

# TPI/POLENER POWER

Public Company Limited

รายงานประจำปี ๒๕๖๓

# ANNUAL REPORT 2019



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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 to serve the need for clean power energy to replace energy from fossil fuels in the future as part of our commitment to the preservation of the environment. The Company also helps eliminate the PM 2.5 problem and the overall global warming problem caused by greenhouse gases, and the waste problem in communities, as a response to the governmental policy promoting the sustainable development of power production in the country.

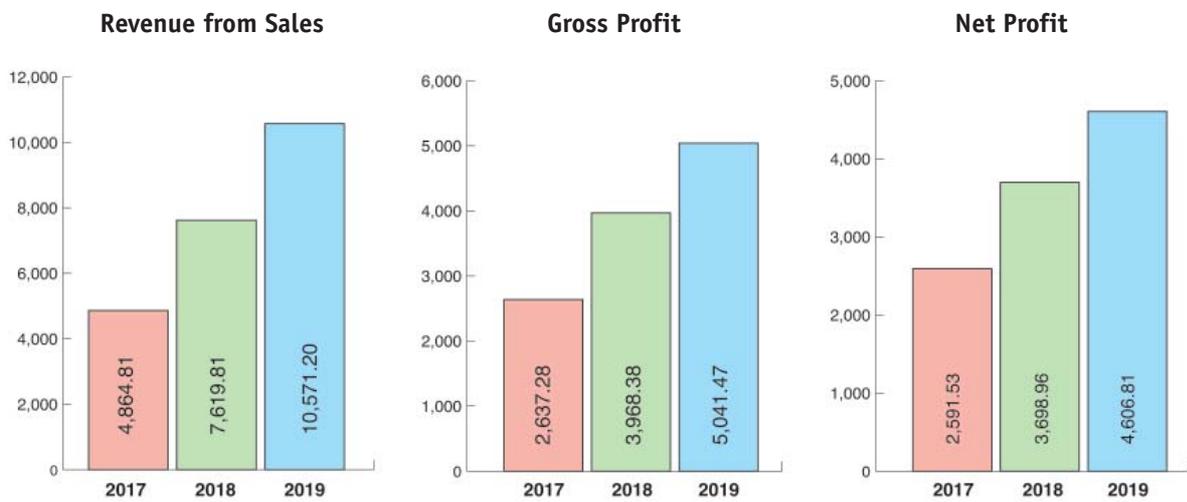
***“CLEAN AND GREEN ENERGY  
For  
OUR HEALTHY COUNTRY”***



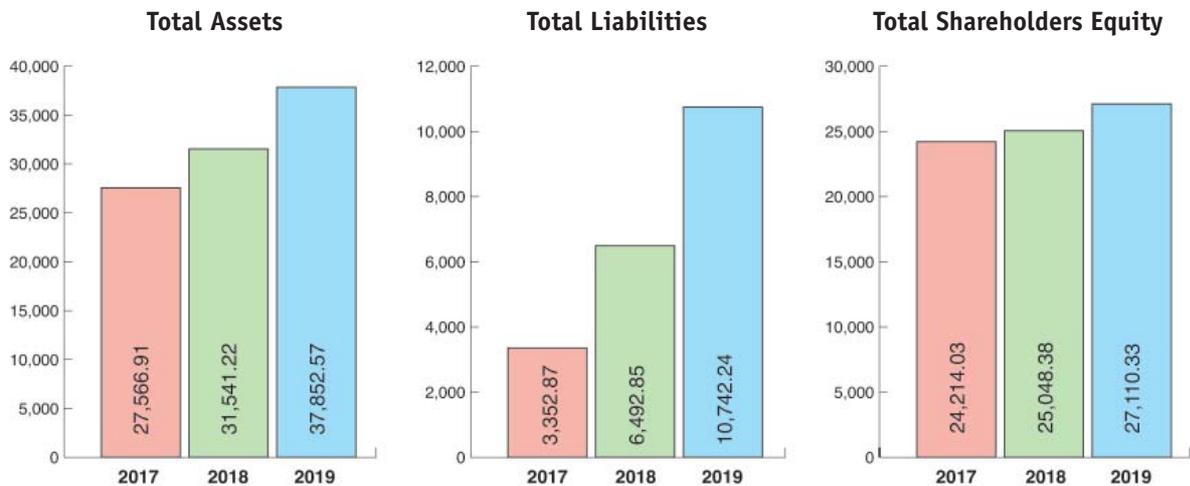
## Financial Highlights

	Unit	2017	2018	2019
<b>Statements of Income</b>				
Revenue from Sales	(million BHT)	4,864.81	7,619.81	10,571.20
Total Revenues	(million BHT)	5,188.15	7,915.35	10,905.83
Cost of Sales	(million BHT)	2,227.54	3,651.43	5,529.73
Gross Profit	(million BHT)	2,637.28	3,968.38	5,041.47
EBITDA	(million BHT)	2,798.55	4,263.90	5,504.81
Net Profit	(million BHT)	2,591.53	3,698.96	4,606.81
<b>Statement of Financial Position</b>				
Total Assets	(million BHT)	27,566.91	31,541.22	37,852.57
Interest Bearing Debt	(million BHT)	-	4,000.00	8,000.00
Total Liabilities	(million BHT)	3,352.87	6,492.85	10,742.24
Paid-up Capital	(million BHT)	8,400.00	8,400.00	8,400.00
Total Equity	(million BHT)	24,214.03	25,048.38	27,110.33
<b>Financial Ratios</b>				
Gross Profit Margin	(%)	54.21	52.08	47.69
Net Profit Margin	(%)	49.95	46.73	42.24
EBITDA Margin	(%)	57.53	55.96	52.07
Return on Assets	(%)	11.33	12.52	13.28
Return on Equity	(%)	15.93	15.02	17.66
Debt to Equity	(Times)	0.14	0.26	0.40
Interest Bearing Debt to Equity	(Times)	-	0.16	0.30
Interest Bearing Debt to EBITDA	(Times)	(1.51)	(0.10)	0.85

## Total Revenues and Net Profit



## Financial Status



## Corporate Profile

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<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 Paid-up Capital</b>	: Baht 8,400,000,000
	: Consisting of 8,400,000,000 ordinary shares, at the par value of Baht 1 each.
<b>Accounting Period</b>	: January 1 - December 31

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### 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.tpipolene.com.co.th">http://www.tpipolene.com.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

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### 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

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### Auditor

<b>Statutory Auditor</b>	: KPMG Phoomchai Audit Limited
<b>Address</b>	: 1 Empire Tower, Floor 48-50, South Sathorn, Kwang Yannawa, Sathorn, Bangkok 10120
Tel. Number	: +66 (0) 2677-2000
Fax Number	: +66 (0) 2677-2222

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**Debentures, Debentures Registrar and Debenture Holders' Representatives  
Offering for Sale of Debentures on December 31, 2019**

Debenture Series	Name	Type	Amount (MB)	Interest Rate (p.a.)	Issued Date	Maturity Date	Term
TIIPP21NA	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
TIIPP22NA	Debentures of TPI Polene Power Public Company Limited No.1/2019 Series1 Due A.D.2022	Unsecured and Unsubordinated Debentures with a debenture holders' representative	4,000	3.50 %	9 Aug 2019	9 Nov 2022	3 Years 3 Months

**Debenture Registrar and Debenture Holders' Representative**

Name : Bank of Ayudhya Public Company Limited  
: TIIPP21NA Registrar  
: TIIPP21NA and TIIPP22NA Debenture Holder's Representative  
Address : 1222 Rama III Road, Bang Phongphang, Yan Nawa, Bangkok 10120 Thailand  
Telephone : +66(0) 2296-2000, +66(0) 2296-5696  
Fax : +66(0) 2683-1302

Name : CIMB Thai Bank Public Company Limited  
: TIIPP22NA Registrar  
Address : 44 Langsuan Road, Lumpini, Pathum Wan, Bangkok 10330 Thailand  
Telephone : +66(0) 2638-8000, +66(0) 2626-7000  
Fax : +66(0) 2657-3333

## Message from the Board of Directors

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### **Dear Shareholders,**

In 2019, the Company's business grew strongly as a result of an increase in production capacity and units of power sales, and maintained its position as the leader in the refuse-derived fuel (RDF)-fired power plants in the country. The Company has invested in the installation of additional steam boilers to increase the utilization rate of power generation and has conducted a feasibility study for potential investment in upcoming RDF power plants, renewable power plants, and power plants for security for economic and social development. The government will shortly set terms of reference (TOR) for the private sectors to participate in the bidding process for these projects, according to the country's Power Development Plan (PDP) and government policies.

The Company always conducts business in accordance with good corporate governance and realizes its responsibility for good corporate governance and for the benefit of the shareholders and society as a whole.

With full cooperation from all levels of our diligent and loyal staff, the Company's operating performance has been grown continuously along with our best waste disposal technology in the world, and our largest waste-to-energy power plants in the world in one single location.

### **Continuous Performance Growth in the year 2019**

In 2019, the Company and its subsidiaries registered a profit for the year of Baht 4,607 million compared with Baht 3,699 million in 2018, an increase of Baht 908 million or 24.54%. This increase is from the installation of additional steam boilers to increase the utilization rate of power generation and experiences in the power plant business which we expect will grow even further in the future. These developments will enable the Company to efficiently operate RDF plants and RDF-fired power plants with stability and sustainability, and to increase our capacity to generate higher profits for the Company and shareholders in the future.

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

In 2019, the Company commercially operated 8 power plants with a total installed capacity of 440 MW, comprising two waste-heat recovery power plants with a total installed capacity of 40 MW, four RDF-fired power plants with a total installed capacity of 180 MW, one mixed fuel-fired power plant of 70 MW, and one coal-fired power plant of 150 MW installed capacity.

### **Business planning to increase business capability**

The Company always has business development plans for its energy business to increase the utilization rate of power generation at a high level, including a regular schedule for repair and maintenance of all key power equipment in order to reduce costs and increase revenues. An example is the installation of additional boilers which will start commercial operations in the year 2020.

The Company is always aware that technological development and innovation increases the efficiency of RDF production and reduces production costs for RDF power plants, which are crucial and necessary for business operations. Thus, the Company continuously emphasizes the value of research and development and applies new technology in power generation.

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

The Company emphasizes business growth through the Company's expertise to preserve environmental conditions by using municipal waste, under the concept of "zero waste out", and waste heat from cement production to produce electricity, instead of emitting such waste heat into the environment, to solve the global warming problem. This Company policy is consistent with government policy as the government has designated this as an important agenda to reduce carbon emissions and greenhouse effects and to solve overloaded waste problems by using waste as a fuel to produce electricity.

Furthermore, the Company has a policy to seek new business opportunities by participating in the bidding for waste disposal projects for power generating plants under government policy to expand existing power generating capacity, and to invest in a project for economic and social development at the designated area under the government's urgent policy. In particular, the Company will participate in projects according to the Cabinet's resolution regarding the Triangle (stable-prosperous-sustainable) Model City 4 Project, in the Chana District, Songkhla Province, which will be a role model for industrial cities of the future according to the Indonesia - Malaysia - Thailand Growth Triangle (IMT-GT) under the Sixth Economic Corridor. This project aims to strengthen economic growth and to improve the welfare of the people.

In addition, the Company is aware of the clear role of corporate social responsibility for the company while balancing excellent business operations achievements, good corporate governance, and care for society both in the industrial and agricultural sectors, in the community, and for the 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 in the organization, enhancing the economic strength of the country, and supporting the 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 2019 the Company received awards as follows:



- TPI Polene Power Plc. obtained a “Thailand Energy Award 2019”, the “excellence” performance award in the category of Renewable Energy Awards on Off-Grid Renewable Energy Project from the Department of Alternative Energy Development and Efficiency under the Ministry of Energy on October 18, 2019.
- Waste heat recovery power plants (TG1&2) were certified Alternative Energy Certificate programs (Gold Label) from the Thailand Environment Institute (“TEI”) based on waste heat recovery power generation systems for cement production process on October 1, 2019.
- TPI Polene Power Plc. won a “CSR-DIW Continuous Award” for three consecutive years, in 2017, 2018 and 2019, in the category of “Standards for Corporate Social Responsibility” from the Department of Industrial Works, Ministry of Industry on August 17, 2017, August 17, 2018 and September 23, 2019 respectively.
- On September 19, 2016, TPI Polene Power participated and received the first award plaque for the project, “Thailand Voluntary Emission Reduction Program: T-VER” from Thailand Greenhouse Gas Management Organization (“TGO”) due to the processing of RDF from municipal solid waste that helps reduce the greenhouse gas emissions in the equivalent amount of 34,754 tons of carbon dioxide per annum. On September 19, 2019, TPI Polene Power received the same award again with the amount of greenhouse gas that can be reduced to the equivalent amount of 68,573 tons of carbon dioxide per annum.
- Power plants of TPI Polene Power were certified International Organization for Standardization under ISO9001:2015, ISO 14001: 2015 and ISO50001:2011 as follows:

International Organization for Standardization	Quality management systems ISO9001:2015	Environmental Management System ISO14001:2015	Energy Management Systems ISO 50001:2011
Waste heat recovery and RDF-fired power plant (TG 4 and TG 6)	Certified on September 12, 2019	Certified on September 12, 2019	-
Mixed fuel-fired Power Plant (TG 7)	Certified on September 12, 2019	Certified on September 12, 2019	-
Coal-fired power plant (TG 8)	Certified on September 12, 2019	Certified on September 12, 2019	-
RDF-fired power plant (TG 5)	Certified on September 12, 2019	Certified on September 12, 2019	Certified on August 15, 2018



- RDF-fired power plant (TG 5) was awarded 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 on August 27, 2018.
- On September 27, 2017, TPI Polene Power Plc. was awarded the ASEAN Energy Award 2017 for the Renewable Energy Project in the “On-grid” - Grid category from the 60MW Power Plant from refused-derived fuel (RDF). The ASEAN Energy Business Forum 2017 was held at Conrad Hotel in Manila, the Philippines.
- TPI Polene Power Plc. received the certificate for reduced carbon dioxide gas from the processing of Refused-derived Fuel (RDF) plant from municipal solid waste under the project, “Thailand Voluntary Emission Reduction Program: T-VER” on September 19, 2017.
- On August 21, 2017, TPI Polene Power Plc. received a “Thailand Energy Award 2017”, the outstanding performance reward in the category of On-Grid Renewable Project for the Power generation of 60MW from Refused Derived Fuel (RDF) Project from the Department of Alternative Energy Development and Efficiency under the Ministry of Energy.

# Audit Committee's Report for 2019

**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 Leopairote 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 2019, the Audit Committee convened 5 meetings as follows:

1. To review and 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.

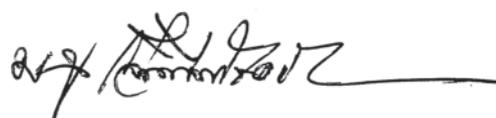
The Company has a clear policy to comply with all regulations and related governing laws, and codes of conduct, to protect against the use of insider information. As announced in the Company's Rules and Regulations, any misuse of internal information shall be subject to disciplinary action, including 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 2020.

The Audit Committee has taken into consideration the independence, performance, experience and 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 Thantijatthanond, CPA registration no. 8829, KPMG Phoomchai Audit Limited, to be the statutory auditors of the Company for 2020.

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 Leopairote**

Chairman of the Audit Committee

# TPI Polene Power and Corporate Social Responsibilities (CSR)

TPI Polene Power Public Company Limited and its subsidiaries remain committed and are aware of conducting business with social responsibility, paying attention to the community, and being environmentally friendly. It also focuses on development to achieve sustainable performance in various aspects as follows:



## 1. Environmental Activities

- TPI Polene Power Public Company Limited was proud to receive a “Thailand Energy Award 2019”, for alternative energy project type that is the off grid power system from the Refuse-Derived Fuel (RDF) project no.2 from the Department of Alternative Energy Development and Efficiency (DEDE), Ministry of Energy. The Company received the award for the third consecutive year, highlighting the potential of efficient power plant business with economic value and giving importance to the environment and society for truly sustainable growth. The Thailand Energy Award is praises outstanding performers that represent a good example to various organizations, and contribute to support energy conservation and the development of alternative energy.
- Received the CSR-DIW Continuous Award 2019, which is the standard award for Corporate Social Responsibility-Department of Industrial Works, for three consecutive years since 2017, from the Department of Industrial Work, Ministry of Industry.
- Received a certificate of honor for voluntary greenhouse gas emissions reduction in accordance with Thailand Voluntary Emission Reduction Program (T-VER) of the Thailand Greenhouse Gas Management Organization (Public Organization) from the RDF Production from Municipal Solid Waste Project. The amount of greenhouse gas that can be reduced was the equivalent of 68,573 tons of carbon dioxide per year.
- The waste heat power plants (TG1 & TG2) were certified for use or production of renewable energy for the year 2019 (Gold Label) from the Thai Environment Institute on October 1, 2019, from the use of waste heat to produce electricity in the cement production process (Waste Heat Recovery Power Plant: WHRP).

In addition, the Company has supported projects to protect the environment as follows:

- TPI Unite the Tree Planting Project

TPI Polene Power executives and employees of the TPI Group jointly planted trees at TPI Cement Plant, Kaeng Khoi District, Saraburi Province, to increase green areas. In addition to helping improve the ecology around the factory, the trees help in the absorption of carbon dioxide that accumulates in the atmosphere every day. The Company is also building relationships, unity and a good attitude of environmental protection in the community and is helping stimulate everyone’s attention and focus efforts on growing trees to reduce the global warming problem.

- Donated 96 tons of TPI cement products to Tham Pa Archa Thong Dharma Practice Center for the building of the Luang Dam, Mae Chan District, Chiang Rai Province. The dam will be a large water source to be used in the event of forest fires and haze. In case of emergency, the staff can use tools to bring water to solve problems of smog and forest fires for the health of the people in Chiang Rai and to create a sustainable, natural balance in the area in the future in accordance with government policy.



- Supported the “Waste Exchanges with Electricity” Community Development (Knowledge Enhancement) Project at Ban Khao Mai Kwian School, Moo 12, Muak Lek District, Saraburi Province. This project aims to teach 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 2019”, for 22 schools in the target group of Kang Khoy Sub-district, Muak Lek Sub-district, and Chalerm Phrakiat Sub-district, Saraburi Province 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 the further development of the nation.
- Donated 250,000 baht for the orthotics project to purchase artificial arms and legs for disabled children who still lack equipment, on the occasion of the National Children’s Day Year 2020 of the Thai Disability Foundation.
- Donated 100,000 baht to join the first decade “Mtoday” event for orphans and the underprivileged established by the Suratthani Youth Education and Development Foundation.
- Supported scholarships in the amount of 100,000 baht for outstanding but underprivileged school children in Nong Chok and nearby areas without any discrimination against race or religion at the event of “Mawlid of Thailand” 1440 A.H. or 2019 A.D.
- Donated funds for the purchase of 22 cubic metres of TPI concrete and 15 tons of TPI cement for the construction of 2 school roads, for Wat Mongkhon School, Chalermprakiet District, Saraburi Province and for Ban Chamkian School, Khun Han District, Sisaket Province, to reduce obstacles for students and staff to commute to the school and for a better quality of life.
- In addition, the Company also supported the volunteer camp of the Faculty of Commerce and Accountancy, Thammasat University, by purchasing TPI building material products for the rural development camp, IBMP CAMP, for the construction of a 6x12 metre building for Ban Bai Na School, Omkoi District, Chiang Mai. The school can use it as a classroom and a cafeteria in order to create further learning opportunities for students.
- Supported open houses to welcome teachers and students of all levels from various institutions to attend a study tour on municipal waste management processes and provide useful knowledge on various aspects of the company. Visitors were from the Renewable Energy Program from Naresuan University, Master of Public Health Management Program from Mahidol University, Faculty of Engineering from Vong Chaowalitkul University and Kasetsart University, Faculty of Applied Sciences from King Mongkut’s University of Technology North Bangkok And Chulalongkorn University, etc.



### 3. Social Activities

- Winter blanket donation project for year 2019

Executives along with employees of TPI Polene Power Public Company Limited / TPI Polene Public Company Limited and subsidiaries, in collaboration with the Environment for Life Foundation, donated a total of 21,000 blankets to victims of the cold weather in the North and North-east who were isolated and did not have enough clothing as follows:

In the northern region, the Company donated a total of 11,000 blankets as follows: to students, teachers, and people who are affiliated with the Border Patrol Police Division 3 in Chiang Mai-4,000 blankets; patients, relatives, and the launch of a mobile medical unit of Mae Chaem Hospital, Chiang Mai Province-500 blankets; and Mae Fah Luang Hospital, Chiang Rai Province-500 blankets; hill tribe villagers of Huai Yuak Baso Village, Mae Chan District, Chiang Rai Province - 400 blankets; villagers in the Ban Yang Luang Sub-District, Mae Chaem District, Chiang Mai Province-600 blankets; students and teachers from 11 schools in Mae Chan District, Mueang Chiang Rai District, Chiang Saen District, Chiang Khong District and Mae Sai District, Chiang Rai Province-1,130 blankets.

The Company also distributed 1,500 blankets via the "Dharma Sin" Dharma Practice Centers to students, teachers, villagers of the Muang Kong Subdistrict Administration Organization and the Ban Huai Ngu Center. Chiang Dao District and Samoeng District, Chiang Mai Province; 500 blankets via Don Si Mon Temple to give to villagers in Mae Rim District, Chiang Mai; 1,000 blankets via Wat Ratchadaram to give to the elderly and disabled club, and students in Pa Sang District, Lamphun Province; and 870 blankets via Thai Environment Foundation to give to villagers and hill tribes in Ban Chan Sub-district, Kalayaniwattana District, Chiang Mai Province.

In the Northeast, the Company donated a total of 10,000 blankets to the following groups: to students, teachers and people belonging to the Border Patrol Division 2, Khon Kaen Province-5,000 blankets; victims of the cold in the Dan Khun Thot District, Nakhon Ratchasima Province, Chalerm Phrakiat District, and Muang District Muaklek District, Saraburi Province-1,500 blankets; and donated through social work agencies, Srinagarind Hospital, Khon Kaen Province, to give to people who suffer from cold weather, and a mobile medical unit of Srinagarind Hospital in Khon Kaen Province-3,500 blankets.

The company wishes to help provide warmth and help relieve the suffering caused cold weather conditions.

- Supporting funds totaling baht 9,615,000 to hospitals, foundations and other organizations to help activities that are beneficial to society, as follows:
- Supported the Friends for Life Project organized by TISCO Bank Public Company Limited with the objective to raise funds for the purchase of medical equipment for 5 large hospitals: Siriraj Hospital, Chulalongkorn Hospital, Ramathibodi Hospital, Rajavithi Hospital and Thammasat Chalermprakiet Hospital.
- Supported Kaeng Khoi Hospital, Saraburi Province, to buy 6 dialysis machines to help relieve the symptoms of kidney disease and kidney failure due to the lack of medical centers in the area of Kaeng Khoi that have a dialysis machine. Until now, patients have had to travel to a hospital in a remote province which is very crowded.



