056.98	2.34
2015	27,345.80	403.70	1.50	183,074.96	5,875.63	3.32

Source: EGAT

4.2 Power Demand Forecast

Power Demand can be forecasted based on possession and power consumption of electrical appliances (end use). This requires a large amount of information, on macro-level, e.g., economic growth, population size, number of households, government's principle in power, etc. and micro-level, e.g. power consumption to value added of small business and industries, type of residence, income level, consumption and efficiency of electrical appliances, applications for power consumption and investment promotional privileges, power consumption to facility service areas, temperature, etc.

Power demand is identified in two terms, i.e. energy demand and peak load demand. Forecast of energy demand takes into account the above information with mathematical models applied. Meanwhile, peak load demand forecast is figured out by considering the derived energy demand forecast together with nature of consumption by each user.

4.3 Dependable Capacity

Dependable capacity refers to the maximum generating capacity sustained by the system in a period of time under circumscribed environment. Dependable capacity of hydroelectric power plants is the electricity generating capacity with reservoir water availability and past water supply statistics taken into account. Dependable capacity of thermal power plants is the electricity generating capacity when taking into account various circumstances and their constraints, which can hinder thermal plants' achievement of their full electricity generating capacity.

4.4 Reserve Margins

Reserve Margins come from the event when dependable capacity is higher than peak load demand. In calculation term, it is the difference between dependable capacity and peak load demand divided by peak load demand, expressed in percentage. In general, EGAT will maintain the reserve margin at 15% to ensure adequate generating capacity.

The following table presents EGAT's reserve margin during fiscal years of 1998-2003, the country's power demand was high thereby the reserve margin in the system falling below the level to be maintained by EGAT. In 1998, due to the economic meltdown and baht volatility, several businesses had to close down or suspend their production and expansion indefinitely. As such, domestic power demand consumption dropped sharply resulting in increase in reserve margins. To contain the excessive reserve margins, EGAT negotiated with SPPs and IPPs for their postponement of power plant construction for 1-4 years and revised the power generating capacity development plan by postponing the projects, which have not yet begun their construction and temporarily shut down some power plants (cold standby). In 2015, EGAT could maintain its reserve margin at 27.46%.

Fiscal year	Reserve Margins on Peak Day	
	MW	%
2000	3,284.80	22.02
2001	4,960.40	30.76
2002	4,585.30	27.49
2003	6,364.70	35.12
2004	4,740.50	24.53
2005	5,100.20	24.83
2006	4,655.00	22.10
2007	4,616.80	20.44
2008	6,728.02	29.81
2009	6,085.41	27.60
2010	6,022.13	25.08
2011	7,460.05	31.21
2012	4,010.32	15.35
2013	5,338.75	20.07
2014	4,597.98	17.07
2015	6,969.43	25.49

Source: EGAT

4.5 Thailand Power Development Plan (PDP)

The country's power development plan (Power Development Plan: PDP) is a master plan substantially focused on security and adequacy of power system along with the policies of the Ministry of Energy (MoEN) on the aspects of economy, society and ecology concern such as economic growth, fuel diversification, energy efficiency and renewable energy promotion. The plan will be reviewed periodically or every 1-2 years.

On June 30, 2015, the Cabinet approved Thailand's Power Development Plan of 2015-2036 (PDP 2015) which has been prepared to cope with the forecasted electricity demand. PDP 2015 has prioritized three issues as the following:

1. Energy Security
2. Economy
3. Ecology

Moreover, the themes of the PDP2015 emphasize on improving power system reliability by reducing dependence on natural gas power generation, increasing a share of coal power generation via clean coal technology, importing power from neighboring countries, and developing renewable energy. In addition, the plan aims on transmission and distribution system development in order to support for renewable energy development and ASEAN Economic Community (AEC).

4.6 Power Industry in Central Region

The central region of EGAT system, covering 22 provinces in four main areas:

- 1) Bangkok outskirts and nearby provinces
- 2) Eastern area
- 3) Western area
- 4) Lower central area

At present, the generating capacity of the central region derives from EGAT's power plants and other large private producers that EGAT has purchased electricity from. Besides, there is supplementary capacity from North Bangkok power plant and transmission facilities from the northern region. As of December 31, 2015, the generating capacity of the Central region is 27,139.85 MW, consisting of:

Total generating capacity of EGAT	8,508.13	MW
Ratchaburi Electricity Generating Holding PCL	3,481.00	MW
Global Power Synergy PCL	700.00	MW
Tri Energy Co., Ltd. (TECO)	700.00	MW
Glow IPP Co., Ltd. (Bowin)	713.00	MW
Eastern Power & Electric Co., Ltd.	350.00	MW
BLCP Power Co., Ltd.	1,346.50	MW
Gulf Power Generation Co., Ltd.	1,468.00	MW
Ratchaburi Power Co., Ltd.	1,400.00	MW
GHECO-One Co., Ltd.	660.00	MW

Gulf JP NS Co., Ltd.	1,600.00	MW
Gulf JP UT Co., Ltd.	1,600.00	MW
Small Power Producers	4,613.22	MW
Total power generating capacity	<u>27,139.85</u>	MW

4.7 Power Industry in Southern Region

Power generating capacity in the southern region comes principally from EGAT's power plants, KEGCO and transmission network connecting to the central region. There is also supplementary capacity during peak period from Bang Lang and Ratchaprapa Hydroelectric Plants. In addition, the southern power network also links with that of Malaysia to allow for their power exchange in case of emergency or necessity.

Power generating capacity in the south as of December 31, 2015 was 3,207.69 MW:

Total generating capacity of EGAT	2,130.49	MW
Thailand-Malaysia Transmission Lines	300.00	MW
KEGCO	748.20	MW
Small Power Producers	29.00	MW
Total power generating capacity	<u>3,207.69</u>	MW

3) EGCO's Power Generation Situation

As of December, 31 2015, EGCO has 23 operating plants with capacity totaling 3,948.81 equity MW, of which 2,739.65 equity MW is dispatched to EGAT under long-term PPAs which is equal to 7.06% of the total capacity of 38,814.95 MW sold to EGAT. Additionally, some of EGCO's power plants generate and supply their electricity to Provincial Electricity Authority (PEA) accountable for the capacity of 88.32 equity MW.

