บริษัท ทีพีไอ โพลีน จำกัด (มหาชน)
TPI POLENE
Public Company Limited

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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**

# Message from the Board of Directors

To: Shareholders

Dear Sirs,

The year 2017 was another year of challenges for TPIPL Group due to intense competition in the country as demand consumption for cement and clinker in the domestic market has slowed down. As for the international market, there was an increased number of cement producers in the global market, leading to intense competition in the export markets, as the cost of coal rose. However, with the full cooperation of all levels of the Company' s staff and the management team, the Company was able to pursue its business operations and achieve its objectives as planned.

### Operating Performance

In 2017, the Company and its subsidiaries reported total revenues of Baht 29,088 million compared with Baht 29,128 million in 2016, a decrease of 0.14%. Total consolidated income in 2017 was Baht 30,996 million compared with the Baht 31,492 million in 2016, a decrease of 1.58%.

In 2016, the Company and its subsidiaries registered a loss for the year of Baht 696 million compared with a profit for the previous year of Baht 515 million, a decrease in loss of 235.25.

### The Offering for Sale of Baht 4,000 million debentures in 2017

In July 2017, the Company successfully completed its fundraising through the issuance and sale offering of unsubordinated/unsecured debentures, in registered form with debenture holders' representatives, in the amount of Baht 4,000 million, with the TRIS affirmed rating of such debentures at BBB+, with a stable rating outlook. The proceeds from the fundraising through the issuance and sale offering of debentures will be utilized to facilitate current project investments of TPI Polene Group and for working capital in business operations.

### TPIPP Raised Funds of Baht 17,500 million and listed on the Stock Exchange of Thailand

In March 2017, TPI Polene Power ("TPIPP", a subsidiary of TPI Polene) raised funds through an Initial Public Offering ("IPO") of newly issued ordinary shares offered for a value of Baht 17,500 million and were then selected to become part of the SET50 Index (a capitalization-weighted index based on the top 50 stocks) on the Stock Exchange of Thailand on April 5, 2017.

Upon the completion of the IPO, TPI Polene remained the controlling shareholder of TPIPP, holding 70.24 per cent of its enlarged paid-up capital.

As a consequence of the Initial Public Offering, the value of share capital that TPI Polene invested in TPIPP, totaling 5,899,999,300 shares, increased accordingly as share price realization increased to Baht 7 per share (par value of Baht 1 each). The increased value as above has thereby resulted in a TPI Polene share price increase of an addition of Baht 1.7 per share, while TPI Polene recorded the above share capital in the Financial Statements at the price of Baht 1 per share (par value).

### New Product Innovation of TPI Polene's Subsidiary

The Company has also developed a variety of construction products using nano technology, such as Nano paint, which can be applied promptly to cover existing surfaces of cement. With a unique specialty formula of hydrophobic components which are solvent-free, it reduces water absorption and is anti-fungus. The Company has also employed modern "digital technology", for processing digital boards such as fiber cement in timber printing and marbled appearance as well as other printings, allowing customers to create individual printings of their own decorative work. This also includes facade boards, constructed with fiber cement, which possess outstanding physical properties with an attractive appearance, a distinctly durable character, and are able to withstand extreme working conditions in the most demanding exterior applications and are specially developed for exterior cladding. High-quality fibre cement facade panels are non-combustible and save energy costs in the building.

The Company has also developed and launched a water-based adhesive and re-dispersible powder, which is widely used as an adhesive for distribution, the main raw materials of which are ethylene and vinyl acetate monomer. These are the byproducts of LDPE Homo-polymer and EVA Co-polymer to be recycled back into the production process, which can help reduce emission gas at the sources and wastes to be emitted to the surrounding environment. Therefore, TPI All Seasons is the first and the sole producer in the country of water-based adhesive and re-dispersible powder under the name EVA emulsion and EVA power, under the brand names of Polene®

TPI Bio Organics Co., Ltd. (a subsidiary-owned company) successfully launched a Microme Knox product used to prevent, control and decrease the risk of potential pathogen outbreaks, such as Avian Influenza or Bird Flu and Early Mortality Syndrome (EMS) in cloven-hoofed animals and poultry farm that are safe for humans and the environment. In addition, TPI Bio Organics also launched Natu piglet (Talcum Powder) which can be applied on piglets as a humidity absorptive to warm piglets after birth, allowing them to be healthier.

The success of these developments is considered as a step of progress for TPI Polene to be well prepared for "Thailand 4.0", and to develop our sustainable energy and construction material businesses, as well as a balance of agricultural products, to fully respond to the current policy of the Thai government.

### 2017 Awards that make us proud

In 2017, TPI Polene Group has passed all assessments and was awarded and certified under Asian and National Standards as follows:-

1. On August 2, 2017, TPI Polene received "Thailand Coal Awards 2017" from the Department of Mineral Fuel, under the Ministry of Energy of Thailand (the "MOE"), held in Thailand. The awards confirm that TPI Polene was selected as a corporation in the category of the outstanding utilization of

coal rewards while focusing on the importance of "Corporate Social Responsibility" to consistently preserve social and community improvement.

2. On August 17, 2017, TPI Polene won CSR-DIW Awards 2017, under the category "Standards for Corporate Social Responsibility", from the Department of Industrial Works, Ministry of Industry. The awards confirm that TPI Polene was selected as a corporation which focuses on the importance of "Corporate Social Responsibility".
3. On September 27, 2017, the Company received ASEAN Energy Awards 2017 in ASEAN Energy Business Forum 2017, ") in the City of Manila, the Philippines, for adhering to best practices for energy efficiency and renewable electricity generation among on-grid connected projects from Burning Refuse-Derived Fuel (RDF) with an installed power generation capacity of 60MW.
4. On September 19, 2017, the Company received Greenhouse Gas Mitigation Mechanism awards under the Thailand Voluntary Emission Reduction: T-VER (crediting program) from renewable energy community wastes Project.

Besides, TPI Polene Power Public Company Limited was also awarded and certified under Asian and National Standards as follows:-

1. On August 21, 2017, TPIPP received Thailand Energy Awards 2017 from the Department of Mineral Fuel, under the Ministry of Energy of Thailand (the "MOE") for adhering to best practices for energy perseveration and renewable electricity generation.
2. On August 17, 2017, TPIPP won CSR-DIW Continuous Awards 2017 from the Department of Industrial Works, Ministry of Industry.
3. On September 27, 2017, TPIPP won ASEAN Energy Awards 2017 or alternative energy for renewable electricity generation among on-grid conected projects from Burning Refuse-Derived Fuel (RDF) with an installed power generation capacity of 60MW, in the City of Manila, the Philippines.
4. On September 19, 2017, TPIPP received Greeenhouse Gas Mitigation Mechanism awards under the Thailand Voluntary Emission Reduction: T-VER (crediting program) for promoting investment in projects for the processing of RDF from municipal solid waste.

The Company's awards and certificates under Asian and National Standards as above confirm TPI Polene Group's strong commitment to being a corporation with high potential for effective energy management at an international level and to pursue its policy to consistently create modern technology and innovations for business operations. TPI Polene also realized the importance of conducting business operations under corporate social responsibility by emphasizing the balanced consideration of all related parties to achieve excellence with an adherence to foster a good governance corporate culture while creating public well-being in surrounding communities, industries, agriculture, and consistently protecting the surrounding environment to step forward internationally.

The Company's current success has been one of our proudest achievements as a Thai Corporation to be able to be competitive internationally. On behalf of the Company, the Company's Board of Directors would like to take this opportunity to thank all related parties for a well-coordinated effort and their ongoing trust in the Company to create unswerving progress for the organization. It is a major goal of the management team and all levels of the Company's staff to move the business forward to overcome obstacles to achieve the goal. We strengthened our growth potential so as to create sustainability within the group, to create stability for the organization, and to enhance the economic strength of the country. To this end, TPIPL realized the importance of conducting business operations by emphasizing the balanced consideration of all related parties, fair treatment of all parties concerned, while supporting public well-being and consistently protecting the surrounding environment to further enhance the sustainable growth of the country.

**Sincerely Yours,**

**Mr. Visith Noiphan**
Chairman of the Board

**Mr. Prachai Leopairatana**
Chief Executive Officer

# New Innovation Development to be an Environmentally Friendly Enterprise

TPI Polene is committed to emphasizing an appropriate investment in production development efficiency and a corporate culture under good corporate governance and well-managed business administration practices. TPI Polene has become a cement manufacturer which has significantly reduced carbon dioxide emissions to zero, using various methods; such as helping to eliminate municipal waste from industries, and boosting its fuel value to generate electricity, to creating its competency to be the cement manufacturer with the lowest cost of production in the country.

TPI Polene Group is also committed to further development to build on business innovation on the nano level, aiming to reduce the employment of national resources to be an environmentally friendly enterprise. The Company has developed a variety of construction materials, such as Fibre Cement, EVA emulsion and EVA powder, and new bio- organic fertilizers and pesticides without dangerous chemicals and toxic insecticides. All products are produced in order to be considered green energy.

TPI Polene Group is moving the business forward, to create unswerving growth potential for the new business, with a commitment to good corporate governance, an emphasis on transparency, and the highest standards of integrity, fairness, and equitable treatment of all related parties. We are ready to move forward by maintaining balance in all aspects of the business, in parallel with the growth potential of the economy, the public well-being and environmental preservation with an aim to create sustainability of the business as a whole, alongside the Thai economy and society as always.

# Corporate Profile

| | |
|---|---|
| **Company's Name** | : TPI Polene Public Company Limited |
| **Abbreviation in the SET** | : TPIPL |
| **Registration Number** | : 01075370000564 (formerly Bor. Mor. Jor. 303) |
| **Nature of Business** | : Manufacture and sale of cement, cement mortar, clinker, electricity, ready-mixed concrete, LDPE/EVA plastic resin, solar film, EVA emulsion, EVA powder, concrete roof tile, fiber cement, lightweight Concrete, industrial waste disposal, organic fertilizer and drinking water, etc. |
| **Registered Capital** | : Baht 24,815,000,000 Consisting of 24,815,000,000 ordinary shares, at the par value of Baht 1 each. |
| **Paid-up Capital** | : Baht 20,190,000,000 Consisting of 20,190,000,000 ordinary shares, at the par value of Baht 1 each. |
| **Accounting Period** | : January 1 - December 31 |
| **Location** | |
| **Head Office Location** | : 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 | : http://www.tpipolene.co.th |
| **Cement Plant/Power Plant** | : 299 Moo 5, Mittraparp Road, Tambol Tubkwang, Amphur Kangkhoy, Saraburi 18260 |
| **Cement Mortar Plant** | |
| **Lightweight Concrete Plant** | |
| **Pyrolysis and RDF Plant** | |
| Tel. Number | : +66 (0) 3633-9111 |
| Fax Number | : +66 (0) 3633-9228-30 |
| **LDPE/EVA Plant** | : 299 Moo 5 Sukhumvit Road, Tambol Chuengnoen, Amphur Muang, Rayong 21000 |
| Tel. Number | : +66 (0) 3861-1333 |
| Fax Number | : +66 (0) 3880-2568 |
| **Concrete Roof Tiles and Fiber Cement Plant** | : 77 Moo 7, within CRT Plant sub-road from Sai Ban Kork Street, Banlardkaopoon and Highway no. 1014, Tambol Ban Kang, Amphur Chaloem Phrakiat, Saraburi 18260 |
| Tel. Number | : +66 (0) 3667-0370-5 |
| Fax Number | : +66 (0) 3667-0377 |
| **Solar Film Plant** | : 49/1 Moo 1, Phichainarong Songkham Road, Tambol Nachong, Amphur Muang Saraburi, Saraburi 18260 |
| Tel. Number | : +66 (0) 3673-1724 |
| **Investors Relation Unit:** | |
| Tel. Number | : +66 (0) 2213-1039 ext. 12983 and 12985 |
| **Other Relevant Information:** | |
| **Share Registrars** | : Thailand Securities Depository Company Limited |
| **Office Location** | : 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 |

**Debentures, Debentures Registrar and Debenture Holders' Representatives**
**Offering for Sale of Debentures on December 31, 2017**

| Debenture Series | Name | Type | Amount (MB) | Interest Rate (p.a.) | Issued Date | Maturity Date | Tenor |
|---|---|---|---|---|---|---|---|
| TPIPL187A | Debentures of TPI Polene Public Company Limited No.1/2014 Series2 Due A.D.2018 | Unsecured and Unsubordinated Debentures with a debentureholders' representative | 2,000 | 5.30 % | 17 Jan 2014 | 17 July 2018 | 4.5 Years |
| TPIPL191A | Debentures of TPI Polene Public Company Limited No.1/2015 Series1 Due A.D.2019 | Unsecured and Unsubordinated Debentures with a debentureholders' representative | 3,000 | 4.85 % | 22 Jan 2015 | 22 Jan 2019 | 4 Years |
| TPIPL201A | Debentures of TPI Polene Public Company Limited No.1/2015 Series2 Due A.D.2020 | Unsecured and Unsubordinated Debentures with a debentureholders' representative | 3,000 | 5.20 % | 22 Jan 2015 | 22 Jan 2020 | 5 Years |
| TPIPL188A | Debentures of TPI Polene Public Company Limited No.2/2015 Series1 Due A.D.2018 | Unsecured and Unsubordinated Debentures with a debentureholders' representative | 3,000 | 4.10 % | 5 Aug 2015 | 5 Aug 2018 | 3 Years |
| TPIPL198A | Debentures of TPI Polene Public Company Limited No.2/2015 Series2 Due A.D.2019 | Unsecured and Unsubordinated Debentures with a debentureholders' representative | 2,750 | 4.40 % | 5 Aug 2015 | 5 Aug 2019 | 4 Years |
| TPIPL208A | Debentures of TPI Polene Public Company Limited No.2/2015 Series3 Due A.D.2020 | Unsecured and Unsubordinated Debentures with a debentureholders' representative | 2,205 | 4.65 % | 5 Aug 2015 | 5 Aug 2020 | 5 Years |
| TPIPL218A | Debentures of TPI Polene Public Company Limited No.2/2015 Series4 Due A.D.2021 | Unsecured and Unsubordinated Debentures with a debentureholders' representative | 3,600 | 4.90 % | 5 Aug 2015 | 5 Aug 2021 | 6 Years |
| TPIPL228A | Debentures of TPI Polene Public Company Limited No.2/2015 Series 5 Due A.D.2022 | Unsecured and Unsubordinated Debentures with a debentureholders' representative | 4,000 | 5.20 % | 5 Aug 2015 | 5 Aug 2022 | 7 Years |
| TPIPL214A | Debentures of TPI Polene Public Company Limited No.1/2016 Series 1 Due A.D.2021 | Unsecured and Unsubordinated Debentures with a debentureholders' representative | 1,600 | 4.35 % | 1 Apr 2016 | 1 Apr 2021 | 5 Years |
| TPIPL224A | Debentures of TPI Polene Public Company Limited No.1/2016 Series 2 Due A.D.2022 | Unsecured and Unsubordinated Debentures with a debentureholders' representative | 1,200 | 4.60 % | 1 Apr 2016 | 1 Apr 2022 | 6 Years |
| TPIPL234A | Debentures of TPI Polene Public Company Limited No.1/2016 Series 3 Due A.D.2023 | Unsecured and Unsubordinated Debentures with a debentureholders' representative | 2,645 | 4.80 % | 1 Apr 2016 | 1 Apr 2023 | 7 Years |
| TPIPL197A | Debentures of TPI Polene Public Company Limited No.1/2017 Series 1 Due A.D.2019 | Unsecured and Unsubordinated Debentures with a debentureholders' representative | 2,000 | 3.20 % | 7 Jul 2017 | 7 Jul 2019 | 2 Years |
| TPIPL234A | Debentures of TPI Polene Public Company Limited No.1/2016 Series 3 Due A.D.2023 | Unsecured and Unsubordinated Debentures with a debentureholders' representative | 2,000 | 3.50 % | 7 Jul 2017 | 7 Jul 2020 | 3 Years |
| Total | | | 33,000 | | | | |

**Debenture Registrar and**
**Debenture Holders' Representative** : CIMB Thai Bank Plc
Address : 44, Langsuan Road, Lumpini Subdistrict, Pathumwan District, Bangkok 10330
Telephone : +66(0) 2626-7507-8, + 66(0) 2626-7591
Fax : +66(0) 2657-3390

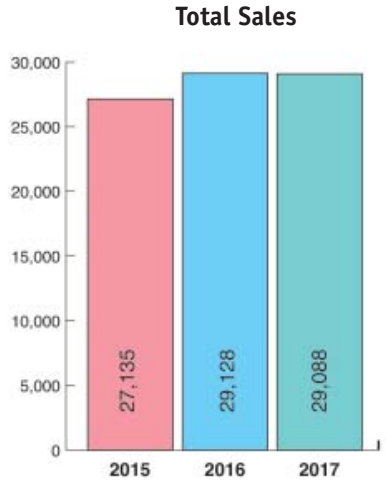
**Statutory Auditor** : KPMG Phoomchai Audit Limited.
Office Location : 1 Empire Tower, 50-51th Fl., South Sathorn Road, Kwaeng Yannawa, Sathorn, Bangkok 10120
Telephone : +66 (0) 2677-2000
Fax : +66 (0) 2677-2222

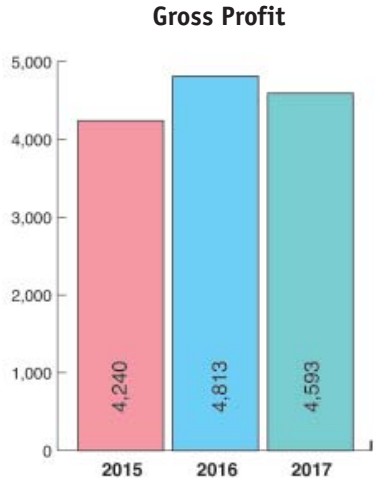
# Financial Highlights

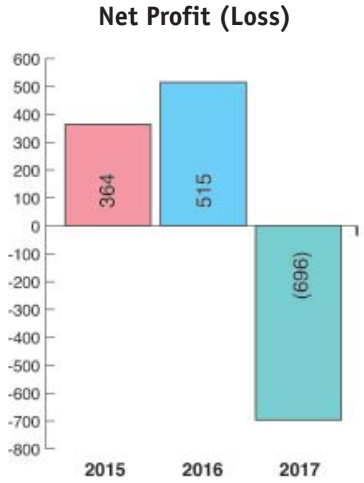
| | Unit | 2015** | 2016*** | 2017 |
|---|---|---|---|---|
| **Operational Performance** | | | | |
| Total Revenues | (Baht Mil.) | 29,247 | 31,492 | 30,996 |
| Total Sales | (Baht Mil.) | 27,135 | 29,128 | 29,088 |
| Gross Profit | (Baht Mil.) | 4,240 | 4,813 | 4,593 |
| Operating Profit (Loss) before income tax | (Baht Mil.) | 137 | (511) | (1,100) |
| Net Profit (Loss) | (Baht Mil.) | 364 | 515 | (696) |
| **Financial Status** | | | | |
| Total Assets | (Baht Mil.) | 107,645 | 92,618 | 103,178 |
| Total Current Assets | (Baht Mil.) | 16,953 | 19,549 | 24,195 |
| Total Liabilities | (Baht Mil.) | 51,679 | 55,864 | 51,092 |
| Total Financial Debt | (Baht Mil.) | 37,681 | 46,609 | 40,972 |
| Total Shareholders' Equity | (Baht Mil.) | 55,966 | 36,755 | 52,086 |
| **Key Financial Ratios** | | | | |
| Gross Profit Margin | (%) | 15.63 | 16.52 | 15.79 |
| Net Profit Margin | (%) | 1.24 | 1.63 | (2.25) |
| Paid-up Capital | (Baht Mil.) | 20,190 | 20,190 | 20,190 |
| Par value per share | (Baht) | 1.00 | 1.00 | 1.00 |
| Book Value per share | (Baht) | 2.80 | 1.84 | 2.61**** |
| Earnings per Share | (Baht) | 0.018 | 0.026 | (0.063) |
| Dividend per Share | (Baht) | 0.02 | 0.02 | 0.02 |
| Dividend payout Ratio* | (%) | N/A | 29.85 | N/A |
| Debt to Equity Ratio | (times) | 0.92 | 1.52 | 0.98 |
| Financial Debt to Equity Ratio | (times) | 0.67 | 1.27 | 0.79 |

Remarks: * Based on Separate Financial Statements
** Consolidated Financial Statements (Before restated)
*** Consolidated Financial Statements (Restated)
**** Number of 5,899,999,300 shares of TPIPP, held by TPI Polene not yet mark to market.
The above share price was realized at the par value of Baht 1 per share.

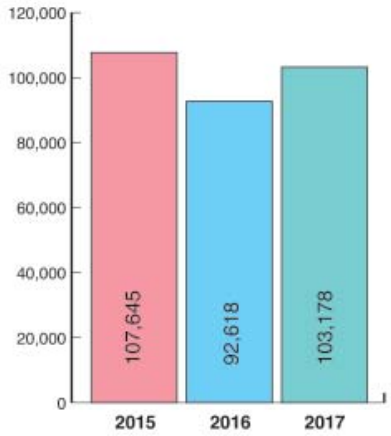
# Total Revenues and Net Profit

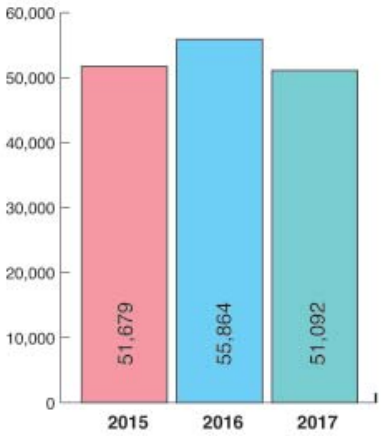


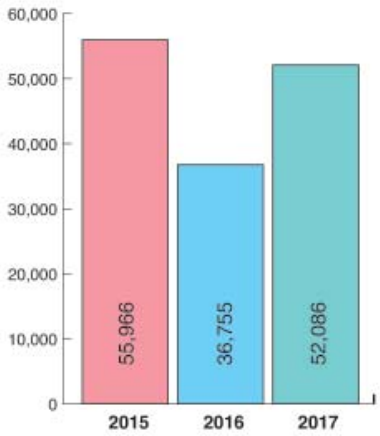




# Financial Status



# Awards that make us proud in 2017

In 2017, TPI Polene Group was awarded and certified under Asian and National Standards as follows:-

**1. CSR Thailand Coal Award 2017**

On August 2, 2017, TPI Polene won "Thailand Coal Awards 2017" from the Department of Mineral Fuel, the Ministry of Energy of Thailand (the "MOE"), held in Thailand. The awards confirm that TPI Polene was selected as a corporation in the category of the outstanding utilization of coal while focusing on the importance of "Corporate Social Responsibility" to consistently preserve social and community improvement to consistently manufacture the products that are environmentally friendly. TPI Polene won the award in 2 categories.

• "Special Submission Category" as a manufacturer in the country for " Specific energy consumption improvement of kiln plant" to consistently improve machinery and production process under modern technology and innovations, enabling it to reduce energy usage and greenhouse gas emissions to preserve social and community improvement and surrounding environment.

• "Standard for Corporate Social Responsibility" as a manufacturer in the country for "TPIPL's continuing commitment to CSR", from the Department of Industrial Works, the Ministry of Industry for 2nd consecutive year. The awards confirm that TPI Polene was selected as a corporation which focused on the importance of "Corporate Social Responsibility" to consistently preserve social and community improvement.

**2. CSR Asean Coal Award 2017**

On September 27, 2017, the Company won 2 ASEAN Energy Awards 2017 from the Department of Mineral Fuel, under the Ministry of Energy of Thailand (the "MOE") in the City of Manila, the Philippines:-

- TPI Polene won Special Submission Category" as a manufacturer in the country for "Specific energy consumption improvement of kiln plant" to consistently improve machinery and production process under modern technology and innovations, enabling it to reduce energy usage and greenhouse gas emissions to preserve social and community improvement and surrounding environment.
- TPI Polene won the "Corporate Social Responsibility" award as a leading cement manufacturer for "TPIPL's continuing commitment to CSR" to consistently preserve social and community improvement.

**3. Energy Saving Label Award**

On December 22, 2017, TPI concrete roof tiles and corrugated roofing sheets have received certificates for "Efficient Energy Saving Label" (Energy Saving Label Award No.5) under "the Project to promote highly efficient machinery and the use of materials for Energy Conservation with the Label Award" from the Department of Alternative Energy Development and Efficiency ("DEDE") under the Ministry of Energy of Thailand (the "MOE"). TPI concrete roof tiles and corrugated roofing sheets are made from high quality cement and are manufactured to be environmentally friendly and help to even out temperatures, using heat-resistant coating, assuring cost and energy savings under the standardization of roofing material. A certificate for "Efficient Energy Saving Label" in the TPI concrete roof tiles and corrugated roofing sheets products category are as follows:-

- TPI Concrete Roof Tiles: Utopia (Orange Peel texture), with the range of color, such as pearl white, bronze and yellowish orange.
- TPI Concrete Roof Tiles: Luxuria (Orange Peel texture), with the range of color, such as pearl white, bronze and yellowish orange.
- TPI Concrete Roof Tiles: Utopia (smooth texture) with the range of color, such as pearl white, bronze and yellowish orange.
- TPI Concrete Roof Tiles: Luxuria (smooth texture) with the range of color, such as pearl white, bronze and yellowish orange.
- TPI Concrete Roof Tiles: Utopia (Excelsior texture), with the range of color, such as pearl white and yellowish orange.
- TPI Corrugated Roofing Sheets (Cool Comfort Series), size 50x120x0.5 centimeters, with the range of colors such as sparkling gold, pearl white and pearl brick.
- TPI Corrugated Roofing Sheets (Cool Comfort Series), size 50x150x0.5 centimeters, with the range of colors such as sparkling gold, pearl white and pearl brick.

**4. Certificate for Carbon Footprint for Cement Products**

The Company's 7 types in the cement products category passed the evaluation criteria in "Carbon Footprint of Products: CFP" and were permitted to use the Carbon Footprint of Products Label (CFP) from Thailand Greenhouse Gas Management Organization Public Company Limited ("GTO") for the period of 3 years. For the event, TPI Polene's other three products have been granted permission to use the "Carbon Footprint Reductions: CFR" label, reflecting the Company's production process that decreases the amount of energy needed for efficient new production technology to reduce emissions of gases that cause climate change in the atmosphere. The cement products were awarded as follows:-

| Cement Products and Awards | Awards | |
|---|---|---|
| | CFP | CFR |
| TPI Portland cement type 1: 50 kilograms | ✔ | ✔ |
| TPI hydraulic grout : red cement -50 kilograms | ✔ | ✔ |
| TPI Portland cement type 1 : Special Formula (Red Super) - 40 kilograms | ✔ | - |
| Mixed cement : 50 kilograms | ✔ | - |
| TPI Mixed cement : green cement super: 40 kilograms | ✔ | - |
| TPI Mixed cement : M197-50 kilograms | ✔ | ✔ |
| Mixed cement : TPI199-50 kilograms | ✔ | - |

The Company is committed to consistently manufacture high quality products and employ national resources at the ultimate benefit to be environmentally friendly.

TPI Polene Power Public Company Limited was also awarded and certified under Asian and National Standards as follows:-

**5. Thailand Energy Award 2017**

On August 21, 2017, TPI Polene Power Plc. received Thailand Energy Awards 2017 from the Department of Mineral Fuel, under the Ministry of Energy of Thailand (the "MOE") for adhering to best practices for energy perseveration and renewable electricity generation among on-grid connected projects from Burning Refuse-Derived Fuel (RDF) with an installed power generation capacity of 60MW.

**6. CSR-DIW Continuous Awards 2017**

On August 17, 2017, TPI Polene Power Plc. won CSR-DIW Continuous Awards 2017, under the category "Standards for Corporate Social Responsibility", from the Department of Industrial Works, Ministry of Industry.

**7. Asian Energy Awards 2017**

On September 27, 2017, TPI Polene Power Plc. won ASEAN Energy Awards 2017 or alternative energy for renewable electricity generation among on-grid connected projects from Burning Refuse-Derived Fuel (RDF) with an installed power generation capacity of 60MW, in the City of Manila, the Philippines.

**8. Greenhouse Gas Mitigation Mechanism**

On September 19, 2017, TPI Polene Power Plc. received Greenhouse Gas Mitigation Mechanism awards under the Thailand Voluntary Emission Reduction: T-VER (crediting program) for promoting investment in projects for the processing of RDF from municipal solid waste.

# Audit Committee's Report for 2017

To: Shareholders:

Dear Sirs,

The Audit Committee of TPI Polene Public Company Limited consists of 2 independent directors, who are all qualified with knowledge of finance, law and management administration: namely, Dr. Narasri Vaivanijkul as the Chairman of the Audit Committee; Mr. Manas Sooksmarn as Audit Committee members: with Mr. Nitisit Jongphitakratana, 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 2017, the Audit Committee convened 5 meetings.

1. To review and to evaluate internal control systems.

The Company and its subsidiaries have appropriate internal control systems and have operated the business efficiently and effectively under appropriate and sufficient internal controls, as supported by the operational performance report. The Company and its subsidiaries have 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 and its subsidiaries, 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 public well-being creation and environmental conservation and fosters 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 2018.

The Audit Committee has taken into consideration the independence, performance, experience and an appropriate remuneration of auditors. The Audit Committee has passed a unanimous resolution to propose to the Company's Board of Directors for consideration and to propose to the shareholders' meeting to consider and approve the appointment of Mr. Ekkasit Chuthamsathit, CPA registration no. 4195 or Mr. Boonyarit Thanormcharoen, CPA registration no. 7900 or Mr. Natthapongse Thantijatthanond, CPA registration no. 8829, KPMG Phoomchai Audit Limited, to be the statutory auditors of the Company for 2018.

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,

**Dr. Narasri Vaivanijkul**
Chairman of the Audit Committee

# Corporate Social Responsibility (CSR)

### The Policy to Create Sustainable Growth

The Company is committed to pursuing its business operations with ethics and well-managed business administration practices with an adherence to creating a corporate culture with good corporate governance in parallel with social conservation and environmental preservation. In its business operations, the Company concentrates on establishing a sustainable return on investment for shareholders. It continues to discharge its responsibilities towards relevant rules and regulations and support the community surrounding its facilities, thus providing better living standards for all related parties. The Company is continuously committed to promoting academic development, encouraging better healthcare and safety, protecting the environment and supporting beneficial activities towards society, and promoting Thai arts and traditional Thai cultures alongside social development with the objective to genuinely respond to the needs of the people in the surrounding communities to create sustainable growth for the Company.

### Vision

TPI Polene is one of the leading cement manufacturer and plastic resins in the country and developed a variety of construction products using Nano technology while focusing on the importance of corporate social responsibly to consistently preserve environmental surrounding.

### Mission

TPI Polene is one of the leading cement manufacturer and plastic resins in the country to be well prepared for " Thailand 4.0", and to develop our sustainable energy and construction material business, as well as a balance of agricultural products, to fully respond to the current policy of the Thai government.

### Organization's Philosophy

TPI Polene realized the importance of consistently producing good quality products while supporting the activities discharging its responsibilities towards relevant governmental rules and regulations while providing better living standards for all related parties. The Company also concentrates on establishing a sustainable returen on investment for shareholders to further enhance the sustainable growth of the business.

### The Policy to Enhance Sustainable Growth of TPI Polene Group

The Company's CSR Committee is responsible for the overall assessment of TPI Polene Group's CSR activities. This also includes the development of CSR activities with a policy of full commitment to create value and sustainable growth of CSR implementation. The policies of CSR implementation have been set to promote and to monitor CSR activities. The Group CSR committee consists of the Chairman, the Vice-Chairman, and the Committee members, who were recruited from top management in the relevant departments of TPIPL group. The meetings of the CSR Committee are held regularly to set the framework of TPI Polene Group's CSR activities to consistently monitor and create a corporate culture with good corporate governance.

### The Stakeholders of the Company

The Company established "corporate governance policies for related parties who have conflicts of interest" by announcing the written publication of "the policies and measurements towards related parties who have conflicts of interest" as a principal guideline for employees to interact properly with the related parties who have conflicts of interest. The Company still maintains a policy of full commitment to the principles of creating value cooperatively with the related parties. Top management will be responsible for policy affairs treatment for all parties concerned and pass the opinion of the parties concerned through relevant departments, which are responsible for all parties concerned. The above policies are a principal guideline for the management and employees of the group that perform in compliance with the principles of good corporate governance by putting corporate social responsibility into clear practice. All related parties, who have a direct impact on business operations, are as follows:

1. Employees - Fair practice to employees/human right compliance
2. Shareholders/suppliers/contractors/customers - Value ethical and transparent business conduct
3. Competitors - Enhance fair competition and new innovation
4. Surrounding community, as well as related persons as a whole - Reduce environmental impact at the source.
5. Environmental preservation: Reduce the environmental impact at the source.

**Guidelines and Practices towards the Company's Stakeholders**

| Stakeholders | Requirements | Procedures | Plan implementation |
|---|---|---|---|
| 1. Employees | - Work progress in their careers<br>- Employees' welfare and security<br>- Membership of Co-Op<br>- Obtaining courses and training programs for potential development<br>- Good image of the Company<br>- Fair treatment<br>- Safety in the workplace | - The Company schedules training programs and on-the-job training sessions as well as relevant knowledge for employees to perform their duties properly, safely and suitably for employees in each respective position.<br>- The Company provide courses and training sessions to develop growth potential, knowledge and competitive advantages of the employees to keep pace with the future growth of the corporation and work progress in their careers.<br>- The Company encourages on-the-job training program among employees, including in-house and external-training courses in compliance with job descriptions.<br>- The Company provides employees the opportunities to pursue their study and obtain courses training programming in compliance with job descriptions. | - The Company has clear rules and regulations on employment to be strictly applied, which also include equal opportunities for employees to progress in their career regardless of sex, age, generic information, races, religion, educational background. The employment policies and conditions of work are based on job requirements.<br>- The Company shall not hire expatriates, which include contractors and sub-contractors.<br>- Allow expression of views and advice.<br>- Fair practice to employees.<br>- The Company offers salary and wages as well as welfare to be equivalent or comparable to those in the same industry.<br>- The Company provides a safe and healthy working environment.<br>- To comply with rules and regulations of human rights. |
| 2. Shareholders | - To create sustainable return on investment.<br>- To conduct the business with transparency.<br>- To take part in decision-making.<br>- Ongoing business operations and low risk.<br>- To obtain information regarding operating results. | - The Company shall protects shareholders' fundamental rights and ensure equitable treatment to all shareholders to facilitate shareholders to access the Company's information .<br>- The Company operates in compliance with the principles of good corporate governance with honesty, prudence and without conflicts of interest to create sustainable value to all shareholders.<br>- Deliver the invitation to the Annual General Shareholders' Meeting with all relevant documents for shareholders in advance of the meeting<br>- Shareholders are able to appoint proxies to delegate their votes to others to act on behalf of them.<br>- Provide shareholders opportunities to add agenda items or propose to the meeting the name of the persons to be elected as the Directors of the Company to be in compliance with the legal Articles of Association of the Company.<br>- Constantly disclose corporate information as well as financial statements and operating results to all shareholders accurately, completely, transparently and in a timely manner to ensure that shareholders obtain adequate corporate operational performance through a network that is easily accessed.<br>- Accept advice and complaints. | - All shareholders have fundamental rights and must have equitable treatment.<br>- To create long-term growth of the busness and establish sustainable return on investment to shareholders. |

| Stakeholders | Requirements | Procedures | Plan implementation |
|---|---|---|---|
| 3. Trade partners | - Clear purchasing policy<br>- Fair business operation<br>- Help develop growth potential of the purchasers.<br>- Clear procurement policy. | - TPIPL group has to obtain the best value for materials and goods and to maintain the highest ethical standards in dealing with suppliers. Value includes price, quality and service.<br>- Purchasing personnel are not permitted personal interest in the procurement process.<br>- The Company will not engage with the trade partners who deal with businesses that act against the law.<br>- Employees of TPIPL group shall procure material and goods at the appropriate and fair price and ensure that its trade partners perform in compliance with guideline leading to sustainable growth for both parties. | - Strictly perform in compliance with terms and conditions of the transaction and contracts.<br>- Take into consideration of the corporate benefits of both parties, thus enhancing equitable practices for business operations<br>- All trade partners should be treated equally. |
| 4. Customers | - Good quality and safe merchandise.<br>- Fair prices<br>- Easy and convenient to acquire<br>- Sales promotions and free samples.<br>- Alternative merchandises<br>- Provide products profiles and instruction | - The Company is focused on the importance of quality product development and full-scale service to be delivered to customers in a timely manner and meet the requirements of customers.<br>- The Company shall keep track of records of customers' profiles systematically in a safe place and protect customer information and records against unauthorized access to or misuse of customer records or information.<br>- Offer fair prices for goods and services.<br>- The Company provides a unit or center to be responsible for providing a range of information of products and services as well as submission of a claim or make a complaint.<br>- An arrangement of customers seminars to consistently educate them on the variety of products. | - Satisfy the needs to customers<br>- Do not act or obtain or attempt to offer any goods or service by any means or device with the intent of fraud to the customers, who must believe in the quality of our goods or services<br>- Provide customers goods and services which are safe and harmless for them.<br>- Create brand loyalty. |
| 5. Competitors | - Market share<br>- Fair Competition<br>- New innovations | - Under the fair competition circumstances | - Not to violate identifiable information of competitors.<br>- To perform in compliance with good practices for trading. |
| 6. Communities | - Keep the community informed of relevant information<br>- Promoting Thai traditional cultures.<br>- Improved Quality of life.<br>- Participating in activities to develop public well-being<br>- Create good opportunities for careers. | - Survey the Community's needs and opinions.<br>- Consistently provide mobile medical units for local people in the community<br>- Supporting reforestation and rehabilitation of used mine areas. | - Support of community activities<br>- Provide training courses for employees to stimulate them to be conscious of environmental preservation. |
| 7. Enviroment | - | - Enhancing production process to reduce environmental impact.<br>- Generating renewable heat recovery to generate electricity back to the system<br>- Generating crude oil and liquid fuel from tire pyrolysis<br>- make use of decomposed organic substances as compost materials to produce Organic Fertilizers | - reduce energy uses from coal<br>- Processing of RDF as alternative fuel from municipal solid wastes<br>- minimizing residual waste from operations and purchase wastes from the community and municipal government<br>- Operate fully integrated industrial waste disposal business to help eliminate industrial wastes from industries |

The Company also realizes the importance of creating quality of life for consumers, employees, the community and environment as well as stakeholders through its operating activities, starting from the procurement of raw material, production process through to dispatching the products to customers. This will further enhance our long-term development for stakeholders and create sustainable growth for the Company as per the mission as follows:-

1. TPI Polene pledges its commitment to consistently create quality of life for consumers.
2. The Company is focused on consistently producing quality products, manufactured under top safety standards for customers and in response to the need of customers.
3. TPI Polene also fosters self-development of all levels of employees, creating quality of life for the staff of the Company.
4. TPI Polene maintains a policy of reducing resource employment.
5. TPI Polene established a policy to reduce environmental impacts at the source, including living along with a sustainable community.
6. TPI Polene is committed to sustainable communities.
7. Committed to creating sustainable growth for our shareholders.

**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 dealings 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 employees must not induce to act or refrain from acting that may lead to malfeasance and corruption, and not getting involved in corruption, whether directly or indirectly.
2. To support all 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 to 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 are classified into 2 major groups as follows:-

1. Internal: Director, Management Team, and all levels of staffs/employees
2. External: Customer or suppliers, contractors 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, assets, or other inappropriate benefits from government officers, government sectors, private sectors, or responsible person either in direct or indirect action so that such person could proceed or disregard his/her function in order to acquire, retain the business, recommend specific company to the entity, or achieve any improper benefits in business transaction. Exception shall be applied in case of laws, regulations, statements, standards, customs, or business traditions that are enabled to do so.

**Roles and Responsibilities**

1. The Board of Directors is responsible for determining the policy, monitoring, and forming of an effective system supporting the Anti-Corruption act in order to affirm that the Management Team is intensively concerned with, emphasizes, and cultivates an Anti-Corruption mindset as the company's culture.

2. Presidents and the Management are responsible for determining the Anti-Corruption system, promoting, and encouraging that Anti-Corruption manners are conveyed to all staff and related parties. This also includes reconsideration of systems or regulations in order to best adjust to business changes, regulations, standards, and laws.
3. The Audit Committee is responsible for revision of financial and accounting reports, internal controls, internal audit functions, 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, assessing, and evaluating whether business transactions are accurate and comply with guidelines, approval authorities, standards, laws, and policies in such monitored departments in order to assure 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 the responsible person provided in particular channels, including cooperating with the fact finding investigation.
2. A person who commits corruption is considered for disciplinary offenses. This means such person is to be considered for discipline according to the Company's standards. Legal prosecution may be applied in case such acts violate laws.
3. The Company shall be fair and provide safeguards for staff members who report corruption cases relating to Anti-Corruption.
4. The Company understands the importance of dissemination, knowledge sharing, and constant communications 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 on Anti-Corruption Policy (to interact properly with business partners and the related parties who have conflicts of interest)**

All employees will be responsible for adhering to the Company's Anti-Corruption Policy in their business connections with customers, suppliers and all parties concerned. (Thereinafter 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 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 under any circumstances, related to the business without 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 the business decision of said employee.
4. The employees must not perform any act to acquire or keep benefits from their positions in the Company to accept Gifts, Entertainment and Hospitality Offering or entertainment and hospitality activities from other persons in business dealing with the Company.
5. Whenever the employees advise the HR department of the Company, those actions must not go against the benefits and/or recruitments of the Company and employees must refrain from doing any act to acquire or keep benefits that go against relevant laws and regulations.
6. There are to be no close relationships between supervisors and those under their supervision within the same departments such as married couples, or parents or offspring, that may impose conflicts of interest.
7. The 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 for business purposes, 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, supervisor approval has not been granted in advance, such employees are deemed to get an approval from their supervisors immediately after offering all types of gifts (such as the Company's products) or all forms in any circumstances, to other persons for business purposes.

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 (discrimination based on race, sex, disabilities or religion). This also includes burglary, threats, force or any other kind of action that violates the law.

11. Employees should ask or request opinions from their supervisors or responsible persons when the employees face or have doubtouts ab any act that is considered corruption in order to avoid any argument.

**File complaints or reports of Fraud**

**Complaints or recommendations**

1.1 A complaint if encountering any acts that are considered corruption, either directly or indirectly.

1.2 Any act that is considered corruption and/or has a direct effect on the internal controls of the Company, to 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 goes against the law, morals or business ethics.

**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, said whistleblower or the person subject to such grievance and parties involving in the fact-finding and reporting process, regardless of the 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 a policy to investigate such reports with equality, transparency, care, and fairness and subject them to a proper investigation. All information will be kept confidential and only be revealed when necessary while we will take into consideration safety of and damage to the whistleblower or the person filing the 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 employees) may choose not to reveal his or her name, address or contact number unless he or she feels that such a disclosure will enable the Company to inform him or her of the progress. Information will be kept confidential and only be revealed when necessary while we will take into consideration the safety of and damage to the whistleblower or the person filing the grievance. The Company will hear all such reports with equality, transparency, care, and fairness and subject them to a proper investigation, which will be carried out in a confidential manner to ensure the staff members who make the reports will have their identities protected.

**Fact-Finding Process and Penalties**

1.1 Having received the grievance, the Management Representatives, whose members consist of the Compliance Unit and the Audit Committee, will be responsible for conducting an investigation.

1.2 During the fact-finding process, the Management Representatives and the Audit Committee might ask the Management Representatives to keep them informed the progress of further investigation.

1.3 In case that tips or grievances are found to contain material evidence, the person committing corruption or violating or failing to comply with the Anti-Corruption measures will be granted an opportunity to acknowledge the charges and will have the right to defend themselves by providing additional information or evidence that they weren't involved in any corruption or that they violated or failed to comply with the Anti-Corruption measures as accused.

4. In case that the person who committed corruption or violated or failed to comply with the Anti-Corruption measures, is proven 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 Company standards. Legal prosecution may apply in case such acts violate the laws. The Management's decision is considered the final judgment for punishment on employees at fault relating to corruption matters.

**Disclosure of the Anti-Corruption Policy**

1. The Company announces the written publication of the Anti-Corruption Policy and measurements as a principal guideline for employees to follow.

2. The Company discloses the written publication of the Anti-Corruption Policy and measurements through the Company's channel, such as letters, the Company's website and Annual Report., etc.

3. The Anti-Corruption Policy needs to be reviewed regularly, including with a possible revision of such policy and implementation provisions in order to be in accord with business changes, regulations, standards, and laws.

# TPI Polene and Social Responsibility

The Company and its subsidiaries, as a Thai corporation, realize the importance of the clear role of operating the business in order to foster good corporate governance, while creating public well-being and be environmentally friendly by putting corporate social responsibility into practice. The Company has focused on development to further enhance the sustainable implementation in all respects, which can be partly reported below:

**1. Environmental Activities**

TPI Polene and its subsidiaries are committed to pursuing business operations with highly efficient fuel management at an international level and to consistently improve machinery and production processes using modern technology and innovations to be implemented in business operations. The Company realizes the importance of "Corporate Social Responsibility" to consistently preserve social and community improvement.

TPI Polene Power pursues business operations to foster a good governance corporate culture while creating public well-being in surrounding communities and consistently protecting the surrounding environment to step forward with an attempt to creating transparency and business ethics for sustainable development of the business. This confirms the Company's strong commitment to be a prototype of a good manufacturer to operate the business to enhance the sustainable implementation environmental preservation. TPI Polene Group has passed all assessments and the Company has been awarded certificates at the international level throughout the year 2017 as follows:-

In 2017, TPI Polene Group is proud to be awarded and certified as follows:-

- **CSR Thailand Coal Award 2017**: TPI Polene won "Thailand Coal Awards 2017" under "Special Submission Category" as a manufacturer in the country for "Specific energy consumption improvement of kiln plant" and "Standard for Corporate Social Responsibility" as a manufacturer in the country for "TPIPL's continuing commitment to CSR", from the Department of Industrial Works, the Ministry of Industry for consecutive year 2nd. The awards confirm that TPI Polene was selected as a corporation in the category of the outstanding utilization of coal while focusing on the importance of "Corporate Social Responsibility" for "TPIPL intend continuing commitment to CSR", from the Department of Mineral Fuel, the Ministry of Energy of Thailand (the "MOE"), held in Thailand, aiming to support the manufacturers with highly efficient coal management on an international level, while creating public well-being and being environmentally responsible and focusing on development to further enhance the sustainable implementation in social and economic development in the Asian arena.