- Supported Phansa Maha Vajiralongkorn Hospital to buy medical devices, a surgical bed, a lamp set for the operating room, and surgical instruments for hemostasis.
- Supported the Thai Blind Foundation in the production of Digital Accessible Information System (DAISY) books to promote lifelong education for the blind and the disabled for the year 2019.
- Donation to Sirindhorn Institute for National Medical Rehabilitation Foundation with the objective of providing the disabled with the opportunity to receive comprehensive and complete rehabilitation services.
- Supported the “Wheel for the Disabled Project” project, for 15 wheelchairs of the Thai Handicapped Foundation so that children with disabilities that are destitute can do daily activities and commute in order to earn a living for themselves and their families.
- Promoted and improved the quality of life of Thai people. The company has cooperated with the Office of Labor Protection and Welfare of Saraburi to organize blood donation activities in honor of His Majesty King Vajiralongkorn on the auspicious occasion of the coronation of the year 2562 B.E., in collaborating with agencies under the Ministry of Labor, Saraburi and the National Blood Service Region 2, Lopburi Province. The employees of the TPI Polene Group and the general public donated more than 24,400 cc of blood to help patients and solve the problem of blood shortage in Saraburi and nearby provinces.
- The Company donated 100 dozen bottles of TPIPL drinking water to participate in the traditional culture on Asan Bucha Day, Lent Day and the end of Buddhist Lent in the area of Khao Din Phatthana Sub-district, Ban Kaeng Sub-district, Chaloeprakiat District, Saraburi Province, and at 25 temples in Kaeng Khoy District and Muak Lek District, Saraburi Province.

#### 4. Religious Activities

TPI Polene Power Public Company Limited is committed to supporting and promoting Buddhism by continuously offering Kathin every year, through executives, employees and customers together donating money to make merit to support the restoration of religious places and buildings in temple areas. These donations totaled 3,200,000 baht. This support included co-hosting the Kathin ceremony at Sridon Moon Temple, Chiang Mai; co-hosting the Kathin ceremony at Ban Hin Lueb Temple, Saraburi; co-hosting the Kathin ceremony at Wat Tham Salika, Nakhon Nayok province; co-hosting the Kathin ceremony at Wat Thep Hiran, Chainat Province; and co-hosting the Kathin ceremony at Wat Na Yai, Nakhon Ratchasima.

In addition to paying attention to Kathin robes, the company also supports and encourages Buddhism in other areas as follows:

- Supported the project “Novice Rakkaew, religious heirs 2019 at International School” by the Dharma Foundation under the patronage of His Holiness the Supreme Patriarch, together with Rama 9 Kanchanaphisek Temple, to encourage youth training in the mind according to the guidelines of Buddhism by the ordination of novices. This is part of the development of Thai people to strengthen themselves, to have great gratitude for our homeland, and to inspire the younger generations to be the power of the country by focusing on training to think positively, to do things positively, and to speak positively to each other 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 for 9 temples, and 4 foundations in order to support Buddhism and prolong the Buddhist Religion.
- Participated in the construction of the Boon Baramee Viharn, Sridon Mun Temple, Chiang Mai Province, which houses a large Buddha statue named “Luang Pho Phet Sompratana” and to support people who come to practice dharma.
- Participated in the construction of a cloister for monks and novices, Dharma Practice Hall, and improved the passage between the cubicle and corridors within the temple of Wat Pa Ban Dan (Rang) (Wat Dara Phirom Branch), Chalerm Phrakiat District, Nan Province.
- Supported the interior decoration and wall decoration in the construction of the ordination hall and residence for monks and novices of Pa Kha Visuthiyon (Wat Pa Dara Phirom Branch), Wiang Sa District, Nan Province.
- Participated in the construction of an 800-meter-long road to Doi Luang Temple, Phayao Province, to facilitate monks, novices, and Buddhists in general.
- Participated in the landscape improvements and building a parking lot at the Ganesha Park, Chachoengsao, to help the increasing number of travelers who come to pay their respects to the Ganesha every year.
- Participated in the construction of the structure of Sae Kee Sanctuary, the construction of 8 Rai sanctuary and the laying of concrete floor tiles at the parking lot of Thammaratsami maneerat Foundation (Nezha Prince Shrine), Chon Buri, and building the structure of the 3rd - 7th floors of the Ordination Hall, Chedi Sri Bua Daeng Bodhisattva Kuan Im Phan Korn Ruai Phan Lan, Pa Sila Ngam Temple, Chaiyaphum Province.
- Participated in the construction of a one-story dormitory building for Vipassana teachers and speakers, and building restrooms of the Phuttha Phiwat Foundation at the Suan Prueaksachart Dharma Practice Center, Sam Phran District, Nakhon Pathom Province for those interested in studying Dharma and to increase the potential in the dissemination of Buddhism and further training.

The above-mentioned activities are just part of TPI Polene Power’s focus and aim to help improve the quality of life of people and society. The company is aware of the important role of CSR (Corporate Social Responsibility), and is ready to support society, education, youth, religion and the environment in order to create a supportive society, good environment and a growing Thai economy.

## 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 off-takers 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 31 December 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 a 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 mixed fuel-fired power plant with an installed power generation capacity of 70 MW ("MIXED FUEL-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, 2019, 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

Business	2017		2018		2019	
	Baht Mil.	%	Baht Mil.	%	Baht Mil.	%
Energy & Utilities	4,164.73	85.61	6,912.25	90.71	9,851.49	93.19
Petrol and gas stations	700.09	14.39	707.56	9.29	719.71	6.81
Others	-	-	-	-	-	-
Total Revenue from Sales	4,864.81	100.00	7,619.81	100.00	10,571.20	100.00

As of 31 December 2019, the revenue of the Company was mainly from Energy & Utilities, accounting for 93.19%, and from Petrol and Gas stations, accounting for 6.81%.

## 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

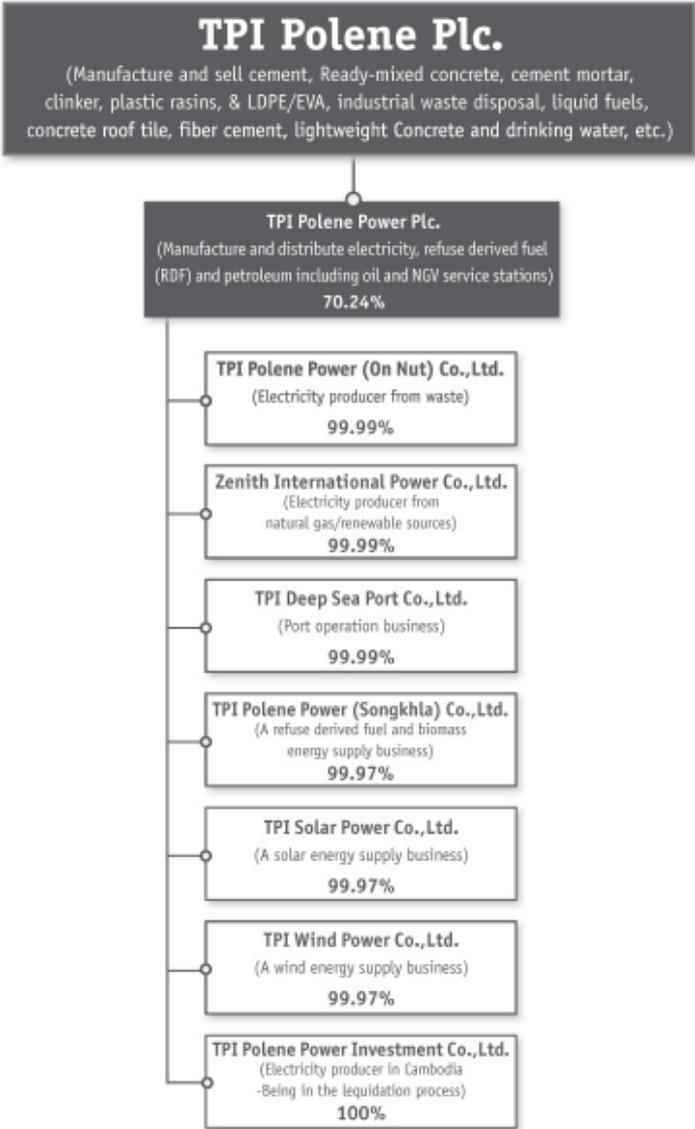
The Company was incorporated in Thailand in November 1991. The following table sets forth the key milestones in the Company Group's history and development:

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>

<b>Month / Year</b>	<b>Milestones</b>
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> </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>MIXED FUEL-PP-70MW (TG7) started commercial operation on August 18, 2018 under an approved power generation capacity of 40MW.</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 (On Nut) 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>
February 2019	<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 MIXED FUEL-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 in 2020.</li> </ul>
September 2019	<ul style="list-style-type: none"> <li>Acquisition of 99.99% ordinary shares of Zenith International Power Co., Ltd.</li> </ul>
October 2019	<ul style="list-style-type: none"> <li>Established TPI Polene Power (Songkhla) Co., Ltd. on 4 October 2019 with an objective to carry out power generation operations from refuse-derived fuel and biomass.</li> <li>Established TPI Solar Power Co., Ltd. on 4 October 2019 with an objective to carry out power generation operations from solar energy.</li> <li>Established TPI Wind Power Co., Ltd. on 4 October 2019 with an objective to carry out power generation operations from wind energy.</li> <li>Established TPI Deep Sea Port Co., Ltd. on 11 October 2019 with an objective to carry out the business of port operation.</li> </ul>
31 January 2019	<ul style="list-style-type: none"> <li>The Company's Board of Directors' meeting no.1/2020, dated January 31, 2020, passed a resolution to appoint Dr. Porakrit Leophairatana to be in the position of the Director and the Executive Director of the Company, effective from 31 January 2020 onwards.</li> </ul>

#### 4. Company Group Structure

As of 31 December 2019, the following diagram illustrates the Company Group’s corporate structure after the Corporate Reorganization:



Information of the Company Group as of 31 December 2019.

Company	Head Office	Type of Business	Registered Capital (Bath)	Paid-up Capital (Bath)	% Shareholding
<b>Subsidiaries</b>					
1. TPI Polene Power (On Nut) Co., Ltd.	26/56 Chan Tat Mai Road, Thungmahamek, Sathorn, Bangkok 10120 Tel. Number (02) 285-5090-9 Fax Number (02) 213-1035	Electricity producer from waste	750,000,000	187,500,000	99.99
2. Zenith International Power Co., Ltd.	26/56 Chan Tat Mai Road, Thungmahamek, Sathorn, Bangkok 10120 Tel. Number (02) 285-5090-9 Fax Number (02) 213-1035	Electricity producer from natural gas/ renewable sources	100,000,000	100,000,000	99.99
3. TPI Deep Sea Port Co., Ltd.	26/56 Chan Tat Mai Road, Thungmahamek, Sathorn, Bangkok 10120 Tel. Number (02) 285-5090-9 Fax Number (02) 213-1035	Port operation business	100,000,000	25,000,000	99.99
4. TPI Polene Power (Songkhla) Co., Ltd.	26/56 Chan Tat Mai Road, Thungmahamek, Sathorn, Bangkok 10120 Tel. Number (02) 285-5090-9 Fax Number (02) 213-1035	A refuse derived fuel and biomass energy supply business	1,000,000	1,000,000	99.97
5. TPI Solar Power Co., Ltd.	26/56 Chan Tat Mai Road, Thungmahamek, Sathorn, Bangkok 10120 Tel. Number (02) 285-5090-9 Fax Number (02) 213-1035	A solar energy supply business	1,000,000	1,000,000	99.97
6. TPI Wind Power Co., Ltd.	26/56 Chan Tat Mai Road, Thungmahamek, Sathorn, Bangkok 10120 Tel. Number (02) 285-5090-9 Fax Number (02) 213-1035	A solar energy supply business	1,000,000	1,000,000	99.97
7. TPI Polene Power Investment Company Limited	274, Phoum 1, Sangkat Tonle Basac, PHNOM PENH CENTER, Phnom Penh, Cambodia	Electricity producer in Cambodia (Being in the liquidation process)	USD 125,000	USD 125,000	100.00

## 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 type of power generation business competing with that of the Company or its subsidiaries (if any).

# Nature of Business

## 1. Revenue structure of the Company Group

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 plants 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

Business	2017		2018		2019	
	Baht Mil.	%	Baht Mil.	%	Baht Mil.	%
Energy & Utilities	4,164.73	85.61	6,912.25	90.71	9,851.49	93.19
Petrol and gas stations	700.09	14.39	707.56	9.29	719.71	6.81
Others	-	-	-	-	-	-
Total Revenue from Sales	4,864.81	100.00	7,619.81	100.00	10,571.20	100.00

## 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 THB3.5 per kWh, which is payable in addition to the base price of power under the power purchase agreements.

As of 31 December 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) had been granted a promotion certificate from the BOI, which entitles it to a number of benefits including exemptions from certain taxes. At present, the corporate income tax exemption has expired.

#### **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 (TG 3) has a term of five years from the date on which RDFPP-20MW first sold power to EGAT and will expire in January 2020. As of the expiration of the initial term, this agreement may be renewed for successive five year terms by mutual written agreement of the parties, executed not less than 30 days prior to the expiration of the initial term (On 22 November 2019, the company sent a written notice to EGAT to inform the intention to extend the power purchase contract for a period of five years from January 1, 2020). The Company will receive the adder during the first two years of the next five-year term and the adder for RDFPP-20MW (TG 3) will expire in January 2022.

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&TG2) 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. At present, the corporate income tax exemption has expired.

#### **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 (Excluding VAT) from EGAT consisting of an energy payment and an adder since the Commercial Operation Date of the RDF-60MW (TG5) in August 2015.

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. As of the expiration of the initial term, this agreement may be renewed for successive five year terms by mutual written agreement of the parties, executed not less than 30 days prior to the expiration of the initial term. The Company will receive the adder during the first two years of the next five-year term and the adder for RDFPP-60MW PPA (TG5) will expire in August 2022.

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 have 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 a 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.

Under the RDFPP-100MW (TG4 and TG6) PPA, the Company shall receive a monthly power tariff (Excluding VAT) from EGAT consisting of an energy payment and an adder since the Commercial Operation Date of the RDF-100MW (TG 4 and TG 6) in April 2018.

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 April 2023. As of the expiration of the initial term, this agreement may be renewed for successive five year terms by mutual written agreement of the parties, executed not less than 30 days prior to the expiration of the initial term. The Company will receive the adder during the first two years of the next five-year term and the adder for RDF-100MW (TG4 and TG6) will expire in April 2025.

The Company improved the efficiency of operations of WHPP-30MW (TG4) 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 & TG2).

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 have 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 (TG4) and RDFPP-70MW (TG6) has been granted a promotion certificate from BOI, which entitles it to a number of benefits including exemptions from certain taxes.

#### **e) MIXED FUEL-PP-70MW (TG7)**

MIXED FUEL-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 MIXED FUEL-PP-70MW (TG7), which will generate about 40 MW of electricity.

In January 2016, the Company entered into a power purchase agreement for a MIXED FUEL-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 Plc 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 MIXED FUEL-PP-70MW (TG7) Power Purchase Agreement will end upon the expiration of the lease agreement for MIXED FUEL-PP-70MW (TG7) 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 installation 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 MIXED FUEL-PP-70MW (TG7). Furthermore, it is also a preparation to support the amount of municipal waste to which the company is exposed. The installation is expected to be completed in 2020.

#### **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 TPI Polene Plc 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 "TG1&TG2") 	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. Waste 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. Mixed fuel-fired Power Plant ("MIXED-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)
TOTAL		440 MW	

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.

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 is 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 31 December 2019, 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 31 December 2019, the Company has entered into MSW deposit agreements with 100 municipal governments and 17 waste management companies in Bangkok and the other 11 provinces in Thailand.

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

The Company invested and installed RDF production machines and additional sorting machines at two landfill sites in Nakhon Ratchasima Province. As for the other high potential landfill sites in the large provinces, the Company also has a policy that invests in the waste sorting machines and allows the landfill site owners to rent and operate those machines for the sufficiency and stability of RDF which would be delivered as ready-to-use RDF to the Company's power plants. With a total of 9 locations, the Company can collect more than 1,000 tons of waste per day, or about 300,000 tons per annum from the rent machines.

#### **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 off-takers 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, 2019**

No.	Company Name	Installed Capacity (MW)	Power Purchase Agreement (MW)	Market Share (capacity-based)
1.	TPI POLENE POWER PUBLIC COMPANY LIMITED	180.0	163	52 %
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.	CHONBURI CLEAN ENERGY CO.,LTD.	8.6	6.9	2 %
9.	CRANE RENEWABLE ENERGY CO.,LTD.	8.5	8.0	2 %
10.	ZENITH GREEN ENERGY CO.,LTD.	8.5	8.0	2 %
11.	OTHERS	78.6	68.9	23 %
	<b>TOTAL</b>	<b>347.1</b>	<b>310.6</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 52%), 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 adder 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 to enter into a power purchase agreement with EGAT. This occurred because of EGAT's acceptance of a proposal to sell electricity by means of a price competition (bidding), which means most of the companies are encountering competition from domestic waste-to-energy power plants.

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

#### 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, 2019, the Company had eight petrol stations, one gas station and three petrol and gas stations under the "TPIPP" brand. The Company's petrol stations are located in Bangkok and other provinces in Thailand and primarily sell petrol, gas and other products to retail customers.

The Company was granted the license to use the TPIPL trademark in accordance with the "TPIPL Trademark Agreement" entered into on March 7, 2016 (which was 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.

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

The gas stations have been granted promotion certificates from BOI, which entitle them to a number of benefits including exemptions from certain taxes.

As for the natural gas market (NGV) in the year 2019, the domestic sales of NGV decreased by 12% compared to the year 2018, as the transportation sector shifted to using B20 diesel instead of NGV due to the lower B20 diesel price compared with the NGV price. Furthermore, the maintenance cost of oil-based cars is lower than those of NGV and the majority of new car models also have an oil-based engine resulting in a decrease in the popularity of NGV-based cars as well as the overall NGV sales volume.

However, in 2019, the petroleum fuels and NGV sales of the Company slightly increased compared to the sales numbers in the year 2018, as a result of a promotion campaign by giving away products of the TPI Polene group (health care, fertilizer and products for animals).

### 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 31 December 2019, 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	Card expired	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 Group 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 (“NO<sub>x</sub>”) 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 NO<sub>x</sub>, as compared to World Bank guidelines and Thai regulatory requirements:

	SO <sub>2</sub>	NO <sub>x</sub>
	(mg / Nm <sup>3</sup> )	
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 April 2019, the Thai government approved a new Power Development Plan ("PDP"), called "Thailand Power Development Plan 2018-2037" ("PDP2018"), with a 20-year outlook towards 2037. The plan was formulated to continuously support the country's economic growth and improve the system security depending on the growing electricity demand and potential in each region of Thailand. 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").

#### Thailand Power Development Plan 2018-2037 (PDP2018) for the security of the power system as shown below:

- Power Generating capacity - 2018-2037		
- Existing capacity as of December 2017	46,090	MW
- New capacity - 2018-2037	56,431	MW
- Retired capacity - 2018-2037	-25,310	MW
<b>Total capacity in 2037</b>	<b>77,211</b>	<b>MW</b>
- New power generating capacity during 2018-2037 of 57,459 MW can be classified as follows:		
- Renewable power plant	20,766	MW
- Pump-storage hydropower plant	500	MW
- Cogeneration power plant	2,112	MW
- Combined cycle power plant	13,156	MW
- Coal/Lignite power plant	1,740	MW
- Power purchase from neighboring countries	5,857	MW
- New/ Replacement plant	8,300	MW
- Energy conservation policy	4,000	MW
<b>Total</b>	<b>56,431</b>	<b>MW</b>

New generating capacity in the period 2018-2037 of 56,431 MW, as detailed above, consists of (1) committed and contracted projects with a total capacity of 19,064 MW, and (2) domestic power plants, neighboring country power purchases projects which were planned to cope with an increase in power demand and to replace the capacities with a capacity of 37,367 MW can be described as follows:

- Committed and contracted projects with the total capacity of 19,064 MW can be described as follows:

- Renewable power plant	3,839	MW
- Pump-storage hydropower plant	500	MW
- Cogeneration power plant	2,112	MW
- Combined cycle power plant	8,256	MW
- Coal/Lignite power plant	600	MW
- Power purchase from neighboring countries	2,357	MW
- New plant	1,400	MW
<b>Total</b>	<b>19,064</b>	<b>MW</b>

- The total capacity of 37,367 MW of domestic power plants and neighboring country power purchases projects to cope with an increase in power demand and to replace the capacities which would be retired can be described as follows:

- Renewable power plant	16,927	MW
- Combined cycle power plant	4,900	MW
- Coal/Lignite power plant	1,140	MW
- Power purchase from neighboring countries	3,500	MW
- New plant	6,900	MW
- Energy conservation measures	2,357	MW
<b>Total</b>	<b>37,367</b>	<b>MW</b>

- Power plants in accordance with government promotion policies, categorized by fuel type, can be summarized as follows:

- Waste-to-energy plant	400	MW
- Biomass power plant	120	MW
<b>Total</b>	<b>520</b>	<b>MW</b>

Source: Thailand Power Development Plan 2018-2037

However, in 2019, the government made an announcement that the Thailand Power Development Plan 2018 or PDP2018 (new version) 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, new version) and preparing an energy efficiency plan (EEP) and creating an alternative energy development plan (AEDP) to be consistent with the National Energy Policy Council (NEPC) and 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 the Prosumer market.

In PDP 2018, there are guidelines for the allocation of new power plants in the future and prioritization to improve the stability and reliability of the power system as shown in the Thailand Power Development Plan 2018-2037 (PDP2018) for the security of the power system.

## Current Status of WTE Power Purchase Agreements (PPAs) (December 2019)

	Number of Power Plants	Installed Capacity (MW)	Power Purchase Agreement (PPA) (MW)
<b>1. Current and potential projects</b>			
Application accepted	0	0	0
PPA signed	18	143.830	124.818
COD	38	347.101	310.560
<b>Total</b>	56	490.931	435.378
<b>2. Cancelled applications</b>			
	80	503.804	439.162
<b>Grand total</b>	136	994.735	874.540

Source: Energy Regulatory Commission (ERC)

According to ERC statistics, in December 2019 WTE power plants that have already completed commercial production (COD) have a total installed capacity of 347 MW and a total sales volume under PPA of 310 MW. TPI Polene Power Public Company Limited (**TPIPP**) has the largest installed capacity in WTE of 180 MW (out of 347 MW) with the highest PPA of 163 MW (out of 310 MW).

