

# TPI POLYMER POWER

Public Company Limited

รายงานประจำปี ๒๕๖๑  
ANNUAL  
REPORT 2018



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Investors can access the information of the company that issued security, from the annual report  
(form 56-1) of the company through the website at [www.sec.or.th](http://www.sec.or.th)

## TPI Polene Power: the Leader of Waste-to-Energy Power Plant

TPI Polene Power is a leading operator of RDF power plants in Thailand, with the largest waste-to-energy power plant operations in the country. The Company always pledges its commitment to continuously pursue and research innovations for waste-to-energy power plants, waste heat-to-energy power plants and alternative power plants to enhance maximum efficiency with a commitment to environmental preservation. The Company also helps eliminate the waste problem in communities and in the country and the overall global warming problem from greenhouse gases.

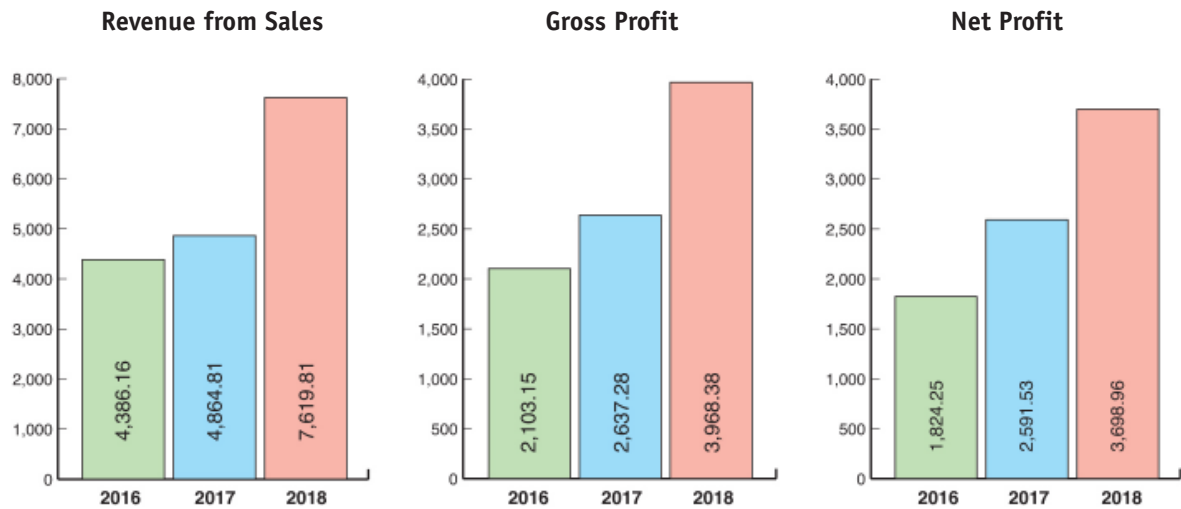
**“CLEAN AND GREEN ENERGY  
For  
OUR HEALTHY COUNTRY”**



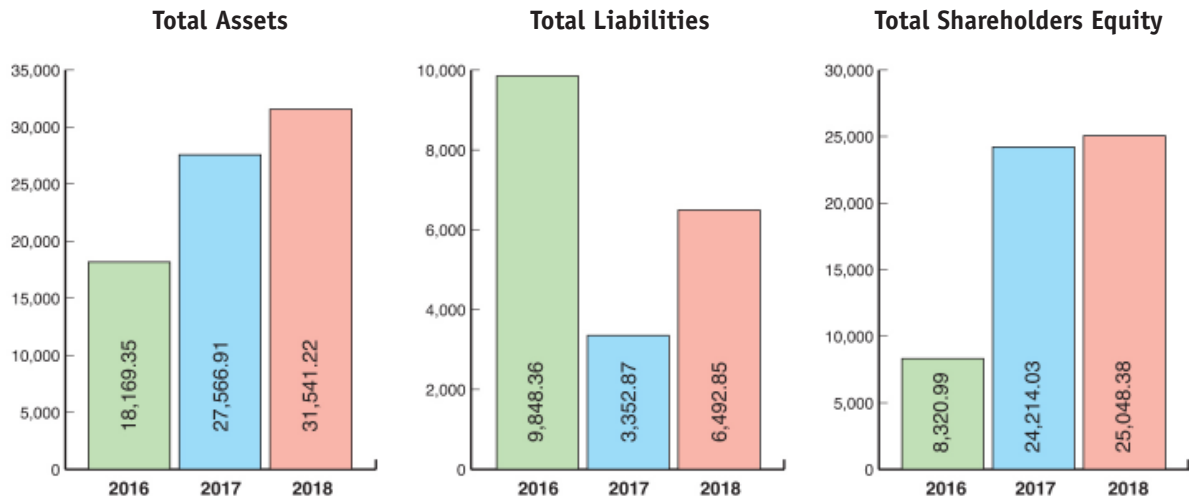
## Financial Highlights

	Unit	2016	2017	2018
<b>Statements of Income</b>				
Revenue from Sales	(million BHT )	4,368.16	4,864.81	7,619.81
Total Revenues	(million BHT )	4,433.32	5,188.15	7,915.35
Cost of Sales	(million BHT )	2,265.01	2,227.54	3,651.43
Gross Profit	(million BHT )	2,103.15	2,637.28	3,968.38
EBITDA	(million BHT )	2,317.64	2,798.55	4,263.90
Net Profit	(million BHT )	1,824.25	2,591.53	3,698.96
<b>Statement of Financial Position</b>				
Total Assets	(million BHT )	18,169.35	27,566.91	31,541.22
Interest Bearing Debt	(million BHT )	7,055.48	-	4,000.00
Total Liabilities	(million BHT )	9,848.36	3,352.87	6,492.85
Paid-up Capital	(million BHT )	5,900.00	8,400.00	8,400.00
Total Equity	(million BHT )	8,320.99	24,214.03	25,048.38
<b>Financial Ratios</b>				
Gross Profit Margin	(%)	48.15	54.21	52.08
Net Profit Margin	(%)	41.15	49.95	46.73
EBITDA Margin	(%)	53.06	57.53	55.96
Return on Assets	(%)	11.83	11.33	12.52
Return on Equity	(%)	21.01	15.93	15.02
Debt to Equity	(Times)	1.18	0.14	0.26
Interest Bearing Debt to Equity	(Times)	0.85	-	0.16
Interest Bearing Debt to EBITDA	(Times)	3.04	-	0.94

## Total Revenues and Net Profit



## Financial Status



# Corporate Profile

<b>Company's Name</b>	: TPI Polene Power Public Company Limited
<b>Abbreviation in the SET</b>	: TPIPP
<b>Registration Number</b>	: 0107559000184
<b>Nature of Business</b>	: The Company operates power plants, focusing on waste-to-energy power plants and waste-heat recovery power plants, and operates petrol and gas stations.
<b>Registered Capital and</b>	: Baht 8,400,000,000
<b>Paid-up Capital</b>	: Consisting of 8,400,000,000 ordinary shares, at the par value of Baht 1 each.
<b>Accounting Period</b>	: January 1 - December 31

## Location

<b>Head Office Location</b>	: 26/56 Chan Tat Mai Road, Thungmahamek, Sathorn, Bangkok 10120
Tel. Number	: +66 (0) 2213-1039- 49, 285-5090 -9
Fax Number	: +66 (0) 2213-1035, 213-1038
Web Address	: <a href="http://www.tpipoleneppower.co.th">http://www.tpipoleneppower.co.th</a>
<b>Power Plant and RDF Plant</b>	: 299 Moo 5, Mittraparp Road, Tambol Tubkwang, Amphur Kangkhoy, Saraburi 18260
Tel. Number	: +66 (0) 3633-9111
Fax Number	: +66 (0) 3633-9228-30

## Investors Relation Unit:

Tel. Number	: +66 (0) 2213-1039 ext. 12985 and 12988
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## Other Relevant Information:

<b>Share Registrars</b>	: Thailand Securities Depository Company Limited
<b>Office Location</b>	: The Stock Exchange of Thailand, 93 Rajadapisek Road, Khwang Dindaeng, Dindaeng, Bangkok 10110
Tel. Number	: +66 (0) 2009-9000, call center +66 (0) 2009-9999
Fax Number	: +66 (0) 2009-9991

## Auditor

<b>Statutory Auditor</b>	: KPMG Phoomchai Audit Limited
<b>Address</b>	: 195 Empire Tower, Floor 21-22, South Sathorn, Kwang Yannawa, Sathorn, Bangkok 10120
Tel. Number	: +66 (0) 2677-2000
Fax Number	: +66 (0) 2677-2222

## Debentures, Debentures Registrar and Debenture Holders' Representatives Offering for Sale of Debentures on December 31, 2018

Debenture Series	Name	Type	Amount (MB)	Interest Rate (p.a.)	Issued Date	Maturity Date	Term
TPIPP21NA	Debentures of TPI Polene Power Public Company Limited No.1/2018 Series1 Due A.D.2021	Unsecured and Unsubordinated Debentures with a debenture holders' representative	4,000	3.90 %	28 Nov 2018	28 Nov 2021	3 Years

## Debenture Registrar and Debenture Holders' Representative

<b>Name</b>	: Bank of Ayudhya Plc.
<b>Address</b>	: 1222 Rama III Road, Bang Phongphang, Yan Nawa, Bangkok 10120 Thailand
<b>Telephone</b>	: +66(0) 2296-2000, +66(0) 2296-5696
<b>Fax</b>	: +66(0) 2683-1302

## Message from the Board of Directors

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**Dear Shareholders,**

In 2018, the Company made progress in implementing investment projects for future growth and an increase in competitive advantages for future competition with a continuous commitment to social responsibilities, environmental preservation, innovations, and good corporate governance.

### **Continuous Performance Growth in year 2018**

In 2018 total revenue from sales of power and goods and revenue from adder were Baht 7,620 million, compared with Baht 4,865 million in 2017, an increase of 56.63%, due to the increase of units of power sales in 2018. Total income in 2018 was Baht 7,915 million compared with Baht 5,188 million in 2017, an increase of 52.57%. In 2018, the Company registered a profit for the year of Baht 3,699 compared with Baht 2,592 million in 2017, an increase of 42.73%, reflecting higher profitability and net profit growth.

### **Total installed electricity capacity of 440 MW Power Plants**

On August 18, 2018, a power plant of installed capacity of 70 MW (TG7) (approved production capacity of 40 MW) became commercially operated. On January 25, 2019 a coal-fired power plant of 150 MW installed capacity (TG8) started commercial operations. Currently, the Company has commercially-run power plants with a combined capacity of 440 MW, comprising waste-heat recovery power plants with total installed capacity of 40 MW, RDF-fired power plants with total installed capacity of 180 MW, and coal-fired power plants of 220 MW installed capacity (under an approved power generation capacity of 190 MW).

### **Continuous increase in production efficiency**

The company aims to continuously increase high levels of power plant utilization rates - therefore, it installed two additional Grate Boiler steamers and three additional boilers were installed which resulted in increased steam production capacity.

The Company is aware that technological development and innovation to support and increase efficiency in waste-to-energy power plant are crucial and necessary for business operations. Thus, the Company encourages research and development and applying technology in order to reduce the cost of electricity generation from waste.

### **Readiness for long-term sustainable business growth**

The company emphasizes business growth through the Company's expertise by focusing on the use of waste heat and waste as the main fuel in electric power production which is consistent with the power development plan of Thailand. The government sector has designated this as an important agenda for solving waste problems by using waste as a fuel to produce electricity. In addition, the company has a policy to seek new business opportunities by participating in the auction of waste disposal projects for the Electrical Power Generating Plants of the government sector in order to continuously expand from the existing power generation and distribution business.

In addition, the Company is aware of the clear role of corporate social responsibility for the company while balancing excellent business operations achievement, good corporate governance, and care for society both in the industrial and agricultural sectors, the community, and environment.

On behalf of the Company, the company's Board of Directors would like to take this opportunity to thank all related parties for their ongoing support and trust in the Company to create continuous progress for the organization and to motivate the management team and all levels of the Company's staff to overcome obstacles to achieve the goal of building stability of the organization, enhancing the economic strength of the country, supporting public well-being and consistently protecting the surrounding environment to further enhance the sustainable growth of the country.

Sincerely Yours,



A handwritten signature in black ink, appearing to be 'Prachai Leopairatana', written over a white background.

**Mr. Prachai Leopairatana**

Chairman

## Awards that made us proud

In 2018 the Company received awards as follows: -

- **RDE-fired Power Plant (TG5) was awarded a Thailand Energy Award 2018.**

On August 27, 2018, TPI Polene Power Plc. received a “Thailand Energy Award 2018”, the outstanding performance award in the category of Innovation on Alternative Energy Project, for an increase in efficiency and a downtime reduction of the power generation of 60MW from a Refuse Derived Fuel (TG5) Project from the Department of Alternative Energy Development and Efficiency under the Ministry of Energy.



- **Waste heat recovery power plants (TG1&2) and a RDF-fired power plant (TG3) were certified complete three systems**

Waste heat recovery power plants (TG1&2) and a RDF-fired power plant (TG3) were certified complete three systems, i.e., Quality Standard System (ISO 9001:2015) on June 21, 2018, Environmental Standard System (ISO 14001:2015) on August 7, 2018, and Health and Safety Management System (OHSAS 18001:2007) on August 3, 2018.

- **RDF-fired Power Plant (TG5) was certified Quality Standard System (ISO9001:2015) and Energy Management System (ISO50001:2011)**

RDF-fired Power Plant (TG5) was certified Quality Standard System (ISO9001:2015) on September 12, 2018 and Energy Management System (ISO50001:2011) on August 15, 2018.

- **Refused Derived Fuel (RDF) Plant was certified Quality Standard System (ISO9001:2015)**

Refused Derived Fuel (RDF) Plant was certified Quality Standard System (ISO9001:2015) on September 10, 2016.



# Audit Committee's Report for 2018

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To: Shareholders:

Dear Sirs,

The Audit Committee of TPI Polene Power Public Company Limited consists of 3 independent directors, who are all qualified with knowledge of finance, accounting, law and management administration: namely, Mr. Manu Leopaibote as the Chairman of the Audit Committee; Dr. Thiraphong Vikitset and Dr. Abhijai Chandrasen as Audit Committee members, with Miss Weeranuch Khimkhum, the Corporate Secretary, as Secretary to the Audit Committee. All Audit Committee members possess appropriate qualifications and are, in all aspects, in compliance with the rules and regulations imposed by the Stock Exchange of Thailand.

The Audit Committee has fully performed its duties and responsibilities to review and evaluate internal control systems, disclosure of Company information, and to review implementation of the provisions of related governing laws, as well as any other important tasks. In 2018, the Audit Committee convened 5 meetings as follows:-

1. To review and to evaluate internal control systems.

The Company has appropriate internal control systems and has operated the business efficiently and effectively under appropriate and sufficient internal controls, as supported by the operational performance report. The Company has internal controls and risk management systems that can protect against potential risks to the Company and to all related parties. The systems are in place to ensure that any mistakes and irregularities will be identified in due course; and that financial reports are accurate, adequate and reliable; and the assets used by the Company, benefit all parties as well as shareholders. In addition, the Company has performed in compliance with the principles of good corporate governance and has embraced the Code of Conduct as a policy for all employees to follow, by emphasizing the balanced consideration of all related parties, fair treatment to all parties concerned, including shareholders, suppliers, contractors and the community as a whole. The Company also realizes the importance of creating public well-being and environmental conservation and fostering the development of all our staff to expand their knowledge so as to become a knowledge organization. This will further enhance our long-term development and create sustainable growth for the Company.

2. To review the disclosure of all relevant information for investors.

The Company has a policy of disclosing all relevant information for investors, such as connected transactions and any other transactions that might affect the interests of related parties. The Company always discloses accurate, reliable and relevant information on a timely basis.

3. To review and to ensure that the Company performs in compliance with all regulations and related governing laws.

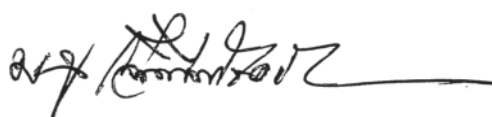
The Company has a clear policy to comply with all regulations and related governing laws, and codes of conduct, to protect against the use of insider information. As announced in the Company's Rules and Regulations, any misuse of internal information shall be subject to disciplinary action, including dismissal. The Company supervises submission by the Management of reports of their shareholding in the Company to comply with related governing laws. The Company realizes the importance of information disclosure, including financial statements and other reports, and ensures that they are complete, accurate, reliable and timely.

4. To select, nominate, and propose the remuneration of the statutory auditors of the Company for the year 2019.

The Audit Committee has taken into consideration the independence, performance, experience and an appropriate remuneration of auditors. The Audit Committee has passed a unanimous resolution to propose to the Company's Board of Directors for consideration and to propose to the shareholders' meeting to consider and approve the appointment of Mr. Ekkasit Chuthamsathit, CPA registration no. 4195 or Mr. Boonyarit Thanormcharoen, CPA registration no. 7900 or Mr. Natthapongse Thantijathanond, CPA registration no. 8829, KPMG Phoomchai Audit Limited, to be the statutory auditors of the Company for 2019.

The Audit Committee considers that in the previous year, the Board of Directors as well as the Management of the Company, was in complete compliance with the principles of good corporate governance. They performed their duties and responsibilities ethically, with integrity, and in a professional manner, to achieve the objectives of the Company. In addition, a product quality system, in compliance with international standards and applicable laws, has been developed. The Audit Committee recognizes that the Company is committed to social and environmental responsibility. The Company has also prepared financial reports in compliance with generally accepted accounting principles, with an adequate disclosure of information, internal control and audit systems, and is able to ensure product quality and good corporate governance, without any material deficiencies.

On behalf of the Audit Committee,



**Mr. Manu Leopaibote**

Chairman of the Audit Committee

# TPI Polene Power and Corporate Social Responsibilities (CSR)



## 1. Environmental Activities

TPI Polene Power Public Company Limited was proud to receive a “Thailand Energy Award 2018”, the outstanding performance award in the category of Innovation on Alternative Energy Project for an increase in efficiency and a downtime reduction of the RDF-fired Power Plant of 60MW (TG5) Project from the Department of Alternative Energy Development and Efficiency under the Ministry of Energy. The Thailand Energy Awards project is another project that measures the success of the public and private sectors that are committed to the development of alternative energy and the use of alternative energy and energy efficiency. The development of alternative energy is the main policy that the government gives priority to in order to raise the level of energy efficiency and use domestic raw materials as fuel and reduce coal imports from abroad. It promotes and develops renewable energy and alternative energy created from innovations that apply to industries and businesses which can reduce costs in order to increase competitiveness and also strengthen energy security for the country in line with the government’s 4.0 energy policy. In addition, the company has supported projects to protect the environment as follows:

- Supporting 176 tons of TPI cement products for building a dam for water storage together with the Internal Security Operations Command, Loei Province and Phitsanulok Province in order to restore the degraded forest area, and preserve the watershed forest to create balance for nature according to the needs of the government and the way of life of sustainable community farmers in the area.
- Donation of 10,200 liters of bio-organic agricultural products (humic fertilizer) to the Internal Security Operations Command, Loei and Phitsanulok provinces, to promote the sustainable livelihoods of the community and to support “Talipot Palm & Betal Palm Planting in the Temple Courtyard Project” of Ratchadarama Forest Temple in Lamphun Province (a branch of Pa Dara Pirom Temple , Phra Arram Luang, Chiang Mai). The project was helped to join the planting of palm trees to offer peacefulness for Buddhist worship at Lan Dharma Pandin Boon.
- Supporting the “Waste Exchanges with Electricity” Community Development (Knowledge Enhancement) Project at Ban Khao Mai Kwian School, Moo 12, Muak Lek District, Saraburi Province with the objective of teaching school children and the villagers in the surrounding area the correct way of waste separation and garbage disposal.

## 2. Academic and Youth Activities

- Participating in activities and supporting “National Children’s Day, Year 2018”, for schools in the target group of 9 sub-districts, including Thap Kwang sub-district, Tao Pun Sub-district, Song Khon Sub-district, Muak Lek Sub-district, Mittraphap Sub-district, Ban Kaeng Sub-district, Phueng Ruang Sub-district, Khao Din Pattana Sub-district, and Phu Khae Sub-district to focus on promoting quality of life, improving the quality of education, giving happiness to children and youth to grow and be the force for further development of the nation.
- Donating budget for purchasing TPI cement products, TPI dry concrete, TPI Super Armour Nano paint, TPI tiles, etc., for schools and universities - for example, together with TISCO Bank Public Company Limited, TPI Polene sponsored products to construct a new school building for Ban Muang School, Khon Kaen Province to replace the two-storey six classroom wooden building that was more than 41 years old; to support TPI Super Armour Nano paints for the Winitsuksa School, Lopburi Province, under the royal patronage, under the Office of the Private Education Commission, Ministry of Education to paint the school ground under the dome for school activities as well as to further support community activities; to support TPI Cement for the construction of the school cafeteria of Thap Kwang Kindergarten, Saraburi Province; to sponsor TPI construction material products in order to further improve the basement of the school building for the Forest Village School, Dong Luang District, Mukdahan Province; to improve the auditorium and male and female restrooms for Muak Lek Witthaya School, Saraburi Province; donating TPI ready mixed concrete to improve the laboratory area on the 11th floor, Nart Photiprasat Building, Department of Architecture, Chulalongkorn University, which is a learning center for multi-purpose activities for students and faculty members of the department.

## 3. Social Activities

- The Company supported a budget of more than 6,426,000 baht for foundations, associations and organizations to help activities that are beneficial to society such as donating money to buy surgical instruments for the urinary tract surgery unit of Chulalongkorn Hospital, Thai Red Cross Society; supporting the Thai Red Cross AIDS prevention activities and participating in the campaign to end AIDS in Thailand under the concept of “U = U are cured, no found equals no spread”; supporting the project for Thai disabled children to be strong by purchasing motion exercise equipment for legs and arms for the disabled of the Thai With Disability Foundation and for the repair and maintenance of exercise equipment used by disabled children at special education centers, schools, educational institutions across the country. The Power Development Fund, TPI Polene Power Company Limited, Saraburi Province supported the exercise machine project for the Sangsaw community, Muak Lek Municipality, Saraburi Province, and supported water filters for villagers, Moo 6, Ban Ang





Hin Subdistrict, Mittraphap District, Saraburi Province to provide villagers with clean drinking water. The Company also supported the budget for the Environmental for Life Foundation in the project to donate winter blankets in 2018 to 11,000 winter victims in the northern and northeastern regions, which still have many areas that are isolated and without adequate clothing. The company would like to provide warmth to the victims of the cold and will help alleviate suffering from the cold weather.

- The Company donated 520 dozens of TPIPL drinking water to a project that supports an energy saving in the community in 2018 to study the importance of energy and the use of renewable energy in the local area as well as the use of technology for energy saving. The Company supported the “Korat Half Marathon On Sky 2018 No.7” at the upper basin area of Lamtakong Cholpha Wattana Power Plant at Ban Kao Yai Thiang Nuea, Sikhio District, Nakhon Ratchasima Province, to promote exercise, tourism sites and to promote tourism to the surrounding communities.
- The Company donated funds to buy TPI cement products, TPI Concrete, TPI Roof Tile, TPI Super Armour Nano paint and other products to improve the building, work place, landscape, and sports yards of various government agencies, such as building public restrooms at the community hall of Kasetsampan community, building community halls for the community including Ban Tham Pattana community, Ban Nampu Nong Phu 93, and Fueng Fah community. The Company donated ready-mixed concrete to make the ground for the multi-purpose Hinlap railway station, and to build the base of the King Rama VI statue for the Muak Lek Technical College, Saraburi Province, etc.

#### 4. Religious Activities

TPI Polene Power Public Company Limited is committed to supporting and promoting Buddhism by continuously offering Kathin every year until now, by executives, employees and customers together donating money to make merit to support the restoration of religious places and buildings in the temple area including the monk and novice ordination project of the year 2018, totaling 1,524,000 baht. This included co-hosting a Kathin ceremony at the Sri Don Mun Temple, Chiang Mai Province, co-hosting a Kathin ceremony at the Ban Hin Lap Temple, Saraburi Province, co-hosting a Kathin ceremony at the Salika Temple, Nakhon Nayok Province. It also included participating in the Royal Kathin Ceremony and offering robes to monks ceremony at various temples, as well as offering the Royal Kathin of the Energy Policy and Planning Office at Kao Bang Sai Temple, Chonburi, offering the Royal Kathin of the Department of Empowerment of Persons with Disabilities at Tak Fa Temple. Nakhonsawan.

- The Company supported the Summer Ordination and Youth Program No. 14 during April 1-30, 2018, of Wat Kham Tu Nang, Muang District, Mukdahan Province, in collaboration with Mahachulalongkornrajavidyalaya University, the Mukdahan Provincial Cultural Office, and the Local Administration Organization in order to honor HRH Princess Maha Chakri Sirindhorn on the occasion of her birthday, on April 2, 2018, and to encourage youth to have ethics, morals, and to stay away from drugs by using free time during the semester break to be beneficial to the public.
- Supported the project “Novice Rakkaew, religious heirs 2018 at International School” by the Dharma Foundation under the patronage of His Holiness the Supreme Patriarch together with Rama 9 Kanchanaphisek Temple to offer charity on the auspicious day of the birthday celebration of His Majesty the King Maha Vajiralongkorn Bodindradebayavarangkun, King Rama X, to encourage youth trained in the mind according to the guidelines of Buddhism during the school holidays by the ordination of novices and so that the youth will learn Buddhism and their own good culture.
- The company donated funds to purchase TPI cement products, TPI fiber cement products and other products, totaling Baht 5,692,977.16. This included donating the funds in order to bring electricity to the Pa Nong Mu Temple, Mahasarakham Province, which is a temple located far away from the community. The electricity provides lighting for monks, novices, and those who have come to make merit on various occasions. The Company also built accommodation for monks and novices and paving roads in the temple area at Wat Pa Yannarangsi, Ban Huai Khrai, Thung Ruang Thong Subdistrict, Chun District, Phayao Province; It also built a study hall and accommodation for monks and novices at Wat Pa Mae Charimsopitaram, Mae Charim district, Nan province, to be a place to support monks and novices who come to study about the doctrinal principles of the Lord Buddha and to continue to sustain Buddhism; the Company also built the parking lot at Wat Saeng Kaew Phothiyan, Chiang Rai province, and at Wat Chaem Uthit, Songkhla Province, built a concrete road to the temple of Wat Srin Nakhon, Than To District, Yala Province to alleviate the steep path conditions in the rainy season, which is dangerous for the transportation of materials for the construction of an ordination hall that has been supported by faithful people and various government agencies, etc. in order to maintain Buddhism and to sustain Buddhism.



# Policy and Business Overview

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## 1. Overview of Business Operations

The Company is a power plant operator in Thailand, with the largest waste-to-energy power plant operations in the country in terms of installed waste-to-energy power generation capacity, according to AWR Lloyd.

The Company operates three types of power plants, namely, RDF-fired power plants in connection with its waste-to-energy operations, waste-heat recovery power plants and a coal-fired power plant. All of the Company's RDF-fired power plants also have the capacity to generate power from waste heat.

The Company's power offtakers are the Electricity Generating Authority of Thailand ("**EGAT**") and the Company's parent, TPI Polene Public Company Limited ("**TPIPL**"), a listed company principally engaged in the business of manufacturing and selling cement and low-density polyethylene/ethylene vinyl acetate plastic resin and selling construction materials.

As of January 31, 2019, the Company had eight commercially operating power plants with a total of 440 MW of installed power generation capacity, all of which are located in the same vicinity as TPIPL's cement production plants in Kangkhoy, Saraburi Province in Thailand:

- a waste heat recovery power plant with an installed power generation capacity of 40 MW ("**WHPP-40MW**" or "**TG1&2**"), consisting of two 20 MW power generation units;
- a RDF-fired power plant with an installed power generation capacity of 20 MW ("**RDFPP-20MW**" or "**TG3**");
- a RDF-fired power plant with an installed power generation capacity of 60 MW ("**RDFPP-60MW**" or "**TG5**");
- a RDF power plant of total capacity of 100 MW ("**RDFPP-100MW**" or "**TG4&6**") comprising of a waste heat recovery power plant with an installed power generation capacity of 30 MW ("**WHPP-30MW**" or "**TG4**") and a RDF-fired power plant with an installed power generation capacity of 70 MW ("**RDFPP-70MW**" or "**TG6**");
- a power plant with an installed power generation capacity of 70 MW ("**PP-70MW**" or "**TG7**") under an approved power generation capacity of 40MW.
- A Coal-fired power plant with an installed power generation capacity of 150 MW ("**Coal-PP-150MW**" or "**TG8**"), which opened commercial operations (COD) on 25 January 2019.

The Company produces RDF from its own RDF production plants as fuel to generate power. The RDF production plants have the daily installed capacity to process up to 6,000 tons of MSW (and/or landfill waste, residual organic materials equivalent to the use of MSW in producing RDF) and produce up to 3,000 tons of RDF. Under the power generation process, the Company uses RDF from its RDF production plants as fuel to generate power.

In addition to MSW, the Company procures both unsorted landfill waste and pre-sorted landfill waste to ensure sufficient waste supply to support its RDF requirements.

The Company believes that its RDF-fired power plant operations are well positioned to benefit from the Thai government's policy of promoting power generation from renewable fuel sources. The Thai government provides adders to renewable power producers at rates that vary based on the type of energy source. In selling power to EGAT, for example, each of the Company's RDF-fired power plants receives an adder at the rate of THB3.5 per kWh in addition to the base tariff.

In addition, the Company operates petrol and gas stations and derives revenue from the sale of petrol, gas and convenience store goods from these stations. As of December 31, 2018, the Company had eight petrol stations, one gas station and three petrol and gas stations in Bangkok and other provinces in Thailand.

## Sales Revenue Structure

Unit: Million Baht

	2016		2017		2018	
	Baht Mil.	%	Baht Mil.	%	Baht Mil.	%
Energy & Utilities	3,509.6	80.3	4,164.7	85.6	6,912.2	90.7
Petrol and gas stations	781.3	17.9	700.1	14.4	707.6	9.3
Others	77.3	1.8	-	-	-	-
Total Revenue from Sales	4,368.2	100.0	4,864.8	100.0	7,619.8	100.0

As of December 31, 2018, the revenue of the Company was mainly from Energy & Utilities, accounting for 90.7%, and from Petrol and Gas stations, accounting for 9.3%.

## 2. Vision and Mission

The Company is determined to follow a zero waste plan and focuses on maintaining its position as a leader in the business of power generation using clean and efficient renewable energy sources, reducing greenhouse gas emissions and controlling the level of nitrogen oxides and sulfur dioxide. In addition, the Company intends to operate its businesses by adhering to the principle of good corporate governance and environmental responsibility.

## 3. Corporate History and Milestones

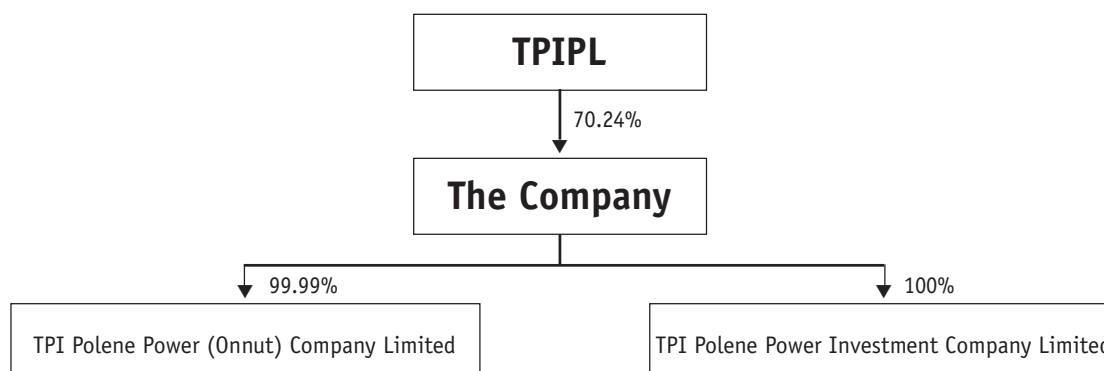
The Company was incorporated in Thailand in November 1991. The following table sets forth the key milestones in the Company's history and development:

Month / Year	Milestones
November 1991	<ul style="list-style-type: none"> <li>Established as TPI Nylon Co., Ltd. by the Leophairatana family.</li> </ul>
June 1996	<ul style="list-style-type: none"> <li>Renamed to TPI Polene Power Co., Ltd., with an objective to carry out power generation operations as the principal business.</li> </ul>
June 2009	<ul style="list-style-type: none"> <li>Commenced the operations of WHPP-40MW (TG1&amp;2) and began selling power to TPIPL. WHPP-40MW initially consisted of two power generation units each with an installed power generation capacity of 20MW, totaling 40MW.</li> </ul>
August 2009	<ul style="list-style-type: none"> <li>Expanded the installed power generation capacity of WHPP-40MW to 60 MW (TG1&amp;2&amp;3) by adding a 20MW(TG3) power generation unit.</li> </ul>
January 2011	<ul style="list-style-type: none"> <li>RDF Plant Commenced Operation.</li> </ul>
January 2015	<ul style="list-style-type: none"> <li>RDFPP-20MW (TG3) became commercially operational and began to sell power to EGAT.</li> <li>In connection with the commencement of commercial operations of RDFPP-20MW to sell power to EGAT, the Company transferred one of the then three 20 MW power generation units of WHPP-40MW to RDFPP-20MW. As a result, the installed power generation capacity of WHPP-40MW decreased from 60 MW (TG1&amp;2&amp;3) to 40 MW (TG1&amp;2).</li> </ul>
August 2015	<ul style="list-style-type: none"> <li>RDFPP-60MW (TG5) became commercially operational and began to sell power to EGAT.</li> </ul>
January 2016	<ul style="list-style-type: none"> <li>Started the expansion of the Company's RDF production capacity from 2,000 tons per day to 3,000 tons per day and was completed in April 2017.</li> <li>Commenced the operations of WHPP-30MW and began selling power from WHPP-30MW (TG4) to TPIPL.</li> </ul>
May 2016	<ul style="list-style-type: none"> <li>Converted into public company limited</li> </ul>
December 2016	<ul style="list-style-type: none"> <li>Installed one additional RDF boiler at RDFPP-20MW (TG3) to be jointly operated with its current boilers to increase the amount of steam generated and to maintain the plant's utilization rate.</li> </ul>
January 2017	<ul style="list-style-type: none"> <li>Installed one additional RDF boiler at WHPP-30MW (TG4) to be jointly operated with its current boilers in order to increase the amount of steam generated and to maintain the plant's utilization rate in case of the suspension of TPIPL's cement production operations from time to time.</li> <li>Entered into an EPC agreement to improve the efficiency of operations when recovering waste heat from TPIPL's cement production process at WHPP-30MW (TG4). This improvement increased the plant's utilization rate and was completed in June 2017.</li> </ul>

Month / Year	Milestones
March 2017	<ul style="list-style-type: none"> <li>The Company has made the initial public offering of 2,500,000 ordinary shares at the offering price of Baht 7 per share, the total offering value is Baht 17,500 million, during March 22-29, 2017.</li> </ul>
April 2017	<ul style="list-style-type: none"> <li>The ordinary shares of the Company were first traded in the Stock Exchange of Thailand on April 5, 2017.</li> <li>The Company established TPI Polene Power Investment Company Limited, the registered company in Cambodia, with registered capital of USD 125,000 with an objective to study potential investment opportunity in power plant business in Cambodia. Later, the company agreed with the partner in Cambodia to hold 1,000 shares (100% of paid-up capital). The Company made a payment of share capital in the amount of USD 125,000 in January 2018.</li> </ul>
April 2018	<ul style="list-style-type: none"> <li>Commenced the operations of RDFPP-100MW (TG4 &amp; TG6) and began selling power from RDFPP-100MW (TG4 &amp; TG6) to EGAT on 5 April 2018, under the Non-Firm 90MW Power Purchase Agreement.</li> </ul>
August 2018	<ul style="list-style-type: none"> <li>Installed a Grate Boiler with a capacity of 75 tons per hour in August 2018 which used waste and / or used RDF fuel and was able to receive 750 tons of direct waste per day to increase the amount of steam production and increase the utilization rate of RDFPP-60MW (TG5)</li> <li>PP-70MW (TG7) started commercial operation on August 18, 2018 under an approved power generation capacity of 40MW.</li> </ul>
November 2018	<ul style="list-style-type: none"> <li>Raised funds by issuing and offering unsubordinated and unsecured debentures of 4,000 million baht, offering for sale on 22 - 27 November 2018, which was received on 28 November 2018.</li> </ul>
December 2018	<ul style="list-style-type: none"> <li>Installed a Grate Boiler with a capacity of 75 tons per hour in December 2018, which used waste and/or used RDF fuel and could receive 750 tons of waste per day to increase steam production and the utilization rate of RDFPP-70MW (TG6).</li> <li>TPI Polene Power (Onnut) Company Limited was established on December 12, 2018 with the objective to expand the waste-to-energy power plant business.</li> </ul>
January 2019	<ul style="list-style-type: none"> <li>Coal-PP-150MW (TG8) became commercially operational and began to sell power to TPI Polene Plc. on January 25, 2019.</li> </ul>
Present	<ul style="list-style-type: none"> <li>In the process of installing 3 additional Grate Boilers using RDF, with each production capacity of 75 tons per hour to be used as a steam boiler supplement for PP-70MW (TG7) and to prepare for the amount of community waste that the company has been exposed to and to sell steam to the Light Weight Concrete Plant of TPI Polene PCL, which is expected to be completed during mid-2020 to 2021.</li> </ul>

#### 4. Corporate Structure

As of December 31, 2018, the following diagram illustrates the Company's corporate structure after the Corporate Reorganization:



#### 5. Relationship with a major shareholder group

The businesses of TPIPL and the Company have been separated whereby the Company will be the TPIPL Group's flagship company for all types of power generation business domestically and outside Thailand. TPIPL and its other subsidiaries will not engage in any types of power generation business competing with that of the Company or its subsidiaries (if any).

# Nature of Business

## 1. Revenue structure

The Company's principal businesses are energy and utilities and petrol and gas stations. In its energy and utilities business, the Company primarily operates power plants with a focus on RDF-fired power plants and waste heat recovery power plants, and sells power to EGAT and waste heat recovery power plant and coal-fired power plant and sells power to TPIPL. To support its RDF-fired power generation capacity, the Company operates its RDF production plants with the daily installed capacity to process up to 6,000 tons of MSW and produce up to 3,000 tons of RDF.

In its petrol and gas stations business, the Company operates petrol and gas stations in Bangkok and other provinces in Thailand and derives revenue from the sales of petrol, gas and convenience store goods from these stations.

The following table sets forth a breakdown of the Company and its subsidiary's revenue from sale of goods for the periods indicated:

Unit : Million Baht

	2016		2017		2018	
	Baht Mil.	%	Baht Mil.	%	Baht Mil.	%
Energy & Utilities	3,509.6	80.3	4,164.7	85.6	6,912.2	90.7
Petrol and gas stations	781.3	17.9	700.1	14.4	707.6	9.3
Others	77.3	1.8	-	-	-	-
Total Revenue from Sales	4,368.2	100.0	4,864.8	100.0	7,619.8	100.0

## 2. Nature of Business

### 2.1 Energy and Utilities

The Company currently operates three types of power plants: (i) waste heat recovery power plants, which use waste heat emitted during TPIPL's cement production process to generate power; and (ii) RDF-fired power plants, which generate power by burning combustible waste known as RDF as the primary fuel. (iii) coal-fired power plant. The Company believes that its waste heat recovery power plants and RDF-fired power plant operations are well positioned to benefit from the trend towards renewable energy, and particularly, the Thai government's policy of promoting and supporting power generation from renewable fuel sources.

In selling power to EGAT, all of the Company's RDF-fired power plants in operation are entitled to an adder of THB 3.5 per kWh, which is payable in addition to the base price of power under the power purchase agreements.

As of January 31, 2019, the Company had 8 commercially operating power plants with a total of 440 MW of installed power generation capacity. All of these plants are located in the same vicinity as TPIPL's cement production plants in Kangkhoy, Saraburi province in Thailand. The details are as follows:

### 1. Power Plants

#### a) WHPP-40MW (TG1&2)

Located in the same vicinity as TPIPL's cement production plants, this waste-heat-recovery power plant commenced commercial operations in June 2009 and initially consisted of two power generation units each with an installed power generation capacity of 20 MW, totaling 40 MW and uses waste heat emitted during TPIPL's cement production process to generate power. The company sells electricity produced to TPI Polene Plc. under the power purchase agreement by charging the electricity charge according to the actual electricity sold in each month at the rate of baht per kilowatt-hour which is equal to the electricity rate per unit according to the time of use rate (TOU) which is the same rate as the power purchase that TPI Polene Public Company Limited purchases directly from the Provincial Electricity Authority without having to charge the highest energy charge (Demand Charge) (the price does not include VAT). The power purchase agreement will expire at the end of the lease period of the land which is the location of this power plant. According to the lease agreement between the company as the tenant and TPI Polene Plc. as the lessor, the lease term according to the said lease agreement will end in July 2044. If the company wishes to renew the contract, the company must notify in writing to TPI Polene Plc at least 1 month in advance before the end of the original lease period to enter into a new lease agreement.

Under the purchase and service agreement, TPI Polene PCL agrees to sell the waste heat in the form of hot gas released from the cement production process to the company for use in the production of electricity from the waste heat energy of the WHPP-40MW (TG1 & 2).

In addition to the production and distribution of electricity, WHPP-40MW (TG1 & 2) also derives income from the sale of steam to TPIPL.

WHPP-40MW (TG1&2) has been granted a promotion certificate from the BOI, which entitles it to a number of benefits including exemptions from certain taxes.

#### **b) RDFPP-20MW (TG3)**

RDFPP-20MW (TG3) generates power by burning RDF as well as partially utilizing waste heat emitted from TPIPL's cement production process. The power plant has an installed power generation capacity of 20 MW. RDFPP-20MW commenced commercial operations in January 2015. The Company sells power generated from RDFPP-20MW to EGAT pursuant to the RDFPP-20MW PPA, which specifies a contracted power generation capacity of 18 MW. The Company's sale of power from RDFPP-20MW to EGAT is on a non-firm basis, and as such, while EGAT is required to offtake power supplied to it from RDFPP-20MW, RDFPP-20MW is not obligated to supply a minimum amount of power to EGAT under the RDFPP-20MW PPA.

Under the RDFPP-20MW (TG3) PPA, the Company shall receive a monthly power tariff from EGAT consisting of an energy payment and an adder, subject to value added tax:

- **Energy payment:** The Company receives an energy payment which is calculated as the product of the actual amount of power supplied to EGAT and an energy payment rate. The energy payment rate is the aggregate of (i) the bulk supply purchase price at which EGAT sells power to power distribution agencies such as the PEA and the Metropolitan Electricity Authority (the "MEA"), subject to adjustments by EGAT; and (ii) a fuel adjustment surcharge for bulk power supply ("Ft"), which is adjusted and announced by the Energy Regulatory Commission of Thailand (the "ERC") every four months.
- **Adder:** The Company also receives an adder at the rate of BHT3.5 per kWh of power supplied to EGAT for a period of seven years from the commencement of commercial operations of RDFPP-20MW in January 2015.

The RDFPP-20MW PPA has a term of five years from the date on which RDFPP-20MW first sold power to EGAT and will expire in January 2020. At the expiration date, the RDFPP-20MW PPA will be automatically extended for an additional five-year term, subject to at least 30 days' prior written notice from the Company to EGAT. The Company will automatically receive the adder during the first two years of the next five-year term, subject to the fuel source requirements specified in the RDFPP-20MW PPA. The adder for RDFPP-20MW will expire in January 2022. The Company understands that the Thai government is in the process of formulating future policies in relation to its support of the development of the renewable energy industry by replacing the adder payment structure with a feed-in tariff scheme after the current adder payments expire. In this regard, the Thai government is currently in discussions with power producers who will be affected by such transition, including the Company.

The Company completed the installation of an additional RDF boiler of 75 ton per hour capacity at RDFPP-20 MW (TG3) in December 2016 which will maximize the utilization rate of power generation and could deliver excess steam to WHPP-40MW (TG1&2) to increase the utilization rate of production.

RDFPP-20MW (TG3) has been granted a promotion certificate from the BOI, which entitles it to a number of benefits including exemptions from certain taxes.

#### **c) RDFPP-60MW (TG5)**

RDFPP-60MW (TG5) generates power by burning RDF as well as partially utilizing waste heat emitted from TPIPL's cement production process. RDFPP-60MW commenced commercial operations in August 2015. The power plant has an installed power generation capacity of 60 MW. The Company sells power generated from RDFPP-60MW (TG5) to EGAT pursuant to the RDFPP-60MW PPA, which specifies a contracted power generation capacity of 55 MW. The Company's sale of power from RDFPP-60MW to EGAT is on a non-firm basis, and as such, while EGAT is required to offtake power supplied to it from RDFPP-60MW (TG5), RDFPP-60MW is not obligated to supply a minimum amount of power to EGAT under the RDFPP-60MW PPA.

Under the RDFPP-60MW (TG5) PPA, the Company shall receive a monthly power tariff from EGAT consisting of an energy payment and an adder, subject to value added tax, subject to the fuel source requirements specified just like in the RDFPP-20MW PPA which required waste as a main source of power generation.