The Company also won two **"CSR Asian Coal Award 2017" awards** at the international level as follows:-

1. TPI Polene was selected as a corporation in the category of the outstanding utilization of coal rewards while focusing on the importance of "Corporate Social Responsibility" to consistently preserve social and community improvement.
2. TPI Polene won "Thailand Coal Awards 2017" under "Special Submission Category" as a manufacturer in the country for "Specific energy consumption improvement of kiln plant"

The awards as above are aimed supporting the manufacturers with highly efficient coal management in Asia.

- TPI Polene received Thailand Energy Awards 2017 from the Department of Mineral Fuel, under the Ministry of Energy of Thailand (the "MOE") for adhering to best practices for energy perseveration and renewable electricity generation among on-grid connected projects from Waste Heat Recovery Power Plant. The awards confirm that TPI Polene was selected as a corporation with a strong commitment for effective utilization of energy to preserve the surrounding environment and further enhance the sustainable implementation of the energy preservation of the country.
- **Planting trees project to promote nature conservation and the environment.**

  The management team of TPI Polene and its staff jointly planted 2,000 trees at cement plant, Amphur Kangkhoi, Saraburi

Province, aiming to help increase green area in the surrounding community and stimulus nature conservation environment awareness to reduce the carbon dioxide emission in the atmosphere.

TPI Polene also participated in the "Environment Conservation Project" with Ban Subprik School in Saraburi Province to help conserve the environment and promote sustainable nature conservation and the environment, jointly plant trees at Samlan Waterfall National Park , Banpongkornsal Community and Saonoi Waterfall National Park, Bankpong Kornsao Community, the temple of Sattrprochakorn (Kharaj), the District of Phraran, Amphur Chalermphrakiat at Cavalry Center, Saraburi Province.

- TPI Polene donated probiotic products for livestock, aiming to assist agriculturists in the flood area in the south, such as Amphur Hadyai, Songkha Province and organic fertilizers to the governmental authorities to promote organic agriculture and the growing of vegetables which are chemical free and safe for farmers and consumers. TPI Polene also encourage the growing of vegetables and sponsored to promote "the Project for chemical free vegetables", the Faculty of Engineering, Mahidol University. In addition, TPI Polene supported the arrangement of "Safe Organic Agriculture Product Fair" to create revenues to the community in Saraburi Province.. "To alleviate unhappiness, to encourage happiness and to make smiles" and participated in "Mobile Smile Fair" for the people in the district of the Temple of Prasitpornchai, Amphur Chalermphrakiat/ The Temple of Kaomanthammaram, Amphur Kangkhoi/ Dhepsirindh Phukae School/ Ban Nong Chan School, Amphur, Saraburi Province; and to "Display and Demonstrate the application of Organic Fertilizers " to the agricultures to grow rice trees in Saraburi Province, be an alternative for the farmers, who are interested in organic agriculture, which are chemical free and safe for farmers and consumers. TPI Polene also sponsored "the Project for chemical free vegetables" to promote and encourage the growing of vegetables which are chemical free and safe for farmers and consumers.
- Made a contribution of 500 tons of cement to the governmental authority to support construction of a dam, which will create reservoirs that supply water for utilization during lean periods. Regulated flow of water helps form reservoirs to help in diluting harmful dissolved substances in waters by supplementing low inflows and can be used for irrigating arid lands. Reservoirs control the water running through a specific river, keep moisture on the surface of soil and further create a balance of nature. TPI Polene cooperated with the governmental authority to support constructions of reservoirs, such as the Sub District of Banluang, Amphur Mae-aey, Chiangmai Province. Those projects include the construction of the dam in the area of Lumphoon Province to alleviate the drought problem for people in the community to conserve water and preserve forests.

## 2. Social Activities

- Contribution of blankets in 2017

  The management team and the staff of the Company, together with the Environment for Better Life Foundation, distributed 10,000 blankets together with photographs of His Majesty the King, to local people, who suffer in the cold in remote areas. TPI Polene wanted to share and help alleviate the cold for those in need in the remote areas. As for the areas in the North, TPI Polene distributed 3,000 blankets to Border Patrol Police Bureau 3 (Chiengmai Center) to further distribute to the students in that jurisdiction and distributed 1,500 blankets to the Meditation Center "Thamsiri", to further distribute to the hill tribes and the elderly who suffered in the cold in remote areas in Amphur Pai, Amphur Pangmapha, Chiangmai Province, As for the areas in the Northeast, TPI Polene distributed 2,000 blankets to Border Patrol Police Bureau 24 (Udornthani Center) to further distribute to the students in that jurisdiction of the Border Patrol Police Bureau and 2,000 blankets and 1,000 blankets to the pupils in Amphur Srikiew and amphur Dankhuntod, Nakornrajsrima Province respectively.

- Made a contribution of Baht 13,312,471 to the foundations, non-profit organizations, and government authorities to help support activities that benefit society such as the donation of 63 automatic water containers to Chulalongkorn Hospital; supported The Foundation For the Promotion and Development of impaired People "under the Royal Patronage to be selected for the competition of the Asian Para Championship, Para CQT; supported the Disabled Athletes Association of Thailand Association (under the patronage of His Majesty the King) for the training of Thai disabled athletes to join the competition in the Asian Para and Paralympics game, made a contribution to FORDEX to further support the poor children and purchase of medical appliances for the physical research department at Thammasat Chalermphrakiat Hospital; helped support the project to purchase, artificial arms, pseudopodium, for the poor disabled and the disable kids; provide services to adapt to the needs of a broader range of poor in order to provide needy ill people and made contribution of medical appliance to Surajthani Hospital.

- Promoted the "Good Health Project" for people in the community by continuously providing mobile medical units to protect them from overall hazards including seriously infectious illnesses. This also includes general check-up services, and lung inspection services, TPI Polene also held activities to provide health information to local people in the community; further promote an awareness campaign for people in the community to plant organic vegetables to encourage good health to the local people in the surrounding communities in Amphur Kaengkhoi, Amphur Muaklek, Amphur Chalermprakiat, Saraburi Province; visit the patients and the disable patients in the district of Muaklek, Amphur Muaklek, Tambol Mittraprab and Tambol Tubkwang Saraburi Province; joined the project " Precaution of dengue hemorrhagic fever infection"; and

supported athletic activities under the Anti-drug program of the Sub-District Administration organization in Amphur Muaklek", Saraburi Province.

- Supported and improved the quality of life of the Thai people, TPI Polene participated in the activity "Donation of blood for the auspiciousness of His Majesty the King" under the coordination of the Center of Saraburi Hospital and Saraburi Red Cross. For the event, employees of TPI Polene, together with local people in the community, jointly donated 86,000 cc of blood to patients in need in Saraburi Province and the surrounding area. 33 and 31 staff of the Company jointly donated cornea and human organ to the hospital.
- Helped develop the potential of the community leaders by having a group of community leaders, from the community committee in Tambol Muaklek, Tambol Mittraphrap, and Amphur Tubkwang, Saraburi Province follow and study on the path of Ubonrajthani Province, Nongkhai Province and Bang Nakha Udornthani Province respectively., Phumanorom, Glass Gallery, Mookdaharn Province, with the objective to enhance knowledge, mental healthcare, take part in activities such as community development, traditional and cultural cultivation, work creation and development for the potential of the learners and for them to create sustainable self-reliance in the community.
- Helped support the community by purchasing Jekchey Saohai rice of 1,300 sets to further distribute to the elderly in the community during 2017 Songkran festival. The project also included the support for public benefit of One Tambol One Product (OTOP), Pukhae, Saraburi Province.
- Made a contribution of 6,455.87 tons of cement as well as concrete roof tiles and super armour nano cement paint and other products, with total value of Baht 3,217,676.96 to the governmental authority for the renovation of office buildings and athletic grounds of governmental authorities, such as the Autistic Foundation of Thailand under the Patronage. Support the project for renovation of 456 houses for the homeless and the disabled to be in compliance with the government's policy, support the construction of waste management knowledge center, King's Royal Guard, Luang Chumporn Military Camp, Chonburi Province, construction of "Support and Quality of Life Improvement Center" for the disabled under the jurisdiction of the Disabled Foundation in Surajthani Province.
- Distributed TPIPL 350 ml. bottled of drinking water for a total of 443,556 bottles to organizations to support activities such as " Walk-Run for collaboration in the Community No.11" of Siriraj Piyamaharajkarun Hospital, to help the construction of "84-year Nawanmindharaborphit Building", support the opening of Mitraparb -Phayayen bridge, support the project "To Be Number One", support the activities for the teenagers under the Anti-drug program of the Sub-District administration Organization in Amphur Pakkhaosarn", Saraburi Province, promoting "Wild Animals Preservation" project, Saraburi Province and to cooperatively supported the tradition and culture in Asalha Puja Day and Kao Phansa Day in the temples of

Saraburi Province, support the "Open House" fair for Ban Kao Mai School, Saraburi Province and to cooperatively supported the tradition and culture in Asalha Puja Day and Kao Phansa Day inSaraburi Province as well as 26 temples in Nakornrajsrima Province. TPI Polene jointly promoted awareness of risk mitigation from road accidents during 2017 New Year's holiday and the Songkran Festival to a variety of government authorities, such as the Provincial Constabulary Station in Saraburi Province and Muaklek Police Station and supported the activities for the teenagers under the Anti-drug program of the Sub-District administration Organization in SaraburiProvince.

### 3. Academic and Youth Activities

TPI Polene realizes the importance of academic development and educational support for creating good opportunities for young people to learn hands-on by broadening their skills as well as consistently developing the quality of academic institutions. TPI Polene fully understands that our youth are fundamental to the future of the nation. For events, the Company held many activities and supported many organizations that performed useful activities for young people and granted scholarships to those with special qualifications, such as academic talent, but who might have lacked monetary resources. They are as follows:

#### Scholarships Awarded

- Consistently supported educational funds in the form of scholarships and fellowships to a total of 7 students in the community of Kaset Samphan, TPI Polene cement plant, Saraburi Province. Scholarships are reserved for students with special qualifications, such as academic talent and good behavioral performance until graduation.
- Awarded 20 scholarships to support needy students with outstanding academic qualifications and supported educational funds of 1 scholarship to schools as well as learning and sports materials to students in Donkao School, Kanchanaburi Province.
- Supported children to create good opportunities to learn hands-on to dare to think, dare to express their opinions and dare to be assertive, by assembling "2017 Children Day Fair" in 26 places in schools and governmental authorities in Amphur Kangkhoi, Amphur Muaklek and Amphur Wangmuang, Saraburi Province

#### To Enhance Academic Quality

- Promoted the project for national talented youth by arranging the forum "Competitive Academic Solution and General Academic Wisdom", to reinforce academic fundamentals and English skill for the youth, and the research and developmental process, to create architectural teaching skills for students. The winners were awarded the Trophy from Her Highness Princess Maha Chakri Sirindhorn.
- Supported an arrangement of the "22nd Congress on Science and Technology of Thailand, under the topic "Innovation for Land of Science to a Sustainable Future".The event is organized annually by the Science Association of Thailand, under the patronage of His Majesty the King, and co-organized with the Faculties of Science of

several universities in the country, to bring advanced scientific and technological knowledge leading to sustainable development of the country.

- Promoted the arrangement "Science and Technology" for the students of the Faculty of Engineering, King Mongkut's Institute of Technology Ladkrabang, with the objective to create academic science and the technology for the students from high school level in the country and provided them with the work training for the students.
- Support Supported an arrangement of the "Academic Science and Technology" by the Faculty of Engineering, Chulalongkorn University, for high school students to bring basis scientific and technological knowledge to be applied in daily.
- Supported a "Science Museum Project" by taking 160 students from Bansubborn School and Kao Maikwian School, Self-Help/Cow-Raising Settlement School, Muaklek School, Saraburi Province to join the activity "Science Walk Rally" and had the children get responses to queries regarding exhibitions in the museum by contacting, testing, thinking, deciding and searching for the answers by themselves. The students had a good time joining the above activity, which helped them increase their experience in science and technology.
- Supported an education trip at Dusit Open Zzoo, Bangkok for vocational academics by having 112 students from Ban Subborn School, Kaomaikwian School, Bansubprig School and Self-Help/Cow-Raising Settlement School, Saraburi Province, learn and observe wild animals and wildlife preservation at Nakornrajsrima Open Zoo and the students from Bansubprik, Saraburi Province to join the project with an aim to promote an outdoor education, conserve natural resources and environmental protection and perceive the value of nature and preservation of wild animal.
- Supported the project for vocational academics and teaching potential as a professional career to create the highest benefits for academic development by supporting "Teachers' Day 2017" in Amphur Kangkhoi, Saraburi Province and jointly established " Fahwanmai School" in Tabkwang sub-district, aiming to develop service system and improve quality of life of the elderly, supported the teaching in Bansuborn school, Bansubprik school, Amphur Kangkhoi, Saraburi Province, with the objective to support academic knowledge to the students, having a group of Sahawitdhaya school to have site study in Petchaburi and Prajuabkirihan Province.
- Support for the project of "Rural Development Voluntary Camps.

  The Company made a contribution of TPIPL cement products of 955.4 tons as well as super armour nano paint, TPIPL concrete roof tiles and other products, totaling Bath 272,578.63 to both governmental institutions and private institutions, for the construction of multipurpose buildings, and to repair dilapidated study rooms, dining rooms and ground floors in the academic institutions. These included Chulalongkorn University, King Mongkut's Institute of Tech-

nology Thonburi, Bangkok University and King Mongkut's University of Technology, to encourage the students to join useful activities during their free time and promote the development of skills, knowledge and talent of the students to apply their knowledge to practical use in the work fields and convey the knowledge to people in the community to perform the activities that bring benefits to society.

Also, TPI Polene made contributions of TPIPL cement to the Faculties of Civil Engineering in 25 institutions throughout the country for the purpose of a course-training program for masons and to support useful activities for the society.

- Made a contribution of 5,154.49 tons of TPIPL cement products, dry concrete and ready-mixed concrete as well as TPIPL Nano Super Armour and concrete roof tiles, totaling Baht 4,910,222.86 to governmental authorities and academic institutions, for the renovation, repair and construction of buildings, such as renovation of concrete pavement at Saohaiwimolwidhayanugoon school, construction of multi-purpose courtyard in front of "The International Convention and Exhibition Centre Commemorating His Majesty's 7th Cycle Birthday Anniversary" , supported the project " To complete the dream and create harmony among sisters-brothers" on behalf of TPI Volunteers arranged by Quality Assurance Department of TPI Polene and TPIPP for the renovation and repairing of buildings in Ban Subnoitai School and Nikomtabkwang 2, Saraburi Province. This included construction of the new studying room, in the cooperation of TISCO Bank Plc., for Bansubbonne School, Ubonrajthani Province, in replacement of the old decay two-storey building, which was built for 52 years. The new structure of this building was constructed under the standard of "Sor Por Chor 105/29" and construction of "the Knowledge Encouragement room", Bansabbonne school, Saraburi Province.

- TPI Polene, Saraburi plant, hosted, welcomed and fully supported activities regarding academic programs in cooperation with a group of professors and students at the level of Bachelor degree, Master's degree and Ph.D. degrees from various institutions, such as: Chulalongkorn University, Rajchapatra University and Prince of Songkla University, observed "Mining and Conveyor system of Raw Material"/ Walailuk University observed

- Safety Management and Hygiene,"/ Nongmuang Vocational College to observe operations "Cement Production Process", the group of local policemen/ the group of military soldier 18 and the group of local community leaders from Tambol Mittraphrab, Tamol Puengluang and Tambol Muaklek observed "Sustainable Agriculture with organic fertilizers and TPIPL bio-organic products ", students from University of Technology Commerce Sukhothai observed the operations of "accounting and Computers" and Department of Quartermaster Directorate of Quartermaster observed the operation "Warehouse Management"

**4. Religious Activities**

- Katin Ceremony

  TPI Polene Plc and its subsidiaries acknowledge the significance of promoting and preserving Buddhism and have consistently taken part in Katin ceremonies every year until the present. To this end, the management team, the company's staff, clients and mystic people together made donations for the construction and renovation of religious monasteries and buildings in the temples worth Baht 4,313,642. TPI Polene, hosted Katin ceremonies at Phadarapirom Temple, Chiengmai Province, hosted Katin ceremonies at Sridonmoon Temple and Ban Hin Lab Temple and co-hosted Katin ceremonies, offerings for the priests, and jointly made donations to: Kantakian Temple, Mongkolchaipattana Temple, Subbonne Temple and other several temples in the surrounding community as well as Phabonngam Temple, Chiengrai Province.

- TPI Polene also supported the "Novices Propagation Ordination Project" at the Temple of the Rama IX Golden, to introduce and propagate the teachings of Lord Buddha to young people and kids. Novices and Buddhist nuns propagated the teachings of Lord Buddha for His Majesty King Maha Vajiralongkorn Bodindradebayavarangkun or King Bhumibol's fiftieth and Her Royal Highness Princess Maha Chakri Sirindhorn. The aim is to cultivate and create consciousness among Thai people. This also includes the propagation of Buddhism under the program TPI Polene and its subsidiaries supported the propagation of Buddhism. The aim is to cultivate and create consciousness among Thai people, to be patriotic to their homeland and sacrifice themselves for Novices and Buddhist nuns propagated the teachings of Lord Buddha to their parents. TPI Polene also supported "The Annual Novice Ordination in Summer", Wat Nason, Nakornrajsirma Province / Nakprok Temple, Bangkok, Saraburi Province, and supporting "Dhamma Talk" University of Chulalongkorn Rajwittayalai so that laymen/laywomen can practice Dhamma through in order to bring about peace and harmony to the lives.

- TPI Polene and its subsidiaries donated to support education for the monks through "Sirindhorn Rajwithayalai Foundation, aiming to propagate the teachings of Lord Buddha and Dhamma practices, emphasizing donation, assisting educational expenses for Buddhism children and supported the public construction at the Temple of Sirindhorn under the patronage of the king.

- TPI Polene and its subsidiaries supported the propagation of Buddhism through "The World Buddhist Television of Thailand (WBTV)" at Wat Yannawara introduced and propagated the teachings of Lord Buddha in the country and to the world community in order to bring about peace and harmony to the lives of the people in the country with various nationalities and religions. The aim is to cultivate and create consciousness among Thai people, to be patriotic to their homeland and sacrifice themselves for the genuine good of the nation, their religion and the monarchy. This also includes the propagation of Buddhism under the program "The Miracles of

Wisdom" with a monk as a daily speaker, Phrarajyannakawee and Phrapornphol Prasanno, at The Temple of the Rama IX Golden, to introduce and propagate the teachings of Lord Buddha.

- Supported the propagation of the teachings of Lord Buddha through " Dhamma and an Inspiration" channel at Wat Weiruwan, Kanjanaburi Province, with the objective to dissimilate the teachings of Lord Buddha, with an emphasis on the donation to charity, observing the precepts and making mediation. The Company also supported the project "Meditation Practice Project for the youth". The aim is to cultivate and create consciousness among Thai people, to further apply Dhamma in daily lives.
- Company donated TPIPL cement product of 10,319 tons, ready-mixed concrete of 55 cubic meters concrete, Super Armour Nano paint and roof tiles as well as other products, with total value of Baht 11,387,266.52, to more than 40 temples in the country for the purchase of construction materials to build and renovate religious places. These included ordination halls, meditation halls, Dharma study halls, a sermon hall in a monastery, a monk's house, crematory, Stupa, Dharma practice hall and surrounding areas around temples for Buddhists and people in general. These included the construction project of ordinary hall, Phrabhudasrisappanyoo in the Nakornsawan Buddhism Park, construction of Great Stupa, Wat Thammakai, and the construction of general purpose hall on Monastery of Phrabhuddasaiyart Lokkanartsartsadamunee to support Buddhism, Wat Paphookorn, Udornthani Province. The Company donated cement to support Buddhism but also distributed cement for the construction of Phrabutthainsom Boromtriloktajnajbordin, Amphur Muang, Leuy Province and the construction of ordinary hall, Phrasrimahatai-Pattaya, Chonburi Province. These included Dharma study halls, Group of Phramahatai, Nakornrajsrima Province and improved the surrounding area in Chaophorsue Shrine, Prachineburi Province.

  In addition, the Company also recognizes the importance of Muslim practices by consistently supporting and participating in Islamic rituals. We support the construction of the fences around the Muslim mosque (cemetery) in Phranakornsriayudhaya Province so that people in the community are convenient to make religion performance and to ensure the private place, thus protecting the erosion of the grounded soil.

**5. Preservation of Traditional Thai Culture**

- **Sustaining Artwork by TPIPL Cement Mortar and Preserving Thailand's Unique Identity**

  TPI Polene realizes the importance of art and culture and has consistently taken part in supporting cultural activities. The Company pursues its business operations with a full commitment to deepen the harmonious coexistence of the activities of the community from time to time by promoting and preserving Thai traditional cultures to be alongside the consistent development of Thai society. The Company knows that stucco molding is an artwork that requires

skill, creativity and art developed over many years which can be seen at historical sites around the country. However, the interest of Thai craftsmen has waned and the art of stucco molding might vanish. TPIPL intends to keep on promoting Thai art and culture, and 2017 was the 17th year that the Company, with the collaboration of the Ministry of Culture, the Poh Chang Campus of the Rajamangala University of Technology Ratanakosin, and the Thai Sculptures Association arranged "The 17th Art of Stucco Molding" competition. The competition comprised two levels as follows:

II. General Public Level with three categories:

1. Molding stucco under the title "Phrasudhon Manorah"
2. Molding cement mortar under the title "Harmonious is the National Power"f
3. Sculpturing of cement mortar under the title, "The tribes in Thailand"

II. Youth level molding premixed cement under the title, "The teachings of King Bhuipol Adulyadej".

The competition was held on April 26-30, 2017.

Her Royal Highness Princess Maha Chakri Sirindhorn, the guest of honor, presided at the opening ceremony of the 17th Thailand Art of Stucco Exhibition on December 29, 2017 at the Poh Chang Museum Art Gallery, Pho Chang College. Her Royal Highness Princess Maha Chakri Sirindhorn bestowed the prize to the selected winners in "The Art of Stucco Molding of Thailand" competition, which further enhanced the highest spiritual kindness for the Art of Stucco Molding and the related persons for the further creation of the Art of Stucco Molding as the unique identity of our country. The Company was honored to take part in helping maintain the conservation of cultural art and development of the Art of Stucco as a unique Thai identity. The Art of Stucco, which appeared in ancient monuments, and valuable national sculptures all over the country, was developed in order to respond to and follow in the footsteps of His Majesty the King in maintaining the conservation and development of the Art of Stucco to remain as a valuable national sculpture forever.

- **To Sustain Thailand's Traditional Cultures**

  In local areas, TPI Polene realizes the importance of the surrounding community by participating in the activities and providing support for the offerings dedicated to Buddhist monks, and supplying the big candles used in the temples on the occasion of the beginning of Buddhist Lent, to more than 26 temples in Saraburi and Chaiyabhoom Provinces. TPI Polene also preserved the "Thai traditional Songkran Festival", a traditional way of paying respect to elders and receiving blessings from elders in Amphur Kangkoi, Amphur Muaklek, Amphur Wungmuang, Saraburi Province, and supported the fair "Historical 2nd World War" (for the 9th year) " in the subdistrict of Kangkhoi, Muaklek, Saraburi Province to encourage Thai people to take part in maintaining the conservation of Thai historical culture with an aim to stimulate the harmony of Thai people and to protect Royal institutions.

# TPI Polene, its Quality, Safety, Hygiene and Environment

TPI Polene is well aware that our success and the sustainable growth of the organization at a level of excellence is primarily the result of growth from operational outcomes together with the acceptance and trust of the community and society. Consequently, the Company's management has implemented Quality Standard Systems ISO 9001:2008, API Spec.Q1, Environment Standard System ISO14001,2015 Health and Safety Management Standard TIS 18001:2001, OHSAS 18001:2007 as well as ISO/IEC 17025:2005 Standard and Energy Management System ISO 50001:2011, certifying the performance evaluation test and calibration laboratories under the certified laboratory system of Thai Industrial Standards Institute. TPI Polene has applied the standardization in all respects to be implemented suitably and properly to enable TPI Polene to operate the business effectively and efficiently.

**Quality Management**

TPI Polene Group focuses on producing, distributing and delivering quality products to satisfy customers' needs. The Company consistently improves the effectiveness of quality control and reduces greenhouse gases. All products of TPI Polene Group were developed under the Quality Control System ISO 9001:2008, API Specification Q1, SPI Specification Q10 and ISO/IEC 17025:2005. In addition, the Company reviews objectives and targets regarding quality at least once a year.

**Health and Safety Management**

TPI Polene Group continuously emphasizes health and safety as a part of business operations to prevent all employees and all people involved from overall hazards including work-related injury and illness.

The Company, together with the Department of Welfare and Labor Protection, the Ministry of Labor, arranged the project "Safety and Health in the Workplace" to provide knowledge to employees, educational institutions and people in general under the auspices of Her Royal Highness Princess Maha Chakri Sirindhorn, with an emphasis on reducing to zero any accidents associated from risk in the workplace. Throughout the year 2018, the Company has understood the significance of occupational health and safety in workplace and has consistently taken part in developing safety systems in the workplace, aiming to reduce accidents to zero. The Company also participates in projects as a corporation to conduct its business according to all the rules and regulations of Thailand regarding health and safety in order to reduce and control moderate to severe risks, and was awarded and selected as the corporation in recognition for achievement of Safe and Health in workplace under the auspices of Her Royal Highness Princess Maha Chakri Sirindhorn , from the Department of Welfare and Labor Protection on September 28, 2015.

The Company has implemented a Health and Safety Management System (OHSAS 18001:2007 /TIS 18001:2011) and has conducted its business according to all the rules and regulations of Thailand regarding health and safety in order to reduce and control moderate to severe risks. The Company believes that health and safety are a responsibility of executives and employees at all levels; therefore, the Company provides sufficient and proper resources such as personnel, time, budget, and training. Additionally, the Company reviews objectives and targets to control the risk of the activities of the company at least once a year and uses work performance in terms of safety as a factor in performance evaluation of employees.

The Company also prepares health check-ups precautions for all employees such as Lung Function Test and Autography.

**Public Well Being and Employee Healthcare**

The Company shows its serious concern for public health in the surrounding community by continuously sending mobile medical units to offer health services to the public. The Company also extends medical welfare (OPD) for employees and covers the families of employees such as parents, spouses and their children. In addition, annual medical check-ups are provided for all employees. The Company also prepared for the prevention of seasonal epidemics by supplying tetanus for clostridium tetani vaccines, flu type B and Swine Flu vaccines to employees and their families.

**Environmental Management**

TPI Polene Group is committed to environmental conservation. Hence, the Company properly improves and preserves the environment to conform to environmental standards and regulations and continuously prevents pollution in every aspect of work. The Company implemented international Environmental Standard System ISO 14001:2015 to reduce waste and environmental impact. The Company reduces the amount of dust as well as controls the quality of wastewater from the production process. In addition, the Company has a policy to economize energy usage and to handle waste properly as well as to utilize resources effectively. The Company fully supports

activities regarding the environment in cooperation with the government, private sector and local communities. The Company promotes sustainable nature conservation with the rehabilitation of used mine areas to be the same as much as possible with the adoption of biodiversity process to determine design, plan and technique to be used for reforestation. TPI Polene is also committed to reducing environmental impact in surrounding communities, such as dust, noise and vibrations. The Company promotes sustainable nature conservation by supporting reforestation and the rehabilitation of used mine areas. The Company also reviews objectives and targets regarding the environment and provides suitable knowledge and training about the environment for all levels of employees in order to raise environmental awareness.

TPI Polene Group has operated the Waste Heat Recovery Power Plant business for bringing total cement production capacity to generate electricity. This enables the Company to reduce electricity energy usage and electricity generating from the PEA, thereby reducing our environmental impact at the source, as fuel is not required to be utilized for power generation in the above-mentioned project.

**Laboratory Standards**

In addition, the laboratories of our cement plants passed the performance evaluation test under the certified laboratory system of Thai Industrial Standards Institute, according to ISO/IEC 17025:2005 and TIS 17025:2548, the performance evaluation test and calibration laboratories. The Company has also bestowed the registration for private organization of "the analytical lab" in respect of environmental preservation by the Department of Industry, registration no. Ror-097.

**Carbon Label: "the Symbol of Environmental-Friendly Production Process"**

The Company was the first Thai manufacturer in the country and the Asian region to be awarded the Carbon Label in Thailand and in Asia by the Thailand Greenhouse Gas Management Organization (TGO) in the cement production category in 2008. The 11 types of products passed the evaluation criteria and were awarded the Carbon Label. To this end, the Company has a strong commitment to consistently develop production processes at environmentally friendly plants.

On June 9, 2016, TPI Polene was awarded as the corporation which has a strong commitment and consistently cooperates to reduce or avoid gas emissions by the Thailand Business Council for Sustainable Development (TBCSD) together with the Thailand Business Environment Institute Foundation (TBEIF). The awards confirm the Company's strong commitment to the importance of Corporate Social Responsibility to consistently manufacture products that are environmentally friendly.

On September 19, 2016, TPI Polene Power participated and registered in the project "Thailand Voluntary Emission Reduction Program: T-VER" from Thailand Greenhouse Gas Management Organization ("TGO"). It is anticipated that the amount of carbon dioxide emitted will be reduced in the labeled products by 51,854 tons in equivalent.

**Energy Management**

The Company has participated in a preparation project for energy management standards together with the Department of Renewable Energy and Energy Conservation, Ministry of Energy, to be in compliance with Energy Conservation Act B.E 2538 (Amended B.E 2550) for Control Building and Control Factory. On July 22, 2016, the Company received ISO50001:2011 certification for energy management standards from AJA Registrars. The reward confirms the Company's commitment to be a socially responsible enterprise dedicated to being environmentally friendly and promoting sustainable environmental awareness for adhering to the best practices for energy efficiency, and aiming to utilize energy resources. Presently, the energy crisis is currently considered as an essential international concern, thereby increasing production costs. Therefore, efficient energy management in an organization to fully utilize all the resources used in the production process is essential, which helps mitigate or reduce green-house gas emissions which cause global warming. To this end, the Company has a strong commitment to consistently comply with regulatory requirements and fully supports activities regarding the environment in cooperation with the government.

In addition, on December 6, 2016, TPI Polene received "The Thailand Energy Awards 2016", an outstanding performance reward in the category of innovation of effective utilization of energy under the project "Regenerative Downhill Conveyor", from Air Chief Marshal, Dr. Prajin Juntong, Deputy Prime Minister, the Department of Alternative Energy Development and Efficiency ("DEDE") under the Ministry of Energy of Thailand (the "MOE").

**Productive Management**

The Company has applied the Total Productive Management (TPM) system, creating awareness so that everyone shares in the organizational development movement and the opportunities are given for all levels of employees to take part in the activities through the

Small Group Activity (SGA) and by preparing One Point Lesson (OPL) for staff coaching in the departments. An arrangement of machinery and equipment inspection has been made regularly with Visual Control to promote cooperation and group activities amongst all employees and to motivate them by offering award "Improvement Sheets" for the purpose of problem solutions. Project teamwork has been set up to analyze causes of the problems to alleviate losses throughout the entire production process. TPM could be applied in the entire production process development starting from repair and maintenance as scheduled as well as quality control, customers services, new product design, office improvement, job improvement of supporting units, and the potential development of personnel through Work Flow Analysis methods, leading to excellence in operations and management.

**Social Responsibility Standards**

The Company has implemented social responsibility standards ISO 26000 to be implemented throughout the organization covering all major issues. The Company acts according to 237 standard regulations and 321 provisions. In addition, the Company operates sustainable community development projects in education, economics, public health, and the environment in order to enhance quality of life in the community in line with the Sufficiency Economy concept and ongoing organizational improvement. TPI Polene has always strived to improve educational and social development, community standards of living and the environment in order to deepen the harmonious coexistence of our Company and our society, following the Sufficiency Economy concept. On September 9, 2015 and July 28, 2016, TPI Polene consistently won CSR-DIW Awards as the top manufacturer in the country, under the category "Standards for Corporate Social Responsibility", from the Department of Industrial Works, Ministry of Industry. In addition, TPI Polene received " Thailand Coal Awards 2015 under the category "Corporate Social Responsibility" on June 25, 2015 from the Department of Mineral Fuel, under the Ministry of Energy of Thailand (the "MOE").

**Integrated Management Systems**

The Company's LDPE plant has moved forward to be the top leading plastic resin manufacturer in Thailand and in the Asian region. TPI Polene is the first plastic resin manufacturer to be awarded Integrated Management Systems (IMS) from ISO Standard Institutions and it is among the top six manufacturers in the country, which all have been awarded the above certificate of Integrated Management Systems.

***"TPI Polene: we create the future alongside reliable wisdom, ethics and consciousness towards society."***

# Overview of Business Operations

TPI Polene group is committed to create the balanced consideration of its business growth in parallel with environmental preservation and to strengthen society to be an integral part in moving the Thai economy forward together with Thai society. The Company is principally engaged in the manufacture and supply of the products mainly classified as follows:-

1. Construction sector: manufacture & sale of cement, mortar, clinker, ready-mixed concrete, CRT/FCB, lightweight concrete and cement paint.,etc.
2. Petrochemical sector: manufacture & sale of EVA/LDPE plastic resins, ammonium nitrate and nitric acid, Solar Film, EVA Emulsion and EVA Powder., etc.
3. Energy sector : Manufacture and sale of RDF alternative fuel, a waste heat recovery power plant, a coal-fired power plant, a RDF-fired power plant, oil and NGV service stations and petroleum exploration., etc.
4. Others: Industry industrial waste disposal, Manufacture and sales of humic fertilizers, grow organic, soap, real estate development, packaging bags, retailed products of the group and drinking water., etc.

**Policy of Business Segregation within TPI Polene Group**

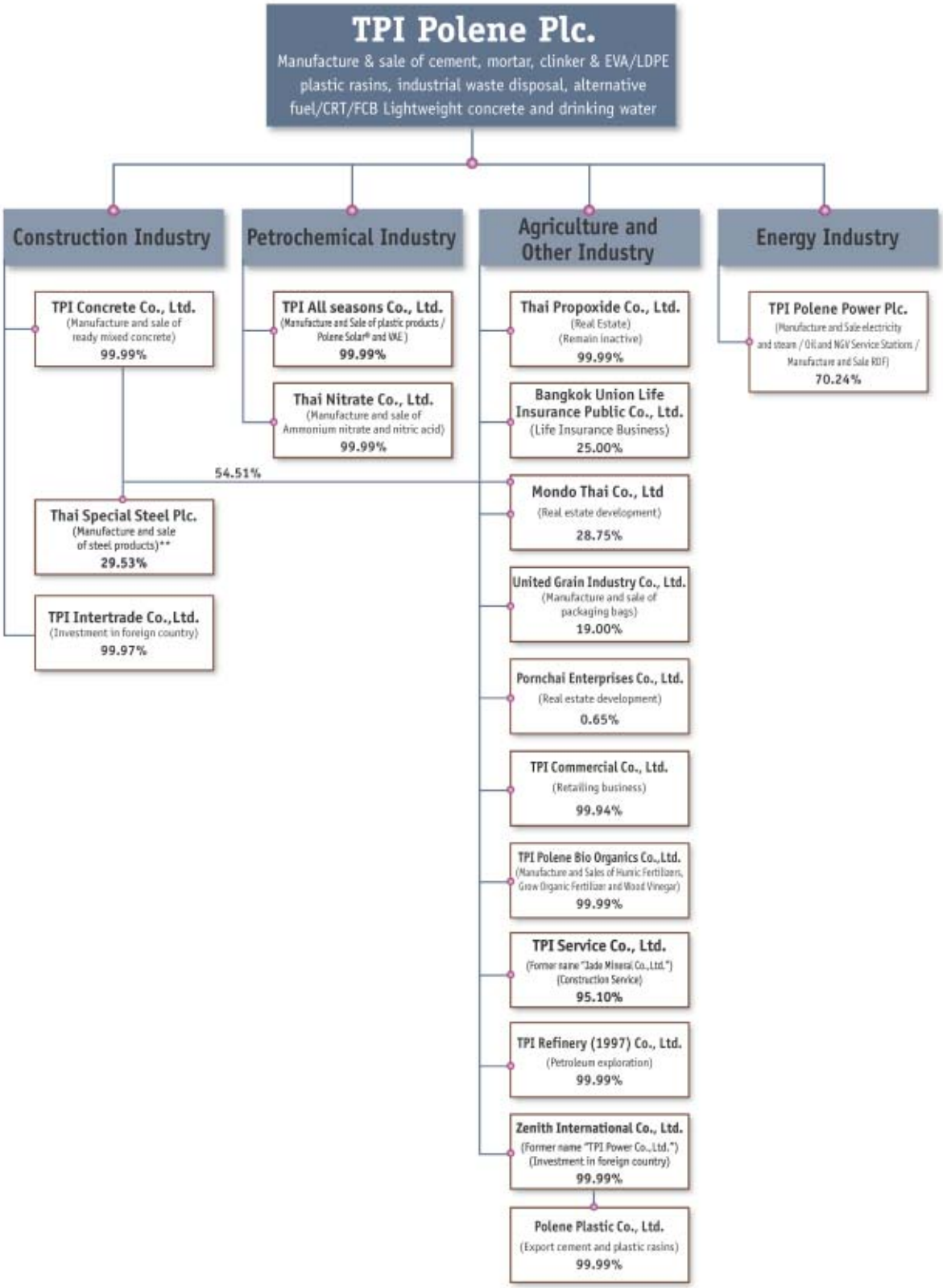
TPI Polene has established subsidiary companies and/or affiliate companies to support the core business and to be convenient, easy to manage, efficient to operate and increase its competitive advantages by considering any other factors, such as relevant governing laws, financial structure, taxes and risk management, etc.

TPI Polene has maintained a policy of managing its subsidiary companies to operate their business to be in compliance with the policies of its mother company to ensure that the business administration and good corporate governance system is controlled in the same way. As for the administration of subsidiary and affiliate companies, the Company has appointed a representative to a position in the executive management team to jointly manage and make decisions on policy and plan implementation by placing great importance on fostering a good governance corporate culture throughout the organization, with an emphasis on transparency to achieve set objectives.

TPI Polene and its subsidiaries have maintained our position as one of the top leading cement manufacturers to create stability and balance in business operations, public well-being, social and community improvement, while protecting our environmental surroundings to strengthen society, further enhance the sustainable growth of the Company, and to always be in compliance with the policy of TPI Polene's responsibility towards society.

# Structure of the Group

as at December 31, 2017



# Nature of Business

**1. Cement, Clinker and Mortar Cement Business**

TPI Polene is one of the major manufacturers and distributors of cement products and mortar cement under the brand name "TPIPL". The plants are located in Saraburi Province. All the Company's cement products meet the ISO/TIS certifications of industrial standards, ASTM Industrial Standards and the EU Industrial Standards. TPI Polene was the first cement manufacturer in Thailand to be awarded ISO 9002 Certification from the International Standard Institute, for surpassing industrial and environmental protection standards. This has enabled the Company to export cement to the state of California, where surrounding communities are highly aware of environmental conservation.

TPI Polene was also the first cement manufacturer to be awarded the Carbon Label for both Portland cement and the mortar cement products. The Carbon Label demonstrates that the producer has submitted data to show that it has significantly reduced carbon dioxide (greenhouse) emissions, which cause global warming.

The Company currently operates four cement production plants with total production capacity of 13.5 MTPA, using technologically advanced machinery, and is strategically located, adjacent to both a limestone quarry and an efficient transportation distribution network, which reaches throughout the country. This gives the Company its low-cost competitive advantage. Besides, TPI Polene Group operates Waste Heat Recovery Power Plants, which generate electricity from waste heat emitted from TPI Polene's 4 cement production plants and/or uses Refuse Derived Fuel (RDF) as fuel to generate electricity in its RDF-fired power plants. As a result, TPI Polene Group has become a power plant operator in Thailand, with the largest waste-to-energy power plant operations in the country, a renewable energy to enhance the environment.

**Cement Industry**

In 2017, cement demand in the country was 34 million tons, increasing from 33 million tons in 2016, or an increase of 3%, supported by an increase of construction of some massive governmental infrastructure projects in the second half of the year which led to higher cement demand consumption in the country. In addition, it shows a sign of improvement in year 2018. However, in 2018, it is anticipated that the cement business will tend to improve. In 2017, the Company consistently developed new cement products to be launched and introduced to the market, such as TPI Super Primer for preparatory coating for fine arts work, automatic cement paint mixers and cement mortar for concrete surface repairing, cement mortar for bonding and general plastering on brick wall and non-shrink cement for ground leveling, all of which have been registered as new product innovations from the Office of National Science and Technology Agency (NSTDA).

In 2018, the Company anticipates that cement demand consumption in the domestic market will increase, supported by investment in public utilities and telecommunication development systems in both the public infrastructure and private on-going investment scheme., such as the construction of Pink Line Skytrain and the Yellow Line Skytrain, mass rapid transit BTS Skytrain, the construction of a motorway from Bangkok to Nakhon Ratchasima., etc. Those entire construction projects have a direct impact on an increase of demand consumption for cement in both the public and private sectors.

Demand growth for cement and clinker in export markets has slowed down due to higher competition from an increased number of cement producers in the global market, with the surplus in the country being exported to international markets. However, quality standards of cement products from Thailand are more acceptable from those of other countries. Cement and clinker manufactured from Thailand are mostly required in the international market, particularly for the development of large-scale investments in infrastructure construction in those countries.

**2. LDPE/EVA plastic resins**

TPI Polene is the manufacturer and distributor of LDPE Homopolymer (LDPE) and LDPE Copolymer (EVA) plastic resin. TPI Polene operates this business in Rayong Province, with total production of 158,000 TPA. The LDPE is the output to be used as a main raw material for many types of plastic products, while EVA plastic resin will be used to produce athletic shoes. Low-density polyethylene (LDPE) and Ethyl Vinyl Acetate (EVA) account for TPI Polene's market share of 20% and 90% of total domestic sales volume in the country respectively. We are the sole producer of EVA in Thailand and one of the few producers of EVA in the world that can develop proprietary EVA production technology.

**LDPE/EVA Industry**

In 2017, fluctuation of LDPE/EVA prices in the global market were primarily the result of raw material price changes, such as, ethylene,

VAM, crude oil price. Simultaneously, there were several new manufacturers brought on stream with additional capacity, particularly from manufacturers in China, thereby having an impact on plastic resin market share. In the first half of the year 2017, EVA price in the global market was trending upward owing to a constantly drastic increase of ethylene prices during the end of year 2016 up until the first quarter of year 2017. However, competition in the market was still intense, and most consumers have monitored plastic resin prices and prolonged buying plastic resins owing to fluctuation of plastic resins as well as crude oil prices throughout the year 2017.

However, TPI Polene did not rely mainly on the domestic market and focused on export sales and demand consumption of EVA plastic resin in international markets, such as China and India, thereby resulting in a consistent growth in export sales volume during the past several years.

The Company has focused on a policy to develop differentiated products to create value added to EVA plastic resins and to create competitive advantages and yield higher contributions, such as high quality EVA emulsion, stretch Wrap Film and PE film where demand consumption in both the domestic market and international market is quite high. TPI Polene has also developed EVA Sheet Encapsulate, which is our innovative solar encapsulation film used for the production of solar cell modules.

**LDPE/EVA Industry in 2018**

In 2018, the Company anticipates that plastic resin prices will be slightly adjusted upward whereas cost of production in plastic resin tends to increase, which will have a direct impact on the petrochemical business. The Company has focused on a policy to develop differentiated products to penetrate the niche markets that yield higher contributions.

**3. Ready-mixed Concrete**

TPI Concrete Co., Ltd. Manufacture (a 99.9% owned subsidiary company) is the second largest manufacturer and distributor of ready-mixed concrete with a market share of 12% of ready-mixed concrete demand in the country. Product quality and consistent improvement of service is our prominent feature.

The major competitors of TPI Concrete are Concrete Product and Aggregate Co., Ltd. (CPAC), Siam City Concrete Co., Ltd. and Asia Concrete Products Co., Ltd. There are also several other minor concrete manufacturers in the country.

**Ready-mixed Concrete Industry**

In 2017, ready-mixed concrete demand consumption in the country slightly increased over the year 2016 as a result of the acceleration of the disbursement of national budgets from the government, to further drive the increase of the logistics system development for the country's infrastructure projects, development and repairing of water sources, construction projects, renovation of governmental buildings, and hospital and governmental academic institution. In early 2017, there were no significant signs of investment in government infrastructure projects and private construction projects, leading to the prolonged investment plan and selected particular types of investment in the country. However, demand for concrete in the country showed signs of recovery in the second half of 2017, a result of the acceleration of construction of the country's infrastructure projects, Inter-City Motorway, public utilities system, which includes construction of double track railways, and an investment fund for the High-speed Rail Project in parallel with the Government' s investment of infrastructure projects for the logistics system, which includes construction of Suvaranbhumi Airport Phrase 2 Developmental Project.,etc. These governmental projects further caused expansion of the big cities and drove real estate enterprises to invest in construction of residential housing, for both condominium and detached houses alongside rapid sky train's line routes throughout the city.

In 2018, it is anticipated that the Government's construction of infrastructure projects for the logistics system consistently from the end of 2017 will be accelerated, such as the construction of rapid sky train's line routes, the Eastern Economic Corridor Project, High-speed Rail Project and double track railways., etc., including new bidding construction projects in 2018 to further drive property development from the private sector to expand new construction project in the big cities, leading to the decrease in overall demand consumption of ready-mixed concrete in the country in 2018, compared to the previous year.

**4. Concrete Roof Tile/Fiber Cement Businesses and Lightweight Concrete**

The Company currently operates four existing plants of fiber cement as follows:-

1. Corrugated production line: with total production of 100,000 TPA, using the production process of air-cure.
2. Board sheets production line
3. Production line for a substitute for wood product category
4. Digital Board production line, wall and floor decoration

Total production capacity of both line 2, 3 and 4 are totaled of 280,000 TPA, using the production process of autoclave

Concrete Roof Tile products are comprised of concrete roof tiles products and its cover set. Total production of concrete roof tiles are 1,600,000 square meters or 16 million pieces per annum.

TPI Polene is the manufacturer and seller of concrete roof tiles and fiber cement products under the logo, "TPIPL", designed through a production process that uses modern machinery and high technology. Concrete roof tiles and fiber cement products are made from high quality cement and are manufactured to meticulous strength specifications, ensuring endurance and ultimate press and quality of the products surpassing the production standards from Thai Industrial Standards Institute and the International Standard Organization (ISO 9001:2015) from British Standards Institution (BSI). In addition, we have a skilled quality control team, assuring qualified products by the professional team under the standardization of roofing material, which can be tested before launching to the market. Concrete roof tiles and fiber cement products are made from high quality cement and are manufactured to meticulous strength specifications, ensuring endurance and ultimate press. It has captured all the characteristics of creative curb appeal, created a matte appearance and they make a roof stand out. TPI Polene put an emphasis on producing the products to be environmentally friendly and help to even out temperatures. The Company also developed varieties of products from fiber cement by employing modern "digital technology". TPI Polene is the very first manufacturer in the country to use digital technology.