## 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 of 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 2018 and 2019, and International Standards under ISO9001:2015, ISO14001:2015 and ISO50001:2011. 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 that are 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 including providing cooperation, consultation, promotion and development of electricity production technology for community waste disposal in the country as well.

#### **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.

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 the 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 the FIT (Feed-in Tariff) scheme and also receive income from the additional tipping fee where 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 is 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 were government projects that were in the process of starting operations, namely, the On Nut waste-to-energy power plant, and the Nong Khaem waste-to-energy power plant. Other power plants that are in the process of starting operations and are expected to be able to start bidding in 2020, 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 plants, waste heat recovery power plants, and coal and RDF-fired power plants.

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 and 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 the 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.

### **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 which is paid during the life of the PPA or a fixed amount per kWh which 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 to the Ministry of Energy the application for permission 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 with 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 governments 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 remains a leading and a large RDF power plant operator in the country and continues to strengthen its competitive advantages over its competitors. With the readiness of its 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 the 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 shutdowns of the cement plants 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 the 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 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 a 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 Group develops staff at all levels to optimize teamwork, 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 the turbine generators of all power plants. In addition, the Company prepares and reserves various machines 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.

**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 Energy Management Standard System ISO50001, 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' 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 has 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 the 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 a 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 of the Company and its subsidiaries

As at 31 December 2019, the Company and its subsidiaries have property, plant and equipment as follows:

Asset	Ownership style	Net value (Mill. Baht)	Obligation
1. Plants	Owner	1,471.87	- none -
2. Land	Owner	5,582.25	- none -
3. Machinery	Owner	20,857.53	- none -
4. Tools and factory equipment	Owner	110.51	- none -
5. Furniture, fixtures and office equipment	Owner	20.17	- none -
6. Major spare parts	Owner	53.45	- none -
7. Assets under construction and installation	Owner	2,453.72	- none -
8. Vehicles	Owner	0.40	- none -
9. Decommissioning assets	Owner	220.56	- none -
<b>Total</b>		<b>30,770.44</b>	

### 2. Intangible Asset

- None -

### 3. Investment Policy in Subsidiary and Associated Company

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 Company 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

The Company has a policy to invest approximately Baht 800 million to expand the production capacity of Refuse Derived Fuel (RDF) and sell the RDF to TPI cement plants resulted in reduction and substitution in the cement plants' coal consumption. By constructing 6 large waste separation sites in Rayong, Chanthaburi, Nakhon Pathom, Ayutthaya and Lopburi, the Company will be able to separate and distribute more waste to 5 new-constructed lines of RDF plants in Saraburi with the capacity to produce an additional 1,500 tons of RDF per day, scheduled to be completed and able to sell the RDF to the cement plants by the end of 2020. In sum, the project would reduce RDF production costs and increase revenue for approximately Baht 400 million per annum.

The Company is currently in the process of constructing 3 additional boilers with a steam capacity of 75 tons per hour which has been undergoing construction since mid-year 2019 and scheduled to be completed in mid-2020, with a project cost of Baht 1,970 million. After the project is completed, the Company would be able to produce and sell electricity to the EGAT according to the PPA, with the increasing utilization rate to more than 98 percent, which can increase the electricity sales by more than 200 million kilowatt-hours per annum and more than Baht 1,200 million per annum.

The Company also plans to participate in the biddings for the power plant under the electricity development plan of 500 MW, which is currently in the process of studying and preparing to participate in the biddings. The Company has a goal to acquire at least 3 new VSPP power plants with a capacity of 9 MW per project, which is expected to be announced within 2020 and each project has a construction period of approximately 2 years and a total investment of approximately Baht 8,000 million.

Furthermore, the Company has considered participating in joint ventures or business acquisitions with power plant operators that have a license or PPA of waste power plants but have not yet operated due to the need for funding. Currently, the Company is in the process of negotiation for 2 projects to increase the Company's production capacity with an expected approximate cost of Baht 4,500 million by 2021.

As for long term projects, the Cabinet of Thailand has passed a resolution to approve the Southern Seaboard project of the industrial Model City for the future project, Chana District, Songkhla Province, introduced by Southern Border Provinces Administrative Center (SBPAC) for stability and sustainability of southern border provinces. The project will consist of an industrial park project of 16,753 Rai, a deep seaport project, a power plant project for security, and renewable energy power plants project with a total capacity of 3,700 MW. The Company volunteered to participate and invest in this project to cooperate with the government's policy which will lead to the well-being and peace in the southern border provinces.

Overall, the project area of approximately 16,753 rai will be categorized into 6 following types of activities:

1. Agricultural and light industry, 4,253 rai
2. Heavy industry, 4,000 rai
3. Electric power industry, 4,000 rai
4. Deep seaport, 2,000 rai
5. Logistic center (Container Yard), 2,000 rai
6. Smart City, residential area of 500 rai

The area plan of the project is shown below



The Company and its subsidiaries, as of December 31, 2018, engaged in material litigations, arbitrations or claims, as follows:

On 16 December 2019, 222 individuals sued the Energy Regulatory Commission (ERC) et al to the Central Administrative Court with the Company listed as the 5th Defendant. The Plaintiffs requested that the approval of Environmental and Health Impact Assessment (EHIA) report for the 150 megawatts thermal power plant project, the license to operate an electricity generating business, and the construction approval of the Company be revoked. The Plaintiffs also requested that the Court take evidence out of Court and issued an interim measure ordering that the electricity generating system be temporarily stopped until the final decision is reached.

On 25 December 2019, the Court inquired both Parties to consider the request for an interim measure and rendered its decision on 28 January 2020 denying the request for an interim measure.

Subsequently, on 31 January 2020, the Court accepted the complaint and requested the Company to file the answers within the time limit. The case is pending the preparation of answers.

The Company's legal consultant considered the complaint and its appendixes and hereby opines that the Company lawfully received the license to operate the electricity generating business and the construction approval from the relevant authorities. The complaint of the Plaintiffs is untrue. As the case is pending the preparation of answers, the Company has caused to relieve itself of any liability generated from the complaint depending on the Central Administrative Court Decision. Moreover, the Company has pressed charges against the 222 Plaintiffs to the Muak Lek police Station, Saraburi, for taking the false information to charge a person in the Court. The case is under investigation by the police.

# Securities and Shareholder Information

## 1. Registered Capital and Paid up Capital

As of 31 December 2019, 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 7 January 2020 (At the last closing date):

Shareholders	Number of Shares	Shareholding (%)
1. TPI Polene Public Company Limited	5,899,999,300	70.24
2. Mr. Paiwan Chartpitak	125,500,000	1.49
3. The Bank of New York Mellon	110,114,287	1.31
4. Thai NVDR Company Limited	100,687,286	1.20
5. Mr. Nares Ngamapichon	86,000,000	1.02
6. Leophairatana Enterprise Company Limited	78,060,394	0.93
7. South East Asia UK (Type C) Nominees Limited	69,931,864	0.83
8. Bangkok Life Assurance Public Company Limited	67,826,500	0.81
9. Mr. Yuk Lung Lee	49,500,000	0.59
10. Mr. Prateep Tangmatitham	41,499,900	0.49

## 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.

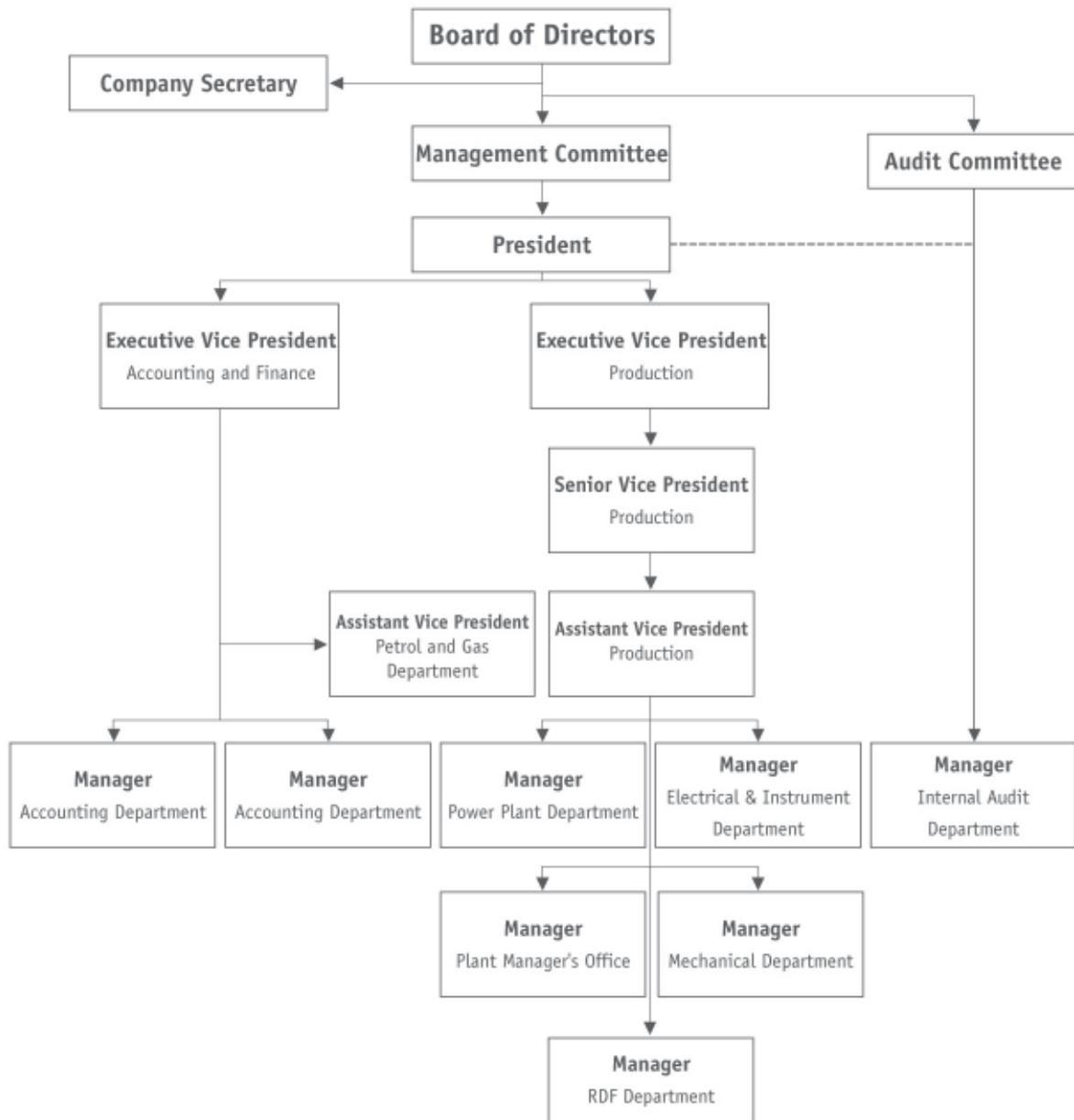
In addition, the Board of Directors may, from time to time, pay the shareholders the interim dividends, provided that it is of the view that the Company has adequate profits to make such payment. After the interim dividends have been paid, such dividend payment shall be reported to the shareholders at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

Separate Financial Statement	2017	2018	2019
Net Profit per share (Baht)	0.333	0.44	0.549
Dividend per share (Baht)	0.30	0.40	0.40*
Par Value per Share (Baht)	1.00	1.00	1.00
Dividend Payout Ratio (%)	90.09	90.91	72.86

Note : \* According to the Company's Board of Directors' meeting no.2/2020, held on 28 February 2020. However, the right of shareholders to receive the dividend payment is still uncertain as the dividend payment is subject to the approval in the 2020 Annual General Shareholders' Meeting, which will be scheduled on 20 April 2020.

# Management Structure

As of 31 January 2020, the Management structure of the Company was as follows:



## 1. Board of Directors

As at 31 December 2019, 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 the members 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 positions 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 the proper appointment and remuneration of the members of the Management.

### 1.1 Board of Directors

As of 31 January 2020, the Board of Directors of the Company comprised 15 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	Dr. Porakrit Leophairatana	Director*
11	Mr. Manu Leopairote	Independent Director ; Chairman of the Audit Committee
12	Mr. Thiraphong Vikitset	Independent Director ; Member of the Audit Committee
13	Mr. Abhijai Chandrasen	Independent Director ; Member of the Audit Committee
14	Mr. Khantachai Vichakkhana	Independent Director
15	Mr. Wanchai Manosooti	Independent Director

Note : \* The Company's Board of Directors' meeting no.1/2020, dated 31 January 2020, passed a resolution to appoint Mr. Porakrit Leophairatana to be in the position of the Director and the Executive Director of the Company effective from 31 January 2020 onwards.

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 and Dr. Porakrit 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 15 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 2019, the Board of Directors convened meetings a total of 13 times, with attendance as detailed below:

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

### **1.2 Audit Committees**

As of 31 January 2020, the Audit Committee is comprised of 3 directors as follows:

<b>No</b>	<b>Name</b>	<b>Position</b>
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. Thiraphong 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 2019, 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	5/5
3.	Dr. Abhijai Chandrasen	Member of the Audit Committee	5/5

### 1.3 Management Committee

As of 31 January 2020, the Management Committee is comprised of 9 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
9.	Dr. Porakrit Leophairatana	Member of the Management Committee*

Remark: \* The Company's Board of Directors' meeting no.1/2020, dated 31 January 2020, passed a resolution to appoint Dr. Porakrit Leophairatana to be in the position of Director and the Executive Director of the Company effective from 31 January 2020 onwards.

## 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 31 January 2020, the Management team is comprised of 8 members as follows:

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

Remarks: The Management means the President or the first four executives, following in descending order in a hierarchical structure. All those in equal positions such as the four management executives also include executives 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 22 September 2016, as a corporate secretary of the Company since 22 September 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 of 31 December 2019, remuneration awarded to the Company's 14 directors in the form of meeting allowances and bonuses was Baht 18,656,000 compared to Baht 15,904,000 in 2018. Details of remuneration in 2019 are as follows:

*Unit: Baht*

No.	Name	position	Meeting allowances	Bonuses	Total
1	Mr. Prachai Leophairatana	Chainman	1,258,400	88,000	1,346,000
2	Mr.Pramuan Leophairatana	Vice Chairman	1,258,400	88,000	1,346,000
3	Mrs. Orapin Leophairatana	Vice Chairman	1,258,400	88,000	1,346,000
4	Mr. Prayad Liewphairatana	Director	1,258,400	88,000	1,346,000
5	Miss Pattrapan Leopairut	Director	1,258,400	88,000	1,346,000
6	Mr. Pakorn Leopairut	Director	1,258,400	88,000	1,346,000
7	Mr. Pakkapol Leopairut	Director	1,258,400	88,000	1,346,000
8	Ms. Nitawan Leophairatana	Director	1,258,400	88,000	1,346,000
9	Ms. Malinee Leopairut	Director	1,258,400	88,000	1,346,000
10	Mr. Manu Leopairote	Independent Director and Chairman of the Audit Committee	1,258,400	88,000	1,346,000
11	Mr. Thiraphong Vikitset	Independent Director and Audit Committee	1,258,400	88,000	1,346,000
12	Mr. Abhijai Chandrasen	Independent Director and Audit Committee	1,258,400	88,000	1,346,000
13	Mr. Khantachai Vichakkhana	Independent Director	1,258,400	88,000	1,346,000
14	Mr. Wanchai Manosooti	Independent Director	1,258,400	88,000	1,346,000
		<b>Total</b>	<b>17,424,000</b>	<b>1,232,000</b>	<b>18,656,000</b>

##### 4.2 Remuneration of Management

In 2019, remuneration awarded to the Company's 5 Executives including salaries and bonuses was Baht 19,534,135 compared to Baht 18,360,535 in 2018. Such remuneration did not include remuneration of the accounting manager.

**Company shares held by the Directors and the Management (including married couples and their offspring) as at 7 January 2020.**

No	Name	Shareholding as at January 7, 2020 (shares)	Shareholding as at January 4, 2019 (shares)	Change (shares)
1	Mr. Prachai Leophairatana	6,019,906	5,354,806	665,100
2	Dr. Pramuan Leophairatana	4,994,025	4,994,025	-
3	Mrs. Orapin Leophairatana *	*	*	*
4	Mr. Prayad Liewphairatana	5,452,506	5,452,506	-
5	Miss Pattrapan Leopairut	3,853,192	3,853,192	-
6	Mr. Pakorn Leopairut	5,325,591	5,325,591	-
7	Mr. Pakkapol Leopairut	1,770,399	1,670,399	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	700,000	-	700,000
15	Dr. Porakrit Leophairatana	537,314	-	-
16	Mr. Worawit Lerdbussarakam	750,000	750,000	-
17	Mrs. Sirirat Lerthirunrat	-	-	-
18	Mr. Somkiat Teeratakulpisal	-	-	-
19	Miss Karuna Permsiripan	-	-	-
20	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

\*\* The Company's Board of Directors' meeting no.1/2020, dated 31 January 2020, passed a resolution to appoint Dr. Porakrit Leophairatana to be in the position of the Director and the Executive Director of the Company effective from 31 January 2020 onwards.

## 5. Personnel

### 5.1 Number of employees

As of 31 December 2019, the Company and its subsidiaries had 1,172 employees.

Department	Number of employees		Total
	Head office	Plant	
<b>TPIPL Total</b>	<b>85</b>		<b>85</b>
- President and Chief Executive Office	2	-	2
- Oil and gas	13	-	13
- On-Nut petrol station	10	-	10
- Soi Klang petrol station	9	-	9
- Pu Chao Saming Phrai petrol station	11	-	11
- TPI Tower petrol station	7	-	7
- Phayuha Khiri petrol station	6	-	6
- Chaeng Sanit petrol station	15	-	15
- Internal audit department	6	-	6
- Accounting department	2	-	2
- Financial department	3	-	3
- Information technology department	1	-	1
<b>Saraburi plant</b>	-	1,087	-
<b>Total</b>	<b>85</b>	<b>1,087</b>	<b>1,172</b>

## 5.2 Remuneration of Employee

In 2019, the Company paid personnel expenses or salary expense to employees in the total amount of Baht 568,345,934.49, in the form of salaries, bonuses and other remuneration with details as follows:

	<i>Unit: Baht</i>
<b>Remuneration</b>	<b>2019</b>
Salaries and Bonuses	527,458,675.70
Other remuneration <sup>1</sup>	40,887,258.79
Total	568,345,934.49

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

## 5.3 Provident Fund

The company contributes 3 percent of an 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 8,567,863 as of December 2019.

## 5.4 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 annual training plan derived from the survey needs in training (Survey Needs) from all departments to understand the real needs for training. The training will be conducted in accordance with the rules and regulations of the Department of Skill Development. Ministry of Labor.
- External Training: To develop the capacity, knowledge, and ability based on the appropriate work by sending employees to join 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 them to be the lecturer and the inspector of the skill levels of the workers at the plant; Also staff are tested for competency individually according to the professional standards of "procurement" as stipulated by the professional institution and to increase skills and operational efficiency, reduce costs, and upgrade the procurement of the company to meet national standards; these include management science for senior managers, internal controls and internal control assessment, ASEAN SCP Multi-stakeholders Dialogue with a focus on: SCP and the Circular Economy Through Sustainable Tourism and Food Waste; The Company also scheduled meetings to brainstorm ideas and make recommendations to (draft) renewable and alternative energy development plans 2018-2037, the annual Energy Symposium 2019 on "Thai Energy Under Disruptive Technology", Cost Study and Life Cycle Assessment of Energy Production from Municipal Waste in the Country etc.
- 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.
- The company has organized a learning course for employees to have knowledge and understanding of the work of each section as follows:
  - Mind Development and Preparation Course: To promote the morals and ethics by Dharma practice for new employees as a new employee orientation. Dharma listening and practicing, Meditation Training, and Walking Meditation were held for one day at Wat Rama IX Karnchanapisek, Bangkok, to create virtue, honesty and good attitudes to work and to colleagues. Also, a job visit at the Saraburi plant for 1 day was arranged to see the overall picture of the company and to visit various agencies at the actual location of the Saraburi factory in order for the employees to become confident and proud in the company including creating morals and good attitudes towards work and colleagues.
  - A work ethics course and Dharma for the children of staff members are organized annually through the course, "Thinking Good, Doing Good, Enjoying Work", so that all employees have morals in their mind and use Dharma as a guidance to work and live daily life well. The company organized the course, "Mindfulness, concentration, wisdom and learning" for the employees' children to have the precepts, mindfulness, concentration, and wisdom, which creates motivation for studying, and makes it possible to solve problems in a comprehensive way and to have compassion, honesty, and gratitude to parents.
  - Management training for employees and administrators at all levels: To develop management skills in line with the Company's business operations, such as a management workshop, the "Role of the New Age boss", problem solving and decision-making, work orders and delegations, job control and monitoring, counseling for behavior change, reducing cost and waste in the organization, systematic thinking and decision-making, labor laws that supervisors and executives should know, etc., in order to

develop management skills in line with the company's business operations.

- Training on emotional and social behavior (soft skills): creating and developing effective teams, communication and coordination techniques, thinking outside the box and creativity, awareness of ownership and commitment to the organization, etc.
- Sales and marketing training: To develop and enhance sales and marketing skills for relevant departments such as "Sales and Marketing Strategy Trends 2019", creating attitudes and techniques that create career success in sales, sales techniques and proactive sales growth, negotiation techniques for sales, digital marketing, etc.
- Occupational health and safety programs: for safety officers at supervisor level (Safety Supervisor), oil test officers at petrol stations, in order to raise awareness of operational quality such as advanced firefighting, and risk assessment.
- Professional courses; accounting for withholding tax according to the Revenue Department's Order No. Thor.Por. 4/2528, Principles of Corporate Income Tax Payment, Transfer Pricing, BOI Tax Benefits, Cash Flow Statements and Basic Cash Budgeting. (Practice), issues accounting documents - payment, sharing knowledge, "Let's talk about digital tax and e-LG on Blockchain", the principles of corporate income tax, etc. to acknowledge the new legal regulations. that should be kept up-to-date in the work process.
- 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.
- Personnel management jobs such as labor law and organizational management, interview techniques for managers.
- IT work such as Security Operations Center (SOC), TechSauce Global Summit 2019, etc.
- Executive course: To enhance knowledge and ability for job development to be effective including knowledge and modern evolution, up-to-date with current events in various important and useful courses such as Advanced Retail Management (ARM), Advanced Master of Management Program (AMM), Business Continuity Management according to ISO 22301: 2012, etc.

#### **5.5 Labor dispute**

From the year 2014 to the year 2019, the Company Group had no labor disputes in which it was a litigant that may have had a significant impact on the Company's or the Group'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 2019, the company held a shareholders' meeting as follows:

1.1 The Annual General Meeting of Shareholders was held on 19 April 2019 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 12 directors attended the AGM.