The RDFPP-60MW PPA (TG5) has a term of five years from the date of which RDFPP-60MW first sold power to EGAT and will expire in August 2020. At the expiration date, the RDFPP-60MW PPA will be automatically extended for additional five-year terms, subject to at least 30 days' prior written notice from the Company to EGAT. The Company will automatically receive the adder during the first two years of the next five-year term, subject to the fuel source requirements specified in the RDFPP-60MW PPA. The adder for RDFPP-60MW will expire in August 2022. The Company understands that the Thai government is in the process of formulating future policies in relation to its support of the development of the renewable energy industry by replacing the adder payment structure with a feed-in tariff scheme after the current adder payments expire. The Thai government is currently in discussions with power producers who will be affected by this transition, including the Company.

In addition, the company completed the installation of the Grate Boiler in August 2018, which can be used to burn waste and/or use RDF. The capacity is 75 tons per hour which has the ability to receive waste of 750 tons per day to increase the amount of steam production to maximize the utilization rate of RDFPP-60MW (TG5).

RDFPP-60MW (TG5) has been granted a promotion certificate from the BOI, which entitles it to a number of benefits including exemptions from certain taxes.

**d) RDFPP-70MW (TG6) and WHPP-30MW (TG4), total 100MW, combined as RDFPP-100MW (TG4 & TG6)**

RDFPP-100MW consists of (i) WHPP-30MW (TG4) and (ii) RDFPP-70MW (TG6) to become a RDF power plant of total capacity of 100 MW (TG4&TG6) to sell electricity to Electricity Generating Authority of Thailand (EGAT) under the power purchase agreement of 90 MW which commenced commercially operation on April 5, 2018.

The Company improved the efficiency of operations of WHPP-30MW when recovering waste heat from TPIPL's cement production process. This improvement increases WHPP-30MW's utilization rate and was completed in June 2017.

The company also installed a RDF steam boiler of 75 tons per hour to increase the amount of steam to increase the utilization rate of WHPP-30MW (TG4) for maximum efficiency which can still send the remaining steam to the WHPP-40MW power plant project (TG1 & 2).

In addition, the company installed the Grate Boiler, which can be used to burn waste directly and/or use RDF fuel. The capacity is 75 tons per hour which has the ability to receive direct waste of 750 tons per day for a steam boiler to increase the amount of steam production in order to increase the utilization rate of RDFPP-70MW (TG6) for maximum efficiency which commenced operation in December 2018.

Each of WHPP-30MW and RDFPP-70MW has been granted a promotion certificate from BOI, which entitles it to a number of benefits including exemptions from certain taxes.

**e) PP-70MW (TG7) (Approved power generation capacity of 40MW)**

PP-70MW (TG7) is designed and constructed to enhance the Company's operational flexibility. In the event that any of the Company's RDFPP-60MW (TG5) or RDFPP-70MW (TG6) operates at less than full capacity due to machinery breakdown, maintenance or otherwise, PP-70MW can be used as a backup power plant to provide power for such power plants, where necessary. The Company believes that PP-70 MW allows it to minimize tariff losses during operational interruption of its RDF-fired power plants. The Company estimates that the switching period in configurations to allow PP-70MW to act as a backup power plant will take approximately one to two weeks.

In the case of the generator of this power plant has not yet used for the RDFPP-60MW (TG5) or the RDFPP-70MW (TG6), the company is able to produce electricity by using boilers that has 150 tons of steam per hour capacity which currently produces steam to sell to the Autoclaved Aerated Concrete Plant of TPI Polene Plc. Or when the aerated brick factory does not use steam, the company will use steam for this PP-70MW (TG7), which will generate about 40 MW of electricity.

In January 2016, the Company entered into a power purchase agreement for a PP-70MW (TG7) with TPI Polene Plc. to sell electricity produced from the said power plant to TPI Polene Plc. It started selling electricity since 18 August 2018, with an approved capacity of 40 MW, according to the said power purchase agreement. The company charges electricity from TPI Polene based on the electricity sold by the Company to TPI Polene each month at the rate of Baht / Kwh which is equal to the tariff per unit according to time of use rate (TOU). This is the same rate as the electricity purchased by TPI Polene Public Company Limited directly from the Provincial Electricity Authority with no Demand Charge (The price is exclusive of VAT), based on the amount of electricity traded.

The term of PP-70MW Power Purchase Agreement will end upon the expiration of the lease agreement for PP-70MW entered into between the Company as lessee and TPIPL as lessor. The lease agreement will expire in July 2042.

In addition, the company has prepared additional boiler construction of three Grate Boilers which can be used to burn waste and/or use RDF with each capacity of 75 tons per hour to be used as a steam boiler for lightweight concrete factories and to process the raw materials and fuel of TPI Polene Plc. which requires additional steam and for the production of PP-70MW (TG7). Furthermore, it is also a preparation to support the amount of municipal waste that the company is exposed to. The installation is expected to be completed by mid-2020 and 2021 respectively.

**f) Coal-PP-150MW (TG8)**

Coal-PP-150MW (TG8) has been completed and commenced commercial operations and sold electricity to TPI Polene PCL on January 25, 2019. Under the Coal-PP-150MW Power Purchase Agreement between the Company and TPI Polene Plc, Coal-PP-150MW is obligated to supply and TPIPL is obligated to offtake at least 30% of power generated by Coal-PP-150MW each year to TPIPL. The Company shall receive a monthly power tariff from TPIPL at the same rate per kWh of power according to the time of use rate (TOU) as the average tariff rate at which TPIPL purchases electricity from the PEA each month without charging the highest energy charge (Demand Charge), subject to any value-added tax. The power tariff is determined based on the actual amount of power delivered each month. The term of Coal-PP-150MW Power Purchase Agreement will end upon the expiration of the lease agreement for Coal-PP-150MW entered into between the Company as lessee and TPIPL as lessor. The lease agreement will expire in July 2042.

Coal-PP-150MW has been granted a promotion certificate from the BOI, which entitles it to a number of benefits including exemptions from certain taxes.

Summary of TPIPP's Power Plant Operations:

Power Plant	COD	Installed Capacity	Off taker
1.Waste Heat Recovery Power Plants ("WHPP-40MW" or "TG 1&2") 	Jun 2009	40 MW	TPIPL (tariff rate at which TPIPL purchases electricity from the PEA)
2.RDF-fired Power Plant ("RDFPP-20MW" or "TG 3") 	Jan 2015	20 MW	EGAT (tariff rate equals energy payment plus adder of baht 3.50/kWh for 7 years).
3.RDF-fired Power Plant ("RDFPP-60MW" or "TG 5") 	Aug 2015	60 MW	EGAT (tariff rate equals energy payment plus adder of baht 3.50/kWh for 7 years).
4.Wasre Heat Recovery Power Plant ("WHPP-30MW" or "TG 4") 	Jan 2016 to TPIPL / Apr 2018 to EGAT	30 MW	EGAT (tariff rate equals energy payment plus adder of baht 3.50/kWh for 7 years).
5.RDF-fired Power Plant ("RDFPP-70MW" or "TG6") 	Apr 2018	70 MW	EGAT (tariff rate equals energy payment plus adder of baht 3.50/kWh for 7 years).
6.Power Plant-70MW ("PP-70MW" or "TG7") 	Aug 2018	70 MW*	TPIPL (tariff rate at which TPIPL purchases electricity from the PEA)
7.Coal-fired Power Plant ("Coal-PP-150MW" or "TG8") 	Jan 2019	150 MW	TPIPL (tariff rate at which TPIPL purchases electricity from the PEA)
<b>TOTAL</b>		<b>440 MW</b>	

Remarks : \* Approved capacity of 40 MW

## 2. Production Processes

The Company's waste heat recovery power plants generate power by using waste heat emitted from TPIPL's cement production process to convert water into steam to drive steam turbine power generators.

The Company's RDF-fired power plants, on the other hand, generate power by using the steam derived from burning RDF as primary fuel and using waste heat as co-fuel to drive steam turbine power generators.

Set forth below is a description of the processes of generating power from waste heat and RDF.

#### **a). Power Generation from Waste Heat**

The Company produces power by capturing waste heat emitted during TPIPL's cement production process and converting the waste heat into power. In the cement production process, the raw meal undergoes a series of heat exchanges with hot exhaust gas before entering the rotary kiln for the production of clinker. At the rotary kiln, a series of complex physical and chemical reactions take place, and the raw meal is turned into clinker. To help the hot clinker solidify and prevent liquid formation, air quenching chamber coolers ("AQC's") quickly lower the temperature of the hot clinker with cool air. The cooling process results in the emission of hot exhaust gas from the AQC's. Detail of the power generating process from waste heat recovery power plant is as follows:-

1. **Recovery of Hot Exhaust Gas from Preheater Tower:** Suspension preheater boilers recover hot exhaust gas from the preheater tower and produce steam by heating condensate water with the recovered waste heat.
2. **Recovery of Hot Exhaust Gas from AQC's:** AQC boilers recover hot exhaust gas from the AQC's and produce steam by heating condensate water with the recovered waste heat.
3. **Power Generation:** The steam from the suspension preheater boilers and the AQC boilers is then fed into steam turbines that drive power generators to produce power.

#### **b). Power Generation from RDF**

The Company's RDF-fired power plants generate power by burning RDF as a heat source to boil water to produce steam. The steam is then used to drive the steam turbine power generator. All of the Company's RDF-fired power plants also have the capacity to generate power by using waste heat as heat source. Details of the power generating process from RDF power plant is as follows:-

1. **Burning of RDF:** RDF is burned in the RDF boiler to boil water to produce steam.
2. **Power Generation:** The steam from the RDF boiler is then fed into steam turbines that drive power generators to produce power.
3. **Condensation of Steam into Water:** The condenser captures steam from the steam turbine and condenses the steam into water. Water derived from the condensation process is reused as feed water in the RDF boiler.
4. **Deaeration:** As dissolved oxygen in water can cause corrosion damage in metal equipment by forming rust, the Company has installed deaerators to remove oxygen from feed water before the water re-enters RDF boilers for steam production.

#### **c). Production of RDF**

The majority of RDF used in the Company's RDF-fired power plants is produced by processing MSW and unsorted landfill waste, and the remaining RDF is sourced directly from waste management companies in the form of pre-sorted landfill waste, which can be used directly as RDF with minimal processing. The Company sources pre-sorted landfill waste, unsorted landfill waste and MSW from an extensive network of suppliers.

In addition, the Company has entered into three contracts for semi-mobile waste-sorting machines at a landfill site in (1) Chonburi (2) Samutsakon and (3) Nakornrajsima province to source landfill waste and is installing additional semi-mobile waste-sorting machines at these sites, which are expected to be completed in the first quarter of 2018. The Company is also negotiating with another waste management companies to install semi-mobile waste-sorting machines at additional landfill sites in (1) Ayuthaya (Amphur Bangsai) (2) Ayuthaya (Ampur Tha-rua) (3) Rayong and (4) Chonburi province. It is expected to be completed by Q1/2018.

The Company has developed a deep understanding of the characteristics of landfill waste and MSW in Thailand, which typically have high moisture content and low heat content. The Company has developed its proprietary technologies to process such waste into RDF. The waste supplied to the RDF production plants are sorted into MSW and landfill waste. With respect to the MSW, the Company checks the waste quantity with weighing machines each time, collects samples for its component analysis to meet the qualifications and conditions of RDF production, and enters the RDF production process. With respect to the landfill waste, most of it is of a higher quality than MSW and therefore, are lightly processed in the RDF preparation facilities machines to enhance the quality of the RDF produced that will be used as fuel to generate electricity.

The Company's RDF production plants currently have the daily installed capacity to process up to 6,000 tons of MSW and produce up to 3,000 tons of RDF. During the course of waste processing, the waste undergoes a pre-shredding process to be reduced in size. The Company then uses a separator to collect light fraction waste such as plastic, which is more suitable for the production of RDF than heavy fraction waste. The light fraction waste undergoes dehydrating, as well as further processing and shredding, to achieve optimal size and heat content for RDF production. The RDF produced is then used as fuel to generate steam to drive power generators.

The Company has established RDF storage facilities which can store up to 100,000 tons of RDF. The RDF storage facilities can store sufficient RDF to sustain the Company's RDF-fired power plant operations for up to approximately one month.

#### **d). Operation and Maintenance**

The maintenance of power plants and RDF production plants is a critical aspect of the Company's business.

Proper maintenance not only allows the Company to operate more efficiently and generate more power with higher efficiency, but also protects the Company's facilities against the risk of major breakdowns and failures. While the Company performs its own operations and routine maintenance and inspections, major overhauls are outsourced to either TPIPL.

Major overhauls usually take place at steam turbines and involve the shutdown of every boiler of a power plant. Major overhauls are carried out once every five years in accordance with the guidelines of equipment manufacturers and generally take 30 to 60 days. Between major overhauls, routine maintenance and inspections are scheduled once a year and generally take approximately 15 to 30 days. Routine maintenance and inspections can be carried out without shutting down the power plants. In addition, each boiler is subject to scheduled shutdown for 30 to 45 days per year for maintenance. In order to minimize disruption to the Company's power generation operations, to the extent that multiple boilers are installed on a power plant, the Company generally performs maintenance on the boilers in turn in order to ensure continuous operation of its power plants. The maintenance schedule of the Company's waste heat recovery power plants is also well integrated with that of TPIPL's cement production lines.

### **3. Supply of Raw Material**

#### **a). Waste Heat Supply**

The Company purchases waste heat from TPIPL pursuant to the TPIPL Framework Agreement.

#### **b). Waste Supply**

The Company's RDF-fired power plants generate power by burning RDF which the Company produces from waste in its RDF production plants, in addition to partially using waste heat. The Company procures three primary types of waste, (i) pre-sorted landfill waste generally supplied by waste management companies; (ii) unsorted landfill waste supplied by waste management companies; and (iii) MSW transported to the Company by municipal governments and waste management companies authorized by municipal governments to dispose of MSW. Pre-sorted landfill waste is waste from landfills that has been processed by waste management companies to remove items with low combustion value, such as sand, stone and metal. Substantially all pre-sorted landfill waste can be used for burning in RDF boilers as RDF with minimal processing. Unsorted landfill waste is waste from landfills that has not been processed. Unsorted landfill waste requires processing by the Company before it can be used for burning in RDF boilers as RDF.

With respect to waste supply, the Company purchases waste based on a calculation of the expected amount of power to be generated and an evaluation of the amount of RDF for such power generation, as well as the amount of waste that should be purchased for RDF production in order to prevent waste purchase in excess of the RDF production. In the case of stoppage of a power plant's production due to regular maintenance or emergency, which will result in a decrease of demand for RDF, the Company is still able to store and preserve 100,000 tons of RDF for approximately one month. The Company also has the right to reduce the amount of, or cancel the landfill waste and/or MSW being purchased, as deemed appropriate, by providing the waste suppliers 30-days prior written notice.

#### **Landfill Waste**

The Company has entered into landfill waste purchase agreements with waste management companies to purchase both pre-sorted and unsorted landfill waste. These agreements typically specify a minimum amount of pre-sorted and unsorted landfill waste to be provided by waste management companies, and generally have a seven-year term. The price of pre-sorted and unsorted landfill waste varies based on the heat content of the waste.

As of December 31, 2018, the Company has entered into landfill waste purchase agreements to purchase pre-sorted and unsorted landfill waste with 59 waste management companies with a total of 1,548,960 tons per year under contract.

#### **Municipal Solid Waste (MSW)**

As of December 31, 2018, the Company has entered into MSW deposit agreements with 88 municipal governments and 13 waste management companies in Bangkok and seven provinces in Thailand, including Rajburi, Saraburi, Pathumthani, Chonburi, Nakornnayok, Samutprakarn and Ayutthaya provinces.

#### Waste that the company has from investing in machinery at the landfill site

The company invested in the installation of RDF production machines and additional sorting machines at the landfill site. The Company installed and operated the machinery at the landfill sites in two locations in Nakhon Ratchasima Province by itself. In addition, the company has invested in the installation of waste sorting machines at the landfill site by allowing the landfill site owner to rent and operate at the high potential waste source in the big provinces for the adequacy and stability of RDF delivered to the company's power plant which is delivered as ready-to-use RDF, namely (1) Phra Nakhon Si Ayutthaya Province 3 sites (2) Rayong Province 2 sites (3) Kanchanaburi Province 1 site (4) Samut Sakhon Province 1 site (5) Chonburi Province 1 site (6) Nakhon Ratchasima 1 site, a total of 9 locations, which can collect more than 1,000 tons of waste per day, or about 300,000 tons per year to provide adequate and stable waste fuel supply for the operation of the power plants of the company.

#### c). Coal Supply

There is currently no need for a substantial amount of coal as the coal-fired power plant; Coal-PP-150MW is still under construction. Nevertheless, under the TPIPL Framework Agreement, TPIPL supplies coal to the Company as part of the initial stages and in preparation for the commercial operation of Coal-PP-150MW. Furthermore, considering that TPIPL procures a substantial amount of coal for its cement manufacturing business, TPIPL has more bargaining power in negotiating coal purchases. Thus, the Company purchases coal from TPIPL.

According to the TPIPL Framework Agreement, the Company is not prohibited from procuring coal from other suppliers. With the commencement of the commercial operations of the Coal-PP-150MW, the Company will have more demand for coal supply and will be in a better position to negotiate coal supply arrangements independently. At such time, the Company can deal directly with the coal suppliers. The Company plans to obtain coal from various sources and suppliers and to enter into various procurement arrangements in view of fluctuations in the price and supply of coal.

#### d). Sales and Marketing

The Company's offtakers are EGAT and TPIPL, which are a parent company and a listed company in the Stock Exchange of Thailand.

Table showing Waste-to-Energy Power Plant as of December 31, 2018

No.	Company Name	Installed Capacity (MW)	Power Purchase Agreement (MW)	Market Share (capacity-based)
1.	TPI POLENE POWER PUBLIC COMPANY LIMITED	180.0	163	57 %
2.	PJT TECHNOLOGY CO., LTD.	14.0	13.0	4 %
3.	GREEN POWER ENERGY CO.,LTD.	9.9	9.0	3 %
4.	RATCHBURI-EEP RENEWABLE ENERGY CO.,LTD	9.9	8.0	3 %
5.	SCG PAPER ENERGY CO.,LTD BANPONG, RATCHABURI	9.9	8.0	3 %
6.	C&G ENVIRONMENTAL PROTECTION (THAILAND) CO., LTD.	9.8	9.8	3 %
7.	EARTH TECH ENVIRONMENT CO.,LTD	9.4	8.0	3 %
8.	CRANE RENEWABLE ENERGY CO.,LTD.	8.5	8.0	3 %
9.	ZENITH GREEN ENERGY CO.,LTD.	8.5	8.0	3 %
10.	BANGKOK GREENPOWER CO.,LTD.	8.5	8.0	3 %
11.	OTHERS	48.7	43.9	15 %
	<b>TOTAL</b>	<b>317</b>	<b>287</b>	<b>100%</b>

Source: Energy Regulatory Commission

It can be seen that the company is the largest Waste-to-Energy Power Plant with the highest production capacity in the country and is the only manufacturer that has sold the electricity as a SPP (Small Power Producer), with the installed capacity of 180 MW and sales volume according to the power purchase agreement of 163 MW (representing the market share for the waste to energy power plant of 57% ), compared with the second rank with only 14 MW installed capacity and sales volume under the 13 MW power purchase agreement (equivalent to only 4% market share). The company is also the largest manufacturer of RDF in the country. The waste-to-energy power plant receives an added price of 3.50 baht / kilowatt-hour as same as the VSPP (Very Small Power Producer) waste-to-energy power plant.

The competition in the waste-to-energy power plant business at present is high in the provision of waste including competition with other power producers in entering into the power purchase agreement with EGAT, which occurred during EGAT's acceptance of the proposal to sell electricity by means of price competition (Bidding) which most of the companies are encountering competition from domestic waste-to-energy power plant.

The Company is a large entrepreneur including being a pioneer and a leader in the waste-to-energy power plant business which has long experience in running a waste power plant business and has a successful performance in concrete; therefore, it has an advantage over other competitors in terms of capital, experience, technology, and reliability with the unsurpassed ability to complete the project.

## **2.2 Petrol and Gas Stations Business**

The Company also operates petrol and gas stations and derives revenue from the sale of goods from these stations. As of December 31, 2018, the Company had eight petrol stations, one gas station and three petrol and gas stations under the "TPIPL" brand. The Company's petrol stations are located in Bangkok and other provinces in Thailand and primarily sell petrol and gas and others to retail customers.

The Company was granted the license to use the TPIPL trademark in accordance with the "TPIPL Trademark Agreement" entered into in March 7, 2016 (approved by the Department of Intellectual Property of Thailand on April 4, 2018) in connection with the Company's sales of certain petrol and gas products.

The Company procures petrol for its petrol stations from oil companies such as Bangchak Petroleum Public Company Limited, Esso (Thailand) Public Company Limited, IRPC Public Company Limited and Shell Oil Company Limited at market price on a spot basis. For its petrol stations in Saraburi province, the Company also purchases petrol from TPIPL, which regularly purchases petrol at large volumes and at discounted prices in the open market. TPIPL sells petrol to the Company at cost.

The Company procures gas for its gas stations from PTT Public Company Limited ("PTT") under long-term gas sale and purchase agreements.

The gas station has been granted promotion certificates from BOI, which entitle it to a number of benefits including exemptions from certain taxes.

There is strong competition in terms of oil market conditions. The major oil suppliers create various promotions to attract customers compared with the Company's oil which doesn't have its own oil depot. Therefore, the company is unable to create promotions to compete with other major suppliers, causing the Company's oil business to be stable. However, the company focuses on providing good services.

As for the natural gas market (NGV), the current NGV sales volume of the company has decreased by 10% due to the transportation sector shifting to use oil instead of NGV. The oil price is about 30 baht/liter with a running distance of about 5 kilometers; meanwhile, the NGV price is about 15 baht/kilogram with a running distance of 2-3 kilometers. The maintenance cost of cars using oil is lower than vehicles using NGV. Most new vehicles also use oil. Therefore, the number of NGV vehicles has decreased, resulting in a decrease in the Company's NGV sales volume as well.

## **3. Board of Investment Privileges**

The Company has been granted promotional privileges under the Investment Promotional Act, B.E. 2520 (as amended) by the Thai Board of Investment ("BOI").

Subject to the conditions prescribed in the promotional certificates, the principal BOI privileges for the Company's power plants, RDF production plants and gas station include the following:

- permission to own land in order to carry on the promoted activities as the BOI deems appropriate;
- exemptions from import duties on machinery as approved by the BOI;
- an exemption from corporate income tax on net profit derived from the promoted business for a period of eight years commencing from the first date on which the promoted business earned operating income;
- a reduction in the normal rate of corporate income tax on net profit by 50.0% for a period of five years after the expiry date of the corporate income tax exemption period; and
- exemptions from withholding tax on dividends paid from the profit of the promoted business for a period of eight years.

As of December 2018, the following table sets forth a summary of the board of investment privileges of the Company's power plants, RDF production plants and gas station as follows:

Plant / Gas Station	Month on which Income was First Derived from Promoted Activity	Expiration of Full Income Tax Exemption	Expiration of 50% Income Tax Reduction
WHPP-40MW	June 2009	Card expired	N/A <sup>(1)</sup>
RDFPP-20MW	June 2009	Card expired	N/A <sup>(1)</sup>
RDFPP-60MW	September 2015	September 2023	September 2028
WHPP-30MW	January 2016	January 2024	N/A <sup>(1)</sup>
RDFPP-70 MW	May 2018	May 2026	N/A <sup>(1)</sup>
Coal-PP-150MW	January 2019	January 2027	N/A <sup>(1)</sup>
RDF production plants	July 2011	June 2019	June 2024
Gas Station	July 2009	Card expired	July 2022

Notes: <sup>(1)</sup> The 50% income tax reduction does not apply after the expiry date of the full corporate income tax exemption period.

#### 4. Environmental, Health and Safety Matters

The Company is subject to the Enhancement and Conservation of National Environment Quality Act B.E. 2535 (1992), and the Office of Natural Resources and Environmental Policy and Planning has approved environmental impact assessments for each of the Company's operating facilities. The Company is liable for breaches of environmental laws and would be responsible for making any improvements and/or modifications to its facilities which may be required to continue to comply with environmental laws. Currently, each of the Company's plants is in compliance, in all material respects, with existing environmental regulations and standards applicable to them. The Company also believes that its operations are fully in compliance with World Bank guidelines set forth for power generation. The Company has not been party to any litigation, arbitration, suit or proceeding in relation to environmental matters or compliance with any environmental regulation.

The Company is determined to follow a "zero waste" plan and works continuously to supervise, control and improve its processes in order to ensure that regulated emissions from its operations are within and below stipulated maximum levels. The Company uses continuous emission monitoring systems to monitor emissions from the combustion processes of its plants. The Company also monitors ambient air quality at several locations within the vicinity of its plants. For each combustion process, the Company monitors and controls oxides of nitrogen ("NOx") and sulfur dioxide ("SO<sub>2</sub>"). The temperature and the fuel/air ratio are controlled during the combustion process in order to maintain emissions within applicable limits. The Company periodically monitors the quality of effluent discharge and compares it to the environmental impact assessment mitigation and monitoring programs to ensure that it complies with regulatory standards. For its emissions and discharge, the Company is well within regulatory requirements.

The following table sets forth the Company's policy for the emission of SO<sub>2</sub> and NOx, as compared to World Bank guidelines and Thai regulatory requirements:

	SO <sub>2</sub>	NOx
	(mg / Nm3)	
The Company	30	120
World Bank guidelines	230	510
Thai regulatory requirements	320	350

The Company has implemented policies, procedures and control mechanisms in order to reduce the risk of chemical leakages and employee exposure to hazardous chemicals. The Company carefully selects chemicals for its processes and seeks to rely only on chemicals that have a minimal adverse impact on the environment and on employee health.

The Company has put in place an environmental, health and safety training program to heighten employee awareness of environmental, health and safety issues. The Company also has a chemical leakage contingency plan in place and provides training for employees, including emergency drills in relation to this plan. The Company prepares, on a regular basis, reports for government agencies on disposal of the Company's hazardous and non-hazardous waste. The Company also has in place a classification and storage program for waste products. The Company has contracts with noise control specialists who periodically monitor noise levels to ensure compliance with government regulations.

## 5. Industry Overview

### Power Development Plan

In June 2015, the Thai government approved a new Power Development Plan ("PDP"), called "Thailand Power Development Plan 2015-2036" ("PDP2015"), with an outlook towards 2036. This is the first new PDP since 2010, incorporating the significant growth of renewables since 2005. Future plans for renewable energy ("RE") are detailed in the Alternative Energy Development Plan ("AEDP")

### Target Share of Power Generation by Fuel Type

Fuel type	Share in 2014	Share in 2026	Share in 2036
Imported hydro power	7%	10-15%	15-20%
Clean coal including lignite	20%	20-25%	20-25%
Renewables including hydro power	8%	10-20%	15-20%
Natural gas	64%	45-50%	30-40%
Nuclear	-	-	0-5%
Diesel/Fuel oil	1%	-	-

Source: Power Development Plan of Thailand 2015-2036

However, in 2018, the government sector was in the process of updating the PDP2015 plan. The draft of PDP2018 (new version) mentioned was in the process of receiving comments to comply with state policy to reduce the support of electricity bills in the alternative energy power plant (excluding waste-to-energy power plants) and to buy electricity at the same price as the wholesale electricity price of EGAT so it will not be a budget burden and will reduce compensation in FT charged to general electricity users.

The government has a new energy policy with a guideline for preparing a power development plan (PDP2018 draft, new edition) and preparing an energy efficiency plan (EEP) and creating an alternative energy development plan (AEDP) to be consistent which the National Energy Policy Council (NEPC) has approved the framework of the plan as follows:

- 1. Energy security:** create a balance of electrical systems by region, consider building an additional power plant for stability at an appropriate level, and increase the flexibility of the electrical system (Grid Flexibility)
- 2. Economy:** promote low-cost electricity generation and maintain the level of retail electricity prices so they don't rise.
- 3. Ecology:** promote electricity from renewable energy and the development of the Smart Grid system to keep pace with Prosumer market.

In the revised PDP, there are guidelines for the allocation of new power plants in the future and prioritization follows:

1. Power plants according to the government's promotion policy
  - Promote electricity production from renewable energy such as municipal waste
  - State-civil biomass power plant, 3 southern border provinces
2. Fossil fuel power plants
  - Consists of EGAT Power Plant / IPP / SPP-Firm / Import
  - Allocation of main power plants for regional security divided into 7 regions, namely, North, Northeast, East, West, Central, Southern and Metropolitan
  - Allocate the main power plant as necessary and sufficient to maintain the stability of the regional power system
  - EGAT is still maintaining the stability of the electrical system

3. Renewable power plants according to Renewable Energy and Alternative Energy Development Plan (AEDP)
  - Composed of biomass, biogas, public sector solar, Floating Solar + Hydro, other renewable energy
  - There is an annual purchase target according to Renewable Energy and Alternative Energy Development Plan (AEDP)
  - Maintain retail electricity prices so they don't rise
4. Energy Conservation Plan (EEP)
  - can prove confidence with quality and can compete for a price, not exceeding Grid Parity

#### Current Status of WTE Power Purchase Agreements (PPAs) (December 2018)

	Number of Power Plants	Installed Capacity (MW)	Power Purchase Agreement (PPA) (MW)
<b>Current and potential projects</b>			
Application accepted	1	20	20
PPA signed	13	80	69
COD	34	317	287
<b>Total</b>	<b>48</b>	<b>417</b>	<b>376</b>
<b>Cancelled applications</b>	<b>77</b>	<b>495</b>	<b>430</b>
<b>Grand total</b>	<b>125</b>	<b>912</b>	<b>806</b>

Source: ERC

According to ERC statistics, in December 2018 WTE power plants that has already completed commercial production (COD) have a total installed capacity of 317 MW and a total sales volume under PPA of 287 MW. TPI Polene Power Public Company Limited (TPIPP) has the largest installed capacity in WTE of 180 MW (out of 317MW) with highest PPA of 163 MW (out of 287MW).

## 6. Competitive Strengths

The Company believes that it possesses the following competitive strengths which differentiate it from its competitors in the waste-to-energy industry in Thailand.

### 6.1 Largest waste-to-energy power plant operator in Thailand, with a proven track record in in-house project development

The Company is the largest waste-to-energy power plant operator in Thailand in terms of installed power generation capacity according to AWR Lloyd (published in 2017). The Company is also one of the first companies in Thailand to have commenced waste-to-energy power generation operations, according to AWR Lloyd. As such, the Company has the advantage of being a first-mover with its know-how that enables it to efficiently address challenges in the waste-to-energy industry in Thailand.

The Company believes that its proven project execution capabilities and contracted sales arrangement in the waste-to-energy industry position it as the leading waste-to-energy power plant operator in Thailand. With its market-leading position and strong operational track record, the Company has received several awards from established institutions both domestically and internationally, including the High Quality Clean Development Mechanism ("CDM") Projects "Crown Standard," the Thai Energy Awards 2014 2015 2017 and 2018 and the ASEAN Energy Awards 2014. The Company believes that it is able to compete effectively with other waste-to-energy power producers in securing additional power purchase agreements with EGAT and expand its business.

### 6.2 Established track record and expertise in waste management and proprietary technologies well adapted to waste-to-energy operations in Thailand

The Company has an established track record and expertise in waste management and possesses proprietary technologies well adapted to waste-to-energy operations in Thailand. The Company has developed a deep understanding of the characteristics of landfill waste and MSW in Thailand, which typically have high moisture content and low heat content. The Company has developed its proprietary technologies to process such waste into RDF.

The Company's RDF production plants currently have daily installed capacity to process up to 6,000 tons of MSW and produce up to 3,000 tons of RDF.

The Company believes that such technological know-how constitutes one of its key competitive strengths, and allows it to maintain its competitive advantage. The Company competes with other waste-to-energy power producers to enter into power purchase agreements with EGAT. The Company competes with other power producers in terms of, among others, technological capabilities. In this regard, the Company believes that its track record and expertise in waste management, as well as its proprietary technologies in waste-to-energy operations, represent one of its key competitive advantages over its competitors.

### **6.3 Strong relationships with key players in the waste-to-energy industry value chain**

The Company has established strong relationships with key players in the waste-to-energy industry value chain. In terms of waste supply, the Company competes with its competitors primarily in terms of waste procurement. The Company has developed an extensive network of suppliers from which it sources pre-sorted landfill waste, unsorted landfill waste and MSW for further processing into RDF to be used as fuel in power generation. In addition, the Company has also maintained a good relationship with EGAT.

### **6.4 Supportive government policies in the renewable power generation industry in Thailand**

The Company believes that its RDF-fired power plant operations are well positioned to benefit from the trend towards renewable energy, and particularly, the Thai government's policy of promoting power generation from renewable fuel sources.

Consistent with the Power Development Plan 2015 and the Alternative Energy Development Plan 2015, the Thai government promotes power generation from renewable energy sources by providing incentives to power producers. ERC and EGAT announced the payment of an adder provided to power producers in addition to energy payment for power generation from biomass, biogas, waste, wind, and solar. The adder provided to SPPs who generate electricity from waste by a thermal process shall be at a rate of BHT3.5 per kWh for a period of seven years from the commercial operation date of the relevant power plant.

The Company has benefited from these policies. In selling power to EGAT, all of the Company's RDF-fired power plants in operation are entitled to an adder of BHT3.5 per kWh, which is payable in addition to the base price of power under the power purchase agreements. The Company believes that the strong government support provides it with significant opportunities to expand its business operations.

Although the government is in the process of formulating future policies in relation to its support of the development of the renewable energy industry such as solar and wind energy, by wanting to buy electricity at a cheaper price in order to reduce the price subsidy for purchasing electricity. However, regarding the waste-to-energy power plant, the government policy still gives priority to the establishment of waste-to-energy power plants, which was driven by the Ministry of Interior supporting various provinces with the potential to accelerate the procurement of private sector to invest and carry out the project in the form of Build-Operate-Transfer (BOT), where the investor will receive the revenue using FIT (Feed-in Tariff) scheme and also receive income from the additional tipping fee which the price will depend on the reference price and the price bidding. It is believed that the domestic waste-to-energy power plant project has the potential to grow at least 400 MW according to the PDP 2018 draft (excluding the project that has requested PPA or is in the process of requesting to follow the original plan but unable to sell electricity to the system which is likely to be canceled in order to open the application for new investors). In 2019, there are government projects that are in the process of operating, namely, On Nut waste-to-energy power plant, Nong Khaem waste-to-energy power plant. Other power plants that are in the process of operation and expected to be able to start bidding in 2019, are in Nakhon Ratchasima and Songkhla province, etc.

### **6.5 Future growth driven by strong growth pipeline of power generation projects and projected GDP growth and growth in power demand in Thailand**

The Company has a number of power generation projects, including RDF-fired power plants, coal-fired power plant, waste heat recovery power plant and coal and RDF- fired power plant.

The favorable macroeconomic conditions in Thailand also allow the Company to grow its operations. According to AWR Lloyd, power demand in Thailand is estimated to grow at an average of 2.7% annually between 2014 and 2036, underpinned by an average population growth of 0.03% and an expected real GDP growth of 3.5% for 2017. The Company believes that it can take advantage of the strong economic growth outlook in Thailand and the resulting growth in energy demand to develop its business sustainably.

### **6.6 Strong support from TPIPL**

The Company enjoys strong and continuing support from its major shareholder, TPIPL.

The Company believes that the strong relationship between the Company and TPIPL in all respects under the special reciprocal business operations will further strengthen the business of both to grow continuously so as to create sustainability within the group.

#### **6.7 Experienced and forward-looking management team and dedicated operations and technical staff**

The Company's management team has extensive experience in the power industry and a proven track record of successfully developing, operating and expanding power plants. According to AWR Lloyd, waste management practices in Thailand are relatively underdeveloped, compared to other developed countries. The Company's management team believes waste management issues in Thailand present an opportunity for the Company to enter into the waste-to-energy industry.

### **7. Business Strategies**

The Company seeks to consolidate its leading position in the waste-to-energy industry in Thailand and has adopted the following strategies to attain this goal:

#### **7.1 To achieve and maintain optimal efficiency in power plant operations through ongoing research and development initiatives.**

The Company seeks to enhance its competitiveness by achieving and maintaining optimal efficiency in its power plant operations. The Company is continuously exploring the development of new technologies and processes to optimize its operational efficiency. The Company believes that such technological know-how constitutes one of its key competitive strengths, and to maintain its competitive advantage, it places emphasis on continuous improvement and innovation of its technological know-how.

#### **7.2 To continue to be a socially responsible and environmentally friendly enterprise by reducing green-house gas emissions and minimizing residual waste from operations**

The Company is a socially responsible enterprise dedicated to the environmentally-friendly treatment of solid waste and promoting environmental awareness. The Company believes that using waste as a fuel source for power generation represents an effective waste treatment method for reducing the toxicity and volume of waste and transforming it into a useful resource. The Company prioritizes the control of environmental emissions from its power plants, and its operations strive for strict compliance with all applicable environmental regulations.

The company's "zero waste" plan aims to fully utilize all the resources used in the production process, thereby increasing the company's operational efficiency while reducing any potential environmental impact.

The Company has been recognized for its efforts in promoting environmentally-friendly production and energy efficiency and strives to continue to be a socially responsible and environmentally friendly enterprise.

#### **7.3 To maximize shareholder value through prudent capital management and business expansion**

The Company seeks to continue its prudent capital management by optimizing its debt level and to strengthen its financial position by increasing revenue through its solid pipeline of power generation projects.

The Company is also actively expanding its power generation operations. The Company also plans to diversify its fuel source, including coal, to expand its power generation capacity.

#### **7.4 To maintain fair and sustainable relationships with stakeholders in the waste-to-energy value chain**

The Company strives to maintain fair and sustainable relationships with all stakeholders in the waste-to-energy value chain in Thailand. The Company enters into some MSW deposit agreements with local governments in Saraburi province as part of its corporate social responsibility initiatives. Under such an agreement, the Company agrees to pay the waste management companies a transportation fee, provided that the Company is satisfied with the quality of the MSW. The Company believes that such waste procurement arrangements are fair and sustainable and allows it to maintain long-term relationships with waste suppliers. Furthermore, the Company seeks to build positive relationships with the community by adhering to good corporate governance practices. In this regard, the Company has published conflicts of interest policies as guidelines for employees to interact properly with related parties with conflicts of interest.

The Company also strives to create a sustainable relationship with its employees by providing comprehensive training and following a policy of fair treatment and rewards.

# Risk Factors

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## **1. Uncertainties and adverse changes in the Thai government's initiatives, incentives and policies that affect the waste-to-energy industry may unfavorably affect the Company's business and results of operations.**

In selling power to EGAT, all of the Company's RDF-fired power plants in operation are entitled to an adder of BHT3.5 per kWh, which is payable in addition to the base price of power under the power purchase agreements. Consistent with the current policies of the Thai government, the adder is available to each of the Company's RDF-fired power plants for a period of seven years from the commencement date of commercial operations of the respective power plants.

Presently, the Thai government is in the process of formulating future policies in relation to its support of the development of the renewable energy industry by replacing the adder rate payment structure with a feed-in tariff scheme or a fixed amount per kWh is paid during the life of the PPA or a fixed amount per kWh is paid during the life of the PPA plus tipping fee.

In the past operators who had power purchase agreements with adder with the authorities that is about to expire have submitted the application for permission to the Ministry of Energy to renew the contract with an adder as before. However, the Ministry of Energy has no policy to renew the contract with an adder. As a result, the company will not have revenue from an adder.

In the event that the power purchase agreement with an adder is about to expire after the end of the seventh year of the power purchase agreement, the company has considered the guidelines by reducing the production cost of RDF and may consider collecting waste disposal (tipping fee) as income for compensation of the adder that is not received from the electricity charge.

## **2. Full energy payment and adder rates from EGAT depend on the Company meeting the requirements specified in the power purchase agreements.**

Under the power purchase agreements with EGAT for the Company's RDF-fired power plants, the Company must satisfy certain requirements in respect of the fuel source. The Company is required to use waste as the primary fuel. The power purchase agreements with EGAT also allow the Company to use other types of fuel as co-fuel, including waste heat emitted from TPIPL's cement production process, but the Company may not use coal as co-fuel. The use of such other types of fuel must not exceed 25.0% of the total amount of thermal energy used in power generation in any contract year.

The Company has placed an emphasis on the above issue as a top priority, in compliance with regulations imposed for the use of fuel sources and has always received the full energy payment and adder rates throughout the life of the PPA terms.

## **3. The Company has a small number of offtakers.**

The Company sells substantially all of the power produced to EGAT and TPIPL. EGAT is the Company's largest and most important customer and the Company's power purchase agreements with EGAT are material to its business,

The power purchase agreements with EGAT are on a non-firm basis and as such, while EGAT is required to offtake power supplied to it, these plants are not obligated to supply a minimum amount of power to EGAT.

The Company's offtakes are primarily state enterprises and creditable private companies, thereby; EGAT is the Company's offtakers, a strongly financial background state enterprise in Thailand and TPIPL, which is considered as an investment grade company.

## **4. The Company's competitors compete with the Company for waste supply and entry into power purchase agreements with EGAT, and the competition could intensify as waste processing technology matures and as new competitors enter the market.**

There is intense competition in waste sourcing. In the event that the Company's competitors' waste processing technology enables them to process waste in a more cost-effective manner than the Company, they may be able to make waste-sourcing arrangements with local government and waste companies on terms that are more attractive to these parties than the Company is able to offer. Such competition may intensify further as new domestic and international waste-to-energy power generation companies enter the market.

In addition, the Company competes with other power producers to enter into power purchase agreements with EGAT. Once a power producer has entered into a power purchase agreement with EGAT, it benefits from a stable stream of power sales income for a fixed number of years as specified in the agreement in exchange for supplying power to EGAT. As such, most competition in the waste-to-energy industry occurs during the contract bidding phase. The Company typically secures power purchase agreements

through a public tender process with EGAT. The Company faces strong competition mainly from domestic waste-to-energy companies which compete in terms of technology, reliability and project execution capability, among others.

With the long-established proficiency to consistently pursue its waste-to-energy power plant operations and generate successfully operational profit, the Company has become a leading and a large RDF power plants operator in the country and continues to strengthen its competitive advantages over its competitors. With its readiness of capital investment together with its long experience to manage production plants and modern production technology as well as its creditability, TPI Polene Power has accomplished and successfully implemented sustainable power plant projects throughout the period.

#### **5. The Company's generation of power from RDF depends on a steady supply of waste with sufficient heat content.**

The Company relies on a steady supply of landfill waste and MSW for the generation of power from RDF.

The amount of power which the Company can generate from RDF depends on the heat content of RDF that the Company produces from waste. RDF with higher heat content produces more power.

The Company purchases MSW and landfilled waste to be processed at the Company's RDF plants with its daily capacity to process up to 6,000 tons of MSW, representing up to 3,000 tons of daily qualified RDF to be produced. Presently, average heat content of RDF that the Company can generate power from has increased consistently. In this regard, the Company has arranged the waste sourcing by entering into waste deposit agreements with local governments and waste management companies, all of which enable to supply landfill waste and MSW to the Company greater than 100 contracts.

In addition, to diversify risk for the waste sourcing arrangement, the Company has made an investment to construct and install semi-mobile waste-sorting machines at the landfill sites in Samuthsakorn province, Ayuthaya province, Choburi province and Rayong province to ensure sufficient supplies of raw material sources and to further reduce production costs. In addition, the Company purchases sorted landfill with heat content not lower than 2,500 Kcal from waste management companies.

Besides, the Company has RDF storage facilities which can store up to 100,000 tons of RDF. The RDF storage facilities can store sufficient RDF to sustain the Company's RDF-fired power plant operations for up to approximately one month, which can mitigate risk associated from raw material procurement to some extent.

#### **6. The Company's generation of power from waste heat depends on a steady supply of waste heat from TPIPL.**

The Company relies on a steady supply of waste heat for the generation of power from its waste heat recovery and RDF-fired power plants. The Company sources all its waste heat requirements from TPIPL by recovering hot exhaust gas emitted from TPIPL's cement production process. In the event of a disruption in TPIPL's cement production process, a decrease or slowdown in TPIPL's cement production or gas recovery equipment breakdown, the Company may not have sufficient waste heat supply to generate power from its waste heat recovery power plants and RDF-fired power plants. In such an event, the Company's power production could be disrupted and its business, financial condition and results of operations may be materially and adversely affected. In addition, technological changes in the cement production process reducing waste heat emission may render the Company's waste heat recovery power generation capacity inefficient and therefore materially and adversely affect the Company's business and prospects.

However, the Company has its modern production technology for power generation that is separated entirely from cement production process of TPIPL, its parent company. In this regard, the Company can manage whether to use RDF or waste heat or coal as fuel to generate power, aiming for the ultimate benefit of the Company. As for the electricity that the Company sells to the parent Company, the Company opts to use waste heat or RDF or coal at 100% as fuel to generate power whenever there is no waste heat emitted from cement production plants of the parent company or select to shut down the Company's power plant for maintenance to be in line with planned shutdown of cement plant of the parent company.

#### **7. A failure to secure commercially reasonable coal supply arrangements or any interruptions in coal supplies may adversely affect the Company's operations of its coal-fired power plants.**

The Company completed construction of a coal-fired power plant. The success of the Company's operations of these power plants depends on, among others, the ability to source a sufficient amount of coal at competitive prices. The Company has entered into the TPIPL Framework Agreement to purchase coal at a fixed price from TPIPL.

The Company group has long experience over 20 years to purchase coal from various sources of supply and has maintained the policy to purchase coal in a large quantity, enabling us to gain more bargaining power to purchase qualified coal at relatively low cost with low bituminous.