Also, the Company provides a full comprehensive range of design for the structure of concrete roof tiles in professional styles. Our superior quality tiles are available with roofing systems, heat-resistant coating and also the budget for installation can be quickly estimated. Our tiles are ideal to complete sustainable building construction, assuring efficient installation work by the professional team under the standardization of roofing materials and efficient production process, which can be tested. Our roof system has a large variety of quality products with an attractive appearance and has a comparatively long lifecycle, as well as a highly efficient product development team.

The dominant characteristic of the lightweight concrete project is that the Company can produce lightweight concrete using a variety of raw materials produced at its own plant, which is greater than 90%, and includes electricity and surplus of steam which will be reusable in the production process, thereby resulting in lower costs of production and creating competitive advantages.

**Concrete Roof Tile/ Fiber Cement and Lightweight Concrete Industry**

There are 6 major manufacturers in the Concrete Roof Tile and Fiber Cement Industry, which are: Siam Cement Plc., (CPAC brand), Diamond Roofing Tiles Plc., (Diamond brand), TPI Polene Plc., (TPIPL brand), Siam City Cement Plc., Siam City Cement Plc., (Conwood brand), Mahaphant Fiber Cement Plc., (Mahaphant brand) and Oranit Roofing Tiles Co., Ltd., (Oranit brand). Big roofing manufacturers, who operate their own cement plants, have competitive advantages in terms of controlled costs of production. There are 6 major manufacturers in the Lightweight Concrete Industry, which are: Siam Cement Plc., (Q-Con brand), Thai Light Block and Panel Co.,Ltd., (Thai Con brand), Diamond Roofing Tiles Plc., (Diamond brand), Siam City Cement Plc., Siam City Cement Plc., (Insee Super Block brand), Smart Concrete Co., Ltd. (Smart Block brand) and TPI Polene Plc., (TPI Block brand).

TPI Polene uses strategy for sales and marketing in the domestic market through the integrated marketing concept, focusing on marketing mix of products to customize the products offering to customers based on intermediary of advertisement via television, printing media and product display at more than 1,000 construction material sales agents and modern trade throughout the country as well as online media advertising to create awareness and deliver products details of marketing messages to consumers with real products presentation. TPIPL maintains the policy to produce new products through research and development for product innovations to respond to the needs of consumers, focusing on products differentiation suitable for a wide range of purposes, genuine application, reducing carbon dioxide gas that causes global warming and environmentally friendly.

The Company has a policy to consistently export fiber cement products and concrete roof tiles to AEC (ASEAN Economic Community) member countries such as the Philippines, Laos and Myanmar and has a plan to expand the market to other countries and other continents, to accommodate economic expansion.

As there is some limitation of wood properties to be used in decoration or construction work, the fiber cement market has growth potential as they can be used as a substitute for wood. They have better properties as compared with wood, as fiber cement is manufactured to ensure moisture endurance, flexibility, free of termites and insects, and is cost saving compared to wood and its availability.

As for the light weight concrete business, competitive conditions also intensified. The Company also has competitive advantages as the products are designed through a production process that uses modern machinery and has maintained the policy to consistently develop a full comprehensive range of products in different size/dimension for an ever-increasing number of applications to respond

the needs of the customers, ensuring suitable application in order to expand the market and capture existing market share.

In 2018, the Company anticipates that the real estate business will tend to grow over the previous year, supported by signs of the economic recovery in the country while housing debt in middle class customers has gradually decreased, thereby reinforcing purchasing power for housing consumption, to further drive the increase of property development of the country to be in an upward trend.

In 2017, due to the investment in construction of condominiums alongside the sky train routes as well as the investment of housing construction in the big cities and the effect of the ASEAN Economic Community, increased number of citizens from Asian zone move to work in Thailand will further drive the increase of investments in real estate properties in the country.

**5. Refuse Derived Fuel ("RDF") Plant**

TPI Polene Power Co., Ltd. (a 70.24% owned- subsidiary of the Company) operates a renewable energy business with an Alternative Fuel Power Plant, or Refuse Derived Fuel (RDF). It commenced commercial operations in 2001. The plant is located within the area of our cement plant in Saraburi Province. The RDF project enables the Company to use RDF fuel to generate energy in the form of electricity in the Plant. The RDF Plant as above has been granted promotion certificates from the Board of Investment ("BOI").

To support its RDF-fired power generation capacity, TPI Polene Power currently operates RDF production facilities with the daily installed capacity to process up to 6,000 tons of municipal wastes and produce up to 3,000 tons of RDF. Presently, TPI Polene Power has constructed the warehouse for RDF storage up to 100,000 ton, to ensure sufficient waste supply to support its RDF requirement as fuel to generate power for a period of one month.

**6. Power Plants**

TPI Polene Power is a power plant operator, with the largest waste-to-energy power operations in the country and has become one of the top leading waste-to-energy power plant explorers in Thailand, with an established track record and expertise in waste management and proprietary technology well adapted to waste-to-energy operations in Thailand.

As of December 31, 2017, the Company had 5 power plants in operation, with total installed power generation capacity of 220 MW. The Company also operates a power plant with an installed RDF-fired power generation capacity of 100 MW, consisting of a 30 MW waste heat recovery power generation unit and a 70 MW RDF-fired power generation, the project of which has been granted relevant certificates and is currently in the process of granting approval from relevant government authority. TPI Polene Power will sell a contracted power generation capacity of 90 MW to The Electricity Generation Authority of Thailand (EGAT).

Presently, TPI Polene Power is constructing a coal-fired power plant with an installed power generation capacity of 150 MW, and is expected to complete its construction in the first quarter of 2018.

However, once all power plant construction is completed, installed power generation capacity is totaling 440 MW as follows:-

1. A waste heat recovery power plant (the "WHRPP-40MW"), which generates electricity from waste heat emitted from TPIPL's cement production plants and has an installed power generation capacity of 40 MW, consisting of two 20 MW power generation units. These RDF-fired Power Plants have been granted promotion certificates from the BOI.
2. An RDF-fired Power Plant with an installed power generation capacity of 20 MW. TPI Polene Power Co., Ltd. began to sell a contracted power generation capacity of 18 MW in January 2015 to The Electricity Generation Authority of Thailand (EGAT). The RDF-fired Power Plants receive an adder of Baht 3.50 per kWh, which is payable in addition to the standard price of EGAT, on alternative-fuel-generated electricity for 7-year period, from EGAT. These RDF-fired Power Plants have been granted promotion certificates from the BOI.
3. An RDF-fired Power Plant with an installed power generation capacity of 60 MW. In August 2015, TPI Polene Power Co., Ltd. began to sell a contracted power generation capacity of 55 MW from RDF-fired Power Plant with an installed power generation capacity of 60 MW to The Electricity Generation Authority of Thailand (EGAT). The RDF-fired Power Plants receive an adder of Baht 3.50 per kWh, which is payable in addition to the standard price of EGAT, on alternative-fuel-generated electricity for 7-year period, from The Power Electricity Authority of Thailand. These RDF-fired Power Plants have been granted promotion certificates from the BOI.
4. A power plant with an installed power generation capacity of 100 MW, consisting of a 30 MW waste heat recovery power generation unit and a 70 MW RDF-fired power generation unit, which commenced commercial operations in February 2016. Presently, TPI Polene Power Co., Ltd. has completed the construction of a Waste Heat Recovery Power Plant with an installed power generation of capacity of 30 MW, which will initially sell electricity generated from the waste heat recovery power

generation unit to TPIPL to be used in TPIPL's cement production process until the RDF-fired power generation of capacity of 70 MW becomes commercially operational. Thereafter, a RDF-fired Power Plant with an installed power generation capacity of 100 MW will sign a contracted power generation capacity of 90 MW to EGAT, both of which have been granted promotion certificates from the BOI, which entitles it to a number of benefits including tax exemptions.

5. An RDF-fired Power Plant with an installed power generation capacity of 70 MW with total project investment of Baht 3,300 million. These RDF-fired Power Plants have been granted promotion certificates from the BOI and currently is in the process of receiving a permission from the relevant governmental authority. A 70 MW RDF-fired power plant together with a 30 MW waste heat recovery power generation unit will be incorporated to generate a 100 MW RDF-fired power generation unit and sign a contracted power generation capacity of 90 MW to EGAT, both of which have been granted promotion certificates from the BOI, which entitles it to a number of benefits including tax exemptions.
6. A coal and RDF-fired power plant with an installed power generation capacity of 70 MW, with the investment project of Baht 900 million. The project investment was made in 2015 and is expected to commence commercial operations in the first quarter of 2018. The electricity generated from a coal/RDF-fired power generation unit will be sold to TPIPL to be used in TPIPL's cement production process. TPI Polene Power is in the process of filing an application to receive promotion certificates from the BOI.
7. A coal/RDF-fired power plant with an installed power generation capacity of 150 MW, with the investment project of Baht 7,300 million. The project is currently under construction and is expected to commence commercial operations in the fourth quarter of 2017. The electricity generated from a coal/RDF-fired power generation unit will be sold to TPIPL to be used in TPIPL's cement production process. This coal/RDF-fired Power Plant has been granted promotion certificates from the BOI.

**7. Industrial Waste Disposal Business**

TPI Polene also operates an industrial waste disposal business to dispose of industrial waste from various industries in the country, under a license to operate a central waste treatment plant granted by Department of Industrial Works. This project helps eliminate industrial waste from industries, enhance recycling opportunities, lower raw material and fossil fuel usage, and develop a recycling economy with the preservation of environmental surroundings.

**8. Pyrolysis Plant**

The Company operates modern, high-efficiency energy recovery technology using a Pyrolysis Plant, with total project investment of Baht 652 million, the plant of which is designed to generate crude oil and liquid fuel from waste plastic and tire pyrolysis. The project is operated adjacent to the RDF plant, which is located within the area of our cement plant is Saraburi province. The Pyrolysis Plant has been granted promotion certificates from the Board of Investment ("BOI").

**9. Oil Service Stations and NGV gas stations**

TPI Polene Power Public Company Limited also operates oil service stations and NGV gas stations in Bangkok and provincial areas, under the logo "TPIPL". NGV gas stations have been granted promotion certificates from the Board of Investment. Currently, TPI Polene Power operates a total of 8 oil service stations, 1 NGV gas stations and 3 oil service stations and NGV in Bangkok and provincial areas.

**10. Fertilizer Plant**

TPI Polene Bio Organics Co., Ltd. (99.99% owned subsidiary of the Company). The project became operational in 2011 and is operated adjacent to the RDF Plant. The composting or the biodegradable waste is sorted and reprocessed into new material bound for the manufacture of organic fertilizer for full cycling for waste management collection, treatment and disposal services. The plant is located within the area of our cement plant in Saraburi Province. The organic fertilizer plant has been granted promotion certificates from the Board of Investment ("BOI"). TPI Polene Bio Organics Co., Ltd. obtained quality products in compliance with the standards of IFOAM for liquid fertilizer on September 5, 2011. Most importantly, TPIPL organic fertilizers are toxic-free and safe for human beings and the environment. TPI Polene Bio Organics Co., Ltd. has consistently produced through research and product development to obtain varieties of products specially manufactured for plants and livestock (symbiotic products).

**Organic Fertilizer Industry**

In 2017, the agricultural sector in the country grew by 5.3% over the previous year whist growth in agribusiness and farming expanded 6.8% and 2.0% in 2016 and 2017 respectively, as a consequence of the governmental supported plan to raise up its standard and to create sustainability to agricultural sectors in the country as climate and its abundant supply of water source also support agriculture, to expand accordingly.

In 2017, organic products for livestock (symbiotic products) and fishery products are increasingly acceptable to be used among the agricultural group as the organic agriculture help increase efficiency in raising livestock animals and to help protection disease in animal farming, thus reducing the uses of antibiotics, whereby the organic agriculture seems to be a better alternative than governmental authorities and the private sector. Hence, big livestock animal manufacturers have turned to form a relationship as business party with the Company.

In 2017, the agricultural sector in the country expanded drastically, supported by the government's policy through a project for sustainable agricultural development, an Entitled 9101 Project, aiming to support agriculturalists to do organic agriculture. The agriculture development initiative under the National Organic Agriculture Development Strategic Project for the year 2017-2021 has an aim to expand the area of organic agriculture up to 600,000 Rai, which has consequently driven the organic products of the Company to grow consistently.

**11. Ammonium Nitrate and Nitric Acid**

Thai Nitrate Co., Ltd. (a 99.99% owned-subsidiary Company) is the largest producer of ammonium nitrate and nitric acid in the country and Thai Nitrate is the sole producer of nitric acid in Thailand.

**12. TPIPL Drinking Water Business**

TPI Polene has operated a drinking water business under the brand name "TPIPL" since 2011. It has good quality products and it is safe for consumers as it uses high quality reverse osmosis technology filtration systems (RO). This process requires that high pressure be exerted on the high concentration side of the membrane and by applying ultra violet treatment to eliminate biological contamination and the ozone treatment process in the water-bottling stage of the production of drinking water. These major benefits have made TPIPL drinking water possess quality characteristics of water; thus, we obtained a certificate approved from the Food and Drug Administration (FDA) in compliance with the standards from natural resources. TPIPL drinking water is consumed at the plants and head office and is also distributed to consumers.

**13. Polene Solar® Products and EVA Emulsion and EVA Powder**

TPI All Seasons Co., Ltd. (99.99%-owned subsidiary of the Company) is the manufacturer and distributor of EVA film that is used for encapsulant for photovoltaic (PV) modules, which are ideal for crystalline, amorphous thin film solar panels. In addition, EVA can be used in laminated safety glass, wrap film, top sheet masking film, multi-purpose plastic sheet, anti-slip mat applications under the brand names of Polene Solar® and Vistasolar® which are certified by Thai Industrial Standards Institute (TIS 9001-2552) and the International Standard Organization (ISO 9001:2008). TPI All Seasons presently operates 10 production lines with an annual capacity of 20,100 TPA.

TPI Polene is also the manufacturer and distributor of water-based adhesive and re-dispersible powder, which are widely used as adhesives for distribution. The main raw material of which is the byproducts of ethylene and vinyl acetate, which are used to produce LDPE Homopolymer and EVA Copolymer. It is classified as the recyclable material, aiming to reduce greenhouse effect and carbon dioxide emitted in the atmosphere. The Company has developed and launched re-dispersible powder into the market.

We have developed proprietary EVA Emulsion and EVA Powder production technology and we also are one of the few producers in Thailand that has developed and launched EVA Emulsion and EVA Powder into the market under the logo Polene®. In 2017, the Company

installed additional machinery and equipment to expand the production capacity to keep pace with the increased demand consumption in the market, thereby increasing the production capacity of EVA Emulsion and EVA Powder to 30,000 tons per annum and 6,000 tons per annum respectively.

Polene Solar® Products can be classified according to their components and application as follows:

1. EVA encapsulant for Photovoltaic (PV) modules: The encapsulant is very important for the solar module because it is used to fix all components of the modules together. Moreover, the EVA sheet must be robust and protect the solar cells against UV light and moisture for at least 25 years. The above products are classified into two brand names as follows:-

    - Polene® Solar Film: In 2007, TPI All Seasons created the first EVA products by using high technology in collaboration with Thailand's top-tier PV manufacturers and our R&D team, who have over 10 years of experience in polymeric materials. The product exhibits very outstanding properties such as high light transmition, UV protection, and excellent adhesion to glass which is suitable for various solar panels (crystalline and amorphous thin film) in order to meet the demands of domestic customers and the Indian market.

- Vistasolar®: The most prestigious and oldest brand of EVA film in Europe, founded in 1982, it was purchased by TPI All Seasons Co., Ltd. in 2014. All machinery, equipment and its technology have been transferred to be installed in Thailand. For this reason, the company has gained more market share and has become more well-known in the world market. The above takeover also included the company's technology processes, all machinery, equipment, intellectual property as well as market share. The products are designed to satisfy the needs of customers in the global market, while the market is mainly in European countries.

2. EVA Interlayer: The Company has also developed the EVA film for laminated glass, safety glass and decorative glass.

3. Blown film products

Blown film extrusion is a well-known technology that is the most common method to make plastic films, especially for the packaging industry (wrap film, top sheet and masking film). The Company also developed the plastic curtain used for cold rooms and clean rooms.

4. Anti-slip mats

Polene EVA film can be used as a household multi-purpose plastic sheet such as anti-slip mats or surface protective film in the kitchen, living room and bathroom.

In 2017, TPI All Seasons Co., Ltd had the following total revenues: 78% from EVA encapsulant film, 21% from Blown film products and 1% from anti-slip mat and multi-purpose plastic film respectively.

1. EVA emulsion and EVA powder can be categorized according to product types and utilization purposes as follows:-

   a. Wood works and wood decoration works.

   b. Fabric and textile for apparel.

   c. Packaging and labeling.

   d. Lamination works.

2. EVA Powder is specially designed for significant components of construction industrial work and is applied for decoration substances for superstructure work, especially to sustain other material to enhance adhesive strength and reinforce bars in structural members. The Company also developed specially design EVA power, for sustaining workability for cement products of the Company as follows:-

   2.1 Tile adhesive mortar

   2.2 Plastering mortar

**Polene Solar® Products and EVA Emulsion and EVA Powder**

TPI All Seasons Co., Ltd. (a 99.99% owned subsidiary company) manufactures and distributes Polene Solar(r) Products and EVA Emulsion and EVA Powder. The nature of the business is summarized as follows:-

**Opportunity and Constraints of Solar Film Business**

Solar energy is a naturally occurring and clean energy. With the large magnitude of solar energy available and concerns about global climate change, many countries try to utilize sunlight to generate electricity instead of oil and coal as well as to reduce the emission of greenhouse gases. For this reason, solar power is a promising choice to address the world energy crisis.

However, there are other factors affecting the opportunities and limitations of the EVA solar film business.

1. Government policy on renewable energy (Internal and Foreign Policies):

   The government action plan that encourages the use of renewable energy, especially solar energy, will promote the solar power industry. The Ministry of Energy will possibly increase the proportion of solar energy within 10 years and will allow rooftop solar energy systems with unlimited power generation. This support by the Thai Government may facilitate increasing the capacity of EVA solar film production by our company due to the increase of solar power demand in the future.

   In addition to Thailand's energy policy, the government's foreign policy also plays an key role in this business. If solar power is promoted around the world, this will also help to increase our production capacity. For example, Japan will host the online auction of solar power plants due to the energy crisis after Tsunami Disaster in 2011. According to the 21st United Nations Framework Convention on Climate Change - UNFCCC COP21, the member nations agreed to fund 100,000 million dollars to poor

countries for renewable energy to achieve the target of limiting global warming to less than 2 degrees Celsius compared to pre-industrial levels.

2. Crude Oil and coal price:

   Crude oil and coal are the main fuel for electricity generation. If the price of those raw materials decreases, this will retard the business of renewable energy and the production capacity of TPI All Season Co., Ltd. as well.

3. Technology:

   If the technology of solar cell and solar module fabrications is developed to obtain more power, the cost of solar power generation might be reduced compared to the conventional technology and other renewable energy generations.

**Competition in Solar Film Industry**

There are several competitors in the solar film industry both in the country and in the international market. Major solar film competitors are Chinese manufacturers, who have established a production base in Thailand and will commence commercial operations in mid-2018. They are considered the major competitors of the Company because the raw materials of production in China are cheaper with higher quality. In the international market, several manufacturers from Japan and Spain went out of the business while several manufacturers in solar film industry in China and South Korea are still in the business.

**Forecast for the Year 2018**

In 2018, it is anticipated that production output and sales revenues for solar film in the domestic market will tend to increase accordingly, supported by Thai government policy on solar cell production. In addition, there are several manufacturers of solar cell from offshore that have established their production bases in Thailand. In addition, the real estate business in Thailand is growing continuously; this also increases the demand for our EVA film which is used for laminated glass and solar panels.

However, there are several manufacturers of solar cells from China to establish their production base in Thailand, which will have a direct impact on sales revenues for solar film in the domestic market. For the international market, sales revenues and profits will also increase owing to the threshold for entry into force of the Paris Agreement of the 21st United Nations Framework Convention to bring all nations into a common cause to undertake efforts to combat Climate Change - UNFCCC COP21 was achieved. Therefore, the agreement also provides opportunities on higher demand consumption for solar cells in the global market. Concurrently, several manufacturers from Japan and Spain have gone out of business; so manufacturers of solar cells will have to purchase additional products from the Company.

**14. Petroleum Exploration and Production Technology**

TPI Refinery (1997) Co., Ltd. entered into the Petroleum Concession no. 2/2554/110 (addition) for concession block no. L29/50 with the Ministry of Energy on January 11, 2017, as the concessionaire for extension of Petroleum Exploration and Production Technology for another 3-year period from February 8, 2017 to February 7, 2020.

# Affiliated Companies as of December 31, 2017

| Company's name | Head Office Address | Business | Registered Capital (Baht) | Paid-up Capital (Baht) | Shareholding (%) |
|---|---|---|---|---|---|
| **Subsidiaries** | | | | | |
| 1. TPI Concrete Co., Ltd. | 26/56, 5th Floor, TPI Tower, Chan Tat Mai Rd., Thungmahamek, Sathorn, Bangkok 10120 Tel: (02) 678-5350-74 Fax: (02) 678-5375-6 | Manufacture and sale of ready-mixed concrete | 2,000,000,000 | 2,000,000,000 | 99.99 |
| 2. TPI Polene Power Co.,Ltd. | 26/56, 8th Floor, TPI Tower, Chan Tat Mai Rd., Thungmahamek, Sathorn, Bangkok 10120 Tel: (02) 285-5090-9 Fax: (02) 213-1035 | Manufacture and sale of electricity and steam, RDF, exploration and manufacture petroleum including oil and NGV service stations | 8,400,000,000 | 8,400,000,000 | 70.24 |
| 3.TPI All Seasons Co., Ltd. | 26/56, 8th Floor, TPI Tower, Chan Tat Mai Rd., Thungmahamek, Sathorn, Bangkok 10120 Tel: (02) 285-5090-9 Fax: (02) 213-1035 | Manufacture and sale of plastic product, Polene Solar®, Vista Solar®, EVA Emulsion and EVA Powder | 450,000,000 | 450,000,000 | 99.99 |
| 4. Thai Propoxide Co., Ltd. | 26/56, TPI Tower, Chan Tat Mai Rd., Thungmahamek, Sathorn, Bangkok 10120 Tel: (02) 678-5000, 678-5050 Fax: (02) 678-5001-5 | Manufacture and sale of electricity (Remain inactive) | 1,000,000 | 250,000 | 99.99 |
| 5. Mondo Thai Co., Ltd. | 26/56, 19th Floor, TPI Tower, Chan Tat Mai Rd., Thungmahamek, Sathorn, Bangkok 10120 Tel: (02) 678-5470 Fax: (02) 678-6511 | Property development as a residential estate | 36,000,000 | 36,000,000 | 83.26* |
| 6. TPI Commercial Co.,Ltd. | 26/56, TPI Tower, Chan Tat Mai Rd., Thungmahamek, Sathorn, Bangkok 10120 Tel: (02) 678-5470 Fax: (02) 678-6511 | Retailing business | 100,000 | 100,000 | 99.94 |
| 7. TPI Refinary (1977) Co.,Ltd. | 26/56, TPI Tower, Chan Tat Mai Rd., Thungmahamek, Sathorn, Bangkok 10120 Tel: (02) 678-5470 Fax: (02) 678-6511 | Petroleum exploration | 1,300,000,000 | 1,300,000,000 | 99.99 |
| 8. TPI Polene Bio Organics Co., Ltd. | 26/56, G Floor, TPI Tower, Chan Tat Mai Rd., Thungmahamek, Sathorn, Bangkok 10120 Tel: (02) 285-5090-9 Fax: (02) 213-1035 | Manufacture and distribute of organic fertilizer | 3,300,000,000 | 3,300,000,000 | 99.99 |
| 9. Thai Nitrate Co., Ltd. | 26/56, 21th Floor, TPI Tower, Chan Tat Mai Rd., Thungmahamek, Sathorn, Bangkok 10120 Tel: (02) 678-5450-2 Fax: (02) 678-5484 | Manufacture and sale of ammonium nitrate and nitric acid | 468,750,000 | 468,750,000 | 99.99 |
| 10. Zenith International Trading Co.,Ltd. (Former name "TPI Power Co.,Ltd.") | 26/56, TPI Tower, Chan Tat Mai Rd., Thungmahamek, Sathorn, Bangkok 10120 Tel: (02) 285-5090-9 Fax: (02) 213-1035 | Investment in Foreign country | 100,000,000 | 1,000,000 | 99.99 |
| 11. TPI Intertrade Co., Ltd. | 26/56, TPI Tower, Chan Tat Mai Rd., Thungmahamek, Sathorn, Bangkok 10120 Tel: (02) 285-5090-9 Fax: (02) 213-1035 | Investment in Foreign country | 100,000 | 100,000 | 99.97 |
| 12. TPI Service Co., Ltd. (Former name "Jade Minerals Co.,Ltd.") | 26/56, TPI Tower, Chan Tat Mai Rd., Thungmahamek, Sathorn, Bangkok 10120 Tel: (02) 285-5090-9 Fax: (02) 213-1035 | Construction business | 10,000,000 | 10,000,000 | 95.10 |
| 13. Polene Plastic Co., Ltd | 26/56, TPI Tower, Chan Tat Mai Rd., Thungmahamek, Sathorn, Bangkok 10120 Tel: (02) 285-5090-9 Fax: (02) 213-1035 | Export cement and plastic resins | 10,000,000 | 10,000,000 | 99.99** |

*Remarks: * Held by TPI Polene Plc. and TPI Concrete Co., Ltd., which accounted for 28.75% and 54.51% respectively, totaling 83.26% .*
*** Held by Zenith International Trading Co., Ltd. 99.99%.*

| Company's name | Head Office Address | Business | Registered Capital (Baht) | Paid-up Capital (Baht) | Shareholding (%) |
|---|---|---|---|---|---|
| **Associated Companies** | | | | | |
| 1. Thai Special Steel Industry Public Co.,Ltd. | 26/56, TPI Tower, Chan Tat Mai Rd., Thungmahamek, Sathorn, Bangkok 10120 Tel: (02) 678-5350-74 Fax: (02) 678-5375-6 | Manufacture and sale of Steel | 11,200,000,000 | 4,220,000,000 | 29.53 |
| 2. Bangkok Union Life Insurance Plc. | 175-177, 8th Floor, Bangkok Insurance Tower, Surawongse, Bangrak, Bangkok 10500 Tel: (02) 634-7323-30 Fax: (02) 634-7331 | Life Insurance | 500,000,000 | 500,000,000 | 25.00 |
| 3. United Grain Industry Co.,Ltd. | 26/56, 27th Floor, TPI Tower, Chan Tat Mai Rd., Thungmahamek, Sathorn, Bangkok 10120 Tel: (02) 678-6988-97 Fax: (02) 678-6988-99 | Manufacture and sale of Packaging | 550,000,000 | 550,000,000 | 19.00 |
| **Other** | | | | | |
| 1. Pornchai Enterprise Co.,Ltd. | 26/56, 22th Floor, TPI Tower, Chan Tat Mai Rd., Thungmahamek, Sathorn, Bangkok 10120 Tel: (02) 678-5490-3 Fax: (02) 678-5494 | Real estate business and rental service | 4,599,919,600 | 4,599,919,600 | 0.65 |

# Sales Revenue Structure

TPI Polene's investment in reciprocal businesses will generate significant sales revenues and create steady growth for the Group. The sales revenues structure is as follows:

*Unit: Baht Million*

| Product/Service | Operated by | % Of TPIPL's Shareholding | Sales revenues | | Inter-company's revenues | | Total Sales revenues | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 2017 | 2016 | 2017 | 2016 | 2017 | % | 2016 | % |
| Construction material | TPI Polene Plc.<br>TPI Concrete Co.,Ltd. | -<br>99.99 | 18,078 | 18,557 | 6,688 | 7,035 | 24,766 | 56.38 | 25,592 | 60.18 |
| Petrochemical and Chemical Products | TPI Polene Plc.<br>Thai Nitrate Co., Ltd. | -<br>99.99 | 6,684 | 6,759 | 7,472 | 5,676 | 14,156 | 32.23 | 12,435 | 29.24 |
| Electricity and Utility | TPI Polene Power Plc. | 70.24 | 4,202 | 3,714 | 663 | 577 | 4,865 | 11.07 | 4,291 | 10.09 |
| Organic Products | TPI Polene Bio Organics Co.,Ltd. | 99.99 | 125 | 98 | 16 | 107 | 141 | 0.32 | 205 | 0.48 |
| Total | | | 29,088 | 29,128 | 14,839 | 13,395 | 43,928 | 100.00 | 42,523 | 100.00 |

# Corporate Developments in 2017

2017 was another year of success for TPI Polene Group as the Company has expanded projects to build up business operations and consistently reduce energy. TPI Polene has moved forward to continue to create high growth potential for the business by making further investments in projects as follows:

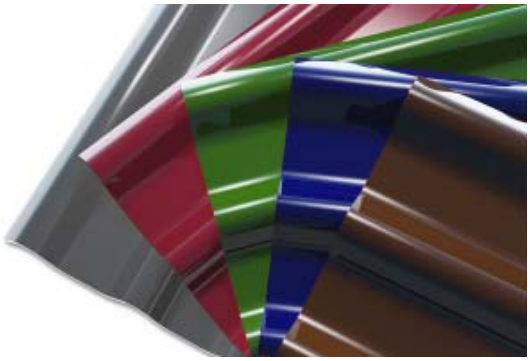
**TPIPP Raised Fund of Baht 17,500 million and listed on the Stock Exchange of Thailand.**

In March 2017, TPI Polene Power ("TPIPP", a subsidiary of TPI Polene) raised funds through an Initial Offering Public Offering ("IPO") of 2,500,000,000 newly issued ordinary shares offered (comprising approximately 29.76% of the Company's total outstanding Shares after the Combined Offering), at the offering price of Baht 7 per share for a value of Baht 17,500 million. TPIPP was then selected to become part of the SET50 Index (a capitalization-weighted index based on the top 50 stocks) on the Stock Exchange of Thailand on April 5, 2017. The net proceeds it received from the Offering as above were used for repayment of loans from TPI Polene and/or for investment in power projects. The completion of the above fund raising was considered a successful step for the TPI Polene Group, receiving a good response from investors in the country and offshores.

Upon the completion of the IPO, TPI Polene remains the controlling shareholder of TPIPP, holding 70.24 per cent of its enlarged paid-up capital.

TPI Polene has also developed and launched EVA emulsion and EVA powder, which are widely used as adhesives for distribution. The main raw materials of these are the byproducts of ethylene and vinyl acetate, which are used to produce LDPE Homopolymer and EVA Copolymer. They are classified as recyclable materials, aiming to reduce greenhouse effects and carbon dioxide emitted into the atmosphere. The Company has developed and launched EVA powder into the market.

We have developed proprietary EVA emulsion and EVA powder production technology and we also are one of the few producers in Thailand who can develop and launch EVA emulsion and Re-dispersible powder into the market under the logo Polene(r). In 2017, TPI All Seasons Co., Ltd. has installed additional machinery and equipment to expand the production capacity to keep pace with the increased demand consumption in the market, thereby increasing the production capacity of EVA emulsion and EVA powder to 30,000 tons per annum and 6,000 tons per annum respectively. They are classified as green products. EVA emulsion and EVA powder are one of TPI Polene Group's products, which are environmentally friendly, and which respond to the needs of customers in both the domestic market and international market.



**New Product Development in 2017**

Current construction projects mostly consume ready-made materials in an ever-increasing number of applications to accommodate the wide range of purposes and require labor cost savings. The Company has developed cement mortar to provide a full comprehensive range of applications. TPI Polene's cement mortar is convenient to use, providing a wide range of purposes. TPI Polene has become the top leading manufacturer of cement mortar in the country. TPI Polene and its subsidiaries have developed new products as follows:-

- **Fiber Cement Products**

**Digital Cool Cement Roof Tiles**

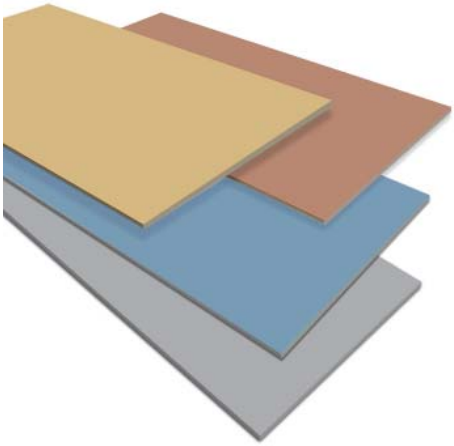
Our digital cool cement roof tiles are well developed to possess outstanding properties, making a polished-surfaced appearance by plastering on the surface with a clear coat technology. The ingredients consist of special substances that enable it to have high impact and durability, with 6 -millimeter thickness. Our digital cool cement roof tiles have been awarded TIS 1407-2540 industrial certification standard.

**Cristallo Cement Roof Tiles**

Our Cristallo cement roof tiles are well developed to possess outstanding properties of high impact and durability, having a polished-surfaced appearance the same as ceramics. Our Cristallo cement roof tiles have been awarded TIS 1407-2540 industrial certification standard.

**Facade: TPI Fibre Board for Concrete Walls and Floors**

Façade is ideal for surface decorative applications. It is well developed to possess outstanding properties, applied through air cure processing. The ingredients consist of special substances that enable it to have properties which will lower water absorption, will have robust, heat resistance of more than 4 hours, and strong adhesion, enabling the creation of color through and consistent printing patterns, with the additional facility to localize the printed patterns, ensuring that it is beautiful work and easily installed.



**TPI Natural Wood**

TPI natural wood is made from fibre cement board, and simulates wood appearance, which has high quality digital printing and a combination of beautiful wood simulation printing with a tongue and groove system that can adjust the level of the floor. It saves time and is very cost effective.

- **Cement Mortar Products**

- **3D Printing Mortar: M901 and 3D Printing Concrete Robot Machine**

  M901 is a mixed material of cement with special chemicals that is well-suited to be sprayed to construct a building of cement structure and architectural features which can be applied to be used with a 3D Printing Concrete Robot Machine, layer by layer to create any digital features as desired, and to formulate whatever it is the user wants to print with durable structure, and anti-crack technology. The product is sold in 50 kilogram bags.

  M901 is a mixed material of cement and is specially developed to accommodate technological development in the future. 3D printing could facilitate to print concrete and be used increasingly in daily life. So the Company has launched M901, a special formula cement mortar for 3D printing work inside of an automated robot, revolutionizing the manufacturing process to build impressive houses, as designed by the computer program, enabling it to be used to design and develop work as large as 1.85x3.0x2.0 meters per piece. Sophisticated consumer machines use a wide array of mixed material of cement to create beautiful printings, well suited to formulate different decorations, such as gardening decoration sets and sofa cement sets etc. Nowadays, a lot of customers are placing orders for those modern decoration works. In this regard, TPI Polene plans to launch additional new 3D printing concrete in 2017 and is committed to develop 3D printing concrete products to be used in many different applications and architectural features in replacement of humans in the near future.

- **Cement mortar M 552**

  M 552: Cement base tile grout is designed to be high quality and promote adhesive textures and high sustainability to be used as a glue to completely fill the joints of tiles, and which is also anti-crack. The product can be ready to be applied immediately by mixing well with water at the recommended proportion. The product is sold in 1 kg bags.

**Other Nano Products**

**TPI Super Special Armour Nano Paint "NP100M" (Top Coat: Concentrated water-based Colors)**

**NP101M: A concentrated water-based colors** is a ready-mixed formula, with the specialty grade of matte film color, that enables it to protect against radiation, humidity/water and it can cover all imperfections of the original for building surface applications, breathable nano paint and waterproof film color base. It is specially designed for painting on building surfaces, such as ceilings and walls, and is ready to be used with no mixture of water. It can be applied on the required areas after painting with TPI Super Special Armour Nano Paint (NP100SW) or TPI Super Special Armour Nano Top Coat Paint (NP101SW). With fine cement-based mixtures, it gives the colors as needed on building surfaces that increase paint durability, and enables it to protect against humidity/ water, abrasion resistance and scratch resistant. The product is sold in 1/4, 1,2.5 and 5 gallon buckets.

**Concentrated water-based colors: NP100S, NP100SW and NP101S: Top Coat**

**TPI Concentrated water-based colors** are well developed and specially designed to respond to the needs of customers, enabling it to form a binding layer that is better prepared to receive the paint at least 14 days as compared with the primitive water-based colors, which need to be applied on the required masonry areas have to be left on top of dried areas at least 14 days before painting the top coat on the surface. With new specially designed TPI Concentrated water-based colors, NP101S, NP100SW can be used immediately after the required masonry areas have been left to dry for 2 hours. It can be applied on the required areas with TPI Super Armour Nano Top Coat Paint (NP101S). With fine cement-based mixtures, it gives the colors as needed on cement or concrete surfaces surface for both masonry work and painting work on surface finished within one day.

**TPI Slip form Concrete for Silo Work**

A new formula Slip form with proportionate mixtures with fine particle size mix of specialty material is specially designed for constructing reinforced Silos. The ingredients consist of special substances that enable it to be used for molds for moving forms, using jacks and concrete to form a continuous structure without joints or seams. Setting time of concrete can be designed and adjusted to be in compliance with the quantities of concrete being poured into a continuously moving form on the quick-setting properties of concrete as being finished within time schedule, allowing concrete to be able to be hardened in a specified time to ensure the best possible consistent pouring. Concrete is shaped in the desired profile during the travel of the form with high quality finished surfaces for polishing concrete surfaces with no additional cement needed to be used again on surfaces.

**Consistently Develop Potential in our Human Resources**

As at December 31, 2017, the Company and its subsidiaries employed 8,900 persons. Of these, 115 were management personnel, totaling 9,015 persons.

The Company strongly believes that highly competent employees are the key driver for corporate success. To this end, the Company has focused on continuous development of our human resources in addition to aiming for our employees to perform their duties ethically, responsibly, and with integrity. Furthermore, the Company strongly believes that encouraging our employees to embrace corporate social responsibilities will reinforce the sustainable growth of our organization.

In addition to the aforementioned activities, the Company has taken the following initiatives in order to further enhance our employees' competency:

**Human Resource Development and Essential Knowledge**: The Company acknowledges the importance of human resources; therefore, we encourage our employees to continuously develop and strive to achieve their fullest potential by providing all our employees with the opportunities to learn and acquire the knowledge equally among employees. The Company offers the following programs to our employees:

- **Development courses and training programs:** The Company fosters staff development at all levels. Each year, the Company schedules training programs specifically designed for each business unit to educate and to provide employees at different levels with an understanding of their tasks and responsibilities with safety. Scheduled training programs for this year were organized through survey needs from employees in each respective department to respond to the necessity for employees to join Development courses and training programs.
- **External Training:** The Company encourages employees to acquire external education by subsidizing independent courses and seminars to be in line with job descriptions. The Company also provides our employees with opportunities to visit the interna-

tional fairs and global companies in order to update our employees with current international standards and expand our employees' vision. Employees are regularly supported to attend course seminars through the Skill Development Center and Safety Committee, for further preparation to be professional lecturer and auditors for technician classification at the factory[DO2].

- **In-house Training:** To develop our employees' ways of thinking, potential and knowledge to perform their duties to be in line with the corporate objectives and competitive circumstances, the Company provides several in-house training programs in the following topics:
  - **New Employee Orientation:** To enroll the employees in the new employee welcome and orientation class through the Employee Development & Training Unit to foster an understanding of integrity and ethics as well as their roles and functions to perform their duties. The course session is held for employees to educate them in view of the cement production process, types, and quality of our products such as cement, concrete roof tiles, Nano paints and organic fertilizers. New employees are trained to know the functions of each department and we also encourage our employees to meditate and study the ways of Dharma from notable and well-respected monks, and engage in Dharma practice, mediation practice and meditation walking during a 1-day course at Wat Rama IX Golden to ensure their confidence and pride in the Company, to encourage ethics and integrity, as well as to build positive working attitudes and relations with colleagues.
  - **Management Training Program for Employees and Management:** The course training includes systematic thinking and decision-making, Preparation for Management Level Step up, Goal Setting and Working Plan, Happiness Creation and Team Work, Creativity Thinking, Succession Planning, Project Analysis and Job Delegation, Human Resource Management to reduce conflicts in the company, Techniques For Success in Working with all generations, Psychological Management and Motivation Skills, IG&EQ with Self-development, Value Creation for Work, Techniques to Cultivate Deep Bonds and Corporate Affection, Employee Engagement., etc. These provide much-needed opportunities to focus on strategic skills, and to lead and manage to be in line with management systems and the ongoing business operations of the organization.
  - **Course seminars for Sales Training Program:** To provide sales representatives and employees in the relevant departments with essential skills to maximize sales performance, such as Course Training for Strategic Sales Development and Modern Marketing in 4G Era, Customer Relation Management (CRM) and Sales Course, Customer Analysis and advanced Sales Professionals etc.
  - **Products and their Specifications Training Program:** techniques to use products, such as TPIPL products, overview of products specification of fiber cement, Lightweight concrete

and TPIPL organic fertilizer etc.

- Course Training Program on ISO 9001:2015, Internal Auditor, ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories Standard, as well as ISO/IEC 17025 Standard, certifying the performance evaluation test and Quality Standard Systems, ISO 14001 and OHSAS 18001: the standardization in all respects to be implemented suitably and properly to enhance the management team to perform their duties under Corporate Social Responsibility and to reduce gamma radiation impact and waste management in general. The Company always strives to reduce the amount of hazardous waste.

  **Health and Safety Management Standard:** Safe way to use forklifts for machinery lifting, safe uses of machinery and cranes, advanced fire extinguisher course, Risk Appraisal, Safety in the Workplace for Officers and Heads of each department.

**On-the-Job Training:** To encourage coaching sessions and on-the-job training programs among employees to consistently develop the employees to perform their duties efficiently to be in line with the "Training Road Map" in each respective department. To enroll the employees in the new employee welcome and orientation class through the Employee Development & Training Unit to foster an understanding of their roles and functions to perform their duties. The course session is held for employees to educate them in view of all the functions of their duties at least 1-2 months ahead of their employment in their own departments. The course session is held for employees to educate them in view of the cement production process to all employees.

**Energy Saving Course:** The course session for energy management standards system: ISO50001, TSV Energy Chart & Energy Equation and Awareness of Energy Preservation.

**Ethics and Quality of Life:** The company under the cooperation of the State Railway of Thailand, built the Statue of Kin Rama 5 to pay their respects beside the Phasadej Railway Station. In addition to placing Buddha statues at several significant spots in our factories for employees and visitors to pay their respects, we also encourage our employees and the management to meditate and study the ways of Dharma from notable and well-respected monks from Wat Praram 9, for instance: Phraponpol Visanno, Phrasriyansophon and Phrathambandit. These programs include the Dharma course arranged for children to cultivate the knowledge of Dharma through the practice of "self-consciousness, concentration and wisdom/study" with an aim to motivate the young students to concentrate on study (free of charge) at Wat Rama IX Golden, Bangkok.

In addition, the Company is focused on a policy to improve standards of living for employees, to be safe in both their lives and possessions as follows:

- The Company strictly prohibits drug activities; therefore, we have been certified as a "White Factory," which signifies a permanent "Drug-Free" zone. Random alcohol breath tests are regularly set up. Any employee, who is found to have a preliminary reading of alcohol, will not be allowed to perform their duties and will face disciplinary punishment.
- The Company is committed to supporting disabled people to join the workplace by encouraging and promoting equal opportunities and equal treatment of people with disabilities. The Company has clear rules and regulations on employment to be strictly applied, regardless of sex, age, generic information, races, religious, education background which also includes equal opportunities for employees to progress in their careers as well as compensation. The employment policies and conditions of work are based on job requirements.

**Quality and Productivity Enhancement:** In addition to our emphasis on HSE, OSHA and CSR as delineated above, we made a full commitment to improve our productivity and to ensure product quality control and assurance. The Company provides various training to our employees on Quality Management System pursuant to ISO 9000, Environmental Management System pursuant to ISO 14001 and OHSAS, and Occupational Health and Safety Management System pursuant to Mor.Or.Kor. 18001 and CSR implementation for the employees and management. Training programs have been performed to encourage Office Improvement ("OI") to be in line with Total Productive Management ("TPM"), in those departments that support (rather than being directly involved in) production. These "OI" programs focus on improving working processes, reducing waste, and increasing work efficiency, in order to effectively increase productivity.

Other than the employee performance evaluation of the annual review conducted by the supervisors of each respective department, in August 2017 onwards, the Company has implemented the new system of Annual performance evaluation, with the objective that employees actively acknowledge and are involved in understanding the requirements of their jobs and are together responsible for the performance of the plants, particularly total production costs, expenses, safety of operations of each respective department and activity involvement in TPM.

**Efficient Time Management:** The Company also encourages employees to participate in social activities during their free time.

Available activities include a Buddhism club and athletic clubs, such as a petanque club, a football club, a golf club and Volunteer club, etc.

**Encourage saving program:** TPI Polene and TPI Concrete have established a co-operative saving program for employees to encourage saving money. This also includes financial assistance in the form of loan offerings to employees at a lower interest rate as compared with financial institutions.

**Employee welfare:** The Company also strives to support equal opportunities for employees to progress and to be secured in their career by providing assessment standards of job appraisal, regardless of sex, age, generic information, race, religion, or educational background. The employment policies and conditions of work are based on job requirements. In addition, the Company offers special care for employees who perform their work in particular areas by providing remuneration in the form of salary and bonuses, the Company also provides subsidized healthcare benefits in the form of OPD medical expenses (outpatient department) to employees and their family members, including father, mother, spouses and legal offspring. The Company also provides free annual health check-ups; life and healthcare benefits are offered in the form of health insurance packages and accident insurance coverage. Financial assistance is also offered for funeral rites of the employees, as well as the family members of employees who pass away. An establishment of " Funeral Assistance Association" among the members of the Company's employees was allowed to assist the members of the Association foundation to offer financial assistance for funeral rites of the employees. In addition, the Company offers special care for employees who perform their work in particular areas by providing free health check-ups at medical centers and free vaccination against tetanus and hepatitis B (HBV) to all employees and to ensure that all levels of the Company's staff have received annual healthcare check-ups. Any employees found ill or with other physical impairments will be sent for repeated healthcare check-ups and put on other job rotations. Also, the Company provides mobile medical units for check-up services for the people in the surrounding community and encourages employees to jointly donate blood to Saraburi Center Hospital and Saraburi Red Cross every three months. TPI Polene also supported athletic activities such as the race of "Association Football" between each department, held at our cement plant, aiming to encourage coordination and harmonization between the management team and staff of the Company. The Company also entered the agreement with Government Housing Bank and Government Savings Bank to grant sources of funds for home loans for employees at a relatively low interest rate.

**Employee welfare:** The Company also provides educational support for children of employees by granting scholarships and provides additionally subsidized welfare to them.