1.2 Extraordinary General Meeting of Shareholders No. 1/2019 was held on 1 August 2019 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 for 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 guidelines.

### 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 not 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 acceptance 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 dealings with the Company, except for 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 the 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 a 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

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 Vikitset 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. Thirapong 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 circumstances 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 the number of the remaining directors.

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

#### **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 30 September 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 previously being 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 characteristics 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 previously having 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 previously being 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 previously being 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 a 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. 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 the knowledge, as well as the appropriate qualifications, skills, and experience which are deemed beneficial to the Company's operations 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 2019 to:**

1.1 The statutory auditor of the Company for the financial year ended 2019 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 2019 in the amount of BHT 2,300,000.

### **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 2019 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 had 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 an additional review and is making a plan to gradually improve the corporate governance policy to be in line with Corporate Governance Code for listed companies 2017 (CG Code).

# Social Responsibility

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## 1. Overview of Policy

The Company Group 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 the principles of universal Corporate Governance and are 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 the 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 principles between the Company and stakeholders whereas the top management is responsible for the participation of all stakeholders and improves communication channels to continuously allow for the expression of opinions to the responsible business units. 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 actions 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 a specific company to the entity, or achieve any improper benefits in the 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 regulations.
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, operations, and connections 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@tpipolenelectricpower.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@tpipolenelectricpower.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 is 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 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 opportunities for the persons committing corruption or proved to be guilty to acknowledge the reasons 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 an 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 measures 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 the community and the 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.

The company provides a map of health risks to monitor the health status of at-risk people in the community within a 5 kilometer radius around the power plant project by hiring Suan Sunandha Rajabhat University as a researcher. The project started in September 2019 and was completed in March 2020.

The company has conducted research to study the health and environmental impact of health risk areas in people at risk of health and organisms that are vegetables and fruits, fish and shellfish that are consumed including soil and water in risk areas that people regularly contact by hiring Suan Sunandha Rajabhat University as a researcher. The project started in September 2019 and completed in March 2020 and will continue to conduct research studies every year.

### **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 Group 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. A health insurance fund to be a guarantee for the medical expenses of the people in case of illness caused by 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 in 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 checks 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).
- (8) Funds for the conservation and restoration of natural resources and environment: To promote career development in the community, to support research institutes, educational institutions, academics, and the community to use in the project related to the conservation and restoration of natural resources and the environment, to promote career development and professional development in nearby communities, totaling 2 projects per annum with a budget of 400,000 baht per annum.
- (9) Public health support budgets to support public health activities in the areas of health promotion and surveillance at the sub-district, district and province: To support the training of volunteers in neighboring communities, support research budgets or monitor health impacts of people in the area, purchase medical equipment and support personnel in public health to increase knowledge about chemistry, pollution and occupational health and safety in the amount of 300,000 baht per annum.
- (10) Budget for occupational health and safety: To support the potential enhancement of the Tambon Health Promotion Hospital and health personnel to take care of the health of people in the area at risk from exposure to pollutants and carcinogens due to the project, by supporting medical supplies, tools and medical equipment, training and practice from occupational health personnel or hygiene or occupational medical doctor annually in an amount of 300,000 baht per annum.
- (11) Supporting biological resource projects: In cooperation with government agencies or the private sector in the restoration of forest areas in the nearby limestone mountains, project areas or other areas with forestry activities by supporting the budget of Baht 3,000 baht per rai for at least more than 100 rai per annum.
- (12) The company sent the money to the community development fund in the area around the power plant in an amount of 33,484,876.61 baht to allocate to communities around the power plant of the company in various areas of community development, career promotion, educational development, overseeing the development of public utilities in the community, including participation in communities in various proposed projects for community development using the budget allocated from the said fund for sustainable coexistence between the community and the power plant of TPI Polene Power Public Company Limited.

### 3. Businesses that affect social responsibility

- None -

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

The Company Group 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 Group 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 Group 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 Controls and Risk Management

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At the Board of Directors' meeting no. 1/2563, held on 31 January 2020, 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 31 December 2019, 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 31 December 2018, and 31 December 2019 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 7 common directors including: Mr. Prachai Leophairatana, Dr. Pramuan Leophairatana, Mr. Prayad Liewphairatana, Mrs. Orapin Leophairatana, Miss Malinee Leophairut, Mr. Khantachai Vichakhana and Mr. Pakorn Leopairut as of 31 December 2019.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2018	Fiscal year ended December 31, 2019		
Revenue from power sales	872.4	2,131.3	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.
Revenue from petrol and gas (NGV) station	39.4	33.8	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.
Revenue from sales of steam	31.2	33.8	The Company sold steam to TPIPL at BHT650 per ton which was derived from production cost plus 10% margin. 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.	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.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2018	Fiscal year ended December 31, 2019		
Revenue from provision of labor	39.3	35.7	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.
Expenses to purchase waste heat	35.7	28.1	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.
Expenses to purchase coal	1,606.5	2,221.6	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 which increases the price by 2% on 1 April 2019.	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
Expenses to purchase untreated water	120.5	128.0	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.
Expenses to purchase shredded tire	38.4	2.2	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.
Expenses for rental of land	10.4	16.7	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:	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	8.5	10.8	<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> </ul>	

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2018	Fiscal year ended December 31, 2019		
			<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 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 2022. 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>	
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.
Expenses for material samples analysis and industrial waste disposal service fees	195.0	230.8	The Company entered into a contract with TPIPL whereby TPIPL was engaged to perform material sample analysis and industrial waste disposal services. The material sample analysis fee consists of (1) material collection fees of Bath 100 per sample (2) materials preparation fee of Bath 300 per sample (3) analysis fee based on the material types from Bath 300-10,400 per sample. Industrial waste disposal services fee, based on the waste type and chloride rate, is about Bath 1,000 - 5,000 per ton with a special discount of 10% of industrial waste disposal services fee.	The transaction is classified as an ordinary course of business of the Company with the service fee referenced from Thailand Institute of Scientific and Technological Research, Institute for Scientific and Technological Research and Services (ISTRS) and Environmental Research Institute Chulalongkorn University. Hence the transaction is reasonable and beneficial to the company.

## (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 31 December 2019.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2018	Fiscal year ended December 31, 2019		
Revenue from petrol and gas (NGV) station	0.0	0.1	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.
Expenses for purchasing products and other services	6.9	4.3	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 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.

## (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 31 December 2019.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2018	Fiscal year ended December 31, 2019		
Revenue from petrol and gas (NGV) station	4.2	0.8	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.

#### (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 31 December 2019.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2018	Fiscal year ended December 31, 2019		
Revenue from petrol and gas (NGV) station	0.3	0.3	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.

#### (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. Pakkapol Leopairut as of 31 December 2019.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2018	Fiscal year ended December 31, 2019		
Revenue from petrol and gas (NGV) station	0.0	0.0	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.

#### (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 Leopairut as of 31 December 2019.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2018	Fiscal year ended December 31, 2019		
Revenue from petrol and gas (NGV) station	0.1	0.1	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.
Expenses for insurance premium	2.3	2.8	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	0.8	0.9		

#### (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 31 December 2019.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2018	Fiscal year ended December 31, 2019		
Revenue from petrol and gas (NGV) station	0.2	0.1	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.
Expenses for insurance premium	45.3	68.0	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	20.5	41.6		

#### (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 Pattrapan Leophairut, Mr. Pakorn Leopaiprot, Mr. Pakkapol Leopaiprot and Ms. Nitawan Leophairatana as of 31 December 2019.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2018	Fiscal year ended December 31, 2019		
Revenue from petrol and gas (NGV) station	0.0	0.0	The Company sold petrol and gas at its service stations at retail market price to United Grain Industry Company Limited for use in its 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.
Expenses for land rental	7.0	7.2	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 &lt;2-3-44.5 rai, the contract period is 3 years, ending the contract in June 2022, 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.
Payable advance for and rental	2.0	2.1		

### (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 31 December 2019.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2018	Fiscal year ended December 31, 2019		
Revenue from petrol and gas (NGV) station	0.0	0.0	The Company sold petrol and gas at its service stations at retail market price to Pornchai Enterprises Company Limited for use in its vehicles. Such retail price was applied to other customers both related and unrelated to the Company.	
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 2022 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.	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		

### (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 Pattrapran Leophairut, Mr. Pakorn Leopairut, Mr. Pakkapol Leopairut and Ms. Nitawan Leophairatana as of 31 December 2019.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2018	Fiscal year ended December 31, 2019		
Expenses for Land rental	1.3	1.3	The Company rents 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 2022 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 31 December 2019.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2018	Fiscal year ended December 31, 2019		
Expenses for Land rental	1.3	1.3	The Company rents 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 2022 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 E0EG 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 31 December 2019.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2018	Fiscal year ended December 31, 2019		
Expenses for Land rental	4.0	4.0	The Company rents 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 2022 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.

### (13) TPI Healthcare Company Limited

(13) TPI Healthcare Company Limited is 99.99% held by Leophairatana group, 6.25% by Pornchai Enterprises Co. Ltd., 2.19 % held by TPI Holdings Company Limited and 0.94 % by TPI E0EG 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 31 December 2019.

Transaction	Transaction Size (Million BHT)		Necessity and Reasonableness	Opinion of the Audit Committee
	Fiscal year ended December 31, 2018	Fiscal year ended December 31, 2019		
Expenses for Product purchases	0.0	8.7	The Company purchases products from TPI Healthcare Company Limited for sales promotion at the Company's petrol stations such as drinks. The purchase price of the product is the same rate that TPI Healthcare Company Limited offered to others, both related and non-related	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.

The details of the connected transactions for the year 2017 can be found in the annual report of the company through the company's website ([www.tpipolenepower.co.th](http://www.tpipolenepower.co.th)).

## 2. Procedures to approve Related Transactions

The Company's Board of Directors' meeting no.2/2563, held on 28 February 2020, 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 transactions 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 Transaction

To have the related party transactions carried out on transparent basis, the Company has a 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 shareholders 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 practices 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.

## **1. Financial statements and auditor's report**

### **1.1 Auditor**

The auditors for the consolidated and separate financial statements which were audited for the year ended 31 December 2019 is Mr. Bunyarit Thanormcharoen, registration number 7900 from KPMG Phoomchai Audit Ltd.

### **1.2 Summary of audit reports**

The auditor audited the consolidated and separate financial statements of TPI Polene Power Public Company Limited and its subsidiaries and of TPI Polene Power Public Company Limited, which consists of the consolidated and separate statements of financial position as at 31 December 2019, the consolidated and separate statements of comprehensive income, changes in equity, and cash flow for the same year ended and notes which contain a summary of significant accounting policies and other matters.

The auditor is of the opinion that the above financial statements present fairly, in all material respects, the financial position of the company as of 31 December 2019. and cash flow for the year then ended in essence accordance with Thai Financial Reporting Standards.

## 2. Summary of Separate financial statements of TPI Polene Power Plc. in 2017, 2018 and 2019

### 2.1 Statement of financial position

(unit : Million Baht)	As of December 31					
	2017	%	2018	%	2019	%
<b>Current assets</b>						
Cash and cash equivalents	456.16	1.65	450.16	1.43	689.56	1.82
Current investments	3,774.56	13.69	3,960.65	12.56	2,650.70	7.00
Trade accounts receivable	736.99	2.67	1,530.70	4.85	2,148.28	5.68
Other receivables	126.40	0.46	104.53	0.33	54.59	0.14
Receivables and advances to related parties	27.62	0.10	35.85	0.11	61.00	0.16
Inventories	449.33	1.63	587.73	1.86	1,052.51	2.78
Other current assets	268.49	0.97	12.20	0.04	10.47	0.03
<b>Total current assets</b>	<b>5,839.55</b>	<b>21.18</b>	<b>6,681.82</b>	<b>21.18</b>	<b>6,667.09</b>	<b>17.61</b>
<b>Non-current assets</b>						
Investments in subsidiaries	-	-	-	-	-	-
Other long-term investments	5.41	0.02	5.34	0.02	186.53	0.49
Property, plant and equipment	21,503.53	78.00	24,642.82	78.13	30,770.44	81.29
Leasehold rights	0.38	0.00	0.11	0.00	0.00	0.00
Advances for plant and equipment	103.29	0.37	106.95	0.34	116.24	0.31
Deferred tax assets	114.76	0.42	91.70	0.29	91.01	0.24
Other non-current assets	-	-	12.48	0.04	21.26	0.06
<b>Total non-current assets</b>	<b>21,727.36</b>	<b>78.82</b>	<b>24,859.41</b>	<b>78.82</b>	<b>31,185.49</b>	<b>82.39</b>
<b>Total assets</b>	<b>27,566.91</b>	<b>100.00</b>	<b>31,541.22</b>	<b>100.00</b>	<b>37,852.57</b>	<b>100.00</b>
<b>Current liabilities</b>						
Short-term loans from financial institutions	-	-	-	-	-	-
Trade accounts payable	173.25	0.63	377.10	1.20	439.83	1.16
Other payables	2,902.91	10.53	1,611.41	5.11	1,583.96	4.18
Payables and advances from related parties	32.37	0.12	79.82	0.25	93.99	0.25
Interest payable	-	-	14.53	0.05	34.86	0.09
Short-term loans from related party	-	-	-	-	-	-
Current portion of long-term loans from financial institutions	-	-	-	-	-	-
Income tax payable	-	-	35.62	0.11	35.56	0.09
Other current liabilities	55.89	0.20	118.71	0.38	146.08	0.39
<b>Total current liabilities</b>	<b>3,164.42</b>	<b>11.48</b>	<b>2,237.19</b>	<b>7.09</b>	<b>2,334.27</b>	<b>6.17</b>
<b>Non-current liabilities</b>						
Long-term loans from financial institutions	-	-	-	-	-	-
Long-term loan from related party	-	-	-	-	-	-
Debentures	-	-	4,000.00	12.68	8,000.00	21.13
Non-current Provisions for employee benefits	70.65	0.26	87.70	0.28	151.12	0.40
Decommissioning costs	117.81	0.43	167.96	0.53	256.86	0.68
<b>Total non-current liabilities</b>	<b>188.46</b>	<b>0.68</b>	<b>4,255.66</b>	<b>13.49</b>	<b>8,407.97</b>	<b>22.21</b>
<b>Total liabilities</b>	<b>3,352.87</b>	<b>12.16</b>	<b>6,492.85</b>	<b>20.59</b>	<b>10,742.24</b>	<b>28.38</b>
<b>Shareholders' equity</b>						
Authorized share capital	8,400.00	30.47	8,400.00	26.63	8,400.00	22.19
Issued and paid share capital	8,400.00	30.47	8,400.00	26.63	8,400.00	22.19
Shares premium on ordinary shares	14,580.89	52.89	14,580.89	46.23	14,580.89	38.52
Retained earnings						
Appropriated Legal reserve	348.38	1.26	533.36	1.69	763.64	2.02
Unappropriated	884.77	3.21	1,534.04	4.86	3,365.96	8.89
Other components of equity	-	-	0.09	0.00	(0.16)	(0.00)
<b>Total shareholders' equity</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.00</b>	<b>0.00</b>
<b>Total liabilities and shareholders' equity</b>	<b>24,214.03</b>	<b>87.84</b>	<b>25,048.38</b>	<b>79.41</b>	<b>27,110.33</b>	<b>71.62</b>
<b>Total liabilities</b>	<b>27,566.91</b>	<b>100.00</b>	<b>31,541.22</b>	<b>100.00</b>	<b>37,852.57</b>	<b>100.00</b>

## 2.2 Statement of comprehensive income

(unit : Million Baht)	As of December 31					
	2017	%	2018	%	2019	%
<b>Income</b>						
Revenue from sale of power and goods	2,853.60	55.00	4,235.36	53.51	6,338.04	58.12
Revenue from adders	2,011.21	38.77	3,384.45	42.76	4,233.16	38.82
Net foreign exchange gain	201.62	3.89	46.62	0.59	91.64	0.84
Investment income	72.30	1.39	49.17	0.62	78.69	0.72
Other income	49.42	0.95	199.75	2.52	164.29	1.51
<b>Total income</b>	<b>5,188.15</b>	<b>100.00</b>	<b>7,915.35</b>	<b>100.00</b>	<b>10,905.83</b>	<b>100.00</b>
<b>Expenses</b>						
Cost of sales of power and goods	(2,227.54)	(42.94)	(3,651.43)	(46.13)	(5,529.73)	(50.70)
Distribution costs	(63.82)	(1.23)	(66.56)	(0.84)	(75.68)	(0.69)
Administrative expenses	(188.77)	(3.64)	(318.76)	(4.03)	(432.15)	(3.96)
Finance costs	(40.92)	(0.79)	(18.97)	(0.24)	(159.48)	(1.46)
<b>Total expenses</b>	<b>(2,521.04)</b>	<b>(48.59)</b>	<b>(4,055.72)</b>	<b>(51.24)</b>	<b>(6,197.04)</b>	<b>(56.82)</b>
<b>Profit before income tax expense</b>	<b>2,667.11</b>	<b>51.41</b>	<b>3,859.63</b>	<b>48.76</b>	<b>4,708.79</b>	<b>43.18</b>
Income tax (expense) income	(75.58)	(1.46)	(160.67)	(2.03)	(101.98)	(0.94)
<b>Profit for the year</b>	<b>2,591.53</b>	<b>49.95</b>	<b>3,698.96</b>	<b>46.73</b>	<b>4,606.81</b>	<b>42.24</b>
<b>Other comprehensive income (expense)</b>						
Exchange differences on translating	-	-	0.09	0.00	(0.25)	(0.00)
Gains (losses) on remeasurements of defined benefit plans	(2.97)	(0.06)	(10.89)	(0.14)	(30.76)	(0.28)
Income tax relating to items that will not be reclassified	0.59	0.01	2.18	0.03	6.15	0.06
Net change in fair value of available-for-sale investments	-	-	-	-	-	-
<b>Other comprehensive income (expense) for the year, net of tax</b>	<b>(2.37)</b>	<b>(0.05)</b>	<b>(8.62)</b>	<b>(0.11)</b>	<b>(24.86)</b>	<b>(0.23)</b>
<b>Total comprehensive income (expense) for the year</b>	<b>2,589.16</b>	<b>49.91</b>	<b>3,690.34</b>	<b>46.62</b>	<b>4,581.95</b>	<b>42.01</b>
<b>Basic earnings per share (in Baht)</b>	<b>0.33</b>	<b>-</b>	<b>0.44</b>	<b>-</b>	<b>0.55</b>	<b>-</b>

## 2.3 Revenue from external customers

(unit : Million Baht)	2017	%	2018	%	2019	%
Energy & Utilities	4,164.73	85.61	6,912.25	90.71	9,851.49	93.19
Petrol and gas stations	700.09	14.39	707.56	9.29	719.71	6.81
Other	-	-	-	-	-	-
<b>Total</b>	<b>4,864.81</b>	<b>100.0</b>	<b>7,619.81</b>	<b>100.00</b>	<b>10,571.20</b>	<b>100.00</b>

## 2.4 Statement of cash flow

(unit : Million Baht)	2017	2018	2019
<b>Net cash from operating activities</b>	<b>2,595.87</b>	<b>3,932.68</b>	<b>4,567.13</b>
<b>Net cash used in investing activities</b>	<b>(8,580.44)</b>	<b>(5,082.67)</b>	<b>(5,781.83)</b>
<b>Net cash from financing activities</b>	<b>6,154.89</b>	<b>1,144.00</b>	<b>1,348.43</b>
<b>Net increase (decrease) in cash and cash equivalents before effect of exchange rates</b>	<b>170.32</b>	<b>(6.09)</b>	<b>133.74</b>
Effect of exchange rate changes on balances held in foreign currencies	(0.03)	0.09	(0.26)
Cash and cash equivalents from changes in investments in subsidiaries	-	-	105.91
Cash and cash equivalents at 1 January	285.86	456.16	450.16
<b>Cash and cash equivalents at 31 December</b>	<b>456.16</b>	<b>450.16</b>	<b>689.56</b>

### 3. Key Financial Ratio

Financial Ratio	Separate financial statements As of December 31,		
	2017	2018	2019
<b>Liquidity Ratios</b>			
Current ratio (times)	1.85	2.99	2.86
Quick ratio (times)	1.57	2.66	2.35
Cash ratio (times)	0.87	1.46	2.00
Receivables turnover (times)	6.24	6.72	5.75
Collection period (days)	57.71	53.57	62.64
Inventory turnover (times)	5.29	7.04	6.74
Inventory turnover period (days)	68.04	51.12	53.39
Accounts payable turnover (times)	16.49	13.27	13.54
Payment Period (days)	21.83	27.13	26.59
Cash cycle (days)	103.92	77.56	89.44
<b>Profitability Ratios</b>			
Gross profit margin (%)	54.21	52.08	47.69
Operating profit margin (%)	50.04	49.64	44.44
Other profit margin (%)	4.49	0.97	0.10
Cash to net profit ratio (%)	106.65	103.96	97.22
Net profit margin (%)	49.95	46.73	42.24
Return on equity (%)	15.93	15.02	17.66
<b>Efficiency Ratios</b>			
Return on assets (%)	11.33	12.52	13.28
Return on fixed assets (%)	15.99	18.12	19.54
Total assets turnover (times)	0.23	0.27	0.31
<b>Financial Policy Ratios</b>			
Financial debts to equity ratio (times)	0	0.16	0.30
Debts to equity ratio (times)	0.14	0.26	0.40
Net interest bearing debt to ebitda ratio (times) <sup>(1)</sup>	(1.51)	(0.10)	0.85
Interest coverage ratio (times) <sup>(2)</sup>	29.94	1,078,060.75	42.46
Debt service coverage ratio (times) <sup>(3)</sup>	0.28	1,078,060.75	42.46
B/E,P/N size to interest bearing debt ratio (times) <sup>(4)</sup>	N.A	0	0
Interest Bearing debt matured 1 year to total interest bearing debt <sup>(5)</sup>	N.A	0	0
Loan from Financial Institution to total debt ratio <sup>(6)</sup>	0	0	0

notes :

- (1) Net interest-bearing debt to EBITDA ratio calculated from (interest bearing debt - cash and cash equivalent-current investment) / 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 Decemeber 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) Loans from Financial Institution to total debt ratio calculated from loan from investment institutions / total debt for the year 2017,2018 and 2019, the value is 0 because the company does not have debt obligations from financial institutions.

# Management Discussion and Analysis

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## 1. Operating Results and Financial Status for 2019

### Revenues

Total revenue from sales (comprising revenue from sale of power and goods and revenue from adders) in 2019 was Baht 10,571.2 million compared with Baht 7,619.8 million in 2018, an increase of Baht 2,951.4 million or 38.7%. The increase in sales revenues was primarily attributed to an increase in sales revenues in the energy and utilities business, which was Baht 9,851.5 million in 2019 compared with Baht 6,912.2 million in 2018.