**8. Investments in research and development may not necessarily lead to timely improvements in technology and the Company may be unable to keep pace with technological changes in the industry.**

An important factor for the Company's success is the timely development of important new technologies to ensure that the Company's power plants, particularly its RDF-fired power plants, and RDF production can keep pace with technological developments. Each successive improvement in waste processing techniques generally involves an increase in complexity that may enhance the required level of investment and demand more development effort. In addition, the Company may devote research and development resources to technologies that turn out to be unsuccessful or do not yield the expected results in a timely manner.

The Company has long experience in managing RDF production plants to produce qualified RDF with high heat content for power generation. The Company maintained its position to become a leading power plant operator in Thailand, with the largest waste-to-energy power plant operations in the country, so we are confident that the Company is able to adapt its production process to be in line with technology changes.

In addition, the Company develops staff at all levels to optimize team work, including production and maintenance staff. The Company schedules training programs to educate employees to be able to fully perform their own tasks as well as work in place of others.

**9. The Company may be adversely affected if there is any significant downtime at any of the Company's plants.**

Normal wear and tear of the power plants is a natural consequence of operations in the Company's industry and results from exposure to the elements and deterioration of equipment. The Company cannot ensure that repairs and maintenance activities will be conducted in a timely manner or at all, and any extensive downtime at any of the Company's plants could have a material adverse effect on the Company's business, financial condition and results of operations.

The Company has developed and improved production efficiency as planned by investing in additional boilers as back-up boilers when the existing boilers undergo maintenance and in order to increase steam production capacity to greater than 150% for Turbine Generators of all power plants. In addition, the Company prepares and reserves various machine and spare parts to be ready for emergency or unplanned shut down of power plants, thus reducing impact from plant shutdown. The Company has a continuous plan for repair and maintenance of its power plants. This aims to enhance high utilization rate of all power plants and mitigate risk of downtime impact.

**10. For the Company's projects under development, the estimated time frame and budget for the completion of critical tasks may be materially different from the actual completion date and costs, which may delay the date of commercial operations of the projects or result in cost overruns.**

Power plants of the Company involve commission risks, which may result in delays or performance that is below expected levels of output or efficiency. In addition, projects under construction may be affected by the timing of the issuance of permits and licenses by government agencies. Furthermore, adjustments to the scope of work may occur from time to time due to incidents of force majeure. The Company completed construction of a 150 MW coal-fired power plant and commenced commercial operations in January 2019.

**11. The Company may be unable to fully comply with the laws and regulations relating to regulatory approvals for business operations with relevant authorities, laws and regulations regarding health, hygiene, safety, and environmental and other laws and regulations as well as the conditions under relevant licenses.**

Because of the nature of the Company's power plants and petrol and NGV gas operations, the Company is subject to the laws and regulations relating to regulatory approvals for business operations, construction of power plants and installation of machinery with relevant authorities, laws and regulations regarding health, hygiene, safety, environment and other laws, and conditions under licenses required for business operations and regulations of Thailand. Such laws and regulations govern, among other matters, air emissions, wastewater discharges, solid and hazardous waste management, and the use, composition, handling, distribution and transportation of hazardous materials.

The Company implemented Quality Standard System ISO9000 for all products of the Company, International Environmental Standard System ISO14000 as well as Health & Safety Management System ISO18000, certifying that it has conducted the business operations according to all the rules and regulations related to health and safety for production plants to be environmentally friendly, including an assessment of operations and risks to ensure that the Company's operations are in compliance with related governing laws.

## Research and Development

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The Company's has developed proprietary technologies to adapt its RDF-fired power generation operations to suit the type of waste in Thailand, which typically have high moisture content and low heat content. The Company believes that such technological know-how constitutes one of its key competitive strengths, and to maintain its competitive advantage, it places emphasis on continuous improvement and innovation of its technological know-how. The Company's research and development efforts focus on improving and adapting its existing technologies as well as waste sorting and processing techniques so as to increase the operational efficiency of its plants and reduce the environmental impact from its operations. The Company's current research and development initiatives include:

- improvement and development of sorting machines to enhance the efficiency of RDF production from waste found in Thailand, which typically has high moisture level and low heat content;
- improvement in efficiency in converting organic matters into fuel;
- reduction of sulfur dioxide emission with the use of limestone sand in boilers;
- use of low nitrogen oxide burners;
- improvement in the content of RDF so as to reduce the slag build-up in the boiler tubes; and
- improvement of the efficiency of dust settling chambers so as to increase the useful life and efficiency of boilers in the Company's waste heat recovery power plants.

By investing in the development of technologies and processes that increase its operational efficiency and reducing its environmental impact, the Company seeks to solidify its competitive position and maintain its technological advantages.

In addition, the Company has entered into the TPIPL Framework Agreement with TPIPL, whereby TPIPL shall, among others, provide research and development services to the Company. With a research and development team of more than 150 scientists, engineers and technicians, TPIPL has provided the Company with research and development support in the past and is expected to continue to do so in the future. TPIPL also regularly engages professors from local universities, including Chulalongkorn University, Suranaree University of Technology and Kasetsart University, to assist with its research and development initiatives.

# Property Used In Business

## 1. Major Fixed Assets

As at December 31, 2018, the Company has property, plant and equipment as follows:

Asset	Ownership style	Net value (Mill. Baht)	Obligation
1. Plants	Owner	883.61	- none -
2. Land	Owner	1,481.34	- none -
3. Machinery	Owner	13,000.85	- none -
4. Tools and factory equipment	Owner	108.05	- none -
5. Furniture, fixtures and office equipment	Owner	10.53	- none -
6. Major spare parts	Owner	20.17	- none -
7. Assets under construction and installation	Owner	8,990.98	- none -
8. Vehicles	Owner	0.23	- none -
9. Decommissioning assets	Owner	147.06	- none -
<b>Total</b>		<b>24,642.82</b>	

## 2. Intangible Asset

- None -

## 3. Investment Policy in Subsidiary and Associated Company

As of December 31, 2018, the Company has 2 subsidiaries, namely (1) TPI Polene Power Investment Company Limited in Cambodia with the company holding 100% of the paid-up capital of USD 125,000 and (2) TPI Polene Power (Onnut) Company Limited, with 99.99% of the registered capital of 750 million baht and paid-up capital of 187.50 million baht (as of 31 December 2018)

The Company has prepared investment policies for subsidiaries and associates by investing in subsidiaries and/or associates with an investment policy that is consistent with the vision and growth plans of the Company Group. This policy will make the company perform better, or more profitably, or invest in a synergy business for the company to increase the competitive advantage the company and to enable the Company to achieve its goal of becoming a leading company in the core business of the Company. The Company and subsidiaries and/or associates may consider investing in other businesses if the business has potential growth or is beneficial to the business of the Group which can generate a good return on investment. The investment of the company, subsidiary and/or associated company must be approved in the Board of Directors meeting or the shareholders' meeting of the company (depending on the case).

## Future projects

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The company has a policy to expand the waste-to-energy power plant business and alternative energy power plants in potential areas according to the policy of bidding for solid waste disposal plants to generate electricity and the government's alternative energy power plant. The company also considers the possibility of joining the investment in the waste-to-energy power plant project and other renewable power plants which currently have a contract with a government agency but are unable to proceed. This includes investment in waste-to-energy power plant businesses and other renewable energy power plants in the country and abroad.

## Legal Dispute

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The Company is not, as of December 31, 2018, engaged in any material litigations, arbitrations or claims, nor is the Company aware of any litigations, arbitrations or claims pending or threatened by or against it that would have a material adverse effect on its results of operations or financial condition, defined under Thai rules as litigations, arbitrations or claims with a claim amount higher than 5.0% of the Company's shareholders' equity.

## Securities and Shareholder Information

### 1. Registered Capital and Paid up Capital

As of December 31, 2018, the paid-up capital of the company was Baht 8,400 million consisting of 8,400,000,000 ordinary shares, at the par value of Baht 1 each.

### 2. Restriction of transfer of shares

The shares of the Company can be transferred without limitation provided that ownership of the shares by non-Thai persons does not exceed 49% of the Company's registered and paid-up capital.

### 3. Shareholding Structure

Major Shareholders as at January 4, 2019 (At the last closing date)

Shareholders	Number of Shares	Shareholding (%)
1. TPI Polene Public Company Limited	5,899,999,300	70.24
2. Thai NVDR Company Limited	89,334,179	1.06
3. The Bank of New York Mellon	88,451,300	1.05
4. Mr. Nares Ngamapichon	83,200,000	0.99
5. Mr. Paiboon Sereewiwattana	82,587,500	0.98
6. Bangkok Life Assurance Public Company Limited	67,826,500	0.81
7. South East Asia UK (Type C) Nominees Limited	54,947,044	0.65
8. Nortrust Nominees Limited-The Northern Trust RE IEDU UCITS Clients 10 PCT Account	50,000,000	0.60
9. Mr. Yuk Lung Lee	48,750,000	0.58
10. HSBC Bank Plc-HSBC Global Investment Funds Asia Ex Japan Equity Smaller Companies	45,809,300	0.55

### 4. Dividend Payment Policy

The Company's dividend payment policy is to distribute annual dividends to its shareholders at a rate of not less than 50.0% of the net profit as recorded in the Company's separate financial statements after deductions for income tax and legal reserves as required by law and its article of association. Notwithstanding the foregoing, dividend payments are subject to the discretion of the Company's Board of Directors based on the Company's results of operations, cash flow, investment plans, future needs and other factors as the Company's Board of Directors deems appropriate, and the dividend payment must be approved by the annual general meeting of shareholders.

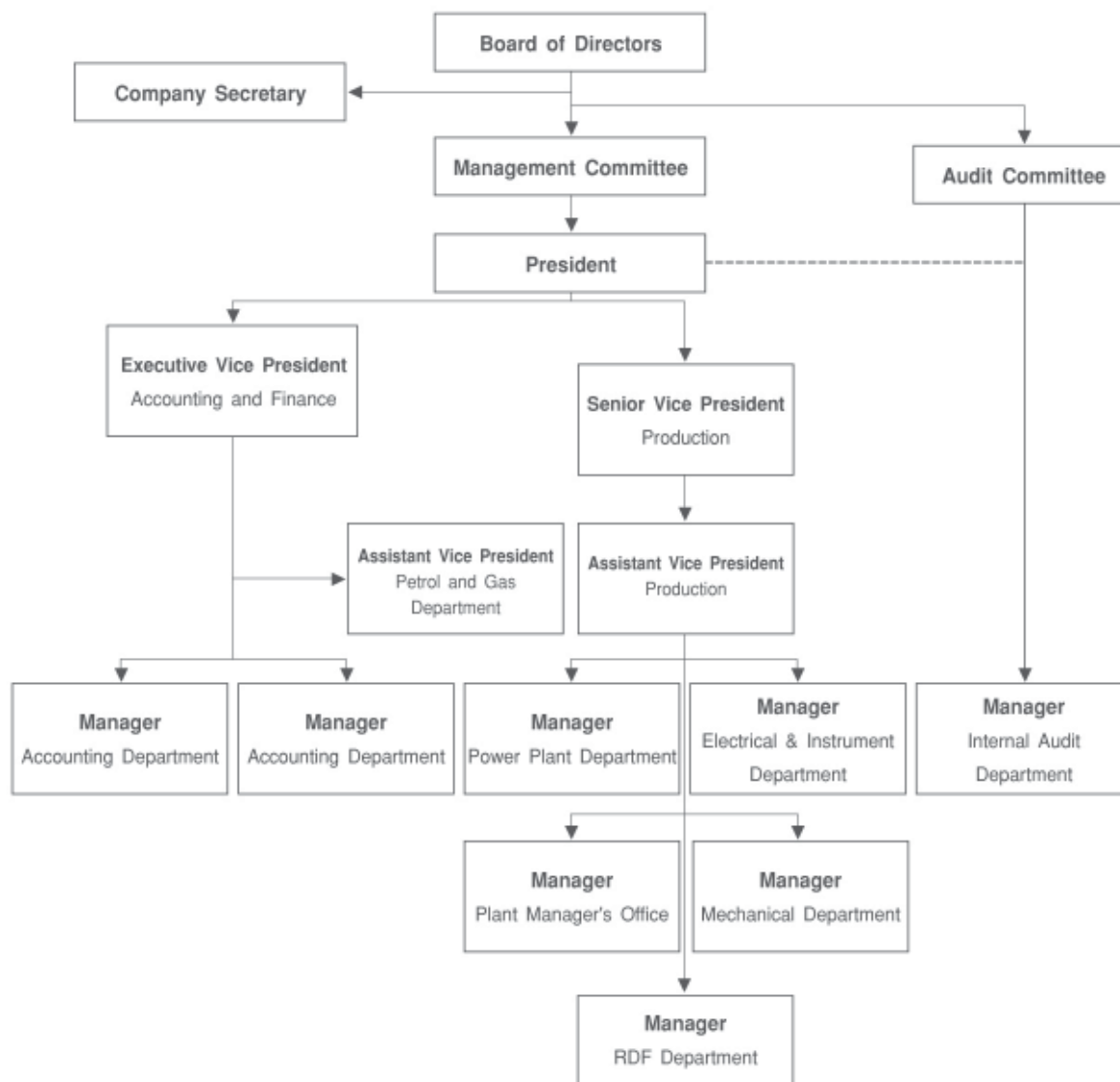
In addition, the Board of Directors may, from time to time, pay the shareholders the interim dividends, provided that it is of the view that the Company has adequate profits to make such payment. After the interim dividends have been paid, such dividend payment shall be reported to the shareholders at the next shareholders' meeting.

Separate Financial Statement	2017	2018
Net Profit per share (Baht)	0.333	0.44
Dividend per share (Baht)	0.30	0.40*
Par Value per Share (Baht)	1.00	1.00
Dividend Payout Ratio (%)	90.09	90.91

*Note : \* According to the Company's Board of Directors' meeting no.2/2562, held on February 22, 2019 however, the right of shareholders to receive the dividend payment is still uncertain as the dividend payment is subject to the approval in the 2019 Annual General Shareholders' Meeting, which will be scheduled on April 19, 2019.*

# Management Structure

As of December 31 2018, the Management structure of the Company was as follows:



## 1. Board of Directors

As at December 31, 2018, the management structure of the Company consists of three Executive Committees: (1) the Board of Directors (2) Sub-committee including the Executive Management Committee and the Audit Committee and (3) The Management. The Company does not have a recruitment committee or a remuneration committee. Nevertheless, the Company put in place the necessary policies and criteria for proper appointment and remuneration of member of the Board of Directors. These standards are consistent with those followed by other public companies listed on the SET, which are in similar industries and have similar financial position and performance as the Company. The Company believes that these policies and standards allow it to appoint suitable, qualified, knowledgeable, capable, skilled and experienced individuals for the benefit of the Company. Besides, the Company put in place the necessary policies and criteria for proper appointment and remuneration of member of the Management.

### 1.1 Board of Directors

As at December 31, 2018, the Board of Directors of the Company comprised 14 directors as follows:

No	Name	Position
1	Mr. Prachai Leophairatana	Chairman
2	Dr. Pramuan Leophairatana	Vice Chairman
3	Mrs. Orapin Leophairatana	Vice Chairman
4	Mr. Prayad Liewphairatana	Director
5	Miss Pattrapan Leopairut	Director
6	Mr. Pakorn Leopairut	Director
7	Mr. Pakkapol Leopairut	Director
8	Ms. Nitawan Leophairatana	Director
9	Ms. Malinee Leopairut	Director
10	Mr. Manu Leopairote	Independent Director ; Chairman of the Audit Committee
11	Mr. Thiraphong Vikitset	Independent Director ; Member of the Audit Committee
12	Mr. Abhijai Chandrasen	Independent Director ; Member of the Audit Committee
13	Mr. Khantachai Vichakkhana	Independent Director
14	Mr. Wanchai Manosooti	Independent Director

All Directors of the Company have participated in at least 1 training course organized by the Thai Institute of Director Association: the Directors Certification Program (DCP) or the Directors Accreditation Program (DAP).

#### Authorized Director

“Mr. Prachai Leophairatana, Dr. Pramuan Leophairatana, Mrs. Orapin Leophairatana, Mr. Prayad Liewphairatana, Miss Pattrapan Leopairut, Mr. Pakorn Leopairut, Mr. Pakkapol Leopairut, Mrs. Nitawan Leophairatana, two directors of which signing jointly with Company seal affixed.”

#### Independence of the Board of Directors

At present, the Board of Directors consists of 14 directors, five of whom are independent directors and constitute one-third of the total number of directors of the Company, which is in compliance with the Notification of the Capital Market Supervisory Board No. TorChor.39/2559 Re: Application for and Approval of Offer for Sale of Newly-Issued Shares. The SET recommended practices and principles of good corporate governance prescribe, however, that if the Chairman of the Board of Directors is not an independent director, then the number of independent directors should be more than one-half of the total number of directors.

Although the number of independent directors of the Company is less than one half of the total number of directors, the Company is of the view that the transparency of the structure of its Board of Directors sufficiently safeguards the interests of the shareholders and the Company. This is because the Board of Directors comprises five independent directors, all of whom, including the Audit Committee members, are third parties who possess the knowledge, capability, and experience that are beneficial to the business operations of the Company, and who are impartial and have no conflicts of interest with the major shareholders of the Company. Moreover, after becoming listed on the SET, the Company must comply with the rules and regulations prescribed by the SEC Office, the Capital Market Supervisory Board, and the SET, such as the regulations governing connected transactions and the acquisition and disposal of assets. These regulations require that matters of material importance shall be approved at a shareholders' meeting, and that the opinion of the Audit Committee, to the extent that it differs from that of the Board of Directors, shall be reported to the shareholders. In such a case, the Audit Committee acts as the representatives of the minority shareholders of the Company. As such, as shareholders would be informed of the opinion of the Audit Committee, they would receive adequate information to enable them to make decisions on agenda items.

In addition, all of the directors have the duty to comply with all relevant laws such as the fiduciary duty under the SEC Act, the Public Limited Company Act, as well as the various policies of the Company, including the Company corporate governance policy and Code of Conduct, which prescribe that all directors and persons related to the business operations of the Company have the duty to comply with all relevant laws and policies in order to maximize the benefits for the shareholders of the Company.

### The Board's meeting

In 2018, the Board of Directors convened meetings a total of 12 times, with attendance as detailed below:

No	Name	Position	Number of Meeting Attendance
1	Mr. Prachai Leophairatana	Chairman	12/12
2	Mr.Pramuan Leophairatana	Vice Chairman	12/12
3	Mrs. Orapin Leophairatana	Vice Chairman	12/12
4	Mr.Prayad Liewphairatana	Director	9/12
5	Miss Pattrapan Leopairut	Director	10/12
6	Mr. Pakorn Leopairut	Director	9/12
7	Mr. Pakkapol Leopairut	Director	12/12
8	Ms.Nitawan Leophairatana	Director	10/12
9	Ms. Malinee Leopairut	Director	11/12
10	Mr. Manu Leopairote	Independent Director and Chairman of the Audit Committee	12/12
11	Mr. Thiraphong Vikitset	Independent Director and Audit Committee	12/12
12	Mr. Abhijai Chandrasen	Independent Director and Audit Committee	12/12
13	Mr. Khantachai Vichakkhana	Independent Director	12/12
14	Mr. Wanchai Manosooti	Independent Director	12/12

### 1.2 Audit Committees

As at December 31, 2018, the Audit Committee is comprised of 3 directors as follows:

No	Name	Position
1.	Mr. Manu Leopairote	Chairman of the Audit Committee
2.	Dr. Thiraphong Vikitset	Member of the Audit Committee
3.	Dr. Abhijai Chandrasen	Member of the Audit Committee

Ms. Weeranuch Khimkhum has been appointed as a secretary to the Audit Committee.

Dr. Thiraphong Vikitset has a background and experience in the accounting and finance field, which are adequate to be responsible for reviewing the reliability of financial statements of the Company. Dr. Thirapong Wikitsait holds a Bachelor's degree of Science in Chemical Engineering and a Ph.D in Economics from West Virginia University.

### Meeting of the Audit Committee

In 2018, the Audit Committee convened meetings a total of 5 times, with attendance as detailed below:

No	Name	Position	Number of Meeting Attendance
1.	Mr. Manu Leopairote	Chairman of the Audit Committee	5/5
2.	Dr. Thiraphong Vikitset	Member of the Audit Committee	4/5
3.	Dr. Abhijai Chandrasen	Member of the Audit Committee	5/5

### 1.3 Management Committee

As at December 31, 2018, the Management Committee is comprised of 8 directors as follows:

No	Name	Position
1.	Mr. Prachai Leophairatana	Chairman of the Management Committee
2.	Dr. Pramuan Leophairatana	Vice Chairman of the Management Committee
3.	Mrs. Orapin Leophairatana	Vice Chairman of the Management Committee
4.	Mr. Prayad Liewphairatana	Member of the Management Committee
5.	Miss Pattrapan Leopairut	Member of the Management Committee
6.	Mr. Pakorn Leopairut	Member of the Management Committee
7.	Mr. Pakkapol Leopairut	Member of the Management Committee
8.	Ms. Nitawan Leophairatana	Member of the Management Committee

### 2. The Management

The Management as the definition of the Management of the announcement of S.E.C. of Kor. Jor. 17/2551 Re: the definition of the announcement of the issuing and the offering of the stock (including additional revision).

As at December 31, 2018, the Management team is comprised of 7 members as follows:

No	Name	Position
1.	Mr. Pakorn Leopairut	President
2.	Mr. Pakkapol Leopairut	Executive Vice President - Accounting and Finance
3.	Mr. Worawit Lerdussarakam	Senior Vice President - Production
4.	Mrs. Sirirat Lerthirunrat	Assistant Vice President - Petrol and Gas
5.	Mr. Somkiat Teeratakulpisal	Assistant Vice President - Production
6.	Miss Karuna Permsiripan	Manager - Accounting
7.	Miss Weerawan Larpchaiwut	Manager - Finance

Remarks:

The Management means the President or the first four executives, following descending in a hierarchical structure. All those in equal positions such as four executive management also include executive level in charge of the Accounting or Finance department, who are in the position of Department Manager or higher.

### 3. Corporate Secretary

Miss Weeranuch Khimkhum has been appointed at the meeting of the Board of Directors' meeting no. 6/2016 held on September 22, 2016, as a corporate secretary of the Company since September 22, 2016. The corporate secretary is deemed to be responsible for the duties as imposed by the Securities and Exchange Act.

## 4. Remuneration of the Directors and the Management

### 4.1 Remuneration of the Directors

As at December 31, 2018, remuneration awarded to the Company's 14 directors in the form of meeting allowances and bonuses was Baht 15,904,000 compared to Baht 15,920,000 in 2017. Details of remuneration in 2018 are as follows:

<i>Unit: Baht</i>					
No.	Name	position	Meeting allowances	Bonuses	Total
1	Mr. Prachai Leophairatana	Chainman	1,056,000	80,000	1,136,000
2	Mr.Pramuan Leophairatana	Vice Chairman	1,056,000	80,000	1,136,000
3	Mrs. Orapin Leophairatana	Vice Chairman	1,056,000	80,000	1,136,000
4	Mr. Prayad Liewphairatana	Director	1,056,000	80,000	1,136,000
5	Miss Pattrapan Leopairut	Director	1,056,000	80,000	1,136,000
6	Mr. Pakorn Leopairut	Director	1,056,000	80,000	1,136,000
7	Mr. Pakkapol Leopairut	Director	1,056,000	80,000	1,136,000
8	Ms. Nitawan Leophairatana	Director	1,056,000	80,000	1,136,000
9	Ms. Malinee Leopairut	Director	1,056,000	80,000	1,136,000
10	Mr. Manu Leopairote	Independent Director and Chairman of the Audit Committee	1,056,000	80,000	1,136,000
11	Mr. Thiraphong Vikitset	Independent Director and Audit Committee	1,056,000	80,000	1,136,000
12	Mr. Abhijai Chandrasen	Independent Director and Audit Committee	1,056,000	80,000	1,136,000
13	Mr. Khantachai Vichakkhana	Independent Director	1,056,000	80,000	1,136,000
14	Mr. Wanchai Manosooti	Independent Director	1,056,000	80,000	1,136,000
<b>Total</b>			<b>14,784,000</b>	<b>1,200,000</b>	<b>15,904,000</b>

### 4.2 Remuneration of Management

In 2018, remuneration awarded to the Company's 5 Executives including salaries and bonuses was Baht 18,360,535 compared to Baht 16,517,012 in 2017. Such remuneration did not include remuneration of accounting manager.

**5. Company shares held by the Directors and the Management (including couple marriage and their offspring) as at January 4, 2019.**

No	Name	Shareholding as at January 4, 2019 (shares)	Shareholding as at December 29, 2018 (shares)	Change (shares)
1	Mr. Prachai Leophairatana	5,354,806	5,354,806	-
2	Dr. Pramuan Leophairatana	4,994,025	4,994,025	-
3	Mrs. Orapin Leophairatana*	*	*	*
4	Mr. Prayad Liewphairatana	5,452,506	5,452,056	-
5	Miss Pattrapan Leopairut	3,853,192	3,883,192	-
6	Mr. Pakorn Leopairut	5,325,591	5,325,591	-
7	Mr. Pakkapol Leopairut	1,670,399	570,399	1,100,000
8	Ms. Nitawan Leophairatana	250,571	250,571	-
9	Ms. Malinee Leopairut	50,265	50,265	-
10	Mr. Manu Leopairote	-	-	-
11	Mr. Thiraphong Vikitset	179	179	-
12	Mr. Abhijai Chandrasen	-	-	-
13	Mr. Khantachai Vichakkhana	171	171	-
14	Mr. Wanchai Manosooti	-	-	-
15	Mr. Worawit Lerdbussarakam	750,000	650,000	100,000
16	Mrs. Sirirat Lerthirunrat	-	-	-
17	Mr. Somkiat Teeratakulpisal	-	-	-
18	Miss Karuna Permsiripan	-	-	-
19	Miss Weerawan Larpchaiwut	-	-	-

Note: \* Included in shareholding of Mr. Prachai Leophairatana to comply with the provisions contained in the Securities and Exchange Act, article 258

**6. Personnel**

**6.1 Number of employees**

As at December 31, 2018, the company had 1,083 employees.

**6.2 Remuneration of Employee**

In 2018, the Company paid personnel expenses or salary expense to employees in the total amount of Baht 460,535,647.75, in the form of salaries, bonuses and other remuneration with details as follows:-

Remuneration	Unit: Baht 2018
Salaries and Bonuses	413,020,232.61
Other remuneration <sup>1</sup>	47,515,415.14
Total	460,535,647.75

Note : <sup>1</sup>Other remuneration included food, medical fees and a provident fund

**6.3 Provident Fund**

The company contributes 3 percent of employee's salary to the provident fund and the employees contribute at least 3 percent of their own salary. The Company started putting money into the provident fund in May 2016 and the provident fund expenses amount to Baht 7,173,967 as of December 2018.

#### 6.4 Employee Development Policy

The Company realizes the importance of personnel; thus, its policy is to develop skills, knowledge and ability to work for all employees in an appropriate and consistent manner as follows:

- **Staff Training Plan and Courses:** To teach both the work to be done and to provide employees with the knowledge to work properly, safely, and consistently, suitable for each and every job position. The training will be conducted in accordance with the rules and regulations of the Department of Skill Development, Ministry of Labor, with 50% of all employees required to attend the training.
- **External Training:** To develop the capacity, knowledge, and ability based on the appropriate work by sending employees to join the training or seminars with external training institutions, sending employees to broaden their horizons in both domestic and international settings, as well as sending staff to training centers for skills development to prepare to be the lecturer and the inspector of the skill level of the workers at the plant.
- **In-house Training:** To develop ideas, potential, knowledge, and ability to perform the job to meet the goals of the organization and the current competitive situation.
- **On-Job Training (OJT):** To develop employees to perform more effectively and to consistently train staff according to the Training Road Map (TRM) of each department to self-develop in performing the job effectively. For new employees and employees who have been promoted, the company has organized a learning course for them to have knowledge and understanding the work of each section as follows:
  - **Mind Development and Preparation Course:** To promote the moral and ethics by Dharma practice for new employees as an orientation. Dhamma listening and practicing, Meditation Training, and Walking Meditation are held for one day at Wat Rama IX Karnchanapisek, Bangkok, to create virtue, honesty and good attitude to the work and to colleagues. Also, a job visit at the Saraburi plant for 1 day is arranged to see the overall picture of the company and to visit to various agencies at the actual location of the Saraburi factory.
  - **Management training for employees and administrators at all levels:** To develop management skills in line with the Company's business operations, such as work orders and delegations, problem solving and decision making, management for middle-level managers, conflict management, a boss that subordinates accept and the company trusts, improving work processes efficiently, and supervisors and adaptation in the Thailand 4.0 era, etc.
  - **Training on emotional and social behavior (Soft Skills)** such as happiness creation and team building, raising conscious mind of loving organizations, EQ-AQ, work success, creating motivation for work, etc. to develop management skills in accordance with the business operations of the company.
  - **Quality system courses:** such as OHSAS 18001: 2007 Upgrade Training Course, ISO / IEC 17025 : 2005, Quality System Documentation and Related Documentation in accordance with ISO / IEC 17025, Quality Control, Knowledge of ISO: 14001 and OHSAS: 18001 requirements, Social Responsibility for Executives, Prevention of Danger from Radiation, Prevention of danger from operating in confined spaces, general waste and hazardous waste management.
  - **Occupational health and safety programs:** such as advanced firefighting, risk assessment, safety officer at supervisor and management level, First Aid and CPR, and knowledge of basic fire protection, etc.
  - **Sales and accounting courses** such as superior sales team management, customer analysis and professional sales presentation, preparation and delivery and storage of electronic tax invoices and electronic receipts, etc.
- **Energy courses:** such as training on energy management standards, training on TSV Energy Chart & Energy Equation, awareness campaign on energy conservation.

#### 6.5 Labor dispute

From the year 2014 to the year 2018, the Company had no labor disputes in which it was a litigant that may have a significant impact on the Company's business.

## 1. Policy

The Company values ethical business conduct by putting corporate social responsibility into clear practice. The Company issued a Code of Business Conduct, which is disclosed on the Company's website, and is constantly reviewed to make the Code of Business Conduct more suitable for changed circumstances. The Company's Directors acknowledge best practices for directors of a listed company as their principle guideline. The Directors, the management and all levels of staff carry out their duties with honesty, integrity, and good ethics. All realize that the Company is a long-established, leading, reputable company with a track record of over 20 years. Corporate governance practices of the Company can be divided into 5 sections as follows:

### 1.1 Section 1. Stakeholder Rights

The Company realizes and respects the importance of the rights of all shareholders. The Company has policies to protect shareholders fundamental rights and ensure equitable treatment under the law as follows:

#### 1. Shareholders' Meeting

The Company schedules an annual general meeting of the shareholders ("AGM") within 4 months of the annual closing date of its accounting books. In case there are emergency issues that might affect the interest of the shareholders and/or related to the terms and regulations or any legal issues, to be proposed for approval in the meeting. The extraordinary shareholders' meeting will be held as the case may be. In 2018, the company held a shareholders' meeting as follows:

- 1.1 The Annual General Meeting of Shareholders was held on April 19, 2018 at the Conference Room on the 9th floor of TPI Tower, 26/56, Chan Tat Mai Road Thung Maha Mek Subdistrict, Sathon District, Bangkok. A total of 14 directors attended the AGM.
- 1.2 Extraordinary General Meeting of Shareholders No. 1/2018 was held on September 4, 2018 at the Conference Room on 9th floor of TPI Tower, 26/56, Chan Tat Mai Road Thung Maha Mek Subdistrict, Sathon District, Bangkok. A total of 13 directors attended the meeting.

The auditor of the company and legal counselor acted as a mediator in checking ballots throughout the meeting in which the Chairman of the Board of Directors conducted the meeting completely as required by law and the results of the meeting have approved all agenda.

#### 2. Delivering Meeting Notices

After the Company's Board of Directors approved and resolved the Annual General Shareholders Meeting, the Company will disclose the Invitation to the Annual General Shareholders Meeting with all relevant documents on the Company's website for shareholders' consideration in advance of the meeting.

The meeting notices contained details of the agenda and accompanying documents (both supplementary and supporting) for the decisions of the Board of Directors, the Securities Registrar mails the opinion of the Board, minutes of the previous meeting, the annual report, all meeting documents, and proxy forms designed by the Ministry of Commerce, to shareholders at least 7 days or 14 days (as the case may be) ahead of the meeting date. An invitation to the AGM is also announced in newspapers for 3 consecutive days in advance of the meeting.

#### 3. Facilitating Shareholders

The Company treats all shareholders in a fair manner. The Company always allows registration of shareholders at least one hour before each meeting. A barcode system summarizing details of each shareholder is printed on the registration form, or the proxy form, to facilitate registration and save time. A suitable reception is also extended to all shareholders.

#### 4. Conduct of Shareholders' Meetings

Before the meeting, the Chairman explains clearly the rules on voting and vote counting for individual agenda items. Once information has been disclosed for each item, the chairman allocates sufficient time for each item and facilitates the meeting appropriately. During the meeting, the chairman allows thorough expression of views and queries by shareholders before voting and summarizes the meeting's resolution on each agenda item. Minutes of the meeting must be completely and accurately recorded, with a summary of voting results on each item.

## 5. After the Shareholders' Meetings

The Company duly submits the resolution of the Shareholders' meeting to the SET one day after the meeting ends. The Company duly submits the minutes of the Shareholders' meeting to the SET, the Securities Registrar of Public Company, Department of Business Development, the Ministry of Commerce, within 14 days and also discloses the minutes of the Shareholders' meeting on the Company's website.

### 1.2 Section 2. Equitable Treatment of Shareholders

The Company values and treats all shareholders equally and fairly through the following actions:

1. Conducting the meeting in sequence of agenda items as specified in the invitation and not adding agenda items without notifying shareholders in advance, to ensure they have enough time to investigate before making their decisions.
2. Appointing Proxies to maintain the rights of those shareholders who cannot attend in person: they are able to appoint proxies, or to delegate their votes to any independent director in attendance.

In addition, the Company also discloses the format of the proxies (as per the format set by the Ministry of Commerce) together with all details and procedures on the Company's website in advance of the meeting.

3. Encouraging shareholders to use ballots for every agenda item, voting tickets are provided for each agenda item separately.
4. All groups of shareholders can access the Company information completely, accurately, transparently, and in a timely manner. The Company has established an Investor Relations Office to take responsibility for providing information in both Thai and English to all shareholders, equally and completely, to ensure that shareholders can make appropriate investment decisions. Corporate information is disclosed on the Company's website, as well as on the websites of the SET, to facilitate access by shareholders and other interested investors.

5. Ensuring strict supervision of the use of inside information by explicitly defining in writing the misuse of inside information as part of the Code of Conduct. In addition, in order to prevent any conflicts of interest, or misuse of inside information by the Board and Management, the Company has put in place internal information controls to supervise the use of inside information as follows:

1. Directors and Management will be regularly informed of related laws and regulations pertaining to misuse of inside information, through various communication channels.
2. The Company discloses in the TPIPL annual report the shareholdings of Directors, Management (and the holdings of management equivalents in Finance and Accounting Division) in compliance with the regulations of the Office of Securities and Exchange Commission.
3. The Directors and Management of the Company are fully responsible for submitting a report of their shareholdings in the Company, and those of their spouses and minors, in accordance with provisions contained in the Securities and Exchange Act.
4. Any misuse of internal information shall be subject to disciplinary action, including dismissal, as announced in the Company's rules and regulations.
6. Devising practical guidelines for potential conflict of interest in its Good Corporate Governance and Code of Conduct for the Directors. Management and employees must strictly comply with these.

### 1.3 Section 3. Stakeholder Roles

The Company is well aware of the roles of all stakeholders. The Company sets precise responsibilities to be prudent, fair, and respect the rights of all stakeholders, in operating its business. Hence, the Company has established a Code of Business Conduct emphasizing the balanced consideration of all stakeholders, which has been disclosed via the Company's website.

TPI Polene has embraced the Code of Conduct as a policy for Directors, Management and all employees to put the Code into practice and to abide by strict moral guidelines.

All management levels have to strictly follow the Code of Conduct as best practice principles, and it is a strict policy to ensure that all employees under each relevant organization line will acknowledge, understand, and follow the Code of Conduct.

The Company has a strict policy to treat all stakeholders fairly as follows:

1. **Shareholders:** The Company concentrates on establishing the greatest benefit to shareholders. The accounting and financial systems are in place to ensure that any mistakes and irregularities will be identified in due course and that financial reports are accurate, adequate and reliable. The Company's continuously strong financial potential is demonstrated in its ability to make appropriate dividend payments to shareholders.

- 2. Customers:** The Company places a great emphasis on customer satisfaction through the quality of its products and services, provided at reasonable prices.
- 3. Management and Employees:** The Company realizes the importance of human resources. Hence, the Company fosters development of all levels of management and staff with internal and external training to enhance their capabilities. The Company applies compensation systems which reward and benefit management and staff appropriately and in line with remunerations in other companies in the same industry.  
In addition, the Company also focuses on the safety of its human resources by adopting Health and Safety Management standards.
- 4. Trade partners:** The Company ethically sets its business operation strategies, thus enhancing relationships with all trade partners through transparent and fair practices. The Company has a policy of benefit sharing and equitable treatment for trade partners and strictly adheres to contractual agreements made. The Company is independent, without strong involvement with any trade partners.
- 5. Community and Society:** The Company, as a Thai Company, continues to be determined to discharge its responsibilities towards the nation, society and communities. Accordingly, the Company is continuously committed to promoting and supporting beneficial activities towards society, religion, education and youth.
- 6. Environmental Responsibility:** The Company acts as a good citizen, conscious and aware of being part of this society. It continues to be determined to discharge its responsibilities towards relevant rules and regulations and support the community surrounding its facilities by eliminating problems and protecting the environment, thus providing better living standards for the communities near its plants.

The Company also has Anti-Corruption operational guidelines in its Code of Conduct and Business Ethics regarding giving and/or accepts Gifts as follows:-

1. The Directors, the Management and the employees may offer or accept gifts, assets, or all kind of benefits in any circumstances from other persons for the benefits of the business of the Company, nonetheless not involving in the manner of circumstances that are involved in any corruption with other persons in business dealing with the Company or potential partners of the Company. Such offering or accepting must be proceeded transparently and can be disclosed.
2. The Directors, the Management and the employees must avoid accepting gifts (including both monetary and nonmonetary offerings) from suppliers or other persons in business dealing with the Company, except for the special events or traditional occasions.
3. The Company does not have the policy to offer gifts, assets, or other kinds of benefits in order to acquire the business of customers, business partners or other persons covering the business except for entertaining customers for the special events or traditional occasions, or for trade discounts and sales promotion of the Company.
4. The Directors, the Management and the employees have the responsibility to report the accepting of gifts, assets, or all kind of benefits from suppliers, contractors, customers or other persons covering the business that directly affect themselves to perform their duties and/or that might have conflicts of interest.
5. The Directors, the Management and the employees have the responsibility to report accepting gifts, assets, or all kind of benefits from other persons in business dealing with the Company and the Company will constantly keep the suppliers, contractors, customers or other persons in business dealing with the Company informed regarding the policy of accepting gifts or all kinds of gifts or benefits.
6. Any acceptance thereof as above from other persons must comply with and proceed transparently and in alignment with related laws and regulations.
7. The Company does not prohibit offering gifts under TPIPL logo to customers in case those gifts comply with the Anti-Corruption policies and measures and are reasonably offered to other persons in compliance with business operations of the Company.

#### **1.4 Section 4. Information Disclosure and Transparency**

The Company is aware of its duty to conduct business in conformity with relevant rules and regulations set by the SEC and the SET as follows:

1. Disclosure of Company information including financial reports is executed accurately, completely and in a timely fashion as reflected in the Annual Report form (Form 56-1), the Company's Annual Report (Form 56-2) and other reports, which are carried out in compliance with the guidelines set by the SEC and the SET.

2. A plant visit is provided for interested institutional investors, shareholders and analysts to access information and have meetings with the Management of the Company. In addition, the Investor Relations Unit has been established to be responsible for communicating information to institutional investors, shareholders, analysts, and relevant authorities in an equitably and fair manner.
3. Disclosure of Company information is made through approved communication channels via the SET and the Company's website in Thai and in English.
4. The Company pays close attention to the quality of the financial information it provides: particularly in its accuracy and adequacy. In addition, all financial information conforms to generally-accepted accounting principles and is audited by independent auditors. Hence, the Company will provide a report of the Board of Director's responsibility for financial statements in Annual Report.
5. Functions and responsibilities of the Board and Sub-Committees are disclosed: In addition, the number of meetings and meeting attendance of each member are disclosed in the Annual Report and 56-1 Form.
6. Disclosure of remuneration to Directors and Management Remuneration: Remuneration levels are based on the operating results of the Company during the previous fiscal year; they reflect duties and responsibilities fairly and reasonably; and are comparable to general practices in the industry.

## **1.5 Section 5. Responsibility of the Board**

The Board plays a key role in supervising corporate governance to create maximum benefits for the Company. Each director represents all shareholders, and takes part in promoting good corporate governance within the Company, and in maintaining the rights of, and creating benefits for, all shareholders and other stakeholders. Details as follows:

### **1. Structure of the Board**

#### **(1) Composition**

The Company's Board of Directors comprises at least 5 directors, of whom 3 were independent directors. This exceeds one-third of the Board. The Board of Directors of at least half of total number of directors must have permanent residence in Thailand and those directors may or may not hold shares in the Company.

#### **(2) Qualifications of the Company's Directors**

The Company's Board of Directors comprises qualified members who have skills, experience, honesty, ethics, and independence. They have capabilities in diverse fields, pertinent to the Company's businesses and, accordingly, can safeguard the interests of all shareholders.

In addition, all Directors are aware of their duties, responsibilities and nature of the Company's businesses. They perform their duties with honesty and prudence, and regularly update themselves on new knowledge. Directors attend each Board meeting with full responsibilities.

#### **(3) Definition of the Independent Director Qualification**

The Board of Directors has defined the qualification of Independent Directors in line with the requirements of the Thai Capital Markets Supervisory Board and SET.

#### **(4) Segregation of the Power of the Chairman of the Board and the President**

The Company's Board is well organized to ensure there is clear distinction between supervision, policy-making, and day-to-day business administrative roles. The positions of the Chairman of the Board and the President are separated. This ensures separation between governing and managing duties.

#### **(5) Chairman of the Board**

In addition, the Chairman's leadership plays a key role in ensuring the Board's efficiency and the Shareholder's meeting promotion to be in compliance with good corporate governance as the listed Company.

#### **(6) Corporate Secretary**

A knowledgeable and experienced Corporate Secretary to the Board serves as an advisor to the Board regarding pertinent laws, relevant rules and regulations, and monitors compliance of the Board's actions on a regular basis. In addition, the Secretary is also responsible for assisting in Board activities and coordinating with other relevant functions to comply with the Board's resolutions and good corporate governance principles.

## **2. Sub-Committee:**

The Board of Directors has appointed Directors who have knowledge and skills suitable to be members of Sub-Committees to assist in important matters. The Sub-Committees consist of the Management Committee and the Audit Committee.

The Management Committee is composed of members who are knowledgeable, capable, ethical and experienced in the business. They manage functions and undertake acts in relation to the day-to-day management of the Company.

The Audit Committee consists of 3 Independent Directors. Members' qualifications meet the requirements stipulated in the relevant Thai Capital Markets Supervisory Board and SET announcements. The Committee is assigned to perform checks on management and secure the balance of power in various business activities to ensure reliability and integrity, and serving the best interests of all stakeholders at all times.

## **3. Roles, Duties and Responsibilities of the Board**

- (1) Good Corporate Governance and the Code of Business Conduct.** The Board of Directors values good corporate governance and maintains high standards of integrity and ethics. All Directors have responsibilities in carrying out their duties and are held accountable to the Company and its stakeholders. They perform their duties with integrity, in compliance with the governing laws and regulations of the Company, and based on professional standards. The Company conducts business in a transparent, honest and fair manner for the interests of all groups of stakeholders.

The Company also issued a Code of Business Conduct for its Board, Management, staff and all employees. These principles are strictly followed, together with the Company's rules and regulations, as detailed in Section 3: Stakeholder Roles.

- (2) Conflict of Interest:** The Board has a clear policy to execute transactions, which have potential conflicts of interest in a manner that is in the best interests of the Company and its shareholders. Transactions between the Company and anyone, with which a possible conflict of interest might occur, require approval under the rules and regulations imposed by the Thai Capital Markets Supervisory Board, the SEC and the SET concerning information disclosure and undertaking of the listed Company regarding connected transactions. In addition, such transactions are subject to an approval process in which only unconnected persons may participate.

Details of connected transactions that may involve conflicts of interest (according to criteria of the Thai Capital Markets Supervisory Board, the SET and the SEC) must be disclosed in the Company's Annual Report; in the Annual Report form (Form 56-1) or declared in other reports (as the case may be). This also includes disclosure of information on connected transactions according to the general accepted accounting standard criteria. Details of connected transactions are disclosed in the section "Inter-Company Transactions".

In addition, pursuant to the Articles of Association, Directors shall notify the Company without delay of their interests in any contract executed with the Company or affiliated companies, and of their holding, and its increase or decrease, of shares or debentures of the Company.

- (3) Internal Control and Internal Audit:**

The Board employs an appropriate, and effective, internal control system to ensure Management prevents and mitigates business risks, and produces accurate and reliable financial statements.