**Provide opportunities to the disabled to work in the Company**

The Company strives to support equal opportunities in the society and it has clear rules and regulations on employment to be strictly applied, which also include equal opportunities for employment regardless of sex, age, generic information, races, religion, educational background as well as compensation and career path. The employment policies and conditions of work are based on job requirements and qualifications of that particular person.

**Personnel Management System:** The personnel management system at our cement plant is an online system. The program provides several services online; for instance, employee online attendance system and compensation leave system. This includes online personnel management system linkage through all units of operation, such as online attendance system and leave system, by applying finger scan for recording work attendance, This also includes employees' performance appraisal system and pay roll. CCTV have been installed in particular spots in the workplace.

# Operating Results and Financial Status for 2017

**Revenues**

Total consolidated revenues from sales in 2015, 2016 and 2017 were Baht 27,135 million, Baht 29,128 million and Baht 29,088 million respectively. Sales revenues in the energy and utilities business accounted for 2.9%, 7.3% and 12.8% of total revenue from sales in 2015, 2016 and 2017 respectively.

In addition, sales revenues mainly generated from construction business sector, which accounted for 67.2%, 63.7% and 62.1% of total revenues from sales of total revenues from sales respectively. Sales revenues in the petrochemical business accounted for 25.1%, 23.2% and 23.0% of total revenue from sales in 2015, 2016 and 2017 respectively.

In 2017, sales revenues generated from the energy and utilities businesses sector increased, which was primarily due to the realization of sales revenues from our energy and utilities businesses, which increased by 15%, whereas average tariff rates increased by 2.3%. In 2017, sales revenues generated from the construction business sector dropped mainly as a result of a decrease in sales volumes of cement and the fact that the average price of cement and clinker went down, mainly due to the slowdown in the economy in the country. The mega construction projects from the government and the public sector have been delayed substantially. Also, sales revenues generated from the petrochemical business dropped to be in line with the 0.9% decrease in sales revenue whereas the selling price increased by 3.3%.

Other revenues, which were comprised of revenues from transportation, net foreign exchange gain, investment income and gain from bargain of goods and other revenues in 2015, 2016 and 2017 were Baht 2,112 million, Baht 2,364 million and Baht 1,907 million respectively. Other revenues in 2017 were considered higher compared with the same in the previous year because in 2016, there were net gains from the bargain of Thai Nitrate Co., Ltd's shares of Baht 435 million.

Total consolidated revenues in 2015, 2016 and 2017 were Baht 29,247 million, Baht 31,492 million and Baht 30,996 million respectively.

**Other Income**

In 2015, 2016, and 2017 the Company had other sales revenues of Baht 684 million 342 million and 487 million respectively. Other sales revenues mainly generated from rent bulk revenue of Baht 148 million, Baht 128 million and Baht 69 million or accounting for 21.7%, 37.3% and 17.9% of total revenue from sales in 2015, 2016 and 2017 respectively.

**Cost of Goods Sold**

Consolidated cost of goods sold in 2015, 2016 and 2017 were Baht 22,895 million, Baht 24,316 million and Baht 24,495 million respectively, which accounted for 84.4%, 83.5% and 84.2% of total revenues from sales. As a result, gross profit margins in 2015, 2016 and 2017 represented 15.6%, 16.5% and 15.8% of total revenues from sales respectively. Gross profit margin in 2017 decreased as compared with the same in 2016 as average selling of cement dropped, leading to a decrease in cement sales revenues (accounting for 62.1% of total sales revenues) while gross profit margins in 2016 decreased as compared with the same in 2015 as the Company and its subsidiaries' sales revenues increased to be in line with the increased proportion of sales revenues from various projects in energy and utilities businesses sector.

**Selling and Administrative Expenses**

Consolidated selling and administrative expenses in 2015, 2016 and 2017 were Baht 5,018 million, Baht 5,364 million and Baht 5,810 million, which accounted for 18.7%, 18.4% and 20.0% of total revenues from sales respectively. The percentage in 2017 decreased due to an increase in revenue from the sale of goods from various projects in energy and utilities businesses sector.

**Interest Expenses (Cost of financial debt)**

In 2015, 2016 and 2017, the Company and its subsidiaries had interest expenses of Baht 1,018 million, Baht 1,649 million and Baht 1,647 million respectively. The interest expenses in 2016 was at the same level as that in 2017 as the Company had the debt liabilities as a result of the utilization of loans for various investment projects.

**Net Profit**

In 2015, 2016 and 2017, the Company and its subsidiaries registered net profits (loss) of Baht 364 million, Baht 515 million and Baht (696) million or basic earnings (loss) per share of Baht 0.018, Baht 0.026 and Baht (0.063) respectively. Net loss in 2017 was mainly due to the increase in recognition of cost of goods sold and selling and administration expenses.

**Financial Status and Financial Ratio**

**Assets**

At year-end 2015, 2016 and 2017, total consolidated assets were Baht 107,645 million, Baht 92,618 million and Baht 103,178 million respectively. The increase in assets value was mainly due to additional investments in various projects in energy and utilities businesses sector as well as an increase of cash, cash equivalents, and current investments during the period as the Company received the net proceeds from the shares offering of TPIPP in the first quarter of 2017.

At year-end 2015, 2016 and 2017, total consolidated current assets were Baht 16,953 million, Baht 19,549 million and Baht 24,195 million respectively. The increase in total current assets was in line with the increase in cash, current investments, trade accounts receivable and inventories. Inventory accounted for 64.7%, 60.0% and 54.3% of total current assets in 2015, 2016 and 2017, equating to average inventory turnover periods of 35 days, 36 days and 39 days respectively. Trade accounts receivable (after the provision of doubtful debts) represented 14.9%, 15.4% and 12.7% of total current assets, which equated to an average collection period of 34 days, 35 days and 36 days.

As of December 31, 2015, December 31, 2016 and December 31, 2017, the property, plant and equipment of the Company and its subsidiaries were Baht 85,848 million, Baht 85,848 million and Baht 76,551 million respectively. The increase in the property, plant and equipment was mainly due to additional investments in various projects in energy and utilities businesses sector, such as RDF Power Plant 70 MW, Coal Power Plant 150 MW, RDF Power Plant/Coal-Fired Power Plant 70 MW and RDF Fuel Power Plant.

**Liabilities**

Total consolidated liabilities were Baht 51,679 million, Baht 55,864 million and Baht 51,092 million at the end of 2015, 2016 and 2017 respectively. The debt liabilities decreased because the Company has utilized the net proceeds from the fund raising to repay outstanding debt.

Trade account payables at year-end 2015, 2016 and 2017 were Baht 2,524 million, Baht 2,214 million and Baht 2,818 million, equating to an average payment period of 42 days, 35 days and 37 days respectively.

As of December 31, 2015, December 31, 2016 and December 31, 2017, the Company and its subsidiaries had bank overdrafts and short-term loans from financial institutions of Baht 923 million, Baht 5,610 million, and Baht 2,178 million respectively; long-term loans from financial institutions of Baht 6,908 million, Baht 8,909 million, and Baht 5,790 million respectively; and debentures of Baht 29,555 million, Baht 32,000 million, and Baht 33,000 million respectively. Bank overdrafts and short-term loans from financial decreased because the Company has utilized the net proceeds from the fund raising to repay outstanding debt.

**Shareholders' Equity**

As of December 31, 2015, December 31, 2016 and December 31, 2017, shareholders' equity was Baht 55,966 million, Baht 36,755 million and Baht 52,086 million respectively. The shareholders' equity as of December 31, 2017 decreased due to a decrease of fixed assets reappraised by the independent appraiser to be in accordance with the accounting standard.

**Capital Structure**

At the end of 2015, 2016 and 2017, the debts to equity ratios were at 0.92 times, 1.52 times and 0.98 times respectively. In 2017, the debt to equity ratio was lower compared with the same in the previous year because the Company has utilized the net proceeds received from the fund raising for the repayment of loans from financial institutions.

**Financial Liquidity**

In 2015, 2016 and 2017, consolidated net cash flow from operating activities of the Company and its subsidiaries were Baht 1,155 million, Baht 1,932 million and 1,955 million respectively. The increase in consolidated net cash flow from operating activities in 2016 and 2017 was primarily a result of an increase in sales revenues generated from investments in various projects in energy and utilities businesses sector.

In 2015, 2016 and 2017, net cash flow from investing activities of the company and its subsidiaries were Baht (8,389) million, Baht (7,962) million and Baht (11,055) million respectively as the Company consistently invested in plants including machinery and

equipment from Cement Line No. 4, Mortar Plant, Power Plants, RDF Power Plant Project, Concrete Roof Tile Plant, Fiber Cement Plant, and Lightweight Concrete Plant.

In 2015, 2016 and 2017, net cash flow from financing activities of the Company and its subsidiaries were Baht 8,151 million, Baht 7,059 million, and Baht 8,533 million respectively. The Company received money from short-term and long-term loans from financial institutions and the issuance of debentures for the construction of various investment projects as mentioned above. As a result, by year-end 2015, 2016 and 2017, consolidated cash and cash equivalent were Baht 917 million, Baht 1,029 million and Baht (567) million respectively.

Besides, TPIPP, the subsidiary company, successfully raised funds through the initial public offering of Baht 17,500 million.

Interest Coverage Ratio in 2015, 2016 and 2017 equaled 2.09, 2.31, and 1.94 times respectively, which decreased consecutively because interest expenses decreased due to an increase of the interest expensed of long-term loans for various project investments and short-term loans for capital in business operations. In addition, Debt Service Coverage Ratio was 1.23, 1.68 and 1.31 times respectively and Interest-bearing Debt to Equity Ratio was 0.67, 1.27, and 0.79 times respectively.

**Source of Funds and the Use of Funds**

The Company and its subsidiaries had sufficient funds for various project investments as the source of funds came from the issuance of debentures, loans from financial institutions from both domestic and international institutions, as well as the use of cash from business operations of the Company and its subsidiaries. The projects which used the funds from loans from financial institutions are as follows:

**- Cement Line no. 4 Project**

Cement Line no. 4 project, with project investment of approximate Baht 11,500 million was 100% funded by financial institutions. The Company borrowed the funds from domestic financial institutions in the amount of Baht 5,500 million (which was fully prepaid in August 2015 rom the issuance of debentures in 2015) and from financial institutions abroad under the guarantee of Euler Hermes Deutschland AG, a German Export Credit Agency of the Ministry of Finance in Germany, and Office National Du Ducroire or ONDD, a Belgian Export Credit Agency in Belgium, in the amount of Euro 153,851,376.39 with a 36-month grace period and a 10-year repayment period. The conditions were to maintain Debt to Equity Ratio to be equal or less than 1:1 and to maintain Debt Service Coverage Ratio to be equal or more than 1.20: 1. As of December 31, 2017, the Company had an outstanding debt of Baht 5,122.75 million of the above mentioned loans.

As of December 31, 2017, the Company's Interest Bearing Debts to Equity Ratio (calculated based on the last 12-month period figures, as per the terms and conditions stipulated in the loan agreements) equated 0.79 : 1 (which is not higher than 1:1) whereas Debt Service Coverage Ratio equated 1.31 : 1, which was not lower than 1.2:1 times as per the terms and conditions stipulated in the loan agreements.

**- Power Plant 90 MW (A RDF-fired Power Plant 60 MW and a Waste Heat Recovery Plant 30 MW)**

Power Plant 90 MW (comprising a RDF-fired Power Plant 60 MW and a Waste Heat Recovery Plant 30 MW), with the project investment of approximately Baht 4,700 million was 100% funded by domestic financial institutions. TPI Polene Power Co. Ltd. fully repaid the above mentioned loan in August 2015 using money from the issuance of debentures in 2015.

**- Fiber Cement Plant and Lightweight Concrete Plant**

Fiber cement Plant and Lightweight Concrete Plant had the project investment of Baht 3,300 million and Baht 800 million respectively. The Company borrowed funds of 75% of the project investments of each project and the Company repaid the above mentioned loans in August 2015 using the money raised by the issuance of debentures in 2015.

**- Electric Locomotives**

The Company made an investment to purchase electric locomotives for the amount of USD 24.2 million. The Company borrowed funds of 85% of the project investment from financial institutions abroad under the guarantee of SINOSURE, a Chinese Export Credit Agency in China. The condition was to maintain Debt to Equity Ratio to be equal or less than 1:1. As of December 31, 2016, the Company had an outstanding debt of Baht equivalent 506.75 million of the above mentioned loan.

As of December 31, 2017, the Company's Interest-bearing debt to Equity equaled 0.79 : 1 (calculated based on the past 12-month period according to condition stipulated in the loan agreement) which was less than the ration of 1:1 as stipulated in the loan agreement as mentioned above.

**- A 70 MW RDF-fired Power Plant**

A 70 MW F-fired Power Plant, with the project investment of approximately Baht 3,300 million was 100% funded by domestic financial institutions. The condition was to maintain Interest Bearing Debts to Equity Ratio (calculated based on the last 12-month period figures, as per the terms and conditions stipulated in the loan agreements) not greater than 1.75:1 (during the period March 2016 to March 2017) and not greater than 1.50:1 (for the remaining period of the loan agreement) and to maintain Debt Service Coverage Ratio not lower than 1.05:1. In this regard, TPI Polene Power utilized the net proceeds from the Initial Public Offering for full prepayment of the loan on April 2017.

**- Outstanding debt of Baht 33,000 million debentures**

As at December 31, 2017, the Company's outstanding debt of debentures was Baht 33,000 million. The condition was to maintain Interest Bearing Debts to Equity Ratio not greater than 1.5:1.

As at December 31, 2017, Interest Bearing Debts to Equity Ratio (calculated based on the last 12-month period figures, as per the terms and conditions stipulated in the loan agreements) equated 0.79 : 1, which was not greater than 1.5:1 as stipulate in the loan agreement as mentioned above.

**Operational Results classified by Business Sector**

**Construction Business**

In 2016, l cement sales volume in the country increased by 1.2% whereas ready-mixed concrete sales volume decreased by 6.5% respectively compared with the same in 2015, due to economic slowdown resulting in the postpone of the infrastructure construction projects for both the government and private sector. In 2015, average domestic selling price decreased by Bath 200/ton for cement and Baht 250/cubic meter for concrete, compared with the same in 2014 respectively.

In 2017, cement and ready-mixed concrete sales volume decreased by 2.9% and 13% compared with the same in 2016 respectively due to the economic deterioration in the country, resulting in the slowdown of government infrastructure projects and private construction projects. In 2017, average cement price and ready-mixed concrete price in the domestic market dropped by Baht 200/ton and Baht 250/cubic meter respectively as compared with the same in 2016.

**Petrochemical and Chemical Business**

In 2016, sales volumes slightly decreased by 2.5% compared with the same in 2015. However, in late 2015, average selling price of plastic products slightly decreased by USD 30 per ton. The selling price of plastic products decreased accordingly to be in line with continuously declining ethylene prices while the variance between the selling price of plastic products and cost of ethylene in 2018 increased by USD50/ton, resulting in the better operating performance of the overall petrochemical and chemical business.

In 2017, the average selling price of plastic products increased, resulting in the better gross profit margin to increase from 7.6% in 2016 to 11,5% in 2017.

**Energy and Utility Business**

In 2016, total revenue increased by 86.7% compared with the same in 2015, which was due to an increase in revenues generated from power plants and RDF power plants of 60 MW. Out of the sales revenues in 2015, revenue generated from power plants, oil and gas stations services represented 82% and 18% respectively.

In 2017, total revenues decreased by 13.1% compared with the same in 2016, which was due to an increase in revenue generated from power plants. Out of the sales revenues in 2017, revenue generated from power plants represented 86%, revenue generated from oil and gas stations services represented 14%.

**Agriculture Business**

In 2016, total sales revenue decreased by 6% compared with the same in 2015 due to a decrease of fertilizers sales volume. The prolonged drought conditions in particular areas in the country in 2015 and weakening prices of agriculture products have lowered the need to use fertilizer as a factor of agricultural production in the country.

In 2017, total sales revenue increased by 28% compared with the same in 2016, driven by a policy to support the use of organic agricultural products from the government sector, as well as weather conditions in particular areas in the country with adequate sources of water further facilitated the agriculture expansion accordingly.

**Summary of Consolidated financial statements of TPI Polene Plc. in 2015, 2016 and 2017**
**Statements of financial position (Consolidated)**

| Statement of Financial Position | Accounting Period ended December 31 | | | | | |
|---|---|---|---|---|---|---|
| | 2015 | | 2016*** | | 2017 | |
| | "000" Baht | Ratio | "000" Baht | Ratio | "000" Baht | Ratio |
| Total current assets | 16,953,174 | 15.75 | 19,549,201 | 21.11 | 24,194,558 | 23.45 |
| Property, plant and equipment | 85,847,611 | 79.75 | 69,833,310 | 75.40 | 76,551,024 | 74.19 |
| Other non-current assets* | 4,844,257 | 4.50 | 3,235,591 | 3.49 | 2,432,053 | 2.36 |
| **Total Assets** | **107,645,042** | **100.00** | **92,618,102** | **100.00** | **103,177,635** | **100.00** |
| Total current liabilities | 1,670,571 | 10.84 | 17,068,947 | 18.43 | 16,216,936 | 15.72 |
| Long-term loans from financial institutions | 6,504,022 | 6.04 | 8,002,058 | 8.64 | 5,039,377 | 4.88 |
| Other non-current liabilities** | 33,504,762 | 31.13 | 30,792,569 | 33.25 | 29,835,188 | 28.92 |
| **Total Liabilities** | **51,679,355** | **48.01** | **55,863,574** | **60.32** | **51,091,501** | **49.52** |
| **Equity** | | | | | | |
| Authorized share capital | 24,815,000 | 23.05 | 24,815,000 | 26.79 | 24,815,000 | 24.05 |
| Issued and paid-up share capital | 20,190,000 | 18.76 | 20,190,000 | 21.80 | 20,190,000 | 19.57 |
| Treasury shares held by subsidiaries | (359,235) | (0.33) | (359,235) | (0.39) | (359,235) | (0.35) |
| Shares premium | 60,600 | 0.06 | 60,600 | 0.07 | 60,600 | 0.06 |
| Other surpluses (deficits) | - | - | 52,943 | 0.06 | 9,840,436 | 9.54 |
| Retained earnings | 16,527,855 | 15.35 | 16,693,810 | 18.02 | 15,036,655 | 14.57 |
| Other components of equity | 19,538,392 | 18.15 | 110,412 | 0.12 | 114,160 | 0.11 |
| Non-controlling interests | 8,075 | 0.01 | 5,998 | 0.01 | 7,203,518 | 6.98 |
| **Total Equity** | **55,965,687** | **51.99** | **36,754,528** | **39.68** | **52,086,134** | **50.48** |
| **Total Liabilities and Equity** | **107,645,042** | **100.00** | **92,618,102** | **100.00** | **103,177,635** | **100.00** |

Remarks: * Other non-current assets comprise investments in associates and joint venture, Long-term investments in related parties, Other long-term investments, investment properties, land leasehold rights, intangible assets, advances payment for plant and equipment, deferred tax assets and other non-current assets.

** Other non-current liabilities comprise debentures, financial lease liabilities, deferred tax liabilities, non-current provisions for employee benefit and other non-current liabilities.

*** Consolidated Financial Statements (Restated)

## Statements of comprehensive income (Consolidated)

| Statement of Comprehensive Income | Accounting Period ended December 31 | | | | | |
|---|---|---|---|---|---|---|
| | 2015* | | 2016*** | | 2017 | |
| | "000" Baht | Ratio | "000" Baht | Ratio | "000" Baht | Ratio |
| **Income** | | | | | | |
| - Revenue from sales of goods | 27,135,163 | 100.00 | 29,128,215 | 100.00 | 29,088,352 | 100.00 |
| - Delivery income | 1,245,348 | 4.59 | 1,264,643 | 4.34 | 1,254,582 | 4.31 |
| - Gain on bargain purchase | 0 | 0.00 | 434,990 | 1.49 | 0 | 0.00 |
| - Net foreign exchange rate | 106,504 | 0.39 | 287,989 | 0.99 | 162,604 | 0.56 |
| - Other income | 760,155 | 2.80 | 376,597 | 1.29 | 490,186 | 1.69 |
| **Total income** | **29,247,170** | **107.78** | **31,492,434** | **108.12** | **30,995,724** | **106.56** |
| **Expenses** | | | | | | |
| - Cost of sales of goods | 22,894,808 | 84.37 | 24,315,714 | 83.48 | 24,495,256 | 84.21 |
| - Distribution costs | 3,680,025 | 13.56 | 3,691,808 | 12.67 | 4,032,725 | 13.86 |
| - Administrative expenses | 1,400,723 | 5.16 | 1,671,869 | 5.74 | 1,777,383 | 6.11 |
| - Finance costs | 1,018,145 | 3.75 | 1,649,248 | 5.66 | 1,647,192 | 5.66 |
| - Net foreign exchange loss | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| **Total expenses** | **28,993,701** | **106.85** | **31,328,639** | **107.55** | **31,952,556** | **109.85** |
| Share of profit of investment in associates and joint venture | 42,766 | 0.16 | 48,121 | 0.17 | 19,742 | 0.07 |
| **Profit (Loss) before income tax expense** | **296,235** | **1.09** | **211,916** | **0.73** | **(937,090)** | **(3.22)** |
| Income tax (expense) benefit | 67,608 | 0.25 | 302,961 | 1.04 | 240,723 | 0.83 |
| **Profit (Loss) for the year** | **363,843** | **1.34** | **514,877** | **1.77** | **(696,367)** | **(2.39)** |
| Total Comprehensive gain (loss) for the year | (1,411,571) | (5.20) | 546,349 | 1.88 | (690,671) | (2.37) |
| Profit (Loss) from operation *** | 136,849 | 0.50 | (511,063) | (1.75) | (1,099,694) | (3.78) |

Remark: * Consolidated Financial Statements (Before restated)
** Consolidated Financial Statements (Restated)
*** Profit from operation not including net foreign exchange gain/loss, gain on bargain purchase, income tax and tax expenses

## Revenues from sales-outside customers

| | 2015 ("000" Baht) | % | 2016 ("000" Baht) | % | 2017 ("000" Baht) | % |
|---|---|---|---|---|---|---|
| Construction | 18,237,937 | 67.21 | 18,556,750 | 63.71 | 18,077,561 | 62.15 |
| Petrochemical and Chemical | 6,803,148 | 25.07 | 6,759,341 | 23.21 | 6,684,190 | 22.98 |
| Energy and Utilities | 1,989,637 | 7.33 | 3,714,303 | 12.75 | 4,201,598 | 14.44 |
| Agriculture | 104,441 | 0.38 | 97,821 | 0.34 | 125,003 | 0.43 |
| Total | **27,135,163** | **100.00** | **29,128,215** | **100.00** | **29,088,352** | **100.00** |

## Statement of cash flow (Consolidated)

| | Accounting Period ended December 31 | | |
|---|---|---|---|
| | 2015 ("000" Baht) | 2016* ("000" Baht) | 2017 ("000" Baht) |
| **Net cash from operating activities** | **1,155,129** | **1,932,197** | **1,955,085** |
| **Net cash used in investing activities** | **(8,388,661)** | **(7,961,662)** | **(11,055,289)** |
| **Net cash from financing activities** | **8,150,856** | **7,058,570** | **8,532,808** |
| Net increase (decrease) in cash and cash equivalents before effect of exchange rates and changes in holding of investment in subsidiary | 917,324 | 1,029,105 | (567,396) |
| Effect of exchange rate changes on balances held in foreign currencies | 14,564 | (13,129) | 20,781 |
| Cash and cash equivalents from changes in holding of investment in subsidiaries | 1,141 | 754,441 | 0 |
| **Net increase in cash and cash equivalents** | **933,029** | **1,770,417** | **(546,615)** |
| Cash and cash equivalents at 1 January | 762,149 | 1,695,178 | 3,465,595 |
| **Cash and cash equivalents at December 31** | **1,695,178** | **3,465,595** | **2,918,980** |

Remark: * Consolidated Financial Statements (Restated)

## Key Financial Ratio

| Financial Ratio | Accounting Period ended December 31 | | |
|---|---|---|---|
| | 2015[2] | 2016[3] | 2017 |
| **Liquidity Ratio** | | | |
| 1.Current Ratio (times) | 1.45 | 1.15 | 1.49 |
| 2.Quick Ratio (times) | 0.43 | 0.39 | 0.61 |
| 3.Cash Ratio (times) | 0.10 | 0.13 | 0.12 |
| 4.Receivable Turnover (times) | 10.21 | 10.08 | 9.17 |
| 5.Collection Period (days) | 35.25 | 35.72 | 39.24 |
| 6.Inventory Turnover Period (times) | 2.26 | 2.14 | 1.97 |
| 7.Inventory Turnover (days) | 159.10 | 167.99 | 182.66 |
| 8.Account Payable Turnover (times) | 8.64 | 10.26 | 9.73 |
| 9.Payment Period (days) | 41.68 | 35.08 | 36.98 |
| 10.Cash Cycle (days) | 152.67 | 168.64 | 184.92 |
| **Profitability Ratio** | | | |
| 11.Gross Profit Margin (%) | 15.63 | 16.52 | 15.79 |
| 12.Operating Profit Margin (%) | 7.79 | 6.24 | 4.87 |
| 13.Other Profit Margin (%) | (0.52) | (1.75) | (3.21) |
| 14.Cash to Net Profit Ratio (times) | 0.46 | 0.61 | 0.74 |
| 15.Net Margin (%) | 1.24 | 1.63 | (2.25) |
| 16.Return on Equity (%) | 0.64 | 1.11 | (1.57) |
| **Efficiency Ratio** | | | |
| 17.Return on Assets (%) | 0.35 | 0.51 | (0.71) |
| 18.Return on Fixed Assets (%) | 2.96 | 3.84 | 2.63 |
| 19.Assets Turnover (times) | 0.28 | 0.31 | 0.32 |
| **Financial Policy Ratio** | | | |
| 20.Debt to Equity Ratio (times) | 0.92 | 1.52 | 0.98 |
| 21.Financial Debt to Equity Ratio (times) [4] | 0.67 | 1.27 | 0.79 |
| 22.Interest Coverage Ratio (times) [5] | 2.09 | 2.31 | 1.94 |
| 23.Debt Service Coverage Ratio (times) [5] | 1.23 | 1.68 | 1.31 |
| 24.Dividend Payout Ratio (%) [1] | N/A | 29.85 | N/A |
| **Per Share** | | | |
| 25.Book Value per Share (Baht) | 2.80 | 1.84 | 2.61 [6] |
| 26.Net Profit per Share (Baht) | 0.018 | 0.026 | (0.063) |
| 27.Dividend per Share (Baht) | 0.020 | 0.020 | 0.020 |
| **Growth Rate** | | | |
| 28.Total Assets (%) | 7.72 | (13.96) | 11.40 |
| 29.Total Liabilities (%) | 22.62 | 8.10 | (8.54) |
| 30.Sales (%) | (4.81) | 7.34 | (0.14) |
| 31.Operating Expenses (%) | 0.52 | 5.57 | 8.32 |
| 32.Net Profit (%) | (73.32) | 41.51 | (235.25) |

Remarks:
1. Based on Separate Financial Statements.
2. Consolidated Financial Statements (Before restated)
   From 1 January 2017, the Group has changed the accounting policy in regarding measurement of property, plant and equipment from the revaluation model to cost model in accordance with TAS16 (revised 2016) property, plant and equipment. Management believes that the change in accounting policy enables the Group to apply the accounting policies in line with other companies in the same industry, resulting in comparable financial information.
   The changes have been applied retrospectively (restated) in the financial statements for the year 2015 amd 2016 respectively whist the changes of which have been applied retrospecttively in the profit and loss statements, resulting in comparable financial information (restated) only for the year 2016. (additional information as stated in the attachment 5 in the finacial statements for the fiscal year ended December 31, 2016 (Note to the financial statements regarding the change in accounting policy)
3. Consolidated Financial Statements (Restated)
4. Financial ratio as per the terms and condition stipulated in the loan agreements shall not be exceeding 1.5:1
5. Cash basis
   Interest coverage ratio = Cash from (used in) operating activities (before change in current assets and current liabilities) divided by finance cost paid from cash flow from financing activities.
   Debt service coverage ratio is calculated based on formula of Financial Covenants stipulated in Financial Agreements of the Company with commercial bank creditors, which is as follows:-
   = Cash from (used in) operating activities (before change in current assets and current liabilities) divided by repayment of long-term loan + finance lease payments + finance cost paid from cash flow from financing activities
6. Number of 5,899,999,300 shares of TPIPP, held by TPI Polene not yet mark to market. The above share price was realized at the par value of Baht 1 per share.

# INTER-COMPANY TRANSACTIONS

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

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

As of December 31, 2017, the Company and its subsidiaries 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 6 of the consolidated financial statements as at December 31, 2017, which can be summarized as follows:

| Company (Description of relationship) | Description of transaction | Baht million | Necessity and reasonablenes |
|---|---|---|---|
| 1. Pornchai Enterprise Co.,Ltd. (There are some common Directors.) | The Company and its subsidiaries advanced funds for infrastructure expenses to obtain good terms and conditions to Pornchai Enterprise for a 90-year lease period. | 175.045 | Such agreements are regarded as special reciprocal agreements because the advance rent is considered to be a financial support to Pornchai Enterprise for the construction of the building and to ensure that the Company and its subsidiaries pay the total rental expense below that in the market and at the fixed rate for 90-year lease period, free from inflation rate reflection. In addition, the location is suitable for office building in Bangkok Metropolitan and the number of employees. Such agreements are regarded as special reciprocal agreement. |
| | The Company pays rental advance to Pornchai Enterprise for 3-year lease period. | 0.35 | Transactions are undertaken to accommodate the necessity to use office buildings of the Company. Therefore, the transaction is to support business operations under the same conditions as other tenants. The rental deposit and service fee are paid as the guarantee pursuant to Rental and Service Agreement. |
| | The Company pays rental and service fee as the deposit to Pornchai Enterprise Co., Ltd. | 14.611 | |
| | The Company and its subsidiaries pay rental fee to Pornchai Enterprise Co., Ltd. | 40.145 | |
| 2. United Grain Industry Co., Ltd. (“UGI”) (There are some common Directors.) | The Company and its subsidiaries pay UGI for cement bags. | 11.843 | Transactions are always undertaken at market rates to support normal business operations of the Company. |
| | Accounts Payable | 1.419 | |
| 3. Thai Plastic Film Co.,Ltd. (There are some common Directors.) | The Company sells plastic resin to Thai Plastic Film Co., Ltd. | 0 | Transactions are always undertaken at market rates to support normal business operations of the Company. |
| | The Company hires Thai Plastic Film Co., Ltd. to produce cement bags at the rate of Baht 2.00 to 2.60 per bag. (This rate includes labor cost, rental charges, electricity and other related expenses) | 105.891 | |
| | The Company and its subsidiaries pay Thai Plastic Film Co., Ltd. for cement bags. | 207.752 | |
| | Accounts Payable | 65.382 | |
| 4. Thai Plastic Product Co.,Ltd. (There are some common Directors.) | The Company and its subsidiaries purchases cement bags for export from Thai Plastic Product. | 413.289 | Transactions are always undertaken at market rates to support normal business operations of the Company. |
| | Accounts Payable | 97.695 | |
| | The Company Sells plastic resin to Thai Plastic Product Co.,Ltd. | 24.143 | |
| 5.Bangkok Union Insurance Plc. (BUI) (There are some common Directors.) | The Company and its subsidiaries pay insurance premium to BUI. | 165.167 | Transactions are always undertaken market rates to support normal business operations of the Company. |
| 6. Bangkok Union Life Insurance Plc. (There are some common Directors.) | The Company pays life insurance premium to Bangkok Union Life Insurance Plc. | 19.401 | Transactions are always undertaken at market rates to support normal business operations of the Company. |

### Procedures to approve Related Transactions

Since the Company is a listed company, its practices regarding related transactions are conducted according to the rules and regulations of the SET and the SEC. The Company is highly aware of the sensitivity of this issue and closely monitors any situation in which a potential related transaction could occur. The above inter-company transactions were subject to the normal terms and conditions of business to reflect applicable market prices. Directors of the Company who are not deemed to be connected parties to such transactions are responsible for making decisions in regard to the said connected transactions.

The process for approval of connected transactions will be carried out under the standards of integrity, and be reviewed by the Audit Committee to be in the best interests of the Company and its shareholders. This complies with SEC and SET regulations. The Company will disclose types and values of transactions that might present conflicts of interest accurately and completely. For any transactions that are considered to have potential conflicts of interest, market prices will be used as criteria to consider those transactions.

### Potential Future Related Transactions

The Company expects to continue its business transactions with subsidiaries, the Joint Venture Company, affiliated companies, and related companies in the normal course of its business. Inter-company transactions are subject to normal terms and there is no conflict of interest. The Company adheres to practices for the above transactions that comply with the SET regulations, and regulations of other relevant governmental authorities, with regard to the reasonableness of the conditions and fair prices.

# Risk Factors

TPI Group has constantly managed risks to be at controllable and acceptable levels. The Company has already implemented a management information system ("MIS"), which covers various areas of management to identify different aspects of risk, in order to ensure that each operation unit operates so as to achieve its targets. Risk management can be classified as follows:

**Risks associated with potential foreign currency exchange rate fluctuations**

As at December 31, 2017, the Company's major long-term loans are mainly denominated in Baht currencies, representing 85% while the remaining long-term borrowing is denominated in Euro and USD currency accounting for 13% and 2% respectively. Therefore, the Company has impact from risks associated with the exchange rate fluctuation to some extent.

The Company also has debt liability in the form of working capital, a significant amount of which is denominated in USD currency while part of it is denominated in Euro currency. However, most of the Company's income is generated in US dollars, which is higher than the payment of expenses in foreign currencies (in both US dollars and Euro based). The Company has a policy to mitigate foreign exchange risk through natural hedging by balancing its foreign currency revenues and expenses. These measures will partly protect the company against currency fluctuations, by balancing its cash flow in foreign currencies, revenue and expenses structure. The Company can use a number of financial mechanisms against risk caused by fluctuation in currency exchange rates by exporting products for payment in US dollars and maintaining a US dollar deposit account for repayment of principal and interest to creditors, to mitigate foreign exchange risk through natural hedging.

In addition, the Company has also applied the policy to mitigate risk associated with foreign exchange to use financial instruments, which is apt for hedging to enter into a forward exchange contract and /or cross currency swap, as considered appropriate; to hedge its foreign exchange exposure, and will closely monitors potential adverse currency movements, by balancing the income generated in US dollars and the payment of expenses in foreign currencies.

**Risk associated with potential coal price fluctuations**

Coal is a principle source of kiln fuel in the manufacture of cement. Coal price fluctuation depends on supply from major exporters in Australia and Indonesia. In case that demand for coal from major importers of coal in China increases, coal prices will be adjusted upward. Therefore, the Company's fundamental approach to managing coal price fluctuation risk is to identify extensive supply sources for coal, and establish import sales contracts throughout the entire year, with an appropriate allocation of short-term and long-term contracts, in order to efficiently manage cement production costs.

**Risk associated with credit provision**

To mitigate credit risk stemming from debtors' potential failure to comply with their contracts, the Company has the policy to conduct business transactions with reliable trade partners by selling cement products based on cash and credit terms. Usually customers are required to give collateral in the form of a letter guarantee or bank guarantee in return for customer credit lines. A Credit Committee has been appointed to consider proper criteria for offering credit lines to customers and to develop a monitoring process for cash collection from customers.

As at December 31, 2017 and December 31, 2016, Allowance for Doubtful Debt percentage to Total Account Receivable of the Company was 4.04 % and 3,83%, respectively.

**Risk associated with Product Price's fluctuation**

The Company's plastic resins' price fluctuation has a direct impact on the business profitability of the group. However, the Company manufactures and sells a variety of products. Thus, cement products are regarded as a typically fundamental consumer item in that its price fluctuation depends on the health of the nation's economy. Revenue receipts from cement sales balances with the revenues from export sales of plastic resins while commodity's global price rise will drive coal prices to increase accordingly. All in all, cement production costs will be higher. Nonetheless, all these factors will also impact a plastic resin price hike, leading to an increase in plastic resins price and its higher revenues. These measures will partly protect the company against price fluctuations, by balancing revenue structure and net revenue earned by TPI Polene Group.

# Financial Structure

### Ordinary Share

As of December 31, 2017, the registered capital of the company is Baht 24,815 million consisting of 24,815,000,000 ordinary shares, at the par value of Baht 1 each. Paid-up capital is Baht 20,190 million consisting of 20,190,000,000 ordinary shares, at the par value of Baht 1 each.

### Debentures

As of December 31, 2017, the Company issued unsubordinated/unsecured onshore Debentures, in registered form with debenture holders' representatives. Details of Debenture are summarized as follows:

| Debenture Series | Total Amount (Baht) | Interest rate (%) | Term and redemption period | Credit Rating | Rating Outlook |
|---|---|---|---|---|---|
| TPIPL187A | 2,000,000,000 | 5.30% p.a | 4.5 Years, mature in 2018 | BBB+ | Stable |
| TPIPL191A | 3,000,000,000 | 4.85% p.a | 4 Years, mature in 2019 | BBB+ | Stable |
| TPIPL201A | 3,000,000,000 | 5.20% p.a | 5 Years, mature in 2020 | BBB+ | Stable |
| TPIPL188A | 3,000,000,000 | 4.10 % p.a | 3 Years, mature in 2018 | BBB+ | Stable |
| TPIPL198A | 2,750,000,000 | 4.40 % p.a | 4 Years, mature in 2019 | BBB+ | Stable |
| TPIPL208A | 2,205,000,000 | 4.65 % p.a | 5 Years, mature in 2020 | BBB+ | Stable |
| TPIPL218A | 3,600,000,000 | 4.90 % p.a | 6 Years, mature in 2021 | BBB+ | Stable |
| TPIPL228A | 4,000,000,000 | 5.20 % p.a | 7 Years, mature in 2022 | BBB+ | Stable |
| TPIPL214A | 1,600,000,000 | 4.35 % p.a | 5 Years, mature in 2021 | BBB+ | Stable |
| TPIPL224A | 1,200,000,000 | 4.60 % p.a | 6 Years, mature in 2022 | BBB+ | Stable |
| TPIPL234A | 2,645,000,000 | 4.80 % p.a | 7 Years, mature in 2023 | BBB+ | Stable |
| TPIPL197A | 2,000,000,000 | 3.20 % p.a | 2 Years, mature in 2019 | BBB+ | Stable |
| TPIPL207A | 2,000,000,000 | 3.50 % p.a | 3 Years, mature in 2020 | BBB+ | Stable |
| Total | 33,000,000,000 | | | | |

### Short term loan in form of bill of exchange

As at February 28, 2018, the Company's outstanding debt in the form of Bill of Exchange was Baht 1,323 million.

Top 10 major shareholders as at December 29, 2017

# Shareholding Structure

| Shareholders | Number of Shares | Shareholding (%) |
|---|---|---|
| 1. Leophairatana Enterprises Co., Ltd. 1/ | 4,308,595,450 | 21.34 |
| 2. Thai Petrochemical Industry Co., Ltd. 1/ | 2,774,698,160 | 13.74 |
| 3. Mr. Nares Ngamapichon | 1,285,000,000 | 6.36 |
| 4. Mrs. Orapin Leophairatana | 867,346,240 | 4.29 |
| 5. Mr. Prayad Liewphaitana | 867,122,740 | 4.29 |
| 6. Mr. Pakorn Leophairatana | 862,745,810 | 4.27 |
| 7. Dr. Pramuan Leophairatana | 808,900,000 | 4.00 |
| 8. Bangkok Bank Public Company Limited | 657,693,240 | 3.25 |
| 9. Miss Pattrapan Leophairut | 629,077,220 | 3.11 |
| 10. Mrs. Worapan Jungsubpaisan | 206,000,000 | 1.02 |

*Note: 1/ Majority shares held by the Leophairatana family*

# Dividend Payment Policy

The dividend payout policy of the Company is subject to the operational results of single financial statements of the Company. Dividend payment will be paid to shareholders by taking into consideration other factors such as liquidity, cash flow and financial status of the Company. Such dividend payments shall be subject to the shareholders' approval or the Board of the Directors' approval.

In addition, the Board of Directors of the Company may from time to time approve the payment of interim dividends to shareholders, where it is justified by the profits of the Company. After the payment of dividends, the transaction shall be reported to shareholders at the next meeting.

| Separate Financial Statement | 2015* | 2016** | 2017 |
|---|---|---|---|
| Net Profit per share (Baht) | (0.019) | 0.067 | (0.005) |
| Dividend per share (Baht) | 0.02 | 0.02 | 0.02*** |
| Par Value per Share (Baht) | 1.00 | 1.00 | 1.00 |
| Dividend Payout Ratio (%) | N/A | 29.85 | N/A |

Remark : * Separate Financial Statements (Before restated)

** Separate Financial Statements (Restated)

*** At the Company's Board of Directors' meeting no. 2/2561, held on March 1, 2018, it passed a resolution to approve the dividend payment. However, the right of shareholders to receive the above dividend is still uncertain until it is approved at the 2018 Ordinary Shareholders' Meet, which will be held on April 25, 2018.

# The Management

**Management Structure**

As at March 2, 2018, the management structure of the Company consists of three Executive Committees: the Board of Directors, the Executive Management Committee and the Audit Committee. The Board of Directors of the Company had a total of 15 directors, consisting of 7 independent directors, which exceeds one third of the total number of directors, details of which are as follows:

**The Board of Directors** as at March 2, 2018

| Name | Position |
|---|---|
| 1. Mr. Visith Noiphan | Chairman and Independent Director |
| 2. Mr. Prachai Leophairatana | Director |
| 3. Mr. Prateep Leopairut | Director |
| 4. Dr. Pramuan Leophairatana | Director |
| 5. Dr. Narasri Vaivanijkul | Independent Director and Chairman of the Audit Committee |
| 6. Dr. Chavin Iamsopana | Director |
| 7. Mr. Prayad Liewphairatana | Director |
| 8. Mrs. Orapin Leophairatana | Director |
| 9. Mr. Manas Sooksmarn | Independent Director and Audit Committee |
| 10. Mr. Pisej Iamsakulrat * | Independent Director and Audit Committee |
| 11. Mr. Thavich Taychanavakul * | Independent Director and Audit Committee |
| 12. Mr. Tayuth Sriyuksiri | Director |
| 13. Mr. Khantachai Vichakkhana | Independent Director |
| 14. Mr. Chulasingh Vasantasingh | Independent Director |
| 15. Miss Malinee Leophairatana | Director |

Remarks: * At the Company's Board of Directors ùmeeting on March 1, 2018, it passed resolutions to approve an appointment of Mr. Pisej Iamsakulrat to be in the position of Independent Director and Audit Committee and Mr. Thavich Taychanavakul to be in the position of Audit Committee. In this regard, Pol. Gen. Charnchit Bhiraleus, who was the Companyûs Director, passed away on December 4, 2017. Therefore, his name was no longer in the list of the Board of Directors on March2, 2017. Mr. Nitisit Jongphitakratana is the Corporate Secretary.

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

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 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.

**The Executive Management Committee** as at March 2, 2018

| Name | Position |
|---|---|
| 1. Mr. Prachai Leophairatana | Chairman of Executive Management Committee |
| 2. Mr. Prateep Leopairut | Executive Director |
| 3. Dr. Pramuan Leophairatana | Executive Director |
| 4. Mr. Prayad Liewphairatana | Executive Director |
| 5. Mrs. Orapin Leophairatana | Executive Director |
| 6. Dr. Chavin Iamsopana | Executive Director |
| 7. Mr. Tayuth Sriyuksiri | Executive Director |

Seven Directors are authorized to sign on behalf of the Company. Two of the seven directors must jointly sign, together with the affixation of the official company stamp.

**Functions and Responsibilities of the Executive Management Committee**

1. To govern and determine the operational strategy of the business, in compliance with the policy of the Board of Directors.
2. To monitor operational results of each department.
3. To select and nominate top management of the Company.
4. To nominate and remove officers of the Company, and to determine their rewards.
5. To perform their duties in relation to the general administration of the Company

**The Audit Committee** as at March 2, 2018

| Name | Position |
|---|---|
| 1. Dr. Narasri Vaivanijkul | Chairman of the Audit Committee* |
| 2. Mr. Manas Sooksmarn | Audit Committee |
| 3. Mr. Pisej Iamsakulrat ** | Audit Committee |
| 4. Mr. Thavich Taychanavakul ** | Audit Committee |

Remarks: * Possess background and experience in auditing of financial statements.

** At the Company's Board of Directors'meeting on March 1, 2018, it passed resolutions to approve an appointment of Mr. Pisej Iamsakulrat to be in the position of Independent Director and Audit Committee and Mr. Thavich Taychanavakul to be in the position of Audit Committee. In this regard, Pol. Gen. Charnchit Bhiraleus, who was the Company's Director, passed away on December 4, 2017. Therefore, his name was no longer in the list of the Board of Directors on March2, 2017. Mr. Nitisit Jongphitakratana is the Corporate Secretary.

**Functions and Responsibilities of the Audit Committee**

1. To control and monitor the Company's financial reports to ensure that they are complete, adequate and reliable.
2. To monitor the auditing process and internal control systems of the Company to ensure that they are appropriate and efficient.
3. To select and propose the appointment of the statutory auditor of the Company.
4. To supervise and ensure that the Company acts in compliance with the regulations imposed by the SET and the SEC and related governing laws.
5. To consider the disclosure of information regarding connected transactions or transactions that might have conflicts of interest, to ensure it is accurate and complete.
6. To prepare the Audit Committee Report as disclosed in the Company's Annual Report to be in compliance with the provisions imposed by the SET and the SEC.
7. To perform any other tasks that may be stipulated in the Articles of Association of the Company.
8. To perform any other tasks that may be delegated by the Board of Directors.

**The Management** as at March 2, 2018

| Name | Position |
|---|---|
| 1. Mr. Prachai Leophairatana | Chief Executive Officer |
| 2. Mr. Prateep Leopairut | President |
| 3. Dr. Pramuan Leophairatana | President |
| 4. Mr. Prayad Liewphairatana | President |
| 5. Mrs. Orapin Leophairatana | Senior Executive Vice President |
| 6. Mr. Prasert Ittimakin | Senior Vice President - Accounting and Finance Division |
| 7. Miss Chularat Danwattanachai | Vice President - Accounting and Finance Division |
| 8. Mr. Anugoon Piyapakorn | Vice President - Accounting Department |
| 9. Mr. Pongsak Yiengsakun | Vice President - Finance Department |

**Functions and Responsibilities of the Chief Executive Officer**

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 budgets as approved by the Board of Directors.