In 2019, sales of power were Baht 9,807.3 million, comprising sales to EGAT of Baht 7,676.0 million and sales to TPIPL of Baht 2,131.3 million, whereas 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. The increase in revenue from power sales was mainly due to the combined operation of RDFPP-70MW (TG6) and the Waste Heat Recovery power plant WHPP-30 MW (TG4) power plants totaling RDFPP-100MW power plant sold electricity fully in the year 2019. The company installed Boilers (B11, B12) to expand power capacity resulting in an increase in sales to the Electricity Generating Authority of Thailand. The 150 MW power plant (TG8) has also started selling electricity to TPI Polene Plc since January 25, 2019.

Sales from petrol and gas stations increased from Baht 707.6 million in 2018 to Baht 719.7 million in 2019, which was mainly due to an increase in sales volume of petrol and gas.

### Other Income

Other income decreased from Baht 199.8 million in 2018 to Baht 164.3 million in 2019, a decrease of Baht 35.5 million or 17.8 %, due to a decrease of the revenue from the insurance compensation of Baht 72.7 million from that of Baht 115.7 million in the year 2018 to that of baht 43.0 million in 2019. While the company's rental income increased Baht 26.5 million from that of Baht 67.8 million in 2018 to that of baht 94.3 million in 2019.

### Cost of Goods Sold

Cost of goods sold increased from Baht 3,651.4 million in 2018 to Baht 5,529.7 million in 2019, an increase of Baht 1,878.3 million or 51.4%, which was mainly due to an increase in units of electricity production in 2019.

### Gross Profit

Gross profit increased from Baht 3,968.4 million in 2018 to Baht 5,041.5 million in 2019, an increase of Baht 1,073.1 million or 27.0 %, as a result of higher units of power sales in 2019 compared with the same in 2018. Gross profit margins decreased from 52.1% in 2018 to 47.7% in 2019.

### Selling Expenses

Selling expenses increased from Baht 66.6 million in 2018 to Baht 75.7 million in 2019, an increase of Baht 9.1 million or 13.7%. Selling expenses account for 0.7% of sales revenue in 2018, decreased from 0.9% in 2018, mainly due to higher sales revenue from energy and utilities businesses.

### Administrative Expenses

Administrative expenses increased from Baht 318.8 million in 2018 to Baht 432.2 million in 2019, an increase of Baht 113.4 million or 35.6%, due to an increase in public relations and donation expenses. Administrative expenses accounted for 4.2 % and 4.1% of total sales revenue in 2018 and 2019, respectively.

### Finance cost

In 2019, the Company recorded finance costs of Baht 159.5 million compared with Baht 19.0 million in 2018, an increase of Baht 140.5 million or 740.7%, as the company issued debentures in the amount of Baht 4,000 million in November, 2018 and Baht 4,000 million in August 2019.

### Income Tax Expense

In 2019, the company recorded income tax expenses of Baht 102.0 million, a decrease from Baht 160.7 million in 2018, as in 2019 the profit generated from WH-40MW (TG1&2) and RDF-20MW (TG3) power plants decreased, after the tax benefits from BOI promotional privileges of those plants expired in June 2017.

### Net Profit

In 2019, the Company registered net profits of Baht 4,606.8 million compared with Baht 3,699.0 million in 2018, an increase of Baht 907.8 million or 24.5%. The Company's net profit margin decreased from 46.7% in 2018 to 42.2% in 2019 mainly due to the increase in electricity sales to TPI Polene Plc. which generated a lower profit margin compared to sales to EGAT.

## 2. Financial Status and Financial Ratio

### Assets

At year-end 2018 and 2019, total consolidated assets were Baht 31,541.2 million and Baht 37,852.6 million respectively. The increase in total assets is mainly due to investment in property, plant and equipment and the increase in trade receivable account as sales increase.

At year-end 2018 and 2019, total consolidated current assets were Baht 6,681.8 million and Baht 6,667.1 million respectively. Accounts receivables represented 22.9% and 32.2% of total current assets, which equated to an average collection period of 54 days and 63 days respectively. Inventory accounted for 8.80 % and 15.80 % of total current assets in 2018 and 2019, equating to average inventory turnover periods of 51 days and 53 days respectively.

As of 31 December 2018 and 31 December 2019, the property, plant and equipment of the Company were valued at Baht 24,642.8 million and Baht 30,770.4 million respectively. The increase in the property, plant and equipment value was mainly due to additional investment in property for future power plants of the Company.

### Liabilities

Total consolidated liabilities were Baht 6,492.8 million and Baht 10,742.2 million at the end of 2018 and 2019 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 in 2019. Other payables accounted for 72.0% and 67.9% of total current liabilities in 2018 and 2019 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 2018 and 2019 were Baht 377.1 million and Baht 439.8 million, representing an average payment period of 27 days and 27 days respectively.

### Shareholders' Equity

As of 31 December 2018 and 31 December 2019, shareholders' equity was Baht 25,048.4 million and Baht 27,110.3 million respectively, as in 2019 the Company operated its business with a profit.

### Capital Structure

At the end of 2018 and 2019, total debts to equity ratios were at 0.26 and 0.40 times and the financial debt to equity ratios were 0.16 and 0.30 times respectively, as in the year 2019 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 2018 and 2019, the Company recorded consolidated net cash flow from operating activities of Baht 3,932.7 million and 4,567.1 million, respectively.

In 2018 and 2019, the Company registered net cash flow in investing activities of Baht (5,082.8) million and Baht (5,781.8) million respectively, as in the year 2019 the company had higher current investments compared to the same in 2018.

In 2018 and 2019 the Company recorded net cash flow from financing activities of Baht 1,144.0 million and Baht 1,348.4 million, respectively. As a result, the Company's net cash flow after financing activities in 2018 and 2019, were at Baht (6.1) million and Baht 133.7 million, respectively.

The Company and its subsidiaries have sufficient funds for investment in various projects. The source of funds comes from the net cash flow from operating activities, debenture offering, loans from financial institutions, and revolving credit from financial institutions.

As of 31 December 2019, the debentures debt of the Company and its subsidiaries equals Baht 8,000 million, in accordance with the terms and conditions of the debentures stipulated that the debt to equity ratio must be maintained (debt means interest-bearing liabilities) at the end of the quarterly accounting period or the end of the fiscal year throughout the term of the debentures and must not exceed 1.75: 1.

As of 31 December 2019, the Company has an interest-bearing debt to equity ratio of 0.3: 1, which does not exceed the required rate of 1.75: 1, in accordance with the terms and conditions of the debenture rights of the company. However, with the interest-bearing debt ratio (net after cash and cash equivalents and current investments) to shareholders' equity equal to 0.16: 1.

### Commitments with non-related parties

As of 31 December 2019, the Company and subsidiaries had commitments as follows:

1. Commitments under construction contracts for machinery and equipment in the amount of Baht 281 million, using sources of funds from cash flows from business operations including the issuance and offering of debentures

2. Commitments under car rental agreements and land lease agreements which are divided into commitments within 1 year of Baht 4 million and commitments with periods of more than 1 year but not more than 5 years of Baht 2 million by using funding from cash flows from business operations.
3. Letter of credit obligation (for importing machinery and spare parts) in the amount of Baht 499 million and bank guarantees of Baht 11 million by using the funds from the cash flow from business operations and revolving credit facilities from financial institutions in the amount of Baht 1,600 million.

**Information of Directors, Executives and Company Secretary** as at 31 December 2019

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> 76 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.
			Oct2019-Present	Executive Director	TPI Deep Sea Port Co.,Ltd.
			Oct2019-Present	Executive Director	TPI Polene Power (Songkla) Co.,Ltd.
			Oct2019-Present	Executive Director	TPI Wind Power Co.,Ltd.
			Oct2019-Present	Executive Director	TPI Solar Power Co.,Ltd.
			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> 71 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. Diplomas, National Defense College, The National Defence Course Class 41 and The Joint State-Private Sector Course 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.
			Aug2016-Present	Executive Director	Thai Nitrate Co., Ltd.
			Aug2019-Present	Executive Director	TPI Deep Sea Port Co.,Ltd.
			Oct2019-Present	Executive Director	TPI Polene Power (Songkla) Co.,Ltd.
			Oct2019-Present	Executive Director	TPI Wind Power Co.,Ltd.
			Oct2019-Present	Executive Director	TPI Solar Power Co.,Ltd.
			Oct2019-Jan2015	Executive Director	Thai Nitrate Co., Ltd.
			1996-Jul2014	Executive Director	Mondo Thai Co., Ltd.
1990-Aug2013	Executive Director	Thai Nitrate Co., Ltd.			
1978-2006	President	Thai Petrochemical Industry Plc.			
<b>Mr. Prayad Liewphairatana</b> 69 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	Executive 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> 73 years of age <b>Position</b> -Vice Chairman of the Board; Vice Chairman of the Management Committee - Mr.Prachai Leophairatana (Husband)	1. Political Science (2 <sup>nd</sup> 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.
			Oct2019-Present	Executive Director	TPI Deep Sea Port Co.,Ltd.
			Oct2019-Present	Executive Director	TPI Polene Power (Songkla) Co.,Ltd.
			Oct2019-Present	Executive Director	TPI Wind Power Co.,Ltd.
			Oct2019-Jan2015	Executive Director	TPI Solar Power Co.,Ltd.
			Oct2013-Jan2015	Executive Director	Thai Nitrate Co., Ltd.
			2009-Aug2013	Executive 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> 42 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	Executive 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.
			Oct2019-Present	Executive Director	TPI Deep Sea Port Co.,Ltd.
			Oct2019-Present	Executive Director	TPI Polene Power (Songkla) Co.,Ltd.
			Oct2019-Present	Executive Director	TPI Wind Power Co.,Ltd.
Oct2019-Present	Executive Director	TPI Solar Power 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> 41 years of age <b>Position</b> -Director; Member of the Management Committee and President - Miss Pattrapran 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	Executive Director	TPI Polene Power Plc.
			Jan 2016-Present	Member of the Management Committee	TPI Polene Power Plc.
			Feb2016-Present	President	TPI Polene Power Plc.
			May2019-Present	Executive Director	TPI Polene 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.
			2011-Present	Executive Director	Thai Petrochemical Industry Co., Ltd.
			2007-Present	President	Thai Nitrate Co., Ltd.
Oct2019-Present	Executive Director	TPI Deep Sea Port Co.,Ltd.			
Oct2019-Present	Executive Director	TPI Polene Power (Songkla) Co.,Ltd.			
Oct2019-Present	Executive Director	TPI Wind Power Co.,Ltd.			
Oct2019-Present	Executive Director	TPI Solar Power Co.,Ltd.			
2007-2008	Investment Analyst	MFC Asset Management Plc.			
2002-2007	Supervisor	Thai Petrochemical Industry Plc.			
<b>Mr. Pakkapol Leopairut</b> 38 years of age <b>Position</b> -Director ; Member of the Management Committee and Executive Vice President-Accounting and Finance - Mr.Pakorn Leopairut (Elder brother) - MissPattrapran 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	Executive 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.
			Oct2019-Present	Executive Director	TPI Deep Sea Port Co.,Ltd.
			Oct2019-Present	Executive Director	TPI Polene Power (Songkla) Co.,Ltd.
			Oct2019-Present	Executive Director	TPI Wind Power Co.,Ltd.
			Oct2019-Present	Executive Director	TPI Solar Power 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> 41 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 2. LL.M in Taxation New York University - School of Law, Graduated 2007 3. Licensed Attorney in New York State 4. M.P.A. Cornell University, Graduated 2003 5. B.A. Cornell University Major In Chemistry and Chemical Biology) Graduated 2002 6. Directors Accreditation Program (DAP-No.131/2016) Thai Institute of Directors (IOD)	0.00	Jan2016-Present	Member of the Management Committee	TPI Polene Power Plc.
			Jul2015-Present	Executive Director	TPI Polene Power Plc.
			2013-Feb2016	Assistant Vice President	TPI Polene Power Plc.
			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.
			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 Intertrade Co.,Ltd.
			Jul2015-Present	Executive Director	TPI Refinery (1997) Co.,Ltd.
			Oct2019-Present	Executive Director	TPI Deep Sea Port Co.,Ltd.
			Oct2019-Present	Executive Director	TPI Polene Power (Songkla) Co.,Ltd.
			Oct2019-Present	Executive Director	TPI Wind Power Co.,Ltd.
Oct2019-Present	Executive Director	TPI Solar Power Co.,Ltd.			
2008-2013	Assistant Vice President	TPI Polene Public Co.,Ltd.			
2007-2008	Senior Associate	Earnst and Young LLP, New York City, USA. United Grain Industry Co., Ltd. Thai Plastic Product Co., Ltd. Thai Plastic film Co., Ltd.			
<b>Ms. Malinee Leopairut</b> 78 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. 2. Bachelor of Commerce and Accounting Major in Statistics (Second Honour) Chulalongkorn University 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) (Class 22/2002) Thai Institute of Directors (IOD)	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.
			1997-Present	Chief Executive Officer	Bangkok Union Insurance Plc.
			1973-2011	Managing Director	Bangkok Union Insurance Plc.
			1987-1989	President	Thai General Insurance Association

NAME/AGE/POSITION/ FAMILY RELATION AMONG DIRECTORS & EXECUTIVES	EDUCATIONAL BACKGROUND/TRAINING	% SHARE HOLDING <sup>1</sup>	WORK EXPERIENCE		
			DURATION	POSITION	COMPANY/ BUSINESS
<b>Dr. Porakrit Leophairatana</b> 29 years of age <b>Position-Director</b> - Dr.Pramuan Leophairatana (Father) - Ms.Nitawan Leophairatana (Elder sister)	1. Ph.D. Chemical Engineering, Columbia University, Graduated 2017  2. M.Phil. Chemical Engineering, Columbia University, Graduated 2016  3. M.S. Chemical Engineering, Columbia University, Graduated 2015  4. B.S. Chemical and Biological Engineering, Tufts University, Graduated 2013	0.00	Jan2020-Present	Executive Director	TPI Polene Power Plc.
			Mar2018-Present	Assistant Vice President	TPI Polene Plc.
			May2018 Present	Director	TPI Polene Power (Onnut) Co.,Ltd.
			Aug2019-Present	Director	Zenith International Power Co.,Ltd.
			Sep2019-Present	Executive Director	TPI Polene Power (Songkla) Co.,Ltd.
			Sep2019-Present	Executive Director	TPI Deep Sea Port Co.,Ltd.
			Sep2019-Present	Executive Director	TPI Wind Power Co.,Ltd.
			Sep2019-Present	Executive Director	TPI Solar Power Co.,Ltd.
			Aug2019-Present	Director	TPI Refinery (1997) Co.,Ltd.
			May2018-Present	Director	TPI All Seasons Co., Ltd.
			May2018-Present	Director	TPI Healthcare Co.,Ltd.
			May2018-Present	Director	TPI Bio Pharmaceuticals Co.,Ltd.
			Apr2019- resent	Director	Bangkok life Insurance Plc.
Mar2017-May 2018	CTO	TempRes Technologies LLC			
	Co-Funder				
	Oct2017-Mar 2019	Post-Doctoral Researcher	Columbia University, New York		
<b>Mr. Manu Leopairote</b> 78 years of age <b>Position-Independent Director;</b> 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>  73 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 - Enhancing Audit Committee Excellences through Internal Audit, (2017) - The Business in the abnormali- ties era (EY) (2017) - Cyber Resilience Leadership (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
				Director	The Chaipattana Foundation
				Director	Suan Luang foundation Rama9
				Legal Advisor	Office of the Royal Development Projects Board
				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			

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> 73 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>  72 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.
			June2018-Present	Chairman and Independent Director	TPI Polene Public Co.,Ltd.
			Aug2014-Present	Independent Director and the Nomination, Remuneration and Corporate Governance Committee	L.P.N. Development Public Co., Ltd.
			Extracurricular	Independent Director	Tong Hua Holding Plc.
				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	Thai Red Cross Council			
	Committee of Inquiry	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> 71 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	Independent Director	TPI Polene Power Public Co.,Ltd.
			2019-Present	Director	Sirindhorn National Medical Rehabilitation Institute
			1999-2001	EXECUTIVE V.P.	TISCO Bank Public Co.,Ltd.
			2002-2007	Managing Director	TISCO Securities Co.,Ltd.
<b>Mr. Worawit Lerdbussarakam</b> 55 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	Senior Vice President -Production	TPI Polene Power Public Co.,Ltd.
			Feb2016- Present	Vice President -Production	TPI Polene Power Public Co.,Ltd.
			Jan1990-Feb2016	Vice President -Production	TPI Polene Public Co.,Ltd.
<b>Mrs. Sirirat Lerthirunrat</b> 60 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> 53 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> 57 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> 56 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	Manager-Finance	TPI Polene Power Public Co.,Ltd.
			Dec2006-Mar2016	Assistant Manager-Finance	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	Secretary	TPI Polene Power Public Co.,Ltd.
			Nov2012-Present	Supervisor	TPI Polene Public Co.,Ltd.

Remark : (1) Percentage of shareholding date was as at January 31, 2019.

**Position of the Management and Controlling Persons over the Company and Related Companies as of 31 December 2018**

Company	Mr. Prachai Leophairatana	Mr. Pramuan Leophairatana	Mrs. Orapin Leophairatana	Mr. Prayad Leophairatana	Miss Pattrapan Leopairut	Mr. Rakorn Leopairut	Mr. Pitkeapol Leopairut	Mrs. Nitawan Leophairatana	Miss Malinee Leophairatana	Mr. Manu Leopairute	Dr. Ponnakit Leophairatana	Dr. Thiraphong Vithet	Dr. Abhijai Chandrasen	Mr. Kiantachai Vichakhana	Mr. Vanchai Manosuthi	Mr. Worawit Lerdussanankam	Ms. Sirirat Lerthirumet	Mr. Somkiet Teeratrakuljaisa	Miss Karuna Romsiripan	Miss Weerawan Lamchaiwat
<b>Company</b>	X//	/,V	/,V	/,V	/,V	/,V	/,V	/,V	/	///	///	///	///	/	/	/,V	/,V	/,V	/,V	/,V
TPI Polene Power Public Company Limited																				
<b>Related Company</b>																				
Zenith International Power 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 EDEG 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//	//	-	//	//	//	//	//	//	-	-	-	-	-	-	-	-	-	-	-
Ponchai 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.	X//	-	//	-	//	//	//	//	-	-	-	-	-	-	-	-	-	-	-	-
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	-	-	-	-	-	-	-	-	-	-	-	///	-	-	-	-	-	-	-	-
Better Way (Thailand) Co., Ltd.	-	-	-	-	-	-	-	-	-	-	-	/	-	-	-	-	-	-	-	-

	Mr. Prachai Leophairatana	Mr. Pramuan Leophairatana	Mrs. Orapin Leophairatana	Mr. Prayad Leophairatana	Miss Patrapan Leophairatana	Mr. Palom Leophairatana	Mr. Paikapol Leophairatana	Mrs. Nitawan Leophairatana	Miss Malinee Leophairatana	Mr. Manu Leophairatana	Dr. Parakrit Leophairatana	Dr. Thiraphong Wichet	Dr. Abhijai Chandrasen	Mr. Khantachai Vichakkhana	Mr. Vanchai Manosathi	Mr. Worawit Leorbussanaband	Ms. Sirat Leorbussanaband	Mr. Somkiat Teeratrakulpisa	Miss Karuna Pemsripan	Miss Weerawan Larphaisut
Kasikombank Public Company Limited	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Siam Motors Co., Ltd.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L.P.N. Development Public Company Limited	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
International Trading Development Co., Ltd.	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI
Phorphan Phannich Co., Ltd.	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI
Thai Agrico Co., Ltd.	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI
Hong Yiah Seng Warehouse Co., Ltd.	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI
TPI All Seasons Company Limited	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI
TPI Polene Public Company Limited	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI
Jaturat Co., Ltd.	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI
TPI Holdings Co., Ltd.	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI
Mondo Thai Co., Ltd.	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI
Rayong Forest Co., Ltd.	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI
TPI Bio Pharmaceuticals Co., Ltd.	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI
TPI Olefins Co., Ltd.	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI
Master Archeep (Thailand) Co., Ltd.	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI	XI
Rangsit Patumpom Co., Ltd.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
K. Cotton & Glass 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 Phatumpom Housing Project Co., Ltd.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Krung Thai Sugar Factory Co., Ltd.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Siam Steel International Public Company Limited	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ชื่อบริษัท	นายประชัย เสี่ยวไพรัตน์	ดร.ประมวศ เสี่ยวไพรัตน์	นางอรุณี เสี่ยวไพรัตน์	นายประยงค์ เสี่ยวไพรัตน์	นายภัทธร เสี่ยวไพรัตน์	นางฉวีวัน เสี่ยวไพรัตน์	น.ม.เสถียร เสี่ยวไพรัตน์	นายอนุ เสี่ยวไพรัตน์	ดร.ประภพ เสี่ยวไพรัตน์	ดร.วิระพงษ์ วิคิดเศรษฐ์	ดร.อภิรักษ์ จินทรเกษม	นายธเนศ วิจิตรณะ	นายวันชัย มโนสุทธี	นายวิฑูรย์ เสียมุขชาติ	นางศิริรัตน์ เสียมุขชาติ	นายสมเกียรติ วิบูลย์กุล	น.ส.กัญญา เจียมศิริวัฒน์	น.ส.วีรวรรณ ลาภไชยวุฒิ
Saha Rattananakom Co., Ltd. (absolute receivership)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ASIA Wealth Securities Company Limited	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anuman Spare Parts Co., Ltd.	-	-	-	-	-	-	//	/	-	-	-	-	-	-	-	-	-	-
Asia Pacific Potash Corporation Limited	-	-	-	-	-	-	-	/	-	-	-	-	-	-	-	-	-	-
Asia Precision Public Company Limited	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-
SVOA Public Company Limited	-	-	-	-	-	-	-	///	-	-	-	-	-	-	-	-	-	-
HF-Tech Nittsu (Thailand) Co., Ltd.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
United Grain Marketing Co., Ltd.	X //	//	-	//	-	-	//	-	-	-	-	-	-	-	-	-	-	-
United Grain Marketing Co., Ltd.	/	/	/	/	/	/	-	-	/	-	-	-	-	-	-	-	-	-
TPI Polene Power Ommut Co.,Ltd.	/	/	/	/	/	/	-	-	/	-	-	-	-	-	-	-	-	-
TPI Deep Sea Port Co.,Ltd.	/	/	/	/	/	/	-	-	/	-	-	-	-	-	-	-	-	-
TPI Polene Power (Songkhla) Co.,Ltd.	/	/	/	/	/	/	-	-	/	-	-	-	-	-	-	-	-	-
TPI Wind Power Co.,Ltd.	/	/	/	/	/	/	-	-	/	-	-	-	-	-	-	-	-	-
TPI Solar Power Co.,Ltd.	/	/	/	/	/	/	-	-	/	-	-	-	-	-	-	-	-	-