Power Plant	% of Shareholding	Installed Capacity (MWe)	Contracted Capacity with EGAT (MW)	% of Contracted Capacity to EGAT
IPP				
1. Khanom Electricity Generating Co., Ltd.	100.00	759.00	748.20	27.31
2. BLCP Power Co., Ltd.	50.00	717.00	673.25	24.58
3. Gulf Power Generation Co., Ltd.	50.00	755.00	734.00	26.79
		2,231.00	2,155.45	78.68
SPP				
4. EGCO Cogeneration Co., Ltd.	80.00	93.60	48.00	1.75
5. Roi-Et Green Co., Ltd.	70.30	6.96	6.19	0.23
6. Gulf Cogeneration Co., Ltd.	50.00	55.00	45.00	1.64
7. Samutprakarn Cogeneration Co., Ltd.	50.00	63.00	45.00	1.64
8. Nong Khae Cogeneration Co., Ltd.	50.00	63.00	45.00	1.64
9. Gulf Yala Green Co., Ltd.	50.00	11.50	10.10	0.37
10. Natural Energy Development Co., Ltd.	66.66	42.00	36.66	1.34

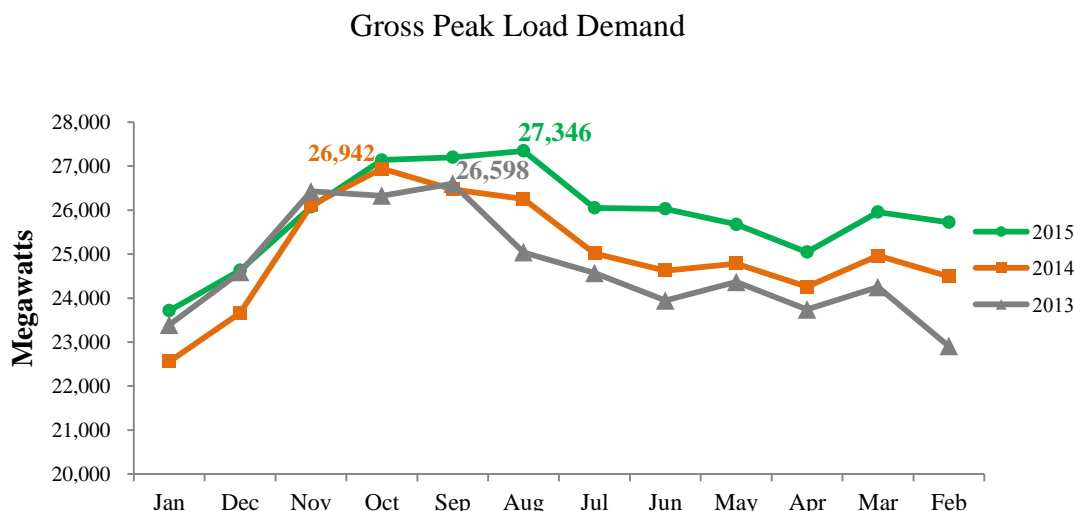
Power Plant	% of Shareholding	Installed Capacity (MWe)	Contracted Capacity with EGAT (MW)	% of Contracted Capacity to EGAT
		335.06	235.95	8.61
VSPP				
11. SPP Two Co., Ltd.	100.00	8.00	-	-
12. SPP Three Co., Ltd.	100.00	8.00	-	-
13. SPP Four Co., Ltd.	100.00	6.00	-	-
14. SPP Five Co., Ltd.	100.00	8.00	-	-
15. G-Power Source Co., Ltd.	60.00	15.60	-	-
16. Theppana Wind Farm Co., Ltd.	90.00	6.75	-	-
17. Solarco Co.,Ltd.	49.00	27.93	-	-
18. GIDEC Co.,Ltd.	50.00	3.25	-	-
		83.53	-	-
Foreign Country				
19. Nam Theun 2 Power Co., Ltd.	35.00	380.38	348.25	12.71
20. Quezon Power (Philippines) Limited Co.	100.00	502.50	-	-
21. Masinloc Power Partner Co., Ltd.	40.95	257.94	-	-
22. Star Energy Geothermal Co., Ltd.	20.00	45.40	-	-
23. Boco Rock Wind Farm Pty Ltd.	100.00	113.00	-	-
		1,299.22	348.25	12.71
Total		3,948.81	2,739.65	100.0

2.3 Competitive Situation

EGCO is the first IPP company which generates electricity from various sources of fuel namely natural gas, coal, oil, biomass, hydro power, solar power and wind to help stabilize the nation's electricity system. EGCO is a holding company with EGAT as the major shareholder with 25.41% of shares, followed by both domestic and international investors. Its main source of revenue is from the dividend income from subsidiaries and share profits that focus on long-term development project. It has signed the power purchase agreement which are located in domestic and Asia Pacific as well as other related business.

(1) Demand, Supply and the Impact of Business Growth

Net Peak Generation Requirement on EGAT system, The net peak generation requirement in 2015 occurred on June 11, 2015, at 2.02 p.m, reaching 27,346 MW, accounting for 1.50% higher than in 2014 which was at 26,942 MW. In this regard, the Peak Demand will determine the amount of power generation and the construction of power plant. In the other hand, to support the Peak Demand, EGCO has studied and applied for implementing our business strategy.



Source: EGAT, 2015

(2) Market Situation and Competitive Capabilities of Market Segment

Market Situation

With the government economic stimulus policy which supports both public and private sector investments, and in the advent of ASEAN Economic Community (AEC), resulting to electricity purchase trends to increase forward. In the meantime, PDP 2015 promotes renewable energy investments, to prompt power producers for both large and small scale, to diversify their investments more into renewable energy. Coupled with increasing limitation in construction of large power plants in the country, higher competition is evident in domestic electricity generation business.

On the other hand, the competition and market in Asia-Pacific countries where EGCO has consistently kept abreast of electricity industry situation in those targeted countries in the future can be summarized as the following;

Lao PDR:

Hydropower plant is a potential investment in Lao PDR, which has abundant water resource. The country's mountainous geography makes it suitable for construction of hydroelectric dams. Moreover, the government of Laos has a policy of drawing investments in hydropower plants from private sectors, both domestically and overseas, in its efforts toward being Battery of Asia by 2020. Electricity generated by the Company's power plant in Lao PDR can also be distributed to Thailand, thus helping step up electricity reliability.

Myanmar:

After Myanmar's reform since 2011 and changes in investment policies with increasing incentives to attract foreign investments since 2012, the government has drawn up a 5-year social and economic development framework focusing on concurrent developments in all areas, especially electricity to serve as infrastructure to continuing investments. Moreover, Myanmar has such strong

fundamentals as abundant natural resources, energy related resources in particular. Therefore, Myanmar has planned to level up the country's installed capacity of electricity to approximately 15,000 megawatts by 2030 from the existing capacity of approximately 4,600 megawatts.

Philippines:

Electricity consumption of the Philippines is forecast to increase by an average of 5.7% during 2015-2020. The investments will be emphasized in coal-fired power plants despite protests from the community. Moreover, the Philippine Department of Energy has continuously pushed for investments in renewable energy with a target to triple the renewable energy capacity by 2030, with focus on hydropower and geothermal energy. Investment in energy storage technology, which is a technology employed to enhance reliability and flexibility of renewable energy, still has promising growth prospects in the Philippines.