**Business relationships or professional service relationships between independent directors and the Company, or the parent company, or its affiliates, or subsidiary companies, or associated companies, or juristic persons within the Company, that may impose conflicts of interest in an amount exceeding the restricted amount under the notification of the SEC regarding permission and approval of new shares issuance (if any), as well as the resolution and opinion of the Board of Directors approval (if any).**

**Selection of the Directors and the Management**

The Board of Directors of the Company is responsible for the selection of Directors and Management of the Company. Selection of Directors takes into consideration their background, knowledge, experience in related fields of business, ethical behavior, standards of integrity, independence, courage in giving opinions, responsible discharge of duties, precision and honesty, and consistent attendance at all Board meetings. Their resumes and their ethical behavior are taken into consideration as well as other appropriate qualifications deemed beneficial to the Company. We also consider other factors that may impose conflicts of interest.

Selection of the directors to replace those retiring by rotation is under the criteria of the Office of Securities and Exchange Commission and the Stock Exchange of Thailand.

Selection of Management takes into consideration their background, knowledge, abilities, professional skills, and experience deemed beneficial to the Company. Management selection is in compliance with recruitment procedures of the Company.

Criteria for selection of the Independent Directors are as follows:

1. Under the criteria of the Office of Securities and Exchange Commission and the Stock Exchange of Thailand, Independent Directors:
   - 1.1 Are restricted in the number of shares they may hold to not greater than 1% of the voting shares in the Company, its affiliates, its associated companies, or its juristic persons that may impose conflicts of interest (implicitly including related persons as stated in Section 258 of the SEC's Act B.E. 2535.)
   - 1.2 Have no management participation in the Company, its affiliates, or its associated companies; and are not employees or regularly paid consultants, or persons who have control over the Company, its affiliates, or its associated companies or its juristic persons that may impose conflicts of interest.
   - 1.3 Have no business relationship with the Company, its affiliates, or its associated companies; and do not have any loss or gain, directly or indirectly, in the finance or management of the Company, its affiliates, or its associated companies; or its juristic persons that may impose conflicts of interest.

1.4 Have no close relatives, or persons related in a way that may lead to a lack of independence from the management or major shareholders of the Company, its affiliates, or its associated companies, or its juristic persons that may impose conflicts of interest; nor may they be appointed to protect the interest of any director or major shareholders.

1.5 Maintain consistent attendance at all board meetings, and follow and monitor the business performance and operations of the Company.

2. Independent Directors must be capable, talented and knowledgeable, with backgrounds and experience deemed beneficial to the Company; such as backgrounds in engineering, accounting, finance etc.

3. Independent Directors must detail their qualifications and perform their duties with great care and loyalty in the best interest of the shareholders, without conflict of interest with/for their own businesses or former businesses, or related parties.

**Remuneration of the Directors and the management**

1. Remuneration in monetary terms

1.1 Remuneration of the Directors

In 2017, remuneration awarded to the Company's 16 directors in the form of meeting allowances and bonuses was Baht 27,680,661 compared to Baht 29,750,176 in 2016 for 17 directors. Details of remuneration in 2017 are as follows:

*Unit: Baht*

| No. | Name | Position | Meeting allowances | Bonus | Total |
|---|---|---|---|---|---|
| 1. | Mr. Visith Noiphan | Chairman | 1,604,676 | 133,723 | 1,738,399 |
| 2. | Mr. Prachai Leophairatana | Director | 1,604,676 | 133,723 | 1,738,399 |
| 3. | Mr. Prateep Leopairut | Director | 1,604,676 | 133,723 | 1,738,399 |
| 4. | Dr. Pramuan Leophairatana | Director | 1,604,676 | 133,723 | 1,738,399 |
| 5. | Dr. Narasri Vaivanijkul | Director | 1,604,676 | 133,723 | 1,738,399 |
| 6. | Dr. Chavin Iamsopana | Director | 1,604,676 | 133,723 | 1,738,399 |
| 7. | Mr. Prayad Liewphairatana | Director | 1,604,676 | 133,723 | 1,738,399 |
| 8. | Mrs. Orapin Leophairatana | Director | 1,604,676 | 133,723 | 1,738,399 |
| 9. | Mr. Manas Sooksmarn | Director | 1,604,676 | 133,723 | 1,738,399 |
| 10. | Pol. Gen. Charnchit Bhiraleus * | Director | 1,470,953 | 133,723 | 1,604,676 |
| 11. | Mr. Pisej Iamsakulrat | Director | 1,604,676 | 133,723 | 1,738,399 |
| 12. | Mr. Tayuth Sriyuksiri | Director | 1,604,676 | 133,723 | 1,738,399 |
| 13. | Mr.Thavich Taychanakul | Director | 1,604,676 | 133,723 | 1,738,399 |
| 14. | Mr. Khantachai Vichakkhana | Director | 1,604,676 | 133,723 | 1,738,399 |
| 15. | Mr. Chulasingh Vasantasingh | Director | 1,604,676 | 133,723 | 1,738,399 |
| 16. | Miss Malinee Leophairatana | Director | 1,604,676 | 133,723 | 1,738,399 |
| | Total | | 25,541,093 | 2,139,568 | 27,680,661 |

Remarks: * Pol. Gen. Charnchit Bhiraleus, a Director of the Company, passed away on December 4, 2017. Therefore, the director fee has been paid until November 2017.

1.2 Remuneration of Management

In 2017, remuneration awarded to the Company's 5 Executives including salaries and bonuses was Baht 236,886,000 compared to Baht 254,046,400 for total of 5 persons in 2016.

2. Other remuneration

Other remuneration to the Management includes company cars for each position.

**Audit Fees**

**1. The Company and its subsidiaries paid audit fees for 2017 to:**

1.1 The statutory auditor of the Company for the financial year ended 2017 in the amount of Baht -0-

1.2 The office of the statutory auditor of the Company, or other persons or related enterprises relating to the statutory auditor of the Company for year 2017 in the amount of Baht 10,895,000.

**2. Non-Audit Fees**

TPI Polene and its subsidiaries paid a fee to KPMG Phoomchai Audit 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 2017 for a total of Baht 240,000.

**Company shares held by the Directors and the Management (including couple marriage and their offspring) as at December 29, 2017**

| Name | Shareholding As at December 29, 2017 (shares) | Shareholding As at December 26, 2016 (shares) | Change (shares) |
|---|---|---|---|
| 1. Mr. Visith Noiphan | - | - | - |
| 2. Mr. Prachai Leophairatana | 867,446,240 | 867,446,240 | - |
| 3. Mr. Prateep Leopairut | 2,040,000 | 2,040,000 | - |
| 4. Dr. Pramuan Leophairatana | 809,000,000 | 809,000,000 | - |
| 5. Dr. Narasri Vaivanijkul | - | - | - |
| 6. Dr. Chavin Iamsopana | 21,910,000 | 21,910,000 | - |
| 7. Mr. Prayad Liewphairatana | 883,217,140 | 883,217,140 | - |
| 8. Mrs. Orapin Leophairatana* | * | * | * |
| 9.Mr. Manas Sooksmarn | - | - | - |
| 10. Mr. Pisej Iamsakulrat | 8,128,400 | 8,128,400 | - |
| 11. Mr. Thavich Taychanavakul | 1,091,180 | 1,091,180 | - |
| 12. Mr. Tayuth Sriyuksiri | 94,425,890 | 91,425,890 | 3,000,000 |
| 13. Mr. Khantachai Vichakkhana | 27,760 | 27,760 | - |
| 14. Mr. Chulasingh Vasantasingh | 50,000 | 50,000 | - |
| 15. Miss Malinee Leophairatana | 8,143,080 | 8,143,080 | - |
| 16. Mr. Prasert Ittimakin | 10,480 | 10,480 | - |
| 17. Miss Chularat Danwattanachai | - | - | - |
| 18. Mr. Anugoon Piyapakorn | - | - | - |
| 19. Mr. Pongsak Yiengsakun | - | - | - |

Note: * Included in shareholding changes of Mr.Prachai Leophairatana to comply with the provisions contained in the SEC Act, article 258.

**Positions of the Management and Controlling Persons over the Company, its Subsidiaries, the Joint Venture Company, Associated Companies and other related Companies as of 31 December 2017.**

| Name | TPI | Subsidiaries 2/ | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Polene | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 1. Mr.Visith Noiphan | X | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2. Mr.Prachai Leophairatana | // | //x | //x | //x | //x | //x | //x | //x | // | //x | - | //x | //x | - | //x | //x | //x | //x |
| 3. Mr.Prateep Leopairut* | // | // | // | // | // | // | // | // | // | // | - | // | // | - | // | // | // | // |
| 4. Dr.Pramuan Leophairatana | // | // | // | // | // | // | // | // | // | // | //x | // | // | - | // | // | // | // |
| 5. Dr.Narasri Vaivanijkul | / | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 6. Dr.Chavin Iamsopana | // | - | - | - | - | - | - | - | - | - | // | // | - | - | - | - | - | - |
| 7. Mr.Prayad Liewphairatana | // | // | // | // | // | // | // | // | // | // | // | // | // | - | // | // | // | // |
| 8. Mrs.Orapin Leophairatana | // | // | - | // | // | // | // | // | - | // | - | // | // | - | // | // | // | // |
| 9. Mr.Manas Sooksmarn | / | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 10. Mr.Pisej Iamsakulrat | / | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 11. Mr.Thavich Taychanavakul | / | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 12. Mr.Tayuth Sriyuksiri | // | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 13. Mr.Khantachai Vichakkhana | / | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 14. Mr.Chulasingh Vasantasingh | / | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 15. Miss Malinee Leophairatana | / | - | - | / | - | - | - | - | / | - | // | // | // | - | - | - | - | - |

Note: 1. / = Director X = Chairman // = Executive Director
2. / Names of the Companies
* Mr. Prateep Leopairut resigned from the position of the Director of TPI Polene Power Public Limited on February 15, 2017.

| No. | The Subsidiries Company | Status |
|---|---|---|
| 1 | TPI Concrete Co.,Ltd. | Subsidiary company |
| 2 | Thai Propoxide Co.,Ltd. | Subsidiary company |
| 3 | TPI Polene Power Plc. | Subsidiary company |
| 4 | TPI All Seasons Co.,Ltd. | Subsidiary company |
| 5 | Polene Plastic Co.,Ltd. | Subsidiary company |
| 6 | TPI Polene Bio Organics Co.,Ltd. | Subsidiary company |
| 7 | Thai Nitrate Co.,Ltd. | Subsidiary company |
| 8 | Thai Special Steel Plc. | Associated company |
| 9 | Mondo Thai Co.,Ltd. | Subsidiary company |
| 10 | Bangkok Union Life Insurance Public Co.,Ltd. | Associated company |
| 11 | United Grain Industry Co.,Ltd. | Associated company |
| 12 | Pornchai Enterprises Co.,Ltd. | Related company |
| 13 | TPI Commercial Co.,Ltd. | Subsidiary company |
| 14 | TPI Service Co.,Ltd. | Subsidiary company |
| 15 | Zenith International Trading Co.,Ltd. | Subsidiary company |
| 16 | TPI Intertrade Co.,Ltd. | Subsidiary company |
| 17 | TPI Refinery (1997) Co.,Ltd. | Subsidiary company |

**The Board of Directors - TPI Concrete Co., Ltd.** as at December 31, 2017

| | Name | Position |
|---|---|---|
| 1. | Mr. Prachai Leophairatana | Chairman |
| 2. | Mr. Prateep Leopairut | Director |
| 3. | Dr. Pramuan Leophairatana | Director |
| 4. | Mr. Prayad Liewphairatana | Director |
| 5. | Mrs. Orapin Leophairatana | Director |
| 6. | Mr. Panya Tangsingtrong | Director |
| 7. | Ms. Niphond Punyaratabandhu | Director |

**The Board of Directors - TPI Polene Power Plc.** as of December 31, 2017

| | 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. | Mr. Pakorn Leopairut | Director |
| 6. | Miss Pattrapan Leopairut | Director |
| 7. | Mr. Pakkapol Leopairut | Director |
| 8. | Miss. Nitawan Leophairatana | Director |
| 9. | Mr. Manue Leohairoj | Director |
| 10. | Mr. Thiraphong Vikitset | Director |
| 11. | Mr. Apichai Chantarasaen | Director |
| 12. | Mr. Khantachai Vichakkhana | Director |
| 13. | Miss Malinee Leophairatana | Director |
| 14. | Mr. Wanchai Manosutthi | Director |

**The Board of Directors - Polene Plastic Co., Ltd.** as at December 31, 2017

| | Name | Position |
|---|---|---|
| 1. | Mr. Prachai Leophairatana | Chairman |
| 2. | Mr. Prateep Leopairut | Director |
| 3. | Dr. Pramuan Leophairatana | Director |
| 4. | Mr. Prayad Liewphairatana | Director |
| 5. | Mrs. Orapin Leophairatana | Director |
| 6. | Miss Pattrapan Leopairut | Director |
| 7. | Mr. Pakorn Leopairut | Director |
| 8. | Mr. Pakkapol Leopairut | Director |
| 9. | Mr. Thanakorn Liewphairatana | Director |
| 10. | Miss Chutinan Liewphairatana | Director |

**The Board of Directors - TPI Polene Bio Organics Co., Ltd.** as at December 31, 2017

| | Name | Position |
|---|---|---|
| 1. | Mr. Prachai Leophairatana | Chairman |
| 2. | Mr. Prateep Leopairut | Director |
| 3. | Dr. Pramuan Leophairatana | Director |
| 4. | Mr. Prayad Liewphairatana | Director |
| 5. | Mrs. Orapin Leophairatana | 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 |
| 11. | Mr. Thanakorn Liewphairatana | Director |
| 12. | Miss Chutinan Liewphairatana | Director |
| 13. | Mr. Vipot Kotbua | Director |
| 14. | Mr. Pakpoom Thongsorn | Director |

**The Board of Directors - TPI All Seasons Co., Ltd.** as at December 31, 2017

| | Name | Position |
|---|---|---|
| 1. | Mr. Prachai Leophairatana | Chairman |
| 2. | Mr. Prateep Leopairut | Director |
| 3. | Dr. Pramuan Leophairatana | Director |
| 4. | Mr. Prayad Liewphairatana | Director |
| 5. | Mrs. Orapin Leophairatana | Director |
| 6. | Mr. Panya Tangsingtrong | Director |
| 7. | Mr. Pakorn Leopairut | Director |
| 8. | Mrs. Nitawan Leophairatana | Director |

**The Board of Directors - Mondo Thai Co., Ltd.** as at December 31, 2017

| | Name | Position |
|---|---|---|
| 1. | Mr. Prachai Leophairatana | Chairman |
| 2. | Mr. Prateep Leopairut | Director |
| 3. | Dr. Pramuan Leophairatana | Director |
| 4. | Mr. Prayad Liewphairatana | Director |
| 5. | Mrs. Orapin Leophairatana | Director |

**The Board of Directors - TPI Commercial Co., Ltd.** as at December 31, 2017

| | Name | Position |
|---|---|---|
| 1. | Mr. Prachai Leophairatana | Chairman |
| 2. | Miss Pattrapan Leopairut | Director |
| 3. | Mr. Pakkapol Leopairut | Director |
| 4. | Mrs. Achira Chatdarong | Director |
| 5. | Mrs. Nitawan Leophairatana | Director |
| 6. | Mr. Thanakorn Liewphairatana | Director |
| 7. | Miss Chutinan Liewphairatana | Director |
| 8. | Mr. Prasert Ittimakin | Director |
| 9. | Mr. Anugoon Piyapakorn | Director |
| 10. | Mr. Vipot Kotbua | Director |
| 11. | Mr. Pakpoom Thongsorn | Director |
| 12. | Mr. Chairat Kittithorn | Director |

**The Board of Directors - TPI Service Co., Ltd.*** as at December 31, 2017

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

*Remarks: TPI Service Co.,Ltd. (former name Jade Minerals Co.,Ltd.)

**The Board of Directors - Thai Nitrate Co., Ltd.** as at December 31, 2017

| | Name | Position |
|---|---|---|
| 1. | Mr. Prachai Leophairatana | Chairman |
| 2. | Mr. Prateep Leopairut | Director |
| 3. | Dr. Pramuan Leophairatana | Director |
| 4. | Mr. Prayad Liewphairatana | Director |
| 5. | Mrs. Orapin Leophairatana | Director |
| 6. | Mr. Pakorn Leopairut | Director |
| 7. | Mr. Pakkapol Leopairut | Director |

**The Board of Directors - Zenith International Trading Co., Ltd.** as at December 31, 2017

| | Name | Position |
|---|---|---|
| 1. | Mr. Prachai Leophairatana | Chairman |
| 2. | Mr. Prateep Leopairut | Director |
| 3. | Dr. Pramuan Leophairatana | Director |
| 4. | Mr. Prayad Liewphairatana | Director |
| 5. | Mrs. Orapin Leophairatana | 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 |
| 11. | Mr. Thanakorn Liewphairatana | Director |

*Remarks: Zenith International Trading Co., Ltd. (former name TPI Power Co.,Ltd.)

**The Board of Directors - TPI Intertrade Co., Ltd.** as at December 31, 2017

| | Name | Position |
|---|---|---|
| 1. | Mr. Prachai Leophairatana | Chairman |
| 2. | Mr. Prateep Leopairut | Director |
| 3. | Dr. Pramuan Leophairatana | Director |
| 4. | Mr. Prayad Liewphairatana | Director |
| 5. | Mrs. Orapin Leophairatana | Director |
| 6. | Mr. Pakorn Leopairut | Director |
| 7. | Mrs. Nitawan Leophairatana | Director |
| 8. | Mr. Pakkapol Leopairut | Director |

**The Board of Directors - TPI Refinery (1997) Co., Ltd.** as at December 31, 2017

| | Name | Position |
|---|---|---|
| 1. | Mr. Prachai Leophairatana | Chairman |
| 2. | Mr. Prateep Leopairut | Director |
| 3. | Dr. Pramuan Leophairatana | Director |
| 4. | Mr. Prayad Liewphairatana | Director |
| 5. | Mrs. Orapin Leophairatana | Director |
| 6. | Mr. Pakorn Leopairut | Director |
| 7. | Mrs. Nitawan Leophairatana | Director |
| 8. | Mr. Pakkapol Leopairut | Director |

***The Board of Directors - Propoxide Thai Co., Ltd.*** as at December 31, 2017

| | Name | Position |
|---|---|---|
| 1. | Mr. Prachai Leophairatana | Chairman |
| 2. | Mr. Prateep Leopairut | Director |
| 3. | Dr. Pramuan Leophairatana | Director |
| 4. | Mr. Prayad Liewphairatana | Director |
| 5. | Mrs. Orapin Leophairatana | Director |
| 6. | Miss Pattrapan Leopairut | Director |
| 7. | Mr. Pakorn Leopairut | Director |
| 8. | Mr. Pakkapol Leopairut | Director |
| 9. | Mr. Thanakorn Liewphairatana | Director |
| 10. | Miss Chutinan Liewphairatana | Director |

## **Board of Directors** as at December 29, 2017

| NAME/AGE/ FAMILY RELATION AMONG DIRECTORS & EXECUTIVES | EDUCATIONAL BACKGROUND/TRAINING | % SHARE HOLDING* | WORK EXPERIENCE | | |
|---|---|---|---|---|---|
| | | | DURATION | POSITION | COMPANY/ BUSINESS |
| **Mr.Visith Noiphan**<br>84 years of age<br>-no relationship | M.ENG.(Sanitary Engineering)<br>Chulalongkorn University<br><br>B.E. (Civil Engineering)<br>Chulalongkorn University<br><br>Directors Accreditation Program (DAP- No.5/2003)<br>Thai Institute of Directors (IOD)<br><br>Role of the Chairman (RCP) No.20/2008<br>Thai Institute of Directors (IOD)<br><br>Chairman Forum 2/2013<br>Thai Institute of Directors (IOD) | - | 2005-Present | Chairman and Independent Director | TPI Polene Plc. |
| | | | 1982-1984 | Director General of Department of Industrial Works | Ministry of Industry |
| | | | 1984-1986 | Director General of Department of Industrial Promotion | Ministry of Industry |
| | | | 1986-1988 | Secretary General Thai Industrial Standards | Ministry of Industry |
| | | | 1988-1992 | Director General Department of Mineral Resources | Ministry of Industry |
| | | | 1992-1993 | Deputy Permanent Secretary | Ministry of Industry |
| | | | | Acting of Permanent Secretary | Ministry of Industry |
| | | | | Advisor | The Office Of Prime Minister |
| | | | 1994-2005 | Independent Director and member of the Audit Committee | TPI Polene Plc. |
| | | | 2001-Present | Chairman and Independent Director | Sahaviriya Plate Mill Co., Ltd. |
| | | | 2006-Present | Chairman and Independent Director | Thai Agro Energy Plc. |
| | | | 2014-Present | Chairman and Independent Director | Bangsaphan Barmill Plc. |
| **Mr. Prachai Leophairatana**<br>73 years of age<br>Younger brother of Miss Malinee Leophairatana, elder brother of Mr. Prateep Leopairut, Dr. Pramuan Leophairatana and Mr. Prayad Liewphairatana | Honorary Doctorate Degree in Industrial Engineering, Rajamangala University of Technology Krungthep<br><br>M.S.(EE) University of California (Berkeley) U.S.A.<br><br>B.E.(EE) (1st Class Hons.) University of Canterbury, New Zealand<br><br>Directors Accreditation Program (DAP- No.35/2005)<br>Thai Institute of Directors (IOD) | 4.30 | 2001-Present | Chief Executive Officer | TPI Polene Plc. |
| | | | 1991-Present | Chairman | TPI Polene Power Plc. |
| | | | 1969-1997 | Chairman | Cathay Finance & Securities Plc. |
| | | | 1978-2006 | Chief Executive Officer | Thai Petrochemical Industry Public Co.,Ltd. and TPI Polene Group of Companies. |
| | | | 1992-2000 | Senator | Parliamentary Commission |
| | | | 2000-2006 | Board Executive Director | Bangkok Union Insurance Public Co.,Ltd. |
| | | | April 2012-Present | Director | Bangkok Union Insurance Public Co.,Ltd. |
| **Dr. Narasri Vaivanijkul**<br>84 years of age<br>-no relationship | Ph.D. in Management Science The University of Texas at Austin, Texas. USA<br><br>Directors Accreditation Program (DAP- No.5/2003)<br>Thai Institute of Directors (IOD) | - | 2005-Present | Chairman of the Audit Committee and Independent Director | TPI Polene Plc. |
| | | | 1998-2005 | Independent Director and member of the Audit Committee | TPI Polene Plc. |
| | | | 2009-Present | Vice President | Assumption University Council |
| | | | Present | Director | Asian University of Science and Technology Council |
| | | | Present | Vice President | Rajapark College Council |

| NAME/AGE/ FAMILY RELATION AMONG DIRECTORS & EXECUTIVES | EDUCATIONAL BACKGROUND/TRAINING | % SHARE HOLDING* | WORK EXPERIENCE | | |
|---|---|---|---|---|---|
| | | | DURATION | POSITION | COMPANY/ BUSINESS |
| **Mr. Prateep Leopairut**<br>71 years of age<br>Younger brother of Miss Malinee Leophairatana and Mr.Prachai Leophairatana, elder brother of Dr. Pramuan Leophairatana, and Mr. Prayad Liewphairatana | Honorary Doctorate Degree in Engineering Materials Faculty of Engineering Rajamangala University of Technology Rattanakosin | 0.01 | 1987-Present | President | TPI Polene Plc. |
| | | | 1991-Present | Executive Director | TPI Concrete Co.,Ltd. |
| | | | 2002-Present | Executive Director | Polene Plastic Co.,Ltd. |
| | | | 2007-Jan 2015 | President | Thai Nitrate Co.,Ltd. |
| | | | 2011-Jan 2015 | President | TPI Polene Bio Organics Co;.Ltd. |
| | | | 1978-Present | Director | United Grain Industry Co., Ltd. |
| | | | 1989-Present | Director | Thai Plastic Film Co., Ltd. |
| | | | 1988-Present | Director | Thai Plastic Product Co., Ltd. |
| | | | 1994-Present | Vice Chairman | Bangkok Union Insurance Plc. |
| | | | 1981-2006 | President | International Plastic Trading Co., Ltd. |
| | | | 1978-2006 | President | Thai Petrochemical Industry Plc. |
| | | | 1973-Present | Executive Director | Leophairatana Enterprises Co., Ltd. |
| | | | 1996-Present | Executive Director | Pornchai Enterprises Co., Ltd. |
| | | | 1996-Present | Director | Mondo Thai Co.,Ltd. |
| | | | 1987-present | President | Thai Petrochemical Industry and Trade Association |
| | | | 1987-1993 | Director | Bangkok Union Insurance Plc. |
| | | | 1990-1992 | President | The Thai Packaging Association |
| | | | 2009-2011 | Commission of Central Asia | Thai Chamber of Commerce |
| | | | 2009-2011 | Committee of International Trade | Thai Chamber of Commerce |
| | | | 2009-2011 | Committee of International Negotiation Trade | Thai Chamber of Commerce |
| | | | 2009-Present | Specialist on the examination of working professionals with engineering diploma in industrial engineering field | Council of Engineers |
| | | | 2009-Present | Expert on the examination of corporate engineering level of working professionals industrial engineering field | Council of Engineers |
| | | | 2012-2014 | Chairman | ASEAN Federation of Cement Manufacturers (AFCM) |
| | | | 2012-Present | Committee of the Examination of Working professionals with Engineering diploma in industrial engineering field | Council of Engineers |
| | | | 2012-2016 | President | Thai Cement Manufacturers Association (TCMA) |
| | | | 2012-2016 | President of Cement Group | The Federation of Thai Industries |
| | | | 2012-2016 | Committee of the Federation of Thai Industries | The Federation of Thai Industries |
| | | | 2012-2016 | Committee of Logistics Economic Division | The Federation of Thai Industries |
| | | | 2012-2016 | Committee of Logistics Economic and Infrastructure Development | The Federation of Thai Industries |
| | | | 2012-2016 | Committee of Logistics Trade | The Federation of Thai Industries |
| | | | 2012-2014 | Committee of Development of the economic cooperation of neighboring countries, the Mae-kong sub region (GMS/ACMECS/MJ/Business council of Burma-Loas-Cambodian-Vietnam) | |
| | | | 2012-2014 | Committee of Facilitate on Trade, Import-Export and Custom Practices | The Federation of Thai Industries |
| | | | 2012-2016 | Committee of The Institute of Industrial Environment | The Federation of Thai Industries |
| | | | 2012-Present | Committee of the Institute of Industrial Energy | The Federation of Thai Industries |
| | | | 2012-2014 | President of construction Materials Cluster | The Federation of Thai Industries |
| | | | 2012-2014 | Hororary Member and Council Association | The Thai Packaging Association |
| | | | 2013-Present | Committee of the Examination of License for professional Engineer in industrial engineering field | Council of Engineers |
| | | | 2013 | Committee Council of the study system rice industry | Committee on Economics, commerce and Industrial of the Senate |
| | | | 2013-2014 | Honorary Council | Committee on Economics, commerce and Industrial of the Senate |
| | | | 2015-Present | President | Thai Organic Fertilizer Industry Foundation Trade Association |

| EDUCATIONAL BACKGROUND/TRAINING |
|---|
| M.S. (Industrial Engineering) Stanford University U.S.A. |
| B.E. (Industrial Engineering) Chulalongkorn University |
| National Defense College in cooperation with the private sector, 2/1990, National Defense College |
| The Political "Leadership in new era" program, 2/2005, King Prajadhipok's Institute |
| Directors Accreditation Program (DAP) No.28/2004 Thai Institute of Directors (IOD) |
| Directors Certification Program (DCP) No.53/2005 Thai Institute of Directors (IOD) |
| Audit Committee Program (ACP) No.8/2005 Thai Institute of Directors (IOD) |
| Understanding the Fundamental of Financial Statements (UFS) no.1/2006 Thai Institute of Directors (IOD) |
| Chartered Director Class (CDC) No.5/2009 Thai Institute of Directors (IOD) |

| NAME/AGE/ FAMILY RELATION AMONG DIRECTORS & EXECUTIVES | EDUCATIONAL BACKGROUND/TRAINING | % SHARE HOLDING* | WORK EXPERIENCE | | |
|---|---|---|---|---|---|
| | | | DURATION | POSITION | COMPANY/ BUSINESS |
| **Dr. Pramuan Leophairatana**<br>68 years of age<br>Younger brother of Miss Malinee Leophairatana, Mr. Prachai Leophairatana and Mr. Prateep Leopairut, elder brother of Mr. Prayad Liewphairatana | M.S., SC.D. Massachusetts Institute of Technology at Cambridge, M.A., U.S.A.<br>B.S. (Honors) University of California (Berkeley), U.S.A.<br>Directors Accreditation Program (DAP- No.39/2005) Thai Institute of Directors (IOD)<br>National Defense College No.41 and National Defense College in cooperation with the private sector No.11, King Prajadhipok's Institute | 4.01 | 2001-Present<br>1973-Present<br>1978-2006<br>1988-Present<br>1989-Present<br>1989-Present<br>1990-Aug.2013<br>1991-Present<br>1991-Present<br>1996-Jul.2014<br>1997-Present<br>2002-Present<br>2010-Present<br>Oct.2013-Jan.2015<br>Aug.2016-Present<br>Jul.2014-Present | President<br>Director<br>President<br>Director<br>Director<br>Director<br>Director<br>Vice Chairman<br>Executive Director<br>Director<br>Chairman<br>Executive Director<br>Executive Director<br>Director<br>Director<br>Executive Director | TPI Polene Plc.<br>Leophairatana Enterprises Co.,Ltd.<br>Thai Petrochemical Industry Plc.<br>Thai Plastic Product Co.,Ltd.<br>Thai Plastic Film Co.,Ltd.<br>United Grain Industry Co.,Ltd.<br>Thai Nitrate Co.,Ltd.<br>TPI Polene Power Plc.<br>TPI Concrete Co.,Ltd.<br>Mondo Thai Co.,Ltd.<br>BUI Life Insurance Plc.<br>Polene Plastic Co.,Ltd.<br>TPI Polene Bio Organics Co.,Ltd.<br>Thai Nitrate Co.,Ltd.<br>Thai Nitrate Co.,Ltd.<br>Mondo Thai Co.,Ltd. |
| **Miss Malinee Leophairatana**<br>75 years of age<br>Elder sister of Mr.Prachai Leophairatana, Mr.Prateep Leopairut, Dr.Pramuan Leophairatana and Mr.Prayad Liewphairatana | Master Degree in Actuarial Science Georgia State University, U.S.A.<br>Bachelor of Commerce and Accounting Major in Statistics (Second Honour)<br>Directors Certification Program (DCP) No.22/2002 Thai Institute of Directors (IOD)<br>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<br>Certified as Actuary under Section 83/2 of The Life Insurance Act B.E.2535 as Amended by Life Insurance Act (No.2), B.E.2551 | 0.04 | April 2016-Present<br>Jan 2016-Present<br>1973-Present<br>2001-Present<br>1997-Present<br>1987-1989 | Director<br>Director<br>Director<br>Chief Executive Officer<br>Director<br>President | TPI Polene Plc.<br>TPI Polene Power Plc.<br>Leophairatana Enterprises Co., Ltd.<br>Bangkok Union Insurance Plc.<br>Bangkok Union Life Insurance Plc.<br>Thai General Insurance Association |
| **Dr. Chavin Iamsopana**<br>75 years of age<br>Brother-in-law of Mr. Prachai Leophairatana, Mr. Prateep Leopairut, Dr. Pramuan Leophairatana, and Mr. Prayad Liewphairatana | Doctor of Engineering, Osaka City University Japan<br>Directors Accreditation Program (DAP- No.28/2004) Thai Institute of Directors (IOD)<br>Directors Certification Program (DCP-No.46/2004) Thai Institute of Directors (IOD)<br>Audit Committee Program (ACP-No.15/2006) Thai Institute of Directors (IOD) | 0.11 | 1987-Present<br>1989-Present<br>1989-Present<br>1989-Present<br>1997-Present<br>2004-Present | Executive Director<br>Executive Director<br>Executive Director<br>Executive Director<br>President<br>Executive Director | TPI Polene Plc.<br>Thai Plastic Film Co.,Ltd.<br>Thai Plastic Product Co.,Ltd.<br>United Grain Industry Co.,Ltd.<br>BUI Life Insurance Co.,Ltd.<br>Bangkok Union Insurance Plc. |

| NAME/AGE/ FAMILY RELATION AMONG DIRECTORS & EXECUTIVES | EDUCATIONAL BACKGROUND/TRAINING | % SHARE HOLDING* | WORK EXPERIENCE | | |
|---|---|---|---|---|---|
| | | | DURATION | POSITION | COMPANY/ BUSINESS |
| **Mr. Prayad Liewphairatana**<br>66 years of age<br>Younger brother of<br>Miss Malinee Leophairatana,<br>Mr. Prachai Leophairatana,<br>Mr. Prateep Leopairut, and<br>Dr. Pramuan Leophairatana | M.S.C.E. University of Michigan (ANN ARBOR) U.S.A.<br><br>Directors Accreditation Program (DAP- No.29/2004) Thai Institute of Directors (IOD) | 4.37 | 1987-Present | President | TPI Polene Plc. |
| | | | 1973-Present | Director | Leophairatana Enterprises Co.,Ltd. |
| | | | 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 Polene Power Plc. |
| | | | 1991- Present | Executive Director | TPI Concrete Co.,Ltd. |
| | | | 1996-Present | Executive Director | Mondo Thai Co.,Ltd. |
| | | | 1997- Present | Executive Director | BUI Life Insurance Co.,Ltd. |
| | | | 2002-Present | Executive Director | Polene Plastic Co.,Ltd. |
| | | | Aug 2, 2016-Present | Executive Director | Thai Nitrate Co.,Ltd. |
| | | | 2010-Present | Executive Director | TPI Polene Bio Organics Co.,Ltd. |
| **Mrs. Orapin Leophairatana**<br>70 years of age<br>Mr. Prachai Leophairatana's wife | Political Science<br>(2nd Class Honors)<br>Chulalongkorn University<br><br>Directors Accreditation Program (DAP- No.35/2005) Thai Institute of Directors (IOD) | 4.30 | 1998-2003, | Senior Executive | TPI Polene Plc. |
| | | | 2005-Present | Vice President | |
| | | | 2007-Present | Vice Chairman | TPI Polene Power Plc. |
| | | | 1977- 1982 | Third Secretary | Ministry of Foreign Affairs |
| | | | 1986-1997 | Managing Director | Cathay Finance & Securities Plc. |
| | | | 1995-1997 | Director | Bangkok Stock Trading Center |
| | | | 1995-1997 | Chairman | Association of the Securities Brokerage |
| | | | April-Dec.1997 | Director | Association of Finance Companies |
| | | | 1998-Present | Executive Director | TPI Concrete Co., Ltd. |
| | | | 2001-2011 | Director | Thai Listed Company Association |
| | | | 2002-Present | Executive Director | Polene Plastic Co.,Ltd. |
| | | | 2009-Present | Executive Director | TPI All Season Co., Ltd. |
| | | | 2009-Aug.2013 | Director | Thai Nitrate 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. |
| | | | Oct.2013-Jan.2015 | Executive Director | Thai Nitrate Co.,Ltd. |
| | | | Jul.2014-Present | Executive Director | Mondo Thai Co.,Ltd. |
| **Mr. Manas Sooksmarn**<br>82 years of age<br>-no relationship | Master of Science in Industrial Engineering and Management, Oklahoma State University, U.S.A.<br><br>Post Graduate diploma Industrial Development Programming. (Economics) Institute of Social Studies (ISS), The Hague, Netherlands<br><br>Master of Political Science, Ramkhamhaeng University<br><br>B.E. (Industrial Engineering), Chulalongkorn University.<br><br>National Defense College No.31<br><br>Directors Accreditation Program (DAP- No.47/2005)<br>Thai Institute of Directors (IOD) | - | 2005-Present | Independent Director and member of the Audit Committee | TPI Polene PLc. |
| | | | 1996-2000 | Senator | The Senate of Thailand |
| | | | 1996-1997 | Committee | Express Authority of Thailand |
| | | | 1997 | Advisor to Deputy Minister | Ministry of Interior |
| | | | 1997, 2001 | Advisor to Deputy Minister | Ministry of Agriculture and Cooperatives |
| | | | 2006 | Honorable Committee | The Constitutional Court |

| NAME/AGE/ FAMILY RELATION AMONG DIRECTORS & EXECUTIVES | EDUCATIONAL BACKGROUND/TRAINING | % SHARE HOLDING* | WORK EXPERIENCE | | |
|---|---|---|---|---|---|
| | | | DURATION | POSITION | COMPANY/ BUSINESS |
| **Mr. Pises Iamsakulrat**<br>53 years of age<br>-no relationship | Master of International Trade, Golden Gate University, U.S.A. | 0.04 | Mar1,2018-Present | Independent Director and Audit Committee | TPI Polene Plc. |
| | | | 2008- Present | Director | TPI Polene Plc. |
| | Bachelor Degree, Business Administration, Menlo College, California, U.S.A | | 1987- Present | Managing Director | Iamsakulrat Co., Ltd. |
| | | | 1990- Present | Managing Director | Lampang Food Products Co., Ltd. |
| | | | 1995- Present | Vice President | Laos Industrial-Agriculture Co., Ltd. |
| | | | 1997- Present | Director | K. Cotton & Gloss Co., Ltd. |
| | Directors Accreditation Program (DAP- No. 140/2017) Thai Institute of Directors (IOD) | | 1997- Present | Director | TPI Holding Co., Ltd. |
| | | | 2004- Present | Managing Director | Maekong Inter Trade Co., Ltd. |
| **Mr. Thavich Taychanavakul**<br>68 years of age<br>-no relationship | Bachelor Degree, Business Administration Kinki University, Japan | 0.01 | Mar1,2018-Present | Audit Committee | TPI Polene Plc. |
| | | | 2008- Present | Independent Director | TPI Polene Plc. |
| | National Defense College No. 366 | | 2013-Present | Board Executive Director | Mae Fah Luang University Council |
| | | | 2012-Present | Advisor | Thai Industrial Estate Association |
| | Directors Accreditation Program (DAP- No. 6/2003) Thai Institute of Directors (IOD) | | 2012-Present | Board Executive Director | Hi-Tech Kabin Logistics Co.,Ltd. |
| | | | 1999-Present | Board Executive Director | Ayutthaya Technology Hi-Tech Center Co.,Ltd. |
| | Finance for Non-finance Director (FND) No.30/2006 Thai Institute of Directors (IOD) | | 1990- Present | Managing Director | Thai Industrial Estate Co., Ltd. |
| | | | 1983-Present | Member of the Audit Committee /Independent Director | Bangkok Union insurance Plc. |
| **Mr.Tayuth Sriyuksiri**<br>63 years of age<br>-no relationship | Master Of Business Administration, Boston University, U.S.A. | 0.47 | 2008-Present | Executive Director | TPI Polene Public Plc. |
| | | | 1982- Present | Managing Director | K. Cotton & Gloss Co., Ltd. |
| | Bachelor's Degree, Engineering, Mechanic, Worcester University, U.S.A. | | 1994- Present | Director | TPI Holdings Co., Ltd. |
| | | | 1999- Present | Director | Micro Fiber Industry Co., Ltd. |
| | | | 2005- Present | Director | Hua Thai Manufacturing Plc. |
| | Director Accreditation Program (DAP- No.29/2004) Thai Institute of Directors (IOD) | | | | |

| NAME/AGE/ FAMILY RELATION AMONG DIRECTORS & EXECUTIVES | EDUCATIONAL BACKGROUND/TRAINING | % SHARE HOLDING* | WORK EXPERIENCE | | |
|---|---|---|---|---|---|
| | | | DURATION | POSITION | COMPANY/ BUSINESS |
| **Mr. Khantachai Vichakkhana**<br>69 years of age<br>-no relationship | Master of Political Science, (Public Administration), Thammasat University<br><br>Bachelor of Law, Thammasat University<br><br>Directors Accreditation Program (DAP- No.112/2014) Thai Institute of Directors (IOD)<br><br>Role of Compensation Committee (RCC-No.19/2014) Thai Institute of Directors (IOD)<br><br>Directors Certification Program (DCP- No.119/2015) Thai Institute of Directors (IOD)<br><br>Guest Speaker Training Program- Land Class 2: Department of Land (1979)<br><br>Division Director of Security within the Kingdom Program (Ka.Rmn): Royal Thai Army (1979)<br><br>Advance Land Management School Program Class 3: Department of Lands (1984)<br><br>Advance administration Program: Class 30, Institute of Administration Development, Department of Provincial Administration (1993)<br><br>High Level Information Technology Executives (CIO) Seminar (2003)<br><br>Political Development in Democratic Governance for Executives Program Class 8, King Prajadhipok's Institute (2004) | 0.00 | Oct 2009 - Present | Independent Director | TPI Polene Plc. |
| | | | Jan 2016-Present | Independent Director | TPI Polene Power Plc. |
| | | | 1986 | Land Officer- Uttaradit | Department of Lands |
| | | | 1986-1988 | Land Officer- Nakhornnayok | Department of Lands |
| | | | 1988-1989 | Land Officer- Nonthaburi and Bangyai District | Department of Lands |
| | | | 1989-1990 | Land Officer- Phuket | Department of Lands |
| | | | 1990-1992 | Land Officer- Chonburi | Department of Lands |
| | | | 1992-1995 | Department of Important book | Department of Lands |
| | | | 1995-1998 | Land Management Division | Department of Lands |
| | | | 1998-1999 | Director of Bureau Authority Land | Department of Lands |
| | | | 1999-2000 | Inspector-General | Department of Lands |
| | | | 2000 | Staff Plan & Policy Analysis (Land) | Department of Lands |
| | | | 2000-2002 | Directors: Land Registration Bureau of Standards | Department of Lands |
| | | | 2002-2008 | Deputy Director -General | Department of Lands |
| | | | Aug8,2014-Present | Director and the Nomination, Remuneration and Corporate Governance committee Independent Director | L.P.N. Development Public Co.,Ltd. |
| | | | | **Extracurricular** | |
| | | | | Council Member | Rajamangala University or technology Bangkok |
| | | | | Qualified Director | National Council Boy Scouts |
| | | | | Assets Management Committee | Thai Red Cross Council |
| | | | | Diagnosis Sub-Committee | Office of the Election Commission of Thailand |
| | | | | Committee | Retired Government Officials' Pension |
| | | | | Committee | Association of Interior Foundation |
| | | | | Committee | Executive Public Administration Foundation |
| | | | | Committee | (EPAF) TriamudomsuksaAlumni Foundation |
| | | | | Committee | Anan Anantakool Foundation |
| | | | | Committee | Dr.Suk Phukyaphon, Foundation |
| | | | | Committee | Hospital & phrapiya school Foundation |

| NAME/AGE/ FAMILY RELATION AMONG DIRECTORS & EXECUTIVES | EDUCATIONAL BACKGROUND/TRAINING | % SHARE HOLDING* | WORK EXPERIENCE | | |
|---|---|---|---|---|---|
| | | | DURATION | POSITION | COMPANY/ BUSINESS |
| **Mr.Chulasingh Vasantasingh**<br>67 years of age<br>-no relationship | Bachelor of Law (Honor), Chulalongkorn University<br><br>Thai Barrister at law, Institute of Legal Education of the Thai Bar<br><br>Master of Comparative Law (MCL.) University of Illinois, U.S.A.<br><br>Honorary doctor of laws, Ramkhamhaeng University<br><br>Honorary doctor of laws, Chulalongkorn University<br><br>Honorary doctor of laws, Yonok University<br><br>The Certificate, Harvard Business School<br><br>Degree Programs, National Defense College No.388<br><br>Advanced Certificate Course in Politics and Governance in Democratic Systems, King Prajadhipok's Institute<br><br>Advanced Certificate Course, Capital Market Academy<br><br>Advanced Certificate Course, Thailand Energy Academy<br><br>Top Executive Program in Commerce and Trade, TEPCOT<br><br>Poompalungpandin Program, Chulalongkorn University<br><br>Directors Certification Program (DCP35/ 2003), Thai Institute of Directors<br><br>Finance for Non-Finance Director (FN 7/2003), Thai Institute of Directors<br><br>Understanding the Fundamental of Financial Statements (UFS 1/ 2006), Thai Institute of Directors<br><br>Audit Committee Program (ACP 17/ 2007), Thai Institute of Directors<br><br>DCP Refresher Course (1/2008), Thai Institute of Directors<br><br>Financial Institutions Governance Program (FGP 4/2012), Thai Institute of Directors | 0.00 | Aug.2014-Mar2015<br>Mar2015-Present<br>2005-2009<br>2009-2013<br>2010-2013<br><br>2010-2013<br><br>2010-2014<br><br>Nov.2013-Jan2016<br>Nov.2013-Jan2016<br>May2014-Jan2016<br>Feb2014-Present<br>2014-2017<br><br>2014-Present<br><br>Apr2015-Present<br><br><br>**Honor and Social roles**<br>Council of State<br>Professor emeritus<br>Member of Property Committee<br>Member of Property Committee | Director<br>Independent Director<br>Deputy Attorney General<br>Attorney General<br>Independent Director and Chairman of the Audit Committee<br>Independent Director and Chairman of the Audit Committee<br>Independent Director and Chairman of the Audit Committee<br>Independent Director and<br>Member of the Audit Committee<br>Chairman of the Audit Committee<br>Independent Director and Chairman<br>Independent Director and member of the Audit Committee<br>Director and Chairman of the Audit Committee<br>Independent Director and Chairman of the Audit Committee<br><br><br>Office of the Council of State<br>Chulalongkorn University<br>Chulalongkorn University<br><br>Vajiravudh College | TPI Polene Plc.<br>TPI Polene Plc.<br>Office of The Attorney General<br>Office of The Attorney General<br>PTT Plc.<br><br>Airways International Plc.<br><br>Krung Thai Bank Plc.<br><br>Thai Oil Plc.<br>Thai Oil Plc.<br>Thai Oil Plc.<br>Aqua Corporation Plc.<br>Global Power Synergy Plc.<br><br>Tanachart Insurance Plc.<br><br>Quality House Plc. |
| **Mr. Nitisit Jongphitakratana**<br>47 years of age<br>-no relationship | Master of Law, Thammasat University | - | 2006-Present<br>2011-Present<br>2006-2011 | Secretary<br>Asst.Vice President Department<br>Manager Department | TPI Polene Plc.<br>TPI Polene Plc.<br>TPI Polene Plc. |

| NAME/AGE/ FAMILY RELATION AMONG DIRECTORS & EXECUTIVES | EDUCATIONAL BACKGROUND/TRAINING | % SHARE HOLDING* | WORK EXPERIENCE | | |
|---|---|---|---|---|---|
| | | | DURATION | POSITION | COMPANY/ BUSINESS |
| **OTHER EXECUTIVES** | | | | | |
| **Mr.Prasert Ittimakin**<br>58 years of age<br>-no relationship | M.B.A. Finance University of St. Thomas, U.S.A.<br><br>Bachelor of Accounting, Chulalongkorn University | - | 2001-Present | Senior Vice President Accounting and Finance Division | TPI Polene Plc. |
| | | | 1998-2001 | Vice President Accounting and Finance Division | TPI Polene Plc. |
| | | | 1990-1998 | Vice President Corporate Finance Department | Asia Credit & Securities Plc. |
| **Miss Chularat Danwattanachai**<br>56 years of age<br>-no relationship | M.B.A. Thammasart University | - | 2001-Present | Vice President Accounting and Finance Division | TPI Polene Plc. |
| | | | 1999-2001 | Asst.Vice President Accounting and Finance Division | TPI Polene Plc. |
| | | | 1989-1998 | Asst. Vice President Corporate Finance Department | Asia Credit & Securities Plc. |
| **Mr. Anugoon Piyapakorn**<br>59 years of age<br>-no relationship | M.B.A.<br>Chulalongkorn University | - | 2012-Present | Vice President Accounting Department | TPI Polene Plc. |
| | | | 2001-2012 | Asst. Vice President Accounting Department | TPI Polene Plc. |
| | | | 1989-2001 | Manager of Accounting Department | TPI Polene Plc. |
| **Mr. Pongsak Yiengsakun**<br>62 years of age<br>-no relationship | Bachelor of Accounting, Chulalongkorn University | - | 2012-Present | Vice President Financial Operation Departmen | TPI Polene Plc. |
| | | | 2001-2012 | Asst.Vice President Financial Operation Department | TPI Polene Plc. |
| | | | 1992-2001 | Manager of Finance Department | TPI Polene Plc. |

Remarks: * Percentage of shareholding above includes shares held by spouses and offspring.