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

#### Directors of Subsidiaries.

##### Board of Directors of TPI Polene Power Investment Company Limited as at 31 December 2019 (Being in the liquidation process)

Name	Position
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 31 December 2019

Name	Position
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. Dr. Porakit Leophairatana	Director

##### Zenith International Power Company Limited as at December 31, 2019

Name	Position
1. Mr. Prachai Leophairatana	Director
2. Mr. Prateep Leopairut	Director
3. Dr. Pramuan Leophairatana	Director
4. Mr. Prayad Liewphairatana	Director
5. Mrs. Orapin Leophairatana	Director
6. Mr. Pakkapol Leopairut	Director
6. Miss Pattrapan Leopairut	Director
7. Mr. Pakorn Leopairut	Director
8. Mr. Pakkapol Leopairut	Director
9. Mrs. Achira Chatdarong	Director
10. Mrs. Nitawan Leophairatana	Director

##### TPI Deep Sea Port Company Limited as at 31 December 2019

Name	Position
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. Miss Pattrapan Leopairut	Director
7. Mrs. Achira Chatdarong	Director
8. Mrs. Nitawan Leophairatana	Director
9. Mrs. Pannee Liewphairatana	Director
10. Mr. Thanakorn Liewphairatana	Director
11. Dr. Porakrit Leophairatana	Director

**TPI Polene Power (Songkhla) Company Limited as of 31 December 2019**

<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. Miss Pattrapan Leopairut	Director
7. Mrs. Achira Chatdarong	Director
8. Mrs. Nitawan Leophairatana	Director
9. Mrs. Pannee Liewphairatana	Director
10. Mr. Thanakorn Liewphiratana	Director
11. Dr. Porakrit Leophairatana	Director

**TPI Wind Power Company Limited as of 31 December 2019**

<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. Miss Pattrapan Leopairut	Director
7. Mrs. Achira Chatdarong	Director
8. Mrs. Nitawan Leophairatana	Director
9. Mrs. Pannee Liewphairatana	Director
10. Mr. Thanakorn Liewphiratana	Director
11. Dr. Porakrit Leophairatana	Director

**TPI Solar Power Company Limited as at 31 December 2019**

<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. Miss Pattrapan Leopairut	Director
7. Mrs. Achira Chatdarong	Director
8. Mrs. Nitawan Leophairatana	Director
9. Mrs. Pannee Liewphairatana	Director
10. Mr. Thanakorn Liewphiratana	Director
11. Dr. Porakrit 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 2019, 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 2019 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  
6 February 2020

# Statement of financial position

TPI Polene Power Public Company Limited and its subsidiaries

(in thousand Baht)

Assets	Note	Consolidated financial statements		Separate financial statements	
		31 December 2019	31 December 2018	31 December 2019	31 December 2018
<b>Current assets</b>					
Cash and cash equivalents	5	689,556	450,164	551,434	259,124
Current investments	6	2,650,696	3,960,652	2,650,696	3,960,652
Trade accounts receivable	4, 7	2,148,276	1,530,704	2,148,276	1,530,704
Other receivables		54,585	104,526	53,027	104,526
Short-term loan to related party	4	-	-	801	-
Receivables and advances to related parties	4	61,001	35,845	61,027	35,857
Inventories	8	1,052,505	587,732	1,052,505	587,732
Other current assets		10,467	12,196	10,446	12,196
<b>Total current assets</b>		<b>6,667,086</b>	<b>6,681,819</b>	<b>6,528,212</b>	<b>6,490,791</b>
<b>Non-current assets</b>					
Investment in subsidiaries	9	-	-	325,444	191,457
Other long-term investments	6	186,532	5,337	5,261	5,337
Property, plant and equipment	10	30,770,444	24,642,820	30,770,444	24,642,820
Leasehold rights		-	113	-	113
Advances for plant and equipment		116,238	106,953	116,238	106,953
Deferred tax assets	27	91,011	91,699	91,011	91,699
Other non-current assets		21,263	12,483	21,263	12,483
<b>Total non-current assets</b>		<b>31,185,488</b>	<b>24,859,405</b>	<b>31,329,661</b>	<b>25,050,862</b>
<b>Total assets</b>		<b>37,852,574</b>	<b>31,541,224</b>	<b>37,857,873</b>	<b>31,541,653</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)

Liabilities and equity	Note	Consolidated financial statements		Separate financial statements	
		31 December 2019	31 December 2018	31 December 2019	31 December 2018
<b>Current liabilities</b>					
Trade accounts payable	4, 12	439,833	377,095	439,833	377,095
Other payables	13	1,583,960	1,611,411	1,583,898	1,611,326
Payables and advances from related parties	4	93,985	79,824	93,891	79,792
Interest payable		34,860	14,531	34,860	14,531
Income tax payable		35,555	35,622	35,555	35,622
Other current liabilities	14	146,076	118,708	146,076	118,708
<b>Total current liabilities</b>		<b>2,334,269</b>	<b>2,237,191</b>	<b>2,334,113</b>	<b>2,237,074</b>
<b>Non-current liabilities</b>					
Debentures	11	8,000,000	4,000,000	8,000,000	4,000,000
Non-current provisions for employee benefits	15	151,119	87,698	151,119	87,698
Decommissioning costs	4, 16	256,855	167,958	256,855	167,958
<b>Total non-current liabilities</b>		<b>8,407,974</b>	<b>4,255,656</b>	<b>8,407,974</b>	<b>4,255,656</b>
<b>Total liabilities</b>		<b>10,742,243</b>	<b>6,492,847</b>	<b>10,742,087</b>	<b>6,492,730</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)

Liabilities and equity	Note	Consolidated financial statements		Separate financial statements	
		31 December 2019	31 December 2018	31 December 2019	31 December 2018
<b>Equity</b>					
Share capital:	17				
Authorised share capital		8,400,000	8,400,000	8,400,000	8,400,000
Issued and paid share capital		8,400,000	8,400,000	8,400,000	8,400,000
Shares premium:					
Shares premium on ordinary shares		14,580,886	14,580,886	14,580,886	14,580,886
Retained earnings					
Appropriated					
Legal reserve	18	763,640	533,356	763,640	533,356
Unappropriated		3,365,960	1,534,043	3,371,260	1,534,681
Other component of equity		(158)	92	-	-
<b>Equity attribute to owners of the Company</b>		<b>27,110,328</b>	<b>25,048,377</b>	<b>27,115,786</b>	<b>25,048,923</b>
Non-controlling interests		3	-	-	-
<b>Total equity</b>		<b>27,110,331</b>	<b>25,048,377</b>	<b>27,115,786</b>	<b>25,048,923</b>
<b>Total liabilities and equity</b>		<b>37,852,574</b>	<b>31,541,224</b>	<b>37,857,873</b>	<b>31,541,653</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)

	Note	Consolidated financial statements		Separate financial statements	
		Year ended 31 December		Year ended 31 December	
		2019	2018	2019	2018
<b>Revenue</b>					
Revenue from sale of power and goods	19, 28	6,338,038	4,235,362	6,338,038	4,235,362
Revenue from adders	19, 28	4,233,163	3,384,445	4,233,163	3,384,445
Net foreign exchange gain		91,637	46,616	91,637	46,616
Investment income	20	78,694	49,173	75,671	49,129
Other income	21	164,293	199,751	164,270	199,751
<b>Total income</b>		<b>10,905,825</b>	<b>7,915,347</b>	<b>10,902,779</b>	<b>7,915,303</b>
<b>Expenses</b>					
Cost of sales of power and goods	25 8	5,529,730	3,651,430	5,529,730	3,651,430
Distribution costs	22	75,679	66,561	75,679	66,561
Administrative expenses	23	432,150	318,759	424,442	318,077
Finance costs	26	159,476	18,969	159,476	18,969
<b>Total expenses</b>		<b>6,197,035</b>	<b>4,055,719</b>	<b>6,189,327</b>	<b>4,055,037</b>
<b>Profit before income tax expense</b>		<b>4,708,790</b>	<b>3,859,628</b>	<b>4,713,452</b>	<b>3,860,266</b>
Tax expense	27	(101,982)	(160,669)	(101,982)	(160,669)
<b>Profit for the year</b>		<b>4,606,808</b>	<b>3,698,959</b>	<b>4,611,470</b>	<b>3,699,597</b>
<b>Other comprehensive income (expense)</b>					
<b>Items that will be reclassified subsequently to profit or loss</b>					
Exchange differences on translating foreign operations		(250)	92	-	-
<b>Total items that will be reclassified subsequently to profit or loss</b>		<b>(250)</b>	<b>92</b>	<b>-</b>	<b>-</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)

	Note	Consolidated financial statements		Separate financial statements	
		Year ended 31 December 2019	2018	Year ended 31 December 2019	2018
<b>Other comprehensive income (expense)</b>					
<i>Items that will not be reclassified to profit or loss</i>					
Losses on remeasurements of defined					
benefit plans	15	(30,759)	(10,885)	(30,759)	(10,885)
Income tax relating to items that					
will not be reclassified	27	6,152	2,177	6,152	2,177
<b>Total items that will not be reclassified to profit or loss</b>					
		<u>(24,607)</u>	<u>(8,708)</u>	<u>(24,607)</u>	<u>(8,708)</u>
<b>Other comprehensive income (expense) for the year, net of tax</b>					
		<u>(24,857)</u>	<u>(8,616)</u> "	<u>(24,607)</u>	<u>(8,708)</u>
<b>Total comprehensive income for the year</b>					
		<u>4,581,951</u>	<u>3,690,343</u>	<u>4,586,863</u>	<u>3,690,889</u>
<b>Profit attributable to:</b>					
Owners of the parent		4,606,808	3,698,959	4,611,470	3,699,597
Non-controlling interests		-	-	-	-
<b>Profit for the year</b>					
		<u>4,606,808</u>	<u>3,698,959</u>	<u>4,611,470</u>	<u>3,699,597</u>
<b>Total comprehensive income (expense) attributable to:</b>					
Owners of the parent		4,581,951	3,690,343	4,586,863	3,690,889
Non-controlling interests		-	-	-	-
<b>Total comprehensive income (expense) for the year</b>					
		<u>4,581,951</u>	<u>3,690,343</u>	<u>4,586,863</u>	<u>3,690,889</u>
<b>Basic earnings per share (in Baht)</b>					
	29	<u>0.548</u>	<u>0.440</u>	<u>0.549</u>	<u>0.440</u>

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)

	Note	Issued and paid-up share capital	Share premium	Retained earnings		Other components of equity		Equity attributable to owners of the Company	Non-controlling interests	Total equity
				Legal reserve	Unappropriated	Translating foreign operations				
<b>Year ended 31 December 2018</b>										
Balance at 1 January 2018		8,400,000	14,580,686	348,376	884,772	-	-	24,214,034	-	24,214,034
<b>Transaction with owners, recorded directly in equity</b>										
<i>Contributions by and distributions to owners of the parent</i>										
Dividends	30	-	-	-	(2,856,000)	-	-	(2,856,000)	-	(2,856,000)
<b>Total contributions by and distributions to owners of the parent</b>		-	-	-	<b>(2,856,000)</b>	-	-	<b>(2,856,000)</b>	-	<b>(2,856,000)</b>
<b>Comprehensive income (expense) for the year</b>										
Profit		-	-	-	3,698,959	-	-	3,698,959	-	3,698,959
Other comprehensive income (expense)		-	-	-	(8,708)	92	-	(8,616)	-	(8,616)
<b>Total comprehensive income (expense) for the year</b>		-	-	-	<b>3,690,251</b>	<b>92</b>	-	<b>3,690,343</b>	-	<b>3,690,343</b>
Transfer to legal reserve	18	-	-	184,980	(184,980)	-	-	-	-	-
<b>Balance at 31 December 2018</b>		<b>8,400,000</b>	<b>14,580,686</b>	<b>533,356</b>	<b>1,534,043</b>	<b>92</b>	-	<b>25,048,377</b>	-	<b>25,048,377</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

(in thousand Baht)

	Consolidated financial statements					
	Retained earnings	Other components of equity		Equity		Total equity
	Legal reserve	Unappropriated	Translating foreign operations	attributable to owners of the Company	Non-controlling interests	
	Share premium	Issued and paid-up share capital	Share premium			
<b>Year ended 31 December 2019</b>						
Balance at 1 January 2019	14,560,886	593,356	1,594,043	92	25,048,377	-
<b>Transaction with owners, recorded directly in equity</b>						
<i>Contributions by and distributions to owners of the parent</i>						
Dividends	-	-	(2,520,000)	-	(2,520,000)	-
<i>Total contributions by and distributions to owners of the parent</i>	-	-	(2,520,000)	-	(2,520,000)	-
<b>Changes in ownership interests in subsidiaries</b>						
Acquisition of non-controlling interests with a change in control	-	-	-	-	-	3
<i>Total changes in ownership interests in subsidiaries</i>	-	-	-	-	-	3
<b>Total transactions with owners, recorded directly in equity</b>	-	-	(2,520,000)	-	(2,520,000)	3
<b>Comprehensive income (expense) for the year</b>						
Profit	-	-	4,606,808	-	4,606,808	-
Other comprehensive income (expense)	-	-	(24,607)	(250)	(24,857)	-
<b>Total comprehensive income (expense) for the year</b>	-	-	4,582,201	(250)	4,581,951	-
Transfer to legal reserve	-	-	(230,284)	-	-	-
<b>Balance at 31 December 2019</b>	14,560,886	763,640	3,365,960	(158)	27,110,328	3

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

## Separate financial statements

(in thousand Baht)

	Note	Issued and paid-up share capital	Share premium	Retained earnings		Total equity
				Legal reserve	Unappropriated	
<b>Year ended 31 December 2018</b>						
<b>Balance at 1 January 2018</b>		8,400,000	14,580,886	348,376	864,772	24,214,034
<b>Transaction with owners, recorded directly in equity</b>						
<i>Contributions by and distributions to owners</i>						
Dividends	30	-	-	-	(2,856,000)	(2,856,000)
<b>Total contributions by and distributions to owners</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>3,690,889</b>	<b>3,690,889</b>
Transfer to legal reserve	18			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>
<b>Year ended 31 December 2019</b>						
<b>Balance at 1 January 2019</b>		8,400,000	14,580,886	533,356	1,534,681	25,048,923
<b>Transaction with owners, recorded directly in equity</b>						
<i>Contributions by and distributions to owners</i>						
Dividends	30	-	-	-	(2,520,000)	(2,520,000)
<b>Total contributions by and distributions to owners</b>					<b>(2,520,000)</b>	<b>(2,520,000)</b>
<b>Comprehensive income (expense) for the year</b>						
Profit					4,611,470	4,611,470
Other comprehensive income (expense)					(24,607)	(24,607)
<b>Total comprehensive income (expense) for the year</b>					<b>4,586,863</b>	<b>4,586,863</b>
Transfer to legal reserve	18			230,284	(230,284)	-
<b>Balance at 31 December 2019</b>		<b>8,400,000</b>	<b>14,580,886</b>	<b>763,640</b>	<b>3,371,260</b>	<b>27,115,786</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 31 December		Year ended 31 December	
	2019	2018	2019	2018
<b><i>Cash flows from operating activities</i></b>				
Profit for the year	4,606,808	3,698,959	4,611,470	3,699,597
<i>Adjustments to reconcile profit to cash receipts (payments)</i>				
Depreciation and amortisation	806,873	481,091	806,873	481,091
Interest income	(63,570)	(43,600)	(60,523)	(43,556)
Finance costs	159,476	18,969	159,476	18,969
Unrealised gain on foreign exchange	(55,368)	(8,045)	(55,368)	(8,045)
Reversal of losses on inventories devaluation	-	(4,633)	-	(4,633)
Gain on disposal equipment	(14)	(2)	(14)	(2)
(Gain) loss on fair value adjustment of current investments	(7,730)	2,386	(7,730)	2,386
Provision for employee benefits	37,408	6,449	37,408	6,449
Tax expense	101,982	160,669	101,982	160,669
	<u>5,585,865</u>	<u>4,312,243</u>	<u>5,593,574</u>	<u>4,312,925</u>
<i>Changes in operating assets and liabilities</i>				
Trade accounts receivable	(617,572)	(793,712)	(617,572)	(793,712)
Other receivables	48,994	20,344	48,835	20,344
Receivables and advances to related parties	(25,156)	8,228	(25,170)	(8,240)
Inventories	(464,773)	(133,771)	(464,773)	(133,771)
Other current assets	1,729	(1,150)	1,750	(1,150)
Other non-current assets	(8,780)	(12,483)	(8,780)	(12,483)
Trade accounts payable	62,738	203,847	62,738	203,847
Other payables	42,515	77,969	42,538	77,884
Payables and advances from related parties	14,161	47,458	14,099	47,426
Other current liabilities	27,368	62,816	27,368	62,816
Provisions for employee benefits	(4,746)	(281)	(4,746)	(281)
Cash generated from operating activities	<u>4,662,343</u>	<u>3,775,052</u>	<u>4,669,861</u>	<u>3,775,605</u>
Taxes paid	(95,209)	(99,813)	(95,209)	(99,813)
Value added tax refund received	-	257,442	-	257,442
<b>Net cash from operating activities</b>	<b><u>4,567,134</u></b>	<b><u>3,932,681</u></b>	<b><u>4,574,652</u></b>	<b><u>3,933,234</u></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 31 December		Year ended 31 December	
	2019	2018	2019	2018
<b><i>Cash flows from investing activities</i></b>				
Interest received	64,730	45,198	63,262	45,154
Acquisition of property, plant and equipment	(6,380,163)	(4,773,906)	(6,380,163)	(4,773,906)
Proceeds from sale of equipment	30	13	30	13
Advances payment for machine	(496,795)	(165,594)	(496,795)	(165,594)
(Increase) decrease of current investments	1,317,686	(188,475)	1,317,686	(188,475)
Increase in other long-term investments	(181,331)	-	-	-
Cash outflow on loan to related party	-	-	(800)	-
Net cash outflow on acquisition of subsidiary	(105,988)	-	(105,988)	-
Cash outflow on addition investment in subsidiaries	-	-	(27,999)	(191,457)
<b>Net cash used in investing activities</b>	<b>(5,781,831)</b>	<b>(5,082,764)</b>	<b>(5,630,767)</b>	<b>(5,274,265)</b>
<b><i>Cash flows from financing activities</i></b>				
Finance costs paid	(131,568)	(4)	(131,568)	(4)
Dividends paid to owners of the Company	(2,520,000)	(2,856,000)	(2,520,000)	(2,856,000)
Proceeds from issue of debentures	4,000,000	4,000,000	4,000,000	4,000,000
<b>Net cash from financing activities</b>	<b>1,348,432</b>	<b>1,143,996</b>	<b>1,348,432</b>	<b>1,143,996</b>
Net increase (decrease) in cash and cash equivalents,				
before effect of exchange rates	133,735	(6,087)	292,317	(197,035)
Effect of exchange rate changes	(257)	90	(7)	(2)
Cash and cash equivalents from changes in				
holding of investments in subsidiary	105,914	-	-	-
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>239,392</b>	<b>(5,997)</b>	<b>292,310</b>	<b>(197,037)</b>
Cash and cash equivalents at 1 January	450,164	456,161	259,124	456,161
<b>Cash and cash equivalents at 31 December</b>	<b>689,556</b>	<b>450,164</b>	<b>551,434</b>	<b>259,124</b>
<b><i>Non-cash transactions</i></b>				
Other payables - plant and equipment	1,360,994	1,430,960	1,360,994	1,430,960
Advances for plant and equipment	116,238	106,953	116,238	106,953

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 2019

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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 6 February 2020.

## **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 2019 and 2018 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 and applicable rules and regulations of the Thai Securities and Exchange Commission.

New and revised TFRS are effective for annual accounting periods beginning on or after 1 January 2019. The initial application of these new and revised TFRS has resulted in changes in certain of the Group’s accounting policies. There is no material impact on the Group’s financial statements. The Group has initial applied TFRS 15 Revenue from Contracts with Customers (“TFRS 15”) which replaces TAS 18 Revenue (“TAS 18”), TAS 11 Construction Contracts (“TAS 11”) and related interpretations. The details of accounting policies are disclosed in note 3 (n).

In addition, the Group has not early adopted a number of new and revised TFRS which are not yet effective for the current period in preparing these financial statements. Those new and revised TFRS that are relevant to the Group’s operations are disclosed in note 34.

### *(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 the Group’s accounting policies. 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 at 31 December 2019 that have a significant risk of resulting in a material adjustments to the carrying amounts of assets and liabilities in the next financial year is included in the following notes:

- Note 15 Measurement of defined benefit obligations: key actuarial assumptions;
- Note 16 Recognition and measurement of decommissioning costs: key assumptions about the likelihood and magnitude of an outflow of resources; and
- Note 27 Recognition of deferred tax assets: availability of future taxable profit against which tax losses carried forward can be utilised.

#### *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 31 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**

A receivable is recognised when the Group has an unconditional right to receive consideration.

A receivable is measured at value less allowance for doubtful accounts which is assessed 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 recognition, 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 is recognised when a customer obtains control of the goods or services in an amount that reflects the consideration to which the Group expects to be entitled, excluding those amounts collected on behalf of third parties, value added tax and is after deduction of any trade discounts and volume rebates.

#### *Sale of goods*

Revenue from sales of goods is recognised when a customer obtains control of the goods, generally on delivery of the goods to the customers. For contracts that permit the customers to return the goods, revenue is recognised to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognised will not occur. Therefore the amount of revenue recognised is adjusted for estimated returns, which are estimated based on the historical data.

#### *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.

#### **(o) Investment income**

Investment income comprises rental income 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.

#### **(p) 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.

#### **(q) 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.

#### **(r) 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.

**(s) 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.

**(t) Related parties**

Related parties are a person or entity that has direct or indirect control or joint control, or has significant influence over the financial and managerial decision-making of the Group; a person or entity that are under common control or under the same significant influence as the Group; or the Group has direct or indirect control or joint control or has significant influence over the financial and managerial decision-making of a person or entity.