To protect the assets of the Company and shareholders' investments from potential loss, an internal audit unit has been set up as a separate division, responsible for auditing and monitoring the Company's operations for efficiency and effectiveness under a sufficient and appropriate internal audit system. The internal audit unit is independent and able to report its resultant audit openly. This allows management to be notified of problems and irregularities in a timely manner and to be able to establish measures to safeguard the Company's assets and shareholders' investments against fraud in the Company or its subsidiaries. This can also be applied to improve and develop the efficiency and effectiveness of the Company's operations.

In addition, an Audit Committee has been appointed to review and evaluate internal control systems, to examine disclosure and assessment of all relevant information for investors, and to ensure that the Company performs in compliance with regulations and governing laws.

Five aspects of the sufficiency of the internal control systems of the Company and its subsidiaries were evaluated. These were: the organization and environmental control system; the risk management system; Management control system; the information and communication system; and the monitoring system.

In addition, the Company and its subsidiaries have policies and measures in place to regulate business transactions with major shareholders, Directors and Management or connected persons so as to avoid conflicts of interest, in order to pursue the best interests of all parties concerned.

#### **4. Meetings of the Board:**

The Company arranges regular meetings of the Board at least once a month, and may hold special meetings as deemed appropriate, to continuously supervise management operations. The time allowed for each meeting is sufficient for the Board to consider all related matters. The Chairman and the President jointly establish and approve meeting agendas to ensure that all material issues are fully considered by the Board. Each Director may independently propose agenda items and freely expresses opinions. At meetings, Directors are encouraged to use discretion to consider all raised issues.

The Company convenes each meeting in compliance with the provisions of the Public Company Act. The minutes of each meeting are properly documented, are certified by the Board, and are systematically filed under tight security.

#### **5. Remuneration of Directors and Management**

The Company rewards its Directors fairly and reasonably, taking into account directors' responsibilities and the Company's operating results. Directors' remuneration has been approved at the shareholders meeting.

The Company fairly remunerates its Management, taking into account their responsibilities, performance, the operating results of the Company, and comparability within the same field of business.

#### **6. Training of Directors and the Executive**

The Company continuously builds the corporate governance knowledge of its Directors and Management so they may carry out their business operations in compliance with good corporate governance principles. The Company supports all Directors to participate in training courses organized by the Thai Institute of Directors Association ("IOD"), so as to add to their knowledge concerning their roles in the Company, and apply such learning to their job performance.

## **2. Structure of the Board of Directors of the Company**

As at December 31, 2018, the management structure of the Company consisted of three Executive Committees: (1) the Board of Directors (2) Sub-Committee including the Executive Management Committee and the Audit Committee and (3) The Management.

### **2.1 Functions and Responsibilities**

#### **2.1.1 Functions and Responsibilities of the Board of Directors**

The Company has to manage the business operations of the Company to be in compliance with governing laws, objectives and resolutions of the shareholders' meeting. In addition, the Board of Directors of the Company is committed to conduct the business operations in compliance with corporate governance and has functions and responsibilities to approve the following: -

1. To carry out activities prudently and in compliance with related governing laws, the objectives of the Company, and the Articles of Association, in order to protect the Company's interests and for the benefit of shareholders.
2. To consider policy, vision, work plans and key strategies, as well as ethical standards for business operations, and to supervise and monitor the Management, to ensure that they perform duties efficiently and are in compliance with the Company's policies.
3. To monitor the operational results of the Company and any other key progress criteria.
4. To determine interim dividends to shareholders.
5. To ensure that financial reports are complete, accurate, reliable and timely, and are prepared in compliance with generally accepted accounting principles.
6. To monitor the implementation of internal control and audit systems; to comply with all regulations and related governing laws; and to ensure appropriate risk management.
7. To ensure that the Company performs in compliance with good corporate governance policies, and focuses on fair treatment for all related parties, and discloses all relevant information that might affect the interests of related parties and the public.
8. To monitor and to prevent conflicts of interest, and ensure that connected transactions and any other transactions that might affect the interests of related parties are in compliance with related rules and regulations.

### 2.1.2 Functions and Responsibilities of the Audit Committee

The Audit Committee is responsible for reviewing the Company's financial report, the adequacy of internal control systems, the risk management system, and the compliance with relevant laws, rules and regulations. In addition, the Audit Committee has to prepare a report or provide its opinion to the Board of Directors or the Company's shareholders (as the case may be) as the following:

1. to review the financial reporting process to ensure that the Company's financing reporting is accurate and adequate;
2. to review the internal audit systems and ensure that the Company has adequate internal control;
3. to ensure that the Company has duly complied with the laws on securities and exchange, the SET regulations, and the laws relating to its business;
4. to consider, select and nominate an independent auditor, to propose the independent auditor's remuneration, and to attend a non-management meeting with the independent auditor at least once a year;
5. to review connected transactions and transactions that may lead to conflicts of interests to ensure that they are in compliance with laws and the SET regulations and are reasonable and for the Company's highest benefit;
6. to prepare, and to disclose the Company's annual report, an audit committee's report which must be signed by the chairman of the audit committee and consist of at least the following information:
  - an opinion on the accuracy, completeness and creditability of the financial report;
  - an opinion on the adequacy of the internal control system;
  - an opinion on the compliance with the law on securities and exchange, the SET regulations, or the laws relating to the business;
  - an opinion on the suitability of an auditor;
  - an opinion on transactions that may lead to conflicts of interest;
  - the number of the audit committee meetings, and the attendance of such meeting by each committee member;
  - an opinion or overview comment received by the audit committee from its performance of duties in accordance with the charter; and
  - other transactions which, according to the audit committee's opinion, should be known to the Company's shareholders and general investors, subject to the scope of duties and responsibilities assigned by the Board of Directors;
7. In performing its duties as the Audit Committee, if suspicious cases such as the following are found, which might have significant effects on the financial status and performance of the Company, the Audit Committee has to report such cases to the Board of Directors of the Company in order to improve and solve the problem within the time frame approved by the Audit Committee:
  - Conflict of interest transactions
  - Fraud or defect in the internal control system
  - Non-compliance with rules and regulations of the Securities and Exchange Act and rules and regulations of the SET and related governing laws.

In case the Board of Directors of the Company or the Management do not take any actions in order to improve and solve problems within the time frame as specified, the Audit Committee is deemed appropriate to report such transactions or such actions to the SEC or the SET.
8. To perform any other tasks as assigned by the Board of Directors upon the Audit Committee's consent.
9. To submit an operational report to the Board of Directors at least once a year.

Dr. Thiraphong Vikitsat has a background and experience in the accounting and finance field, which is adequate to be responsible for reviewing the reliability of financial statements of the Company. Dr. Thiraphong Wikitsait holds a Bachelor's degree of Science in Chemical Engineering and a Ph.D in Economics from West Virginia University.

### 2.1.3 Functions and Responsibilities of the Management Committee

The Management Committee was appointed by the Company's Board of Directors at the Shareholders' Meeting, to perform the following functions:

1. To manage and determine the business strategies, targets and operational plan, financial objectives and the budget of the Company by appropriately taking business factors into consideration and approval by the Board of Directors; in case circum-

stances change, the Management Committee shall review the use of the allocated budget to ensure that it is appropriate considering the circumstances. The Management Committee shall also undertake acts in line with the Company's business strategies in compliance with the policies determined by the Company's Board of Directors;

2. To monitor the work performance of each department to ensure the efficient and effective compliance with the Company's policies, business strategies, targets and operational plan, financial objectives and budget of the Company as approved by the Board of Directors considering the business environment, and to provide advice and suggestions on management to the high level management;
3. To select and nominate the high level management of the Company. In the initial stage, the Management Committee members shall consider persons who are fully-qualified, and who possess the knowledge, skills and experience that are beneficial to the Company's business operations. The names of these persons shall then be nominated for approval by the Company's Board of Directors'; to specify the organizational structure and the management policy; to consider and monitor the succession plan for the Management, and the workforce plans, as well as the rules for remuneration payment and evaluation criteria for work performance by the Management.
4. To appoint and remove employees of the Company from office, and to determine their rewards.
5. To consider and provide suggestions or comments to the Board of Directors on proposed projects or the entering into of any transactions relating to the Company's business, and to consider fund-raising options where necessary and greater than the allocated budget and/or the amount provided by the relevant laws, rules, and regulations, or the amount that the Articles of Association of the Company require that the Shareholders' Meeting and/or approved by the Board of Directors, as provided in the Articles of Association of the Company.
6. To perform any acts relating to the general management of the Company, and such Committee shall have the authority and responsibilities as assigned by or as provided in the policy of the Board of Directors;
7. To appoint and/or assign the member of Management Committee or any person(s) to act within the scope of the Management Committee as it deems appropriate, and within the scope provided in the Table of Authority as defined by the Board of Directors. The Management Committee has the right to revoke or amend such authority within its scope of authority.

#### **2.1.4 Functions and Responsibilities of the President**

The President is responsible for duties as assigned by the Board of Directors of the Company as follows: -

1. To carry out activities prudently; to be in compliance with the objectives of the Articles of Association; and to be in line with establishing policy as approved by the Board of Directors of the Company, in order to protect the Company's interests and for the benefit of shareholders.
2. To monitor and manage daily operational results of each department to ensure these are carried out effectively and efficiently.
3. To assign, nominate, remove and punish employees and staff of the Company to comply with Company discipline.
4. To report work progress to be in line with work plans and budget as approved by the Board of Directors
5. To have the authority to issue orders, rules and regulations, notifications to manage the business operation to be in compliance with the Company's policy and for the best interest of the Company and to keep discipline within the organization.
6. To have the authority to appoint a sub-attorney or other person to be a representative to perform special duties under the scope of power of attorney and/or to be in compliance with rules and regulations, including Table of Authorities, as approved by the Company's Board of Directors and/or guidelines of the Company's Board of Directors and/or the Company.

### **3. Recruitment and Appointment of the Director, Sub-Committee and President**

#### **3.1 Recruitment of the Directors of the Company**

The Company is responsible for the selection of Directors. The selection of Directors takes into consideration their background, knowledge, experience in related fields of business or consider representatives from the major shareholders of the Company who have appropriate qualifications deemed beneficial to the Company. The Appointment of new Directors must be resolved and approved at the meeting of the Board of Directors and/or the Shareholders' meeting (as the case may be). Below are procedures and criteria for the selection of the Directors.

- (1) Each shareholder shall have one vote for each share held.
- (2) At any shareholders' meeting to elect directors, each shareholder may exercise his voting right by electing candidates one by one or by electing a whole group comprising a number of candidates which is equal to the number of directors to be elected at the meeting at one time, as the meeting of shareholders may deem appropriate. In exercising the right to vote in either of the two options as aforesaid, each shareholder shall give all the votes that he is entitled to exercise as specified in (1) above to each candidate, and each shareholder may not divide his votes into portions to various candidate.
- (3) The candidates who receive the highest votes in their respective order of the votes shall be elected as directors in the number equal to the number of the directors of the Company or the number of the directors to be elected at such meeting. In the event of a tie of votes which causes the number of candidates to be elected to exceed the number of the directors of the Company or of the number of the directors to be elected at such meeting, the Chairman shall have a casting vote.

At every annual ordinary meeting of shareholders, one-third of the total number of directors of the Company shall retire. If the number of directors cannot be divided into three parts, the number of directors nearest to one-third shall retire. The directors to retire from office in the first and second years following the registration of the Company shall be determined by drawing lots. In the subsequent years, the directors who have been longest in office shall retire. Retired directors may be re-elected.

In the case of a vacancy of directorship for reason other than expiration of term of office, the Board of Directors shall elect a person possessed of qualifications and not possessed of disqualifications under the rules and regulations of the Public Company Act and the Securities and Exchange Act as the replacement director in the next meeting of board of directors, unless the remaining term of office of the director is less than two months.

The resolution of the Board of Directors under the above paragraph one must be supported by votes not less than three-fourths of number of the remaining directors.

The replacement director pursuant to the above paragraph one may hold only for the remainder of term of office of the director whom is replaces.

### **3.2 Recruitment of Independent Directors**

The Company has a policy to recruit independent directors to be in compliance with notification of the Capital Market Supervisory Board No. 39/2559, Application for and Approval of Offer for Sale of Newly Issued Shares, dated September 30, 2016, (including the amendment), with details as follows: -

1. Holding shares not exceeding 1% of voting shares in the Company, parent company, subsidiary companies, associated company or controlling persons of the Company, including shares held by related persons of such independent director.
2. Neither being nor used to be an executive director, employee, staff, or advisor who receives salary, or a controlling person of the Company, a parent company, subsidiary companies, associated companies, same-level subsidiary companies, major shareholders, or controlling person, unless the foregoing status has ended for not less than two years prior to his or her appointment as the Company's independent director. Such prohibited characteristic shall not include the case where the independent director used to be a government official or advisor of a government unit, which is a major shareholder, or a controlling person of the Company.
3. Not being a person related by blood or legal registration as a father, mother, spouse, sibling, and child, including spouse of a child of the Company's directors, executives, major shareholders, controlling persons, or persons to be nominated as a director, executive, or controlling persons of the Company or subsidiary company.
4. Neither having nor used to have a business relationship with the Company, a parent company, subsidiary companies, associated companies, major shareholders, or controlling persons, in the manner which may interfere with his or her independent judgment, and neither being nor used to be a significant shareholder, or controlling person of anyone having a business relationship with the Company, a parent company, subsidiary companies, associated companies, major shareholders, or controlling persons, unless the foregoing relationship has ended for not less than two years.

The term business relationship under the first paragraph shall include normal business transactions, rental or lease immovable property, and transactions relating to assets or services or granting or receiving of financial assistance. For example, these include receiving or extending of loans, guarantee, providing assets as collateral, and other similar actions which can potentially result in the Company or its counterparty being subject to indebtedness payable to the other party in the amount of three percent or more of net tangible assets of the Company or twenty million baht or more, whichever is lower. The

amount of such indebtedness shall be calculated according to the method for calculation of the value of connected transactions under the notification of the Capital Market Supervisory Board's governing rules on connected transactions *mutatis mutandis*. The consideration of such indebtedness shall include indebtedness occurred during the period of one year prior to the date on which the business relationship with person commences.

5. Neither being nor used to be an auditor of the Company, a parent company, subsidiary companies, associated companies, major shareholders, or controlling persons, and not being a significant shareholder, controlling person, or partner of an audit firm which employs auditors of the Company, a parent company, subsidiary companies, associated companies, major shareholders, or controlling persons, unless the foregoing relationship has ended for not less than two years.
6. Neither being nor used to be a provider of any professional services, including those as a legal advisor or financial advisor who receives service fees exceeding two million baht per year from the Company, a parent company, subsidiary companies, associated companies, major shareholders, or controlling person, and not being a significant shareholder, controlling person, or partner of the provider of the professional services, , unless the foregoing relationship has ended for not less than two years.
7. Not being a director appointed as representative of director of the Company, a major shareholder or any shareholders who are related to the major shareholder
8. Not undertaking any business in the same nature and in competition to the business of the Company or subsidiary companies, or nor being a significant partner in a partnership of an executive director, employee, staff, advisor who receives salary or hold shares exceeding one percent of total number of shares with voting rights of a company which undertakes its business in the same manner and in competition to that of the Company or subsidiary companies.
9. Not having any other characteristics which cause an inability to express independent opinions regarding the Company's business operation.

### **3.3 General Criteria for appointment of Directors in various sub-committees of the Company**

The Board of Directors may appoint a sub-committee or many sub-committees to support the implementation of the Board of Directors. The sub-committee will be responsible to consider reviewing special important issues. The Board of Directors is responsible for appointing members of sub-committees, including issuing charter, functions and responsibilities and relevant others, in relation to such sub-committee. In each year, the Board of Directors will consider reviewing the charter of each sub-committee.

### **3.4 General criteria for appointing the President and remuneration**

The Management Committee is responsible for the selection and appointment of top management. Members of the Management Committee will preliminarily consider recruiting qualified persons who have knowledge, as well as appropriate qualification, skills, and experience which are deemed beneficial to the Company's operation prior to submission of the name of the qualified persons to the Company's Board of Directors for approval. In addition, the Board of Directors is responsible to determine the organization structure, a management plan, a succession plan, manpower and criteria for remuneration as well as assessment of the Management's performance.

## **4. Supervision of operation in a subsidiary and associated company**

The Company has a policy to supervise operations of a subsidiary or associated companies as follows: -

1. The Company will appoint a representative to be in a position of Director in each subsidiary company and/or associated company according to the Company's shareholding percentage in the respective company. However, the Company's representative shall be considered and approved by the Company's Board of Directors.
2. The Board of Directors and the Management of each subsidiary company and/or associated company shall have functions and responsibilities to be in accordance with related governing laws. For example, the Board and the Management of each subsidiary company and/or associated company will report the Company of its financial status and performance, connected transactions, and acquisition or disposition of assets. In addition, they have to report to the Company of the transactions which have potential conflicts of interest including their related persons to avoid conflicts of interest. This is to comply with rules and regulations imposed by the Capital Market Supervisory Board and the SET.
3. The Company will set up a necessary work plan and action to ensure that a subsidiary company and/or associated company reports reliable financial status and performance. The Company will ensure an appropriation and sufficiency of disclosure system and internal control of a subsidiary company and/or associated company for a business operation.

In addition, the Company will closely follow up the performance and operations of a subsidiary company and/or associated company and submit analysis reports as well as its opinion or recommendation to the Company's Board of Directors as well as to the Board of Directors of a subsidiary company and/or associated company for consideration to set up a policy or to improve a business operation to promote business development and continued growth in a subsidiary company and/or associated company.

## **5. Supervision of the use of inside information**

The Company values supervision to ensure all groups of shareholders can access the Company's information equitably and fairly. The inside information or undisclosed information which might have a direct impact on share price of the Company is considered confidential information for internal use to operate the Company's business. The Directors and the Management and all levels of employees have to keep internal information as confidential. The Company has put in place the use of inside information as follows: -

1. Employees shall keep information of the Company's clients as confidential and shall not trade information and not disclose such information, except to the extent required to be disclosed by applicable law or approved by the Board of Directors of the Company.
2. Any disclosure of information which might have any effect on the Company must be carried out by authorized persons except for obtaining authorization from the authorized person.
3. The inside information involving business operations and administration is considered as confidential. Disclosure of such inside information to the public might have an effect on the Company.
4. All employees and related persons shall not disclose non-public information to the public and shall not sell or purchase securities of the Company or of any Companies such persons get involved by using non-public information.
5. Important documents and confidential information must be carefully kept, taken care of and easily accessible under special methods at each level or for each type of information (document or electronic). After the expiry period of the data retention, the responsible employee has to destroy information properly and correctly as some documents are to be kept to comply with governing laws. (as the case may be).

The Company has a policy to regulate the Directors and the Management to use inside information, that is not disclosed to the public, for their benefit including purchasing and selling securities as follows: -

1. The Company will advise the Directors, the Management and the person who is in charge of the Accounting & Finance department to understand their duties to submit a report of ownership in the Company, including their spouses and children not yet of legal age, to the SEC to be in accordance with provision contained in section 59 and section 257 of the Securities and Exchange Act B.E. 2535. This includes a report of their acquisition and sales of securities in the Company, including their spouses and children not yet of legal age, to the SEC to be in accordance with the section 246 and section 298 of the Securities and Exchange Act B.E. 2535.
2. The Company requires the Board, the Management and executive persons in charge of the Accounting or Finance department, including their spouses and children not yet of legal age, to prepare and submit reports of their ownership in the Company to the corporate secretary prior to filing such report to the SEC. Such a report shall be prepared and submitted to the corporate secretary within 30 days from the date when they first hold the position. After that they shall report every transaction within three business working days from the purchasing or selling date.
3. Prohibition of the Board of Directors and employees in related departments, including their spouse and children not yet of legal age, of purchasing or selling the Company's securities within 1 month before quarterly and yearly financial report are due to be released publicly and within 24 hours from the disclosure date of such financial statements to the public.  
  
In addition, the Board of Directors and employees in related departments, including their spouse and children not yet of legal age, are prohibited from purchasing or selling the Company's security by using undisclosed information, which might affect the price of the Company's security, up until the expiration of the 24-hour period after such information has been disclosed to the public.
4. The Company has set up criteria and guidelines for penalties for offenders for use of inside information for personal advantage. The penalties include a letter of employee reminder, waiver of wage payment, temporary work suspension without payment, and lay off. The penalties will be considered subject to the intent of the action and the seriousness of the offense.

## **6. Audit Fees**

### **1. The Company and its subsidiaries paid audit fee for 2018 to:**

- 1.1 The statutory auditor of the Company for the financial year ended 2018 in the amount of baht -0-
- 1.2 The office of the statutory auditor of the Company, or other persons or related enterprises paid other audit fees related to the the statutory auditors of the Company for year 2018 in the amount of BHT 2,200,000.

### **2. Non-Audit Fees**

The Company paid a fee to KPMG Phoomchai Audit Company Limited to review the report of promotional privileges and benefits of exemption from payment of corporate income tax by virtue of the promotional certificates of the Board of Investment in 2018 for a total of Baht 180,000.

### **7. Adoption of Corporate Governance Code 2017 (CG Code) for listed companies**

The Company has reviewed the corporate governance policy by referring to the Corporate Governance Code for listed companies in 2012 of the Stock Exchange of Thailand and good Corporate Governance Code for listed companies 2017 (CG Code) of the Securities and Exchange Commission which the company has adopted most practices by adding practices that are suitable for the business and can do without any other effects on the corporate governance policy of the company. At present, the company is considering additional review and making a plan to gradually improve the corporate governance policy to be in line with Corporate Governance Code for listed companies 2017 (CG Code).

## 1. Overview of Policy

The Company has a policy to pursue its business operations under well-managed administration practices with an adherence to creating a corporate culture in good corporate governance in parallel with social conservation and environmental preservation. The Company also realizes the importance of educational support, public well-being and safety, art, cultural preservation and social development with an aim to respond the need of the people in the local community to further enhance the sustainable growth in all respects, which can be partly reported below.

### 1.1 Business Operation with Fairness

The company aims to conduct business according to the Corporate Governance Policy and Code of Conduct of the company (Please see details under Section 2.11 Corporate Governance -11.1 Corporate Governance Policy) and is determined to promote the firm to be an organization that does business with transparency, ethics, and responsibility for shareholders and stakeholders.

The Board of Directors is determined to conduct business according to good corporate governance, focusing on justice, transparency, fairness, responsibility for society, culture and the environment, together with building sustainable development for all staff, customers, the community, and all stakeholders under the management.

### *“Transparent Thailand where all citizens live happily”*

The Company's Board of Directors specifies principles of Good Corporate Governance for the Board, management, and all employees of the company to hold as follows:

- (1) Directors hold on to universal Corporate Governance and is determined to improve Good Corporate Governance continuously i.e. shareholders rights, equitable treatment of shareholders, shareholder roles, information disclosure and transparency, and responsibility of the Board.
- (2) Directors, Management and staff concentrate to apply Principles of Corporate Governance i.e. Creation Shared Value, Responsibility, Equitable treatment, Accountability, Transparency, and Ethics (C.R.E.A.T.E.) to use as a guideline to conduct business and to strictly abide by laws and related regulations of invested countries.
- (3) Directors establish the management structure to treat Directors, Management and shareholders with fairness, and consider policy, vision, work plans and key strategies, and supervise and monitor business operations, and ensure appropriate risk management. They are independent and responsible for business operations to conform to Good Corporate Governance by being an ethical leader and a good example to follow the Corporate Governance and Code of Conduct as well as promote the culture of Corporate Governance. They are responsible for all related stakeholders and to promote human rights, consumer rights, and fair labor as well as to establish a system to follow up, evaluate, and review for all employees to practice Corporate Governance in a complete and sustainable manner.

In addition, the Company makes a written announcement of a Code of Conduct for all stakeholders with shared values principle between the Company and stakeholders whereas the top management is responsible for the participation from all stakeholders and improves communication channels to express opinions to responsible business units continuously. The Company has a strict policy to treat all stakeholders fairly including shareholders, customers, employees, trade partners, competitors, community and society. The management and employees put the Code of Conduct into practice so they clearly understand how to fairly treat shareholders, trade partners, and customers, etc.

### 1.2 Anti-Corruption Policy

The Company is committed to pursuing its business operations with an emphasis on transparency with ethics and responsibility to shareholders, customers, employees, society and others stakeholders. The Directors, the Management and all levels of employees are prohibited from operating or accepting, soliciting, demanding, or accepting assets or other benefits to other persons in business dealing with the Company, whether directly or indirectly, as a motive for them to do or refrain from doing any act to acquire or keep benefits that are unsuitable to the business, except as allowed by the laws, rules, regulations, local customs or tradition, or business customs, to create the balanced consideration of all related parties and fair treatment to all parties concerned. The Company has conducted Anti-Corruption awareness as guideline policies for the management and employees of the group to perform in compliance with the principles of good corporate governance, Code of Conducts and/or related to the terms and regulations or any legal issues to create sustainable value and long-term growth of the business.

### **Objective**

1. All levels of employees must not induce to act or refrain from acting that may lead to malfeasance and corruption, by not being involved in corruption, whether directly or indirectly.
2. To support all levels of employees' roles and responsibilities to take part in the activities of Anti-Corruption Policy Corruption, not to solicit, demand, or accept assets or other benefits from other persons in business dealing with the Company,
3. To conduct its business with fairness and enhance the confidence to its stakeholders.

### **Scope of Anti-Corruption Policy**

Stakeholders of the Company who are involved in Anti-Corruption Policy Corruption are classified into 2 major groups as follows:-

1. **Internal** : Director, Management Team, and all level of staffs/employees
2. **External** : Customer or suppliers, contractor's sub-contractors, business partners, creditors, governmental authorities and private officers.

### **Anti-Corruption Definition**

Corruption means any types of bribery; an offering, agreement to give, giving, promising to give, soliciting, or receiving of money, asset, or other inappropriate benefits from the government officers, government sectors, private sectors, or responsible person either in direct or indirect action so that such person could proceed or disregard his/her function in order to acquire, retain the business, recommend specific company to the entity, or achieve any improper benefits in business transaction. Exceptions shall be applied in case of laws, regulations, statements, standards, customs, or business traditions.

### **Roles and Responsibilities**

1. The Board of Directors is responsible for determining the policy, and monitoring, and forming an effective system supporting Anti-Corruption acts in order to affirm that the Management Team intensively concerns, emphasizes, and cultivates an Anti-Corruption mindset as part of the Company's culture.
2. Presidents and the Management are responsible for determining an Anti-Corruption system, promoting, and encouraging Anti-Corruption manners conveyed to all staff and related parties. This also includes reconsideration on systems or regulations in order to best adjust with business changes, regulation, standard, and laws.
3. The Audit Committee is responsible for the revision of financial and accounting reports, internal control, internal audit function, and risk management so that such operations are concise, appropriate, effective, and conform to global standards.
4. The Internal Audit Director is responsible for auditing, assessment, and evaluations in business transactions whether they are accurate and comply with guidelines, approval authority, standards, laws, and policies in such monitored departments in order to ensure that the internal controls are sufficient and suitable for probable risk in corruption. This shall be directly reported to the Audit Committee.

### **Anti-Corruption Guidelines**

1. Staff shall not be negligent in any corruption conditions involved directly with the Company. All staff must notify such acts to supervisors or responsible persons provided in particular channels, including collaborate with the fact-finding investigations.
2. A person who is involved in corruption is considered to have committed a disciplinary offense. This means such person needs to be considered for disciplinary action according to the Company's standards. Legal conviction may be applied in case such acts violate the laws.
3. The Company shall provide fairness and safeguard staffs who inform Management of corruption cases relating to Anti-Corruption information.
4. The Company is concerned about the importance of dissemination, knowledge sharing, and constant communication with employees.
5. The Internal Audit Department of the Company will be responsible for reviewing and evaluating internal control systems, disclosure of Company information, and to review implementation of the provisions and risk management systems that can mitigate risks against corruption and report directly to the Audit Committee.

## **Provision in Implementation**

### **Implementation of Anti-Corruption Policy (to interact properly with business partners and the related parties who have conflicts of interest)**

All levels of employees will be responsible for the Anti-Corruption Policy in connection with customers, suppliers and all parties concerned. (Hereafter called “related parties who have conflicts of interest” who have a direct impact on business operations)

1. The employees must comply with the Anti-Corruption policy and measures, the Company’s corporate governance principles and code of business conduct and hospitality activities from other persons in business dealing with the Company.
2. The employees must not accept Gifts, Entertainment and Hospitality offerings, gifts or entertainment and hospitality activities from other persons in business dealing with the Company, whether directly or indirectly.
3. Employees must not be corrupt or accept corruption in any form in any circumstance, covering the business without otherwise getting prior approval from the direct supervisors. Any acceptance thereof as above from other persons must comply with the Anti-Corruption policy and measures, the Company’s corporate governance principles and code of business conduct and must not have any impact in business decision of such employee.
4. Employees must not perform any act to acquire or keep benefits from their positions in the Company or to accept Gifts, Entertainment and Hospitality offerings, gifts or entertainment and hospitality activities from other persons in business dealing with the Company.
5. Whenever the employees advise the personnel to the Company, those actions must not go against the benefits and/or recruitment of the Company or refrain from doing any act to acquire or keep benefits that are against related laws and regulation.
6. There are no close relationships between supervisors and those under their supervision within the same departments such as: married couples, parents or offspring, that may impose conflicts of interest.
7. Business Relations and Procurement Process with the Public Sector or all types of bribery or illegal payments are prohibited in all business transactions, operation, and connection to the government.
8. Corrupt persons who violate or fail to comply with the Anti-Corruption measures must face punishment under the Company’s rules and may also face prosecution if the action violates the law.
9. Employees must be granted an approval from their supervisors before offering all types of gifts (such as the Company’s products) or entertainment and hospitality activities to other persons covering the business to be in compliance with the Anti-Corruption policy and measures, the Company’s corporate governance principles and code of business conduct. In case of emergency that in any circumstances, it has not been granted approval from their supervisors in advance, such employees are deemed to get an approval from their supervisors whatsoever after offering all types of gifts (such as the Company’s products) or all forms in any circumstances, to other persons covering the business.
10. The employees must not acquire or take benefits from their positions in the Company to perform inappropriate relationship, sexual harassment and other verbal or physical harassment of a sexual nature, any kinds of treatment or consideration of, or making a distinction in favor of or against (such discrimination based on race, sex, disabilities or religious). This also includes burglary, threats, force or any other kind of the action that violates the law.
11. Employees should ask or use request forms to get opinions from their supervisors or responsible persons when the employees face or doubt any act that is considered corruption in order to avoid any argument.

## **File complaints or reports of Fraud**

### **1. Complaints or recommendations**

- 1.1 A complaint if encountering any acts that are considered corruption, direct or indirect.
- 1.2 Any act that is considered corruption and/or have a direct effect on the internal control of the Company cooperate in the fact-finding investigation stipulated by the Company’s regulations.
- 1.3 Any act that has a direct impact on the Company’s reputation and benefits.
- 1.4 Any misconduct that is against the law, morals and/or business ethics.

### **2. Suitable report channel to file a complaint**

When they face or doubt any act that might be considered corruption, employees have a responsibility to notify supervisors or responsible persons or through suitable report channels.

### **3. Channels of Communication between the Company and its Employees** (Internal complaint)

1. Head of the Internal Control Department/ Head of the Human Resources Department or Head of Legal Department.
2. Mail Box
3. E-Mail : Orapin@tpipolenepower.co.th

### **4. Channels of Communication between the Company and outsiders** (External complaints)

1. Letters : Mrs. Orapin Leophairatana  
Vice Chairman  
TPI Polene Power Public Company Limited  
26/56 Chan Tat Mai Road, Thungmahamek,  
Sathorn, Bangkok 10120
2. E-Mail : orapin@tpipolenepower.co.th
3. Letters : The Audit Committee  
TPI Polene Power Public Company Limited  
26/56 Chan Tat Mai Road, Thungmahamek,  
Sathorn, Bangkok 10120
4. Tel. no. 02-285-5090 or 02-213-1039 Internal Audit Department

### **Identities and confidentiality protected**

#### **1. Identities protected**

As the whistleblower or the person filing the grievance in good faith are greatly beneficial to the Company and all employees, therefore, the whistleblower or the person subject to such grievance and parties involving in the fact-finding and reporting process, no matter difficulties they might have, the Company will ensure that no employees shall be demoted, penalized or be otherwise affected because they honestly decline to participate in corruption.

The Company has the policy to investigate such reports with equal transparency, care and fairness and subject them to a proper investigation, information will be kept confidential and only be revealed when necessary while we will take into consideration safety and damage of the whistleblower or the person filing grievance, which will be carried out in a confidential manner to ensure staff who make the reports will have their identities protected.

#### **2. Names and Confidentiality Protected**

The whistleblower or the person filing the grievance (various groups of stakeholders or employee) may choose not to reveal his name, address or contact number unless he feels that such a disclosure will enable the Company to inform him of progress. Information will be kept confidential and only be revealed when necessary while we will take into consideration safety and damage of the whistleblower or the person filing grievance. The Company will hear all such reports with equity, transparency, care and fairness and subject them to a proper investigation, which will be carried out in a confidential manner to ensure staff that makes the reports will have their identities protected with fair treatment.

### **Fact-finding process and Penalty**

1. Having received the grievance, the Management Representatives, whose members consist of the Compliance Unit and the Audit Committee, will be responsible to conduct an investigation.
2. Under the fact-finding process, the Management Representatives and the Audit Committee might assign Management Representatives to keep them informed of the progress of further investigation.
3. In case that tips or the grievance are found to contain materiality, the person committing corruption or violating or failing to comply with the Anti-Corruption measures will be notified. The Company will grant the opportunities for the persons committing corruption or proved to be guilty to acknowledge the excuses and reserve the right for them to prove themselves by providing additional information or evidence that they aren't involved in any corruption or are guilty of violating or failing to comply with the Anti-Corruption measures as accused.
4. In case that the person who is committed corruption or violating or failing to comply with the Anti-Corruption measures, are proved to be guilty, the Company will take actions in accordance with the established procedures to investigate and levy disciplinary punishment on employees at fault, relating to corruption matters. Such person will be considered for discipline

according to the Company standards. Legal conviction may be applied in case such act violates the laws. The Management's decision is considered the final judgment for punishment on employees at fault, relating to corruption matters.

#### **Disclosure of the Anti-Corruption Policy**

1. The Company announces the written publication of the Anti-Corruption Policy and measurements as a principal guideline for employees to follow.
2. The Company discloses the written publication of the Anti-Corruption Policy and measurements through the Company's channel, such as letters, the Company's Website and Annual Report., etc.
3. The Anti-Corruption Policy needs to be reviewed regularly, including with a possible revision of such policy and implementation provision in order to accord with business changes, regulation, standard, and laws.

#### **1.3 Respecting Human Rights**

The company realizes that community and environment are susceptible to its activities and business conduct; hence, the Board, the management, and all employees must respect the law, customs, traditions and local cultures where the company is conducting business. The Company consequently set the following guidelines:

- (1) Employees must treat any person in the areas of the establishment with respect, on the basis of human dignity, justice and respect for each other. They also comply with all applicable laws in the country.
- (2) The Company promotes diversity in employment and provides opportunities to grow and advance in career path without discrimination in favor or against any person, race, nationality, religion, country, education, age, sex, status, disability, and so on.
- (3) Employees must carefully handle stakeholder information.
- (4) Employees will not disclose confidential information of stakeholders to unauthorized persons, except for the written consent of the stakeholder or the authorized person of the company.
- (5) Employees must limit disclosure, use and access of stakeholder information as necessary.
- (6) Prohibiting employees from harassing or causing sexual nuisances in the workplace.

In addition, the operation and management of the security of the Company's area must comply with voluntary compliance with security and human rights principles.

#### **1.4 Fair Labor Practices**

The Company values its employees, focusing on all employees to progress, to have welfare and security, to develop their potential, and to be safe to work. To treat employees fairly, the guidelines are as follows:

- (1) The company has plans and training courses to teach the job to be done or relevant issues for employees to understand and to work properly, safely and suitably with the employees in each job position.
- (2) The Company organizes training for knowledge development, competitive advantage of its employees to support its growth and the progress of the employees
- (3) The company encourages the transfer of knowledge, teaching, and work learning among employees.
- (4) The Company provides opportunities and support for employee education, and training to increase knowledge both inside and outside the organization following proper job description.
- (5) The Company has clear and strict employment regulations, including progress in the job with no restriction on gender, age, social status, race, ethnic, religious, educational institutions. The employment policies and working conditions are based on the needs of the job.
- (6) The company will not employ migrant workers including contractors and subcontractors.
- (7) The Company provides a channel for listening to employees' feedback and suggestions.
- (8) The Company provides benefits and welfare, equivalent to other companies in the same industry.
- (9) The Company creates a good working environment and a safe place to work.

### 1.5 Consumer Responsibility

The Company is committed to providing customers or consumers who buy products and services from the Company benefits and satisfaction with the product by producing fair-priced, good quality products which show responsibility to customers and consumers. It needs to serve customers and consumers quickly and without discrimination. It also maintains sustainable relationships with customers and consumers. The guidelines are as follows.

- (1) To develop quality products and give full service by continuously delivering goods and services quickly to meet the needs of customers and consumers. The employees must also be fully dedicated to meeting customer needs with reasonable prices and without restrictions on consumer rights.
- (2) Not to commit any fraud or deception in the quality of the company's product and services by producing products and services that are safe, reliable and non-hazardous to the health of consumers. The warning signs and documentation must be specified in accordance with international quality management standard systems.
- (3) To store customer data in a secure system and not to disclose customers' data illegally and specify the fair price of the products and services.
- (4) To provide an agency responsible for providing adequate recommendation knowledge and understanding of products and services including counseling and offering solution. We also receive complaints in order to maximize customer satisfaction in products and services.

### 1.6 Environmental protection

The main business of the Company is the production and distribution of electricity and the service station for fuel and natural gas (NGV). It focuses on power plants that use waste heat and RDF fuels. Most of businesses are eco-friendly.

The company provides a health insurance fund in the event that people in the community radius of 5 kilometers around the project are sick due to the operation of the factory. In the first year, 1 million baht was put into the fund and 500,000 baht per year was put into the fund the following years.

In addition, the company has provided funds to promote public health in communities such as training for health workers, providing medical tools to the community health center by funding approximately 300,000 baht per year in a radius of 5 kilometers around the power plant project, such as Mittraphap Sub-district, Thap Kwang Sub-district, Muak Lek District and Tha Khlo Sub-district, etc.

The company provided a project to study air quality in the area of <5 kilometers radius around the power plant project of TPI Polene Power Public Company Limited during 2018-2020. Details of the study time are 3 years, operated by Thammasat University Research and Consultancy Institute (TU-RAC).

The company has a plan to create a project to study the effects of heavy metals on dairy farming areas and aquatic animals in a radius of 20 kilometers around the project area by hiring higher education institutions to study the project for a period of 3 years continuously. The project is expected to begin the study from mid-2019 onwards.

The company has a plan to hire an environmental consulting company to inspect dust in the atmosphere that are not more than 2.5 microns, with 8 stations around the project area which will be measured for a period of 5 years continuously between the years 2019-2023.

### 1.7 Community or social development

Commitment to social and community development, promoting quality of life, and maintaining the environment so that the industry can live in harmony with society and the community, are what the company, as a company of Thai people, values along with its business operations. The Company has focused on developing sustainable practices in various areas.

The Company has a project to install 14 drinking water machines in the radius of 5 kilometers around power plant projects to allow the community to have clean and safe drinking water which will be completed by the year 2019.

### 1.8 Innovative use and dissemination of innovations that is socially and environmentally responsible.

The Company is focused on innovation through the maximization of resources. The Company is focused on generating electricity from waste heat and RDF which uses waste as raw material for production. The use of alternative energy reduces carbon dioxide (CO<sub>2</sub>) emissions into the atmosphere; thus, it is deemed an environmental-friendly innovation. The Company has publicized this principle to the community and people to learn and understand the Company's operations on various occasions.

In addition, RDF is produced from waste which is derived from local communities and factories. The Company's business is an innovative business to recycle waste and also helps the community reduce waste, which is a national problem. It also helps reduce waste disposal processes of other public and private sectors organizations, which saves energy indirectly, in accordance with the company's philosophy to create balance between business growth and environmental protection, and to create a strong Thai society and to be a driving force for the Thai economy and Thai society.

## **2. Implementation and Reporting (CSR in Process)**

The Company has a clear policy on CSR and is committed to working on such a policy to ensure that it helps create a quality society and environment. The company policy has been implemented for the benefit of the community and society as follows:

- (1) The Company is committed to implementing the guidelines of "Zero Waste" and has consistently followed this policy by regulating, supervising, and developing processes to ensure that the rate of waste emissions from operations is below the highest level allowed by the law. Also the Company reuses the waste heat from the cement production process to produce electricity power.
- (2) The Company is focusing on ways to reduce carbon dioxide (CO<sub>2</sub>) emissions into the atmosphere, which cause greenhouse effects for the community. As a result, the Company has focused on operating the RDF power plant.
- (3) The Company is committed to reducing community waste by utilizing community waste for alternative RDF projects. The use of such alternative fuels to generate electricity helps community waste management and reduces the quantity of the waste and the space for garbage collection.
- (4) The Company continues to use the waste monitoring system to monitor the emission of waste from the combustion process of the power plant and keeps track of and controls the oxides of nitrogen (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>) in each combustion process. And it controls the temperature and fuel-to-air ratio during the combustion process to maintain the level of waste discharge to the level required by law.
- (5) The Company shall cooperate and comply with the regulations, laws and other requirements related to the environment.
- (6) The company has established a health surveillance fund comprising of:
  1. Health insurance fund to be a guarantee for the medical expenses of the people in case of illness due to the project. In the first year, 1 million baht was put into the fund and 500,000 baht per year was put into the fund the following years.
  2. Funds to support personnel, medical equipment and research on public health in the amount of 300,000 baht per year
  3. Funds for public health check in the area to be monitored and observed for communities around the power plant.
- (7) Spatial air quality study project - The company has hired Thammasat University Research and Consultancy Institute (TU-RAC) to study the impact and study of air quality protection guidelines by studying the accumulation of heavy metals in the air, potential support capacity for SO<sub>2</sub>, NO<sub>2</sub>, TSP, PM<sub>10</sub> and heavy metals, potential support capacity for TSP and PM<sub>10</sub> in limestone quarries, accumulation of heavy metals in the soil and guidelines for air quality management in the area around the power plant. The study area is within a radius of 5 kilometers around the project with the study period of 3 years (2018-2020).

## **3. Businesses that affect social responsibility**

- None -

## **4. Additional Guidelines on Prevention of Corruption Involvement**

The Company has a policy against corruption. The Company focuses on promoting morality, ethics, transparency in business operations according to the business ethics of the Company. It also operates a business using a management system that is efficient, transparent, and auditable. In addition, the Company encourages its personnel at all levels not to deal with corruption directly and indirectly and to participate in preventing and combating corrupted practices related to the Company's business.

The Company has a policy regarding gifts and other benefits from/to the person or company that conducts business with the Company. To avoid any conflict of interest, the employees of the company must not accept or claim, directly or indirectly, any gifts or bribes, special remuneration or incentives that are valued by outsiders who are involved in business. And if any employees need to do that, one must receive approval by the direct supervisor before. The receipt of such gift must comply with the rules, business practices or business etiquette and it must have no influence on business decisions of employees.

In addition, the Company has a policy that does not allow or encourage unlawful payments or bribe a government agency. It also provides a way to clearly report clues or complaints when people see the wrong action. The investigation and penalties are set out in the Company's Anti-Corruption Policy.

## Internal Control and Risk Management

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At the Board of Directors' meeting no. 1/2562, held on January 25, 2019, attended by the 3 Audit Committees, the Board considered and evaluated the sufficiency of the internal control systems of the Company by investigating the Management and other relevant departments, and considering assessment report, which was prepared by the Management and reviewed by the Audit Committee. These were 5 aspects of internal control systems as follows:-

1. The organization and environmental control system
2. The risk management system
3. Management control system
4. Information and communication system
5. The monitoring system

The resultant assessment showed that the internal control systems of the Company operated appropriately and sufficiently. The Company provided sufficient employees to efficiently follow-up the internal control systems, and to sufficiently monitor the operations of the Company to safeguard the Company's assets including transactions which a possible conflict of interest might occur. The Board also considered that other aspects of the internal control systems are sufficient.

## Inter-Company Transactions

Disclosure of information about inter-company transactions, and other transactions that might have the potential to involve conflicts of interest, is in compliance with the rules and regulations imposed by the SET and the SEC.

The Audit Committee has performed its duties and responsibilities to review inter-company transactions. The procedures used in inter-company transactions have always been subject to the normal terms and conditions of business and reflect applicable market prices. The Company established procedures for the above transactions in the same manner as for transactions with general customers and all inter-company transactions reflect applicable market prices to ensure that there are no conflicts of interest.