# Corporate Governance

Throughout 2016, the Board of Directors of the Company operated in compliance with the principles of good corporate governance by carrying out their duties with transparency, ethics, and responsibility to shareholders, customers, employees, society and others stakeholders.

As the Company values ethical business conduct, we issued a Code of Business Conduct, which is constantly reviewed to make it more suitable for changed circumstances. The Company's Directors acknowledge best practice 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:

**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 2016, the Annual General Shareholders' meeting was held on April 29, 2016 at the Conference Room on the 9th floor of TPI Tower, 26/56 Chan Tat Mai Rd, Thungmahamek, Sathorn, Bangkok. A total of 14 directors attended the AGM.

The Audit Committee of the Company and the Legal Advisor were acted as the agents for the ballot throughout the meeting.

**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 at http://www.tpipolene.co.th for shareholders' consideration in advance of the meeting.

The Company assigned Thailand Securities Depository Co., Ltd., its SEC Securities Registrar, to mail meeting notices together with 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 ahead of the meeting date. An invitation to the AGM is also announced in newspapers for 3 consecutive days in advance of the meeting.

**3. Facilitating Shareholders**

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

**4. Conduct of Shareholders' Meetings**

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

**5. After the Shareholders' Meetings**

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

### 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 together with all details and procedures on the Company's website at http://www.tpipolene.co.th 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 and the SEC 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 B.E. 2535.
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.

### 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 http://www.tpipolene.co.th

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:** In its business operations, 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. For the manufacturing of cement, plastic resin and ready-mixed concrete, the Company and its subsidiaries have also been awarded ISO 9001:2000 certifications from the International Organization for Standardization. In

addition, TPI Group has gained recognition for the quality of all cement products from the Thai Industrial Standards Institute and the Office of Customer Protection Board.

In addition, the Company holds seminars for customers to enhance relationships and to educate them about the variety of products offered. We also develop customer interaction via certified agents that welcome all customer suggestions, as these lead to higher efficiency of product development, and maintain customer loyalty.

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. This is reflected in the attainment of the Health and Safety Management standard TIS 18001 certification from the Anglo Japanese American Registrars (AJA) for our cement plant. For our plastic resin and ready-mixed concrete businesses, the Company was also awarded TIS 18001 certifications. These systems have been implemented to reduce accidents in the workplace.

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. **Competitors:** The Company applies equitable treatment and abides by the framework of fair competition.

6. **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 by establishing a full-scale foundation under the name, "the Environment for Better Life Foundation" as detailed in section "TPI Polene and Society".

7. **Environmental Responsibility:** The Company acts as a good citizen, conscious and aware of being one 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. As reflected in its full support for environmental enhancement, the Company has received ISO 14001 certification for Environmental Management System as detailed in section "TPI Polene for Safety and Environment".

**Section 4. Information Disclosure and Transparency**

The Company is aware of its duty to conduct business in conformity with relevant rules and regulations 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, the SEC and the Company's Internet 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 has provided a report of the Board of Director's responsibility for financial statements in this Annual Report.

5. **Functions and responsibilities of the Board and Sub-Committees are disclosed:** see above in the section "Management". In addition, the number of meetings and meeting attendance of each member are disclosed in the section "Corporate Governance", clause 5 "Responsibilities of the Board".

6. **Disclosure of remuneration to Directors and Management Remuneration:** this is detailed above in the section "Management". Remuneration levels are based on the operating results of the Company during the previous fiscal year; reflect duties and responsibilities fairly and reasonably; and are comparable to general practices in the industry.

## 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

As of December 31, 2017, the Company's Board of Directors consists of 16 directors, of whom 7 were management team members and 9 were non-management, of whom 7 were independent directors. This exceeds one-third of the Board.

#### (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 SEC and SET. Details are contained in the section "Management", above.

#### (4) Segregation of the Power of the Chairman and the Chief Executive Officer

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 Chief Executive Officer are separated. This ensures separation between governing and managing duties.

#### (5) Independence of the Chairman

The Chairman of the Board, as an independent director, is not a member or chairman of any sub-committee, and is thus able to express his views on business operations independently. This ensures a balance of power.

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

#### (6) Corporate Secretary

A knowledgeable and experienced 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 Executive Management Committee and the Audit Committee.

The Executive Management Committee is composed of 7 members who are knowledgeable, capable, ethical and experienced in diverse fields. Duties and responsibility of the Executive Management Committee are contained in the section "Management".

The Audit Committee consists of 3 Independent Directors. Members' qualifications meet the requirements stipulated in relevant SEC 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. Duties and responsibilities of the Audit Committee are contained in the section "Management".

### 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 its subsidiaries) and anyone, with which a possible conflict of interest might occur, require approval under the rules and regulations imposed by the SEC and the SET concerning information disclosure. 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 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. 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.

At the Board of Directors' meeting no. 1/2017 held on January 26, 2017, attended by the Audit Committee and the Independent Directors, the Board evaluated five aspects of the sufficiency of the internal control systems of the Company and its subsidiaries. These were: the organization and environmental control system; the risk management system; Management control system; the information and communication system; and the monitoring system.

The resultant assessment showed that the internal control systems of the Company and its subsidiaries operated appropriately and sufficiently in all five aspects, thus mitigating business and operational risks and allowing the Company to manage its operations effectively and efficiently.

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. (See details in the Audit Committee Report)

**(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 Chief Executive Officer 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. In 2017, the Board of Directors and the Audit Committee convened meetings a total of 12 times and 5 times, respectively, with attendance as detailed below:

| Name | Position | Number of Meeting Attendance | |
|---|---|---|---|
| | | The Board of Directors 12 Times / 2017 | The Audit Committee 5 Times / 2017 |
| 1. Mr. Visith Noiphan | Chairman and Independent Director | 10/12 | - |
| 2. Mr. Prachai Leophairatana | Director | 12/12 | - |
| 3. Mr. Prateep Leopairut | Director | 11/12 | - |
| 4. Dr. Pramuan Leophairatana | Director | 11/12 | - |
| 5. Dr. Narasri Vaivanijkul | Independent Director and Chairman of Audit Committee | 12/12 | 5/5 |
| 6. Dr. Chavin Iamsopana | Director | 12/12 | - |
| 7. Mr. Prayad Liewphairatana | Director | 10/12 | - |
| 8. Mrs. Orapin Leophairatana | Director | 12/12 | - |
| 9. Mr. Manas Sooksmarn | Independent Director and Audit Committee | 12/12 | 5/5 |
| 10. Pol.Gen. Charnchit Bhiraleus* | Independent Director and Audit Committee | 8/12 | 4/5 |
| 11. Mr. Pises Iamsakulrat** | Independent Director and Audit Committee | 10/12 | - |
| 12. Mr. Thavich Taychanavakul** | Independent Director and Audit Committee | 9/12 | - |
| 13. Mr. Tayuth Sriyuksiri | Director | 10/12 | - |
| 14. Mr. Khantachai Vichakkana | Director | 12/12 | - |
| 15. Mr. Chulasingh Vasantasingh | Independent Director | 12/12 | - |
| 16. Miss Malinee Leophairatana | Director | 12/12 | - |

Remarks: * Pol. Gen. Charnchit Bhiraleus passed away on December 4, 2017.

** At the Company's Board of Directors' meeting on March 1, 2017, it passed a resolution to appoint Mr. Pises Iamsakulrat to be in the position of the Independent Director and the Audit Committee and Mr. Thavich Taychanavakul to be in the position of the Audit Committee.

### 4. 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. Details of remuneration are disclosed in the section "Management".

### 5. 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.

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

The Board of Directors of the Company are aware of their duties and responsibilities to ensure that the financial reports of the Company and its subsidiaries 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 have 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 credibly to ensure that the financial statements of the Company and its subsidiaries present financial positions, operational results and financial cash flow which are accurate and reliable in all material aspects.

**Sincerely Yours,**

**Visith Noiphan**
Chairman of the Board

**Prachai Leopairatana**
Chief Executive Officer

# Independent Auditor's Report

## To the Shareholders of TPI Polene Public Company Limited

### *Opinion*

I have audited the consolidated and separate financial statements of TPI Polene Public Company Limited and its subsidiaries (the "Group") and of TPI Polene Public Company Limited (the "Company"), respectively, which comprise the consolidated and separate statements of financial position as at 31 December 2017, and 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 2017 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 requirements of 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.

| ***Valuation of inventory*** | |
|---|---|
| Refer to Note 4 and 10 to the financial statements. | |
| **The key audit matter** | **How the matter was addressed in the audit** |
| Inventory is a significant balance. There is slow moving in some type of inventory. There is a risk arising from the degree of judgment involved in assessing the net realisable value which is based on assumptions concerning future events and activities.<br><br>Due to the high level of management's judgment and the significant carrying amounts involved, this is one of the key judgmental areas that my audit is concentrated on. | My audit procedures in this area included, among others:<br>• understanding the Group's business plan and process on estimate the net realisable value derived from business plan;<br>• considering the management's significant assumptions used in their assessment of the net realisable value of inventory, which included comparing them to internally and externally derived data; and<br>• evaluating the adequacy disclosure in accordance with the related Thai Financial Reporting Standards. |

| ***Impairment assessment of property, plant and equipment in consolidated financial statements and loan to and investment in subsidiaries in separate financial statements*** | |
|---|---|
| Refer to Note 6, 12 and 15 to financial statements. | |
| **The key audit matter** | **How the matter was addressed in the audit** |
| The continuous loss in operation of two subsidiaries; TPI Polene Bio Organics Co.,Ltd. and TPI All Seasons Co., Ltd. indicated that property, plant and equipment and loan to and investment in subsidiaries may be impaired.<br><br>Since the consideration of impairment of assets depend on the management's judgments and assumptions in respect to the forecast of operating results, discount rate and key assumptions used to estimate the recoverable amount of aforementioned business, this is one of the key judgmental areas that my audit is concentrated on. | My audit procedures in this area included, among others:<br>• understanding the management's process of identifying impairment indicator and impairment testing and estimate recoverable amount;<br>• considering the investee's ability to generate profit by comparing with historical performance, future action plan and other relevant data; and<br>• evaluating the adequacy of disclosure in accordance with the related Thai Financial Reporting Standards. |

| ***Valuation of Exploration assets*** | |
|---|---|
| Refer to Note 4 and 15 to the consolidated and separate financial statements. | |
| **The key audit matter** | **How the matter was addressed in the audit** |
| A subsidiary, TPI Refinery (1997) Co., Ltd., recognises all costs associated with the exploration as exploration assets and will be charged to profit or loss in the period when there is no discovery of proved reserves or no discovery of commercially adequate reserves and no future exploration and assessment plan.<br><br>Due to the future exploration and assessment plan including the operation as planned, high level of management's judgments involved. This is one of the key judgmental areas that my audit is concentrated on. | My audit procedures in this area included, among others:<br>• understanding the preparation of management's future exploration plan;<br>• considering the management-approved future exploration plans;<br>• evaluating the assumptions used in management's valuation of exploration assets by comparing with the petroleum estimates, and budget;.<br>• evaluating the adequacy of disclosure in accordance with the related Thai Financial Reporting Standards. |

| ***Recognition of deferred tax assets*** | |
|---|---|
| Refer to Note 4 and 17 to the consolidated and separate financial statements. | |
| **The key audit matter** | **How the matter was addressed in the audit** |
| The Group has recognised deferred tax assets for unused tax losses that it believes are recoverable.<br><br>The recoverability of recognised deferred tax assets is in part dependent on the Group's ability to generate future taxable profits sufficient to utilise tax losses (before the latter expire).<br><br>Due to the inherent uncertainty in forecasting the amount and timing of future taxable profits, this is one of the key judgmental areas that my audit is concentrated on. | My audit procedures in this area included, among others:<br>• understanding the method of the management's recognition of deferred tax assets and the assessment of assumptions used in projecting the Group's future taxable profits;<br>• evaluating assumption used by management by comparing to operation plan and external information; and<br>• evaluating the adequacy of disclosure in accordance with the related Thai Financial Reporting Standards. |

### *Emphasis of Matter*

Without modifying my opinion, I draw attention to the following matters:

As described in note 3 to the financial statements stating the effect of the Company's adoption from 1 January 2017 of a new accounting policy. The corresponding figures presented are based on the audited financial statements as at and for the year ended 31 December 2016 after making the adjustments described in note 3.

As described in note 39 (2) to the financial statements, the uncertainty related to the outcome of lawsuit in relation to its operation of mining which is under consideration of the Court.

### *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.

### *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
27 February 2018

# Statement of financial position

## TPI Polene Public Company Limited and its Subsidiaries

*(in thousand Baht)*

| Assets | Note | Consolidated financial statements | | | Separate financial statements | | |
|---|---|---|---|---|---|---|---|
| | | 31 December 2017 | 31 December 2016 (Restated) | 1 January 2016 (Restated) | 31 December 2017 | 31 December 2016 (Restated) | 1 January 2016 (Restated) |
| ***Current assets*** | | | | | | | |
| Cash and cash equivalents | *7* | 2,918,980 | 3,465,595 | 1,695,178 | 1,910,795 | 2,552,273 | 928,804 |
| Current investments | *8* | 3,790,167 | 75,669 | 680,958 | 15,604 | 17,669 | 679,958 |
| Trade accounts receivable | *6, 9* | 3,076,868 | 3,014,777 | 2,527,611 | 2,694,550 | 2,120,607 | 3,626,902 |
| Other receivables | | 680,018 | 606,955 | 549,932 | 493,693 | 517,283 | 506,710 |
| Short-term loans to related parties | *6* | - | - | - | 274,576 | 115,398 | 1,738,838 |
| Receivables and advances to related parties | *6* | 57,927 | 54,221 | 73,970 | 147,064 | 219,046 | 165,421 |
| Inventories | *10* | 13,133,460 | 11,724,075 | 10,969,059 | 11,083,311 | 9,783,785 | 9,141,177 |
| Other current assets | | 537,138 | 607,909 | 456,466 | 126,780 | 119,587 | 99,147 |
| **Total current assets** | | **24,194,558** | **19,549,201** | **16,953,174** | **16,746,373** | **15,445,648** | **16,886,957** |
| ***Non-current assets*** | | | | | | | |
| Investments in associates and joint venture | *11* | 745,865 | 722,495 | 1,582,702 | 229,500 | 229,500 | 513,909 |
| Investments in subsidiaries | *12* | - | - | - | 12,640,946 | 12,817,346 | 8,675,389 |
| Long-term investments in related parties | *13* | 45,870 | 45,870 | 45,870 | 45,870 | 45,870 | 45,870 |
| Other long-term investments | *8* | 36,153 | 36,117 | 36,178 | 19,053 | 18,943 | 18,934 |
| Long-term loans to related party | *6* | - | - | - | - | 4,528,846 | 1,635,021 |
| Receivables and advances to related parties | *6* | - | - | - | 421,984 | 421,984 | 421,984 |
| Investment properties | *14* | 374,688 | 611,940 | 616,382 | 74,044 | 514,605 | 447,528 |
| Property, plant and equipment | *15* | 76,551,024 | 69,833,310 | 61,652,346 | 50,338,019 | 49,335,490 | 48,272,720 |
| Land leasehold rights | | 383 | 653 | 1,459 | - | - | - |
| Intangible assets | *16* | 216,928 | 244,433 | 234,021 | 216,928 | 244,433 | 234,021 |
| Advances payment for plant and equipment | | 267,435 | 1,088,049 | 1,841,059 | 109,311 | 223,746 | 897,130 |
| Deferred tax assets | *17* | 484,568 | 208,144 | 183,572 | 329,182 | 46,317 | - |
| Other non-current assets | *6* | 260,163 | 277,890 | 303,014 | 208,786 | 226,410 | 251,311 |
| **Total non-current assets** | | **78,983,077** | **73,068,901** | **66,496,603** | **64,633,623** | **68,653,490** | **61,413,817** |
| **Total assets** | | **103,177,635** | **92,618,102** | **83,449,777** | **81,379,996** | **84,099,138** | **78,300,774** |

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

# Statement of financial position

## TPI Polene Public Company Limited and its Subsidiaries

*(in thousand Baht)*

| Liabilities and equity | Note | Consolidated financial statements | | | Separate financial statements | | |
|---|---|---|---|---|---|---|---|
| | | 31 December 2017 | 31 December 2016 (Restated) | 1 January 2016 (Restated) | 31 December 2017 | 31 December 2016 (Restated) | 1 January 2016 (Restated) |
| ***Current liabilities*** | | | | | | | |
| Bank overdrafts and short-term loans from financial institutions | *18* | 2,178,403 | 5,609,638 | 923,136 | 1,844,119 | 4,718,066 | 923,136 |
| Trade accounts payable | *6, 19* | 2,818,257 | 2,214,330 | 2,523,938 | 2,796,225 | 2,595,005 | 2,629,166 |
| Other payables | *20* | 5,068,971 | 4,801,702 | 4,223,560 | 1,886,935 | 2,160,531 | 2,487,907 |
| Short-term loans from related parties | *6* | - | - | - | 375,627 | - | - |
| Payables and advances from related parties | *6* | 24,032 | 28,513 | 61,674 | 109,873 | 90,470 | 118,418 |
| Current portion of long-term loans from financial institutions | *18* | 751,049 | 906,485 | 404,436 | 751,049 | 741,485 | 404,436 |
| Current portion of debentures | *18* | 5,000,000 | 3,000,000 | 3,000,000 | 5,000,000 | 3,000,000 | 3,000,000 |
| Interest payable | | 232,226 | 234,275 | 189,222 | 232,031 | 233,698 | 189,222 |
| Current portion of finance lease liabilities | *18* | 2,378 | 87,480 | 203,797 | 2,378 | 40,155 | 110,152 |
| Income tax payable | | 44,623 | 36,739 | 948 | - | - | - |
| Other current liabilities | | 96,997 | 149,785 | 139,860 | 32,064 | 92,058 | 42,710 |
| **Total current liabilities** | | **16,216,936** | **17,068,947** | **11,670,571** | **13,030,301** | **13,671,468** | **9,905,147** |
| ***Non-current liabilities*** | | | | | | | |
| Long-term loans from financial institutions | *18* | 5,039,377 | 8,002,058 | 6,504,022 | 5,039,377 | 5,670,430 | 6,504,022 |
| Debentures | *18* | 28,000,000 | 29,000,000 | 26,555,000 | 28,000,000 | 29,000,000 | 26,555,000 |
| Finance lease liabilities | *18* | 775 | 3,134 | 90,921 | 775 | 3,134 | 43,597 |
| Deferred tax liabilities | *17* | 76,202 | 113,035 | 328,092 | - | - | 323,302 |
| Non-current provisions for employee benefit | *21* | 1,443,775 | 1,373,924 | 1,317,394 | 1,228,884 | 1,178,236 | 1,159,678 |
| Other non-current liabilities | | 314,436 | 302,476 | 374,302 | 307,453 | 301,896 | 491,271 |
| **Total non-current liabilities** | | **34,874,565** | **38,794,627** | **35,169,731** | **34,576,489** | **36,153,696** | **35,076,870** |
| **Total liabilities** | | **51,091,501** | **55,863,574** | **46,840,302** | **47,606,790** | **49,825,164** | **44,982,017** |

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

# Statement of financial position

## TPI Polene Public Company Limited and its Subsidiaries

*(in thousand Baht)*

| Liabilities and equity | Note | Consolidated financial statements | | | Separate financial statements | | |
|---|---|---|---|---|---|---|---|
| | | 31 December 2017 | 31 December 2016 (Restated) | 1 January 2016 (Restated) | 31 December 2017 | 31 December 2016 (Restated) | 1 January 2016 (Restated) |
| ***Equity*** | | | | | | | |
| Share capital: | *22* | | | | | | |
| Authorised share capital | | 24,815,000 | 24,815,000 | 24,815,000 | 24,815,000 | 24,815,000 | 24,815,000 |
| Issued and paid-up share capital | | 20,190,000 | 20,190,000 | 20,190,000 | 20,190,000 | 20,190,000 | 20,190,000 |
| Treasury shares held by subsidiaries | *23* | (359,235) | (359,235) | (359,235) | - | - | - |
| Additional paid in capital: | | | | | | | |
| Share premium on ordinary shares | | 60,600 | 60,600 | 60,600 | 60,600 | 60,600 | 60,600 |
| Other surpluses (deficits) | | 9,840,436 | 52,943 | 52,943 | - | - | - |
| Retained earnings | | | | | | | |
| Appropriated | | | | | | | |
| Legal reserve | *24* | 824,300 | 824,300 | 808,505 | 824,300 | 824,300 | 808,505 |
| Unappropriated | | 14,212,355 | 15,869,510 | 15,741,289 | 12,698,394 | 13,199,272 | 12,259,874 |
| Other components of equity | | 114,160 | 110,412 | 107,298 | (88) | (198) | (222) |
| **Equity attributable to owners of the Company** | | **44,882,616** | **36,748,530** | **36,601,400** | **33,773,206** | **34,273,974** | **33,318,757** |
| Non-controlling interests | | 7,203,518 | 5,998 | 8,075 | - | - | - |
| **Total equity** | | **52,086,134** | **36,754,528** | **36,609,475** | **33,773,206** | **34,273,974** | **33,318,757** |
| **Total liabilities and equity** | | **103,177,635** | **92,618,102** | **83,449,777** | **81,379,996** | **84,099,138** | **78,300,774** |

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

# Statement of comprehensive income

## TPI Polene Public Company Limited and its Subsidiaries

*(in thousand Baht)*

| | Note | Consolidated financial statements Year ended 31 December 2017 | 2016 (Restated) | Separate financial statements Year ended 31 December 2017 | 2016 (Restated) |
|---|---|---|---|---|---|
| ***Income*** | *6, 25* | | | | |
| Revenue from sale of goods | *34* | 29,088,352 | 29,128,215 | 21,602,243 | 21,960,571 |
| Transportation income | | 1,254,582 | 1,264,643 | 1,230,148 | 1,337,980 |
| Gain on bargain purchase | *5* | - | 434,990 | - | - |
| Net foreign exchange gain | | 162,604 | 287,989 | - | 252,284 |
| Investment income | *26* | 107,384 | 34,223 | 3,373,822 | 3,366,838 |
| Other income | *27* | 382,802 | 342,374 | 454,469 | 510,613 |
| **Total income** | | **30,995,724** | **31,492,434** | **26,660,682** | **27,428,286** |
| ***Expenses*** | *6, 31* | | | | |
| Cost of sales of goods | *10* | 24,495,256 | 24,315,714 | 20,258,769 | 19,718,614 |
| Distribution costs | *28* | 4,032,725 | 3,691,808 | 3,556,724 | 3,325,297 |
| Administrative expenses | *29* | 1,777,383 | 1,671,869 | 1,532,146 | 1,756,017 |
| Net foreign exchange loss | | - | - | 49,113 | - |
| Finance costs | *32* | 1,647,192 | 1,649,248 | 1,640,105 | 1,647,433 |
| **Total expenses** | | **31,952,556** | **31,328,639** | **27,036,857** | **26,447,361** |
| Share of profit of associates and joint venture | *11* | 19,742 | 48,121 | - | - |
| **Profit (loss) before income tax expense** | | **(937,090)** | **211,916** | **(376,175)** | **980,925** |
| Income tax income | *33* | 240,723 | 302,961 | 282,133 | 371,314 |
| **Profit (loss) for the year** | | **(696,367)** | **514,877** | **(94,042)** | **1,352,239** |
| **Other comprehensive income (loss)** | | | | | |
| ***Items that will be reclassified subsequently to profit or loss*** | | | | | |
| Gains on remeasuring available-for-sale investments | | 148 | 42 | 137 | 30 |
| Share of other comprehensive income (loss) of associates | *11* | 3,628 | 3,078 | - | - |
| Income tax relating to items that will be reclassified | *17, 33* | (27) | (6) | (27) | (6) |
| **Total items that will be reclassified subsequently to profit or loss** | | **3,749** | **3,114** | **110** | **24** |

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

# Statement of comprehensive income

## TPI Polene Public Company Limited and its Subsidiaries

*(in thousand Baht)*

| | Note | Consolidated financial statements Year ended 31 December 2017 | 2016 (Restated) | Separate financial statements Year ended 31 December 2017 | 2016 (Restated) |
|---|---|---|---|---|---|
| **Other comprehensive income (loss)** | | | | | |
| ***Items that will not be reclassified to profit or loss*** | | | | | |
| Gains (losses) on remeasurements of defined benefit plans | *21* | 2,371 | 35,061 | (3,795) | 8,443 |
| **Income tax relating to items that will not be reclassified** | *17, 33* | (424) | (6,703) | 759 | (1,689) |
| **Total items that will not be reclassified to profit or loss** | | **1,947** | **28,358** | **(3,036)** | **6,754** |
| **Other comprehensive income (loss) for the year, net of tax** | | **5,696** | **31,472** | **(2,926)** | **6,778** |
| **Total comprehensive income (loss) for the year** | | **(690,671)** | **546,349** | **(96,968)** | **1,359,017** |
| **Profit (loss) attributable to:** | | | | | |
| Owners of the Company | | (1,259,738) | 515,022 | (94,042) | 1,352,239 |
| Non-controlling interests | | 563,371 | (145) | - | - |
| **Profit (loss) for the year** | | **(696,367)** | **514,877** | **(94,042)** | **1,352,239** |
| **Total comprehensive income (loss) attributable to:** | | | | | |
| Owners of the Company | | (1,254,043) | 546,494 | (96,968) | 1,359,017 |
| Non-controlling interests | | 563,372 | (145) | - | - |
| **Total comprehensive income (loss) for the year** | | **(690,671)** | **546,349** | **(96,968)** | **1,359,017** |
| **Basic earnings (loss) per share** *(in Baht)* | *35* | **(0.063)** | **0.026** | **(0.005)** | **0.067** |

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

# Statement of change in equity

## TPI Polene Public Company Limited and its Subsidiaries

**Consolidated financial statements**

*(in thousand Baht)*

| | Note | Issued and paid-up share capital | Treasury shares held by subsidiaries | Share premium | Other surpluses (deficits): Shareholding changes in Group | Retained earnings: Legal reserve | Retained earnings: Unappropriated | Other components of equity: Fair value changes in available-for-sale investments | Other components of equity: Revaluation surplus | Other components of equity: Share of other comprehensive income (loss) of associates and joint venture | Other components of equity: Total other components of equity | Equity attributable to owners of the Company | Non-controlling interests | Total equity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Year ended 31 December 2016** | | | | | | | | | | | | | | |
| **Balance at 1 January 2016 - as reported** | | **20,190,000** | **(359,235)** | **60,600** | **52,943** | **808,505** | **15,719,350** | **(106)** | **19,356,212** | **129,343** | **19,485,449** | **55,957,612** | **8,075** | **55,965,687** |
| Impact of changes in accounting policy | *3* | - | - | - | - | - | 21,939 | - | (19,356,212) | (21,939) | (19,378,151) | (19,356,212) | - | (19,356,212) |
| **Balance at 1 January 2016 - restated** | | **20,190,000** | **(359,235)** | **60,600** | **52,943** | **808,505** | **15,741,289** | **(106)** | **-** | **107,404** | **107,298** | **36,601,400** | **8,075** | **36,609,475** |
| **Transaction with owners, recorded directly in equity** | | | | | | | | | | | | | | |
| ***Distributions to owners of the Company*** | | | | | | | | | | | | | | |
| Dividends to owners of the Company | *36* | - | - | - | - | - | (399,364) | - | - | - | - | (399,364) | - | (399,364) |
| ***Total distributions to owners of the Company*** | | - | - | - | - | **-** | **(399,364)** | | - | - | - | **(399,364)** | - | **(399,364)** |
| ***Changes in ownership interests in subsidiary*** | | | | | | | | | | | | | | |
| Acquisition of non-controlling interests without a change in control | | - | - | - | - | - | - | - | - | - | - | - | (1,932) | (1,932) |
| ***Total changes in ownership interests in subsidiary*** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **(1,932)** | **(1,932)** |
| **Total transaction with owners, recorded directly in equity** | | **-** | **-** | **-** | **-** | **-** | **(399,364)** | **-** | **-** | **-** | **-** | **(399,364)** | **(1,932)** | **(401,296)** |
| **Comprehensive income (loss) for the year** | | | | | | | | | | | | | | |
| Profit - restated | | - | - | - | - | - | 515,022 | - | - | - | - | 515,022 | (145) | 514,877 |
| Other comprehensive income (loss) | | - | - | - | - | - | 28,358 | 36 | - | 3,078 | 3,114 | 31,472 | - | 31,472 |
| **Total comprehensive income (loss) for the year** | | **-** | **-** | **-** | **-** | **-** | **543,380** | **36** | **-** | **3,078** | **3,114** | **546,494** | **(145)** | **546,349** |
| Transfer to legal reserve | | - | - | - | - | 15,795 | - | - | - | - | - | - | - | - |
| **Balance at 31 December 2016 - restated** | | **20,190,000** | **(359,235)** | **60,600** | **52,943** | **824,300** | **15,869,510** | **(70)** | **-** | **110,482** | **110,412** | **36,748,530** | **5,998** | **36,754,528** |
| **Year ended 31 December 2017** | | | | | | | | | | | | | | |
| **Balance at 1 January 2017 - as reported** | | **20,190,000** | **(359,235)** | **60,600** | **52,943** | **824,300** | **15,869,510** | **(70)** | **18,319,876** | **110,482** | **18,430,288** | **55,068,406** | **5,998** | **55,074,404** |
| Impact of changes in accounting policy | *3* | - | - | - | - | - | - | - | (18,319,876) | - | (18,319,876) | (18,319,876) | - | (18,319,876) |
| **Balance at 1 January 2017 - restated** | | **20,190,000** | **(359,235)** | **60,600** | **52,943** | **824,300** | **15,869,510** | **(70)** | **-** | **110,482** | **110,412** | **36,748,530** | **5,998** | **36,754,528** |
| **Transactions with owners, recorded directly in equity** | | | | | | | | | | | | | | |
| ***Distributions to owners of the Company*** | | | | | | | | | | | | | | |
| Dividends to owners of the Company | *36* | - | - | - | - | - | (399,364) | - | - | - | - | (399,364) | (649,648) | (1,049,012) |
| ***Total distributions to owners of the Company*** | | **-** | **-** | **-** | **-** | **-** | **(399,364)** | **-** | **-** | **-** | **-** | **(399,364)** | **(649,648)** | **(1,049,012)** |
| ***Changes in ownership interests in subsidiaries*** | | | | | | | | | | | | | | |
| Acquisition of non-controlling interests without a change in control | | - | - | - | 9,787,493 | - | - | - | - | - | - | 9,787,493 | 7,283,796 | 17,071,289 |
| ***Total changes in ownership interests in subsidiaries*** | | **-** | **-** | **-** | **9,787,493** | **-** | **-** | **-** | **-** | **-** | **-** | **9,787,493** | **7,283,796** | **17,071,289** |
| **Total transaction with owners, recorded directly in equity** | | **-** | **-** | **-** | **9,787,493** | **-** | **(399,364)** | **-** | **-** | **-** | **-** | **9,787,493** | **6,634,148** | **16,022,277** |
| **Comprehensive income (loss) for the year** | | | | | | | | | | | | | | |
| Profit (loss) | | - | - | - | - | - | (1,259,738) | - | - | - | - | (1,259,738) | 563,371 | (696,367) |
| Other comprehensive income (loss) | | - | - | - | - | - | 1,947 | 120 | - | 3,628 | 3,748 | 5,695 | 1 | 5,696 |
| **Total comprehensive income (loss) for the year** | | - | - | - | - | **-** | **(1,257,791)** | **120** | **-** | **3,628** | **3,748** | **(1,254,043)** | **563,371** | **(690,671)** |
| **Balance at 31 December 2017** | | **20,190,000** | **(359,235)** | **60,600** | **9,840,436** | **824,300** | **14,212,355** | **50** | **-** | **114,110** | **114,160** | **44,882,616** | **7,203,518** | **52,086,134** |

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

# Statement of change in equity

## TPI Polene Public Company Limited and its Subsidiaries

*(in thousand Baht)*

| | | Separate financial statements | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Retained earnings | | Other compoments of equity | | | |
| | *Note* | Issued and paid-up share capital | Share premium | Legal reserve | Unappropriated | Fair value changes in available-for-sale investments | Revaluation surplus | Total other components of equity | Total equity |
| **Year ended 31 December 2016** | | | | | | | | | |
| **Balance at 1 January 2016 - as reported** | | **20,190,000** | **60,600** | **808,505** | **12,259,874** | **(222)** | **19,356,212** | **19,355,990** | **52,674,969** |
| Impact of changes in accounting policy | *3* | - | - | - | - | - | (19,356,212) | (19,356,212) | (19,356,212) |
| **Balance at 1 January 2016 - restated** | | **20,190,000** | **60,600** | **808,505** | **12,259,874** | **(222)** | **-** | **(222)** | **33,318,757** |
| **Transaction with owners, recorded directly in equity** | | | | | | | | | |
| ***Distributions to owners of the Company*** | | | | | | | | | |
| Dividends to owners of the Company | *36* | - | - | - | (403,800) | - | - | - | (403,800) |
| **Total transaction with owners, recorded directly in equity** | | **-** | **-** | **-** | **(403,800)** | **-** | **-** | **-** | **(403,800)** |
| **Comprehensive income (loss) for the year** | | | | | | | | | |
| Profit - restated | | - | - | - | 1,352,239 | - | - | - | 1,352,239 |
| Other comprehensive income (loss) | | - | - | - | 6,754 | 24 | - | 24 | 6,778 |
| **Total comprehensive income (loss) for the year** | | **-** | **-** | **-** | **1,358,993** | **24** | **-** | **24** | **1,359,017** |
| Transfer to retained earnings | | - | - | 15,795 | (15,795) | - | - | - | - |
| **Balance at 31 December 2016 - restated** | | **20,190,000** | **60,600** | **824,300** | **13,199,272** | **(198)** | **-** | **(198)** | **34,273,974** |
| **Year ended 31 December 2017** | | | | | | | | | |
| **Balance at 1 January 2017 - as reported** | | **20,190,000** | **60,600** | **824,300** | **13,199,272** | **(198)** | **18,319,876** | **18,319,876** | **52,593,850** |
| Impact of changes in accounting policy | *3* | - | - | - | - | - | (18,319,876) | (18,319,876) | (18,319,876) |
| **Balance at 1 January 2017 - restated** | | **20,190,000** | **60,600** | **824,300** | **13,199,272** | **(198)** | **-** | **(198)** | **34,273,974** |
| **Transaction with owners, recorded directly in equity** | | | | | | | | | |
| ***Distributions to owners of the Company*** | | | | | | | | | |
| Dividends to owners of the Company | *36* | - | - | - | (403,800) | - | - | - | (403,800) |
| **Total transaction with owners, recorded directly in equity** | | **-** | **-** | **-** | **(403,800)** | **-** | **-** | **-** | **(403,800)** |
| **Comprehensive income (loss) for the year** | | | | | | | | | |
| Loss | | - | - | - | (94,042) | - | - | - | (94,042) |
| Other comprehensive income (loss) | | - | - | - | (3,036) | 110 | - | 110 | (2,926) |
| **Total comprehensive income (loss) for the period** | | **-** | **-** | **-** | **(97,078)** | **110** | **-** | **110** | **(96,968)** |
| **Balance at 31 December 2017** | | **20,190,000** | **60,600** | **824,300** | **12,698,394** | **(88)** | **-** | **(88)** | **33,773,206** |

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

# Statement of cash flows

## TPI Polene Public Company Limited and its Subsidiaries

*(in thousand Baht)*

| | Consolidated financial statements Year ended 31 December | | Separate financial statements Year ended 31 December | |
|---|---|---|---|---|
| | 2017 | 2016 (Restated) | 2017 | 2016 (Restated) |
| ***Cash flows from operating activities*** | | | | |
| Profit (loss) for the year | (696,367) | 514,877 | (94,042) | 1,352,239 |
| *Adjustments to reconcile profit (loss) to cash receipts (payments)* | | | | |
| Depreciation and amortisation | 2,621,157 | 2,477,964 | 1,932,488 | 1,830,547 |
| Interest income | (99,149) | (28,183) | (99,821) | (197,630) |
| Finance costs | 1,647,192 | 1,649,248 | 1,640,105 | 1,647,433 |
| Dividend income | (14) | (13) | (3,257,169) | (3,153,318) |
| Gain on bargain purchase | - | (434,990) | - | - |
| Unrealised (gain) loss on foreign exchange | (70,948) | (174,132) | 91,467 | (186,558) |
| (Reversal of) bad and doubtful debt expense | 13,538 | 9,833 | 24,898 | (60) |
| Losses on decline in value of inventories | 123,984 | 126,089 | 31,393 | 29,925 |
| Provision for employees benefits | 88,462 | 76,495 | 65,898 | 60,212 |
| Provision for decommissioning | 9,674 | 11,195 | 5,953 | 5,713 |
| Impairment loss on other long-term investment | - | 200 | - | 200 |
| (Gain) loss on disposal of plant and equipment | (8,701) | 20,023 | 13,982 | 13,842 |
| Impairment loss on investments in subsidiary | - | - | 180,000 | 382,000 |
| Loss on disposal of investments in subsidiary | - | - | - | 20,459 |
| Reversal of loss on impairment of investment properties | (557) | (3,873) | - | - |
| Reversal of loss on impairment of assets under construction and installation | (2,154) | - | - | - |
| Loss on disposal of investment properties | - | 2,568 | - | 260 |
| Change in investment holding in subsidiary | - | 2,068 | - | - |
| Share of profit of associates and joint venture | (19,742) | (48,121) | - | - |
| Income tax income | (240,723) | (302,961) | (282,133) | (371,314) |
| | 3,365,652 | 3,898,287 | 253,019 | 1,433,950 |

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

# Statement of cash flows

## TPI Polene Public Company Limited and its Subsidiaries

*(in thousand Baht)*

| | Consolidated financial statements Year ended 31 December | | Separate financial statements Year ended 31 December | |
|---|---|---|---|---|
| | 2017 | 2016 (Restated) | 2017 | 2016 (Restated) |
| *Changes in operating assets and liabilities* | | | | |
| Trade accounts receivable | (82,591) | (363,776) | (599,550) | 1,506,854 |
| Other receivables | (64,539) | (26,771) | 24,272 | (10,024) |
| Receivable and advances to related parties | (3,706) | 19,749 | 71,982 | (53,625) |
| Inventories | (1,533,369) | (713,135) | (1,330,919) | (672,533) |
| Other current assets | 95,679 | (104,351) | 6,959 | (5,238) |
| Other non-current assets | 17,727 | 26,914 | 17,624 | 24,901 |
| Trade accounts payable | 603,006 | (336,109) | 201,220 | (34,156) |
| Other payables | (282,608) | (290,603) | (205,825) | (198,831) |
| Payable and advances from related parties | (4,481) | (33,161) | 14,683 | (47,862) |
| Other current liabilities | (52,788) | 9,488 | (59,994) | 49,349 |
| Provision for employee benefit | (16,240) | (13,684) | (14,325) | (13,297) |
| Other non-current liabilities | 3,352 | (88,442) | (396) | (195,087) |
| Cash generated from (used in) operating activities | 2,045,094 | 1,984,406 | (1,621,250) | 1,784,401 |
| Income tax paid | (90,009) | (52,209) | (14,152) | (15,202) |
| **Net cash from (used in) operating activities** | **1,955,085** | **1,932,197** | **(1,635,402)** | **1,769,199** |
| ***Cash flows from investing activities*** | | | | |
| Interest received | 90,679 | 27,701 | 99,639 | 197,864 |
| Dividend received | 14 | 13 | 3,257,169 | 3,153,318 |
| Net cash (outflow) inflow on current investment | (3,714,498) | 605,289 | 2,065 | 662,289 |
| Acquisition of property, plant and equipment | (6,458,077) | (6,215,750) | (2,147,717) | (2,004,525) |
| Proceeds from sale of plant and equipment | 105,441 | 2,796 | 2,169 | 5,750 |
| Advance payment for plant and equipment | (1,065,934) | (1,843,290) | (212,357) | (352,247) |
| Loans to related parties | - | - | (3,065,206) | (6,331,692) |
| Proceeds from repayment of loans to related parties | - | - | 7,434,401 | 5,060,546 |
| Acquisition of other long-term investments | - | (200) | - | (200) |
| Proceeds from sale of investment properties | - | 8,958 | - | 542 |
| Acquisition of intangible assets | (12,031) | (43,179) | (12,031) | (43,179) |
| Net cash inflow on disposal of other long-term investments | 58 | - | - | - |
| Net cash outflow on acquisition of subsidiary | - | (500,000) | (3,600) | (500,000) |
| Cash outflow on addition investment in subsidiaries | - | (4,000) | - | (3,858,000) |
| Net cash inflow on disposal of subsidiary | - | - | - | 97,993 |
| Cash outflow for decommissioning | (941) | - | - | - |
| **Net cash from (used in) investing activities** | **(11,055,289)** | **(7,961,662)** | **5,354,532** | **(3,911,541)** |

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

# Statement of cash flows

## TPI Polene Public Company Limited and its Subsidiaries

*(in thousand Baht)*

| | Consolidated financial statements Year ended 31 December | | Separate financial statements Year ended 31 December | |
|---|---|---|---|---|
| | 2017 | 2016 (Restated) | 2017 | 2016 (Restated) |
| ***Cash flows from financing activities*** | | | | |
| Finance cost paid | (1,732,660) | (1,684,769) | (1,691,998) | (1,673,336) |
| Dividend paid | (1,049,012) | (399,364) | (403,800) | (403,800) |
| Finance lease payments | (87,461) | (204,104) | (40,136) | (110,460) |
| Increase (decrease) in bank overdrafts and short-term loans from financial institutions | (3,431,235) | 4,673,160 | (2,873,947) | 3,794,930 |
| Proceeds from short-term loans from related parties | - | - | 733,000 | 1,509,408 |
| Repayment of short-term loans from related parties | - | - | (358,000) | (1,509,408) |
| Proceeds from long-term loans from financial institutions | - | 2,656,665 | - | 160,037 |
| Repayment of long-term loans from financial institutions | (3,238,113) | (428,018) | (741,485) | (428,018) |
| Proceeds from issue of debentures | 4,000,000 | 5,445,000 | 4,000,000 | 5,445,000 |
| Repayment of debentures | (3,000,000) | (3,000,000) | (3,000,000) | (3,000,000) |
| Proceeds from issue of ordinary shares of subsidiary | 17,490,403 | - | - | - |
| Transaction cost from issue of shares of subsidiary | (419,114) | - | - | - |
| **Net cash from (used in) financing activities** | **8,532,808** | **7,058,570** | **(4,376,366)** | **3,784,353** |
| Net increase (decrease) in cash and cash equivalents, before effect of exchange rates and changes in holding of investments in subsidiary | (567,396) | 1,029,105 | (657,236) | 1,642,011 |
| Effect of exchange rate changes on balances held in foreign currencies | 20,781 | (13,129) | 15,758 | (18,542) |
| Cash and cash equivalents from changes in holding of investments in subsidiary | - | 754,441 | - | - |
| **Net increase (decrease) in cash and cash equivalents** | **(546,615)** | **1,770,417** | **(641,478)** | **1,623,469** |
| Cash and cash equivalents at 1 January | 3,465,595 | 1,695,178 | 2,552,273 | 928,804 |
| **Cash and cash equivalents at 31 December** | **2,918,980** | **3,465,595** | **1,910,795** | **2,552,273** |
| **Supplemental disclosure of cash flows information** | | | | |
| Other payables - plant and equipment | 3,068,186 | 2,518,309 | 238,955 | 306,726 |

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

# Notes to the financial statements

**TPI Polene Public Company Limited and its Subsidiaries**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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 authorised for issue by the audit committee, as appointed by the Board of Directors of the Company, on 27 February 2018.

## 1 General information

TPI Polene 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 in November 1990.

The Company operates in 3 major industries and has 18 distribution terminals around the country. It operates in the cement industry at Kang-Khoi, Saraburi and has 8 plants consisting of 4 cement manufacturing plants and 4 dry mortar manufacturing plants. It operates in the construction materials industry at Amphur Chalermprakiet, Saraburi and has cement roof tiles and fibre cement board manufacturing plants. It operates in the plastic industry at Amphur Muang, Rayong and has 2 LDPE and EVA plastic manufacturing plants. Details of the Company's subsidiaries and indirect subsidiary as at 31 December 2017 and 2016 were as follows:

| Name of the entity | Type of business | Country of incorporation | Ownership interest direct/indirect (%) | |
|---|---|---|---|---|
| | | | 2017 | 2016 |
| ***Direct subsidiaries*** | | | | |
| TPI Concrete Co., Ltd. | Manufacturing and distributing ready mixed concrete | Thailand | 99.99 | 99.99 |
| TPI Polene Power Public Co., Ltd. (fomerly: TPI Polene Power Co.,Ltd.) | Distributing gasoline, diesel and natural gas / Manufacturing and distributing electricity and refuse derived fuel (RDF) and organics waste | Thailand | 70.24 | 99.99 |
| TPI All Seasons Co., Ltd. | Manufacturing and distributing melt sheets | Thailand | 99.99 | 99.99 |
| Thai Propoxide Co., Ltd. | Manufacturing electricity (dormant) | Thailand | 99.99 | 99.99 |
| TPI Polene Bio Organics Co., Ltd. | Manufacturing and distributing organic fertilizer | Thailand | 99.99 | 99.99 |
| TPI Refinery (1997) Co.,Ltd. | Petroleum exploration | Thailand | 99.99 | 99.99 |
| Thai Nitrate Co.,Ltd. | Manufacturing and distributing nitric acids and ammonium nitrate | Thailand | 99.99 | 99.99 |
| Zenith International Trading Co.,Ltd. | Holding company | Thailand | 99.99 | 99.99 |
| TPI Intertrade Co.,Ltd. | Holding company (dormant) | Thailand | 99.97 | 99.97 |
| TPI Commercial Co., Ltd. | Retailing business | Thailand | 99.94 | 99.94 |
| TPI Service Co., Ltd. | Construction service | Thailand | 95.00 | 51.00 |
| ***Indirect subsidiaries*** | | | | |
| Polene Plastic Co., Ltd. (see note 12) | Export and import business | Thailand | 99.99 | 99.99 |
| Mondo Thai Co., Ltd. | Property developing | Thailand | 83.27 | 83.27 |

* Starting from 2 August 2016, the Group's consolidated financial statements included the financial statements of Thai Nitrate Co., Ltd. after the Company increased its equity interest from 50% to 99.99% (see note 5).