**(u) 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**

Relationships with subsidiaries are described in notes 9. Key management and other related parties that the Group had significant transactions with during the year were as follows:

<b>Name of entities</b>	<b>Country of incorporation/nationality</b>	<b>Nature of relationships</b>
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
Zenith International Power Co., Ltd. (Formerly Zenith International Trading Co., Ltd.)	Thailand	Subsidiary, 99.99% shareholding, some common directors
TPI Deep Sea Port Co., Ltd.	Thailand	Subsidiary, 99.99% shareholding, some common directors
TPI Polene Power (Songkhla) Co., Ltd.	Thailand	Subsidiary, 99.97% shareholding, some common directors
TPI Solar Power Co., Ltd.	Thailand	Subsidiary, 99.97% shareholding, some common directors
TPI Wind Power Co., Ltd.	Thailand	Subsidiary, 99.97% shareholding, some common directors
TPI Polene Bio Organics 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
TPI Refinery (1997) Co., Ltd.	Thailand	Subsidiary of the parent's company and some common directors
TPI Healthcare Co., Ltd.	Thailand	Subsidiary of the parent's company and some common directors
TPI Bio Pharmaceuticals 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:

<b>Transactions</b>	<b>Pricing policies</b>
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 income	Agreed price
Interest expense	MLR - 1.5%

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

<i>Year ended 31 December</i>	<i>(in thousand Baht)</i>			
	<b>Consolidated financial statements</b>		<b>Separate financial statements</b>	
	2019	2018	2019	2018
<b>Parent company</b>				
Sale of goods and electricity power	2,205,902	917,669	2,205,902	917,669
Purchase of goods and services fee	2,691,055	2,024,286	2,691,055	2,024,286
Acquisition of investment (see note 9)	105,988	-	105,988	-
Other income	4,010	3,714	4,010	3,714
Shared service expense - cost of sale	93,779	93,779	93,779	93,779
Shared service expense - administrative expense	38,221	38,221	38,221	38,221
Dividend paid	1,770,000	2,006,000	1,770,000	2,006,000
Administrative expenses	759	759	759	759
<b>Subsidiaries</b>				
Interest income	-	-	3	-
<b>Other related parties</b>				
Sale of goods	1,539	4,947	1,539	4,947
Purchase of goods	4,747	4,699	4,747	4,699
Other income	10	223	10	223
Dividend paid	411	466	411	466
Insurance premium	70,861	47,535	70,861	47,535
Administrative expenses	8,505	8,453	8,505	8,453
<b>Key management personnel</b>				
Key management personnel compensation				
Short-term employee benefits	45,631	38,400	45,631	38,400
Post-employment benefits	441	448	441	448
<b>Total key management personnel compensation</b>	<b>46,072</b>	<b>38,848</b>	<b>46,072</b>	<b>38,848</b>

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

<i>Trade accounts receivable - related parties</i>	<i>(in thousand Baht)</i>			
	<b>Consolidated financial statements</b>		<b>Separate financial statements</b>	
	2019	2018	2019	2018
<b>Parent company</b>				
	558,089	242,344	558,089	242,344
<b>Other related parties</b>				
TPI Polene Bio Organics Co., Ltd.	2	5	2	5
TPI Concrete Co., Ltd.	62	71	62	71
TPI All Seasons Co., Ltd.	26	35	26	35
Thai Nitrate Co., Ltd.	1	1	1	1
United Grain Industry Co., Ltd.	1	1	1	1
Bangkok Union Insurance Public Co., Ltd.	9	13	9	13
BUI Life Insurance Public Co., Ltd.	12	8	12	8
<b>Total</b>	<b>558,202</b>	<b>242,478</b>	<b>558,202</b>	<b>242,478</b>

<i>Short-term loans to related party</i>	Interest rate		<i>(in thousand Baht)</i>			
			Consolidated financial statements		Separate financial statements	
	2018	2017	2019	2018	2019	2018
	<i>(% per annum)</i>					
<b>Subsidiaries</b>						
TPI Polene Power (On Nut) Co., Ltd.	2.125	-	-	-	800	-
			-	-	800	-
Accrued interest receivable			-	-	1	-
<b>Total</b>			<b>-</b>	<b>-</b>	<b>801</b>	<b>-</b>

As at 31 December 2019, all short-term loans to related party is promissory notes which have repayment schedules on demand.

Movements during the years ended 31 December of short-term loans to related party were as follows:

<i>Short-term loans to related party</i>	<i>(in thousand Baht)</i>			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<b>Subsidiary</b>				
At 1 January	-	-	-	-
Increase	-	-	800	-
<b>At 31 December</b>	<b>-</b>	<b>-</b>	<b>800</b>	<b>-</b>

<i>Receivables and advance to related parties</i>	<i>(in thousand Baht)</i>			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Parent company	16,086	11,859	16,086	11,859
Subsidiaries				
TPI Polene Power (On Nut) Co., Ltd.	-	-	-	12
TPI Deep Sea Port Co., Ltd.	-	-	7	-
TPI Polene Power (Songkhla) Co., Ltd.	-	-	7	-
TPI Solar Power Co., Ltd.	-	-	6	-
TPI Wind Power Co., Ltd.	-	-	6	-
Other related parties				
TPI Polene Bio Organics Co., Ltd.	2	505	2	505
United Grain Industry Co., Ltd.	2,138	1,943	2,138	1,943
BUI Life Insurance Public Co., Ltd.	881	827	881	827
Bangkok Union Insurance Public Co., Ltd.	41,648	20,488	41,648	20,488
Pornchai Enterprise Co., Ltd.	246	223	246	223
<b>Total</b>	<b>61,001</b>	<b>35,845</b>	<b>61,027</b>	<b>35,857</b>

<i>Trade accounts payable - related parties</i>	<i>(in thousand Baht)</i>			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<b>Parent company</b>	<b>209,560</b>	<b>201,124</b>	<b>209,560</b>	<b>201,124</b>
<b>Other related parties</b>				
TPI Polene Bio Organics Co., Ltd.	518	1,070	518	1,070
TPI Healthcare Co., Ltd.	2,313	-	2,313	-
TPI Bio Pharmaceuticals Co., Ltd.	39	-	39	-
<b>Total</b>	<b>212,430</b>	<b>202,194</b>	<b>212,430</b>	<b>202,194</b>

<i>Payables and advance from related parties</i>	<i>(in thousand Baht)</i>			
	<b>Consolidated financial statements</b>		<b>Separate financial statements</b>	
	2019	2018	2019	2018
<b>Parent company</b>	93,525	77,356	93,431	77,324
<b>Other related parties</b>				
TPI Concrete Co., Ltd.	433	-	433	-
TPI Polene Bio Organics Co., Ltd.	22	2,325	22	2,325
Pornchai Enterprise Co., Ltd.	4	98	4	98
Bangkok Union Insurance Public Co., Ltd	1	45	1	45
<b>Total</b>	<b>93,985</b>	<b>79,824</b>	<b>93,891</b>	<b>79,792</b>

#### **Significant agreements with related parties**

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

<i>Non-cancellable operating lease commitments</i>	<i>(in thousand Baht)</i>			
	<b>Consolidated financial statements</b>		<b>Separate financial statements</b>	
	2019	2018	2019	2018
Within one year	21,826	17,290	21,826	17,290
After one year but within five years	114,382	120,929	114,382	120,929
After five years	724,482	750,526	724,482	750,526
<b>Total</b>	<b>860,690</b>	<b>888,745</b>	<b>860,690</b>	<b>888,745</b>

Several land rental agreements specified that the Company has 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 2019 in amount of Baht 257 million (2018: Baht 168 million) (see note 16).

- (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**

	<i>(in thousand Baht)</i>			
	<b>Consolidated financial statements</b>		<b>Separate financial statements</b>	
	2019	2018	2019	2018
Cash on hand	482	2,965	482	2,965
Cash at banks - current accounts	7,096	6,658	3,924	3,172
Cash at banks - savings accounts	668,472	373,752	533,522	186,198
Cash at banks - savings accounts (Private Funds)	13,506	66,788	13,506	66,788
Highly liquid short-term investment	-	1	-	1
<b>Total</b>	<b>689,556</b>	<b>450,164</b>	<b>551,434</b>	<b>259,124</b>

## 6 Other investments

	(in thousand Baht)			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<b>Current investments</b>				
Fixed deposits with financial institutions	-	800,000	-	800,000
Equity securities held for trading (Short term general bond)	200,249	-	200,249	-
Debt securities held for trading	1,129,100	330,638	1,129,100	330,638
Debt securities held for trading (Private funds)	1,321,347	2,530,465	1,321,347	2,530,465
Debt securities held to maturity	-	299,549	-	299,549
<b>Total</b>	<b>2,650,696</b>	<b>3,960,652</b>	<b>2,650,696</b>	<b>3,960,652</b>
<b>Other receivable - Interest receivable (Private funds)</b>	<b>4,281</b>	<b>5,825</b>	<b>4,281</b>	<b>5,825</b>
<b>Other long-term investments</b>				
Debt securities held to maturity	<b>186,532</b>	<b>5,337</b>	<b>5,261</b>	<b>5,337</b>

## 7 Trade accounts receivable

	Note	(in thousand Baht)			
		Consolidated financial statements		Separate financial statements	
		2019	2018	2019	2018
Related parties	4	558,202	242,478	558,202	242,478
Other parties		1,590,074	1,288,226	1,590,074	1,288,226
<b>Total</b>		<b>2,148,276</b>	<b>1,530,704</b>	<b>2,148,276</b>	<b>1,530,704</b>

Aging analyses for trade accounts receivable were as follows:

	(in thousand Baht)			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<b>Related parties</b>				
Within credit terms	217,446	168,059	217,446	168,059
Overdue:				
Less than 3 months	340,756	74,419	340,756	74,419
	<b>558,202</b>	<b>242,478</b>	<b>558,202</b>	<b>242,478</b>
<b>Other parties</b>				
Within credit terms	1,589,635	1,287,490	1,589,635	1,287,490
Overdue:				
Less than 3 months	439	736	439	736
	<b>1,590,074</b>	<b>1,288,226</b>	<b>1,590,074</b>	<b>1,288,226</b>
<b>Net</b>	<b>2,148,276</b>	<b>1,530,704</b>	<b>2,148,276</b>	<b>1,530,704</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	
	2019	2018	2019	2018
Finished goods	28,568	26,471	28,568	26,471
Work in process	321,062	56,917	321,062	56,917
Raw materials, package and chemical	114,633	89,137	114,633	89,137
Spare parts and supplies	612,742	439,527	612,742	439,527
Goods in transit	-	180	-	180
	<u>1,077,005</u>	<u>612,232</u>	<u>1,077,005</u>	<u>612,232</u>
Less allowance for declining in value	(24,500)	(24,500)	(24,500)	(24,500)
<b>Net</b>	<b><u>1,052,505</u></b>	<b><u>587,732</u></b>	<b><u>1,052,505</u></b>	<b><u>587,732</u></b>
Inventories recognised as an expense in 'cost of sales of goods':				
- Cost	5,529,730	3,656,063	5,529,730	3,656,063
- Reversal of write-down	-	(4,633)	-	(4,633)
<b>Net total</b>	<b><u>5,529,730</u></b>	<b><u>3,651,430</u></b>	<b><u>5,529,730</u></b>	<b><u>3,651,430</u></b>

## 9 Investment in subsidiaries

	(in thousand Baht)	
	Separate financial statements	
	2019	2018
At 1 January	191,457	-
Acquisition	<u>133,987</u>	<u>191,457</u>
	325,444	191,457
Less allowance for impairment of investments	-	-
<b>At 31 December</b>	<b><u>325,444</u></b>	<b><u>191,457</u></b>

### *TPI Polene Power Investment Company Limited*

On 23 January 2018, TPI Polene Power Investment Company Limited ("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.

On 26 December 2019, the Board of Directors' meeting pass the resolution to approve the Company to register the dissolution and liquidation of TPI PPI.

As at 31 December 2019, the registering of dissolution is in the process.

### *TPI Polene Power (On Nut) Company Limited*

On 27 November 2018, the Board of Directors' meeting pass the resolution to approve the Company to establish TPI Polene Power (On Nut) 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.

### *Zenith International Power Company Limited*

On 30 August 2019, the Company's Board of Directors' meeting passed the resolution to approve the acquisition of shares in Zenith International Power Co., Ltd. (formerly Zenith International Trading Co., Ltd.), the main objective is to restructure the shareholding of the Group to support business expansion. Thereafter, on 24 September 2019, the Company obtained control of that company by acquiring 999,980 shares or equivalent to 99.99% of the paid-up share capital at the price of Baht 105.99 per share, in the amount of Baht 105,987,880.20 from the Parent, thereby become a subsidiary of the Company.

*TPI Deep Sea Port Co., Ltd.*

In October 2019, the Company was established TPI Deep Sea Port Co., Ltd. The authorised share capital of Baht 100,000,000 with 1,000,000 ordinary shares was registered on 11 October 2019. The Company holds 999,997 shares or 99.99% of the registered capital and TPI Deep Sea Port Co., Ltd. called for 25% paid-up share capital and the Company fully paid share capital amounting to Baht 24,999,925.

*TPI Polene Power (Songkla) Co., Ltd.*

In October 2019, the Company was established TPI Polene Power (Songkla) Co., Ltd. The authorised share capital of Baht 1,000,000 with 10,000 ordinary shares was registered on 4 October 2019. The Company holds 9,997 shares or 99.97% of the registered capital and TPI Polene Power (Songkla) Co., Ltd. called for 100% paid-up share capital and the Company fully paid share capital amounting to Baht 999,700.

*TPI Solar Power Co., Ltd.*

In October 2019, the Company was established TPI Solar Power Co., Ltd. The authorised share capital of Baht 1,000,000 with 10,000 ordinary shares was registered on 4 October 2019. The Company holds 9,997 shares or 99.97% of the registered capital and TPI Solar Power Co., Ltd. called for 100% paid-up share capital and the Company fully paid share capital amounting to Baht 999,700.

*TPI Wind Power Co., Ltd.*

In October 2019, the Company was established TPI Wind Power Co., Ltd. The authorised share capital of Baht 1,000,000 with 10,000 ordinary shares was registered on 4 October 2019. The Company holds 9,997 shares or 99.97% of the registered capital and TPI Wind Power Co., Ltd. called for 100% paid-up share capital and the Company fully paid share capital amounting to Baht 999,700.

Investments in subsidiaries as at 31 December 2019 and 2018, dividend income from those investments for the years then ended, were as follows:

Subsidiaries	Type of business	Ownership interest (%)		Paid-up capital		Cost		Impairment		At cost - net		Dividend income	
		2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
		<i>(in thousand Baht)</i>											
TPI Polene Power Investment Co., Ltd.	Generate and distribute electricity in Cambodia (in the process of registering the dissolution)	100.00	100.00	3,957	3,957	3,957	3,957	-	-	3,957	3,957	-	-
TPI Polene Power (On Nut) Co., Ltd	Generate and distribute electricity from refuse derived fuel (RDF) (dormant)	99.99	99.99	187,500	187,500	187,500	187,500	-	-	187,500	187,500	-	-
Zenith International Power Co., Ltd. (Formerly Zenith International Trading Co., Ltd.)	Investing in alternative energy business (dormant)	99.99	-	100,000	-	105,988	-	-	-	105,988	-	-	-
TPI Deep Sea Port Co., Ltd.	Port business operation (dormant)	99.99	-	25,000	-	24,999	-	-	-	24,999	-	-	-
TPI Polene Power (Songkhla) Co., Ltd.	Generate electricity from refuse derived fuel and biomass (dormant)	99.97	-	1,000	-	1,000	-	-	-	1,000	-	-	-
TPI Solar Power Co., Ltd.	Generate electricity from solar energy (dormant)	99.97	-	1,000	-	1,000	-	-	-	1,000	-	-	-
TPI Wind Power Co., Ltd.	Generate electricity from wind energy (dormant)	99.97	-	1,000	-	1,000	-	-	-	1,000	-	-	-
<b>Total</b>				<b>325,444</b>	<b>191,457</b>	<b>325,444</b>	<b>191,457</b>	<b>-</b>	<b>-</b>	<b>325,444</b>	<b>191,457</b>	<b>-</b>	<b>-</b>

All subsidiaries were incorporated in Thailand, except TPI Polene Power Investment Co., Ltd. which was incorporated in Cambodia.

None of the Company's subsidiaries are publicly listed and consequently do not have published price quotations.

## 10 Property, plant and equipment

*(in thousand Baht)*

	<b>Consolidated and Separate financial statements</b>									
	Land	Plants	Machinery	Tools and factory equipment	Furniture, fixture and office equipment	Vehicle	Major spare parts	Assets under construction and installation	Decommissioning assets	Total
<b>Cost</b>										
At 1 January 2018	-	192,362	10,641,600	179,539	22,883	117	18,291	12,488,470	112,392	23,655,654
Additions	1,481,340	-	4,088	22,595	5,064	146	1,875	2,059,302	45,713	3,620,123
Transfers	-	733,973	4,821,229	-	1,591	-	-	(5,556,793)	-	-
Disposals	-	-	-	-	(45)	-	-	-	-	(45)
<b>At 31 December 2018 and 1 January 2019</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>
Additions	4,100,911	-	48,063	18,350	7,244	204	33,279	2,645,031	81,318	6,934,400
Transfers	-	639,216	8,536,788	-	6,289	-	-	(9,182,293)	-	-
Disposals	-	-	-	-	(30)	-	-	-	-	(30)
<b>At 31 December 2019</b>	<b>5,582,251</b>	<b>1,565,551</b>	<b>24,051,768</b>	<b>220,484</b>	<b>42,996</b>	<b>467</b>	<b>53,445</b>	<b>2,453,717</b>	<b>239,423</b>	<b>34,210,102</b>
<b>Depreciation</b>										
At 1 January 2018	-	21,303	2,029,916	78,637	16,025	5	-	-	6,239	2,152,125
Depreciation charge for the year	-	21,422	486,154	15,448	2,975	19	-	-	4,803	480,821
Disposals	-	-	-	-	(34)	-	-	-	-	(34)
<b>At 31 December 2018 and 1 January 2019</b>	<b>-</b>	<b>42,725</b>	<b>2,465,070</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>
Depreciation charge for the year	-	50,961	728,172	15,893	3,874	41	-	-	7,819	806,760
Disposals	-	-	-	-	(14)	-	-	-	-	(14)
<b>At 31 December 2019</b>	<b>-</b>	<b>93,686</b>	<b>3,194,242</b>	<b>109,978</b>	<b>22,826</b>	<b>65</b>	<b>-</b>	<b>-</b>	<b>18,861</b>	<b>3,439,658</b>
<b>Net book value</b>										
At 1 January 2018	-	171,059	8,611,684	100,902	6,858	112	18,291	12,488,470	106,153	21,503,529
At 31 December 2018 and 1 January 2019	1,481,340	883,610	13,000,847	106,049	10,527	239	20,166	8,990,979	147,063	24,642,820
At 31 December 2019	5,582,251	1,471,865	20,857,526	110,506	20,170	402	53,445	2,453,717	220,562	30,770,444

The original cost of the Company's fully depreciated plant and equipment that was still in use as at 31 December 2019 amounted to Baht 932 million (2018: Baht 828 million).

Capitalised borrowing costs relating to the acquisition of the land and the construction of the new factory of the Group and the Company as at 31 December 2019 are amounted to Baht 61 million and Baht 61 million, respectively (2018: nil and nil, respectively), with a capitalisation in the consolidated and separate financial statements of 3.5% - 3.9% (2018: not applicable).

## 11 Interest-bearing liabilities

	<i>(in thousand Baht)</i>			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<b>Non-Current</b>				
Debentures	8,000,000	4,000,000	8,000,000	4,000,000
<b>Total non-current interest-bearing liabilities</b>	<b>8,000,000</b>	<b>4,000,000</b>	<b>8,000,000</b>	<b>4,000,000</b>
<b>Total</b>	<b>8,000,000</b>	<b>4,000,000</b>	<b>8,000,000</b>	<b>4,000,000</b>

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

	<i>(in thousand Baht)</i>			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
After one year but within five years	8,000,000	4,000,000	8,000,000	4,000,000
<b>Total</b>	<b>8,000,000</b>	<b>4,000,000</b>	<b>8,000,000</b>	<b>4,000,000</b>

As at 31 December 2019 and 2018, the Company has no unutilised credit facilities.

### Debentures

As at 31 December 2019, the Company had the unsecured, unsubordinated debentures in registered form with debentures holders' representative, payable quarterly totalling Baht 8,000 million (2018:Baht 4,000 million) as follows:

Issued Date	Consolidated and Separate financial statements						Interest Rate (% p.a.)	Term
	The period to maturity within one year		The period to maturity over one year		Total			
	2019	2018	2019	2018	2019	2018		
28 November 2018	-	-	4,000,000	4,000,000	4,000,000	4,000,000	3.90	3 years
9 August 2019	-	-	4,000,000	-	4,000,000	-	3.50	3 years 3 months
<b>Total</b>	<b>-</b>	<b>-</b>	<b>8,000,000</b>	<b>4,000,000</b>	<b>8,000,000</b>	<b>4,000,000</b>		

## 12 Trade accounts payable

	Note	<i>(in thousand Baht)</i>			
		Consolidated financial statements		Separate financial statements	
		2019	2018	2019	2018
Related parties	4	212,430	202,194	212,430	202,194
Other parties		227,403	174,901	227,403	174,901
<b>Total</b>		<b>439,833</b>	<b>377,095</b>	<b>439,833</b>	<b>377,095</b>

## 13 Other payables

	<i>(in thousand Baht)</i>			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Retention payable	1,058,706	853,019	1,058,706	853,019
Other payables - Machine	363,225	628,529	363,225	628,529
Accrued expenses	78,859	62,260	78,797	62,175
Deposit from sales and guarantee	6,799	6,463	6,799	6,463
Others	76,371	61,140	76,371	61,140
<b>Total</b>	<b>1,583,960</b>	<b>1,611,411</b>	<b>1,583,898</b>	<b>1,611,326</b>

## 14 Other current liabilities

	<i>(in thousand Baht)</i>			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Payable to Revenue Department	36,578	29,917	36,578	29,917
Suspend output tax	103,450	83,732	103,450	83,732
Others	6,048	5,059	6,048	5,059
<b>Total</b>	<b>146,076</b>	<b>118,708</b>	<b>146,076</b>	<b>118,708</b>

## 15 Non-current provisions for employee benefits

	<i>(in thousand Baht)</i>			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<b>Statement of financial position</b>				
<b>Non-current provisions for:</b>				
Post-employment benefits	<b>151,119</b>	<b>87,698</b>	<b>151,119</b>	<b>87,698</b>
 <i>Year ended 31 December</i>				
<b>Statement of comprehensive income:</b>				
<b>Recognised in profit or loss:</b>				
Post-employment benefits	<b>37,408</b>	<b>6,449</b>	<b>37,408</b>	<b>6,449</b>
 <b>Recognised in other comprehensive income:</b>				
Actuarial losses recognised in the year	<b>30,759</b>	<b>10,885</b>	<b>30,759</b>	<b>10,885</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.