Indonesia:

The Indonesian government has laid down a plan to expand its electricity generating capacity by 35,000 megawatts in the next five years (2015-2019) to cope with future power shortage. Of the total capacity increase, 25,000 megawatts would be open for investors' bidding for which the government would introduce certain regulations that would facilitate and accelerate the process. The government also has a fuel diversification plan in place to cut down utilization of natural gas viewing that natural gas reserves are on a decline, and to elevate utilization proportion of renewable energy targeted at 19% by 2020. Emphasis is placed mainly on development of hydropower and geothermal power generation as Indonesia has high potential geothermal sources in abundance.

Australia:

Renewable energy generating capacity under Australia's promotion policy has been decreased to be 33,000 gigawatt-hours by 2020 (formerly targeted at 41,000 gigawatt-hours). Despite such decrease, an additional generating capacity of 5,500 megawatts is still required to achieve the adjusted target. Moreover, it is forecast that by 2023, the generating capacity will increase by 20.4%, totaling electricity demand of 267.0 terawatt-hours. Highest growth will be seen in renewable energy, coal, and natural gas.

However, competition in electricity industry in Australia has remained keen as resulted from excess in the installed capacity and entry of new competitors, as well as uncertainty in the government policy to promote Renewable Energy Target (RET), hence direct impact on Australia's investment direction and project development in future.

Vietnam:

According to power master plan VII, Vietnam's electricity generating capacity is forecast to increase to 75,000 megawatts and 146,800 megawatts in 2020 and 2030 respectively. One half of such generating capacity will come from coal-fired power plants. Furthermore, Vietnam has planned to introduce the first nuclear power plant in Southeast Asia and develop the first offshore windmill farm in Asia.

The country's industrial sector is the largest power user, representing 44% of the generating capacity, followed by transportation sector 29.7% and households 16.2%. With its development policy moving toward becoming a new industrialized country, the government believes that the industrial sector will further expand and accordingly raise power demand forward.

Malaysia:

Malaysia's power generation and peak demand are forecast to grow by 2.9% and 2.8% on average respectively, with generating capacity raised to 37,200 megawatts by 2020, coming from coal-fired power plants and Sarawak power plant. Utilization of renewable energy tends to increase in proportion due to its low cost and environmental friendliness. Moreover, Malaysia has launched a nuclear power plant development plan, targeted to generate nuclear power at 10% in 2025.

Malaysia and Thailand have collaborated in power generation with power purchase agreement at around 330 megawatts for Southernmost Thailand and Malaysian border areas.

India:

The government of India gives importance to solar power generation development by allocating a budget of USD 100,000 million to support foreign investment and increase the solar power generation to 100 gigawatts by 2022. This is expected to serve electricity demand in the industrial sector, business sector, and over 30,000 villages in need of electricity across the country.

It is evident that electricity demand in Asia-Pacific region is on a rising trend. Many countries have established fuel diversification plans for power generation by switching more to renewable energy sources. This allows EGCO to explore prospective investment opportunities in the region toward achieving its major investment targets.

(3) Competitive Capabilities

In 2015, EGCO was successful in implementation of three development projects as below:

- On February 4, 2015, EGCO acquired additional shares by 33.33% in Natural Energy Development Co., Ltd. (NED) from Diamond Generating Asia, Limited (DGA), resulting in EGCO's current shareholder proportion of 66.67% in NED.
- On May 20, 2015, Energy Regulatory Commission of the Philippines issued a letter to approve a 455 megawatts power supply agreement between San Buenaventura Ltd. Co. (SBPL) and Manila Electric Company (MERALCO).
- On October 1, 2015, EGCO indirectly acquired additional shares in Quezon Power (Philippines), Limited Co. (QPL) by 2%, thus bringing EGCO's current shareholder proportion in QPL to 100%.

Acquisition of additional shares has enabled EGCO to not only recognize income immediately but also creates value added to the Company in a long run which is in line with its business strategy. EGCO's investments will focus on power plants with long-term power supply agreements in hand in order to mitigate risks related to future possible income and cash flow. As well as based on the following contributing factors, EGCO hence maintains its competitiveness in the market.

- **Human resources**

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

- **EGCO Reliability and investment projects**

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 can impact on communities nearby the power plants, EGCO operates its business with due regard for possible impacts on nearby communities. The Company discloses factual information without concealment, and encourages appropriate participation of 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.

2.3.2 Other Businesses

1. Service Business - ESCO

ESCO has the highest market shares of around 90% for the SPP maintenance segment. This was because the power plant maintenance work requires high expertise as the equipment is of high price. The players in this market then are EGAT, OEM and ESCO. With the customers' trust in ESCO services, ESCO could attract and retain both existing and new customers who tend to be more interested in entering into a long term contract. For other maintenance work such as that of the industrial and petrochemical plants, ESCO still has to compete with other service providers. However, the market share is increasing.

With regard to the O&M service, the market is still limited as most private power producers still prefer to use their own workforce. For the engineering and construction, ESCO is competitive in term of financing apart from the qualified workforce.

2. Water Business – Egcom Tara

Since Egcom Tara supplies tap water to the PWA under the 30-year contract, there is no competition. Egcom Tara focuses on maintaining the quality of water to meet the standard which was certified by TIS and the Health Department, Ministry of Health as drinkable tap water. In addition, Egcom Tara commits to ensure that its production is environmental friendly without any pollution. Due to its contribution to maintain a good working environment, it also wins the award on “Distinguished Workplace” from the Department of Health.

On August 31, 2015, ESCO divested its shares in Egcom Tara to Eastern Water Resources Development and Management Pcl.

2.4 Undelivered works

There are 7 power plant projects under developing as follows:

Power Plant Project	Province/ Country	Fuel Type	EGCO Shares (%)	Equity Contracted Capacity (MWe)	SCOD
1. Khanom 4	Nakorn Sri Thammarat	Natural Gas	100.00	930.00	2016
2. Chaiyaphum Wind Farm	Chaiyaphum	Wind	90.00	81.00	2016
3. TP Cogen	Ratchaburi	Natural Gas	100.00	113.00	2017
4. SK Cogen	Ratchaburi	Natural Gas	100.00	107.00	2017
5. TJ Cogen	Pathumthani	Natural Gas	100.00	107.00	2017
6. XPCL	Laos PDR	Hydro	12.50	160.00	2019
7. SBPL	Philippines	Coal	49.00	223.00	2019

3. Risk Factors

EGCO realizes that the prudent risk analysis and risk management are crucial in building stakeholders' confidences. To ensure that the corporate risk management is effective, the Board entrusts the Audit Committee to oversee EGCO Group's risk management policies and guidelines while the Management has the responsibility for the implementation and regularly reports to the Audit Committee and the Board.

At the management level, the Risk Management Committee has been set up and comprises EGCO's top executives with the President as the chairman of the Committee. In addition, most of EGCO's invested assets have their own risk management committee to ensure that their particular risks are managed adequately. As part of corporate risk management, the risk factors have been monitored periodically and revised annually.