## 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); guidelines promulgated by the Federation of Accounting Professions ("FAP"); and applicable rules and regulations of the Thai Securities and Exchange Commission.

The FAP has issued new and revised TFRS effective for annual accounting periods beginning on or after 1 January 2017. The initial application of these new and revised TFRS has resulted in changes in certain of the Group's accounting policies. The effects of these changes, where such effects are considered material to the financial statements, are disclosed in note 3.

In addition to the above new and revised TFRS, the FAP has issued a number of other new and revised TFRS which are effective for annual financial periods beginning on or after 1 January 2018 and have not been adopted in the preparation of these financial statements. The Group has made a preliminary assessment of the potential initial impact on the consolidated and separate financial statements of these new and revised TFRS and expects that there will be no material impact on the financial statements in the period of initial application.

### *(b) Basis of measurement*

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

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

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

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

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

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

Information about assumption and estimation uncertainties that have a significant risk of resulting in a material adjustments to the amounts recognised in the financial statements is included in the following notes:

| | |
|---|---|
| Note 5 | Acquisition of subsidiary: fair value of the assets acquired and liabilities assumed, measured on a provisional basis; |
| Note 10 | Allowance for decline in value of inventories adjusted to net realisable value; |
| Note 15 | Impairment test: key assumptions underlying recoverable amounts; |
| Note 17 | Recognition of deferred tax assets: availability of future taxable profit against which tax losses carried forward can be used; |
| Note 21 | Measurement of defined benefit obligations: key actuarial assumptions; and |
| Note 39 | Contingent liabilities: key assumptions about the likelihood and magnitude of an outflow of resources. |

*Measurement of fair values*

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

When measuring the fair value of an asset or a liability, the Group uses market observable 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 the following notes:

- Note 5 Acquisition of subsidiary;
- Note 14 Investment property; and
- Note 37 Financial instruments

## 3 Change in accounting policy

### *Accounting for property, plant and equipment measurement*

From 1 January 2017, the Group has changed the accounting policy in regarding measurement of property, plant and equipment from the revaluation model to cost model in accordance with TAS16 (revised 2016) property, plant and equipment. Management believes that the change in accounting policy enables the Group to apply the accounting policies in line with other companies in the same industry, resulting in comparable financial information. The changes have been applied retrospectively. The impact to financial statements are summary as follows:

*(in thousand Baht)*

| | Consolidated financial statements | | |
|---|---|---|---|
| | As previously reported | Adjustment | As restated |
| ***Statement of financial position*** | | | |
| ***At 1 January 2016*** | | | |
| **Assets** | | | |
| Property, plant and equipment | 85,847,611 | (24,195,265) | 61,652,346 |
| **Liabilities** | | | |
| Deferred tax liabilities | 5,167,145 | (4,839,053) | 328,092 |
| **Equity** | | | |
| Retained earnings - unappropriated | 15,719,350 | 21,939 | 15,741,289 |
| Other components of equity | | | |
| - Revaluation surplus | 19,356,212 | (19,356,212) | - |
| - Share of profit (loss) of associates and joint ventures | 129,343 | (21,939) | 107,404 |
| ***At 31 December 2016*** | | | |
| **Assets** | | | |
| Property, plant and equipment | 92,733,155 | (22,899,845) | 69,833,310 |
| Deferred tax assets | 224,470 | (16,326) | 208,144 |
| **Liabilities** | | | |
| Deferred tax liabilities | 4,709,330 | (4,596,295) | 113,035 |
| **Equity** | | | |
| Other components of equity | | | |
| - Revaluation surplus | 18,319,876 | (18,319,876) | - |

*(in thousand Baht)*

| | Separate financial statements | | |
|---|---|---|---|
| | As previously reported | Adjustment | As restated |
| ***Statement of financial position*** | | | |
| ***At 1 January 2016*** | | | |
| **Assets** | | | |
| Property, plant and equipment | 72,467,985 | (24,195,265) | 48,272,720 |
| **Liabilities** | | | |
| Deferred tax liabilities | 5,162,355 | (4,839,053) | 323,302 |
| **Equity** | | | |
| Other components of equity | | | |
| - Revaluation surplus | 19,356,212 | (19,356,212) | - |
| ***At 31 December 2016*** | | | |
| **Assets** | | | |
| Property, plant and equipment | 72,235,335 | (22,899,845) | 49,335,490 |
| Deferred tax assets | - | 46,317 | 46,317 |
| **Liabilities** | | | |
| Deferred tax liabilities | 4,533,652 | (4,533,652) | - |
| **Equity** | | | |
| Other components of equity | | | |
| - Revaluation surplus | 18,319,876 | (18,319,876) | - |

*(in thousand Baht)*

| | Consolidated financial statements | | |
|---|---|---|---|
| | As previously reported | Adjustment | As restated |
| ***Statement of comprehensive income*** | | | |
| ***Year ended 31 December 2016*** | | | |
| Cost of sales of goods | | | |
| - depreciation on revaluation surplus | 1,295,420 | (1,295,420) | - |
| Income tax income | 562,045 | (259,084) | 302,961 |
| **Profit (loss) for the year** | **(521,459)** | **1,036,336** | **514,877** |
| **Basic earnings (loss) per share (in Baht)** | **(0.026)** | **0.052** | **0.026** |

*(in thousand Baht)*

| | Separate financial statements | | |
|---|---|---|---|
| | As previously reported | Adjustment | As restated |
| ***Statement of comprehensive income*** | | | |
| ***Year ended 31 December 2016*** | | | |
| Cost of sales of goods | | | |
| - depreciation on revaluation surplus | 1,295,420 | (1,295,420) | - |
| Income tax income | 630,398 | (259,084) | 371,314 |
| **Profit (loss) for the year** | **315,903** | **1,036,336** | **1,352,239** |
| **Basic earnings (loss) per share (in Baht)** | **0.016** | **0.051** | **0.067** |

The impact to 2017 financial statements are summary as follows:

*(in thousand Baht)*

| | Consolidate and Separate financial statements |
|---|---|
| ***Statement of comprehensive income*** | |
| ***Year ended 31 December 2017*** | |
| Decrease in cost of sales of goods | |
| - depreciation on revaluation surplus | 1,196,119 |
| Decrease in income tax income | (239,224) |
| **Increase in profit (loss) for the year** | **956,895** |
| **Increase in basic earnings (loss) per share (in Baht)** | **0.048** |

## 4 Significant accounting policies

The accounting policies set out below have been applied consistently to all periods presented in these financial statements except as explained in note 3, which addresses changes in accounting policies.

### *(a) Basis of consolidation*

The consolidated financial statements relate to the Company and its subsidiaries (together referred to as the "Group") and the Group's interests in associates and joint ventures.

*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 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 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.

*Step acquisition*

When a business combination is achieved in stages, the Group's previously held equity interest in the acquiree is remeasured to its acquisition-date fair value and the resulting gain or loss, if any, is recognised in profit or loss. Amounts arising from interests in the acquiree prior to the acquisition date that have previously been recognised in other comprehensive income are reclassified to profit or loss where such treatment would be appropriate if that interest were disposed of.

*Acquisitions from entities under common control*

Business combinations of entities or businesses under common control are accounted for using a method similar to the pooling of interest method and in accordance with the Guideline issued in 2009 by the FAP.

*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.

*Interests in equity-accounted investees*

The Group's interests in equity-accounted investees comprise interests in associates and a joint venture.

Associates are those entities in which the Group has significant influence, but not control or joint control, over the financial and operating policies. A joint venture is an arrangement in which the Group has joint control, whereby the Group has rights to the net assets of the arrangement, rather than rights to its assets and obligations for its liabilities.

Interests in associates and joint ventures are accounted for using the equity method. They are initially recognised at cost, which includes transaction costs. Subsequent to initial recognition, the consolidated financial statements include the Group's share of the profit or loss and other comprehensive income of equity-accounted investees, until the date on which significant influence or joint control ceases.

*Transactions eliminated on consolidation*

Intra-group balances and transactions, and any unrealised income or expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements. 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 at the reporting date are translated to the functional currency at the foreign exchange rates ruling at that 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.

Non-monetary assets and liabilities measured at fair value in foreign currencies are translated to the functional currency at the exchange rates at the dates that fair value was determined.

Foreign exchange differences arising on translation are recognised in the profit or loss.

***(c) Derivative financial instruments***

Derivative and financing instruments are used to manage exposure to foreign exchange arising from operational activitiy and financing activity. Derivative financial instruments are not used for trading purposes.

Derivatives are recognised initially at fair value; attributable transaction costs are recognised in profit or loss when incurred. Subsequent to initial recognition, they are remeasured at fair value. The gain or loss on remeasurement to fair value is recognised immediately in profit or loss.

The fair value of forward exchange contracts is based on their listed market price at the reporting date.

***(d) 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.

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

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

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

***(f) Inventories***

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

Cost is calculated using the weighted average cost principle, and 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.

***(g) Investments***

*Investments in associates, subsidiaries and joint venture*

Investments in associates, subsidiaries and joint venture in the separate financial statements of the Company are accounted for using the cost method. Investments in associates and joint ventures in the consolidated financial statements are accounted for using the equity 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.

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 on available-for-sale monetary items, are recognised directly in equity. Impairment losses 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.

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 investment*

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 is determined using the weighted average method applied to the carrying value of the total holding of the investment.

***(h) Investment properties***

Investment properties are measured at cost less accumulated depreciation and impairment losses.

Cost includes expenditure that is directly attributable to the acquisition of the investment property. The cost of self-constructed investment property includes the cost of materials and direct labour, and other costs directly attributable to bringing the investment property to a working condition for its intended use and capitalised borrowing costs.

Depreciation is charged to profit or loss on a straight-line basis over the estimated useful lives of condominium which are 20 years.

*Reclassification to property, plant and equipment*

When the use of a property changes such that it is reclassified as property, plant and equipment, its historical cost becomes its cost for subsequent accounting.

***(i) Property, plant and equipment***

*Recognition and measurement*

*Owned assets*

Property, plant and equipment are measured at cost less accumulated depreciation and impairment losses, except for certain buildings, machinery and equipment which are stated at their revalued amounts. The revalued amount is the fair value determined on the basis of the property's existing use at the date of revaluation less any subsequent 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 an 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.

*Leased assets*

Leases in terms of which the Group substantially assumes all the risk and rewards of ownership are classified as finance leases. Property, plant and equipment acquired by way of finance leases is capitalised at the lower of its fair value and the present value of the minimum lease payments at the inception of the lease, less accumulated depreciation and impairment losses. Lease payments are apportioned between the finance charges and reduction of the lease liability so as to achieve a constant rate of interest on the remaining balance of the liability. Finance charges are charged directly to the 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.

*Exploration assets*

The Company follows the full cost method of accounting for petroleum and natural gas properties and related expenses whereby all costs associated with the exploration for productive and non-productive wells are treated as capitalised and will be charged to profit or loss when the exploratory wells have not identified proved reserves or have identified proved reserves but have not been found to be commercially producible or have abandoned.

Costs of properties comprise total acquisition costs of petroleum rights or the portion of costs applicable to properties as well as the decommissioning costs.

*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 or on units of production method of relevant assets. The estimated useful lives are as follows:

| | |
|---|---|
| Land improvement | 5 years |
| Leasehold improvement | 8 - 10 years |
| Buildings and structures | 10 - 49 years and per lease period |
| Machinery and equipment for production (concrete) | 3 - 10 years |
| Other machinery and equipment for production | 5 - 40 years |
| Tools and factory equipment | 3 - 30 years |
| Furniture, fixtures and office equipment | 3, 5 and 10 years |
| Vehicles | 5 - 25 years |

Machinery and equipment for production of LDPE, construction materials and machine for melt sheets and mixer trucks calculate depreciation based on units of production.

No depreciation is provided on freehold 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.

***(j) Intangible assets***

*Concession*

Cost of concessions on mining limestone and shale are include acquisition, exploration and development costs and are measured at cost less accumulated amortisation and accumulated impairment losses.

*Research and development*

Expenditure on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, is recognised in profit or loss as incurred.

Development activities involve a plan or design for the production of new or substantially improved products and processes. Development expenditure is capitalised only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable, and the Group intends to and has sufficient resources to complete development and to use or sell the asset. The expenditure capitalised includes the cost of materials, direct labour, overhead costs that are directly attributable to preparing the asset for its intended use, and capitalised borrowing costs. Other development expenditure is recognised in profit or loss as incurred.

Capitalised development expenditure is measured at cost less accumulated amortisation and accumulated impairment losses.

*Other intangible assets*

Other intangible assets that are acquired by the Group and have finite useful lives are measured at cost less accumulated amortisation and accumulated impairment losses.

*Amortisation*

Amortisation is based on the cost of the asset, or other amount substituted for cost, less its residual value.

Amortisation is recognised in profit or loss on a straight-line basis over the estimated useful lives of intangible assets from the

date that they are available for use, since this most closely reflects the expected pattern of consumption of the future economic benefits embodied in the asset.

The estimated useful lives for the current and comparative periods are as follows:

| | | | |
|---|---|---|---|
| Concessions | Life of concessions : | 13 - 25 | years |
| Software licenses | | 3 - 12 | years |
| Development assets | | 5 | years |

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

### *(k) 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 amounts are 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 available-for-sale financial assets is calculated by reference to the fair value.

The recoverable amount of a non-financial asset is the greater of the assets' 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.

### *(l) Interest-bearing liabilities*

Interest-bearing liabilities are recognised at cost.

### *(m) Trade and other accounts payable*

Trade and other accounts payable are stated at cost.

### *(n) 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 plans 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 recognized immediately in other comprehensive

income. The Group 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 recognized 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.

***(o) 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.

***(p) Treasury shares held by a subsidiary***

When share capital recognised as equity is repurchased, the amount of consideration paid, including directly attributable costs, is classified as treasury shares held by a subsidiary and recognised as a deduction from equity. When treasury shares held by a subsidiary are sold, the amount received is recognised as an increase in equity by crediting the cost of the treasury shares held by a subsidiary sold, calculated using the weighted average method, to the treasury shares account. Surpluses on the sale of treasury shares held by a subsidiary are taken directly to a separate category within equity, ùSurplus on treasury shares held by a subsidiaryû. Net deficits on sale or cancellation of treasury shares are debited to retained earnings after setting off against any remaining balance of surplus on treasury shares held by a subsidiary.

***(q) Revenue***

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

*Sale of goods and services rendered*

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

*Loyalty programmes*

The Company has a customer loyalty programme whereby customers are awarded credits (Points) entitling customers to the right to qualify for a free gift from the Company. The fair value of the consideration received or receivable in respect of the initial sale is allocated between the Points and the other components of the sale. The amount allocated to the Points is estimated by reference to the fair value of the free gift. The fair value is estimated based on the amount of the discount adjusted to take into account the expected forfeiture rate. Such amount is deferred and revenue is recognised only when the Points are redeemed and the Company has fulfilled its obligations to supply the products. The amount of revenue recognised in those circumstances is based on the number of Points that have been redeemed in exchange for discounted products, relative to the total number of Points that is expected to be redeemed. Deferred revenue is also released to profit or loss when it is no longer considered probable that the Points will be redeemed.

*Investments*

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

*Rental income*

Rental income from investment property 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.

*Dividend income*

Dividend income is recognised in profit or loss on the date the Group's right to receive payments is established.

*Interest income*

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

### (r) 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.

### (s) 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.

### (t) 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 goodwill; 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 and joint venture 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. 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.

***(u) 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, adjusted for own shares held.

***(v) 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.

## 5 Acquisition of subsidiary

On 2 August 2016, the Company acquired an additional 2,343,750 shares of Thai Nitrate Co., Ltd. at the price of Baht 213.33 per share (par value of Baht 100 each), making total investment of Baht 500 million from the group of foreign company. As a result, the Company's interest in the said company increased from 50% to 99.99% of the paid-up share capital, and the status of that company has, therefore, changed from a joint venture to a subsidiary. The consolidated financial statements for the year ended 31 December 2016 included the statement of financial position and the statement of comprehensive income of Thai Nitrate Co., Ltd. from 2 August 2016 to 31 December 2016.

Taking control of Thai Nitrate Co., Ltd., the Company and the Group of foreign company agreed to settle their disputes where the Company and the shareholders of the foreign company mutually filed a petition to the Court in order to settle the dispute whether it be dispute under laws or pending cases between them in every courts involved.

For the period from 2 August 2016 to 31 December 2016, Thai Nitrate Co., Ltd. contributed revenue of Baht 344 million and profit of Baht 59 million to the Group's results. If the acquisition had occurred on 1 January 2016, management estimates that consolidated revenue would have been Baht 988 million and consolidated profit for year ended 31 December 2016 would have been Baht 161 million. In determining these amounts, management has assumed that the fair value adjustments, determined provisionally, that arose on the date of acquisition would have been the same if the acquisition had occurred on 1 January 2016.

Under TFRS 3 Business Combinations, the acquisitions of Thai Nitrate Co., Ltd. is classified as a step acquisition. An independent appraiser has been appointed by the management to determine the fair value of the business. The Group hired an independent appraiser to determine the fair value of assets and liabilities acquired during the measurement period, which must not exceed one year from the acquisition date to reflect new information obtained about facts and circumstances that existed as of the acquisition date. Finalisation of the valuation of net assets of Thai Nitrate Co., Ltd. which the Company acquired on 2 August 2016 was completed in November 2016.

When a business combination is achieved in stages, the Group's previously held equity interest in the acquisiton is remeasured to its acquisition-date fair value and the resulting gain or loss, if any, is recognized in profit and loss. There was no significant change in the remeasurement of the fair value of investment in Thai Nitrate Co., Ltd. before changing status from joint venture to subsidiary and, therefore, the Group has not recognised any difference rising from the step-acquisition on the acquisition date in the consolidated statement of comprehensive income for the year ended 31 December 2016.

A gain on bargain purchase is measured as the fair value of the consideration transferred less the net recognised amount (generally fair value) of the identifiable assets acquired and liabilities assumed, all measured as of the acquisition date. The group recognised gain on bargain purchase in the consolidated statement of comprehensive income for the year ended 31 December 2016 of Baht 435 million.

The following summarises the major classes of consideration transferred, and the recognized amounts of assets acquired and liabilities assumed at the acquisition date:

*Consideration transferred*

| | **Fair value** *(in thousand Baht)* |
|---|---|
| Cash | 500,000 |
| Total | 500,000 |

*Identifiable assets acquired and liabilities assumed*

| | **Fair value** *(in thousand Baht)* |
|---|---|
| Cash and cash equivalents | 754,441 |
| Trade account receivables | 128,205 |
| Inventories | 167,970 |
| Other current assets | 57,792 |
| Property, plant and equipment | 955,372 |
| Other non-current assets | 1,790 |
| Trade accounts payable | (26,550) |
| Other current liabilities | (72,818) |
| Other non-current liabilities | (119,806) |
| **Total identifiable net assets** | **1,846,396** |
| *Less* fair value of previously held equity interest | (911,406) |
| **Net assets acquired** | **934,990** |
| Gain on bargain purchase | (434,990) |
| **Purchase consideration transferred** | **500,000** |
| Net cash acquired with the subsidiary | 754,441 |
| Cash paid | (500,000) |
| Net cash inflows | **254,441** |

*Acquisition-related costs*

The Group incurred acquisition-related costs of Baht 0.13 million related to external legal fees which have been included in administrative expenses in the Group's consolidated statement of comprehensive income.

## 6 Related parties

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

Relationships with key management and related parties were as follows:

| **Name of entities** | **Country of incorporation/nationality** | **Nature of relationships** |
|---|---|---|
| Key management personnel | Thailand | Persons having authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any director (whether executive or otherwise) of the Group. |
| TPI Concrete Co., Ltd. | Thailand | Subsidiary, 99.99% shareholding, more than 50% of directors are representatives of the Company |
| TPI Polene Power Public Co., Ltd. | Thailand | Subsidiary, 70.24% shareholding, more than 50% of directors are representatives of the Company (see note 12) |
| TPI All Seasons Co., Ltd. | Thailand | Subsidiary, 99.99% shareholding, more than 50% of directors are representatives of the Company |
| Thai Propoxide Co., Ltd. | Thailand | Subsidiary, 99.99% shareholding, more than 50% of directors are representatives of the Company |
| TPI Polene Bio Organics Co., Ltd. | Thailand | Subsidiary, 99.99% shareholding, more than 50% of directors are representatives of the Company |
| TPI Refinery (1997) Co., Ltd. | Thailand | Subsidiary, 99.99% shareholding, more than 50% of directors are representatives of the Company |
| Thai Nitrate Co., Ltd. | Thailand | Subsidiary, 99.99% shareholding, more than 50% of directors are representatives of the Company (see note 5, and 12) |
| TPI Intertrade Co., Ltd. | Thailand | Subsidiary, 99.97% shareholding, more than 50% of directors are representatives of the Company |

| Name of entities | Country of incorporation/nationality | Nature of relationships |
|---|---|---|
| TPI Commercial Co., Ltd. | Thailand | Subsidiary, 99.94% shareholding, more than 50% of directors are representatives of the Company |
| Zenith International Trading Co., Ltd. | Thailand | Subsidiary, 99.99% shareholding, more than 50% of directors are representatives of the Company |
| TPI Service Co., Ltd. | Thailand | Subsidiary, 95.10% shareholding, more than 50% of directors are representatives of the Company |
| TPI Polene Power Investment Co., Ltd. | Cambodia | Indirect subsidiary, 100% shareholding held by TPI Polene Power Public Co., Ltd., more than 50% of directors are representatives of the Company |
| Polene Plastic Co., Ltd. | Thailand | Indirect subsidiary, 99.99% shareholding held by Zenith International Trading Co., Ltd., more than 50% of directors are representatives of the Company |
| Mondo Thai Co., Ltd. | Thailand | Indirect subsidiary, 28.75% shareholding held by the Company and 54.52% shareholding held by TPI Concrete Co., Ltd., more than 50% of directors are representatives of the Company |
| BUI Life Insurance Public Co., Ltd. | Thailand | Associate, 25.00% shareholding, more than 20% of directors are representatives of the Company |
| United Grain Industry Co., Ltd. | Thailand | Associate, 19.00% shareholding, more than 20% of directors are representatives of the Company |
| Thai Special Steel Industry Public Co., Ltd. | Thailand | Indirect associate, 29.53% shareholding held by TPI Concrete Co., Ltd., more than 20% of directors are representatives of the Company |
| Thai Plastic Film Co., Ltd. | Thailand | Indirect associate, 99.99% shareholding held by United Grain Industry Co., Ltd., more than 20% of directors are representatives of the Company |
| Thai Plastic Products Co., Ltd. | Thailand | Indirect associate, 99.99% shareholding held by United Grain Industry Co., Ltd., more than 20% of directors are representatives of the Company |
| Pornchai Enterprise Co., Ltd. | Thailand | Co-director |
| TPI Holding Co., Ltd. | Thailand | Co-director |
| Leophairatana Enterprise Co., Ltd. | Thailand | Co-director |
| Bangkok Union Insurance Public Co., Ltd. | Thailand | Co-director |
| Lampang Food Products Co., Ltd. | Thailand | Co-director |
| Hong Yiah Seng Co., Ltd. | Thailand | Co-director |
| Saraburi Ginning Mill Co., Ltd. | Thailand | Co-director |
| Thai Petrochemical Industry Co., Ltd. | Thailand | Co-director |
| Rayong Forest Co., Ltd. | Thailand | Co-director |
| Hong Yiah Seng Real Estates and Investment Co., Ltd. | Thailand | Co-director |

The pricing policies for transactions with related parties are explained further below:

| Transactions | Pricing policies |
|---|---|
| Sale of goods | Market price |
| Transportation income | Market price |
| Energy service for electrical manufacturing income | Agreed price |
| Shared service income | Agreed price |
| Purchase of raw materials and spare parts | Market price |
| Purchase of electricity | Referred to market price |
| Purchase of refuse derived fuel (RDF) | Agreed price |
| Purchase of steam | Agreed price |
| Purchase of goods for sales promotion | Market price |

| Transactions | Pricing policies |
|---|---|
| Sales of investment | Book value |
| Interest income | MLR-1.5% |
| Interest expense | 1.5% and MLR-1.5% |
| Insurance premium | Market price |
| Paper bag production charge | 2.0 - 2.6 Baht per bag |

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

*(in thousand Baht)*

| *Year ended 31 December* | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| **Subsidiaries** | | | | |
| Sales of goods | - | - | 10,238,728 | 9,981,124 |
| Transportation income | - | - | 186,576 | 227,277 |
| Purchase of raw materials and spare parts | - | - | 3,552,908 | 2,718,785 |
| Purchase of electricity | - | - | 570,263 | 519,152 |
| Purchase of refuse derived fuel (RDF) | - | - | - | 7,165 |
| Purchase of steam | - | - | 35,111 | 26,723 |
| Purchase of goods for sales promotion | - | - | 1,614 | 3,739 |
| Sales of investment (see note 12) | - | - | - | 97,993 |
| Dividend income | - | - | 3,257,155 | 3,153,305 |
| Interest income | - | - | 71,519 | 175,523 |
| Interest expense | - | - | 3,362 | 7,557 |
| Other income | - | - | 189,418 | 220,587 |
| Administrative expenses | - | - | 71,627 | 62,241 |
| **Joint venture** | | | | |
| Sales of goods | - | 277 | - | 277 |
| Purchase of raw materials | - | 24,920 | - | 24,920 |
| Other income | - | 498 | - | 498 |
| **Associates** | | | | |
| Sale of goods | 25,344 | 55,474 | 25,017 | 55,199 |
| Transportation income | 5 | - | 5 | - |
| Purchase of raw materials | 632,887 | 639,309 | 583,002 | 611,570 |
| Other income | 27 | - | 27 | - |
| Insurance premium | 19,405 | 16,288 | 13,870 | 12,066 |
| Administrative expenses | 2,992 | 1,073 | 1,426 | - |
| **Other related parties** | | | | |
| Sales of goods | 1,063 | 2,684 | 192 | 1,547 |
| Transportation income | - | 226 | - | 226 |
| Other income | 121 | 114 | 120 | 114 |
| Insurance premium | 165,174 | 166,541 | 108,102 | 120,767 |
| Administrative expenses | 104,849 | 102,091 | 91,425 | 88,859 |
| **Key management personnel** | | | | |
| Key management personnel compensation | | | | |
| Short-term employee benefits | 390,871 | 367,889 | 320,815 | 324,542 |
| Post-employment benefits | 14,898 | 15,984 | 10,208 | 14,431 |
| **Total key management personnel compensation** | **405,769** | **383,873** | **331,023** | **338,973** |

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

*(in thousand Baht)*

| *Trade accounts receivable - related parties* | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| **Subsidiaries** | | | | |
| TPI Concrete Co., Ltd. | - | - | 555,875 | 304,119 |
| TPI Polene Power Public Co., Ltd. | - | - | 64,041 | 14,566 |
| TPI All Seasons Co., Ltd. | - | - | 215,366 | 153,891 |
| Polene Plastic Co., Ltd. | - | - | 1,062,508 | 874,328 |
| TPI Polene Bio Organics Co., Ltd. | - | - | 12,006 | 9,886 |
| TPI Commercial Co., Ltd. | - | - | 2,776 | 1,283 |
| Thai Nitrate Co., Ltd. | - | - | 78 | 86 |
| **Associates** | | | | |
| BUI Life Insurance Public Co., Ltd. | 12 | 6 | - | - |
| United Grain Industry Co., Ltd. | 18 | 41 | 11 | 20 |
| Thai Plastic Products Co., Ltd. | 7,592 | 1,525 | 7,592 | 1,525 |
| **Other related parties** | | | | |
| Bangkok Union Insurance Public Co., Ltd. | 24 | 29 | 5 | 5 |
| Pornchai Enterprise Co., Ltd. | 96 | 113 | 49 | 73 |
| Lampang Food Products Co.,Ltd. | 3 | 3 | 3 | 3 |
| Rayong Forest Co., Ltd. | 824 | 338 | - | - |
| Leophairatana Enterprise Co., Ltd. | 37 | 87 | - | - |
| **Total** | **8,606** | **2,142** | **1,920,310** | **1,359,785** |

*(in thousand Baht)*

| *Loans to related parties* | Interest rate | | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 |
| | *(% per annum)* | | | | | |
| **Subsidiaries** | | | | | | |
| TPI Polene Power Public Co., Ltd. | MLR-1.5 | MLR-1.5 | - | - | - | 4,528,846 |
| TPI Polene Bio Organics Co., Ltd.* | MLR-1.5 | MLR-1.5 | - | - | 226,211 | 70,037 |
| TPI All Seasons Co., Ltd.* | MLR-1.5 | MLR-1.5 | - | - | 44,153 | 41,153 |
| TPI Intertrade Co., Ltd. | MLR-1.5 | MLR-1.5 | - | - | 2,889 | 1,412 |
| TPI Service Co., Ltd. | MLR-1.5 | MLR-1.5 | - | - | - | 1,000 |
| | | | - | - | 273,253 | 4,642,448 |
| Accrued interest receivable | | | - | - | 1,323 | 1,796 |
| **Total** | | | **-** | **-** | **274,576** | **4,644,244** |

* Please see Note 12 impairment assessment for loan to and investment in subsidiaries

As at 31 December 2017, all short-term loans to related parties are promissory notes which have repayment schedules on demand.

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

*(in thousand Baht)*

| *Loans to related parties* | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| **Subsidiaries** | | | | |
| At 1 January | - | - | 4,642,448 | 3,371,302 |
| Increase | - | - | 3,065,206 | 6,331,692 |
| Decrease | - | - | (7,434,401) | (5,060,546) |
| **At 31 December** | **-** | **-** | **273,253** | **4,642,448** |

***Receivables and advances to related parties - current***

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| **Subsidiaries** | | | | |
| TPI Concrete Co., Ltd. | - | - | 3,070 | 3,436 |
| TPI Polene Power Public Co., Ltd. | - | - | 42,060 | 104,351 |
| TPI All Seasons Co., Ltd. | - | - | 11,889 | 20,257 |
| TPI Refinery (1997) Co., Ltd. | - | - | 64 | - |
| Polene Plastic Co., Ltd. | - | - | 5,189 | 7,953 |
| TPI Polene Bio Organics Co., Ltd. | - | - | 48,600 | 43,979 |
| TPI Commercial Co., Ltd. | - | - | 133 | 151 |
| TPI Service Co., Ltd. | - | - | 144 | 226 |
| Thai Nitrate Co., Ltd. | - | - | 165 | 163 |
| Zenith International Trading Co., Ltd. | - | - | 64 | 60 |
| Mondo Thai Co., Ltd. | - | - | 507 | 460 |
| **Associates** | | | | |
| BUI Life Insurance Public Co., Ltd. | 4,985 | 4,161 | 4,368 | 3,712 |
| United Grain Industry Co., Ltd. | 3,805 | 3,203 | 46 | - |
| **Other related parties** | | | | |
| Bangkok Union Insurance Public Co., Ltd. | 48,070 | 45,608 | 30,259 | 33,815 |
| Pornchai Enterprise Co., Ltd. | 991 | 1,181 | 430 | 416 |
| Rayong Forest Co., Ltd. | 76 | 67 | 76 | 67 |
| Saraburi Ginning Mill Co., Ltd. | - | 1 | - | - |
| **Total** | **57,927** | **54,221** | **147,064** | **219,046** |

***Receivables and advances to related parties - non-current***

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| **Subsidiary** | | | | |
| Thai Propoxide Co., Ltd. | - | - | 421,984 | 421,984 |

In 1997, the Company entered into an agreement to sell land to Thai Propoxide Co., Ltd. (a subsidiary) at the price of Baht 477 million, in consideration for a loan payable by August 2000, with interest of 16%. No payments of principal or interest were subsequently made by the subsidiary and consequently the Company deferred recording the gain on the sale land of Baht 40 million and interest income of Baht 155 million in income, and ceased accrued interest. The deferred gain and interest income are disclosed as non-current liabilities in the statement of financial position of the separate financial statements.

The subsidiary used the land as collateral for a bank loan, the proceeds of which were subsequently loaned to the Company. In 2000 the subsidiary's bank loan was assigned to the Company. Subsequently, in 2011, the land has been released by the bank as collateral and the subsidiary has sold a part of land to the Company and repaid a part of the land loan to the Company of Baht 68 million.

At 31 December 2017, the outstanding amount of accounts receivable from the subsidiary from the sale of land total Baht 422 million and the deferred gain on the sale of Baht 35 million and deferred interest income of Baht 134 million in the statement of financial position of the separate financial statements.

***Trade accounts payable - related parties***

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| **Subsidiaries** | | | | |
| TPI Polene Power Public Co., Ltd. | - | - | 8,949 | 4,210 |
| Polene Plastic Co., Ltd. | - | - | 658,669 | 782,721 |
| TPI Polene Bio Organics Co., Ltd. | - | - | 270 | 979 |
| Thai Nitrate Co., Ltd. | - | - | 6,051 | 8,389 |
| **Associate** | | | | |
| United Grain Industry Co., Ltd. | 1,421 | 907 | - | 8 |
| Thai Plastic Film Co., Ltd. | 65,216 | 56,119 | 65,041 | 55,682 |
| Thai Plastic Products Co., Ltd. | 97,700 | 71,890 | 92,436 | 66,982 |
| **Total** | **164,337** | **128,916** | **831,416** | **918,971** |

***Short-term loans from related parties***

*(in thousand Baht)*

| | Interest rate | | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 |
| | *(% per annum)* | | | | | |
| **Subsidiaries** | | | | | | |
| Thai Nitrate Co., Ltd. | 1.5 | MLR-1.5 | - | - | 320,000 | - |
| TPI Refinery (1997) Co., Ltd. | MLR-1.5 | - | - | - | 55,000 | - |
| | | | - | - | 375,000 | - |
| Accrued interest payable | | | - | - | 627 | - |
| **Total** | | | **-** | **-** | **375,627** | **-** |

As at 31 December 2017, short-term loan from related party is promissory note which has repayment schedules on demand.

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

*(in thousand Baht)*

| ***Short-term loans from related parties*** | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| **Subsidiaries** | | | | |
| At 1 January | - | - | - | - |
| Increase | - | - | 733,000 | 1,509,408 |
| Decrease | | | | |
| | - | - | (358,000) | (1,509,408) |
| **At 31 December** | **-** | **-** | **375,000** | **-** |
| ***Payables and advances from related parties*** | | | | |
| **Subsidiaries** | | | | |
| TPI Concrete Co., Ltd. | - | - | 2,640 | 2,808 |
| TPI Polene Power Public Co., Ltd. | - | - | 85,686 | 63,693 |
| TPI All Seasons Co., Ltd. | - | - | 7,965 | 5,728 |
| Polene Plastic Co., Ltd. | - | - | - | 24 |
| TPI Polene Bio Organics Co., Ltd. | - | - | 1,178 | 14 |
| **Associates** | | | | |
| BUI Life Insurance Public Co., Ltd. | 22 | - | 22 | - |
| United Grain Industry Co., Ltd. | 2,098 | 1,865 | - | 29 |
| Thai Special Steel Industry Public Co., Ltd. | - | 840 | - | 840 |
| Thai Plastic Film Co., Ltd. | 675 | 514 | 525 | 454 |
| Thai Plastic Products Co., Ltd. | 120 | 100 | - | - |
| **Other related parties** | | | | |
| Pornchai Enterprise Co., Ltd. | 7,600 | 9,526 | 7,298 | 8,976 |
| Bangkok Union Insurance Public Co., Ltd. | 13,504 | 13,333 | 4,546 | 5,569 |
| Hong Yiah Seng Co., Ltd. | 13 | 2,335 | 13 | 2,335 |
| **Total** | **24,032** | **28,513** | **109,873** | **90,470** |

***Significant agreements with related parties***

***(a) Office building lease agreements***

The Company and its subsidiary have long-term office building lease agreements with a related company. Previously, the initial lease term for each lease agreement was for 3 years, with the lease being renewable. In July 1999, the Company and a subsidiary entered into a 90 years office building lease agreement with a related company to replace the expired original office building lease agreements in which the Company and a subsidiary made one payment for the whole lease period (the total rental for the 90 years term of the lease is Baht 40,000 per square meter, equivalent to a monthly rental, before discounting cash flows, of Baht 37 per square meter). The annual rental is deducted from the prepaid rentals. Subsequently, on 24 July 2001, the Company and its subsidiary agreed to sign the amendments in addition to the existing office building lease agreements with a related company. The initial period of the lease is for 30 years, commencing from the original date on which the rentals of each respective

agreement were prepaid. The related party warranted that the lease would be renewable for another 2 subsequent periods of 30 years under the same conditions, including rental fee as set out in the original agreements.

On 25 August 2006, the Company and its subsidiary registered the lease with the Land Department.

Significant details of long-term office building lease agreements with a related company as at 31 December were as follows:

*(in thousand Baht)*

| Type of agreement | Prepaid rentals | Remaining prepaid rentals 2017 | 2016 |
|---|---|---|---|
| **The Company** | | | |
| 30 years lease agreement | | | |
| (3 years for original agreement) | 143,517 | 107,402 | 108,997 |
| 30 years lease agreement | | | |
| (90 years for original agreement) | 29,669 | 23,405 | 23,735 |
| | 173,186 | 130,807 | 132,732 |
| **Subsidiary** | | | |
| 30 years lease agreement | | | |
| (3 years for original agreement) | 47,000 | 35,040 | 35,560 |
| 30 years lease agreement | | | |
| (90 years for original agreement) | 11,659 | 9,198 | 9,327 |
| | 58,659 | 44,238 | 44,887 |
| **Total** | **231,845** | **175,045** | **177,619** |

Should either party terminate the lease agreement, the unused prepaid rentals are refundable to the Companies. Both parties agreed in principle to execute a mortgage on the office building as security for the unused prepaid rentals. As at 31 December 2017, there was no mortgage agreement as security for the unused prepaid rentals, so the recoverability of prepaid rentals depends on the ability of the related company to repay.

### *(b) Electricity supply agreement*

The Company entered into an electricity supply contract with a subsidiary company, to provide the waste heat to the subsidiary that will be used in the manufacturing process for electricity. The subsidiary company shall supply the electricity to the 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) Land lease agreement*

The Company and its subsidiaries entered into several land and office building space lease agreements with related parties for 3 years and 30 years as stated in each agreement. The details as at 31 December were as follows:

*(in thousand Baht)*

| | **Consolidated financial statements** | | **Separate financial statements** | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| ***Non-cancellable operating lease commitments*** | | | | |
| Within one year | 72,446 | 87,115 | 50,081 | 63,158 |
| After one year but within five years | 62,574 | 95,971 | 31,581 | 46,472 |
| After five years | 136,025 | 162,433 | 13,860 | 20,578 |
| **Total** | **271,045** | **345,519** | **95,522** | **130,208** |

The Company and subsidiaries had made several land rental agreements with its related parties which specified that lessee has to decommission the assets from rental area at the end of contract, causing lessee to set up the decommissioning costs as at 31 December 2017 in amount of Baht 121.3 million *(2016: Baht 108.7 million)*.

As at 31 December 2017, the Company has guaranteed bank credit facilities and mortgaged land which was obligated by the Company as collateral on behalf of its subsidiary of Baht 117.5 million *(2016: Baht 117.5 million)*.

## 7 Cash and cash equivalents

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Cash on hand | 7,929 | 10,042 | 5,149 | 6,618 |
| Cash at banks - current accounts | 45,573 | 149,137 | 30,584 | 105,264 |
| Cash at banks - savings accounts | 2,434,143 | 1,679,637 | 1,548,603 | 1,121,617 |
| Cash at banks - savings accounts (private fund) | 5,034 | - | 159 | - |
| Highly liquid short-term investments | 426,301 | 1,626,779 | 326,300 | 1,318,774 |
| **Total** | **2,918,980** | **3,465,595** | **1,910,795** | **2,552,273** |

## 8 Other investments

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| ***Current investments*** | | | | |
| Fixed deposits with financial institutions | 866,191 | 73,500 | 15,500 | 15,500 |
| Equity securities held for trading (Mutual Fund) | 100,113 | - | - | - |
| Debt securities held for trading | 200,307 | - | - | - |
| Debt securities held for trading (Private fund) | 2,623,556 | 2,169 | 104 | 2,169 |
| | **3,790,167** | **75,669** | **15,604** | **17,669** |
| ***Other long-term investments*** | | | | |
| Equity securities available-for-sale | 429 | 292 | 429 | 292 |
| Other non-marketable equity securities | 1,596 | 1,596 | 1,596 | 1,596 |
| Other debt securities held-to-maturity | 34,128 | 34,229 | 17,028 | 17,055 |
| | **36,153** | **36,117** | **19,053** | **18,943** |
| **Total** | **3,826,320** | **111,786** | **34,657** | **36,612** |

The Group set up private funds which are managed by 2 independent assets management companies. Those private funds have invested in fixed deposits with the financial institutions and debt securities which had high liquidity and rating as investment grade. As at 31 December 2017, value of private funds in the consolidated and separate financial statements totalling Baht 2,634 million and Baht 0.3 million, respectively. *(2016: Baht 2 million and Baht 2 million, respectively)*.

During 2017, a subsidiary entered into CIMB-Principal Daily Income Plus Fund (CIMB - PRINCIPAL DPLUS), to invest in onshore and offshore debt, financial instrument and/or cash deposits, rating of the instrument or issuer is at an investment grade. A subsidiary purchased 10 million units or amounting to Baht 100 million which its fair value as at 31 December 2017 is Baht 100 million *(31 December 2016: Nil)*.

Deposits at financial institutions and other debt securities held-to-maturity of the Group and the Company are pledged as collateral of Baht 27 million and Baht 17 million, respectively *(2016: Baht 27 million and Baht 17 million, respectively)*.

Movements during the years ended 31 December of marketable equity securities were as follows:

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| **Equity/debt securities held for trading** | | | | |
| At 1 January | 2,169 | 529,958 | 2,169 | 529,958 |
| Increase (Decrease) | 2,918,562 | (527,813) | (2,065) | (527,813) |
| Valuation adjustment | 3,245 | 24 | - | 24 |
| **At 31 December** | **2,923,976** | **2,169** | **104** | **2,169** |
| **Equity securities available-for-sale** | | | | |
| At 1 January | 292 | 262 | 292 | 262 |
| Valuation adjustment | 137 | 30 | 137 | 30 |
| **At 31 December** | **429** | **292** | **429** | **292** |

## 9 Trade accounts receivable

*(in thousand Baht)*

| | Note | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|---|
| | | 2017 | 2016 | 2017 | 2016 |
| Related parties | 6 | 8,606 | 2,142 | 1,920,310 | 1,359,785 |
| Other parties | | 3,190,874 | 3,139,617 | 847,737 | 812,228 |
| **Total** | | **3,199,480** | **3,141,759** | **2,768,047** | **2,172,013** |
| *Less* allowance for doubtful | | (122,612) | (126,982) | (73,497) | (51,406) |
| **Net** | | **3,076,868** | **3,014,777** | **2,694,550** | **2,120,607** |
| Bad and doubtful debts expense for the year (Reversal of) | | **13,538** | **9,833** | **24,898** | **(60)** |

Aging analyses for trade accounts receivable were as follows:

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| **Related parties** | 2017 | 2016 | 2017 | 2016 |
| Within credit terms | 8,519 | 2,109 | 990,098 | 887,705 |
| Overdue: | | | | |
| Less than 3 months | 69 | 12 | 788,275 | 383,024 |
| 3 - 6 months | - | 16 | 54,713 | 37,662 |
| 6 - 12 months | 13 | - | 75,122 | 51,116 |
| Over 12 months | 5 | 5 | 12,102 | 278 |
| | **8,606** | **2,142** | **1,920,310** | **1,359,785** |
| *Less* allowance for doubtful accounts | - | - | - | - |
| | **8,606** | **2,142** | **1,920,310** | **1,359,785** |
| **Other parties** | | | | |
| Within credit terms | 2,864,286 | 2,841,741 | 704,350 | 694,793 |
| Overdue: | | | | |
| Less than 3 months | 190,506 | 152,664 | 69,115 | 62,929 |
| 3 - 6 months | 8,722 | 6,042 | 347 | 3,388 |
| 6 - 12 months | 2,441 | 3,465 | 1,190 | 400 |
| Over 12 months | 124,919 | 135,705 | 72,735 | 50,718 |
| | **3,190,874** | **3,139,617** | **847,737** | **812,228** |
| *Less* allowance for doubtful accounts | (122,612) | (126,982) | (73,497) | (51,406) |
| | **3,068,262** | **3,012,635** | **774,240** | **760,822** |
| **Net** | **3,076,868** | **3,014,777** | **2,694,550** | **2,120,607** |

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

The normal credit term granted by the Group ranges from 30 days to 360 days.