As of December 31, 2018, the Company had inter-company transactions with related persons, which might have the potential to involve conflicts of interest. The Directors and/or Management have considered the reasonableness of the above inter-company transactions, and all were undertaken for the maximum benefit of the Company and were subject to the normal terms and conditions of business to reflect applicable market prices and in compliance with the rules and regulations imposed by the SET and the SEC. Details of the inter-company transactions are contained in Note 4 of the consolidated financial statements as at December 31, 2017, and December 31, 2018 which can be summarized as follows:

### 1 Inter-Company Transaction between the Company and related persons that might have the potential to involve conflicts of interest

#### (1) TPI Polene Public Company Limited (“TPIPL”)

TPIPL is a major shareholder of the Company. TPIPL holds 70.24% of paid up capital in the Company. In addition, TPIPL and the Company have 6 common directors including: Mr. Prachai Leophairatana, Dr. Pramuan Leophairatana, Mr. Prayad Liewphairatana, Mrs. Orapin Leophairatana, Miss Malinee Leophairut and Mr. Khantachai Vichakkhana as of December 31, 2018.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2017	Fiscal year ended December 31, 2018		
Revenue from power sales	570.3	872.4	The Company sold power generated from its power plant to TPIPL. The Company received a monthly electricity tariff from TPIPL at the same rate as the average tariff rate at which TPIPL purchased power from the PEA. (the price does not include VAT). Since April 1, 2018, the Company has used tariff rate type 4 for large business, specific rates according to the time of use, according to the announcement of PEA plus Ft charge.	Classified as ordinary course of business of the Company at reasonable price and beneficial to the Company.
A/R	80.1	234.4		
Revenue from sales of shredded tire	-	4.6	The purchase of old tires from TPI Polene Plc. and sold the shred tires to TPI Polene Plc. was a program initiated from the start of the company which was fuel supply business for TPI Polene Plc. (before the company starts production and sales of electricity power). At that time, the company purchased a shredder for use in the processing of waste to produce RDF fuel. Later, the company could use such shredder to process tires to be used as raw material in the pyrolysis plant of TPI Polene Plc. for the production of fuel oil and diesel oil, therefore, agreed to use the shredders to shred more tires to increase the benefits. Subsequently, in 2016, the Company entered into an agreement with TPI Polene Plc. to provide service for tire shredding to TPIPL by charging fee at actual cost plus 10% margin.	Classified as ordinary course of business of the Company which is the utilization of the machines that the company already has to be most effective. Even though the Company charged the price of tires based on actual cost in 2015, the company still received the wire or steel wire in the tire to resell without any direct costs and would not cause the company to lose benefits. But it is deemed appropriate to change the format of the transaction to provide the service of shredding the old tires charged at actual cost plus 10% margin to better reflect opportunity cost of the Company.
A/R	-	0.4		
Revenue from service of shredding tire	9.0	10.3		
A/R	0.9	0.9		
Expense for analysis and waste disposal	-	195.7	Service fee for Industrial waste disposal and an analysis of material samples including an issue of analysis report for the Company.	The transaction is classified as ordinary course of business of the Company with the service fee is the market price that TPIPL offered to others. Therefore, the transaction is considered reasonable and beneficial to the Company.
Payables and advances	-	37.0		
Revenue from petrol and gas (NGV) station	41.1	39.4	The Company sold petrol and gas at its service stations at retail market price to TPIPL for use in TPIPL's vehicles. Such retail price was applied to other customers both related and unrelated to the Company.	Classified as ordinary course of business of the Company at retail market price which is the same level that the company sold to other customers, both related and not related to the company; hence, the transaction is reasonable and beneficial to the company.
A/R	3.1	3.1		

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2017	Fiscal year ended December 31, 2018		
Revenue from sales of steam	35.1	31.2	The Company sold steam to TPIPL at BHT650 per ton which was derived from production cost plus 10% margin.	Classified as ordinary course of business of the Company which is the utilization of the machines that the company already has to be most effective. However, the price of steam based on the estimated cost of steam generated in 2015 might not cause the company to lose benefits. But it deemed appropriate to improve the price of steam, where the company will charge steam at actual cost plus 10% margin to better reflects the opportunity cost of the Company.
A/R	2.7	3.5	The sale of steam to TPIPL occurs because the company has the steam generated from the electricity production process of the company, therefore, the company sells steam generated from the electricity generation process to TPIPL to be used in the light weighted concrete production plant of TPI Polene at the price of 525 baht per ton, which is calculated from the estimated steam cost incurred. Still, in 2016, the company entered into an agreement with TPI Polene Plc. to sell steam at 650 baht per ton, which is considered estimated cost of steam incurred plus 10 percent of the said cost.	
Revenue from provision of labor	37.4	39.3	Labor cost to TPIPL occurred because TPI Polene has a power generation unit in the tile production plant of TPIPL but there are not enough qualified workers to operate the power plants. Therefore it has hired the company to send workers to operate the power plants. In 2015, the company charged workers according to the cost of salaries, welfare and related expenses of workers sent to work in the power plants. However, in 2016, the company has entered into an agreement with TPIPL which stipulates that the labor cost is calculated based on the cost of salary, welfare and expenses related to workers sent to work in the power plants plus 10% margin.	Charging the labor cost in 2015 at costs might not make the company lose benefits; however, it does not allow the company to benefit from such transactions. Still, when there is an adjustment of the said labor cost, the labor cost is calculated according to the cost of salary, welfare and related expenses of workers sent to operate in the power plant plus 10 % margin to make the company more profit and also to create more operational experience for workers. Hence the transaction is reasonable and beneficial to the company.
Other A/R	3.7	3.3		
Expenses to purchase waste heat	10.8	35.7	In the cement production process of TPIPL, there will be a lot of waste heat left from the cement production process and the company can use such waste heat as a fuel to produce electricity efficiently. The Company entered into an agreement with TPIPL to purchase waste heat emitted from cement plant of TPIPL at BHT0.06/Kwh, which was derived from additional cost of TPIPL to deliver waste heat to power plant of the Company. Since January 1, 2018, the price is set at BHT0.12/Kwh.	The transaction is classified as ordinary course of business of the Company because the Company must use waste heat as one of the main fuels for power plant, which results in lower production cost of power of the Company as compared with other fuel. Therefore, this transaction is reasonable and beneficial to the Company.
Payables and advance from related parties	1.1	6.5		
Expense for power purchase	34.7	65.8	At RDF plant and oil stations and NGV stations, there is a need to use electrical energy in the production and in the office. The Company purchased power from TPIPL to be used in the Company's RDF plant and some petrol and gas service at the same tariff rate as the rate at which TPIPL purchased power from the PEA using a 115 kv system. Such tariff rate was lower than the tariff rate applicable to the Company if the Company purchased power from the PEA using a 22 kv system. The Company would also need to install additional transmission lines to connect its power system with that of the PEA if the Company purchased power from the PEA.	The transaction is classified as ordinary course of business of the Company because the RDF plant and some oil and NGV stations need to use electrical energy in the production and in the office. In addition, the tariff rate used is the market price in a system that is cheaper and the company can save money as well. Therefore this transaction is reasonable and beneficial to the company.
Payables and advance from related parties	3.1	3.3		
Expenses to purchase coal	551.7	1,606.5	The Company purchased coal from TPIPL according to the contract agreement of sale and service to use coal as a fuel for boiler testing at TPIPL' cost plus 10% margin. The price was adjustable subject to heat content of coal.	The transaction is classified as ordinary course of business of the Company and necessary for the business of the company. The said price is the price that TPIPL buys from coal traders including shipping costs plus 10% margin and adjustable subject to the actual heat value of the coal received. This transaction is reasonable and beneficial to the Company
Payables and advance from related parties	60.5	183.5		
Expenses to purchase untreated water	45.9	120.5	The Company purchased untreated water from TPIPL for use in its power generation process according to the contract agreement of sale and service with TPIPL in 2016 at actual cost plus 10% margin. On October 1, 2017, the water price of the Provincial Waterworks Authority (PWA) is reference price and trade discounts vary according to the production cost of water of TPIPL.	The transaction is classified as ordinary course of business of the Company and is necessary to the Company. In case the Company makes its own investment in water facility, the project investment cost is too high and it is not feasible to invest. This transaction at the rate charged is reasonable and beneficial to the Company.
Payables and advance from related parties	5.8	12.1		

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2017	Fiscal year ended December 31, 2018		
Expenses to purchase shredded tire	34.9	38.4	The Company purchased shredded tires from TPIPL for use in the power generation process in power plants according to the contract agreement of sale and service that the company made with TPIPL in 2016 at production cost plus 10% margin of TPIPL.	The transaction is classified as ordinary course of business of the Company and is necessary to the Company. The price is reasonable and beneficial to the Company.
Payables and advance from related parties	3.4	3.3		
Expenses for rental of land	8.3	10.4	<p>The Company leased a number of premises from TPIPL, including land for power plant, RDF plant and petrol and gas service stations. The land lease agreement is classified by business type as follows:</p> <ul style="list-style-type: none"> <li>Waste heat power plant of the company is located in the same area as the cement plant of TPIPL for the convenience of receiving waste heat as fuel. In addition, RDF-fired power plants and coal-fired power plants are located nearby for the convenience of fuel transportation; hence, the company has a land lease agreement for the said power plants, a total area of «47-0-52.5 rai, totaling 3 contracts. The contract period is between 30-50 years (ending between 2042-2062). The total land rental rate is Baht 5.6 million per year which is comparable or less than the rate as offered by TPIPL to outsider related or unrelated.</li> <li>RDF plants are located in the same area as the power plant for the convenience of fuel transportation. The Company has a land lease agreement for RDF plant with a total area of «1-1-11.51 rai, with a term of 30 years (ended in year 2046), and a total rental rate of Baht 0.2 million per year which is comparable or less than the rental rate as offered by TPIPL to related and unrelated tenants.</li> <li>4 petrol and gas stations (NGVs) are located in Saraburi Province to provide services to general customers and the 4 areas are located along Mittraphap Road, which is the main road of the country attracting a lot of traffic of various vehicles which is the target customer of the service station. The Company has a land lease agreement for 4 petrol and gas (NGV) stations, with a total area of «32-3-1 rai, with a term of 3 year ended in June 2019. Total land rental is Baht 0.8 million per year, which is comparable or less than the rental rate that TPIPL offered to others, both related and unrelated.</li> </ul>	The transaction is assets-related or services-related and is to support normal business of the company. It is necessary for the business of the company with the rental price set at the comparable rate as that of TPIPL offered to others. Therefore, the transaction is considered reasonable. and beneficial to the company
Advance payment	4.1	8.5		
Revenue from sales of spare parts	1.8	1.6	<p>The Company and TPIPL and its affiliated companies have many plant equipment and spare parts that can be used together. Therefore, both the Company and TPIPL and its affiliates have a discussion on how to keep the factory equipment and spare parts from overlapping. This is the case when the company needs to use plant equipment and spare parts that TPI Polene and its affiliates have and can use them quickly and see the availability of factory equipment and spare parts. Thus, the Company purchased plant equipment and spare parts from TPI Polene and its affiliates at the price based on the actual cost that TPIPL purchased from factory equipment and spare parts suppliers. In cases where TPIPL including its affiliates have purchased factory equipment and spare parts from the company, they will be charged at the actual cost that the company purchased from factory equipment and spare parts suppliers as well. However, since 2016, the purchase price will be based on the actual cost plus 10% margin.</p>	The transaction is classified as ordinary course of business of the Company and is necessary in order to efficiently manage the storage of factory equipment and spare parts, reduce the opportunities of storage redundancy. With pricing based on actual cost, hence, it can be considered that the transaction is reasonable and is beneficial to the company. However, at present, it is deemed appropriate to revise the pricing based on the actual cost price plus 10% margin in order to better reflect the opportunity cost of carrying such factory equipment and spare parts.
A/R Receivables and advance to related parties	0.0	-		
Expenses for purchasing spare parts, cement and others	206.7	189.4		
Account Payables Payables and advance from related parties	15.2	56.7		

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2017	Fiscal year ended December 31, 2018		
Expenses for service fee under Framework Agreement	120.0	132.0	The Company entered into a Framework Agreement with TPIPL whereby TPIPL was engaged to perform certain task and responsibilities for the Company both at the factory and head office, primarily relating to, among others, purchasing, administration, accounting, finance, security service, public relations, legal, engineering, information technology, HR and other services. The service fee was at Baht 10,000,000 per month, which was derived from service cost plus 10% margin. In 2018 the service fee was at Baht 11,000,000 per month.	The transaction is classified as ordinary course of business of the Company with the service fee calculated from the cost of services plus 10% margin. If the company does not accept such services from TPIPL and need to hire more staff and invest more in information technology systems which is not worth the investment. Hence the transaction is reasonable and beneficial to the company.
Payables and advance from related parties	10.00	11.8		

## (2) TPI Polene Bio Organics Company Limited

TPI Polene Bio Organics Company Limited is a 99.99%- owned subsidiary company of TPIPL. TPIPL holds 99.99% of paid up capital in TPI Polene Bio Organics Co., Ltd. In addition, the Company and TPI Polene Bio Organics Co., Ltd. have 8 common directors including: Mr. Prachai Leophairatana, Dr. Pramuan Leophairatana, Mr. Prayad Liewphairatana, Mrs. Orapin Leophairatana, Miss Pattrapan Leopairut, Mr. Pakorn Leopairut, Mr. Pakkapol Leopairut and Mrs. Nitawan Leophairatana as of December 31, 2018.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2017	Fiscal year ended December 31, 2018		
Revenue from Sales of organic material and other raw material	17.1	-	The Company sold organic matter and residual organic material produced by the Company's RDF production plants to TPI Polene Bio Organics Co., Ltd. to be used as raw material to produce organic fertilizers and other products. The selling price of organic materials was equal to the Company's cost of production plus a profit margin. However, in the future, the Company expects that this transaction will be less significantly as the Company has developed production process to use the residual organic material as input to produce output as RDF in the Company's RDF plant.	The transaction is classified as ordinary course of business of the Company. In the past, if the company did not sell organic matter and other raw materials left from the RDF production, it would have to dispose them which would cause the company additional costs. Therefore selling organic matter and other raw materials remaining from the RDF process to TPI Polene Bio Organics Co., Ltd. to use as raw materials for the production of bio-fertilizers and other products resulted in the company increasing revenue and reducing expenses. Therefore the transaction is reasonable and beneficial to the company.
A/R	5.5	-		
Revenue from sales of shredded tire	0.2	-	The company sold some of the shredded tires to TPI Polene Bio Organics Company Limited to use as fuel in the production of organic fertilizer at the price equaling the cost of tires purchased from TPIPL plus the cost of shredding tires. The Company would receive the wire or steel wire in the tire to resell without direct costs. However, at present the Company has entered into an agreement which stipulates that such transaction is in the form of a tire shredding service, where the Company will charge fee at actual cost plus 10% margin.	The transaction is classified as ordinary course of business of the Company which is the utilization of the machines that the company already has to be most effective. Even though the Company charged the price of tires based on actual cost in 2015, the company still received the wire or steel wire in the tire to resell without any direct costs and would not cause the company to lose benefits. But it is deemed appropriate to change the format of the transaction to provide the service of shredding the old tires charged at actual cost plus 10% margin to better reflect opportunity cost of the Company.
A/R	0.0	-		

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2017	Fiscal year ended December 31, 2018		
Revenue from sales of spare parts and chemicals	1.4	2.4	The Company and TPIPL and its affiliated companies have many plant equipment and spare parts and several chemicals that can be used together. Therefore, both the Company and TPIPL and its affiliates have a discussion on how to keep the factory equipment and spare parts and chemicals from overlapping. This is the case when TPI Polene Bio Organics Company Limited, a subsidiary of TPIPL, needs to use plant equipment and spare parts and chemicals that the Company has; thus, purchased plant equipment and spare parts and chemicals from the Company at the price based on the actual cost that the Company purchased from factory equipment and spare parts suppliers. In cases where the Company has purchased factory equipment and spare parts from TPI Polene Bio Organics Company Limited, they will be charged at the actual cost that TPI Polene Bio Organics Company Limited purchased from factory equipment and spare parts and chemicals suppliers as well. However, since 2016, the purchase price will be based on the actual cost plus 10% margin.	The transaction is classified as ordinary course of business of the Company and is necessary in order to efficiently manage the storage of factory equipment and spare parts and chemicals, reduce the opportunities of storage redundancy. With pricing based on actual cost, hence, it can be considered that the transaction is reasonable and is beneficial to the company. However, at present, it is deemed appropriate to revise the pricing based on the actual cost price plus 10% margin in order to better reflect the opportunity cost of carrying such factory equipment and spare parts and chemicals.
A/R	0.0	0.5		
Expenses for purchasing products and other services	3.8	6.9	The Company purchased products and services from TPI Polene Bio Organics Company Limited to use in general operation of the Company. The transactions can be divided into the following main items: 1) The Company purchased products for trading in its convenient store at its petrol and gas stations such as wood vinegar, organic fertilizer, dish washing liquid, etc. The purchase price of such products is set at the same price as that of TPI Polene Bio Organic, sold to other customers, both related and unrelated. 2) The Company purchases spare parts, supplies and other raw materials that TPI Polene Bio Organics Company Limited has to use in the business of the company. The purchase price of such products is determined according to the cost of TPI Polene Bio Organics Company Limited. The Company hires workers of TPI Polene Bio Organics Company Limited to operate for the Company at the rate according to the costs of salaries, welfare and related expenses of all worker of TPI Polene Bio Organics Company Limited that come to work for the Company.	The transaction is classified as ordinary course of business that supports the Company's operation. The purchase price is the same price that TPI Polene Bio Organics sells to other customers, both related and unrelated to the company and / or determine the purchase price and service according to the costs incurred by TPI Polene Bio Organics, as the case may be. This transaction is therefore reasonable and beneficial to the Company.
Payables and advance from related parties	1.0	3.4		

### (3) TPI Concrete Company Limited

TPI Concrete Company Limited is a 99.99%- owned subsidiary company of TPIPL. TPIPL holds 99.99% of paid up capital in TPI Concrete Company Limited. In addition, the Company and TPI Concrete Company Limited have 4 common directors including: Mr. Prachai Leophairatana, Dr. Pramuan Leophairatana, Mr. Prayad Liewphairatana and Mrs. Orapin Leophairatana as of December 31, 2018.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2017	Fiscal year ended December 31, 2018		
Revenue from sales of petrol and gas	7.1	4.2	The Company sold petrol and gas to TPI Concrete Co., Ltd. for use in vehicles of TPI Concrete Co., Ltd. at retail price as offered by the Company to both related parties and non-related parties.	Classified as ordinary course of business at market rate as offered by the Company to both related parties and non-related parties. This transaction is therefore reasonable and beneficial to the Company
A/R	0.6	0.0		
Expenses for purchasing products and other services	0.1	-	The Company hired TPI Concrete Co., Ltd. to repair the ground and the wall of the Company's petrol station at Pakkaosan station at the same service rate TPI Concrete Co., Ltd. offered to both related parties and non-related parties. In 2017 the Company bought ready-mixed concrete to construct the ground road at Onnut petrol station.	The transaction is classified as ordinary course of business that supports the Company's operation. The purchase price is the same price that TPI Concrete offered to both related and non-related customers. This transaction is therefore reasonable and beneficial to the Company.
A/R	0.1	-		

### (4) TPI All Seasons Company Limited

TPI All Seasons Company Limited is a 99.99%- owned subsidiary company of TPIPL. TPIPL holds 99.99% of paid up capital in TPI All Seasons Company Limited. In addition, the Company and TPI All Seasons Company Limited have 6 common directors including: Mr. Prachai Leophairatana, Dr. Pramuan Leophairatana, Mr. Prayad Liewphairatana, Mrs. Orapin Leophairatana, Mr. Pakorn Leopairut and Ms. Nitawan Leophairatana as of December 31, 2018.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2017	Fiscal year ended December 31, 2018		
Revenue from sales of petrol and gas	0.3	0.3	The Company sold petrol and gas to TPI All Seasons Co., Ltd. for use in vehicles of TPI All Seasons Co., Ltd. at retail price as offered by the Company to both related parties and non-related parties. (With revenue from sales of oil and gas (NGV) in the amount of Baht 253,772.60 for the fiscal year ending December 31, 2017 and Baht 307,908.00 for the fiscal year ending December 31, 2018, with the total A/R of Baht 41,600.93 Baht for the fiscal year ended December 31, 2017 and Baht 34,557.00 for the fiscal year ended December 31, 2018.)	Classified as ordinary course of business at market rate as offered by the Company to both related parties and non-related parties. This transaction is therefore reasonable and beneficial to the Company.
A/R	0.0	0.0		

### (5) Thai Nitrate Company Limited

Thai Nitrate Company Limited is a 99.99%- owned subsidiary company of TPIPL. TPIPL holds 99.99% of paid up capital in Thai Nitrate Company Limited. In addition, the Company and Thai Nitrate Company Limited have 6 common directors including: Mr. Prachai Leophairatana, Dr. Pramuan Leophairatana, Mr. Prayad Liewphairatana and Mrs. Orapin Leophairatana, Mr. Pakorn Leopairut and Mr. Pakapol Leopairut as of December 31, 2018.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2017	Fiscal year ended December 31, 2018		
Revenue from sales of petrol and gas	0.1	0.0	The Company sold petrol and gas to Thai Nitrate Co., Ltd. for use in vehicles of Thai Nitrate Co., Ltd. at retail price as offered by the Company to both related parties and non-related parties. (Total A/R was Baht 3,110.10 for the fiscal year ending December 31, 2017 and Baht 860.13 for the fiscal year ending December 31, 2018.)	Classified as ordinary course of business at market rate as offered by the Company to both related parties and non-related parties. This transaction is therefore reasonable and beneficial to the Company.
A/R	0.0	0.0		

#### (6) Bangkok Union Life Insurance Public Company Limited

Bangkok Union Life Insurance Public Company Limited is 25.00% held by TPI Polene Public Company Limited, 9.60% held by Bangkok Union Insurance Public Company Limited and 15.18% by Leophairatana group. In addition, the Company and Bangkok Union Life Insurance Public Company Limited have 3 common directors including: Mr. Pramuan Leophairatana, Mr. Prayad Liewphairatana and Miss Malinee Leophairut as of December 31, 2018.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2017	Fiscal year ended December 31, 2018		
Revenue from sales of petrol and gas	0.1	0.1	The Company sold petrol and gas to Bangkok Union Life Insurance Plc. for use in vehicles of Bangkok Union Life Insurance Plc. at retail price as offered by the Company to both related parties and non-related parties. (With A/R of Baht 11,960.05 for the fiscal year ending December 31, 2017 and Baht 8,165.32 for the fiscal year ending December 31, 2018.)	Classified as ordinary course of business at market rate as offered by the Company to both related parties and non-related parties. This transaction is therefore reasonable and beneficial to the Company.
A/R	0.0	0.0		
Expenses for insurance premium	1.7	2.3	The company purchased a life insurance policy as a welfare for the employees of the company and Bangkok Union Life Insurance's premium rate is the best rate and is the same rate that Bangkok Union Life Insurance Plc. collected from other related and non-related customers.	Classified as ordinary course of business of the Company. This transaction was made on bidding basis at market price. Bangkok United Life Insurance's premium rate is comparable to the rate that Bangkok Union Life Insurance Plc. collected from other related and non-related customers. This transaction is therefore reasonable and beneficial to the Company.
Advance for insurance premium	0.6	0.8		

#### (7) Bangkok Union Insurance Public Company Limited

Bangkok Union Insurance Public Company Limited is 13.87% held by Leophairatana Enterprises Co. Ltd., 12.74% held by Bangkok Union Life Insurance Public Company Limited, 9.19% by Thanapornchai Enterprises Co. Ltd. and 14.57% by Leophairatana group. In addition, the Company and Bangkok Union Insurance Public Company Limited have 3 common directors including: Mr. Prachai Leophairatana, Miss Malinee Leophairut and Mr. Manu Leopaiprot as of December 31, 2018.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2017	Fiscal year ended December 31, 2018		
Revenue from sales of petrol and gas	0.2	0.2	The Company sold petrol and gas to Bangkok Union Insurance Plc. for use in vehicles of Bangkok Union Insurance Plc. at retail price as offered by the Company to both related parties and non-related parties. (With A/R of Baht 19,545.40 for the fiscal year ending December 31, 2017 and Baht 12,998.45 for the fiscal year ending December 31, 2018.)	Classified as ordinary course of business at market rate as offered by the Company to both related parties and non-related parties. This transaction is therefore reasonable and beneficial to the Company.
A/R	0.0	0.0		
Expenses for insurance premium	29.6	45.3	The Company purchased property risk insurance, construction insurance, third party liability insurance, money insurance and legal liability insurance arising from the type 3 controlled business under the law on fuel control, which relates to the operation of natural gas control (NGV). The company has negotiated insurance rates before purchasing the policy and renews insurance and the insurance premium rate is the same rate that Bangkok Union Insurance collected from both related and non-related customers.	Classified as ordinary course of business of the Company. This transaction was made on bidding basis at market price. Bangkok United Insurance's premium rate is comparable to the rate that Bangkok Union Insurance Plc. collected from other related and non-related customers. This transaction is therefore reasonable and beneficial to the Company.
Advance for insurance premium	16.6	20.5		
Payables and advance from related parties	0.0	0.0		

### (8) United Grain Industry Company Limited

United Grain Industry Company Limited is 52.63% held by Leophairatana Enterprises Co. Ltd., 19.00% held by TPI Polene Plc. and 15.71% by Leophairatana group. In addition, the Company and United Grain Industry Company Limited have 9 common directors including: Mr. Prachai Leophairatana, Dr. Pramuan Leophairatana, Mr. Prayad Liewphairatana, Mrs. Orapin Leophairatana, Miss Malinee Leophairut, Miss Pattrapana Leophairut, Mr. Pakorn Leopairut, Mr. Pakkapol Leopairut and Ms. Nitawan Leophairatana as of December 31, 2018.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2017	Fiscal year ended December 31, 2018		
Expenses for land rental	6.5	7.0	Land rental is a normal business support transaction of the company. The Company have RDF plant and oil and gas (NGV) service stations located on the land of United Grain Industry Company, therefore, entered into a land lease agreement for business use of RDF plant and oil and gas (NGV) service stations, which are classified by business type as follows: <ul style="list-style-type: none"> <li>• RDF plants are located in the same area as the power plant for the convenience of fuel transportation. The Company has a land lease agreement for RDF plants with a total area of 46-1-67.18 rai, with a term of 30 years (contract ended 2046) with a total rental rate of Baht 5.6 million per year, which is at the same level or not higher than the rental price that the United Grain Industry provides to others, both related and non-related.</li> <li>• Petrol and gas service stations (NGV) Changsanit branch, was located in Jaeramae District, Ubon Ratchathani providing services to general customers in such areas. The Company has entered into the land lease agreements for oil and gas service stations. (NGV) for a total area of 2-3-44.5 rai, the contract period is 3 years, ending the contract in June 2019, with the total land rental rate of Baht 1.0 million per year which is at the same rate that United Grain Industry offered to others, both related and non-related.</li> </ul>	Classified as ordinary course of business at market rate as offered by United Grain Industry Co., Ltd. to both related parties and non-related parties. This transaction is therefore reasonable and beneficial to the Company.
Payables and advance for land rental	2.4	2.0		

### (9) Pornchai Enterprises Company Limited

Pornchai Enterprises Company Limited is 75.13% held by Leophairatana Enterprises Co. Ltd., 0.65% held by TPI Polene Plc. and 0.33% by Leophairatana group. In addition, the Company and Pornchai Enterprises Company Limited have 5 common directors including: Mr. Prachai Leophairatana, Dr. Pramuan Leophairatana, Mr. Prayad Liewphairatana, Mrs. Orapin Leophairatana and Miss Malinee Leophairut as of December 31, 2018.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2017	Fiscal year ended December 31, 2018		
Expenses for office rental	0.9	0.9	The company rented the 8th floor of the TPI Tower building for use as a 186-square-meter office space. The lease term is 3 years. The contract expires in May 2019 with the rental rate of Baht 160.0 per square meter per month and the service fee is baht 240.0 per square meter per month which is at the same level or not higher than the rental rate Pornchai Enterprises offered to others, both related and non-related. (With A/P and advance received of baht 4,154.68 baht for the fiscal year ending December, 31 2018)	Classified as ordinary course of business and is necessary for business operations of the Company. The rental price is set at a rate that is not higher than the general market price compared to similar properties and is in the vicinity and at the same rate Pornchai Enterprises offered to others. This transaction is therefore reasonable and beneficial to the Company.
Deposit	0.2	0.2		
A/P and advance received	0.0	0.1		

**(10) Thanapornchai Enterprises Company Limited**

Pornchai Enterprises Company Limited is 25.13% held by Leophairatana Enterprises Co. Ltd., 9.81% held by Thanapornchai Enterprises Company Limited and 21.49% by Leophairatana group. In addition, the Company and Thanapornchai Enterprises Company Limited have 9 common directors including: Mr. Prachai Leophairatana, Dr. Pramuan Leophairatana, Mr. Prayad Liewphairatana, Mrs. Orapin Leophairatana, Miss Malinee Leophairut, Miss Pattrapan Leophairut, Mr. Pakorn Leopairut, Mr. Pakkapol Leopairut and Ms. Nitawan Leophairatana as of December 31, 2018.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2017	Fiscal year ended December 31, 2018		
Expenses for Land rental	1.3	1.3	The Company rent the land for use in the business of two oil stations and gas (NGV) locations, namely Puchao Samingphrai Branch in Samutprakan province and Phayuha Khiri Branch in Nakhonsawan province to provide services to general customers. The two areas are located along the road that attracts traffic of various vehicles which is the target customer of the service station. The company has a land lease agreement for two oil and gas (NGV) stations, with a total area of 4-2-11 rai. The contract period is 3 years, ending in June 2019 with rental rate of Baht 1.3 million per year which is in the same rate Thanapornchai Enterprise offered to others, both related and non-related.	Classified as ordinary course of business and is necessary for business operations of the Company. The rental price is set at a rate that is not higher than the general market price compared to similar properties and is in the vicinity and at the same rate Thanapornchai Enterprises offered to others. This transaction is therefore reasonable and beneficial to the Company.

**(11) Saraburi Cotton Factory Company Limited**

Saraburi Cotton Factory Company Limited is 23.13% held by Leophairatana group, 5.75% held by Leophairatana Enterprises Co. Ltd. In addition, the Company and Saraburi Cotton Factory Company Limited have 6 common directors including: Mr. Prachai Leophairatana, Mrs. Orapin Leophairatana, Miss Pattrapan Leophairut, Mr. Pakorn Leopairut, Mr. Pakkapol Leopairut and Ms. Nitawan Leophairatana as of December 31, 2018.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2017	Fiscal year ended December 31, 2018		
Expenses for Land rental	1.3	1.3	The Company rent the land for use in the business of oil stations and gas (NGV) locations, Pakkaosan Branch in Saraburi province to provide services to general customers. The area is located along the road that attracts traffic of various vehicles which is the target customer of the service station. The company has a land lease agreement for the oil and gas (NGV) stations, with a total area of 2-2-11.75 rai. The contract period is 3 years, ending in June 2019 with rental rate of Baht 1.3 million per year which is in the same rate Saraburi Cotton Factory Company Limited offered to others, both related and non-related.	Classified as ordinary course of business and is necessary for business operations of the Company. The rental price is set at a rate that is not higher than the general market price compared to similar properties and is in the vicinity and at the same rate Saraburi Cotton Factory Company Limited offered to others. This transaction is therefore reasonable and beneficial to the Company.

## (12) Leophairatana Enterprises Company Limited

Leophairatana Enterprises Company Limited is 88.40% held by Leophairatana group, 6.25% by Pornchai Enterprises Co. Ltd., 2.19 % held by TPI Holdings Company Limited and 0.94 % by TPI EOEG Co. Ltd. In addition, the Company and Thanapornchai Enterprises Company Limited have 5 common directors including: Mr. Prachai Leophairatana, Dr. Pramuan Leophairatana, Mr. Prayad Liewphairatana, Mrs. Orapin Leophairatana and Miss Malinee Leophairut as of December 31, 2018.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2017	Fiscal year ended December 31, 2018		
Expenses for Land rental	4.0	4.0	The Company rent the land for use in the business of three oil stations and gas (NGV) locations, namely Onnut branch, Sudbantat branch, and Soi Klang branch in Bangkok to provide services to general customers. The three areas are located along the road that attracts traffic of various vehicles which is the target customer of the service station. The company has a land lease agreement for three oil and gas (NGV) stations, with a total area of 7-0-42 rai. The contract period is 3 years, ending in June 2019 with rental rate of Baht 4.0 million per year which is in the same rate Leophairatana Enterprises Company Limited offered to others, both related and non-related.	Classified as ordinary course of business and is necessary for business operations of the Company. The rental price is set at a rate that is not higher than the general market price compared to similar properties and is in the vicinity and at the same rate Leophairatana Enterprises Company Limited offered to others. This transaction is therefore reasonable and beneficial to the Company.

## 2. Procedures to approve Related Transactions

The Company's Board of Directors' meeting no.2/2562, held on February 22, 2019, passed a resolution to establish and approve policies governing related party transactions as follows:-

1. The Company is required to comply with measures and approval procedures set forth in the relevant rules and regulations of the SEC and the SET, concerning related party transactions and relevant disclosure requirements. The procedures used in related party transaction have always been subject to the normal term and conditions of business and reflect applicable market prices. The Directors and the person who have potential conflicts of interest will not attend the Board of Directors' meeting on such agenda, to consider and approve the related party transactions.
2. The Board of Directors will provide procedures to approve the related party transactions to be carried out under the standards of integrity and reviewed by the Audit Committee to be in the best interest of the Company and its shareholders. This complies with the SEC and the SET regulations. The Company will disclose the related party transactions to the public accurately and completely. The related party transactions are subject to reflect applicable market prices.

## 3. Policy for the Related Party Transactions

To have the related party transactions carried out on transparency basis, the Company has policy for the related party transactions as follows:

1. The Company expects to continue its business transactions with major shareholder and related parties in the normal course of its business without conflict of interest. The Company is committed to comply with regulations of the SET and related authorities based on reasonable criteria and applicable market prices.
2. In case there will be any related party transactions occurring in the future, the Company will carry out the related party transaction to be in compliance with regulations of the Securities and Exchange Act B.E 2535. Disclosure of related party transactions shall be in accordance with the relevant rules and regulations of the SET as well a prevailing accounting policy.
3. In case the related party transactions continuously occur as normal course of business, the Company has policies and measures in place to regulate such related party transactions to be carried out under normal commercial terms and conditions with fair and reasonable prices. Such transactions can be audited and are in compliance with normal terms and conditions of general trading, which will be approved by the Board of Directors.
4. In case there are related party transactions or any amendments of the agreement and terms in relation to any transaction with major shareholders, Directors or Management or any person, which conflict of interests might occur, such transactions are subject to an approval process in which only unconnected persons may participate.

#### **4. Potential Future Related Transactions**

The Company expects to continue its business transactions with major shareholder and/or related parties in the normal course of its business. Such transactions are necessary to the business operation of the Company. The transactions are as follows-

1. To sell power to TPIPL
2. To sell petrol and gas at petrol and gas stations to TPIPL group and persons that might have the potential to involve conflicts of interest.
3. To lease a number of premises, including land and office space, from TPIPL group and persons that might have the potential to involve conflicts of interest.
4. To purchase / to sell products and services with TPIPL group as follows:
  - To purchase products and services i.e., waste heat, untreated water, coal, spare parts and services provided by TPIPL at both factory and head office to support the Company's operation under the Frame Work Agreement
  - To sell products and services to TPIPL i.e. steam, provision of labor for repair and maintenance of power plants.
5. To purchase/sell various products and services within TPIPL group such as RDF, organic material, spares parts and other raw materials.
6. To purchase all risk insurance cover and life insurance cover from related parties that might have the potential to involve conflicts of interest.

The Company adheres to practice for the connected transactions to comply with measures and approval procedures set forth in the relevant rules and regulations of the Securities and Exchange Act B.E 2535, the Capital Market Supervisory Board, the SEC, and the SET including the policy and related notifications of the Company such as Code of Practice, policies governing related party transactions.

# Management's Discussion and Analysis

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## 1. Operating Results and Financial Status for 2018

### Revenues

Total revenue from sales (comprising revenue from sale of power and goods and revenue from adders) in 2018 was Baht 7,619.8 million compared with Baht 4,864.8 million in 2017, an increase of Baht 2,755.0 million or 56.6%. The increase in sales revenues was primarily attributed to an increase in sales revenues in the energy and utilities business, which was Baht 6,912.2 million in 2018 compared with Baht 4,164.7 million in 2017.

In 2018, sales of power was Baht 6,866.0 million, comprising sales to EGAT of Baht 6,033.9 million and sales to TPIPL of Baht 832.1 million, whereas in 2017 sales of power was Baht 4,120.5 million comprising sales to EGAT of Baht 3,550.1 million and sales to TPIPL of Baht 570.3 million. The increase in revenue from power sales was mainly due to the commercial operation of RDFPP-70MW (TG6) and PP-70 MW (TG7) power plants in the year 2018. The combination of RDFPP-70MW (TG6) and the Waste Heat Recovery power plant WHPP-30 MW (TG4) totaling RDFPP-100MW power plant has started selling electricity to the Electricity Generating Authority of Thailand since April 5, 2018, and the 70 MW power plant (TG7) has started selling electricity to TPI Polene Plc since August 18, 2018. Sales from petrol and gas stations increased from Baht 700.1 million in 2017 to Baht 707.6 million in 2018, which was mainly due to an increase in selling price of petrol and gas.

### Other Income

In 2018, the Company had investment income of Baht 49.3 million compared with Baht 72.3 million in 2017, a decrease of Baht 23.1 million or 32.0 %, as in the year 2017 the Company received proceeds from the initial public offering of common shares in the amount of Baht 17,500 million which led to short-term investment, thus resulting in higher interest income from investment in 2017 than the same in 2018. Other income increased from Baht 49.4 million in 2017 to Baht 199.8 million in 2018, an increase of Baht 150.3 million or 304.2 %, due to the revenue from the insurance compensation of Baht 115.7 million in the year 2018.

### Cost of Goods Sold

Cost of goods sold increased from Baht 2,227.5 million in 2017 to baht 3,651.4 million in 2018, an increase of Baht 1,423.9 million or 63.9%, which was mainly due to an increase in units of electricity production in 2018 from the RDF-100MW power plant and the 70 MW power plant (TG7), which started commercial operation in 2018.

### Gross Profit

Gross profit increased from Baht 2,637.3 million in 2017 to Baht 3,968.4 million in 2018, an increase of Baht 1,331.1 million or 50.5 %, as a result of higher units of power sales in 2018 compared with the same in 2017. Gross profit margins decreased from 54.2 % in 2017 to 52.1% in 2018.

### Selling Expenses

Selling expenses increased from Baht 63.8 million in 2017 to Baht 66.6 million in 2018, an increase of Baht 2.7 million or 4.3%. Selling expenses accounts for 0.9% of sales revenue in 2018, decreased from 1.3% in 2017, mainly due to higher sales revenue from energy and utilities businesses in 2018.

### Administrative Expenses

Administrative expenses increased from Baht 188.8 million in 2017 to Baht 318.8 million in 2018, an increase of Baht 130.0 million or 68.9%, due to an increase in the number of power plants, public relations and donation expenses. Administrative expenses accounted for 3.9 % and 4.2% of total sales revenue in 2017 and 2018, respectively.

### Finance cost

In 2018, the Company recorded finance costs of Baht 19.0 million (comprising interest expense from debentures of Baht 14.5 million and provisions for dismantle cost of all buildings from the rental area, which is in accordance with accounting standards, in the amount of Baht 4.4 million) compared with Baht 40.9 million in 2017, a decrease of Baht 22.0 million or 53.6%, as the company used the proceeds from the initial public offering of common shares of Baht 17,500 million to repay long-term loans during the second half of 2017 to 2018. Thereafter, the company issued debentures in the amount of Baht 4,000 million on November 28, 2018.

### **Income Tax Expense**

In 2018, the company recorded income tax expenses of Baht 160.7 million, increase from Baht 75.60 million in 2017, as in 2018 the company started to pay corporate income tax for profit generated from WH-40MW (TG1&2) and RDF-20MW (TG3) power plants, after tax benefit from BOI promotional privileges of those plants were expired in June 2017.

### **Net Profit**

In 2018 the Company registered net profits of Baht 3,699.0 million compared with Baht 2,591.5 million in 2017, an increase of Baht 1,107.4 million or 42.7%. The Company's net profit margin decreased from 50.0% in year 2017 to 46.7% in 2018 due to the increase in cost of goods sold.

## **2. Financial Status and Financial Ratio**

### **Assets**

At year-end 2017 and 2018, total consolidated assets were Baht 27,566.9 million and Baht 31,541.2 million respectively. The increase in total assets is mainly due to investment in power plants and the increase in trade receivable account as sales increase,

At year-end 2017 and 2018, total consolidated current assets were Baht 5,839.5 million and Baht 6,681.8 million respectively. The increase in total current assets was in line with the increase in accounts receivable. Accounts receivables represented 12.6% and 22.9% of total current assets, which equated to an average collection period of 58 days and 54 days respectively. Inventory accounted for 7.70 % and 8.80 % of total current assets in 2017 and 2018, equating to average inventory turnover periods of 68 days and 51 days respectively.

As of December 31, 2017 and December 31, 2018, the property, plant and equipment of the Company were Baht 21,503.5 million and Baht 24,642.8 million respectively. The increase in the property, plant and equipment was mainly due to additional investment in power plants of the Company.

### **Liabilities**

Total consolidated liabilities were Baht 3,353 million and Baht 6,492.8 million at the end of 2017 and 2018 respectively. The total liabilities increased as the Company issued debentures in the amount of Baht 4,000 million for purposes of investment in various power plant projects and working capital. Other payables accounted for 91.7% and 72.0% of total current liabilities in 2017 and 2018 respectively, as the company paid the cost of power plant, machinery and equipment to overseas suppliers, who completed their installation works of the power plants.

Trade receivable accounts at year-end 2017 and 2018 were Baht 173.2 million and Baht 377.1 million, representing an average payment period of 22 days and 27 days respectively.

### **Shareholders' Equity**

As of December 31, 2017 and December 31, 2018, shareholders' equity were Baht 24,214 million and Baht 25,048.4 million respectively, as in 2018 the Company operated its business with profit.

### **Capital Structure**

At the end of 2017 and 2018, total debts to equity ratios were at 0.14 and 0.26 times and the financial debt to equity ratios were 0 and 0.16 times respectively, as in the year 2018 the Company issued debentures in the amount of Baht 4,000 million for purposes of investment in power plants and working capital.

### **Financial Liquidity**

In 2017 and 2018, the Company recorded consolidated net cash flow from operating activities of Baht 2,595.9 million and 3,932.7 million, respectively.

In 2017 and 2018, the Company registered net cash flow in investing activities of Baht (8,580.4) million and Baht (5,082.7) million respectively, as in the year 2018 the company had lower current investments compared to the same in 2017.

In 2017 and 2018 the Company recorded net cash flow from financing activities of Baht 6,154.9 million and Baht 1,144.0 million, respectively, as in 2017 the Company received proceeds from the initial public offering of shares in the amount of Baht 17,500 million. The Company's net cash flow after financing activities in 2017 and 2018, were at Baht 170.3 million and Baht (6.0) million, respectively.