EGCO incorporates risk management policies in EGCO Group Risk Management Manual which has been published to educate its staffs and to serve as a guideline for EGCO Group's risk management.

A summary of key risk factors and associated mitigation measures is as follows:

1. Investment Expansion Risk

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

1.1 Risk from Project Selection

EGCO plans to expand its investment to maintain continuous growth. Potential projects of both domestic and overseas are listed in the investment plan including expansion in power generation from fossil and renewable energy. Since project selection is very important in making investment decision, EGCO incorporates prudent project selection process that business development units are assigned to be responsible for the project analysis which includes factors on economic, political and social policies of the target countries economic situation, industry, cost of finance, equipment and construction, as well as governing 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.

Moreover, EGCO has due process for investment scrutiny that new investment opportunities are to be reviewed by EGCO Management Committee which comprises EGCO top management as well as the Investment Committee which is the sub-committee of the Board of Directors, to ensure that all material risks are identified and managed before submitting investment opportunities to the Board of Directors for their consideration.

In 2015, EGCO successfully acquired additional shares of 33.33% in Natural Energy Development Company Limited (NED) which increased EGCO's share in NED up to 66.67% of the total shares. EGCO also acquired 2% indirect ownership

interest in Quezon Power (Philippines) Limited Company which, upon the completion of the purchase, made EGCO hold 100% indirect ownership interest in QPL. In addition, the power supply agreement of 455 megawatts between San Buenaventura Power Limited Company (SBPL) and the Manila Electric Company (MERALCO) was approved by the Energy Regulatory Commission of the Philippines on May 20, 2015 and that SBPL has successfully achieved the financial closing on December 1, 2015.

1.2 Risk from Overseas Asset Management

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

EGCO has recruited well experienced personnel for the operation of its overseas assets such as Nam Theun 2 hydropower plant and Quezon power plant. For Boco Rock Wind Farm, EGCO has engaged management team and personnel with highly expertise in Australia's business.

2. Risk from Project Construction

EGCO is well aware of the risk from delays in project construction, which could be caused by contractors or local communities' resistance or natural disaster. 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, securing insurance policies which cover the impact from natural disaster and to have the project management team to closely monitor project progress to ensure project completion as scheduled.

In 2015, EGCO has six projects under construction namely Khanom 4, Chaiphaphum Wind Farm, TJ Cogeneration, TP Cogeneration, SK Cogeneration and Xayaburi. Moreover, Khanom 4 and Chaiphaphum Wind Farm are expected to complete construction and COD in 2016.

3. Operating Risks

3.1 The risk of obtaining lower forecasted earnings than target

EGCO 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 for the follow up and performance monitoring of each invested company including 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 regular reports on joint venture companies' performance to senior management and the Board of Directors to ensure the timely and appropriate actions.
- Coordinate with partners for joint-audit activities in invested companies to ensure the adequacy and effectiveness of internal control system.

In 2015, EGCO has continuously mitigated operating risks as per measures described. As a result, most of EGCO's invested assets generated higher return than target.

3.2 Plant Performance Risks

To fulfill 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 stipulated various plant efficiency indicators such as heat rate and failure to meet these performance requirements would result in higher cost than specified contract. The cause of such risk could be the malpractice in power plant maintenance. Therefore, EGCO set 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 the followings:

- Scheduled inspection and preventive maintenance by skillful staff members.
- Early warning systems for critical information in plant operation.
- Adequate and well managed of plant spare parts.
- Implementation of the quality management system to ensure operating performance and comply with PPA such as ISO: 9001:2008 system at group power plants : Khanom, Gulf Power Generation (GPG), Lopburi Solar Project, SPP Two , SPP Three , SPP Four and SPP Five.
- Capacity building and continuous improvement of personnel.

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, the delay of rainy season which may affect the reserve of raw water. The measures have been set to prevent and mitigate such risks. EGCO Cogeneration power plant, as an example, has its own water reservoir with the volume of 12,000 cubic meters which is sufficient to continuously keep power plant fully operation for 3 days. With those measures, EGCO has no record of water shortage situation.

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 were implemented to prevent and mitigate such risk as follows:

- EGCO Group's coal fired power plants being BLCP, Quezon and Masinloc Power Plants have the 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, 45-day and 25-day continuous operation respectively.
- EGCO Group's biomass power plants using rice husks and parawood 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 15-day and 30-day continuous operations respectively.

3.2.4 Safety, Health, Environment and Social Risk

EGCO realizes that the electricity generation process could incur certain risks on the safety, occupational 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:

- Implement corporate social responsibility schemes under EGCO Group's policies.
- Conform with 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.

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

3.2.5 Risk from Accident, Resistance, and Sabotage

In conducting its business, EGCO may face risks from accident causing fire as well as community resistance by the negative impact from plant operation. Such risks could be caused by the power plant aging condition, personnel's operation, or sabotage event.

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

- Regular communication with staffs to avoid carelessness.
- Schedule routine maintenance 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.

- Secure the insurance policy that covers all risks, machinery breakdown, business interruption and third party liability to assure that loss from damages in the unexpected case would be properly and adequately protected. EGCO procured the political violence insurance policy which covered the effects of loss from terrorism, sabotage, riot, political conflict, revolution and coup d'état, covering majority owned power plants and EGCO head office building.

4. Financial Risks

EGCO Group's investment is capital-intensive. Since the primary 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 will use an appropriated financial instrument i.e. cross currency swap to manage the loan currency to match with the development and construction costs.

4.2 Interest Rate Fluctuation

EGCO Group has a policy to manage interest rate fluctuation by setting the guideline of interest rate exposure mitigation by swapping floating interest rate to fixed interest rate at an appropriate level when the swap market is favorable.

4.3 Cash Management from Overseas Investments

Most of EGCO's revenues are in US dollars resulting in the excess cash from offshore account which may affect the foreign cash management. Nevertheless, such risk is still low because of EGCO's expansion to overseas projects. 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 investments.

5. Corporate Tax Legislation Risk

EGCO prioritizes compliance with corporate tax legislation and planning to ensure that its tax management has due regard to relevant regulations. Currently, EGCO 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 may risk extensive damage to its reputation and operations. Therefore, it is vital for the company to prepare well tax planning and accurate payment schedule in compliance with corporate tax legislation. For new investment, EGCO 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.

6. Compliance Risks

With operation business in both domestic and overseas, EGCO is regulated under various local laws as well as regulations and international laws while failure to comply can affect EGCO Group's operation and its corporate image. Thus, EGCO Group is

well aware and strictly complies with all related laws and regulations, as well as environment laws and SHE regulations while new issues of governing laws and regulations are closely monitored.

In 2015, EGCO Group has no record of failures to comply with related laws and regulations that involves in its business. In addition, EGCO Group has followed up the new laws and regulations to acknowledge all concerned units on the issues and impacts through the legal database for their further compliance.