	<i>(in thousand Baht)</i>			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
At 1 January	87,698	70,645	87,698	70,645
<b>Include in profit or loss:</b>				
Current service cost and interest on obligation	37,408	6,449	37,408	6,449
<b>Included in other comprehensive income</b>				
Actuarial loss	30,759	10,885	30,759	10,885
<b>Other</b>				
Benefit paid	(4,746)	(281)	(4,746)	(281)
<b>At 31 December</b>	<b>151,119</b>	<b>87,698</b>	<b>151,119</b>	<b>87,698</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.

On 5 April 2019, the Labor Protection Act was amended 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 has therefore amended its retirement plan in accordance with the changes in the Labor Protection Act in 2019. As a result of this change, the provision for retirement benefits as at 31 December 2019 as well as past service cost recognised during the year then ended in the consolidated and separate financial statements increased by an amount of Baht 28 million and Baht 28 million, respectively.

### **Actuarial assumptions**

The following were the principal actuarial assumptions at the reporting date (expressed as weighted averages).

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Discount rate	2.00	3.25	2.00	3.25
Future salary growth	6.66	6.73	6.66	6.73

(%)

Assumptions regarding future mortality have been based on published statistics and mortality tables.

At 31 December 2019, the weighted-average duration of the defined benefit obligation was 27 years (2018: 27 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.

	Consolidated financial statements		Separate financial statements	
	Increase	Decrease	Increase	Decrease
<b>At 31 December 2019</b>				
Discount rate (1% movement)	(20,390)	24,996	(20,390)	24,996
Future salary growth (1% movement)	21,733	(18,337)	21,733	(18,337)
<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)

(in thousand Baht)

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.

## **16 Decommissioning costs**

	(in thousand Baht)
	<b>Consolidated and Separate financial statements</b>
At 1 January 2018	117,812
Provisions made	50,146
<b>At 31 December 2018 and 1 January 2019</b>	<b>167,958</b>
Provisions made	88,897
<b>At 31 December 2019</b>	<b>256,855</b>
<b>At 31 December 2018 and 1 January 2019</b>	
Non-current	167,958
<b>At 31 December 2019</b>	
Non-current	256,855

## 17 Share capital

	Par value per share (in Baht)	2019		2018	
		Number	Amount (thousand shares / thousand Baht)	Number	Amount
<b>Authorised</b>					
<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>
<b>Issued and paid</b>					
At 1 January					
- ordinary shares	1	<u>8,400,000</u>	<u>8,400,000</u>	<u>8,400,000</u>	<u>8,400,000</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>

## 18 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.

As at 31 December 2019, the Company allocated profit from operation to legal reserve in amount of Baht 230 million, the total legal reserve are Baht 764 million. (2018: the Company allocated profit from operation to legal reserve in amount of Baht 185 million, the total legal reserve are Baht 533 million)

#### **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.

## 19 Segment information and disaggregation of revenue

The Group comprises the following main business segments:

- Energy & Utilities
- Petrol and gas stations

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	
	2019	2018	2019	2018	2019	2018	2019	2018
Energy & Utilities	9,851,493	6,912,247	-	-	9,851,493	6,912,247	4,713,032	3,866,080
Petrol and gas stations	719,708	707,560	-	-	719,708	707,560	(4,265)	(6,452)
<b>Total</b>	<b>10,571,201</b>	<b>7,619,807</b>	<b>-</b>	<b>-</b>	<b>10,571,201</b>	<b>7,619,807</b>	<b>4,708,767</b>	<b>3,859,628</b>
Other losses							-	-
							<b>4,708,767</b>	<b>3,859,628</b>
Elimination of inter-segment (profit) loss							23	-
<b>Profit before income tax expense for the year</b>							<b>4,708,790</b>	<b>3,859,628</b>

The Group was incorporated both domestic and international. There are no material revenues derived from, or assets located in, foreign countries, and timing of revenue recognition of the Group is at a point in time.

**(b) Reportable segment financial position**

(in thousand Baht)

	Segment assets	
	2019	2018
Energy & Utilities	34,198,184	27,023,205
Petrol and gas stations	52,198	45,067
	<b>34,250,382</b>	<b>27,068,272</b>
Unallocated assets	3,602,192	4,472,952
<b>Total assets</b>	<b>37,852,574</b>	<b>31,541,224</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 9,882 million (2018: Baht 6,952 million) of the Group's total revenues.

**20 Investment income**

(in thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Interest income	63,570	43,600	60,523	43,556
Others	15,124	5,573	15,148	5,573
<b>Total</b>	<b>78,694</b>	<b>49,173</b>	<b>75,671</b>	<b>49,129</b>

**21 Other income**

(in thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Other income-claim insurance	43,048	115,722	43,048	115,722
Revenue from machine rental	94,317	67,798	94,317	67,798
Others	26,928	16,231	26,905	16,231
<b>Total</b>	<b>164,293</b>	<b>199,751</b>	<b>164,270</b>	<b>199,751</b>

## 22 Distribution costs

	<i>(in thousand Baht)</i>			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Personnel expenses	31,100	27,222	31,100	27,222
Utilities expenses	10,921	10,722	10,921	10,722
Rental	10,159	9,915	10,159	9,915
Depreciation and amortisation	2,976	4,061	2,976	4,061
Others	20,523	14,641	20,523	14,641
<b>Total</b>	<b>75,679</b>	<b>66,561</b>	<b>75,679</b>	<b>66,561</b>

## 23 Administrative expenses

	<i>(in thousand Baht)</i>			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Personnel expenses	71,709	59,855	71,709	59,855
Shared service expenses	40,316	46,799	40,213	46,799
Professional fees	38,062	51,965	38,002	51,295
Registration fees	27,705	13,009	20,301	12,999
Depreciation and amortisation	17,186	9,496	17,186	9,496
Insurance expenses	3,170	8,649	3,170	8,649
Others	234,002	128,986	233,861	128,984
<b>Total</b>	<b>432,150</b>	<b>318,759</b>	<b>424,442</b>	<b>318,077</b>

## 24 Employee benefit expenses

	<i>(in thousand Baht)</i>			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<b>Management</b>				
Wages and salaries	25,485	22,383	25,485	22,383
Defined benefit plans	441	449	441	449
Others	20,146	16,016	20,146	16,016
	46,072	38,848	46,072	38,848
<b>Employee</b>				
Wages and salaries	524,919	411,912	524,919	411,912
Defined benefit plans	12,295	6,000	12,295	6,000
Others	46,044	35,759	46,044	35,759
	583,258	453,671	583,258	453,671
<b>Total</b>	<b>629,330</b>	<b>492,519</b>	<b>629,330</b>	<b>492,519</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.

## 25 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:

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<i>(in thousand Baht)</i>				
<b><i>Included in cost of sales of goods:</i></b>				
Changes in inventories of finished goods and work in progress	266,242	13,960	266,242	13,960
Raw materials and consumables used	3,299,697	2,520,629	3,299,697	2,520,629
Employee benefit expenses	526,521	405,442	526,521	405,442
Depreciation and amortisation	786,711	467,534	786,711	467,534
<b><i>Included in distribution costs:</i></b>				
Employee benefit expenses	31,100	27,222	31,100	27,222
Depreciation and amortisation	2,976	4,061	2,976	4,061
<b><i>Included in administrative expenses:</i></b>				
Employee benefit expenses	71,709	59,855	71,709	59,855
Depreciation and amortisation	17,186	9,496	17,186	9,496

## 26 Finance costs

	Note	Consolidated financial statements		Separate financial statements	
		2019	2018	2019	2018
<i>(in thousand Baht)</i>					
<b><i>Interest expense:</i></b>					
Bank loan and overdrafts		-	5	-	5
Debentures		211,616	14,531	211,616	14,531
<b>Total interest expense</b>		<b>211,616</b>	<b>14,536</b>	<b>211,616</b>	<b>14,536</b>
Other		8,374	4,433	8,374	4,433
		<b>219,990</b>	<b>18,969</b>	<b>219,990</b>	<b>18,969</b>
Less amounts included in the cost of qualifying assets:					
- Construction contracts work in progress	10	(60,514)	-	(60,514)	-
<b>Net</b>		<b>159,476</b>	<b>18,969</b>	<b>159,476</b>	<b>18,969</b>

## 27 Income tax

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<i>(in thousand Baht)</i>				
<b><i>Income tax recognised in profit or loss</i></b>				
<b>Current tax expense</b>				
Current year	98,129	135,435	98,129	135,435
Adjustment for prior years	(2,987)	-	(2,987)	-
	<b>95,142</b>	<b>135,435</b>	<b>95,142</b>	<b>135,435</b>
<b>Deferred tax expense</b>				
Movements in temporary differences	6,840	25,234	6,840	25,234
<b>Total income tax expense</b>	<b>101,982</b>	<b>160,669</b>	<b>101,982</b>	<b>160,669</b>

	Consolidated and Separate financial statements					
	2019			2018		
	Before tax	Tax (expense) benefit	Net of tax	Before tax	Tax (expense) benefit	Net of tax
Defined benefit plan actuarial gains (losses)	(30,759)	6,152	(24,607)	(10,885)	2,177	(8,708)
<b>Total</b>	<b>(30,759)</b>	<b>6,152</b>	<b>(24,607)</b>	<b>(10,885)</b>	<b>2,177</b>	<b>(8,708)</b>

### Reconciliation of effective tax rate

	Consolidated financial statements			
	2019		2018	
	Rate (%)	(in thousand Baht)	Rate (%)	(in thousand Baht)
Profit before income tax expense		4,708,790		3,859,628
Income tax using the Thai corporation tax rate	20	941,758	20	771,926
Double allowance and deduction		(24,507)		(12,326)
Profit was derived from promoted activities		(822,148)		(603,182)
Expenses not deductible for tax purposes		9,866		4,251
Over provided in prior years		(2,987)		-
<b>Total</b>	<b>2.2</b>	<b>101,982</b>	<b>4.2</b>	<b>160,669</b>

### Reconciliation of effective tax rate

	Separate financial statements			
	2019		2018	
	Rate (%)	(in thousand Baht)	Rate (%)	(in thousand Baht)
Profit before income tax expense		4,713,452		3,860,266
Income tax using the Thai corporation tax rate	20	942,690	20	772,053
Double allowance and deduction		(24,507)		(12,453)
Profit was derived from promoted activities		(822,148)		(603,182)
Expenses not deductible for tax purposes		8,934		4,251
Over provided in prior years		(2,987)		-
<b>Total</b>	<b>2.2</b>	<b>101,982</b>	<b>4.2</b>	<b>160,669</b>

### Deferred tax assets and liabilities At 31 December

	Consolidated and Separate financial statements			
	Assets		Liabilities	
	2019	2018	2019	2018
Total	92,388	91,699	(1,377)	-
Set off of tax	(1,377)	-	1,377	-
<b>Net deferred tax assets</b>	<b>91,011</b>	<b>91,699</b>	<b>-</b>	<b>-</b>

Movements in deferred tax balances are as follows:

	Consolidated and Separate financial statements			
	(Charged) / Credited to			
	At 1 January 2019	Profit or loss	Other comprehensive	At 31 December 2019
<b>Deferred tax assets</b>				
Property, plant and equipment	75,338	(11,827)	-	63,511
Inventories	4,900	-	-	4,900
Provisions for employee benefits	11,293	6,532	6,152	23,977
Revaluation on fair value of trading investment	168	(168)	-	-
<b>Total</b>	<b>91,699</b>	<b>(5,463)</b>	<b>6,152</b>	<b>92,388</b>
<b>Deferred tax liabilities</b>				
Revaluation on fair value of trading investment	-	(1,377)	-	(1,377)
<b>Total</b>	<b>-</b>	<b>(1,377)</b>	<b>-</b>	<b>(1,377)</b>
<b>Net</b>	<b>91,699</b>	<b>(6,840)</b>	<b>6,152</b>	<b>91,011</b>

(in thousand Baht)

	Consolidated and Separate financial statements			
	(Charged) / Credited to			
	At 1 January 2018	Profit or loss	Other comprehensive	At 31 December 2018
<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>

## 28 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:

- exemption from payment of import duty on machinery and equipment approved by the Board;
- 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;
- 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;
- 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
- 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 cooperate 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:

(in thousand Baht)

	Consolidated and Separate financial statements					
	2019			2018		
	Promoted business	Non Promoted business	Total	Promoted business	Non Promoted business	Total
Domestic sales	8,799,853	1,771,348	10,571,201	5,287,456	2,332,351	7,619,807
<b>Total</b>	<b>8,799,853</b>	<b>1,771,348</b>	<b>10,571,201</b>	<b>5,287,456</b>	<b>2,332,351</b>	<b>7,619,807</b>

## 29 Basic earnings per share

The calculations of basic earnings per share for the years ended 31 December 2019 and 2018 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		<i>(in thousand Baht / thousand shares)</i> Separate financial statements	
	2019	2018	2019	2018
<b>Profit attributable to ordinary shareholders of the Company (basic)</b>	<u>4,606,808</u>	<u>3,698,959</u>	<u>4,611,470</u>	<u>3,699,597</u>
<b>Weighted average number of ordinary shares outstanding (basic)</b>	<u>8,400,000</u>	<u>8,400,000</u>	<u>8,400,000</u>	<u>8,400,000</u>
<b>Earnings per share (basic) (in Baht)</b>	<u>0.548</u>	<u>0.440</u>	<u>0.549</u>	<u>0.440</u>

## 30 Dividends

At the Board of Director's meeting of the Company held on 29 November 2019, the Board of Director's meeting passed a resolution to declare the interim dividend payment from retained earnings as of 30 September 2019, in amount of Baht 0.10 per share for the Baht 8,400 million common shares, amounting to Baht 840 million. The dividend was paid to shareholders on 27 December 2019.

At the Board of Director's meeting of the Company held on 30 August 2019, the Board of Director's meeting passed a resolution to declare the interim dividend payment from retained earnings as of 30 June 2019, in amount of Baht 0.10 per share for the Baht 8,400 million common shares, amounting to Baht 840 million. The dividend was paid to the shareholders on 13 September 2019.

At the annual general meeting of the shareholders of the Company held on 19 April 2019, the shareholders approved the appropriation of 2018 annual dividend at Baht 0.40 per share, amounting to Baht 3,360 million. After a deduction of the interim dividends of Baht 0.30 per share which were paid to the Company's shareholders in 2018, the remaining dividends of Baht 0.10 per share, totalling Baht 840 million. The dividend was paid to the shareholders on 3 May 2019.

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 0.10 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 0.10 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 0.10 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.

## 31 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:

*(in thousand Baht)*

	Effective interest rate (% per annum)	Within 1 year	After 1 year but within 5 years	After 5 years	Total
<b>2019</b>					
<b>Non-current</b>					
Debentures	3.90	-	4,000,000	-	4,000,000
Debentures	3.50	-	4,000,000	-	4,000,000
<b>Total</b>		<b>-</b>	<b>8,000,000</b>	<b>-</b>	<b>8,000,000</b>
<b>2018</b>					
<b>Non-current</b>					
Debentures	3.90	-	4,000,000	-	4,000,000
<b>Total</b>		<b>-</b>	<b>4,000,000</b>	<b>-</b>	<b>4,000,000</b>

### *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:

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<i>(in thousand Baht)</i>				
<b>United States Dollars</b>				
Cash and cash equivalents	3,253	3,549	81	63
Other payables	(1,360,994)	(1,419,642)	(1,360,994)	(1,419,642)
	<b>(1,357,741)</b>	<b>(1,416,093)</b>	<b>(1,360,913)</b>	<b>(1,419,579)</b>
<b>EURO</b>				
Cash and cash equivalents	6	3	6	3
Other payables	-	(10,684)	-	(10,684)
	<b>6</b>	<b>(10,681)</b>	<b>6</b>	<b>(10,681)</b>
<b>Others</b>				
Cash and cash equivalents	334	100	334	100
Other payables	-	(633)	-	(633)
	<b>334</b>	<b>(533)</b>	<b>334</b>	<b>(533)</b>
<b>Gross balance sheet exposure</b>	<b>(1,357,401)</b>	<b>(1,427,307)</b>	<b>(1,360,573)</b>	<b>(1,430,793)</b>

### 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.

### Carrying amount and fair values

The following table shows the carrying amounts and fair values of financial assets and financial liabilities, including their levels in the fair value hierarchy. It does not include fair value information for financial assets and financial liabilities not measured at fair value if the carrying amount is a reasonable approximation of fair value.

	Carrying value	Consolidate financial statements			
		Fair value			
		Level 1	Level 2	Level 3	Total
<i>(in thousand Baht)</i>					
<b>31 December 2019</b>					
<b>Financial assets measured at fair value</b>					
Equity securities held for trading (Short term general bond)	200,249	200,249	-	-	200,249
Debt securities held for trading	1,129,100	-	1,129,100	-	1,129,100
Debt securities held for trading (Private funds)	1,321,347	-	1,321,347	-	1,321,347
<b>Financial assets and financial liabilities not measured at fair value</b>					
Debt securities held to maturity	186,532	-	180,902	-	180,902
Debenture	8,000,000	-	8,091,745	-	8,091,745
<b>31 December 2018</b>					
<b>Financial assets measured at fair value</b>					
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
<b>Financial assets and financial liabilities not measured at fair value</b>					
Debt securities held to maturity	304,886	-	304,443	-	304,443
Debenture	4,000,000	-	4,016,748	-	4,016,748

(in thousand Baht)

	Carrying value	Separate financial statements			
		Fair value			
		Level 1	Level 2	Level 3	Total
<b>31 December 2019</b>					
<b>Financial assets measured at fair value</b>					
Equity securities held for trading (Short term general bond)	200,249	200,249	-	-	200,249
Debt securities held for trading	1,129,100	-	1,129,100	-	1,129,100
Debt securities held for trading (Private funds)	1,321,347	-	1,321,347	-	1,321,347
<b>Financial assets and financial liabilities not measured at fair value</b>					
Debt securities held to maturity	5,261	-	5,063	-	5,063
Debenture	8,000,000	-	8,091,745	-	8,091,745
<b>31 December 2018</b>					
<b>Financial assets measured at fair value</b>					
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
<b>Financial assets and financial liabilities not measured at fair value</b>					
Debt securities held to maturity	304,886	-	304,443	-	304,443
Debenture	4,000,000	-	4,016,748	-	4,016,748

## Measurement of fair values

### Valuation techniques

The following tables show the valuation techniques used in measuring Level 2 fair values.

Type	Valuation technique
Debt securities held for trading Debt securities held for maturity	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.

## 32 Commitments with non-related parties

(in thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<b>Capital commitments</b>				
<i>Contracted but not provided for:</i>				
Agreements for construction, machine and equipment	<u>281,061</u>	<u>2,014,709</u>	<u>281,061</u>	<u>2,014,709</u>
<b>Future minimum lease payments under non-cancellable operating leases</b>				
Within one year	3,748	4,164	3,748	4,164
After one year but within five years	<u>1,959</u>	<u>4,365</u>	<u>1,959</u>	<u>4,365</u>
<b>Total</b>	<u><u>5,707</u></u>	<u><u>8,529</u></u>	<u><u>5,707</u></u>	<u><u>8,529</u></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.

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<b>Other commitments</b>				
Unused letters of credit	498,667	-	498,667	-
Bank guarantees	10,827	37,225	10,827	37,225
<b>Total</b>	<b>509,494</b>	<b>37,225</b>	<b>509,494</b>	<b>37,225</b>

### 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

## 33 Litigation

On 16 December 2019, individuals in total of 222 people sued Energy Regulatory Commission (ERC) et al to the Central Administrative Court which the Company was listed as the 5th Defendant. The Plaintiffs requested that the approval of Environmental and Health Impact Assessment (EHIA) report for the project of 150 megawatts thermal power plant, the license to operate electricity generating business and the construction approval of the Company be revoked. The Plaintiffs also requested that the Court take evidence out of Court and issued an interim measure and ordering that the electricity generating system be temporarily stopped until the final decision is reached.

On 25 December 2019, the Court inquired both Parties in considering the request for interim measure and rendered its decision on 28 January 2020 denied the request for interim measure.

Subsequently, On 31 January 2020, the Court ordered to accept the complaint and request the Company to file the answers within the time limit. The case is under the preparation of answers.

The Company's legal consultant considered the complaint and its appendixes and hereby opines that the Company lawfully received the license to operate the electricity generating business and the construction approval from the competent authorities. The complaint of the Plaintiffs is untrue. As the case is in the preparation for answer, the Company has causes to relieve itself of any liability generated from the complaint depending on the Central Administrative Court Decision. Moreover, the Company has pressed charges against the 222 Plaintiffs to the Muak Lek police station, Saraburi, for taking the false information to charge the person in the Court. The case is under the investigation of the police.

### 34 Thai Financial Reporting Standards (TFRS) not yet adopted

New and revised TFRS, which are relevant to the Group's operations, expected to have material impact on the consolidated and separate financial statements when initially adopted, and will become effective for the financial statements in annual reporting periods beginning on or after 1 January 2020, are as follows:

<b>TFRS</b>	<b>Topic</b>
TFRS 7*	Financial Instruments: Disclosures
TFRS 9*	Financial Instruments
TFRS 16	Leases
TAS 32*	Financial Instruments: Presentation
IFRIC 16*	Hedges of a Net Investment in a Foreign Operation
IFRIC 19*	Extinguishing Financial Liabilities with Equity Instruments

\* TFRS - Financial instruments standards

#### (a) TFRS - Financial instruments standards

These TFRS - Financial instruments standards establish requirements related to definition, recognition, measurement, impairment and derecognition of financial assets and financial liabilities, including accounting for derivatives and hedge accounting. When these TFRS are effective, some accounting standards, interpretations and guidance which are currently effective will be cancelled.

Management has considered the potential impact of adopting and initially applying TFRS-Financial instruments standards 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 16 Leases

TFRS 16 introduces a single lessee accounting model for lessees. A lessee recognises a right-of-use asset and a lease liability. 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. When this TFRS is effective, some accounting standards and interpretations which are currently effective will be cancelled.

Currently, the Group recognises payments made under operating leases and relevant lease incentives in profit or loss on a straight-line basis over the term of the lease, and recognised assets and liabilities only to the extent that there was a timing difference between actual lease payments and the expense recognised. Under TFRS 16, the Group will recognise right-of-use assets and lease liabilities for its operating leases as disclosed in Note 32. As a result, the nature of expenses related to those leases will be changed because the Group will recognise depreciation of right-of-use assets and interest expense on lease liabilities.

The Group plans to apply the practical expedient to grandfather the definition of a lease on transition. This means that it will apply TFRS 16 to all contracts entered into before 1 January 2020 and identified as leases in accordance with TAS 17 and IFRIC 4.

The preliminary impact assessment of initially applying TFRS 16 on the financial statements is as follows:

<b>Statement of financial position</b>	<i>(in thousand Baht)</i>
<b>At 1 January</b>	<b>Consolidated and separate financial statements 2020</b>
Increase in right-of-use assets	574,542
Decrease in advances to related parties	(10,765)
Increase in lease liabilities	563,777



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