## 1. Summary of Separate financial statements of TPI Polene Power Plc. in 2016, 2017 and 2018

### 1.1 Statement of financial position

(unit : Million Baht)	As of December 31,					
	2016	%	2017	%	2018	%
<b>Current assets</b>						
Cash and cash equivalents	285.86	1.57	456.16	1.65	450.16	1.43
Current investments	-	-	3,774.56	13.69	3,960.65	12.56
Trade accounts receivable	822.81	4.53	736.99	2.67	1,530.70	4.85
Other receivables	38.66	0.21	126.40	0.46	104.53	0.33
Receivables and advances to related parties	18.95	0.10	27.62	0.10	35.85	0.11
Inventories	392.64	2.16	449.33	1.63	587.73	1.86
Other current assets	146.42	0.81	268.49	0.97	12.20	0.04
<b>Total current assets</b>	<b>1,705.34</b>	<b>9.39</b>	<b>5,839.55</b>	<b>21.18</b>	<b>6,681.82</b>	<b>21.18</b>
<b>Non-current assets</b>						
Investments in subsidiaries	-	-	-	-	-	-
Other long-term investments	5.48	0.03	5.41	0.02	5.34	0.02
Property, plant and equipment	15,459.21	85.08	21,503.53	78.00	24,642.82	78.13
Leasehold rights	0.65	0.00	0.38	0.00	0.11	0.00
Advances for plant and equipment	808.93	4.45	103.29	0.37	106.95	0.34
Deferred tax assets	189.74	1.04	114.76	0.42	91.70	0.29
Other non-current assets	-	-	-	-	12.48	0.04
<b>Total non-current assets</b>	<b>16,464.01</b>	<b>90.61</b>	<b>21,727.36</b>	<b>78.82</b>	<b>24,859.41</b>	<b>78.82</b>
<b>Total assets</b>	<b>18,169.35</b>	<b>100.00</b>	<b>27,566.91</b>	<b>100.00</b>	<b>31,541.22</b>	<b>100.00</b>
<b>Current liabilities</b>						
Short-term loans from financial institutions	28.73	0.16	-	-	-	-
Trade accounts payable	96.89	0.53	173.25	0.63	377.10	1.20
Other payables	2,382.16	13.11	2,902.91	10.53	1,611.41	5.11
Payables and advances from related parties	101.25	0.56	32.37	0.12	79.82	0.25
Short-term loans from related party	1.27	0.01	-	-	14.53	0.05
Current portion of long-term loans from financial institutions	165.00	0.91	-	-	-	-
Income tax payable	-	-	-	-	35.62	0.11
Other current liabilities	49.57	0.27	55.89	0.20	118.71	0.38
<b>Total current liabilities</b>	<b>2,824.87</b>	<b>15.55</b>	<b>3,164.42</b>	<b>11.48</b>	<b>2,237.19</b>	<b>7.09</b>
<b>Non-current liabilities</b>						
Long-term loans from financial institutions	2,331.63	12.83	-	-	-	-
Long-term loan from related party	4,528.85	24.93	-	-	-	-
Debenture	-	-	-	-	4,000.00	12.68
Provisions for employee benefits	58.15	0.32	70.65	0.26	87.70	0.28
Decommissioning costs	104.86	0.58	117.81	0.43	167.96	0.53
<b>Total non-current liabilities</b>	<b>7,023.48</b>	<b>38.66</b>	<b>188.46</b>	<b>0.68</b>	<b>4,255.66</b>	<b>13.49</b>
<b>Total liabilities</b>	<b>9,848.36</b>	<b>54.20</b>	<b>3,352.87</b>	<b>12.16</b>	<b>6,492.85</b>	<b>20.59</b>
<b>Shareholders' equity</b>						
Authorized share capital	8,400.00	46.23	8,400.00	30.47	8,400.00	26.63
Issued and paid share capital	5,900.00	32.47	8,400.00	30.47	8,400.00	26.63
Shares premium on ordinary shares	-	-	14,580.89	52.89	14,580.89	46.23
Retained earnings						
Appropriated Legal reserve	218.80	1.20	348.38	1.26	533.36	1.69
Unappropriated	2,202.19	12.12	884.77	3.21	1,534.04	4.86
Other components of equity	-	-	-	-	0.09	0.00
<b>Total shareholders' equity</b>	<b>8,320.99</b>	<b>45.80</b>	<b>24,214.03</b>	<b>87.84</b>	<b>25,048.38</b>	<b>79.41</b>
<b>Total liabilities and shareholders' equity</b>	<b>18,169.35</b>	<b>100.00</b>	<b>27,566.91</b>	<b>100.00</b>	<b>31,541.22</b>	<b>100.00</b>

## 1.2 Statement of comprehensive income

(unit : Million Baht)	As of December 31,					
	2016	%	2017	%	2018	%
<b>Income</b>						
Revenue from sale of power and goods	2,690.64	60.69	2,853.60	55.00	4,235.36	53.51
Revenue from adders	1,677.52	37.84	2,011.21	38.77	3,384.45	42.76
Net foreign exchange gain	25.16	0.57	201.62	3.89	46.62	0.59
Investment income	6.04	0.14	72.30	1.39	49.17	0.62
Other income	33.96	0.77	49.42	0.95	199.75	2.52
<b>Total income</b>	<b>4,433.32</b>	<b>100.00</b>	<b>5,188.15</b>	<b>100.00</b>	<b>7,915.35</b>	<b>100.00</b>
<b>Expenses</b>						
Cost of sales of power and goods	(2,265.01)	(51.09)	(2,227.54)	(42.94)	(3,651.43)	(46.13)
Selling expenses	(65.03)	(1.47)	(63.82)	(1.23)	(66.56)	(0.84)
Administrative expenses	(125.56)	(2.83)	(188.77)	(3.64)	(318.76)	(4.03)
Finance costs	(160.38)	(3.62)	(40.92)	(0.79)	(18.97)	(0.24)
<b>Total expenses</b>	<b>(2,615.97)</b>	<b>(59.01)</b>	<b>(2,521.04)</b>	<b>(48.59)</b>	<b>(4,055.72)</b>	<b>(51.24)</b>
<b>Profit before income tax expense</b>	<b>1,817.34</b>	<b>40.99</b>	<b>2,667.11</b>	<b>51.41</b>	<b>3,859.63</b>	<b>48.76</b>
Income tax (expense) income	6.91	0.16	(75.58)	(1.46)	(160.67)	(2.03)
<b>Profit for the year</b>	<b>1,824.25</b>	<b>41.15</b>	<b>2,591.53</b>	<b>49.95</b>	<b>3,698.96</b>	<b>46.73</b>
<b>Other comprehensive income (expense)</b>						
Exchange differences on translating	-	-	-	-	0.09	0.00
Gains (losses) on remeasurements of defined benefit plans	4.12	0.09	(2.97)	(0.06)	(10.89)	(0.14)
Income tax relating to items that will not be reclassified	(0.82)	(0.02)	0.59	0.01	2.18	0.03
Net change in fair value of available-for-sale investments	-	-	-	-	-	-
<b>Other comprehensive income (expense) for the year, net of tax</b>	<b>3.30</b>	<b>0.07</b>	<b>(2.37)</b>	<b>(0.05)</b>	<b>(8.62)</b>	<b>(0.11)</b>
<b>Total comprehensive income (expense) for the year</b>	<b>1,827.55</b>	<b>41.22</b>	<b>2,589.16</b>	<b>49.91</b>	<b>3,690.34</b>	<b>46.62</b>
<b>Basic earnings per share (in Baht)</b>	<b>0.31</b>	<b>-</b>	<b>0.33</b>	<b>-</b>	<b>0.44</b>	<b>-</b>

## Revenue from external customers

(unit : Million Baht)	2016	%	2017	%	2018	%
Energy & Utilities	3,509.56	80.34	4,164.73	85.61	6,912.25	90.71
Petrol and gas stations	781.26	17.89	700.09	14.39	707.56	9.29
Agriculture and other	77.34	1.77	-	-	-	-
<b>Total</b>	<b>4,368.16</b>	<b>100.00</b>	<b>4,864.81</b>	<b>100.0</b>	<b>7,619.81</b>	<b>100.00</b>

## 1.3 Statement of cash flow

(unit : Million Baht)	As of December 31,		
	2016	2017	2018
<b>Net cash from operating activities</b>	<b>2,826.14</b>	<b>2,595.87</b>	<b>3,932.68</b>
<b>Net cash used in investing activities</b>	<b>(5,323.67)</b>	<b>(8,580.44)</b>	<b>(5,082.67)</b>
<b>Net cash from (used in) financing activities</b>	<b>2,669.65</b>	<b>6,154.89</b>	<b>1,144.00</b>
Net increase (decrease) in cash and cash equivalents before effect of exchange rates	172.12	170.32	(6.00)
Cash and cash equivalents at 1 January	113.74	285.86	456.16
Effect of exchange rate changes on balances held in foreign currencies	0.00	(0.03)	(0.00)
<b>Cash and cash equivalents at 31 December</b>	<b>285.86</b>	<b>456.16</b>	<b>450.16</b>

Note: \*Separate financial statements

## 2. Key Financial Ratio

Financial Ratio	Separate financial statements As of December 31,		
	2016	2017	2018
<b>Liquidity Ratios</b>			
Current ratio (times)	0.60	1.85	2.99
Quick ratio (times)	0.39	1.57	2.66
Cash ratio (times)	1.18	0.87	1.46
Receivables turnover (times)	3.49	6.24	6.72
Collection period (days)	103.08	57.71	53.57
Inventory turnover (times)	5.44	5.29	7.04
Inventory turnover period (days)	66.19	68.04	51.12
Accounts payable turnover (times)	24.83	16.49	13.27
Payment Period (days)	14.50	21.83	27.13
Cash cycle (days)	154.77	103.92	77.56
<b>Profitability Ratios</b>			
Gross profit margin (%)	48.15	54.21	52.08
Operating profit margin (%)	44.56	50.04	49.64
Other profit margin (%)	(2.91)	4.49	0.97
Cash to net profit ratio (%)	145.19	106.65	103.96
Net profit margin (%)	41.15	49.95	46.73
Return on equity (%)	21.01	15.93	15.02
<b>Efficiency Ratios</b>			
Return on assets (%)	11.83	11.33	12.52
Return on fixed assets (%)	17.75	15.99	18.12
Total assets turnover (times)	0.29	0.23	0.27
<b>Financial Policy Ratios</b>			
Financial debts to equity ratio (times)	0.85	0	0.16
Debts to equity ratio (times)	1.18	0.14	0.26
Net debt to ebitda ratio (times) <sup>(1)</sup>	2.92	(1.51)	(0.10)
Interest coverage ratio (times) <sup>(2)</sup>	12.03	29.94	1,078,060.75
Debt service coverage ratio (times) <sup>(3)</sup>	0.46	0.28	1,078,060.75
B/E,P/N size to interest bearing debt ratio (times) <sup>(4)</sup>	0	N.A	0
Interest Bearing debt matured 1 year to total interest bearing debt (times) <sup>(5)</sup>	0.03	N.A	0
Loan from Financial Institution to total debt ratio (times) <sup>(6)</sup>	0.26	N.A	0

notes :

(1) Net debt to EBITDA ratio calculated from (interest bearing debt - cash and cash equivalent) / EBITDA

(2) Interest Coverage Ratio calculated from cash from cash from operating activity before changes in assets and liabilities / interest expenses for the year 2018 ended December 31, 2018 is very high because the company had very little interest on loans from financial institutions. However, there is a list of financial costs in the income statement in that period because it is a recording of the provision for the cost of dismantling all buildings from the rental area at the end of the contract which is in accordance with accounting standards. Such financial costs are not interest on loans from financial institutions.

(3) Debt Service Coverage Ratio calculated from operating cash flow before changes in operating assets and liabilities / (interest expenses + other financial costs + the principal that is due) for the year 2018 ended 31 December 2018 is very high because the company's principal debt and interest from financial institutions is very low. However, there is a list of financial costs in the income statement in that period because it is a recording of the provision for the cost of dismantling all buildings from the rental area at the end of the contract which is in accordance with accounting standards. Such financial costs are not interest on loans from financial institutions.

(4) B/E,P/N size to interest bearing debt ratio calculated from (B/E+P/N) / interest bearing debt). For the year 2017, numbers cannot be calculated because the company has no burden of bills and interest-bearing liabilities.

(5) Interest Bearing debt matured 1 year to total interest bearing debt calculated from (short- term interest bearing debt + current portion of long-term interest bearing debt) / interest bearing debt. For the year 2017, numbers cannot be calculated. Because the company does not have a debt obligation From loans from financial institutions

(6) Loan from Financial Institution to total debt ratio calculated from loan from investment institutions / total debt for the year 2017 and 2018, the value is 0 because the company does not have debt obligations from financial institutions.

## Board of Directors as at December 31, 2018

NAME/AGE/POSITION/ FAMILY RELATION AMONG DIRECTORS & EXECUTIVES	EDUCATIONAL BACKGROUND/TRAINING	% SHARE HOLDING <sup>1</sup>	WORK EXPERIENCE		
			DURATION	POSITION	COMPANY/ BUSINESS
<b>Mr. Prachai Leophairatana</b> 75 years of age <b>Position</b> -Chairman of the Board; Chairman of the Management Committee - Miss Malinee Leophairatana (Elder sister) - Dr. Pramuan Leophairatana (Younger brother) - Mr. Prayad Liewphairatana (Younger brother)	1. Honorary Doctorate in Industrial Engineering , Rajamangala University of Technology Krugthep 2. M.S.E.E University of California (Berkeley) U.S.A. 3. B.E. (1 <sup>st</sup> Class Hons.) University of Canterbury, New Zealand 4. Directors Accreditation Program (DAP- No.35/2005) Thai Institute of Directors (IOD)	0.06	1991-Present	Chairman	TPI Polene Power Plc.
			Jan2016-Present	Chairman of the Management Committee	TPI Polene Power Plc.
			2001-Present	Chief Executive Officer	TPI Polene Plc.
			Apr2012-Present	Directors	Bangkok Union Insurance Plc.
			2000-2006	Board Executive Director	Bangkok Union Insurance Plc.
			1978-2006	Chief Executive Officer	Thai Petrochemical Industry Public Co., Ltd. and entities
			1992-2000	Senator	Parliamentary Commission
			1969-1997	Chairman	Cathay Finance & Securities Plc.
<b>Dr. Pramuan Leophairatana</b> 70 years of age <b>Position</b> -Vice Chairman of the Board; Vice Chairman of the Management Committee - Miss Malinee Leophairatana (Elder sister) - Mr. Prachai Leophairatana (Elder brother) - Mr. Prayad Liewphairatana (Younger brother)	1. M.S., SC.D. Massachusetts Institute of Technology at Cambridge, M.A., U.S.A. 2. B.S. (Honors) in Chemical Engineering, University of California at Berkeley, U.S.A. 3. Directors Accreditation Program (DAP- No.39/2005) Thai Institute of Directors (IOD) 4. National Defense College of Thailand class 41 and class 11	0.06	Jan2016-Present	Vice Chairman and Vice Chairman of the Management Committee	TPI Polene Power Plc.
			1991-Jan2016	Director	TPI Polene Power Plc.
			1973-Present	Executive Director	Leophairatana Enterprises Co., Ltd.
			1988-Present	Director	Thai Plastic Product Co., Ltd.
			1989-Present	Director	Thai Plastic Film Co., Ltd.
			1989-Present	Director	United Grain Industry Co., Ltd.
			1991-Present	Executive Director	TPI Concrete Co., Ltd.
			1997-Present	Chairman	Bangkok Union Life Insurance Plc.
			2001-Present	Director/President	TPI Polene Plc.
			2002-Present	Executive Director	Polene Plastic Co., Ltd.
			2010-Present	Executive Director	TPI Polene Bio Organics Co., Ltd.
			Jul2014-Present	Executive Director	Mondo Thai Co., Ltd.
			Oct2013-Jan2015	Executive Director	Thai Nitrate Co., Ltd.
			1996-Jul2014	Director	Mondo Thai Co., Ltd.
			1990-Aug2013	Director	Thai Nitrate Co., Ltd.
<b>Mr. Prayad Liewphairatana</b> 68 years of age <b>Position</b> -Director; Member of the Management Committee - Miss Malinee Leophairatana (Elder sister) - Mr. Prachai Leophairatana (Elder brother) - Dr. Pramuan Leophairatana (Elder brother)	1. M.S.C.E. University of Michigan (ANN ARBOR) U.S.A. 2. Directors Accreditation Program (DAP- No.29/2004) Thai Institute of Directors (IOD)	0.06	1991-Present	Director	TPI Polene Power Plc.
			Jan2016-Present	Member of the Management Committee	TPI Polene Power Plc.
			1973-Present	Executive Director	Leophairatana Enterprises Co., Ltd.
			1987-Present	Director/President	TPI Polene Plc.
			1981-2006	Director	International Plastic Trading Co., Ltd.
			1988-Present	President	Thai Plastic Product Co., Ltd.
			1988-Present	President	United Grain Industry Co., Ltd.
			1989-Present	President	Thai Plastic Film Co., Ltd.
			1991-Present	Executive Director	TPI Concrete Co., Ltd.
			1996-Present	Executive Director	Mondo Thai Co., Ltd.
			1997-Present	Executive Director	Bangkok Union Life Insurance Plc.
			2002-Present	Executive Director	Polene Plastic Co., Ltd.
			2010-Present	Executive Director	TPI Polene Bio Organics Co., Ltd.
			2Aug2016-Present	Executive Director	Thai Nitrate Co., Ltd.

NAME/AGE/POSITION/ FAMILY RELATION AMONG DIRECTORS & EXECUTIVES	EDUCATIONAL BACKGROUND/TRAINING	% SHARE HOLDING <sup>1</sup>	WORK EXPERIENCE		
			DURATION	POSITION	COMPANY/ BUSINESS
<b>Mrs. Orapin Leophairatana</b>  72 years of age  <b>Position</b> -Vice Chairman of the Board; Vice Chairman of the Management Committee  - Mr.Prachai Leophairatana (Husband)	1. Political Science (2nd Class Honors) Chulalongkorn University  2. Directors Accreditation Program (DAP- No.35/2005) Thai Institute of Directors (IOD)	0.06	Jan2016-Present	Vice Chairman and Vice Chairman of the Management Committee	TPI Polene Power Plc.
			2007-Jan2016	Directors	TPI Polene Power Plc.
			1998-Present	Executive Director	TPI Concrete Co., Ltd.
			2002-Present	Executive Director	Polene Plastic Co., Ltd.
			2005-Present	Director/Senior Executive Vice President	TPI Polene Plc.
			2009-Present	Executive Director	TPI All Seasons Co., Ltd.
			2010-Present	Executive Director	United Grain Industry Co., Ltd.
			2010-Present	Executive Director	Thai Petrochemical Industry Co., Ltd.
			2010-Present	Executive Director	TPI Polene Bio Organics Co., Ltd.
			Jul 2014-Present	Executive Director	Mondo Thai Co., Ltd.
			Oct2013-Jan2015	Executive Director	Thai Nitrate Co., Ltd.
			2009-Aug2013	Director	Thai Nitrate Co., Ltd.
			2001-2011	Director	Thai Listed Company Association
			1998-2003	Senior Executive Vice President	TPI Polene Plc.
			Apr-Dec1997	Director	Association of Finance Companies
			1995-1997	Director	Bangkok Stock Trading Center
			1995-1997	Chairman	Association of the Securities Brokerage
			1986-1997	Managing Director	Cathay Finance & Securities Plc.
			1977-1982	Third Secretary	Ministry of Foreign Affairs
<b>Miss Pattrapan Leopairut</b>  41 years of age  <b>Position</b> -Director; Member of the Management Committee  - Mr.Pakorn Leopairut (Younger brother) - Mr.Pakkapol Leopairut (Younger brother)	1. Assumption University (ABAC) (Master Degree)  2. Bangkok University International College (BUIC) (Bachelor Degree)  3. International School Bangkok (ISB) (High School)  4. Movement of Thai industrial investor toward India and Myanmar  5. Employee Fraud Prevention Detection  6. Excellence in Practice Quality Control  7. Investigation & Litigation, Business Process Transformation & Operation  8. Relationship Marketing & Customer  9. Relationship Management  10. Directors Accreditation Program (DAP- No.131/2016) Thai Institute of Directors (IOD)	0.05	2007-Present	Director	TPI Polene Power Plc.
			Jan2016-Present	Member of the Management Committee	TPI Polene Power Plc.
			2009-Present	Assistant Vice President	TPI Polene Plc.
			2010-Present	Executive Director	TPI Polene Bio Organics Co., Ltd.
			2014-Present	Executive Director	Zenith International Trading Co.,Ltd.
			Oct2014-Present	Executive Director	TPI Commercial Co., Ltd.
			2006-Present	Executive Director	Thai Petrochemical Industry Co., Ltd.

NAME/AGE/POSITION/ FAMILY RELATION AMONG DIRECTORS & EXECUTIVES	EDUCATIONAL BACKGROUND/TRAINING	% SHARE HOLDING <sup>1</sup>	WORK EXPERIENCE		
			DURATION	POSITION	COMPANY/ BUSINESS
<b>Mr. Pakorn Leopairut</b>  40 years of age  <b>Position</b> -Director; Member of the Management Committee and President  - Miss Pattarapan Leopairut (Elder sister) - Mr.Pakkapol Leopairut (Younger brother)	1. Master of Public and Private Management NIDA  2. CEDI-BABSON ENTREPRENEURIAL LEADERSHIP PROGRAM No. 1/2556  3. Young F.T.I Eite No. 1 The Federation Of Thai Industries  4. Executive Development Program No.10 Ministry of Finance FPO : Forum Economic Guru Seminar No. 3 Ministry of Finance  5. Energy Executive Program No. 1 The Federation Of Thai Industries  6. Directors Accreditation Program (DAP-No.132/2016) Thai Institute of Directors (IOD)	0.06	2007-Present	Director	TPI Polene Power Plc.
			Jan 2016-Present	Member of the Management Committee	TPI Polene Power Plc.
			Feb2016-Present	President	TPI Polene Power Plc.
			2008-Present	Assistant Vice President	TPI Polene Plc.
			2009-Present	Executive Director	TPI All Seasons Co., Ltd.
			2010-Present	Executive Director	TPI Polene Bio Organics Co., Ltd.
			2010-Present	Executive Director	TPI service Co., Ltd.
			2010-Present	Executive Director	Zenith International Trading Co.,Ltd.
			2014-Present	Executive Director	TPI Commercial Co., Ltd.
			Jul2015-Present	Executive Director	TPI Healthcare Co.,Ltd.
			Jul2015-Present	Executive Director	TPI Refinery (1997) Co.,Ltd.
			2007-2008	Investment Analyst	MFC Asset Management Plc.
			2011-Present	Executive Director	Thai Petrochemical Industry Co., Ltd.
			2002-2007	Supervisor	Thai Petrochemical Industry Plc.
			2007-Present	President	Thai Nitrate Co., Ltd.
<b>Mr. Pakkapol Leopairut</b>  37 years of age  <b>Position</b> -Director ; Member of the Management Committee and Executive Vice President-Accounting and Finance  - Mr.Pakorn Leopairut (Elder brother) - MissPattarapan Leopairut (Elder sister)	1. Economic University of Southern California (Master Degree)  2. Economic University of Kansas (Bachelor Degree)  3. CEDI-BABSON ENTREPRENEURIAL LEADERSHIP PROGRAM No. 1/2013  4. CMO by Marketing Association of Thailand No.1/2013  5. Executive Development Program No. 10 (July 2014)  6. Directors Accreditation Program (DAP-No.132/2016) Thai Institute of Directors (IOD)	0.01	Feb2016-Present	Executive Vice President	TPI Polene Power Plc.
			Jan2016-Present	Member of the Management Committee	TPI Polene Power Plc.
			Jul2015-Present	Director	TPI Polene Power Plc.
			2008-Jan2016	Assistant Vice President	TPI Polene Plc.
			2010-Present	Executive Director	TPI service Co.,Ltd.
			2010-Present	Executive Director	Zenith International Trading Co.,Ltd.
			2011-Present	Executive Director	TPI Polene Bio Organics Co., Ltd.
			2014-Present	Executive Director	TPI Commercial Co., Ltd.
			Jul2015-Present	Executive Director	TPI Healthcare Co.,Ltd.
			Jul2015-Present	Executive Director	TPI Refinery (1997) Co.,Ltd.

NAME/AGE/POSITION/ FAMILY RELATION AMONG DIRECTORS & EXECUTIVES	EDUCATIONAL BACKGROUND/TRAINING	% SHARE HOLDING <sup>1</sup>	WORK EXPERIENCE		
			DURATION	POSITION	COMPANY/ BUSINESS
<b>Ms. Nitawan Leophairatana</b>  40 years of age  <b>Position</b> -Director; Member of the Management Committee  - Dr.Pramuan Leophairatana (Father)	1. Juris Doctor Seattle University - School of Law, Graduated 2006	0.00	Jan2016-Present	Member of the Management Committee	TPI Polene Power Plc.
			Jul2015-Present	Director	TPI Polene Power Plc.
			2013-Feb2016	Assistant Vice President	TPI Polene Power Plc.
	2. LL.M in Taxation New York University - School of Law, Graduated 2007		Mar2016-Present	Assistant Vice President	TPI Polene Plc.
			2009-Present	Executive Director	TPI All Seasons Co., Ltd.
			2010-Present	Executive Director	TPI Polene Bio Organics Co., Ltd.
	3. Licensed Attorney in New York State		2010-Present	Executive Director	TPI service Co.,Ltd.
			2010-Present	Executive Director	Zenith International Trading Co.,Ltd.
	4. M.P.A. Cornell University, Graduated 2003		2014-Present	Executive Director	TPI Commercial Co., Ltd.
			Jul2015-Present	Executive Director	TPI Healthcare Co.,Ltd.
			Jul2015-Present	Executive Director	TPI Refinery (1997) Co.,Ltd.
	5. B.A. Cornell University Major In Chemistry and Chemical Biology) Graduated 2002		2008-2013	Assistant Vice President	TPI Polene Public Co.,Ltd.
			2007-2008	Senior Associate	Earnst and Young LLP, New York City, USA.
	6. Directors Accreditation Program (DAP-No.131/2016) Thai Institute of Directors (IOD)			Executive Director	United Grain Industry Co., Ltd.
				Executive Director	Thai Plastic Product Co., Ltd.
				Executive Director	Thai Plastic film Co., Ltd.
<b>Ms. Malinee Leopairut</b>  77 years of age  <b>Position</b> -Director  - Mr.Prachai Leophairatana (Younger brother) - Dr.Pramuan Leophairatana (Younger brother) - Mr.Prayad Liewphairatana (Younger brother)	1. Master Degree in Actuarial Science Georgia State University, U.S.A.	0.00	Jan2016-Present	Director	TPI Polene Power Plc.
			1973-Present	Director	Leophairatana Enterprises Co., Ltd.
			2015-Present	Director	Thai Special Steel Industry Plc.
			1997-Present	Director	Bangkok life Insurance Plc.
	2. Bachelor of Commerce and Accounting Major in Statistics (Second Honour) Chulalongkorn University		1997-Present	Chief Executive Officer	Bangkok Union Insurance Plc.
			1973-2011	Managing Director	Bangkok Union Insurance Plc.
			1987-1989	President	Thai General Insurance Association
	3. Certified as Actuary under Section 78/2 of The Non-Life Insurance Act B.E.2535 as Amended by Non-Life Insurance Act (No.2), B.E.2551				
	4. Directors Certification Program (DCP) No.22/2002 Thai Institute of Directors (IOD)				

NAME/AGE/POSITION/ FAMILY RELATION AMONG DIRECTORS & EXECUTIVES	EDUCATIONAL BACKGROUND/TRAINING	% SHARE HOLDING <sup>1</sup>	WORK EXPERIENCE		
			DURATION	POSITION	COMPANY/ BUSINESS
<b>Mr. Manu Leopairote</b>  77 years of age  <b>Position</b> -Independent Director; Chairman of the Audit Committee  - None -	1. Honorary Doctorate in Business Administration, Thammasat University.  2. Master's degree of Science in Economics, University of Kentucky, U.S.A.  3. Science in Economics (Honors), Thammasat University  4. Certificate, Industrial Development, "Nagoya, Japan"  5. National Defense College class 34  6. Role of Chairman Program (RCP) No.3/2001 Thai Institute of Directors (IOD)  7. Directors Certification Program (DCP) No.30/2003 Thai Institute of Directors (IOD)  8. Directors Accreditation Program (DAP- No.2003) Thai Institute of Directors (IOD)	-	Jan2016-Present	Independent Director and Chairman of the Audit Committee	TPI Polene Power Public Co.,Ltd.
			2003-Present	Member of the Council of State, group 5	The Council of State (Trade and Industrial)
			2004-Present	Chairman and Chairman of the Audit Committee	Polyplex (Thailand) Plc.
			2004-Present	Chairman	Khon Kaen Sugar Industry Plc.
			2004-Present	Director and Independent Director	Thai Beverage Plc.Singapore Stock Exchange (SGX)
			2004-Present	Chairman	Bangkok Union Insurance Plc.
			2006-Present	Director and Member of the Audit Committee	Siam Steel International Plc.
			2010-Present	Chairman	Jubilee Enterprise Plc.
			2010-Present	Chairman	ARIP Plc.
			2011-Present	Chairman	T.M.C Industry Plc.
			2005-2010	Chairman	Neighboring Countries Economic Development Cooperation Agency (Public Organization): NEDA
			1999-2004	Permanent Secretary Historical	Ministry of Industry
				- Chairman	PTT Plc.
				- Chairman	PTT Exploration and Production Plc.
				- Chairman	PTT Chemical Plc.
				- Chairman	Thai Oil Plc.

NAME/AGE/POSITION/ FAMILY RELATION AMONG DIRECTORS & EXECUTIVES	EDUCATIONAL BACKGROUND/TRAINING	% SHARE HOLDING <sup>1</sup>	WORK EXPERIENCE		
			DURATION	POSITION	COMPANY/ BUSINESS
<b>Dr. Abhijai Chandrasen</b>  72 years of age  <b>Position</b> -Independent Director; Member of the Audit Committee  - None -	1. Ph.D. in Law (Honors), Paris University (Sorbonne) France.  2. Bachelor of Law (Second Honour), Chulalongkorn University  3. Thai Barrister at Law, Institute of Legal Education of the Thai Bar  4. Thai Institute of Directors (IOD) - Audit Committee Program (ACP) No.24/2008 - Role of the Compensation Committee (RCC) No. 2/2007 - Developing Corporate Governance Policy, 2006 - Finance for Non-Finance Director (FN - No.11/2004) - Directors Accreditation Program (DAP- No.5/2003) - TFRS 9 Financial Instruments: Overview and key challenges 2017	-	Jan2559-Present	Independent Director and Member of the Audit Committee	TPI Polene Power Public Co.,Ltd.
			2000-Present	Director and Legal Advisor	Kasikornbank Public Co., Ltd.
			2005-Present	Director	Siam Motors Co.,Ltd.
			2011-Present	Member of the Human Resources and Remuneration Committee	Kasikornbank Public Co., Ltd.
			2003-2013	Chairman of the Nomination and Remuneration Committee Member of the Audit Committee and the Risk Management Committee	Sammakorn Public Co., Ltd.
			2000-2013	Advisor Director to the Management Committee	Kasikornbank Public Co., Ltd.
			1994-2013	Director Chairman of Audit committee Managing Director	Sammakorn Public Co., Ltd. Lawyers council of Thailand (1997-2000) Narai Phand Co., Ltd (a joint venture with the public sector by the Ministry of Industry) (Jan 1987 - Jun 2000)
				Expert Committee	The Property Management Committee, Chulalongkorn University
				Executive Director	The Thai Red Cross Fund
				Director	The Thai Red Cross Society
				Legal Advisor	The Chaipattana Foundation
				Legal Advisor	Office of the Royal Development Projects Board
				Legal Advisor	King Service Center Co., Ltd.
				Legal Advisor	Aeronautical Radio of Thailand Ltd. state enterprise in Thailand under the Ministry of Transport
				Legal Advisor	The Bangkok Dock Company (1957) Limited) state enterprise in Thailand under the Ministry of Defense.
				Legal Advisor	Chulalongkorn University
				Legal Advisor	Prince Mahidol Award Foundation
				Legal Advisor	The Kidney Foundation of Thailand
				Legal Advisor	Princess Maha Chakri Sirindhorn Foundation (PMF)
				Legal Advisor	The Foundation of Queen Sirikit Park
				Legal Advisor	H.R.H Princess Maha Chakri Sirindhorn Charity Fund
				Legal Advisor	Fund for Classical Music Promotion under the Patronage of HRH Princess Galyani Vadhana
				Legal Advisor	His Royal Highness Prince Dipangkorn Rasmijoti Fund
				Arbitrator	The Thai Chamber of Commerce and Board of Trade of Thailand

NAME/AGE/POSITION/ FAMILY RELATION AMONG DIRECTORS & EXECUTIVES	EDUCATIONAL BACKGROUND/TRAINING	% SHARE HOLDING <sup>1</sup>	WORK EXPERIENCE		
			DURATION	POSITION	COMPANY/ BUSINESS
<b>Dr. Thiraphong Vikitset</b>  74 years of age  <b>Position</b> -Independent Director; Member of the Audit Committee  - None -	1. Ph.D. (Economics) West Virginia University, U.S.A.  2. B.S. Ch.E. West Virginia University, U.S.A.  Training Certificate 1. Certificate of Professional Study on "Petroleum Management Program" awarded by Arthur D. Little Management Education Institute, Inc. 1982  2. Thai Institute of Directors (IOD) - Director Accreditation Program Certificate, (DAP- 2003) - Director Certificate Program, (DCP- 2004)	0.00	Jan 2016-Present	Independent Director and Member of the Audit Committee	TPI Polene Power Public Co.,Ltd.
			Present	Professor of Economic Development	National Institute of Development Administration (NIDA)
			1997-Present	Independent Director and Chairman of the Audit committee	I.C.C. International Public Co., Ltd.
			1997-Present	Director	Better Way (Thailand) Co., Ltd.
			2004-2014	Member of the Subcommittee on Energy Conservation Assessment Subcommittee	
			1995-1998	Director of Academic Council	National Institute of Development Administration (NIDA)
			1986-1991	Vice President for Academic Affairs	National Institute of Development Administration (NIDA)
			1985-1986	Dean of the Faculty of Economic Development	National Institute of Development Administration (NIDA)
			1983-1985	Deputy Dean, Faculty of Economic Development	National Institute of Development Administration (NIDA)
			1976-1980	Assistant Professor, Faculty of Economic Development	National Institute of Development Administration (NIDA)
			1974-1976	Professor of Economics	National Institute of Development Administration (NIDA)
			2008	Subcommittee for tracking oil consumption on Government Policy	
			2004	Project Evaluation Subcommittee under Energy Conservation Plan	
			2002	The committee considered the use of ethanol.	
			1989	Member of Subcommittee on Energy Planning for the 7th Economic and Social Development Plan	
			1989	Committee members in the working group tariff changes over time.	
			1989	Committee on Electricity Development Working Group	
			1989	Committee members in the working group, the purchase of electricity from small power producers.	
			1989	Committee members in the working group tariff restructuring.	
			1989	Committee members working in private sector participation in the electricity sector.	
			1989	The Committee members on the working group of Electricity in industry	
			1989	The standard committee member of university education	
			1989	Committee members working in the tariff adjustment	
			1988	Committee members working on electricity demand	
			1986	Subcommittee on Energy Policy Formulation	

NAME/AGE/POSITION/ FAMILY RELATION AMONG DIRECTORS & EXECUTIVES	EDUCATIONAL BACKGROUND/TRAINING	% SHARE HOLDING <sup>1</sup>	WORK EXPERIENCE		
			DURATION	POSITION	COMPANY/ BUSINESS
<b>Mr. Khantachai Vichakkhana</b>  71 years of age  <b>Position</b> -Independent Director  - None -	1. Master's degree in Political Science (Public Administration), Thammasat University  2. Bachelor of Laws, Thammasat University.  3. Guest Speaker Training Program- Land Class 2: Department of Land (1979)  4. Division Director of Security within the Kingdom Program (Ka.Rmn): Royal Thai Army (1979)  5. Advance Land Management School Program Class 3: Department of Lands (1984)  6. Advance administration Program: Class 30, Institute of Administration Development, Department of Provincial Administration (1993)  7. High Level Information Technology Executives (CIO) Seminar (2003)  8. Political Development in Democratic Governance for Executives Program Class 8, King Prajadhipok's Institute (2004)  9. Thai Institute of Directors (IOD) Directors Accreditation Program (DAP-No.112/2014) Role of Compensation Committee (RCC-No.19/2014) Directors Certification Program (DCP-No.119/2015)	0.00	Jan2016-Present	Independent Director	TPI Polene Power Public Co.,Ltd.
			2009-Present	Independent Director	TPI Polene Public Co.,Ltd.
			Aug2014-Present	Director and Audit Committee and the Nomination, Remuneration and Corporate Governance Committee	L.P.N. Development Public Co., Ltd.
			Feb2016-Present	Independent Director	L.P.N. Development Public Co., Ltd.
			Extracurricular	Council Member	Rajamangala University of technology Bangkok
				Qualified Director	National Council Boy Scouts
				Assets Management Committee	Thai Red Cross Council
				Committee	Office of The Election Commission of Thailand
				Consultants	Islamic Bank of Thailand
				Committee	Triamudomsuksa Alumni Foundation
				Committee	Retired Government Officials' Pension Association of Interior Foundation
				Committee	Executive Public Administration Foundation (EPAF)
				Committee	Anan Anantakool Foundation
				Committee	Dr.SukPhukyaphon, Foundation
				Committee	Hospital & Phrapiya school Foundation
			1999-2000	Inspector-General	Department of Lands
			1998-1999	Director of Bureau Authority Land	Department of Lands
			1995-1998	Land Management Division	Department of Lands
			1992-1995	Department of Important book	Department of Lands
			1990-1992	Land Officer- Chonburi	Department of Lands
			1989-1990	Land Officer- Phuket	Department of Lands
			1988-1989	Land Officer-Nonthaburi and Bangyai District	Department of Lands
			1986-1988	Land Officer-Nakhornnayok	Department of Lands
			1986	Land Officer-Uttaradit	Department of Lands
			Extracurricular	Council Member	Rajamangala University of technology Bangkok
				Assets Management Committee of Inquiry	Thai Red Cross Council
				Committee	Office of The Election Commission of Thailand
				Consultants	Islamic Bank of Thailand
				Committee	Triamudomsuksa Alumni Foundation
				Committee	Retired Government Officials' Pension Association of Interior Foundation
				Committee	Executive Public Administration Foundation (EPAF)
				Committee	Anan Anantakool Foundation
				Committee	Dr.SukPhukyaphon, Foundation
				Committee	Hospital & Phrapiya school Foundation
				Assets Management	Srisavarindhira Thai Red Cross Institute of Nursing

NAME/AGE/POSITION/ FAMILY RELATION AMONG DIRECTORS & EXECUTIVES	EDUCATIONAL BACKGROUND/TRAINING	% SHARE HOLDING <sup>1</sup>	WORK EXPERIENCE		
			DURATION	POSITION	COMPANY/ BUSINESS
<b>Mr. Wanchai Manosooti</b> 70 years of age <b>Position</b> -Independent Director - None -	1. Master's degree in Business Administration from Chulalongkorn University. 2. Bachelor's degree of Accounting, Chulalongkorn University. 3. Directors Certification Program (DCP) No.18/2002 Thai Institute of Directors (IOD)	-	Mar2016-Present 1999-2001 2002-2007	Independent Director EXECUTIVE V.P. Managing Director	TPI Polene Power Public Co.,Ltd. TISCO Bank Public Co.,Ltd. TISCO Securities Co.,Ltd.
<b>Mr. Worawit Lerdbussarakam</b> 54 years of age <b>Position</b> -Senior Vice President-Production - None -	1. Business of Administration from Kasetsart University 2. Bachelor's degree in faculty of engineering (Electrical engineer), Prince of Songkla University	0.00	Apr2016-Present Feb2016- Present Jan1990-Feb2016	Senior Vice President -Production Vice President -Production Vice President -Production	TPI Polene Power Public Co.,Ltd. TPI Polene Power Public Co.,Ltd. TPI Polene Public Co.,Ltd.
<b>Mrs. Sirirat Lerthirunrat</b> 59 years of age <b>Position</b> -Assistant Vice President-Petrol and Gas - None -	Bachelor's degree in Management from Sukhothai Thammathirat University	-	Jul2012-Present	Assistant Vice President - Petrol and Gas	TPI Polene Power Public Co.,Ltd.
<b>Mr. Somkiat Teeratakulpisal</b> 52 years of age <b>Position</b> -Assistant Vice President -Production - None -	1. Master's degree of GSPA from National Institute of Development Administration (NIDA) 2. Bachelor's degree in faculty of engineering, Prince of Songkla University	-	Jun2014-Present	Assistant Vice President -Production	TPI Polene Power Public Co.,Ltd.
<b>Miss Karuna Permsiripan</b> 56 years of age <b>Position</b> -Manager-Accounting - None -	Bachelor's degree in Commerce and Accountancy - Chulalongkorn University	-	Mar2016-Present	Manager-Accounting	TPI Polene Power Public Co.,Ltd.
<b>Miss Weerawan Larpchaiwut</b> 55 years of age <b>Position</b> -Manager -Finance - None -	1. Bachelor's degree of Finance and Banking Ramkhamhaeng University 2. Master's degree in Business Administration, Ramkhamhaeng University	-	Apr2016-Present Dec2006-Mar2016	Manager-Finance Assistant Manager-Finance	TPI Polene Power Public Co.,Ltd. TPI Polene Public Co.,Ltd.
<b>Miss Weeranut KimKom</b> 47 years of age <b>Position</b> -Secretary - None -	1. Bachelor of Law, Thammasat University 2. Lawyer License from Training Department of the Lawyer council. 3. Company Secretary Program (CSP) No.76/2017	-	Sep2016-Present Nov2012-Present	Secretary Supervisor	TPI Polene Power Public Co.,Ltd. TPI Polene Public Co.,Ltd.

Remark : (1) Percentage of shareholding date was as at December 31, 2018.

**Position of the Management and Controlling Persons over the Company and Related Companies as of 31 December 2017**

Company	Mr. Prachai Leophairatana	Mr. Pramuan Leophairatana	Mrs. Orapin Leophairatana	Mr. Payad Liewphairatana	Miss Patravan Leopatit	Mr. Pakorn Leopatit	Mr. Pakapol Leopatit	Mrs. Nitawan Leophairatana	Miss Malinee Leophairatana	Mr.Manu Leopatrote	Dr. Thiraphong Vikitsat	Dr. Abhijai Chandrasen	Mr. Khantachai Wichakkhana	Mr. Vanchai Manosuthi	Mr. Worawit Lerdussarakam	Ms. Sirat Lethirunrat	Mr. Somket Teetrakulpisal	Miss Karuna Pernsripan	Miss Weerawan Larpchaiwut
<b>TPI Polene Power Public Company Limited</b>	X//	/V	/V	/V	/V	/V	/V	/V	/	///	///	///	/	/	/V	/V	/V	/V	/V
<b>Related Company</b>																			
Zenith International Trading Co., Ltd.	X//	//	//	//	//	//	//	//	.	.	.	.	.	.	.	.	.	.	.
TPI Service Co., Ltd.	X//	//	//	//	.	//	//	//	.	.	.	.	.	.	.	.	.	.	.
Polene Plastic Co., Ltd.	X//	//	//	//	.	//	.	.	.	.	.	.	.	.	.	.	.	.	.
TPI Polene Bio Organics Co., Ltd.	X//	//	//	//	//	//	.	.	.	.	.	.	.	.	.	.	.	.	.
Thai Propoxide Co., Ltd.	X//	//	.	//	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Thai Special Steel Plc	//	//	.	//	.	.	//	.	/	.	.	.	.	.	.	.	.	.	.
TPI EOG Co., Ltd.	X//	//	//	//	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Hong Yiah Seng Co., Ltd.	X//	//	//	//	//	//	//	//	//	.	.	.	.	.	.	.	.	.	.
Hong Yiah Seng Real Estates and Investment Co.,Ltd.	X//	//	//	//	//	//	//	//	//	.	.	.	.	.	.	.	.	.	.
Saraburi Ginning Mill Co., Ltd.	X//	//	.	//	//	//	//	//	//	.	.	.	.	.	.	.	.	.	.
Pomchai Enterprises Co., Ltd.	X//	//	.	//	.	.	.	.	//	.	.	.	.	.	.	.	.	.	.
Bangkok Union Insurance Plc	/	.	.	.	.	.	.	.	//	X	.	.	.	.	.	.	.	.	.
TPI Concrete Co., Ltd.	X//	//	//	//	.	.	.	.	//	.	.	.	.	.	.	.	.	.	.
TPI All Seasons Co., Ltd.	X//	//	//	//	.	.	.	//	.	.	.	.	.	.	.	.	.	.	.
United Grain Industry Co., Ltd.	X//	//	//	//	//	//	//	//	//	.	.	.	.	.	.	.	.	.	.
Thai Petrochemical Industry Co., Ltd.	.	.	//	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Bangkok Union Life Insurance Plc.	.	X//	.	//	.	.	.	.	//	.	.	.	.	.	.	.	.	.	.
Leophairatana Enterprises Co., Ltd.	X//	//	//	//	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
TPI Commercial Co., Ltd.	.	.	.	.	//	.	//	//	.	.	.	.	.	.	.	.	.	.	.
TPI Healthcare Co., Ltd.	X//	//	//	//	.	.	//	//	.	.	.	.	.	.	.	.	.	.	.
TPI Refinery (1997) Co., Ltd.	X//	//	//	//	//	//	//	//	.	.	.	.	.	.	.	.	.	.	.
Thai Plastic Product Co., Ltd.	X//	//	//	//	//	//	//	//	//	.	.	.	.	.	.	.	.	.	.
Thai Plastic Film Co., Ltd.	X//	//	//	//	//	//	//	//	//	.	.	.	.	.	.	.	.	.	.
Polyplex (Thailand) Public Company Limited	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
Khon Kaen Sugar Industry Public Company Limited	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
Thai Beverage Public Company Limited (Singapore Exchange (SGX))	.	.	.	.	.	.	.	.	.	///	.	.	.	.	.	.	.	.	.
Jubilee Enterprise Public Company Limited	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
ARIP Public Company Limited	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
T.M.C. Industrial Public Company Limited	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
I.C.C. International Public Company Limited	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
Better Way (Thailand) Co.,Ltd.	.	.	.	.	.	.	.	.	.	.	///	.	.	.	.	.	.	.	.