7. Human Resources Risks

EGCO believes that personnel are most valuable asset and the success factor of the organization. Losing the valuable employees would lead to efficiency impairment and business continuity, not mentioning the increased cost from recruitment, training and development. More importantly, as employees' knowledge and expertise in power business are crucial, thus, losing competent employees is one of EGCO's major concerns. In order to mitigate such risk, EGCO introduces a succession plan program aiming to develop competent employees for succeeding the key positions including the individual development plan and job rotation. Besides, the knowledge sharing and knowledge center through the EGCO Group Net are also provided to ensure that EGCO's personnel have required knowledge and competency which would lead to sustainable growth for the company.

4. Operational Assets

4.1 EGCO Group's operational assets comprises fixed assets and intangible assets as follows.

A. Fixed Assets

The fixed assets of the Company and subsidiaries as at December 31, 2015 comprise the following items.

Items	Value ^{/1} (Million Baht)
1. Land and Building	6,895.77
Less Accumulated Depreciation	(2,008.51)
Total	4,887.26
2. Power Plant and Transmission System	59,734.07
Less Accumulated Depreciation	(17,165.00)
Total	42,569.97
3. Office Equipment and Cars	672.24
Less Accumulated Depreciation	(539.17)
Total	133.07
4. Work under construction	24,937.00

Remark : ^{/1} The number is shown in EGCO Group's consolidated financial statements. EGCO Group has recorded interest in equity method from joint ventures in the financial statements. Therefore, the values of land, buildings and pledged of joint ventures are not shown in the financial statements.

Subsidiaries

Khanom Electricity Generating Company Limited has mortgaged land, buildings, and pledged power plant equipment to secure its long-term loan worth USD 311 million and THB 12,881 million.

SPP Two Company Limited has mortgaged land, buildings, and pledged power plant equipment to secure its long-term loan worth THB 868 million.

SPP Three Company Limited has mortgaged land, buildings, and pledged power plant equipment to secure its long-term loan worth THB 904 million.

SPP Four Company Limited has mortgaged land, buildings, and pledged power plant equipment to secure its long-term loan worth THB 684 million.

SPP Five Company Limited has mortgaged land, buildings, and pledged power plant equipment to secure its long-term loan worth THB 830 million.

Theppana Wind Farm Company Limited has mortgaged land, buildings, and pledged power plant equipment to secure its long-term loan worth USD 4 million and THB 275 million.

Solarco Company Limited has mortgaged land, buildings, and pledged power plant equipment to secure its long-term loan worth USD 35 million and THB 3,960 million.

Quezon Power (Philippines) Limited Company has mortgaged company's assets to secure its long-term loans worth USD 445 million.

Boco Rock Wind Farm Pty Limited has mortgaged company's assets to secure its long-term loan worth AUD 249 million.

Joint Ventures

BLCP Power Company Limited has mortgaged land, buildings, and pledged equipment to secure its long-term loan worth USD 558 million and THB 20,663 million.

Gulf Power Generation Company Limited has mortgaged land, buildings, and pledged equipment to secure its long-term loan worth USD 323 million and THB 16,388 million.

Gulf Cogeneration Company Limited, Nong Khae Cogeneration Company Limited and Samutprakarn Cogeneration Company Limited have mortgaged their land, buildings, and pledged all power plant machinery and equipment including parts of their ordinary shares to secure its loan worth THB 9,900 million.

Gulf Yala Green Company Limited has mortgaged land, buildings, and pledged all power plant machinery and equipment to secure its long-term loans worth USD 23 million and THB 154 million.

Nam Theun 2 Power Company Limited has mortgaged company's assets to secure its long-term loans worth USD 462 million and THB 18,470 million.

Natural Energy Development Company Limited has mortgaged land, buildings, and pledged all power plant machinery and equipment to secure its long-term loans worth THB 5,213 million.

G-Power Source Company Limited has mortgaged land, buildings, and pledged all power plant machinery and equipment to secure its long-term loans worth THB 2,381 million.

PT Manambang Muara Enim has mortgaged company's assets to secure its short-term loans worth IDR 25,000 million.

Masin-AES Pte Ltd has mortgaged company's assets to secure its long-term loans and short-term loans worth USD 531 million and USD 200 million respectively.

Star Energy Geothermal Pte Limited has mortgaged company's assets to secure its long-term bonds worth USD 350 million.

B. Intangible Assets

Concessions (Long-Term Power Purchase Agreement, Power Plant Operation and Maintenance Services)

Right in long-term power purchase and power plant operation and maintenance services (O&M) presents the excess of the cost of an acquisition over the fair value of the Group's share of the net assets of the acquired subsidiary undertaking or joint ventures at the date of acquisition. EGCO Group expected to receive benefits and bonus from the subsidiaries in return. Hence, right in long-term power and O&M services is amortized using the straight-line method over its estimated useful life. Management determines the estimated useful life of long-term power and O&M services within 15-25 years, based on the evaluations of EGAT as well as O&M agreement, respectively.

One of EGCO's intangible assets is a good will which occurred from businesses acquisition. On December 31, 2015, the net good will was worth THB 4,268 million. The asset of acquiring subsidiaries and joint ventures were shown in cash flows from investing activities of consolidated financial statements.

4.2 Investment and Management Policy in Subsidiaries and Joint Ventures

EGCO plans to continue increasing its growths under project development strategies as well as acquiring new projects from private power companies within both domestic and Asia Pacific, primarily focusing on ASEAN. The strategies are based on the appropriate of projects, experiences, and company's proficiency, financial cost under the acceptable level of risk including asset management of operated projects to ensure the returns are as expected. EGCO has identified its key long term objectives as follows.

1. Invest in the business in which EGCO Group has expertise to maximize profit and create growth to the Group with the acceptable risks,
2. Allocate the appropriate shareholding proportion in its investment to possess the governing right over joint venture companies,
3. Uphold the investment basis of Non-recourse or Limited Recourse Project Finance with clear sponsor support and contingent liability,
4. Support Corporate Social Responsibility projects and comply all governing laws.

EGCO has policy for subsidiaries and joint ventures to carry out their business in accordance with the following values:

- To conduct business continuously in compliance with its corporate vision and mission, the code of conduct, the corporate governance principles and acceptable risk profiles.
- To implement core policies via EGCO Group employees who are assigned to be directors, management or shareholders of those companies. These representatives must seek advance concurrence from the Board of Directors upon the substantial matter of events,
- To monitor the progress and the operation of the subsidiaries and joint ventures via the Asset Management and Planning with monthly reports to the Board. Should there be any urgent matters for which the immediate action is required; such matters will be duly reported to the Board on the first occasion.

5. Dispute

In 2015, EGCO and its subsidiaries had no litigation based on the definition of SEC as follows:

- Legal case that has negative impact on EGCO and its subsidiaries with the size larger than 5% of the shareholders' equity as at the end of the accounting year.
- Legal case that has significant impact of which the value can not be assessed.
- Legal case which is not related to EGCO's normal business.

6. General Information

EGCO Information

Name	: Electricity Generating Public Company Limited (EGCO)
Business	: Holding Company focusing on power business and other related business
Registration	: 0107537000866 (Previously Number Listed Co. 333)
Sector	: Energy and Utilities
Industry	: Resources
Registered Capital	: 5,300 million baht
Paid up capital	: 5,264.65 million baht
Par Value	: 10 baht
Foreign Limit	: 44.82%
% Free Float	: 51.65% as of March 22, 2014
Head Office	: EGCO Tower, 222 Moo 5, Vibhavadi Rangsit Rd., Tungsonghong, Laksi, Bangkok 10210, Thailand.
Home Page	: www.egco.com
Tel.	: 0 2998 5000
Fax.	: 0 2955 0956-7
Board of Directors	: Email address : directors@egco.com
Audit Committee	: Email address : auditcommittee@egco.com
Corporate Secretary	: 0 2998 5020-5 Email address : cs@egco.com
Investor Relations Contact	: 0 2998 5147-8 Email address : ir@egco.com

Reference Persons

Regulator	<p>Securities and Exchange Commission, Thailand 333/3 Vibhavadi Rangsit Road, Chomphon, Chatuchak, Bangkok 10900, Thailand Tel +66 (0) 2695 9999 Fax. +66 (0) 2695 9660 E-mail: info@sec.or.th Website: www.sec.or.th</p>
Regulator	<p>The Stock Exchange of Thailand The Stock Exchange of Thailand Building, 93 Ratchadaphisek Road, Dindaeng, Bangkok 10400, Thailand Tel +66 (0) 2009 9000 Fax. +66 (0) 2009 9991 SET Call Center +66 (0) 2009 9999 E-mail: SETCallCenter@set.or.th Website: www.set.or.th</p>
Share and Debenture registrar	<p>Thailand Securities Depository Company Limited The Stock Exchange of Thailand Building, 93 Ratchadaphisek Road, Dindaeng, Bangkok 10400, Thailand Tel +66 (0) 2009 9000 Fax. +66 (0) 2009 9991 Call Center +66 (0) 2009 9999 E-mail: TSDCallCenter@set.or.th Website: www.set.or.th/tsd</p>
Auditor	<ol style="list-style-type: none"> 1. Mr. Somchai Jinnovart Certified Public Accountant (Thailand) No. 3271 2. Mr. Vichien Khingmontri Certified Public Accountant (Thailand) No. 3977 3. Ms. Amornrat Pearmpoonvatanasuk Certified Public Accountant (Thailand) No. 4599 <p>PricewaterhouseCoopers ABAS Limited 15th Floor, Bangkok City Tower, 179/74-80 South Sathorn Road, Bangkok 10120, Thailand Tel +66 (0) 2286 9999, +66 (0) 2344 1000 Fax. +66 (0) 2286 5050</p>

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)	Holding Company focusing on Power business and others related to power business	5,300	10	5,264.65	-
Head Office	14 th , 15 th Floor EGCO Tower, 222, Moo 5, Vibhavadi Rangsit Road, Tungsonghong, Laksi, Bangkok 10210, Thailand Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9					
Rayong Power Plant						
Bangkok Office	12 th Floor, EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0931	Independent Power Producer (IPP) Electricity Generating and supply business				
Rayong Office	35 Rayong Highway No. 3191 Huay Pong District, Amphur Muang, Rayong 21150, Thailand Tel. +66 (0) 3868 1012, +66 (0) 3868 1016, +66 (0) 3868 1020					
Sector	Energy & Utilities					
Industry	Resources					
Foreign Limit	44.81%					
Share of Minor Shareholders (% Free Float)	51.90%					
Website	www.egco.com					

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 0932 Site Office 112 Moo 8, Tongnean District, Amphur 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	6,000	10	6,000	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 District, 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
North Pole Investment Company Limited (North Pole) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Overseas office 6 th Floor, Tower A, 1 CyberCity, Ebene, Republic of Mauritius	Holding company focusing on investment in electricity generating companies in foreign countries	53,130.96 ^{/1} (1,475,769,857 USD)	36.0022 ^{/1} (1 USD)	53,130.96 ^{/1} (1,475,769,857 USD)	100
EGCO International (B.V.I) Limited (EGCO B.V.I.) (North Pole is the company's 100% shareholder) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Overseas office Akara Bldg., 24 De Castro Street, Wickhams Cay 1, Road Town, Tortola, British Virgin Islands, P.O. Box 3136	Holding company focusing on investment in electricity generating companies in foreign countries	12.60 ^{/1} (350,000 USD)	36.0022 ^{/1} (1 USD)	12.60 ^{/1} (350,000 USD)	100
New Growth Cooperatief U.A. (Coop) (North Pole is the company's 100% indirect shareholder) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Overseas office Schiphol Boulevard 231, 1118BH Schiphol, The Netherlands	Holding company focusing on investment in electricity generating companies in foreign countries	52,076.02 ^{/1} (1,446,467,737 USD)		52,076.02 ^{/1} (1,446,467,737 USD)	100

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+Indirect) (%)
New Growth B.V. (BV) (North Pole is the company's 100% indirect shareholder) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Overseas office Schiphol Boulevard 231, 1118BH Schiphol, The Netherlands	Holding company focusing on investment in electricity generating companies in foreign countries	1.08 ¹ (29,939.25 USD)		1.08 ¹ (29,939.05 USD)	100
Quezon Power, Inc. (QPI) (North Pole is the company's 100% indirect shareholder) Office Tel. +66 (0) 2998 5999 Fax +66 (0) 2955 0956-9	Holding company focusing on investment in electricity generating companies in Philippines	7.20 ¹ (200,000 USD)		7.20 ¹ (200,000 USD)	100
Quezon Power (Philippines), Limited Co. (Quezon) (North Pole is the company's 98% indirect shareholder) Overseas Office 14 th Floor Zuellinh Building Makati Avenue corner Paseo de Roxas 1225 Makati City, Philippines Site Office Barangay, Cagsiay I, Mauban, Quezon Province, Philippines 4330	IPP Electricity Generating and supply business	7,475.54 ¹ (207,641,268 USD)		7,475.54 ¹ (207,641,268 USD)	100
Pearl Energy Philippines Operating, Inc. (PEPOI) (North Pole is the company's 100% indirect shareholder) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Overseas office Barangay, Cagsiay I, Mauban, Quezon, Philippines 4330	Operation and Maintenance of QPL	7.20 ¹ (200,000 USD)		7.20 ¹ (200,000 USD)	100
Quezon Management Service Inc. (QMS) (North Pole is the company's 100% indirect shareholder) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Overseas office 14 th Floor Zuellinh Building Makati Avenue corner Paseo de Roxas 1225 Makati City, Philippines	Management service for Quezon Power Plant	4.01 ³ (5,260,000 PESO)		4.01 ³ (5,260,000 PESO)	100