	Mr. Prachai Leophairatana	Mr. Pramuan Leophairatana	Mrs. Orapin Leophairatana	Mr. Prayad Liewphairatana	Miss Patrapan Leopairut	Mr. Pakorn Leopairut	Mr. Pakapol Leopairut	Mrs. Nitawan Leophairatana	Miss Malinee Leophairatana	Mr. Manu Leoparote	Dr. Thiraphong Vikitset	Dr. Abhijai Chandrasen	Mr. Khandachai Wichakkhana	Mr. Vanchai Manosuthi	Mr. Worawit Lerdussarakam	Ms. Sirirat Lethirunrat	Mr. Somkiet Teeratrakulpisal	Miss Karuna Permsiripan	Miss Weerawan Larpchaiwut
Kasikornbank Public Company Limited																			
Siam Motors Co., Ltd.																			
L.P.N. Development Public Company Limited																			
International Trading Development Co., Ltd.	X//	//	//	//	//	//	//	//											
Phomphan Phanich Co., Ltd.	X//	//	//	//	//	//	//	//											
Thai Agrico Co., Ltd.	X//	//	//	//	//	//	//	//											
Hong Yiah Seng Warehouse Co., Ltd.	X//	//	//	//	//	//	//	//											
TP1 All Seasons Company Limited	X//	//	//	//	//	//	//	//											
TP1 Polene Public Company Limited	//	//	//	//					/					/					
Jaturat Co., Ltd.	//	//	//	//				//	//										
TP1 Holdings Co., Ltd.	X//	//	//	//															
Mondo Thai Co., Ltd.	X//	//	//	//															
Rayong Forest Co., Ltd.	X//	//		//					//										
TP1 Bio Pharmaceuticals Co.,Ltd.	X//	//		//															
TP1 Olefins Co., Ltd.	X//	//		//															
Master Archeep (Thailand) Co., Ltd.	X//					//	//	//											
Rangsit Patumporn Co.,Ltd		//																	
K. Cotton & Gloss Co., Ltd.	//																		
Lian Thai Apparel Co.,Ltd.				/					//										
Kang Yong Electric Public Company Limited										/									
Sukhumvit62 medical Co., Ltd.									//										
GML Exhibition (Thailand) Co., Ltd.									//										
GML Enterprise (Thailand) Co., Ltd.									//										
DR Development Co., Ltd.										//									
THAI DMT PAINT MFG Co., Ltd.										//									
Tamaka Sugar Industry Co., Ltd.										/									
New Kwang Soon Lee Sugar Factory Co., Ltd.										/									
Blue Ocean Spa Co., Ltd.										/									
Beer Thip Brewery (1991) Co., Ltd.										/									
Beer Thai (1991) Public Company Limited										/									
UBM Asia (Thailand) Co., Ltd.										//									
Rangsit Phatumporn Housing Project Co., Ltd.										/									
New Krung Thai Sugar Factory Co.,Ltd.																			
Siam Steel International Public Company Limited										//									

remark: X = Chairman / = Director // = Executive Director /// = Audit Committee /V = management

**Directors of Subsidiaries.****Board of Directors of TPI Polene Power Investment Company Limited as at December 31, 2018**

<b>Name</b>	<b>Position</b>
1. Mr. Prachai Leophairatana	Chairman
2. Mr. Prateep Leopairut	Director
3. Mr. Pakorn Leopairut	Director
4. Mr. Pakkapol Leopairut	Director

**Board of Directors of TPI Polene Power (Onnut) Company Limited as at December 31, 2018**

<b>Name</b>	<b>Position</b>
1. Mr. Prachai Leophairatana	Director
2. Dr. Pramuan Leophairatana	Director
3. Mrs. Orapin Leophairatana	Director
4. Mr. Pakorn Leopairut	Director
5. Mr. Pakkapol Leopairut	Director
6. Mr. Porakit Leophairatana	Director

## Report of the Board of Directors' Responsibilities for Financial Statements

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The Board of Directors of the Company are aware of their duties and responsibilities to ensure that the financial reports of the Company are accurate, complete, and transparent, and are prepared in compliance with generally accepted accounting principles, and reflect the application of an appropriate and consistent accounting policy. Such reports must be prepared prudently and on a reasonable basis, and must reflect the Company's financial position and operational performance fairly and precisely for the benefit of shareholders and general investors.

In this regard, the Board of Directors has entrusted an Independent Audit Committee to be responsible for the review of accounting policy and financial reports, internal controls, internal audit and risk management systems. Comments on these issues have been included in the Audit Committee Report, which thereby forms a part of this Annual Report.

The Board of Directors are of the opinion that the overall internal control systems of the Company and its subsidiaries have functioned satisfactorily and creditably to ensure that the financial statements of the Company and its subsidiaries present financial position, operational results and financial cash flow which are accurate and reliable in all material aspects.

Sincerely Yours,



**Mr. Prachai Leopairatana**

Chairman of the Board

# Independent Auditor's Report

## To the Shareholders of TPI Polene Power Public Company Limited

### *Opinion*

I have audited the consolidated and separate financial statements of TPI Polene Power Public Company Limited and its subsidiaries (the "Group") and of TPI Polene Power Public Company Limited (the "Company"), respectively, which comprise the consolidated and separate statements of financial position as at 31 December 2018, the consolidated and separate statements of comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

In my opinion, the accompanying consolidated and separate financial statements present fairly, in all material respects, the financial position of the Group and the Company, respectively, as at 31 December 2018 and their financial performance and cash flows for the year then ended in accordance with Thai Financial Reporting Standards (TFRSs).

### *Basis for Opinion*

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

### *Key Audit Matters*

Key audit matters are those matters that, in my professional judgment, were of most significance in my audit of the consolidated and separate financial statements of the current period. These matters were addressed in the context of my audit of the consolidated and separate financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

Based on my consideration and professional judgement, I have determined that there are no key audit matters to communicate in my report.

### *Other Information*

Management is responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated and separate financial statements and my auditor's report thereon. The annual report is expected to be made available to me after the date of this auditor's report.

My opinion on the consolidated and separate financial statements does not cover the other information and I will not express any form of assurance conclusion thereon.

In connection with my audit of the consolidated and separate financial statements, my responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the consolidated and separate financial statements or my knowledge obtained in the audit, or otherwise appears to be materially misstated.

When I read the annual report, if I conclude that there is a material misstatement therein, I am required to communicate the matter to those charged with governance and request that the correction be made.

### *Responsibilities of Management and Those Charged with Governance for the Consolidated and Separate Financial Statements*

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

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

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

### *Auditor's Responsibilities for the Audit of the Consolidated and Separate Financial Statements*

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

As part of an audit in accordance with TSAs, I exercise professional judgment and maintain professional skepticism throughout the audit. I also:

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

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

I also provide those charged with governance with a statement that I have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, I determine those matters that were of most significance in the audit of the consolidated and separate financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.



(Bunyarit Thanormcharoen)  
Certified Public Accountant  
Registration No. 7900

KPMG Phoomchai Audit Ltd.  
Bangkok  
18 February 2019

# Statement of financial position

TPI Polene Power Public Company Limited and its subsidiaries

(in thousand Baht)

		Consolidated financial statements	Separate financial statements	
		31 December	31 December	
<i>Assets</i>	<i>Note</i>	2018	2018	2017
<i>Current assets</i>				
Cash and cash equivalents	5	450,164	259,124	456,161
Current investments	6	3,960,652	3,960,652	3,774,563
Trade accounts receivable	4, 7	1,530,704	1,530,704	736,992
Other receivables		104,526	104,526	126,396
Receivables and advances to related parties	4	35,845	35,857	27,617
Inventories	8	587,732	587,732	449,328
Other current assets		12,196	12,196	268,488
<b>Total current assets</b>		<b>6,681,819</b>	<b>6,490,791</b>	<b>5,839,545</b>
<i>Non-current assets</i>				
Investment in subsidiaries	9	-	191,457	-
Other long-term investments	6	5,337	5,337	5,410
Property, plant and equipment	10	24,642,820	24,642,820	21,503,529
Leasehold rights		113	113	383
Advances for plant and equipment		106,953	106,953	103,285
Deferred tax assets	11	91,699	91,699	114,756
Other non-current assets		12,483	12,483	-
<b>Total non-current assets</b>		<b>24,859,405</b>	<b>25,050,862</b>	<b>21,727,363</b>
<b>Total assets</b>		<b>31,541,224</b>	<b>31,541,653</b>	<b>27,566,908</b>

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

# Statement of financial position

TPI Polene Power Public Company Limited and its subsidiaries

(in thousand Baht)

		Consolidated financial statements	Separate financial statements	
		31 December 2018	31 December 2018	31 December 2017
<b>Liabilities and equity</b>	<i>Note</i>			
<b>Current liabilities</b>				
Trade accounts payable	4, 13	377,095	377,095	173,248
Other payables	14	1,611,411	1,611,326	2,902,911
Payables and advances from related parties	4	79,824	79,792	32,366
Interest payable		14,531	14,531	-
Income tax payable		35,622	35,622	-
Other current liabilities	15	118,708	118,708	55,892
<b>Total current liabilities</b>		<b>2,237,191</b>	<b>2,237,074</b>	<b>3,164,417</b>
<b>Non-current liabilities</b>				
Debenture	12	4,000,000	4,000,000	-
Provisions for employee benefits	16	87,698	87,698	70,645
Decommissioning costs	4, 17	167,958	167,958	117,812
<b>Total non-current liabilities</b>		<b>4,255,656</b>	<b>4,255,656</b>	<b>188,457</b>
<b>Total liabilities</b>		<b>6,492,847</b>	<b>6,492,730</b>	<b>3,352,874</b>
<b>Equity</b>				
Share capital:	18			
Authorised share capital		8,400,000	8,400,000	8,400,000
Issued and paid share capital		8,400,000	8,400,000	8,400,000
Shares premium:				
Shares premium on ordinary shares	18	14,580,886	14,580,886	14,580,886
Retained earnings				
Appropriated				
Legal reserve	19	533,356	533,356	348,376
Unappropriated		1,534,043	1,534,681	884,772
Other component of equity		92	-	-
<b>Equity attribute to owners of the Company</b>		<b>25,048,377</b>	<b>25,048,923</b>	<b>24,214,034</b>
Non-controlling interests		-	-	-
<b>Total equity</b>		<b>25,048,377</b>	<b>25,048,923</b>	<b>24,214,034</b>
<b>Total liabilities and equity</b>		<b>31,541,224</b>	<b>31,541,653</b>	<b>27,566,908</b>

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

# Statement of comprehensive income

TPI Polene Power Public Company Limited and its subsidiaries

(in thousand Baht)

		Consolidated financial statements	Separate financial statements	
		Year ended 31 December	Year ended 31 December	
	Note	2018	2018	2017
<b>Revenue</b>				
Revenue from sale of power and goods	20, 29	4,235,362	4,235,362	2,853,600
Revenue from adders	20, 29	3,384,445	3,384,445	2,011,214
Net foreign exchange gain		46,616	46,616	201,621
Investment income	21	49,173	49,129	72,297
Other income	22	199,751	199,751	49,421
<b>Total income</b>		<b>7,915,347</b>	<b>7,915,303</b>	<b>5,188,153</b>
<b>Expenses</b>	26			
Cost of sales of power and goods	8	3,651,430	3,651,430	2,227,535
Distribution costs	23	66,561	66,561	63,820
Administrative expenses	24	318,759	318,077	188,770
Finance costs	27	18,969	18,969	40,916
<b>Total expenses</b>		<b>4,055,719</b>	<b>4,055,037</b>	<b>2,521,041</b>
<b>Profit before income tax expense</b>		<b>3,859,628</b>	<b>3,860,266</b>	<b>2,667,112</b>
Tax expense	28	(160,669)	(160,669)	(75,581)
<b>Profit for the year</b>		<b>3,698,959</b>	<b>3,699,597</b>	<b>2,591,531</b>

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

# Statement of comprehensive income

TPI Polene Power Public Company Limited and its subsidiaries

(in thousand Baht)

		Consolidated financial statements	Separate financial statements	
		Year ended 31 December 2018	Year ended 31 December 2018	2017
<b>Other comprehensive income (expense)</b>	<i>Note</i>			
<b>Items that will be reclassified subsequently to profit or loss</b>				
Exchange differences on translating foreign operations		92	-	-
<b>Total items that will be reclassified subsequently to profit or loss</b>		<b>92</b>	<b>-</b>	<b>-</b>
<b>Items that will not be reclassified to profit or loss</b>				
Losses on remeasurements of defined benefit plans	16	(10,885)	(10,885)	(2,968)
Income tax relating to items that will not be reclassified	11	2,177	2,177	594
<b>Total items that will not be reclassified to profit or loss</b>		<b>(8,708)</b>	<b>(8,708)</b>	<b>(2,374)</b>
<b>Other comprehensive income (expense) for the year, - net of tax</b>		<b>(8,616)</b>	<b>(8,708)</b>	<b>(2,374)</b>
<b>Total comprehensive income for the year</b>		<b>3,690,343</b>	<b>3,690,889</b>	<b>2,589,157</b>
<b>Profit (loss) attributable to:</b>				
Owners of the Company		3,698,959	3,699,597	2,591,531
Non-controlling interests		-	-	-
<b>Profit (loss) for the year</b>		<b>3,698,959</b>	<b>3,699,597</b>	<b>2,591,531</b>
<b>Total comprehensive income (loss) attributable to</b>				
Owners of the Company		3,690,343	3,690,889	2,589,157
Non-controlling interests		-	-	-
<b>Total comprehensive income (loss) for the year</b>		<b>3,690,343</b>	<b>3,690,889</b>	<b>2,589,157</b>
<b>Basic earnings per share (in Baht)</b>	30	<b>0.440</b>	<b>0.440</b>	<b>0.333</b>

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

# Statement of change in equity

TPI Polene Power Public Company Limited and its subsidiaries

Consolidated financial statements							
(in thousand Baht)							
				Retained earnings		Other components shareholders' equity	
				Legal reserve	Unappropriated	Translating foreign operations	Equity attributable to owners of the Company
	Note	Issued and paid-up share capital	Share premium				Non-controlling interests
							Total equity
Year ended 31 December 2018							
Balance at 1 January 2018		8,400,000	14,580,886	348,376	884,772	-	24,214,034
							24,214,034
Transaction with owners, recorded directly in equity							
Contributions by and distributions to owners							
Dividends	31	-	-	-	(2,856,000)	-	(2,856,000)
		-	-	-	(2,856,000)	-	(2,856,000)
Comprehensive income (expense) for the year							
Profit		-	-	-	3,698,959	-	3,698,959
Other comprehensive income (expense)		-	-	-	(8,708)	92	(8,616)
Total comprehensive income (expense) for the year		-	-	-	3,690,251	92	3,690,343
		-	-	-	(184,980)	-	-
Transfer to legal reserve		-	-	184,980	(184,980)	-	-
		8,400,000	14,580,886	533,356	1,534,043	92	25,048,377
Balance at 31 December 2018							25,048,377

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

# Statement of changes in equity

TPI Polene Power Public Company Limited and its subsidiaries

(in thousand Baht)

	Note	Separate financial statements				Total equity
		Issued and paid-up	Retained earnings			
		share capital	Share premium	Legal reserve	Unappropriated	
<b>Year ended 31 December 2017</b>						
Balance at 1 January 2017		5,900,000	-	218,800	2,202,191	8,320,991
Transaction with owners, recorded directly in equity						
<i>Contributions by and distributions to owners</i>						
Issue of ordinary shares	18	2,500,000	14,580,886	-	-	17,080,886
Dividends	31	-	-	-	(3,777,000)	(3,777,000)
<b>Total contributions by and distributions to owners</b>		<b>2,500,000</b>	<b>14,580,886</b>	<b>-</b>	<b>(3,777,000)</b>	<b>13,303,886</b>
<b>Comprehensive income (expense) for the year</b>						
Profit		-	-	-	2,591,531	2,591,531
Other comprehensive income (expense)		-	-	-	(2,374)	(2,374)
<b>Total comprehensive income (expense) for the year</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>2,589,157</b>	<b>2,589,157</b>
Transfer to legal reserve		-	-	129,576	(129,576)	-
<b>Balance at 31 December 2017</b>		<b>8,400,000</b>	<b>14,580,886</b>	<b>348,376</b>	<b>884,772</b>	<b>24,214,034</b>
<b>Year ended 31 December 2018</b>						
Balance at 1 January 2018		8,400,000	14,580,886	348,376	884,772	24,214,034
Transaction with owners, recorded directly in equity						
<i>Contributions by and distributions to owners</i>						
Dividends	31	-	-	-	(2,856,000)	(2,856,000)
<b>Total contributions by and distributions to owners</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>(2,856,000)</b>	<b>(2,856,000)</b>
<b>Comprehensive income (expense) for the year</b>						
Profit		-	-	-	3,699,597	3,699,597
Other comprehensive income (expense)		-	-	-	(8,708)	(8,708)
<b>Total comprehensive income (expense) for the year</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>3,690,889</b>	<b>3,690,889</b>
Transfer to legal reserve		-	-	184,980	(184,980)	-
<b>Balance at 31 December 2018</b>		<b>8,400,000</b>	<b>14,580,886</b>	<b>533,356</b>	<b>1,534,681</b>	<b>25,048,923</b>

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

# Statement of cash flows

TPI Polene Power Public Company Limited and its subsidiaries

(in thousand Baht)

	Consolidated financial statements	Separate financial statements	
	Year ended	Year ended	
	31 December	31 December	
	2018	2018	2017
<b><i>Cash flows from operating activities</i></b>			
Profit for the year	3,698,959	3,699,597	2,591,531
<i>Adjustments to reconcile profit to cash receipts (payments)</i>			
Depreciation and amortisation	481,091	481,091	364,439
Interest income	(43,600)	(43,556)	(64,964)
Finance costs	18,969	18,969	40,916
Unrealised gain on foreign exchange	(8,045)	(8,045)	(164,416)
(Reversal of) loss on inventories devaluation	(4,633)	(4,633)	10,366
Gain on disposal equipment	(2)	(2)	(20,698)
Loss on fair value adjustment of current investments	2,386	2,386	-
Provision for employee benefits	6,449	6,449	5,638
Tax expense	160,669	160,669	75,581
	4,312,243	4,312,925	2,838,393
<b><i>Changes in operating assets and liabilities</i></b>			
Trade accounts receivable	(793,712)	(793,712)	85,816
Other receivables	20,344	20,344	(80,312)
Receivable and advances to related parties	(8,228)	(8,240)	(3,376)
Inventories	(133,771)	(133,771)	(67,054)
Other current assets	(1,150)	(1,150)	(118,046)
Other non-current assets	(12,483)	(12,483)	-
Trade accounts payable	203,847	203,847	76,362
Other payables	77,969	77,884	(67,925)
Payable and advances from related parties	47,458	47,426	(68,883)
Other current liabilities	62,816	62,816	6,319
Employee benefit paid by the plan	(281)	(281)	(1,396)
Cash generated from operating activities	3,775,052	3,775,605	2,599,898
Taxes paid	(99,813)	(99,813)	(4,026)
Value added tax refund received	257,442	257,442	-
<b>Net cash from operating activities</b>	<b>3,932,681</b>	<b>3,933,234</b>	<b>2,595,872</b>

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

# Statement of cash flows

TPI Polene Power Public Company Limited and its subsidiaries

(in thousand Baht)

	Consolidated financial statements	Separate financial statements	
	Year ended	Year ended	
	31 December	31 December	
	2018	2018	2017
<b><i>Cash flows from investing activities</i></b>			
Interest received	45,198	45,154	57,610
Acquisition of property, plant and equipment	(4,773,906)	(4,773,906)	(4,129,520)
Proceeds from sale of equipment	13	13	118,898
Decrease of current investments	(188,475)	(188,475)	(3,774,563)
Advance payment for machine	(165,594)	(165,594)	(852,860)
Acquisition of subsidiaries	-	(191,457)	-
Currency translation differences	92	-	-
<b>Net cash used in investing activities</b>	<b>(5,082,672)</b>	<b>(5,274,265)</b>	<b>(8,580,435)</b>
<b><i>Cash flows from financing activities</i></b>			
Finance costs paid	(4)	(4)	(94,798)
Dividends paid to owners of the Company	(2,856,000)	(2,856,000)	(3,777,000)
Repayment of short-term loans from financial institutions	-	-	(28,726)
Proceeds from loan from related parties	-	-	2,887,081
Repayment of loan from related parties	-	-	(7,415,927)
Repayment of long-term loans from financial institutions	-	-	(2,496,629)
Proceeds from issue of debenture	4,000,000	4,000,000	-
Proceeds from issue of ordinary shares	-	-	17,500,000
Transaction costs from issue of shares	-	-	(419,114)
<b>Net cash from financing activities</b>	<b>1,143,996</b>	<b>1,143,996</b>	<b>6,154,887</b>
Net increase (decrease) in cash and cash equivalents,			
before effect of exchange rates	(5,995)	(197,035)	170,324
Effect of exchange rate changes on			
cash and cash equivalents	(2)	(2)	(25)
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>(5,997)</b>	<b>(197,037)</b>	<b>170,299</b>
Cash and cash equivalents at 1 January	456,161	456,161	285,862
<b>Cash and cash equivalents at 31 December</b>	<b>450,164</b>	<b>259,124</b>	<b>456,161</b>
<b><i>Non-cash transactions</i></b>			
Other payable - plant and equipment	1,430,960	1,430,960	2,800,429
Advances for plant and equipment	106,953	106,953	103,285

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

# Notes to the financial statements

TPI Polene Power Public Company Limited and its subsidiaries  
For the year ended 31 December 2018

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These notes form an integral part of the financial statements.

The financial statements issued for Thai statutory and regulatory reporting purposes are prepared in the Thai language. These English language financial statements have been prepared from the Thai language statutory financial statements, and were approved and authorised for issue by the audit committee, as appointed by the Board of Directors of the Company on 18 February 2019.

## **1 General information**

TPI Polene Power Public Company Limited, the “Company”, is incorporated in Thailand and has its registered office at 26/56, TPI Tower, Chan Tat Mai Road, Tungmahamek, Sathorn, Bangkok.

The Company was listed on the Stock Exchange of Thailand (“SET”) on 5 April 2017.

The ultimate parent company during the financial year was TPI Polene Public Company Limited, “parent company”, which is incorporated in Thailand and is the major shareholder and the parent of the Company and owned 70.24% of the Company’s issued and paid-up share capital.

The principal business of the Company are manufacturing and distributing electricity and refuse derived fuel (RDF), organics waste and distributing diesel and natural gas 12 stations. Details of the Company’s subsidiaries as at 31 December 2018 and 2017 are given in note 9.

## **2 Basis of preparation of the financial statements**

### *(a) Statement of compliance*

The financial statements are prepared in accordance with Thai Financial Reporting Standards (“TFRS”) and guidelines promulgated by the Federation of Accounting Professions (“FAP”); and applicable rules and regulations of the Thai Securities and Exchange Commission.

The FAP has issued new and revised TFRS effective for annual accounting periods beginning on or after 1 January 2018. The initial application of these new and revised TFRS has resulted in changes in certain of the Group’s accounting policies. These changes have no material effect on the financial statements.

In addition to the above new and revised TFRS, the FAP has issued a number of new and revised TFRS which are not yet effective for current periods. The Group has not early adopted these standards in preparing these financial statements. Those new and revised TFRS that are relevant to the Group’s operations are disclosed in note 35.

### *(b) Basis of measurement*

The financial statements have been prepared on the historical cost basis except as otherwise stated in the accounting policies.

### *(c) Functional and presentation currency*

The financial statements are prepared and presented in Thai Baht, which is the Company’s functional currency. All financial information has been rounded in the notes to the financial statements to the nearest thousand unless otherwise stated.

### *(d) Use of judgements and estimates*

The preparation of financial statements in conformity with TFRS requires management to make judgements, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised prospectively.

Information about assumption and estimation uncertainties that have a significant risk of resulting in a material adjustments to the carrying amounts of assets and liabilities within the year ending 31 December 2019 is included in the following notes:

- Note 11 Recognition of deferred tax assets: availability of future taxable profit against which tax losses carried forward can be used;
- Note 16 Measurement of defined benefit obligations: key actuarial assumptions; and
- Note 17 Recognition and measurement of decommissioning costs: key assumptions about the likelihood and magnitude of an outflow of resources.

#### *Measurement of fair values*

A number of the Group's accounting policies and disclosures require the measurement of fair values, for both financial and non-financial assets and liabilities.

When measuring the fair value of an asset or a liability, the Group uses observable market data as far as possible. Fair values are categorised into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

If the inputs used to measure the fair value of an asset or liability might be categorised in different levels of the fair value hierarchy, then the fair value measurement is categorised in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement.

The Group recognises transfers between levels of the fair value hierarchy at the end of the reporting period during which the change has occurred.

Further information about the assumptions made in measuring fair values is included in note 32 to the financial instruments.

### **3 Significant accounting policies**

The accounting policies set out below have been applied consistently to all periods presented in these financial statements.

#### **(a) Basis of consolidation**

The consolidated financial statements relate to the Company and its subsidiaries (together referred to as the "Group")

##### *Business combinations*

The Group applies the acquisition method for all business combinations when control is transferred to the Group, as describe in subsidiaries section, other than those with entities under common control.

The acquisition date is the date on which control is transferred to the acquirer. Judgment is applied in determining the acquisition date and determining whether control is transferred from one party to another.

Goodwill is measured as the fair value of the consideration transferred including the recognised amount of any non-controlling interest in the acquiree, less the net recognised amount (generally fair value) of the identifiable assets acquired and liabilities assumed, all measured as of the acquisition date. Any gain on bargain purchase is recognised in profit or loss immediately.

Consideration transferred includes the fair values of the assets transferred, liabilities incurred by the Group to the previous owners of the acquiree, and equity interests issued by the Group. Consideration transferred also includes the fair value of any contingent consideration and share-based payment awards of the acquiree that are replaced mandatorily in the business combination. If a business combination results in the termination of pre-existing relationships between the Group and the acquiree, then the lower of the termination amount, as contained in the agreement, and the value of the off-market element is deducted from the consideration transferred and recognised in other expenses.

A contingent liability of the acquiree is assumed in a business combination only if such a liability represents a present obligation and arises from a past event, and its fair value can be measured reliably.

Transaction costs that the Group incurs in connection with a business combination, such as legal fees, and other professional and consulting fees are expensed as incurred.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted during the measurement period, or additional assets or liabilities are recognized, to reflect new information obtained about facts and circumstances that existed at the acquisition date that, if known, would have affected the amounts recognized at that date.

#### *Subsidiaries*

Subsidiaries are entities controlled by the Group. The Group controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The financial statements of subsidiaries are included in the consolidated financial statements from the date on which control commences until the date on which control ceases.

#### *Non-controlling interests*

At the acquisition date, the Group measures any non-controlling interest at its proportionate interest in the identifiable net assets of the acquiree.

Changes in the Group's interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions.

#### *Loss of control*

When the Group loses control over a subsidiary, it derecognises the assets and liabilities of the subsidiary, and any related non-controlling interests and other components of equity. Any resulting gain or loss is recognised in profit or loss. Any interest retained in the former subsidiary is measured at fair value when control is lost.

#### *Transactions eliminated on consolidation*

Intra-group balances and transactions, and any unrealised income or expenses arising from intra-group transactions, are eliminated. Unrealised gains arising from transactions with equity-accounted investees are eliminated against the investment to the extent of the Group's interest in the investee. Unrealised losses are eliminated in the same way as unrealised gains, but only to the extent that there is no evidence of impairment.

### **(b) Foreign currencies**

#### *Foreign currency transactions*

Transactions in foreign currencies are translated to the respective functional currencies of Group entities at exchange rates at the dates of the transactions.

Monetary assets and liabilities denominated in foreign currencies are translated to the functional currency at the exchange rate at the reporting date.

Non-monetary assets and liabilities measured at cost in foreign currencies are translated to the functional currency at the exchange rates at the dates of the transactions.

Foreign currency differences are generally recognised in profit or loss.

#### *Foreign operations*

The assets and liabilities of foreign operations, including goodwill and fair value adjustments arising on acquisition, are translated to Thai Baht at the exchange rates at the reporting date.

The revenues and expenses of foreign operations are translated to Thai Baht at rates approximating the exchange rates at the dates of the transactions.

Foreign exchange differences are recognised in other comprehensive income and accumulated in the translation reserve, except to extent that the translation difference is allocated to non-controlling interest.

When a foreign operation is disposed of in its entirety or partially such that control, significant influence or joint control is lost, the cumulative amount in the translation reserve related to that foreign operation is reclassified to profit or loss as part of the gain or loss on disposal. If the Group disposes of part of its interest in a subsidiary but retains control, then the relevant proportion of the cumulative amount is reattributed to non-controlling interests. When the Group disposes of only part of an associate or joint venture while retaining significant influence or joint control, the relevant proportion of the cumulative amount is reclassified to profit or loss.

**(c) Cash and cash equivalents**

Cash and cash equivalents in the statements of cash flows comprise cash balances, call deposits and highly liquid short-term investments. Bank overdrafts that are repayable on demand are a component of financing activities for the purpose of the statement of cash flows.

**(d) Trade and other accounts receivable**

Trade and other accounts receivable are stated at their invoice value less allowance for doubtful accounts.

The allowance for doubtful accounts is assessed primarily on analysis of payment histories and future expectations of customer payments. Bad debts are written off when incurred.

**(e) Inventories**

Inventories are measured at the lower of cost and net realisable value.

Cost is calculated as follows:

- 1) Finished goods: Diesel and natural gas are calculated using the first in first out principle.
- 2) Inventories other than those mentioned in 1) are calculated using the weighted average cost principle.

Cost comprises all costs of purchase, costs of conversion and other costs incurred in bringing the inventories to their present location and condition. In the case of manufactured inventories and work-in-progress, cost includes an appropriate share of production overheads based on normal operating capacity.

Net realisable value is the estimated selling price in the ordinary course of business less the estimated costs to complete and to make the sale.

**(f) Investments**

*Investments in subsidiaries*

Investments in subsidiaries in the separate financial statements of the Company are accounted for using the cost method.

*Investments in other debt and equity securities*

Debt securities and marketable equity securities held for trading are classified as current assets and are stated at fair value, with any resultant gain or loss recognised in profit or loss.

Debt securities that the Group has the positive intent and ability to hold to maturity are classified as held-to-maturity investments. Held-to-maturity investments are stated at amortised cost, less any impairment losses. The difference between the acquisition cost and redemption value of such debt securities is amortised using the effective interest rate method over the period to maturity.

Debt securities and marketable equity securities, other than those securities held for trading or intended to be held to maturity, are classified as available-for-sale investments. Available-for-sale investments are, subsequent to initial recogni-

tion, stated at fair value, and changes therein, other than impairment losses, are recognised directly in equity. Impairment are recognised in profit or loss. When these investments are derecognised, the cumulative gain or loss previously recognised directly in equity is recognised in profit or loss. Where these investments are interest-bearing, interest calculated using the effective interest method is recognised in profit or loss.

Equity securities which are not marketable are stated at cost less any impairment losses.

The fair value of financial instruments classified as held-for-trading and available-for-sale is determined as the quoted bid price at the reporting date.

#### *Disposal of investments*

On disposal of an investment, the difference between net disposal proceeds and the carrying amount together with the associated cumulative gain or loss that was reported in equity is recognised in profit or loss.

If the Group disposes of part of its holding of a particular investment, the deemed cost of the part sold using the weighted average method applied to the carrying value of the total holding of the investment.

### **(g) Property, plant and equipment**

#### *Recognition and measurement*

##### *Owned assets*

Property, plant and equipment are measured at cost less accumulated depreciation and impairment losses.

Cost includes expenditure that is directly attributable to the acquisition of the asset. The cost of self-constructed assets includes the cost of materials and direct labour, any other costs directly attributable to bringing the assets to a working condition for their intended use, the costs of dismantling and removing the items and restoring the site on which they are located, and capitalised borrowing costs. Purchased software that is integral to the functionality of the related equipment is capitalised as part of that equipment.

When parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment.

Any gains and losses on disposal of item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment, and are recognised in profit or loss.

#### *Subsequent costs*

The cost of replacing a part of an item of property, plant and equipment is recognised in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Group, and its cost can be measured reliably. The carrying amount of the replaced part is derecognised. The costs of the day-to-day servicing of property, plant and equipment are recognised in profit or loss as incurred.

#### *Depreciation*

Depreciation is calculated based on the depreciable amount, which is the cost of an asset, or other amount substituted for cost, less its residual value.

Depreciation is charged to profit or loss on a straight-line basis over the estimated useful lives of each component of an item of property, plant and equipment. The estimated useful lives are as follows:

Buildings and structures	20 and 30 years
Machinery	5 - 30 years
Tools and factory equipment	3 - 20 years
Furniture, fixtures and office equipment	3 - 10 years
Vehicles	10 years

No depreciation is provided on land, assets under construction and installation and major spare parts have not been issued.

Depreciation methods, useful lives and residual values are reviewed at each financial year-end and adjusted if appropriate.

**(h) Leasehold right**

Leasehold right that is acquired by the Group and has finite useful life is measured at cost less accumulated amortisation and impairment loss.

*Amortisation*

Amortisation is recognised in profit or loss on a straight-line basis over the period of the lease agreement. The period of the lease agreement is 10 years.

**(i) Impairment**

The carrying amounts of the Group's assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, the asset's recoverable amount is estimated.

An impairment loss is recognised if the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount. The impairment loss is recognised in profit or loss unless it reverses a previous revaluation credited to equity, in which case it is charged to equity.

When a decline in the fair value of an available-for-sale financial asset has been recognised directly in equity and there is objective evidence that the value of the assets is impaired, the cumulative loss that had been recognised directly in equity is recognised in profit or loss even though the financial asset has not been derecognised. The amount of the cumulative loss that is recognised in profit or loss is the difference between the acquisition cost and current fair value, less any impairment loss on that financial asset previously recognised in profit or loss.

*Calculation of recoverable amount*

The recoverable amount of held-to-maturity securities carried at amortised cost is calculated as the present value of the estimated future cash flows discounted at the original effective interest rate.

The recoverable amount of a non-financial asset is the greater of the asset's value in use and fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For an asset that does not generate cash inflows largely independent of those from other assets, the recoverable amount is determined for the cash-generating unit to which the asset belongs.

*Reversals of impairment*

An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

**(j) Interest-bearing liabilities**

Interest-bearing liabilities are recognised at cost.

**(k) Trade and other accounts payable**

Trade and other accounts payable are stated at cost.

**(l) Employee benefits**

*Defined contribution plans*

Obligations for contributions to defined contribution plans are expensed as the related service is provided.

#### *Defined benefit plans*

A defined benefit plan is a post-employment benefit plan. The Group's net obligation in respect of defined benefit legal severance pay plan is calculated by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value. The discount rate is the yield at the reporting date on government bonds that have maturity dates approximating the terms of the Group's obligations and that are denominated in the same currency in which the benefits are expected to be paid.

The calculation of defined benefit obligations is performed annually by a qualified actuary using the projected unit credit method.

Remeasurements of the net defined benefit liability, actuarial gain or loss are recognised immediately in other comprehensive income. The Company determines the interest expense on the net defined benefit liability for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the annual period, taking into account any changes in the net defined benefit liability during the period as a result of contributions and benefit payments. Net interest expense and other expenses related to defined benefit plans are recognised in profit or loss.

When the benefits of a plan are changed or when a plan is curtailed, the resulting change in benefit that relates to past service or the gain or loss on curtailment is recognised immediately in profit or loss. The Group recognises gains and losses on the settlement of a defined benefit plan when the settlement occurs.

#### *Short-term employee benefits*

Short-term employee benefits are expensed as the related service is provided. A liability is recognised for the amount expected to be paid if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

### **(m) Provisions**

A provision is recognised if, as a result of a past event, the Group has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognised as finance cost.

#### *Decommissioning costs*

The Group recorded provision for decommissioning cost whenever it is probable that there is an obligation as a result of the past event and reliable amount of obligation.

Decommissioning costs is based on discounting the expected future cash flows of provision for decommissioning costs. The estimates of decommissioning costs have been determined based on reviews and estimates by the Group's own engineers and managerial judgment.

### **(n) Revenue**

Revenue excludes value added taxes and is arrived at after deduction of trade discounts.

#### *Sale*

##### *Sale of goods*

Revenue is recognised in profit or loss when the significant risks and rewards of ownership have been transferred to the buyer. No revenue is recognised if there is continuing management involvement with the goods or there are significant uncertainties regarding recovery of the consideration due, associated costs or the probable return of goods.

##### *Sale of electricity*

Income from the sale of electricity is recognised in profit or loss in accordance with delivery units supplied and price as stipulated in the contract. Incomes from the sale of electricity to Electricity Generating Authority of Thailand ("EGAT") is entitled to receive ADDER for the period of 7 years from the commencement of commercial sales. Thereafter, subsequent to this initial period income from sale of electricity is recognised at normal rates.

### *Investments*

Revenue from investments comprises rental income, dividend and interest income from investments and bank deposits.

### *Rental income*

Rental income is recognised in profit or loss on a straight-line basis over the term of the lease. Lease incentives granted are recognised as an integral part of the total rental income. Contingent rentals are recognised as income in the accounting period in which they are earned.

### *Interest income*

Interest income is recognised in profit or loss as it accrues.

## **(o) Finance costs**

Interest expenses and similar costs are charged to profit or loss for the period in which they are incurred, except to the extent that they are capitalised as being directly attributable to the acquisition, construction or production of an asset which necessarily takes a substantial year of time to be prepared for its intended use or sale.

## **(p) Lease payments**

Payments made under operating leases are recognised in profit or loss on a straight line basis over the term of the lease. Lease incentives received are recognised in profit or loss as an integral part of the total lease expense, over the term of the lease.

Contingent lease payments are accounted for by revising the minimum lease payments over the remaining term of the lease when the lease adjustment is confirmed.

### *Determining whether an arrangement contains a lease*

At inception of an arrangement, the Group determines whether such an arrangement is or contains a lease. A specific asset is the subject of a lease if fulfilment of the arrangement is dependent on the use of that specified asset. An arrangement conveys the right to use the asset if the arrangement conveys to the Group the right to control the use of the underlying asset.

At inception or upon reassessment of the arrangement, the Group separates payments and other consideration required by such an arrangement into those for the lease and those for other elements on the basis of their relative fair values. If the Group concludes for a finance lease that it is impracticable to separate the payments reliably, an asset and a liability are recognised at an amount equal to the fair value of the underlying asset. Subsequently the liability is reduced as payments are made and an imputed finance charge on the liability is recognised using the Group's incremental borrowing rate.

## **(q) Income tax**

Income tax expense for the year comprises current and deferred tax. Current and deferred tax are recognised in profit or loss except to the extent that they relate to a business combination, or items recognised directly in equity or in other comprehensive income.

Current tax is the expected tax payable or receivable on the taxable income or loss for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognised in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognised for the following temporary differences: the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit or loss; and differences relating to investments in subsidiaries to the extent that it is probable that they will not reverse in the foreseeable future.

The measurement of deferred tax reflects the tax consequences that would follow the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

Deferred tax is measured at the tax rates that are expected to be applied to the temporary differences when they reverse, using tax rates enacted or substantively enacted at the reporting date.

In determining the amount of current and deferred tax, the Group takes into account the impact of uncertain tax positions and whether additional taxes and interest may be due. The Group believes that its accruals for tax liabilities are adequate for all open tax years based on its assessment of many factors, including interpretations of tax law and prior experience. This assessment relies on estimates and assumptions and may involve a series of judgements about future events. New information may become available that causes the Group to change its judgement regarding the adequacy of existing tax liabilities; such changes to tax liabilities will impact tax expense in the period that such a determination is made.

Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but they intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realised simultaneously.

A deferred tax asset is recognised to the extent that it is probable that future taxable profits will be available against which the temporary differences can be utilised. Future taxable profits are determined based on the reversal of relevant taxable temporary differences. If the amount of taxable temporary differences is insufficient to recognise a deferred tax asset in full, then future taxable profits, adjusted for reversals of existing temporary differences, are considered, based on the business plans for individual subsidiaries in the Group. Deferred tax assets are reviewed at each reporting date and reduced to the extent that it is no longer probable that the related tax benefit will be realised.

**(r) Earnings per share**

The Group presents basic earnings per share (EPS) data for its ordinary shares. Basic EPS is calculated by dividing the profit or loss attributable to ordinary shareholders of the Company by the weighted average number of ordinary shares outstanding during the year.

**(s) Segment reporting**

Segment results that are reported to the Group's CEO (the chief operating decision maker) include items directly attributable to a segment as well as those that can be allocated on a reasonable basis. Unallocated items comprise mainly corporate assets.

**4 Related parties**

For the purposes of these financial statements, parties are considered to be related to the Group if the Group has the ability, directly or indirectly, to control or joint control the party or exercise significant influence over the party in making financial and operating decisions, or vice versa, or where the Group and the party are subject to common control or common significant influence. Related parties may be individuals or other entities.

Relationships with key management and other related parties were as follows:

Name of entities	Country of incorporation/nationality	Nature of relationships
Key management personnel	Thailand	Persons having authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any director (whether executive or otherwise) of the Company.
TPI Polene Public Co., Ltd.	Thailand	Parent, 70.24% shareholding, some common directors
TPI Polene Power Investment Co., Ltd.	Cambodia	Subsidiary, 100.00% shareholding, some common directors
TPI Polene Power (Onnut) Co., Ltd.	Thailand	Subsidiary, 99.99% shareholding, some common directors
TPI Polene Bio Organics Co., Ltd.	Thailand	Subsidiary of the parent's company and some common directors
Zenith International Trading Co., Ltd.	Thailand	Subsidiary of the parent's company and some common directors
TPI Service Co., Ltd.	Thailand	Subsidiary of the parent's company and some common directors

Name of entities	Country of incorporation/nationality	Nature of relationships
TPI Refinery (1997) Co., Ltd.	Thailand	Subsidiary of the parent's company and some common directors
TPI Healthcare Co., Ltd. (Formerly TPI Intertrade Co., Ltd.)	Thailand	Subsidiary of the parent's company and some common directors
TPI Bio Pharmaceuticals Co., Ltd. (Formerly TPI Tank Terminal Co., Ltd.)	Thailand	Subsidiary of the parent's company and some common directors
TPI Commercial Co., Ltd.	Thailand	Subsidiary of the parent's company and some common directors
TPI Concrete Co., Ltd.	Thailand	Subsidiary of the parent's company and some common directors
TPI All Seasons Co., Ltd.	Thailand	Subsidiary of the parent's company and some common directors
Thai Propoxide Co., Ltd.	Thailand	Subsidiary of the parent's company and some common directors
Thai Nitrate Co., Ltd.	Thailand	Subsidiary of the parent's company and some common directors
Polene Plastic Co., Ltd.	Thailand	Indirect subsidiary of the parent's company and some common directors
United Grain Industry Co., Ltd.	Thailand	Associate of the parent's company and some common directors
BUI Life Insurance Public Co., Ltd.	Thailand	Associate of the parent's company and some common directors
Thai Plastic Film Co., Ltd.	Thailand	Indirect subsidiary of the parent's company and some common directors
Thai Plastic Products Co., Ltd.	Thailand	Indirect subsidiary of the parent's company and some common directors
Pornchai Enterprise Co., Ltd.	Thailand	Some common directors
Bangkok Union Insurance Public Co., Ltd.	Thailand	Some common directors
Hong Yiah Seng Real Estates and Investment Co., Ltd.	Thailand	Some common directors
Saraburi Ginning Mill Co., Ltd.	Thailand	Some common directors
Leophairatana Enterprise Co., Ltd.	Thailand	Some common directors
Rayong Forest Co., Ltd.	Thailand	Some common directors

The pricing policies for transactions are explained further below:

Transactions	Pricing policies
Sale of goods and electricity power	Market price / agreed price
Purchase of goods and services fee	Market price / agreed price
Sale of assets	Book value / agreed price
Acquisition of investments	Book value
Other income	Agreed price
Shared service expense	Agreed price
Rental	Agreed price
Insurance premium	Market price
Interest expense	MLR - 1.5%

Significant transactions for the years ended 31 December with related parties were as follows:

	(in thousand Baht)		
	Consolidated financial statements	Separate financial statements	
<i>Year ended 31 December</i>	2018	2018	2017
<b>Parent company</b>			
Sale of goods and electricity power	917,669	917,669	655,508
Purchase of goods and services fee	2,024,286	2,024,286	736,056
Other income	3,714	3,714	4,315
Shared service expense - cost of sale	93,779	93,779	85,253
Shared service expense - administrative expense	38,221	38,221	34,747
Interest expense	-	-	60,201
Dividend paid	2,006,000	2,006,000	3,127,000
Administrative expenses	759	759	809
<b>Other related parties</b>			
Sale of goods	4,947	4,947	8,026
Purchase of goods	4,699	4,699	2,656
Other income	223	223	17,520
Sale of assets	-	-	36,397
Dividend paid	466	466	-
Insurance premium	47,535	47,535	31,283
Administrative expenses	8,453	8,453	8,453
<b>Key management personnel</b>			
Key management personnel compensation			
Short-term employee benefits	38,400	38,400	36,196
Post-employment benefits	448	448	650
<b>Total key management personnel compensation</b>	<b>38,848</b>	<b>38,848</b>	<b>36,846</b>

Balances as at 31 December with related parties were as follows:

	(in thousand Baht)		
	Consolidated financial statements	Separate financial statements	
<i>Trade accounts receivable - related parties</i>	2018	2018	2017
<b>Parent company</b>	242,344	242,344	86,822
<b>Other related parties</b>			
TPI Polene Bio Organics Co., Ltd.	5	5	5,545
TPI Concrete Co., Ltd.	71	71	563
TPI All Seasons Co., Ltd.	35	35	42
Thai Nitrate Co., Ltd.	1	1	3
United Grain Industry Co., Ltd.	1	1	-
Bangkok Union Insurance Public Co., Ltd.	13	13	20
BUI Life Insurance Public Co., Ltd.	8	8	12
<b>Total</b>	<b>242,478</b>	<b>242,478</b>	<b>93,007</b>

(in thousand Baht)

**Receivables and advance to related parties**

	Consolidated financial statements	Separate financial statements	
	2018	2018	2017
<b>Parent company</b>	11,859	11,859	7,969
<b>Subsidiary</b>			
TPI Polene Power (Onnut) Co., Ltd.	-	12	-
<b>Other related parties</b>			
TPI Polene Bio Organics Co., Ltd.	505	505	14
United Grain Industry Co., Ltd.	1,943	1,943	2,414
BUI Life Insurance Public Co., Ltd.	827	827	578
Bangkok Union Insurance Public Co., Ltd.	20,488	20,488	16,642
Pornchai Enterprise Co., Ltd.	223	223	-
<b>Total</b>	<b>35,845</b>	<b>35,857</b>	<b>27,617</b>

(in thousand Baht)

**Trade accounts payable - related parties**

	Consolidated financial statements	Separate financial statements	
	2018	2018	2017
<b>Parent company</b>	201,124	201,124	74,027
<b>Other related parties</b>			
TPI Polene Bio Organics Co., Ltd.	1,070	1,070	716
TPI Concrete Co., Ltd.	-	-	5
<b>Total</b>	<b>202,194</b>	<b>202,194</b>	<b>74,748</b>

(in thousand Baht)

**Payables and advance from related parties**

	Consolidated financial statements	Separate financial statements	
	2018	2018	2017
<b>Parent company</b>	77,356	77,324	32,019
<b>Other related parties</b>			
TPI Concrete Co., Ltd.	-	-	75
TPI Polene Bio Organics Co., Ltd.	2,325	2,325	268
Pornchai Enterprise Co., Ltd.	98	98	4
Bangkok Union Insurance Public Co., Ltd.	45	45	-
<b>Total</b>	<b>79,824</b>	<b>79,792</b>	<b>32,366</b>

**Loans from related parties**

As at 31 December 2018 and 2017, the Group has no loan from related party.