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+Indirect) (%)
Mauban Holdings Company Inc. (Mauban) (North Pole is the company's 100% indirect shareholder) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Overseas office 14th Floor Zuellig Building Makati Avenue cor. Paseo de Roxas 1225 Makati City, Philippines	Holding company focusing on investment in electricity generating companies	341.42 ³ (448,000,000 PESO)	76.21 ³ (100 PESO)	341.42 ³ (448,000,000 PESO)	100
Evergreen Power Venture B.V. (Evergreen) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Overseas office Schiphol Boulevard 231, 1118BH Schiphol, The Netherlands	Holding company focusing on investment in electricity generating companies in foreign countries	0.00 ¹ (1 USD)	36.0022 ^{/1} (1 USD)	0.00 ¹ (1 USD)	100
Millennium Energy B.V. (Millennium) (North Pole is the company's 100% indirect shareholder) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Overseas office Schiphol Boulevard 231, 1118BH Schiphol, The Netherlands	Holding company focusing on investment in electricity generating companies in foreign countries	0.00 ¹ (1 USD)	36.0022 ^{/1} (1 USD)	0.00 ¹ (1 USD)	100
South Pacific Power Pty Limited (SPPP) (North Pole is the company's 100% indirect shareholder) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Overseas office Darling Park Tower 2, 201 Sussex Street, Sydney, New South Wales, 2000	Holding company focusing on investment in electricity generating companies in Australia	2,887.24 ⁴ (110,506,987 AUD)	26.1272 ⁴ (1 AUD)	2,887.24 ⁴ (110,506,987 AUD)	100
Boco Rock Wind Farm Pty Limited (Boco Rock) (North Pole is the company's 100% indirect shareholder) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Overseas office 81 Flinders Street, Adelaide, South Australia, 5000 Tel. +61 8 8384 7755 Fax. +61 8 8384 7722	Electricity Generating and supply business	2,540.82 ⁴ (97,247,980 AUD)	26.1272 ⁴ (1AUD)	2,540.82 ⁴ (97,247,980 AUD)	100
Gen Plus B.V. (Gen Plus) (North Pole is the Company's 100% indirect shareholder) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Overseas office Schiphol Boulevard 231, 1118BH Schiphol, The Netherlands	Holding company focusing on investment in electricity generating companies in foreign countries	0.00 ¹ (1 USD)	36.0022 ^{/1} (1 USD)	0.00 ¹ (1 USD)	100

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+Indirect) (%)
Phoenix Power B.V. (PP) (North Pole is the Company's 100% indirect shareholder) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Overseas office Schiphol Boulevard 231, 1118BH Schiphol, The Netherlands	Holding company focusing on investment in electricity generating companies in foreign countries	0.00 ¹ (100 USD)	36.0022 ¹ (1 USD)	0.00 ¹ (100 USD)	100
EGCO Cogeneration Company Limited (EGCO Cogen) Office 13 th Floor, EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Site Office 222 Moo 8, Mabkha District, Amphur Nikhom Phattana, Rayong 21180, Thailand Tel. +66 (0) 3863 7051-8 Fax +66 (0) 3863 7063	Small Power Producer (SPP) Electricity and steam generating and supply business	1,060	10	1,060	80
EGCO Green Energy Company Limited (EGCO Green) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9	Holding company focusing on power business	175	10	175	74
Roi-Et Green Company Limited (Roi-Et Green) (EGCO Green is the company's 95% shareholder) Office 13 th Floor, EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Site Office 222 Moo 10, Nua-Muang District, Amphur Muang, Roi-et 45000, Thailand Tel. +66 (0) 4351 9825-6 Fax +66 (0) 4351 9827	SPP utilizing Biomass as primary fuel	180	10	180	70.30
Agro Energy Company Limited (AE) (ESCO is the company's 99.99% shareholder) Office 13 th Floor, EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9	Trading/delivery service of fuel from natural scrap	2	10	2	99.99
SPP Two Company Limited (SPP2) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Site Office Salangpan District, Amphur 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 (SPP3) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Site Office Tha-Klor District, Amphur Benjaluck, Srisaket 33110, Thailand	VSPP Electricity Generating and Supply Business using Solar Power	197.5	10	197.5	99.99

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+Indirect) (%)
SPP Four Company Limited (SPP4) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Site Office Tha-Klor District, Amphur Benjaluck, Srisaket 33110, Thailand	VSP Electricity Generating and Supply Business using Solar Power	148.7	10	148.7	99.99
SPP Five Company Limited (SPP5) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Site Office Koomueng District, Amphur Muengsuang, Roi-et, 45220, Thailand	VSP Electricity Generating and Supply Business using Solar Power	198.4	10	198.4	99.99
Theppana Wind Farm Company Limited (Theppana) Office EGCO Tower Tel. +66 (0) 2998 5999 Fax +66 (0) 2955 0956-9 Site Office Watabaek, Thepsathit, Chaiyaphum 36230, Thailand	VSP Electricity Generating and Supply Business using Wind Power	157.32	100	145.23	90
Yanhee EGCO Holding Company Limited (Yanhee EGCO) Office EGCO Tower Tel. +66 (0) 2998 5999 Fax +66 (0) 2955 0956-9	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 99.98% shareholder) Office EGCO Tower Tel. +66 (0) 2998 5999 Fax +66 (0) 2955 0956-9	VSP Electricity Generating and Supply Business using Solar Power	1,650	100	1,650	49
Chaiyaphum Wind Farm Company Limited (Chaiyaphum) Office EGCO Tower Tel. +66 (0) 2998 5999 Fax +66 (0) 2955 0956-9	Small Power Producer (SPP) Electricity Generating and Supply Business using Wind Power	1,514	100	402.85	99.99
Klongluang Utilities Company Limited (TJ Cogen, Klongluang) Office EGCO Tower Tel. +66 (0) 2998 5999 Fax +66 (0) 2955 0956-9	Small Power Producer (SPP) Electricity and steam generating and supply business	1,000	10	257.50	99.99
Banpong Utilities Company Limited (SK Cogen & TP Cogen, Banpong) Office EGCO Tower Tel. +66 (0) 2998 5999 Fax +66 (0) 2955 0956-9	SPP Electricity and steam generating and supply business	2,000	10	507.5	99.99

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	No.87, 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	Holding company focusing on IPP and SPP	14,000	10	13,784.35	50
Website	http://www.gulfelectric.co.th					
Gulf Energy Company Limited (GEN) (GEC is the company's 100% shareholder)						
Office	No.87, 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	Holding company focusing on IPP and SPP	9,782	10	9,782	50
Gulf IPP Company Limited (GIPP) (GEC is the company's 100% shareholder)						
Office	No.87, 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	Holding company focusing on IPP	9,779	10	9,779	50
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) 3624 8305 Fax. +66 (0) 3624 8314, +66 (0) 3625 1344	Independent Power Producer (IPP) Electricity Generating and supply business	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 6531 Fax +66 (0) 3624 8020	SPP Electricity and steam generating and supply business	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	1,241.72	74	1,241.72	50