Movements during the years ended 31 December of loans from related parties were as follows:

(in thousand Baht)

	Consolidated financial statements	Separate financial statements	
	2018	2018	2017
<b>Short-term loan</b>			
<b>Parent company</b>			
At 1 January	-	-	4,528,846
Increase	-	-	2,887,081
Decrease	-	-	(7,415,927)
<b>At 31 December</b>	<b>-</b>	<b>-</b>	<b>-</b>

**Significant agreements with related parties**

- (a) The Company entered into several land and factory building agreements with related parties for 3 years to 30 years were as follows:

(in thousand Baht)

	Consolidated financial statements	Separate financial statements	
	2018	2018	2017
<b>Non-cancellable operating lease commitments</b>			
Within one year	16,434	16,434	14,371
After one year but within five years	87,131	87,131	63,575
After five years	482,013	482,013	325,589
<b>Total</b>	<b>585,578</b>	<b>585,578</b>	<b>403,535</b>

Several land rental agreements specified that the Company have to decommission the assets from rental area at the end of contract, causing the Company to set up the decommissioning costs as at 31 December 2018 in amount of Baht 168 million (2017: Baht 118 million) (see note 17).

- (b) The Company entered into an electricity supply contract with parent company. The parent company will provide the waste heat to the Company that will be used in the manufacturing process for electricity. The Company shall supply the electricity solely to the parent company based on certain percentage as specified in the agreement. The agreement shall remain in full force and effect so long as, unless it is terminated by mutual agreement in writing of both parties.
- (c) On 1 April 2016, the Company entered into sale & purchase and service agreement with the parent company. The parent company will provide services related to infrastructure, human resources, purchase and sale of goods and resources and other services whereby the Company agree to pay fee as specified in agreement. The initial period of the contract is for 3 years which commenced on 1 April 2016 and shall continue for consecutive period of three years, unless earlier terminated by either party.

**5 Cash and cash equivalents**

(in thousand Baht)

	Consolidated financial statements	Separate financial statements	
	2018	2018	2017
Cash on hand	2,965	2,965	2,250
Cash at banks - current accounts	6,658	3,172	2,414
Cash at banks - savings accounts	373,752	186,198	446,566
Cash at banks - savings account (Private Funds)	66,788	66,788	4,930
Highly liquid short-term investment	1	1	1
<b>Total</b>	<b>450,164</b>	<b>259,124</b>	<b>456,161</b>

## 6 Other investments

(in thousand Baht)

	Consolidated financial statements	Separate financial statements	
	2018	2018	2017
<b>Current investments</b>			
Fixed deposits with financial institutions	800,000	800,000	850,691
Equity securities held for trading (Short term general bond)	-	-	100,113
Debt securities held for trading	330,638	330,638	-
Debt securities held for trading (Private funds)	2,530,465	2,530,465	2,623,452
Debt securities held to maturity	299,549	299,549	200,307
<b>Total</b>	<b>3,960,652</b>	<b>3,960,652</b>	<b>3,774,563</b>
<b>Other receivable - Interest receivable (Private funds)</b>	<b>5,825</b>	<b>5,825</b>	<b>5,936</b>
<b>Other long-term investments</b>			
Debt securities held to maturity	5,337	5,337	5,410

During 2018, the Company set up private funds which are managed by 2 independent assets management companies. Those private funds have invested in fixed deposits with the financial institutions and debt securities which had high liquidity and rating as investment grade. As at 31 December 2018, value of private funds totalling Baht 2,603 million (2017: Baht 2,634 million).

## 7 Trade accounts receivable

(in thousand Baht)

		Consolidated financial statements	Separate financial statements	
	Note	2018	2018	2017
Related parties	4	242,478	242,478	93,007
Other parties		1,288,226	1,288,226	643,985
<b>Total</b>		<b>1,530,704</b>	<b>1,530,704</b>	<b>736,992</b>

Aging analyses for trade accounts receivable were as follows:

(in thousand Baht)

	Consolidated financial statements	Separate financial statements	
	2018	2018	2017
<b>Related parties</b>			
Within credit terms	168,059	168,059	86,997
Overdue:			
Less than 3 months	74,419	74,419	6,010
	<b>242,478</b>	<b>242,478</b>	<b>93,007</b>
<b>Other parties</b>			
Within credit terms	1,287,490	1,287,490	643,402
Overdue:			
Less than 3 months	736	736	583
	<b>1,288,226</b>	<b>1,288,226</b>	<b>643,985</b>
<b>Net</b>	<b>1,530,704</b>	<b>1,530,704</b>	<b>736,992</b>

The Group requires various customers to provide cash, and bank guarantees as collateral.

The normal credit term granted by the Group ranges from 15 days to 30 days.

## 8 Inventories

(in thousand Baht)

	Consolidated financial statements	Separate financial statements	
	2018	2018	2017
Finished goods	26,471	26,471	21,538
Work in process	56,917	56,917	75,810
Raw materials, package and chemical	89,137	89,137	100,040
Spare parts and supplies	439,527	439,527	280,714
Goods in transit	180	180	359
	612,232	612,232	478,461
Less allowance for declining in value	(24,500)	(24,500)	(29,133)
<b>Net</b>	<b>587,732</b>	<b>587,732</b>	<b>449,328</b>
Inventories recognised as an expense in 'cost of sales of goods':			
- Cost	3,656,063	3,656,063	2,217,169
- Write-down to net realisable value	-	-	10,366
- Reversal of write-down	(4,633)	(4,633)	-
<b>Net total</b>	<b>3,651,430</b>	<b>3,651,430</b>	<b>2,227,535</b>

## 9 Investment in subsidiaries

(in thousand Baht)

	Separate financial statements	
	2018	2017
At 1 January	-	-
Increase	191,457	-
	191,457	-
Less allowance for impairment of investments	-	-
<b>At 31 December</b>	<b>191,457</b>	<b>-</b>

### *TPI Polene Power Investment Company Limited*

On 17 April 2017, the Board of Directors' meeting pass the resolution to approve the Company to establish TPI Polene Power Investment Company Limited ("TPI PPI"), the registered company in Cambodia. The authorised share capital of USD 125,000 (1,000 shares at USD 125 par value) was registered on 23 June 2017. The Company holds 490 shares or 49% of the registered capital.

On 27 July 2017, the Board of Directors' meeting pass the resolution to approve the Company to purchase 510 shares of TPI PPI from the partner in Cambodia, representing 51% of registered capital of TPI PPI. After the purchase, the Company will hold 1,000 shares of 100% of the registered capital of TPI PPI.

As at 31 December 2017, TPI PPI has not called for paid-up share capital nor started its commercial operation yet. Therefore, the Company did not prepare the consolidated financial statements due to the financial statements of TPI PPI was immaterial to the consolidated financial statements of the Company.

Later, on 23 January 2018, TPI PPI Called for 100% paid-up share capital and the Company fully paid share capital amounting to USD 125,000 or equivalent to Baht 3.96 million.

### *TPI Polene Power (Onnut) Company Limited*

On 27 November 2018, the Board of Directors' meeting pass the resolution to approve the Company to establish TPI Polene Power (Onnut) Company Limited. The authorised share capital of Baht 750,000,000 with 7,500,000 ordinary shares was registered on 12 December 2018. The Company holds 7,499,995 shares or 99.99% of the registered capital.



## 10 Property, plant and equipment

Consolidated and Separate financial statements										(in thousand Baht)
	Land	Plants	Machinery	Tools and factory equipment	Furniture, fixtures and office equipment	Vehicles	Major spare parts	Assets under construction and installation	Decommissioning assets	Total
<b>Cost</b>										
At 1 January 2017	-	176,365	9,533,993	148,368	18,869	-	11,923	7,285,442	102,650	17,277,610
Additions	-	-	8,427	31,211	3,954	117	-	6,453,242	9,742	6,506,693
Transfers	-	15,997	1,227,789	-	60	-	6,368	(1,250,214)	-	-
Disposals	-	-	(128,609)	(40)	-	-	-	-	-	(128,649)
<b>At 31 December 2017 and 1 January 2018</b>	<b>-</b>	<b>192,362</b>	<b>10,641,600</b>	<b>179,539</b>	<b>22,883</b>	<b>117</b>	<b>18,291</b>	<b>12,488,470</b>	<b>112,392</b>	<b>23,655,654</b>
Additions	1,481,340	-	4,088	22,595	5,064	146	1,875	2,059,302	45,713	3,602,123
Transfers	-	733,973	4,821,229	-	1,591	-	-	(5,556,793)	-	-
Disposals	-	-	-	-	(45)	-	-	-	-	(45)
<b>At 31 December 2018</b>	<b>1,481,340</b>	<b>926,335</b>	<b>15,466,917</b>	<b>202,134</b>	<b>29,493</b>	<b>263</b>	<b>20,166</b>	<b>8,990,979</b>	<b>158,105</b>	<b>27,275,732</b>
<b>Depreciation</b>										
At 1 January 2017	-	14,600	1,722,584	65,162	13,489	-	-	-	2,570	1,818,405
Depreciation charge for the year	-	6,703	337,741	13,515	2,536	5	-	-	3,669	364,169
Disposals	-	-	(30,409)	(40)	-	-	-	-	-	(30,449)
<b>At 31 December 2017 and 1 January 2018</b>	<b>-</b>	<b>21,303</b>	<b>2,029,916</b>	<b>78,637</b>	<b>16,025</b>	<b>5</b>	<b>-</b>	<b>-</b>	<b>6,239</b>	<b>2,152,125</b>
Depreciation charge for the year	-	21,422	436,154	15,448	2,975	19	-	-	4,803	480,821
Disposals	-	-	-	-	(34)	-	-	-	-	(34)
<b>At 31 December 2018</b>	<b>-</b>	<b>42,725</b>	<b>2,466,070</b>	<b>94,085</b>	<b>18,966</b>	<b>24</b>	<b>-</b>	<b>-</b>	<b>11,042</b>	<b>2,632,912</b>
<b>Net book value</b>										
At 1 January 2017	-	161,765	7,811,409	83,206	5,380	-	11,923	7,285,442	100,080	15,459,205
<b>At 31 December 2017 and 1 January 2018</b>	<b>-</b>	<b>171,059</b>	<b>8,611,684</b>	<b>100,902</b>	<b>6,858</b>	<b>112</b>	<b>18,291</b>	<b>12,488,470</b>	<b>106,153</b>	<b>21,503,529</b>
<b>At 31 December 2018</b>	<b>1,481,340</b>	<b>883,610</b>	<b>13,000,847</b>	<b>108,049</b>	<b>10,527</b>	<b>239</b>	<b>20,166</b>	<b>8,990,979</b>	<b>147,063</b>	<b>24,642,820</b>

The original cost of the Company's fully depreciated plant and equipment that was still in use as at 31 December 2018 amounted to Baht 828 million (2017: Baht 815 million).

There was no capitalised borrowing costs relating to the acquisition of the construction of new factory (2017: Baht 55 million with capitalization of MLR-1.75% to MLR-1.5%).

## 11 Deferred tax

Deferred tax assets and liabilities as at 31 December were as follows:

Consolidated and Separate statements					(in thousand Baht)
	Assets		Liabilities		
	2018	2017	2018	2017	
Total	91,699	115,065	-	(309)	
Set off of tax	-	(309)	-	309	
Net deferred tax assets	91,699	114,756	-	-	

Movements in total deferred tax assets and liabilities during the year were as follows:

(in thousand Baht)

	<b>Consolidated and Separate statements</b>			
	<b>(Charged) / Credited to:</b>			<b>At 31 December 2018</b>
	<b>At 1 January 2018</b>	<b>Profit or loss (Note 28)</b>	<b>Other comprehensive income</b>	
<b>Deferred tax assets</b>				
Property, plant and equipment	85,576	(10,238)	-	75,338
Inventories	5,827	(927)	-	4,900
Provisions for employee benefits	7,882	1,234	2,177	11,293
Loss carry forward	15,780	(15,780)	-	-
Revaluation on fair value of trading investment	-	168	-	168
<b>Total</b>	<b>115,065</b>	<b>(25,543)</b>	<b>2,177</b>	<b>91,699</b>
<b>Deferred tax liabilities</b>				
Revaluation on fair value of trading investment	(309)	309	-	-
<b>Total</b>	<b>(309)</b>	<b>309</b>	<b>-</b>	<b>-</b>
<b>Net</b>	<b>114,756</b>	<b>(25,234)</b>	<b>2,177</b>	<b>91,699</b>

(in thousand Baht)

	<b>Consolidated and Separate statements</b>			
	<b>(Charged) / Credited to:</b>			<b>At 31 December 2017</b>
	<b>At 1 January 2017</b>	<b>Profit or loss (Note 28)</b>	<b>Other comprehensive income</b>	
<b>Deferred tax assets</b>				
Property, plant and equipment	95,881	(10,305)	-	85,576
Inventories	3,753	2,074	-	5,827
Provisions for employee benefits	6,441	847	594	7,882
Loss carry forward	83,668	(67,888)	-	15,780
<b>Total</b>	<b>189,743</b>	<b>(75,272)</b>	<b>594</b>	<b>115,065</b>
<b>Deferred tax liabilities</b>				
Revaluation on fair value of trading investment	-	(309)	-	(309)
<b>Total</b>	<b>-</b>	<b>(309)</b>	<b>-</b>	<b>(309)</b>
<b>Net</b>	<b>189,743</b>	<b>(75,581)</b>	<b>594</b>	<b>114,756</b>

## 12 Interest-bearing liabilities

(in thousand Baht)

	Consolidated financial statements	Separate financial statements	
	2018	2018	2017
<b>Current</b>			
Current portion of debentures	-	-	-
<b>Total current interest-bearing liabilities</b>	-	-	-
<b>Non-Current</b>			
Debentures	4,000,000	4,000,000	-
<b>Total non-current interest-bearing liabilities</b>	4,000,000	4,000,000	-
<b>Total</b>	4,000,000	4,000,000	-

The periods to maturity of interest-bearing liabilities as at 31 December were as follows:

(in thousand Baht)

	Consolidated financial statements	Separate financial statements	
	2018	2018	2017
Within one year	-	-	-
After one year but within five years	4,000,000	4,000,000	-
After five years	-	-	-
<b>Total</b>	4,000,000	4,000,000	-

As at 31 December 2018 and 2017, the Company has no unutilised credit facilities.

## Debentures

As at 31 December 2018, the Company had the unsecured, unsubordinated debentures in registered form with debentures holders' representative, payable quarterly totalling Baht 4,000 million (2017: nil) as follows:

Issued Date	Consolidated and Separate financial statements							Term
	The period to maturity within one year		The period to maturity over one year		Total		Interest Rate (% p.a.)	
	2018	2017	2018	2017	2018	2017		
	(in thousand Baht)							
28 November 2018	-	-	4,000,000	-	4,000,000	-	3.90	3 years
Total	-	-	4,000,000	-	4,000,000	-		

At the Extraordinary Shareholders' meeting no.1/2561 held on 4 September 2018, the shareholders approved to issue and offer for sale debentures in the amount up to Baht 25,000 million. The maturity of which will not be over 10 years from the issuing date of each issuance. Interest rate offered will be subject to the prevailing market conditions at the time of issuance and offering.

## 13 Trade accounts payable

(in thousand Baht)

	Note	Consolidated financial statements	Separate financial statements	
		2018	2018	2017
Related parties	4	202,194	202,194	74,748
Other parties		174,901	174,901	98,500
<b>Total</b>		377,095	377,095	173,248

#### 14 Other payables

(in thousand Baht)

	Consolidated financial statements	Separate financial statements	
	2018	2018	2017
Retention payable	853,019	853,019	1,480,805
Other payables - Machine	628,529	628,529	1,357,630
Accrued expenses	62,260	62,175	34,351
Deposit from sales and guarantee	6,463	6,463	3,696
Others	61,140	61,140	26,429
<b>Total</b>	<b>1,611,411</b>	<b>1,611,326</b>	<b>2,902,911</b>

#### 15 Other current liabilities

(in thousand Baht)

	Consolidated financial statements	Separate financial statements	
	2018	2018	2017
Payable to Revenue Department	29,917	29,917	535
Suspend output tax	83,732	83,732	41,621
Others	5,059	5,059	13,736
<b>Total</b>	<b>118,708</b>	<b>118,708</b>	<b>55,892</b>

#### 16 Provisions for employee benefits

(in thousand Baht)

	Consolidated financial statements	Separate financial statements	
	2018	2018	2017
<b>Statement of financial position</b>			
<b>Provisions for:</b>			
Post-employment benefits	<b>87,698</b>	<b>87,698</b>	<b>70,645</b>
<b>Year ended 31 December</b>			
<b>Statement of comprehensive income:</b>			
<b>Recognised in profit or loss:</b>			
Post-employment benefits	<b>6,449</b>	<b>6,449</b>	<b>5,638</b>
<b>Recognised in other comprehensive income:</b>			
Actuarial losses recognised in the year	<b>10,885</b>	<b>10,885</b>	<b>2,968</b>

#### **Defined benefit plan**

The Group operate defined benefit plans based on the requirement of Thai Labour Protection Act B.E. 2541 (1998) to provide retirement benefits to employees based on pensionable remuneration and length of service.

The defined benefit plans expose the Company to actuarial risks, such as longevity risk, currency risk, interest rate risk and market (investment) risk.

Movement in the present value of the defined benefit obligations.

(in thousand Baht)

	Consolidated financial statements	Separate financial statements	
	2018	2018	2017
At 1 January	70,645	70,645	58,148
<b>Include in profit or loss:</b>			
Current service cost and interest on obligation	6,449	6,449	5,638
<b>Included in other comprehensive income</b>			
Actuarial loss	10,885	10,885	2,968
<b>Other</b>			
Benefit paid	(281)	(281)	(1,396)
Transferred employee benefit obligations	-	-	5,287
<b>Defined benefit obligations at 31 December</b>	<b>87,698</b>	<b>87,698</b>	<b>70,645</b>

Actuarial gains and losses recognised in other comprehensive income were mainly arose from the change of employee turnover, discount rate and future salary growth.

#### Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date (expressed as weighted averages).

(%)

	Consolidated financial statements	Separate financial statements	
	2018	2018	2017
Discount rate	3.25	3.25	3.12
Future salary growth	6.73	6.73	6.73

Assumptions regarding future mortality have been based on published statistics and mortality tables.

At 31 December 2018, the weighted-average duration of the defined benefit obligation was 27 years (2017: 28 years).

#### Sensitivity analysis

Reasonably possible changes at the reporting date to one of the relevant actuarial assumptions, holding other assumptions constant, would have affected the defined benefit obligation by the amounts shown below.

(in thousand Baht)

	Consolidated financial statements		Separate financial statements	
	Increase	Decrease	Increase	Decrease
<b>At 31 December 2018</b>				
Discount rate (1% movement)	(11,072)	13,415	(11,072)	13,415
Future salary growth (1% movement)	11,793	(10,041)	11,793	(10,041)
<b>At 31 December 2017</b>				
Discount rate (1% movement)	-	-	(9,022)	10,910
Future salary growth (1% movement)	-	-	9,646	(8,234)

Although the analysis does not take account of the full distribution of cash flows expected under the plan, it does provide an approximation of the sensitivity of the assumptions shown.

On 13 December 2018, the National Legislative Assembly passed a bill amending the Labor Protection Act to include a requirement that an employee who is terminated after having been employed by the same employer for an uninterrupted period of twenty years or more, receives severance payment of 400 days of wages at the most recent rate. The Group will amend its retirement plan in the period in which the amendment will have become law and is announced in the Royal Gazette. As a result of this change, the provision for retirement benefits as at that future period end as well as past service cost recognized during that period in the consolidated and the separate financial statements is estimated to increase by an amount of approximately Baht 37 million and Baht 37 million, respectively.

## 17 Decommissioning costs

(in thousand Baht)

	Consolidated and Separate financial statements
1 January 2017	104,861
Provisions made	12,951
<b>At 31 December 2017 and 1 January 2018</b>	<b>117,812</b>
Provisions made	50,146
<b>At 31 December 2018</b>	<b>167,958</b>
<b>At 31 December 2017 and 1 January 2018</b>	
Non-current	<b>117,812</b>
<b>At 31 December 2018</b>	
Non-current	<b>167,958</b>

## 18 Share capital

Share capital	Par value per share (in Baht)	2018		2017	
		Number	Amount	Number	Amount
		(thousand shares / thousand Baht)			
<i>Authorised</i>					
<b>At 31 December</b>					
- ordinary shares	1	<u>8,400,000</u>	<u>8,400,000</u>	<u>8,400,000</u>	<u>8,400,000</u>
<i>Issued and paid</i>					
<b>At 1 January</b>					
- ordinary shares	1	8,400,000	8,400,000	5,900,000	5,900,000
Issue of new shares	1	<u>-</u>	<u>-</u>	<u>2,500,000</u>	<u>2,500,000</u>
<b>At 31 December</b>					
- ordinary shares	1	<u>8,400,000</u>	<u>8,400,000</u>	<u>8,400,000</u>	<u>8,400,000</u>

### Initial Public Offering

In March 2017, the Company offered its common shares to the initial public offering by issuing 2,500 million common shares. The new shares were sold at a price of Baht 7 per share (par value at Baht 1 and premium on common share at Baht 6), totaling Baht 17,500 million which includes the premium on common share of Baht 15,000 million. Directly attributable expenses of the initial public offering totalling approximately Baht 419 million were deducted from the premium on share capital received from the offering. The shares of the Company begin trading in the Stock Exchange of Thailand on 5 April 2017.

## 19 Reserves

Reserves comprise:

### *Appropriations of profit*

#### *Legal reserve*

Section 116 of the Public Companies Act B.E. 2535 Section 116 requires that a public company shall allocate not less than 5% of its annual net profit, less any accumulated losses brought forward, to a reserve account ("legal reserve"), until this account reaches an amount not less than 10% of the registered authorised capital. The legal reserve is not available for dividend distribution.

#### *Other components of equity*

#### **Currency translation differences**

The currency translation differences account within equity comprises all foreign currency differences arising from the translation of the financial statements of foreign operations.

#### **Movements in reserves**

Movements in reserves are shown in the statements of changes in equity.

## 20 Segment information

The Group comprises the following main business segments:

- Energy & Utilities
- Petrol and gas stations
- Agriculture and other

Information regarding the results of each reportable segment is included below. Performance is measured based on segment profit before tax, as included in the internal management reports that are reviewed by the Group's CODM. Segment profit before tax is used to measure performance as management believes that such information is the most relevant in evaluating the results of certain segments relative to other entities that operate within these industries.

### **(a) Reportable segment results**

(in thousand Baht)

	Revenue from external customers		Inter-segment revenue		Total segment revenue		Reportable segment profit (loss) before income tax	
	2018	2017	2018	2017	2018	2017	2018	2017
Energy & Utilities	6,912,247	4,164,727	-	-	6,912,247	4,164,727	3,866,080	2,603,324
Petrol and gas stations	707,560	700,087	-	-	707,560	700,087	(6,452)	46,724
Agriculture and other	-	-	-	-	-	-	-	17,064
<b>Total</b>	<b>7,619,807</b>	<b>4,864,814</b>	<b>-</b>	<b>-</b>	<b>7,619,807</b>	<b>4,864,814</b>	<b>3,859,628</b>	<b>2,667,112</b>
Other losses							-	-
							<b>3,859,628</b>	<b>2,667,112</b>
Elimination of inter-segment (profit) loss							-	-
<b>Profit before income tax expense for the year</b>							<b>3,859,628</b>	<b>2,667,112</b>

**(b) Reportable segment financial position**

(in thousand Baht)

	<b>Segment assets</b>	
	2017	2016
Energy & Utilities	27,023,205	22,954,338
Petrol and gas stations	45,067	52,770
Agriculture and other	-	5,544
	<b>27,068,272</b>	<b>23,012,652</b>
Unallocated assets	4,472,952	4,554,256
<b>Total assets</b>	<b>31,541,224</b>	<b>27,566,908</b>

**Geographical segments**

The Group was incorporated both domestic and international. There are no material revenues derived from, or assets located in, foreign countries.

**Major customer**

Revenues from 2 customers of the Group's represents approximately Baht 6,952 million (2017: Baht 4,206 million) of the Group's total revenues.

**21 Investment income**

(in thousand Baht)

	<b>Consolidated financial statements</b>	<b>Separate financial statements</b>	
	2018	2018	2017
Interest income	43,600	43,556	64,964
Others	5,573	5,573	7,333
<b>Total</b>	<b>49,173</b>	<b>49,129</b>	<b>72,297</b>

**22 Other income**

(in thousand Baht)

	<b>Consolidated financial statements</b>	<b>Separate financial statements</b>	
	2018	2018	2017
Other income-claim insurance	115,722	115,722	20,641
Revenue from machine rental	67,798	67,798	-
Others	16,231	16,231	28,780
<b>Total</b>	<b>199,751</b>	<b>199,751</b>	<b>49,421</b>

**23 Distribution costs**

(in thousand Baht)

	<b>Consolidated financial statements</b>	<b>Separate financial statements</b>	
	2018	2018	2017
Personnel expenses	27,222	27,222	26,667
Utilities expenses	10,722	10,722	11,534
Rental	9,915	9,915	9,915
Depreciation and amortisation	4,061	4,061	4,876
Others	14,641	14,641	10,828
<b>Total</b>	<b>66,561</b>	<b>66,561</b>	<b>63,820</b>

## 24 Administrative expenses

(in thousand Baht)

	Consolidated financial statements	Separate financial statements	
	2018	2018	2017
Personnel expenses	59,855	59,855	54,163
Shared service expenses	46,799	46,799	36,021
Professional fees	51,965	51,295	31,256
Insurance expenses	8,649	8,649	13,032
Registration fees	13,009	12,999	10,598
Depreciation and amortisation	9,496	9,496	19,229
Others	128,986	128,984	24,471
<b>Total</b>	<b>318,759</b>	<b>318,077</b>	<b>188,770</b>

## 25 Employee benefit expenses

(in thousand Baht)

	Consolidated financial statements	Separate financial statements	
	2018	2018	2017
<b>Management</b>			
Wages and salaries	22,383	22,383	20,336
Defined benefit plans	449	449	650
Others	16,016	16,016	15,860
	<u>38,848</u>	<u>38,848</u>	<u>36,846</u>
<b>Employee</b>			
Wages and salaries	411,912	411,912	346,977
Defined benefit plans	6,000	6,000	4,988
Others	35,759	35,759	30,890
	<u>453,671</u>	<u>453,671</u>	<u>382,855</u>
<b>Total</b>	<b>492,519</b>	<b>492,519</b>	<b>419,701</b>

### Defined contribution plans

The defined contribution plans comprise provident funds established by the Company for its employees. Membership to the funds is on a voluntary basis. Contributions are made monthly by the employees at rates ranging 3% of their basic salaries and by the Company at rates ranging 3% of the employees' basic salaries. The provident funds are registered with the Ministry of Finance as juristic entities and are managed by a licensed Fund Manager.

## 26 Expenses by nature

The statements of income include an analysis of expenses by function. Expenses by nature disclosed in accordance with the requirements of various TFRS were as follows:

(in thousand Baht)

	Consolidated financial statements	Separate financial statements	
	2018	2018	2017
<b>Included in cost of sales of goods:</b>			
Changes in inventories of finished goods and work in progress	13,960	13,960	4,415
Raw materials and consumables used	2,520,629	2,520,629	1,434,041
Employee benefit expenses	405,442	405,442	338,871
Depreciation and amortisation	467,534	467,534	340,334
<b>Included in distribution costs:</b>			
Employee benefit expenses	27,222	27,222	26,667
Depreciation and amortisation	4,061	4,061	4,876
<b>Included in administrative expenses:</b>			
Employee benefit expenses	59,855	59,855	54,163
Depreciation and amortisation	9,496	9,496	19,229

## 27 Finance costs

(in thousand Baht)

		Consolidated financial statements	Separate financial statements	
	Note	2018	2018	2017
<b>Interest expense:</b>				
Related parties	4	-	-	60,201
Bank loan and overdrafts		5	5	32,943
Debentures		14,531	14,531	-
<b>Total interest expense</b>		<b>14,536</b>	<b>14,536</b>	<b>93,144</b>
Other		4,433	4,433	3,208
		<b>18,969</b>	<b>18,969</b>	<b>96,352</b>
Less amounts included in the cost of qualifying assets:				
- Construction contracts work in progress	10	-	-	(55,436)
<b>Net</b>		<b>18,969</b>	<b>18,969</b>	<b>40,916</b>

## 28 Income tax expense

### Income tax recognised in profit or loss

(in thousand Baht)

		Consolidated financial statements	Separate financial statements	
	Note	2018	2018	2017
<b>Current tax expense</b>				
Current year		135,435	135,435	-
<b>Deferred tax expense</b>				
Movements in temporary differences	11	25,234	25,234	75,581
<b>Total income tax expense (income)</b>		<b>160,669</b>	<b>160,669</b>	<b>75,581</b>

### Reconciliation of effective tax rate

(in thousand Baht)

		Consolidated financial statements 2018	
Profit before income tax expense	Rate (%)	3,859,628	
Income tax using the Thai corporation tax rate	20	771,926	
Double allowance and deduction		(12,326)	
Profit was derived from promoted activities		(603,182)	
Expenses not deductible for tax purposes		4,251	
<b>Total</b>	<b>4.2</b>	<b>160,669</b>	

### Separate financial statements

	2018	2017
Rate (%)	(in thousand Baht)	(in thousand Baht)
Profit before income tax expense	3,860,266	2,667,112
Income tax using the Thai corporation tax rate	20 772,053	20 533,422
Double allowance and deduction	(12,453)	(20,878)
Profit was derived from promoted activities	(603,182)	(440,644)
Expenses not deductible for tax purposes	4,251	3,681
<b>Total</b>	<b>4.2 160,669</b>	<b>2.8 75,581</b>

### *Income tax reduction*

Revenue Code Amendment Act No. 42 B.E. 2559 dated 3 March 2016 grants a reduction of the corporate income tax rate to 20% of net taxable profit for accounting periods which begin on or after 1 January 2016.

## **29 Promotional privileges**

By virtue of the provisions of the Industrial Investment Promotion Act of B.E. 2520, the Company has been granted privileges by the Board of Investment relating to natural gas stations, power plants and fuel production from garbage and waste. The privileges granted include:

- (a) exemption from payment of import duty on machinery and equipment approved by the Board;
- (b) exemption from payment of corporate income tax for certain operations for a period of 8 years from the dates on which the income is first derived from such operations;
- (c) a 50% reduction in the normal income tax rate on the net profit derived from certain operations for a period of 5 years, commencing from the expiry date in (b) above;
- (d) a deduction of twice the actual transportation, electrical and water supply expenses for a period of 10 years from the respective revenues and a 25% reduction of the capital expenditure for the installation or the construction of the facilities in addition to the normal depreciation; and
- (e) losses occur during the period could be carried forward 5 years commencing from the expiry date of the privileges to deducted from the profit that occur after the period of exemption of corporate income tax.

As a promoted company, the Company must comply with certain terms and conditions prescribed in the promotional certificates.

Summary of revenue from promoted and non-promoted businesses:

	Consolidated and Separate financial statements					
	2018			2017		
	Promoted business	Non Promoted business	Total	Promoted business	Non Promoted business	Total
	<i>(in thousand Baht)</i>					
Domestic sales	5,287,456	2,332,351	7,619,807	3,556,971	1,307,843	4,864,814
<b>Total</b>	<b>5,287,456</b>	<b>2,332,351</b>	<b>7,619,807</b>	<b>3,556,971</b>	<b>1,307,843</b>	<b>4,864,814</b>

## **30 Basic earnings per share**

The calculations of basic earnings per share for the years ended 31 December 2018 and 2017 were based on the profit for the years attributable to ordinary shareholders of the Company and the number of ordinary shares outstanding during the years as follows:

	Consolidated financial statements		Separate financial statements	
	2018	2018	2017	
Profit attributable to ordinary shareholders of the Company (Basic)	3,698,959	3,699,597	2,591,531	
Number of ordinary shares outstanding at 1 January	8,400,000	8,400,000	5,900,000	
Effect of share issued	-	-	1,890,411	
Weighted average number of ordinary shares outstanding (basic)	8,400,000	8,400,000	7,790,411	
Earnings per share (basic) (in Baht)	0.440	0.440	0.333	

### 31 Appropriation of retained earnings

At the Board of Director's meeting of the Company held on 23 November 2018, the Board of Director's meeting passed a resolution to declare the interim dividend payment from retained earnings as of 30 September 2018, in amount of Baht 0.1 per share for the Baht 8,400 million common shares, amounting to Baht 840 million. The dividend was paid to the shareholders on 21 December 2018.

At the Board of Director's meeting of the Company held on 4 September 2018, the Board of Director's meeting passed a resolution to declare the interim dividend payment from retained earnings as of 30 June 2018, in amount of Baht 0.1 per share for the Baht 8,400 million common shares, amounting to Baht 840 million. The dividend was paid to the shareholders on 4 October 2018.

At the Board of Director's meeting of the Company held on 31 May 2018, the Board of Director's meeting passed a resolution to declare the interim dividend payment from retained earnings as of 31 March 2018, in amount of Baht 0.1 per share for the Baht 8,400 million common shares, amounting to Baht 840 million. The dividend was paid to the shareholders on 28 June 2018.

At the annual general meeting of the shareholders of the Company held on 19 April 2018, the shareholders approved the appropriation of 2017 annual dividend at Baht 0.30 per share, amounting to Baht 2,520 million. After a deduction of the interim dividends of Baht 0.26 per share which were paid to the Company's shareholders in 2017, the remaining dividends of Baht 0.04 per share, totalling Baht 336 million. The dividend was paid to the shareholders on 10 May 2018.

At the Board of Director's meeting of the Company held on 30 November 2017, the Board of Director's meeting passed a resolution to declare the interim dividend payment from retained earnings as of 30 September 2017, in amount of Baht 0.06 per share for the Baht 8,400 million common shares, amounting to Baht 504 million. The dividend was paid to the shareholders on 27 December 2017.

At the Board of Director's meeting of the Company held on 31 August 2017, the Board of Director's meeting passed a resolution to declare the interim dividend payment from retained earnings as of 30 June 2017, in amount of Baht 0.1 per share for the Baht 8,400 million common shares, amounting to Baht 840 million. The dividend was paid to the shareholders on 22 September 2017.

At the Board of Director's meeting of the Company held on 8 May 2017, the Board of Director's meeting passed a resolution to declare the interim dividend payment from retained earnings as of 31 March 2017, in amount of Baht 0.1 per share for the Baht 8,400 million common shares, amounting to Baht 840 million. The dividend was paid to the shareholders on 2 June 2017.

At the annual general meeting of the shareholders of the Company held on 1 March 2017, the shareholders approved the appropriation of dividend of Baht 0.27 per share for 5,900 million common shares, amounting to Baht 1,593 million. The dividend was paid to shareholders on 15 March 2017.

As at 31 December 2018, the Company allocated profit from operation to legal reserve in amount of Baht 185 million, the total legal reserve are Baht 533 million. (2017: the Company allocated profit from operation to legal reserve in amount of Baht 129 million, the total legal reserve are Baht 348 million)

### 32 Financial instruments

#### *Financial risk management policies*

The Group is exposed to normal business risks from changes in market interest rates and currency exchange rates and from non-performance of contractual obligations by counterparties. The Group does not hold or issue derivative financial instruments for speculative or trading purposes.

Risk management is integral to the whole business of the Group. The Group has a system of controls in place to create an acceptable balance between the cost of risks occurring and the cost of managing the risks. The management continually monitors the Group's risk management process to ensure that an appropriate balance between risk and control is achieved.

### **Capital management**

The Board of Directors' policy is to maintain a strong capital base so as to maintain investor, creditor and market confidence and to sustain future development of the business. The Board monitors the return on capital, which the Group defines as result from operating activities divided by total shareholders' equity, excluding non-controlling interests and also monitors the level of dividends to ordinary shareholders.

### **Interest rate risk**

Interest rate risk is the risk that future movements in market interest rates will affect the results of the Group's operations and its cash flows because loan interest rates are mainly floating. The Group is primarily exposed to interest rate risk from its borrowings.

The effective interest rates of interest-bearing financial liabilities as at 31 December and the periods in which those liabilities mature or re-price were as follows:

	<b>Consolidated and Separate financial statements</b>				
	<b>Effective interest rate</b> (% per annum)	<b>Within 1 year</b>	<b>After 1 year but within 5 years</b>	<b>After 5 years</b>	<b>Total</b>
		(in thousand Baht)			
<b>2018</b>					
<b>Current</b>					
Current portion of debentures	-	-	-	-	-
<b>Non-current</b>					
Debentures	3.90	-	4,000,000	-	4,000,000
<b>Total</b>		<u>-</u>	<u>4,000,000</u>	<u>-</u>	<u>4,000,000</u>
<b>2017</b>					
<b>Current</b>					
Current portion of debentures	-	-	-	-	-
<b>Non-current</b>					
Debentures	-	-	-	-	-
<b>Total</b>		<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

### **Foreign currency risk**

The Group is exposed to foreign currency risk relating to purchases of spare parts, supplies, machines and equipments which are denominated in foreign currencies.

At 31 December, the Group were exposed to foreign currency risk in respect of financial assets and liabilities denominated in the following currencies:

	<b>Consolidated and Separate financial statements</b>		
	<b>Consolidated financial statements</b>	<b>Separate financial statements</b>	
	2018	2018	2017
<b>United States Dollars</b>			
Cash and cash equivalents	3,549	63	83
Other payables	(1,419,642)	(1,419,642)	(2,774,021)
	<u>(1,416,093)</u>	<u>(1,419,579)</u>	<u>(2,773,938)</u>
<b>EURO</b>			
Cash and cash equivalents	3	3	-
Other payables	(10,684)	(10,684)	(26,408)
	<u>(10,681)</u>	<u>(10,681)</u>	<u>(26,408)</u>
<b>Others</b>			
Cash and cash equivalents	100	100	10
Other payables	(633)	(633)	-
	<u>533</u>	<u>533</u>	<u>10</u>
<b>Gross balance sheet exposure</b>	<u>(1,427,307)</u>	<u>(1,430,793)</u>	<u>(2,800,336)</u>

### **Credit risk**

Credit risk is the potential financial loss resulting from the failure of a customer or counterparty to settle its financial and contractual obligations to the Group as and when they fall due. The Group has concentrations of credit risk since most of its revenues are contracted under long-term agreements with a small number of parties generally government authorities, private corporations and related parties. Therefore, the risk perceived is low.

### **Liquidity risk**

The Group monitors its liquidity risk and maintains a level of cash and cash equivalents deemed adequate by management to finance the Group's operations and to mitigate the effects of fluctuations in cash flows.

### **Fair values of financial assets and liabilities**

The fair value of cash and cash equivalents, trade and other short-term receivables, and trade and other short-term payable are taken to approximate the carrying value due to the relatively short-term maturity of these financial instruments.

The fair value of long-term loans carrying a floating rate, which is considered to be market rate, are taken to approximate their fair values.

Other financial assets not stated above had the fair and carrying value as at 31 December are as follows:

		Consolidated and Separate financial statements			
	Carrying value	Fair value			
		Level 1	Level 2	Level 3	Total
31 December 2018					
(in thousand Baht)					
Financial assets/Financial liabilities measured at fair value					
Debt securities held for trading	330,638	-	330,638	-	330,638
Debt securities held for trading (Private funds)	2,530,465	-	2,530,465	-	2,530,465
Financial assets/Financial liabilities not measured at fair value					
Debenture	4,000,000	-	4,016,748	-	4,016,748
31 December 2017					
Financial assets/Financial liabilities measured at fair value					
Equity securities held for trading (Short term general bond)	100,113	-	100,113	-	100,113
Debt securities held for trading (Private funds)	2,623,452	-	2,623,452	-	2,623,452
Financial assets/Financial liabilities not measured at fair value					
Debenture	-	-	-	-	-

### **Measurement of fair values**

#### **Valuation techniques**

The following tables show the valuation techniques used in measuring Level 2 fair values.

Type	Valuation technique
Equity securities held for trading (Short term general bond)	The net asset value as of the reporting date.
Debt securities held for trading	Thai Bond Market Association Government Bond Yield Curve as of the reporting date.
Corporate debt securities held for trading	<i>Market comparison/discounted cash flow:</i> The fair value is estimated considering (i) current or recent quoted prices for identical securities in markets that are not active and (ii) a net present value calculated using discount rates derived from quoted prices of securities with similar maturity and credit rating that are traded in active markets, adjusted by an illiquidity factor.
Debenture	A valuation technique incorporating observable market data which is adjusted with counterparty credit risk (excluding own credit risk) and other risks to reflect true economic value.

### 33 Commitments with non-related parties

(in thousand Baht)

	Consolidated financial statements 2018	Separate financial statements 2018	2017
<b>Capital commitments</b>			
<i>Contracted but not provided for:</i>			
Agreements for construction, machine and equipment	<u>2,014,709</u>	<u>2,014,709</u>	<u>447,427</u>
<b>Non-cancellable operating lease commitments</b>			
Within one year	4,164	4,164	3,640
After one year but within five years	<u>4,365</u>	<u>4,365</u>	<u>5,690</u>
<b>Total</b>	<u>8,529</u>	<u>8,529</u>	<u>9,330</u>

#### *Operating leases*

The Company entered into several lease agreements covering the lands, and the vehicles for the period of 1 - 5 years. In consideration thereof, the Company is committed to pay rental fees at various annual rental rates as specified in the agreements.

(in thousand Baht)

	Consolidated financial statements 2018	Separate financial statements 2018	2017
<b>Other commitments</b>			
Bank guarantees	<u>37,225</u>	<u>37,225</u>	<u>37,252</u>
<b>Total</b>	<u>37,225</u>	<u>37,225</u>	<u>37,252</u>

#### **Power Purchase Agreement**

The Company entered into Power Purchase Agreements, which uses garbage as fuel and waste heat from the cement production process as a fuel supplement, in term of "Non-firm" with Electricity Generating Authority of Thailand ("EGAT") for the period of 5 years since start trading month. The contracts can be extended for a period of 5 years subject to the provision of written notice to the counterparty not less than 30 days before the contracts expired. Regarding to the agreements, the Company obtained adder form base tariff of electricity for period of 7 years since start trading date. The Company has to comply with conditions as specified in the Power Purchase Agreements. At present, the Company has agreements with Electricity Generating Authority of Thailand as follows:

Power Purchase Agreement	Contracted Capacity	Contract Date	Generating Date
1 <sup>st</sup> agreement	18 Megawatt	7 November 2014	16 January 2015
2 <sup>nd</sup> agreement	55 Megawatt	13 November 2013	6 August 2015
3 <sup>rd</sup> agreement	90 Megawatt	17 August 2017	5 April 2018

### 34 Events after the reporting period

A subsidiary has participated the auction for solid waste disposal project of Bangkok Metropolitan and the Company is required to provide bank guarantee as collateral in amount of Baht 657 million (5% of the project value).

### 35 Thai Financial Reporting Standards (TFRS) not yet adopted

A number of new and revised TFRS which relevant to the Group operations are expected to have significant impact on the consolidated and separate financial statements on the date of initial application. Those TFRS become effective for annual financial reporting periods beginning on or after 1 January of the following years.

TFRS	Topic	Effective
TFRS 7*	Financial Instruments: Disclosures	2020
TFRS 9*	Financial Instruments	2020
TFRS 15	Revenue from Contracts with Customers	2019
TAS 32*	Financial Instruments: Presentation	2020
TFRIC 16*	Hedges of a Net Investment in a Foreign Operation	2020
TFRIC 19*	Extinguishing Financial Liabilities with Equity Instruments	2020

\* TFRS - Financial instruments standards

#### (a) TFRS 15 Revenue from Contracts with Customers

TFRS 15 establishes a comprehensive framework for determining whether, how much and when revenue is recognised. Revenue should be recognised when (or as) an entity transfers control over goods or services to a customer, measured at the amount to which the entity expects to be entitled. It replaces existing revenue recognition standards as follows:

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

Management has considered the potential impact of adopting and initially applying TFRS 15 on the consolidated and separate financial statements and found that there is no material impact on the financial statements in the period of initial application.

#### (b) TFRS - Financial instruments standards

These TFRS establish requirements related to definition, recognition, measurement, impairment and derecognition of financial assets and financial liabilities, including accounting for derivatives and hedge accounting.

Management is presently considering the potential impact of adopting and initially applying TFRS - Financial instruments standards on the consolidated and separate financial statements.

#### (c) TFRS 16 Leases

TFRS 16 introduces a single lessee accounting model for lessees. A lessee recognizes a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. There are recognition exemptions for short-term leases and leases of low-value items. Lessor accounting remains similar to the current standard, i.e. lessors continue to classify leases as finance or operating leases.

Management is presently considering the potential impact of adopting and initially applying TFRS 16 on the consolidated and separate financial statements.



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