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+ Indirect) (%)
Samutprakarn Cogeneration Company Limited (SCC) (GEC is the company's 100% shareholder) 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	981.54	76	981.54	50
Gulf Yala Green Company Limited (GYG) (GEC is the company's 100% shareholder) Site 80 Moo 1, Pron, Office Amphur Muang, Yala 95160, Thailand Tel. +66 (0) 7325 2721 Fax +66 (0) 7325 2722	SPP Electricity Generating and supply business	460	10	460	50
BLCP Power Limited (BLCP) Office No. 9, I-8 Road, Map Ta Phut Industrial Estate, Amphur Map Ta Phut, Rayong 21150, Thailand Tel. +66 (0) 3892 5100, Fax. +66 (0) 3892 5199	IPP Electricity Generating and supply business	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	16,200.99 ^{/1} (450,000,000 USD)	3,600.22 ^{/1} (100USD)	13,446.82 ^{/1} (373,500,000 USD)	35
Natural Energy Development Company Limited (NED) Office 188 Moo 3, Wang Ploeng, Khok Samrong, Lopburi 15120, Thailand Site 188 Moo 3, Wang Ploeng, Office 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
G-Power Source Company Limited (GPS) Office 1046 Nakornchaisri Rd., Nakornchaisri, Dusit, Bangkok 10300 Thailand Tel +66 (0) 2242 5800 Fax +66 (0) 2242 5832 <u>Site Office</u> -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	VSP Electricity Generating and Supply Business using Solar Power	930	100	930	60

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+ Indirect) (%)
-Branch 3 - 11,11/1 Moo 2 Ta Sang, Banphot Phisai, Nakhon Sawan 60180 -Branch 4 311,311/1 Moo 2 Tumbon Sap Samo Thot, Amphoe Bueng Sam Phan, Phetchabun 67160					
GIDEC Company Limited (GIDEC) Office 408/70 Paholyothin Place Tower 16 th Floor, Paholyothin Road, Samsennai, Phayathai, Bangkok 10400 Thailand Site Office Sanambin Panij Road, Moo 3 Kuanlung, Hat Yai, Song Khla 90110, Thailand	VSPP Electricity Generating and Supply Business using waste	400	100	400	50
PT Manambang Maura Enim (MME) (North Pole is the company's 40% indirect shareholder) Head Office Puri Matari 2, 1 st Floor JL.HR. Rasuna Said Kav. H1-2, South Jakarta 10210, Indonesia Site Office Lawang Kidul and Tanjung Enim, Muara Enim City, Sumatera Selatan (South Sumatra) Province, Indonesia	COAL MINING industry, covering coal mining, coal concession development, coal trading and shipping.	1,925.78 ² 750,000,000 (Thousand Rupiah)	2,567.70 ² 1,000 (Thousand Rupiah)	484.44 ² 187,500,000 (Thousand Rupiah)	40
Kalilayan Power Holding Inc. (Kalilayan) (North Pole is the company's 49% indirect shareholder) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Overseas office 62 H. Dela Costa Street, Barangay Daungan Mauban, Quezon Province, Philippines	Holding company investing in San Buenaventura Power Ltd	6.86 ³ (9,000,000 PESO)		6.86 ³ (9,000,000 PESO)	49
San Buenaventura Power Ltd (SBPL) (North Pole is the company's 49% indirect shareholder) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Overseas Office 62 H. Dela Costa Street, Barangay Daungan Mauban, Quezon Province, Philippines	Electricity Generating and supply business	457.26 ³ (600,000,000 PESO)		457.26 ³ (600,000,000 PESO)	49
Masin-AES Pte Ltd (Masin-AES) (North Pole is the company's 44.54% indirect shareholder) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Overseas Office Schiphol Boulevard 231, 1118BH Schiphol, The Netherlands	Holding company focusing on investment in electricity generating companies in Philippines	9,109.42 ¹ (253,024,063 USD)	36.0022 ¹ (1 USD)	9,109.42 ¹ (253,024,063 USD)	44.54

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+ Indirect) (%)
Masinloc Power Partners Co., Ltd. (Philippines) (MPPCL) (North Pole is the company's 40.95% indirect shareholder) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Overseas Office 18 th Floor, Bench Tower, 30 th Street, Corner Rizal Drive, Crescent Park, West 5, Bonifacio Global City, Taguig 1634, Metro Manila, Philippines	IPP Electricity Generating and supply business	9,900.61 ^{/1} (275,000,000 USD)	36.0022 ^{/1} (1 USD)	9,900.61 ^{/1} (275,000,000 USD)	40.95
Alpha Water & Realty Service Corp (North Pole is the company's 16.38% indirect shareholder) Office EGCO Tower Tel. +66 (0) 2998 5000 Fax +66 (0) 2955 0956-9 Overseas Office 3 rd Floor, Glass Tower Building, 115 C. Palanca Street, Makati City 1229, Philippines	Water supply, equipment supply, and coal offloading and delivery service	132.61 ^{/3} (174,000,000 PESO)	0.7621 ^{/3} (1 PESO)	132.61 ^{/3} (174,000,000 PESO)	16.38

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) (North Pole is the company's 20% indirect shareholder) Office 9 Battery Road, #15-01, Straits Trading Building, Singapore 049910	Holding company focusing in geothermal power plants in Indonesia	4,840.02 ^{/1} (134,436,650 USD)		4,840.02 ^{/1} (134,436,650 USD)	20

Others

Company	Business	Registered Share Capital (Million Baht)	Par Value (Baht)	Paid-up Share Capital (Million Baht)	Ownership Interest (Direct+Indirect) (%)
Eastern Water Resources Development and Management Public Company Limited (EAST Water) Office 23-26/F Eastwater Building, 1 Vibhavadi Rangsit Road, Jomphol, Chatuchak, Bangkok 10900, Thailand Tel. +66 (0) 2272-1600 Fax +66 (0) 2272-1601-3 Website http://www.eastwater.com	Water resources development and management for supplying raw water to the customers	1,663.73	1	1,663.73	18.72
Xayaburi Power Company Limited (XPCL) Office 215 Lanexang Avenue, Ban Siang Yuen Chantaburi District, Vientiane, Lao PDR Tel. (856-21) 223 215, 252 060 Fax (856-21) 215 500	Feasibility study on Hydroelectric project in Lao PDR	26,861	10	12,174.50	12.5

Note : The Exchange rate as at December 30, 2015

^{/1}	1 USD	= Baht	36.0022
^{/2}	1,000 Rupiah	= Baht	2.5677
^{/3}	1 PESO	= Baht	0.7621
^{/4}	1 AUD	= Baht	26.1272