## 10 Inventories

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Finished goods | 3,173,023 | 2,669,122 | 1,938,532 | 1,459,806 |
| Work in process | 4,394,296 | 2,609,860 | 4,314,919 | 2,523,113 |
| Raw materials and chemicals | 1,530,826 | 1,759,788 | 1,354,951 | 1,595,575 |
| Packages | 417,785 | 440,023 | 338,122 | 363,156 |
| Oil and coal | 747,932 | 1,226,280 | 740,786 | 1,219,506 |
| Spare parts and general supplies | 2,897,314 | 2,909,085 | 2,412,482 | 2,495,027 |
| Goods in transit | 262,756 | 279,954 | 14,912 | 127,602 |
| | **13,423,932** | **11,894,112** | **11,114,704** | **9,783,785** |
| Less allowance for decline in value | (290,472) | (170,037) | (31,393) | - |
| **Net** | **13,133,460** | **11,724,075** | **11,083,311** | **9,783,785** |
| Inventories recognised as an expense in cost of sales of goods | | | | |
| - Cost | 24,371,272 | 24,189,625 | 20,227,376 | 19,688,689 |
| - Write-down to net realisable value | 123,984 | 126,089 | 31,393 | 29,925 |
| **Net** | **24,495,256** | **24,315,714** | **20,258,769** | **19,718,614** |

## 11 Investments in associates and joint venture

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| **Associates** | | | | |
| At 1 January | 722,495 | 696,932 | 229,500 | 229,500 |
| Share of net profit of investments in associates | 19,742 | 22,485 | - | - |
| Share of other comprehensive income (loss) of investments in associates | 3,628 | 3,078 | - | - |
| **At 31 December** | **745,865** | **722,495** | **229,500** | **229,500** |
| **Joint venture** | | | | |
| At 1 January | - | 885,770 | - | 284,409 |
| Share of net profit (loss) of investment in joint venture | - | 25,636 | - | - |
| Reclassification to subsidiary (see note 12) | - | (911,406) | - | (284,409) |
| **At 31 December** | **-** | **-** | **-** | **-** |
| **Total** | | | | |
| At 1 January | 722,495 | 1,582,702 | 229,500 | 513,909 |
| Share of net profit of investments in associates and joint venture | 19,742 | 48,121 | - | - |
| Share of other comprehensive income (loss) of investments in associates and joint venture | 3,628 | 3,078 | - | - |
| Reclassification to subsidiary (see note 12) | - | (911,406) | - | (284,409) |
| **At 31 December** | **745,865** | **722,495** | **229,500** | **229,500** |

The Group has not recognised loss relating to an investment in an indirect associate accounted for using the equity method where its share of loss exceeds the carrying amount of its investment. As at 31 December 2017, the Group's cumulative share of unrecognized loss was Baht 981 million *(2016: Baht 978 million)*, of which the Group's share of loss for the year ended 31 December 2017 was Baht 3 million *(2016: Baht 3 million)*. The Group has no obligation in respect of this loss.

Investments in associates as at 31 December were as follows:

| | Consolidated financial statements | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Ownership interest | | Paid-up Capital | | Cost | | Equity method | |
| | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 |
| | *(%)* | | | | *(in thousand Baht)* | | | |
| ***Associates*** | | | | | | | | |
| BUI Life Insurance Public Co., Ltd. | 25.00 | 25.00 | 500,000 | 500,000 | 125,000 | 125,000 | 133,112 | 132,650 |
| United Grain Industry Co., Ltd. | 19.00 | 19.00 | 550,000 | 550,000 | 104,500 | 104,500 | 612,753 | 589,845 |
| | | | | | 229,500 | 229,500 | 745,865 | 722,495 |
| ***Indirect associate*** | | | | | | | | |
| Thai Special Steel Industry Public Co., Ltd. | 29.53 | 29.53 | 4,220,000 | 4,220,000 | 1,246,200 | 1,246,200 | - | - |
| **Total** | | | | | **1,475,700** | **1,475,700** | **745,865** | **722,495** |

| | Separate financial statements | | | | | |
|---|---|---|---|---|---|---|
| | Ownership interest | | Paid-up Capital | | Cost | |
| | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 |
| | *(%)* | | | | *(in thousand Baht)* | |
| ***Associates*** | | | | | | |
| BUI Life Insurance Public Co., Ltd. | 25.00 | 25.00 | 500,000 | 500,000 | 125,000 | 125,000 |
| United Grain Industry Co., Ltd. | 19.00 | 19.00 | 550,000 | 550,000 | 104,500 | 104,500 |
| **Total** | | | | | **229,500** | **229,500** |

No dividend distribution from investments in associates and joint venture held by the Group and the Company during years ended 31 December 2017 and 2016.

None of the Group's and the Company's associates and joint venture are publicly listed and consequently do not have published price quotations.

The following table summarises the financial information of the joint venture as included in their own financial statements. The table also reconciles the summarized financial information to the carrying amount of the Group's interest in this company.

| | *(in thousand Baht)* |
|---|---|
| | **Thai Nitrate Co.,Ltd.** |
| | 2016 |
| Revenue | 645,111 |
| Profit from continuing operations | 58,048 |
| Other comprehensive income (loss) | (6,120) |
| **Total comprehensive income (loss)** | **51,928** |
| Attributable to investee's shareholders | 51,928 |
| Current assets | 1,108,408 |
| Non-current assets | 957,162 |
| Current liabilities | (99,368) |
| Non-current liabilities | (119,806) |
| **Net assets** | **1,846,396** |
| Attributable to investee's shareholders | 1,846,396 |
| Group's interest in net assets of investee at 1 January | 885,770 |
| Total comprehensive income (loss) attributable to the Group | 25,964 |
| Group's interest in net assets of investee at end of year | 911,734 |
| Elimination of unrealised profit on upstream sales (purchases of goods from joint venture) | (328) |
| Reclassify to subsidiary (see note 12) | (911,406) |
| **Carrying amount of interest in investee at 31 December** | **-** |

In 2017, there was no material joint venture due to reclassification to subsidiary (see note 5).

*Immaterial associates*

The following is summarized financial information for the Group's interest in immaterial associates based on the amounts reported in the Group's consolidated financial statements:

| | *(in thousand Baht)* | |
|---|---|---|
| | Immaterial Associates | |
| | 2017 | 2016 |
| Carrying amount of interests in immaterial associates | **745,865** | **722,495** |
| Group's share of: | | |
| - Profit from continuing operations | 19,742 | 22,485 |
| - Other comprehensive income (loss) | 3,628 | 3,078 |
| **- Total comprehensive income (loss)** | **23,370** | **25,563** |

## 12 Investments in subsidiaries

| | *(in thousand Baht)* | |
|---|---|---|
| | **Separate financial statements** | |
| | 2017 | 2016 |
| At 1 January | 13,199,596 | 8,675,639 |
| Increase | 3,600 | 3,858,000 |
| Decrease | - | (118,452) |
| Gain control of joint venture (see note 5) | - | 784,409 |
| | 13,203,196 | 13,199,596 |
| Less allowance for impairment of investments | (562,250) | (382,250) |
| **At 31 December** | **12,640,946** | **12,817,346** |

*TPI Refinery (1997) Co., Ltd.*

On 29 January 2016, the Company's Board of Directors's meeting passed the resolution to approve payment for increasing of share capital in TPI Refinery (1997) Co., Ltd. with fully paid up of 129.90 million ordinary shares at par value of Baht 10 each, in the amount of Baht 1,299 million which was fully paid to the subsidiary in February 2016.

*TPI Concrete Co., Ltd.*

On 29 April 2016, the Company's Board of Directors's meeting passed the resolution to approve payment for increasing of share capital in TPI Concrete Co., Ltd. with fully paid up of 11.60 million ordinary shares at par value of Baht 100 each in the amount of Baht 1,160 million which were fully paid to the subsidiary in May 2016.

*TPI Polene Bio Organics Co., Ltd.*

On 29 April 2016, the Company's Board of Directors's meeting passed the resolution to approve payment for increasing of share capital in TPI Polene Bio Organics Co., Ltd. with fully paid up of 13.00 million ordinary shares at par value of Baht 100 each in the amount of Baht 1,300 million which were fully paid to the subsidiary in May 2016.

*Polene Plastic Co., Ltd.*

On 15 July 2016, the Company sold 99,993 shares of Polene Plastic Co., Ltd. or equivalent to 99.99% of the paid-up share capital at the price of Baht 980 per share, in the amount of Baht 97.99 million to a subsidiary.

*Zenith International Trading Co., Ltd.*

On 29 July 2016, the Company's Board of Directors's meeting passed the resolution to approve payment for increasing of share capital in Zenith International Trading Co., Ltd. with fully paid up of 990,000 ordinary shares at par value of Baht 100 each, in the amount of Baht 99 million which was fully paid to the subsidiary in August 2016.

*Thai Nitrate Co., Ltd.*

On 2 August 2016, the Company purchased 2,343,750 ordinary shares of Thai Nitrate Co., Ltd. from the group of foreign company in the total amount of Baht 500 million. As a consequence, the Company's interest in such company increased from 50% to 99.99% of the paid-up share capital, and the status of that company has changed from a joint venture to a subsidiary (see note 5).

*Mondo Thai Co., Ltd.*

During 2016, the Group made an additional investment by acquiring 2,000 shares or equivalent to 5.55% of the paid-up share capital at the price of Baht 2,000 per share, in the amount of Baht 4.00 million from other parties via a direct subsidiary. As a result, the Group's equity interest in that company increased from 77.72% to 83.27% of the paid-up share capital.

*TPI Service Co., Ltd.*

On 31 August 2017, the Company's Board of Directors's meeting passed the resolution to approve payment for increasing of share capital in TPI Service Co., Ltd. with 40% paid up of 9,000 ordinary shares at par value of Baht 100 each, in the amount of Baht 3.60 million which was paid to the subsidiary in October 2017. As a result, the Group's equity interest in that company increased from 51.00% to 95.10% of the paid-up share capital.

***Initial public offering of TPI Polene Power Public Co., Ltd. ordinary shares***

In March 2017, TPI Polene Power Public Co., Ltd. completed its Initial Public Offering by issuing 2,500 million new ordinary shares with an offering price of Baht 7 per share (par value of Baht 1 per share) on the Stock Exchange of Thailand. As a result of Initial Public Offering, the Group's ownership interest in TPI Polene Power Public Co., Ltd. decreased from 100.00% to 70.2544% which 70.2381% and 0.0163% shareholding held by the Company and its subsidiaries, respectively.

Details of the change in shareholders' equity are as follows:

*(in thousand Baht)*

| | **Consolidated financial statements** |
|---|---|
| Consideration received | 17,500,000 |
| *Less* Transaction costs from issuance of TPI Polene Power Public Co.,Ltd. ordinary shares | (419,114) |
| *Less* Cash outflow by subsidiary for purchasing TPI Polene Power Public Co., Ltd. ordinary shares | (9,597) |
| **Net** | **17,071,289** |
| Dilution of ownership interest to non-controlling interest | (7,283,796) |
| **Change in equity** | **9,787,493** |

Investments in subsidiaries as at 31 December 2017 and 2016, dividend income from those investments for the years then ended, were as follows:

| | Separate financial statements | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ownership interest | | Paid-up capital | | Cost | | Impairment | | At cost - net | | Dividend income | |
| | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 |
| | (%) | | | | (in thousand Baht) | | | | | | | |
| ***Subsidiaries*** | | | | | | | | | | | | |
| TPI Concrete Co., Ltd. | 99.99 | 99.99 | 2,000,000 | 2,000,000 | 1,999,999 | 1,999,999 | - | - | 1,999,999 | 1,999,999 | - | - |
| TPI Polene Power Public Co., Ltd. | 70.24 | 99.99 | 8,400,000 | 5,900,000 | 5,899,999 | 5,899,999 | - | - | 5,899,999 | 5,899,999 | 3,127,000 | 2,551,750 |
| TPI All Seasons Co., Ltd. | 99.99 | 99.99 | 450,000 | 450,000 | 450,000 | 450,000 | - | - | 450,000 | 450,000 | - | - |
| TPI Polene Bio Organics Co., Ltd. | 99.99 | 99.99 | 3,300,000 | 2,000,000 | 2,654,400 | 2,654,400 | (562,000) | (382,000) | 2,092,400 | 2,272,400 | - | - |
| TPI Refinery (1997) Co., Ltd. | 99.99 | 99.99 | 1,300,000 | 1,300,000 | 1,299,620 | 1,299,620 | - | - | 1,299,620 | 1,299,620 | - | - |
| Thai Propoxide Co., Ltd. | 99.99 | 99.99 | 250 | 250 | 250 | 250 | (250) | (250) | - | - | - | - |
| Thai Nitrate Co., Ltd. | 99.99 | 99.99 | 468,750 | 468,750 | 784,409 | 784,409 | - | - | 784,409 | 784,409 | 80,156 | 501,562 |
| Zenith International Trading Co., Ltd. | 99.99 | 99.99 | 100,000 | 100,000 | 99,712 | 99,712 | - | - | 99,712 | 99,712 | 49,999 | - |
| TPI Intertrade Co., Ltd. | 99.97 | 99.97 | 100 | 100 | - | - | - | - | - | - | - | - |
| TPI Commercial Co., Ltd. | 99.94 | 99.94 | 100 | 100 | - | - | - | - | - | - | - | - |
| TPI Service Co., Ltd. | 95.10 | 51.00 | 4,600 | 1,000 | 4,457 | 857 | - | - | 4,457 | 857 | - | - |
| Mondo Thai Co., Ltd. | 28.75 | 28.75 | 36,000 | 36,000 | 10,350 | 10,350 | - | - | 10,350 | 10,350 | - | - |
| Polene Plastic Co., Ltd. | - | - | - | - | - | - | - | - | - | - | - | 99,993 |
| **รวม** | | | | | **13,203,196** | **13,199,596** | **(562,250)** | **(382,250)** | **12,640,946** | **12,817,346** | **3,257,155** | **3,153,305** |

None of the Company's subsidiaries are publicly listed and consequently do not have published price quotations, except for TPI Polene Power Public Co., Ltd. which is listed on the Stock Exchange of Thailand. Based on the closing price of Baht 8.15 at 31 December 2017, the fair value of the Company's investment in TPI Polene Power Public Co., Ltd. was Baht 48,085 million *(2559: none of the Company's subsidiaries are publicly listed)*.

**Impairment assessment for loan to and investment in a subsidiaries**

The Company has assessed the recoverable amount of investment in TPI Polene Bio Organics Co., Ltd. and TPI All Seasons Co., Ltd. by determining discounted future cash flows. The key assumptions used to determine recoverable amount included sale volume and selling price, long-term growth rate derived from expectations of future outcomes taking into account past experience, adjusted for anticipated revenue growth and discount rate referred to weighted average cost of capital (WACC) of TPI Polene Bio Organics Co., Ltd. and TPI All Seasons Co., Ltd. at 10.90 % and 11.17 %, respectively. Base on impairment assessment, the Company recognised loss on impairment of investment in TPI Polene Bio Organics Co., Ltd. amounting to Baht 180 million in 2017 financial statements. As at 31 December 2017, allowance for impairment of investment in TPI Polene Bio Organics Co., Ltd. is Baht 562 million.

## 13 Long-term investments in related parties

| | Type of business | Relationship | Ownership interest | | Paid-up Capital | | Consolidated and Separate finanacial statements | |
|---|---|---|---|---|---|---|---|---|
| | | | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 |
| | | | (%) | | (in thousand Baht) | | | |
| ***Related parties*** | | | | | | | | |
| Pornchai Enterprise Co., Ltd. | Real estate and service rental | Shareholder | 0.65 | 0.65 | 4,599,920 | 4,599,920 | 45,653 | 45,653 |
| TPI Holding Co., Ltd. | Holding company | Shareholder | 0.001 | 0.001 | 4,044,573 | 4,044,573 | 217 | 217 |
| **Total** | | | | | | | **45,870** | **45,870** |

## 14 Investment properties

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| ***Cost*** | | | | |
| At 1 January | 627,203 | 634,519 | 514,605 | 447,528 |
| Additions | - | 4,211 | - | - |
| Decreases | - | (11,527) | - | (802) |
| Reclassification from (to) property, plant and equipments | (236,809) | - | (440,561) | 67,879 |
| **At 31 December** | **390,394** | **627,203** | **74,044** | **514,605** |
| ***Depreciation and impairment losses*** | | | | |
| At 1 January | 15,263 | 18,137 | - | - |
| Depreciation charge for the year | 1,000 | 1,000 | - | - |
| (Reversal of) impairment losses | (557) | (3,874) | - | - |
| **At 31 December** | **15,706** | **15,263** | **-** | **-** |
| ***Net book value*** | | | | |
| **At 1 January** | **611,940** | **616,382** | **514,605** | **447,528** |
| **At 31 December** | **374,688** | **611,940** | **74,044** | **514,605** |

The fair value of investment properties of the Group and the Company as at 31 December 2017 of Baht 689 million and Baht 75 million, respectively *(2016: Baht 892 million and Baht 602 million, respectively)* was determined by independent professional valuers, at open market values on an existing use basis. The fair value measurement for investment property has been categorised as a Level 3 fair value.

Investment properties include land for rent, freehold land and condominiums.

**Measurement of fair value**

*Fair value hierarchy*

The fair value of investment property was determined by external, independent property valuers, having appropriate recognised professional qualifications and recent experience in the location and category of the property being valued. The valuers provide the fair value of the Group's investment property portfolio on a regular basis.

The fair value measurement of all investment property has been catergorised as level 3 fair value based on the inputs to the valuation technique used.

*Valuation technique and significant unobservable inputs*

The following table shows the valuation technique used in measuring the fair value of investment property, as well as the significant unobservable inputs used.

| Valuation technique | Significant Unobservable inputs |
|---|---|
| Discounted cash flows; The valuation model considers the present value of net cash flows to be generated from the property, taking into account expected rental growth rate. The expected net cash flows are discounted using risk-adjusted discount rates. Among other factors, the discount rate estimation considers the quality of its location (prime vs secondary), tenant credit quality and lease terms. | • Contractually agreed lease income over the remaining period.<br>• Risk-adjusted discount rates |
| *Market approach* | The adjusted quoted price and the actual selling price of comparable investment properties. |

## 15 Property, plant and equipment

*(in thousand Baht)*

| | Consolidated financial statements (Restated) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Land and land improvement | Buildings and structures | Machinery and equipment for production | Tools and factory equipment | Office furniture, fixture and equipment | Vehicle | Major spare parts | Exploration assets | Assets under construction and installation | Total |
| ***Cost*** | | | | | | | | | | |
| At 1 January 2016 | **2,938,839** | **10,536,941** | **44,343,620** | **5,488,951** | **480,969** | **2,386,631** | **251,456** | **1,208,808** | **25,509,227** | **93,145,442** |
| Additions | 26,788 | 11,124 | 190,922 | 412,748 | 33,807 | 11,757 | - | 21,277 | 8,983,380 | 9,691,803 |
| Acquisition through business combinations | 235,308 | 101,484 | 609,410 | 3,858 | 2,162 | 15 | - | - | 3,135 | 955,372 |
| Transfers - net | - | 4,896,674 | 18,600,558 | 1,395,034 | 98,732 | - | 64,263 | - | (25,055,261) | - |
| Disposals | - | (23,634) | (46,474) | (8,762) | (7,022) | (8,068) | - | - | - | (93,960) |
| **At 31 December 2016 and 1 January 2017** | **3,200,935** | **15,522,589** | **63,698,036** | **7,291,829** | **608,648** | **2,390,335** | **315,719** | **1,230,085** | **9,440,481** | **103,698,657** |
| Additions | 32,899 | 9,108 | 152,228 | 287,304 | 28,107 | 64,737 | - | 2,036 | 8,579,425 | 9,155,844 |
| Transfers - net | 278 | 353,382 | 1,997,306 | 439,348 | 3,438 | 2,459 | 148,519 | - | (2,944,730) | - |
| Disposals | - | (11,123) | (169,330) | (20,737) | (2,281) | (14,326) | - | - | (2,484) | (220,281) |
| Reclassification from investment properties | 236,809 | - | - | - | - | - | - | - | - | 236,809 |
| **At 31 December 2017** | **3,470,921** | **15,873,956** | **65,678,240** | **7,997,744** | **637,912** | **2,443,205** | **464,238** | **1,232,121** | **15,072,692** | **112,871,029** |
| ***Depreciation and impairment losses*** | | | | | | | | | | |
| At 1 January 2016 | **-** | **4,753,987** | **20,721,275** | **3,941,991** | **376,095** | **1,693,062** | **-** | **-** | **6,686** | **31,493,096** |
| Depreciation charge for the year | 12 | 430,745 | 1,542,743 | 372,261 | 40,578 | 57,052 | - | - | - | 2,443,391 |
| Transfers - net | - | - | - | - | - | - | - | - | - | - |
| Disposals | - | (18,034) | (34,735) | (7,227) | (6,884) | (4,260) | - | - | - | (71,140) |
| **At 31 December 2016 and 1 January 2017** | **12** | **5,166,698** | **22,229,283** | **4,307,025** | **409,789** | **1,745,854** | **-** | **-** | **6,686** | **33,865,347** |
| Depreciation charge for the year | 14 | 471,066 | 1,604,596 | 401,392 | 43,638 | 59,645 | - | - | - | 2,580,351 |
| Reversal of impairment losses | - | - | - | - | - | - | - | - | (2,154) | (2,154) |
| Transfers - net | - | - | - | - | - | - | - | - | - | - |
| Disposals | - | (1,852) | (94,945) | (14,178) | (2,276) | (10,288) | - | - | - | (123,539) |
| **At 31 December 2017** | **26** | **5,635,912** | **23,738,934** | **4,694,239** | **451,151** | **1,795,211** | **-** | **-** | **4,532** | **36,320,005** |
| ***Net book value*** | | | | | | | | | | |
| **At 1 January 2016** | | | | | | | | | | |
| Owned assets | 2,938,839 | 5,782,954 | 23,310,128 | 1,546,960 | 96,748 | 283,943 | 251,456 | 1,208,808 | 25,502,541 | 60,922,377 |
| Assets under finance lease | - | - | 312,217 | - | 8,126 | 409,626 | - | - | - | 729,969 |
| | **2,938,839** | **5,782,954** | **23,622,345** | **1,546,960** | **104,874** | **693,569** | **251,456** | **1,208,808** | **25,502,541** | **61,652,346** |
| **At 31 December 2016 and 1 January 2017** | | | | | | | | | | |
| Owned assets | 3,200,923 | 10,355,891 | 41,253,436 | 2,984,804 | 197,086 | 367,604 | 315,719 | 1,230,085 | 9,433,795 | 69,339,343 |
| Assets under finance lease | - | - | 215,317 | - | 1,773 | 276,877 | - | - | - | 493,967 |
| | **3,200,923** | **10,355,891** | **41,468,753** | **2,984,804** | **198,859** | **644,481** | **315,719** | **1,230,085** | **9,433,795** | **69,833,310** |
| **At 31 December 2017** | | | | | | | | | | |
| Owned assets | 3,470,895 | 10,238,044 | 41,939,306 | 3,303,505 | 186,761 | 644,050 | 464,238 | 1,232,121 | 15,068,160 | 76,547,080 |
| Assets under finance lease | - | - | - | - | - | 3,944 | - | - | - | 3,944 |
| | **3,470,895** | **10,238,044** | **41,939,306** | **3,303,505** | **186,761** | **647,994** | **464,238** | **1,232,121** | **15,068,160** | **76,551,024** |

*(in thousand Baht)*

| | Separate financial statements (Restated) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Land and land improvement | Buildings and structures | Machinery and equipment for production | Tools and factory equipment | Office furniture, fixture and equipment | Vehicle | Major spare parts | Assets under construction and installation | Total |
| ***Cost*** | | | | | | | | | |
| At 1 January 2016 | 2,561,935 | 9,852,768 | 32,478,172 | 5,285,876 | 393,161 | 2,330,298 | 195,411 | 22,130,927 | 75,228,548 |
| Additions | 38,277 | - | 13,580 | 390,678 | 29,001 | 10,925 | - | 2,465,560 | 2,948,021 |
| Transfers - net | - | 4,726,289 | 16,425,511 | 1,390,320 | 96,990 | - | 37,857 | (22,676,967) | - |
| Disposals | - | - | (28,231) | (7,959) | (5,782) | (7,402) | - | - | (49,374) |
| Reclassification from investment properties | (67,879) | - | - | - | - | - | - | - | (67,879) |
| **At 31 December 2016 and 1 January 2017** | **2,532,333** | **14,579,057** | **48,889,032** | **7,058,915** | **513,370** | **2,333,821** | **233,268** | **1,919,520** | **78,059,316** |
| Additions | - | 6,511 | 9,372 | 250,379 | 20,925 | 80,501 | - | 2,103,383 | 2,471,071 |
| Transfers - net | - | 320,316 | 655,902 | 434,849 | 3,248 | - | 142,809 | (1,557,124) | - |
| Disposals | - | - | (15,549) | (17,122) | (1,353) | (7,278) | - | - | (41,302) |
| Reclassification from investment properties | 440,561 | - | - | - | - | - | - | - | 440,561 |
| **At 31 December 2017** | **2,972,894** | **14,905,884** | **49,538,757** | **7,727,021** | **536,190** | **2,407,044** | **376,077** | **2,465,779** | **80,929,646** |
| ***Depreciation and impairment losses*** | | | | | | | | | |
| At 1 January 2016 | - | 4,344,837 | 16,819,071 | 3,823,958 | 302,463 | 1,665,499 | - | - | 26,955,828 |
| Depreciation charge for the year | - | 364,518 | 989,890 | 355,943 | 35,102 | 52,327 | - | - | 1,797,780 |
| Transfers - net | - | - | - | - | - | - | - | - | - |
| Disposals | - | - | (17,028) | (3,526) | (5,634) | (3,594) | - | - | (29,782) |
| **At 31 December 2016 and 1 January 2017** | **-** | **4,709,355** | **17,791,933** | **4,176,375** | **331,931** | **1,714,232** | **-** | **-** | **28,723,826** |
| Depreciation charge for the year | - | 396,310 | 1,021,176 | 381,688 | 37,966 | 55,812 | - | - | 1,892,952 |
| Transfers - net | - | - | - | - | - | - | - | - | - |
| Disposals | - | - | (6,889) | (10,761) | (1,349) | (6,152) | - | - | (25,151) |
| **At 31 December 2017** | **-** | **5,105,665** | **18,806,220** | **4,547,302** | **368,548** | **1,763,892** | **-** | **-** | **30,591,627** |
| ***Net book value*** | | | | | | | | | |
| **At 1 January 2016** | | | | | | | | | |
| Owned assets | 2,561,935 | 5,507,931 | 15,659,101 | 1,461,918 | 82,572 | 255,173 | 195,411 | 22,130,927 | 47,854,968 |
| Assets under finance lease | - | - | - | - | 8,126 | 409,626 | - | - | 417,752 |
| | **2,561,935** | **5,507,931** | **15,659,101** | **1,461,918** | **90,698** | **664,799** | **195,411** | **22,130,927** | **48,272,720** |
| **At 31 December 2016 and 1 January 2017** | | | | | | | | | |
| Owned assets | 2,532,333 | 9,869,702 | 31,097,099 | 2,882,540 | 179,666 | 342,712 | 233,268 | 1,919,520 | 49,056,840 |
| Assets under finance lease | - | - | - | - | 1,773 | 276,877 | - | - | 278,650 |
| | **2,532,333** | **9,869,702** | **31,097,099** | **2,882,540** | **181,439** | **619,589** | **233,268** | **1,919,520** | **49,335,490** |
| **At 31 December 2017** | | | | | | | | | |
| Owned assets | 2,972,894 | 9,800,219 | 30,732,537 | 3,179,719 | 167,642 | 639,208 | 376,077 | 2,465,779 | 50,334,075 |
| Assets under finance lease | - | - | - | - | - | 3,944 | - | - | 3,944 |
| | **2,972,894** | **9,800,219** | **30,732,537** | **3,179,719** | **167,642** | **643,152** | **376,077** | **2,465,779** | **50,338,019** |

The gross amount of the Group and the Company's fully depreciated plant and equipment that was still in use as at 31 December 2017 amounted to Baht 11,635 million and Baht 8,458 million, respectively *(2016: Baht 10,868 million and Baht 7,691 million, respectively)*.

*Security*

At 31 December 2017 the Company's land, buildings, machinery and equipment with a net book value of Baht 23,008 million. (2016: Baht 29,385 million) are mortgaged or pledged as collateral for the long-terms loan.

Capitalised borrowing costs relating to the acquisition of the construction of new factory of the Group and the Company as at 31 December 2017 are Baht 83 million and Baht 51 million, respectively (2016: Baht 101 million and Baht 70 million, respectively), with capitalization in the consolidated and separate financial statements of 1.5% - 5.3% and MLR-1.75 *(2016: MLR-1.75% to MLR-2%, 3M EURIBOR+1.65%, 6M EURIBOR+1.1% and 6M USD LIBOR+2.2%)*.

***Impairment assessment for property plant and equipment***

Two subsidiaries of the Company; TPI Polene Bio Organics Co., Ltd. and TPI All Seasons Co., Ltd. has continuous loss in operation which indicated the impairment in property, plant and equipment. The Group has assessed the recoverable amount base on value in use; determined by discounting future cash flows to be generated from the continuing use of assets. The key assumptions used to determine recoverable amount included sale volume and selling price, long-term growth rate derived from expectations of future outcomes taking into account past experience, adjusted for anticipated revenue growth and discount rate referred to weighted average cost of capital (WACC) of TPI Polene Bio Organics Co., Ltd. and TPI All Seasons Co., Ltd. at 10.90 % and 11.17 %, respectively. Base on impairment assessment, the recoverable amount was estimated to be higher than its carrying amount and no impairment was required to the Company's financial statements. Increasing in discount rate and decreasing in long-term growth rate could cause the carrying amount to exceed the recoverable amount.

***Exploration assets***

For the exploration assets which the net book value as at 31 December 2017 of Baht 1,232 million. In August 2016, a subsidiary has granted an extention of time until February 2020 for petroleum exploration. Base on the study of the consulting company and the assessment of a subsidiary, the area has high petroleum potential. If a subsidiary continue to explore and drill for the well, it is highly probable to find petroleum.

At present, the subsidiary is studying the potential of petroleum exploration to drill for the well by studying the information of existing well to identify the position of exist well. The management believe that the investment in the petroleum exploration of this two wells is still value according to the gas volumetric calculation in the CCOP Guidelines for Risk Assessment of Petroleum Prospect and the subsidiary is still in the process of exploration above. Hence, the cost associated with the exploration will be recognised as expense to profit or loss in the period when there is no discovery of proved reseves and no future exploration and assessment plan.

## 16 Intangible assets

*(in thousand Baht)*

| | Consolidated and Separate financial statements | | | |
|---|---|---|---|---|
| | Cost of raw material resources and cost of concessions | Software licenses | Development assets | Total |
| ***Cost*** | | | | |
| At 1 January 2016 | 734,564 | 43,870 | - | 778,434 |
| Additions | - | 4,551 | 38,628 | 43,179 |
| **At 31 December 2016 and 1 January 2017** | **734,564** | **48,421** | **38,628** | **821,613** |
| Additions | 1,123 | 10,908 | - | 12,031 |
| **At 31 December 2017** | **735,687** | **59,329** | **38,628** | **833,644** |
| ***Amortisation*** | | | | |
| At 1 January 2016 | 503,065 | 41,348 | - | 544,413 |
| Amortisation for the year | 28,152 | 722 | 3,893 | 32,767 |
| **At 31 December 2016 and 1 January 2017** | **531,217** | **42,070** | **3,893** | **577,180** |
| Amortisation for the year | 30,228 | 1,587 | 7,721 | 39,536 |
| **At 31 December 2017** | **561,445** | **43,657** | **11,614** | **616,716** |
| ***Net book value*** | | | | |
| **At 1 January 2016** | **231,499** | **2,522** | **-** | **234,021** |
| **At 31 December 2016 and 1 January 2017** | **203,347** | **6,351** | **34,735** | **244,433** |
| **At 31 December 2017** | **174,242** | **15,672** | **27,014** | **216,928** |

## 17 Deferred tax

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

*(in thousand Baht)*

| | Consolidated financial statements | | | |
|---|---|---|---|---|
| | Assets | | Liabilities | |
| | 2017 | 2016 (Restated) | 2017 | 2016 (Restated) |
| Total | 1,121,960 | 820,741 | (713,594) | (725,632) |
| Set off of tax | (637,392) | (612,597) | 637,392 | 612,597 |
| **Net deferred tax assets (liabilities)** | **484,568** | **208,144** | **(76,202)** | **(113,035)** |

*(in thousand Baht)*

| | Separate financial statements | | | |
|---|---|---|---|---|
| | Assets | | Liabilities | |
| | 2017 | 2016 (Restated) | 2017 | 2016 (Restated) |
| Total | 982,248 | 712,655 | (653,066) | (666,338) |
| Set off of tax | (653,066) | (666,338) | 653,066 | 666,338 |
| Net deferred tax assets | 329,182 | 46,317 | - | - |

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

*(in thousand Baht)*

| | Consolidated financial statements | | | |
|---|---|---|---|---|
| | | (Charged) / credited to: | | |
| | **At 1 January 2017** (Restated) | Profit or loss | Other comprehensive income *(Note 33)* | **At 31 December 2017** |
| ***Deferred tax assets*** | | | | |
| Allowance for doubtful account receivables | 29,473 | 1,712 | - | 31,185 |
| Allowance for decline in value of inventories | 4,124 | 2,073 | - | 6,197 |
| Allowance for impairment of assets | 2,348 | (542) | - | 1,806 |
| Provision for sales discount and sales promotional | 14,086 | (7,027) | - | 7,059 |
| Provision for employee benefit | 268,109 | 13,331 | (424) | 281,016 |
| Loss carry forward | 501,992 | 292,432 | - | 794,424 |
| Others | 609 | (309) | (27) | 273 |
| **Total** | **820,741** | **301,670** | **(451)** | **1,121,960** |
| ***Deferred tax liabilities*** | | | | |
| Amortisation gap of concessions | (5,935) | 610 | - | (5,325) |
| Financial lease | (141,197) | (9,970) | - | (151,167) |
| Depreciation gap of assets | (479,221) | 12,729 | - | (466,492) |
| Property, plant and equipment | (99,279) | 8,669 | - | (90,610) |
| **Total** | **(725,632)** | **12,038** | **-** | **(713,594)** |
| **Net** | **95,109** | **313,708** | **(451)** | **408,366** |

*(in thousand Baht)*

| | | Consolidated financial statements | | | |
|---|---|---|---|---|---|
| | | (Charged) / credited to: | | | |
| | **At 1 January 2016** | Porfit or loss | Other comprehensive income | Acquired in business combination | **At 31 December 2016** |
| | | | *(Note 33)* (Restated) | *(Note 5)* | |
| ***Deferred tax assets*** | | | | | |
| Allowance for doubtful account receivables | 26,071 | (7,528) | - | 10,930 | 29,473 |
| Allowance for decline in value of inventories | 5,159 | (1,405) | - | 370 | 4,124 |
| Allowance for impairment of assets | 3,123 | (775) | - | - | 2,348 |
| Provision for sales discount and sales promotional | 9,347 | 4,739 | - | - | 14,086 |
| Provision for employee benefit | 260,763 | 8,293 | (6,703) | 5,756 | 268,109 |
| Loss carry forward | 143,679 | 358,313 | - | - | 501,992 |
| Others | 105 | 40 | (6) | 470 | 609 |
| **Total** | **448,247** | **361,677** | **(6,709)** | **17,526** | **820,741** |
| ***Deferred tax liabilities*** | | | | | |
| Amortisation gap of concessions | (6,555) | 620 | - | - | (5,935) |
| Financial lease | (110,244) | (30,953) | - | - | (141,197) |
| Depreciation gap of assets | (475,968) | (3,253) | - | - | (479,221) |
| Revaluation on assets | - | 3,612 | - | (102,891) | (99,279) |
| **Total** | **(592,767)** | **(29,974)** | **-** | **(102,891)** | **(725,632)** |
| **Net** | **(144,520)** | **331,703** | **(6,709)** | **(85,365)** | **95,109** |

*(in thousand Baht)*

| | | Separate financial statements | | |
|---|---|---|---|---|
| | | (Charged) / credited to: | | |
| | **At 1 January 2017** (Restated) | Profit or loss | Other comprehensive income | **At 31 December 2017** |
| | | *(Note 33)* | | |
| ***Deferred tax assets*** | | | | |
| Allowance for doubtful account receivables | 17,000 | 4,371 | - | 21,371 |
| Allowance for impairment of assets | 900 | - | - | 900 |
| Allowance for impairment of investment | 76,400 | (76,400) | - | - |
| Provision for sales discount and sales promotional | 13,318 | (6,661) | - | 6,657 |
| Provision for employee benefit | 235,646 | 9,371 | 759 | 245,776 |
| Loss carry forward | 369,252 | 338,180 | - | 707,432 |
| Others | 139 | - | (27) | 112 |
| **Total** | **712,655** | **268,861** | **732** | **982,248** |
| ***Deferred tax liabilities*** | | | | |
| Amortisation gap of concessions | (5,935) | 610 | - | (5,325) |
| Financial lease | (79,907) | (5,993) | - | (85,900) |
| Depreciation gap of assets | (580,496) | 18,655 | - | (561,841) |
| **Total** | **(666,338)** | **13,272** | **-** | **(653,066)** |
| **Net** | **46,317** | **282,133** | **732** | **329,182** |

*(in thousand Baht)*

| | | Separate financial statements (Charged) / credited to: | | |
|---|---|---|---|---|
| | **At 1 January 2016** (Restated) | Profit or loss | Other comprehensive income | **At 31 December 2016** |
| | | *(Note 33)* | | |
| ***Deferred tax assets*** | | | | |
| Allowance for doubtful account receivables | 23,529 | (6,529) | - | 17,000 |
| Allowance for decline in value of inventories | 5,159 | (5,159) | - | - |
| Allowance for impairment of assets | 900 | - | - | 900 |
| Allowance for impairment of investment | - | 76,400 | - | 76,400 |
| Provision for sales discount and sales promotional | 8,679 | 4,639 | - | 13,318 |
| Provision for employee benefit | 231,935 | 5,400 | (1,689) | 235,646 |
| Loss carry forward | 43,873 | 325,379 | - | 369,252 |
| Others | 105 | 40 | (6) | 139 |
| **Total** | **314,180** | **400,170** | **(1,695)** | **712,655** |
| ***Deferred tax liabilities*** | | | | |
| Amortisation gap of concessions | (6,555) | 620 | - | (5,935) |
| Financial lease | (60,217) | (19,690) | - | (79,907) |
| Depreciation gap of assets | (570,710) | (9,786) | - | (580,496) |
| **Total** | **(637,482)** | **(28,856)** | **-** | **(666,338)** |
| **Net** | **(323,302)** | **371,314** | **(1,695)** | **46,317** |

Deferred tax assets arising from unused tax losses allowance for impairment of investment that has not been recognised in the seperate financial statements as at 31 December 2017 amounting to Baht 112.4 million *(2016: nil)*.

Deferred tax assets arising from unused tax losses that has not been recognised in the consolidated and seperate financial statements as at 31 December 2017 amounting to Baht 462.3 million and Baht 273.4 million, respectively *(2016: Baht 137.0 million and Baht 15.8 million, respectively)*.

The tax losses expire in 2019 to 2023. The deductible temporary differences do not expire under current tax legislation. Deferred tax assets have not been recognised in respect of these items because it is not probable that future taxable profit will be available against which the Group can utilise the benefits therefrom.

*Regcognition of deferred tax asset from tax loss*

In 2017, the Group has entered into several agreements for many projects. As a result, management estimates future taxable profits and, as at 31 December 2017, the Group regcognised deferred tax assets from tax losses in the consolidated and seperate financial statements amounting to Baht 794 million and Baht 707 million, respectively because management considered it probable that future taxable profits would be available against which such losses can be used.

## 18 Interest-bearing liabilities

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| ***Current*** | | | | |
| Bank overdrafts and short-term loans from financial institutions unsecured | 2,178,403 | 5,609,638 | 1,844,119 | 4,718,066 |
| Current portion of long-term loans from financial institutions secured | 751,049 | 906,485 | 751,049 | 741,485 |
| Current portion of debentures | 5,000,000 | 3,000,000 | 5,000,000 | 3,000,000 |
| Current portion of finance lease liabilities | 2,378 | 87,480 | 2,378 | 40,155 |
| **Total current interest-bearing liabilities** | **7,931,830** | **9,603,603** | **7,597,546** | **8,499,706** |
| ***Non-current*** | | | | |
| Long-term loans from financial institutions secured | 5,039,377 | 8,002,058 | 5,039,377 | 5,670,430 |
| Debentures | 28,000,000 | 29,000,000 | 28,000,000 | 29,000,000 |
| Finance lease liabilities | 775 | 3,134 | 775 | 3,134 |
| **Total non-current interest-bearing liabilities** | **33,040,152** | **37,005,192** | **33,040,152** | **34,673,564** |
| **Total** | **40,971,982** | **46,608,795** | **40,637,698** | **43,173,270** |

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

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Within one year | 7,929,452 | 9,516,123 | 7,595,168 | 8,459,551 |
| After one year but within five years | 28,285,010 | 26,099,341 | 28,285,010 | 24,120,941 |
| After five years | 4,754,367 | 10,902,717 | 4,754,367 | 10,549,489 |
| **Total** | **40,968,829** | **46,518,181** | **40,634,545** | **43,129,981** |

Secured interest-bearing liabilities as at 31 December were secured on the following net book value assets:

*(in thousand Baht)*

| | Consolidated and Separate financial statements | |
|---|---|---|
| | 2017 | 2016 |
| Land and buildings | 6,369,831 | 7,934,120 |
| Investment properties | - | 117,492 |
| Machinery and equipment | 16,637,818 | 21,332,966 |
| **Total** | **23,007,649** | **29,384,578** |

As at 31 December 2017 the Group and the Company had unutilised credit facilities totalling Baht 143 million and Baht 108 million, respectively (2016: Baht 997 million and Baht 138 million, respectively).

### *Finance lease liabilities*

Finance lease liabilities as at 31 December were payable as follows:

*(in thousand Baht)*

| | Consolidated financial statements | | | | | |
|---|---|---|---|---|---|---|
| | 2017 | | | 2016 | | |
| | Future minimum lease payments | Interest | Present value of minimium lease payments | Future minimum lease payments | Interest | Present value of minimium lease payments |
| Within one year | 2,503 | 125 | 2,378 | 90,749 | 3,269 | 87,480 |
| After one year but within five years | 794 | 19 | 775 | 3,297 | 163 | 3,134 |
| Total | 3,297 | 144 | 3,153 | 94,046 | 3,432 | 90,614 |

*(in thousand Baht)*

| | Separate financial statements | | | | | |
|---|---|---|---|---|---|---|
| | 2017 | | | 2016 | | |
| | Future minimum lease payments | Interest | Present value of minimium lease payments | Future minimum lease payments | Interest | Present value of minimium lease payments |
| Within one year | 2,503 | 125 | 2,378 | 42,235 | 2,080 | 40,155 |
| After one year but within five years | 794 | 19 | 775 | 3,297 | 163 | 3,134 |
| Total | 3,297 | 144 | 3,153 | 45,532 | 2,243 | 43,289 |

**Loan from financial institutions**

On 25 January 2013 and 26 March 2013, the Company had signed 4 facility agreements for investment in the Fourth Cement Plant Project. As at 31 December 2017, 3 facility agreements remained and total amount was equivalent to Baht 6,608 million *(2016: 3 facility agreements totaling Baht 6,608 million)*. The Company fulfilled the condition precedent of the Facility Agreements which enable the Company to disburse the loan from such Facility Agreements since 27 March 2013, as following financial institutions:

1. Foreign financial institutions in the total amount of Euro 114.5 million covered by Euler Hermes Deutschland AG (German Export Credit Agency of the German Ministry of Finance);
2. Foreign financial institution in the total amount of Euro 26.4 million covered by the Office of National Du Ducroire or ONDD (Belgian Export Credit Agency); and
3. Foreign financial institution in the total amount of Euro 13.0 million covered by the Office of National Du Ducroire or ONDD (Belgian Export Credit Agency)

As at 31 December 2017, the Company had long-term loans from financial institutions of Baht 5,629 million *(2016: Baht 6,222 million)* for the project. Principal repayment shall be made in 6 - 12 years by half year repayment commencing the earlier of; 6 month from receiving of plant acceptance certificates or 3.5 years from the effective date of facility agreement. As at 31 December 2017, the Company has fully utilised its credit facilities. Interest rates for project is according to agreement rate (See note 37).

On 9 March 2016, a subsidiary had signed loan agreement in the amount of Baht 3,300 million with local financial institutions for investment in Alternative Fuel Power Plant with total capacity of 70 megawatt, with the term of 7 years. First principle installment repayment shall be made after 2 years. Interest rate is as specified in agreement. As at 31 December 2017, the balance of loan under this facility was nil as it was fully paid in 2017 *(2016: Baht 2,497 million)*.

Long-term borrowings as mentioned above are secured by related land, buildings and equipment of each project. The credit utilisation agreements contain covenants with which the Group has to comply, pertaining to matters such as maintaining of certain financial ratios, maintaining of percentage of shares held by the major shareholder, and remaining as a public company listed on the Stock Exchange of Thailand.

**Debentures**

As at 31 December 2017, the Company had the unsecured, unsubordinated debentures in registered form with debentures holders' representative, payable quarterly totalling Baht 33,000 million (2016: Baht 32,000 million) as follows:

| | Consolidated and Separate financial statements | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | The period to maturity within one year | | The period to maturity over one year | | Total | | | |
| Issued Date | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | Interest Rate | Term |
| | | | *(in thousand Baht)* | | | | *(%p.a.)* | |
| 17 January 2014 | - | 3,000,000 | - | - | - | 3,000,000 | 5.00 | 3.5 years |
| 17 January 2014 | 2,000,000 | - | - | 2,000,000 | 2,000,000 | 2,000,000 | 5.30 | 4.5 years |
| 22 January 2015 | - | - | 3,000,000 | 3,000,000 | 3,000,000 | 3,000,000 | 4.85 | 4 years |
| 22 January 2015 | - | - | 3,000,000 | 3,000,000 | 3,000,000 | 3,000,000 | 5.20 | 5 years |
| 5 August 2015 | 3,000,000 | - | - | 3,000,000 | 3,000,000 | 3,000,000 | 4.10 | 3 years |
| 5 August 2015 | - | - | 2,750,000 | 2,750,000 | 2,750,000 | 2,750,000 | 4.40 | 4 years |
| 5 August 2015 | - | - | 2,205,000 | 2,205,000 | 2,205,000 | 2,205,000 | 4.65 | 5 years |
| 5 August 2015 | - | - | 3,600,000 | 3,600,000 | 3,600,000 | 3,600,000 | 4.90 | 6 years |
| 5 August 2015 | - | - | 4,000,000 | 4,000,000 | 4,000,000 | 4,000,000 | 5.20 | 7 years |
| 1 April 2016 | - | - | 1,600,000 | 1,600,000 | 1,600,000 | 1,600,000 | 4.35 | 5 years |
| 1 April 2016 | - | - | 1,200,000 | 1,200,000 | 1,200,000 | 1,200,000 | 4.60 | 6 years |
| 1 April 2016 | - | - | 2,645,000 | 2,645,000 | 2,645,000 | 2,645,000 | 4.80 | 7 years |
| 7 July 2017 | - | - | 2,000,000 | - | 2,000,000 | - | 3.20 | 2 years |
| 7 July 2017 | - | - | 2,000,000 | - | 2,000,000 | - | 3.50 | 3 years |
| **Total** | **5,000,000** | **3,000,000** | **28,000,000** | **29,000,000** | **33,000,000** | **32,000,000** | | |

## 19 Trade accounts payable

*(in thousand Baht)*

| | | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|---|
| | *Note* | 2017 | 2016 | 2017 | 2016 |
| Related parties | *6* | 164,337 | 128,916 | 831,416 | 918,971 |
| Other parties | | 2,653,920 | 2,085,414 | 1,964,809 | 1,676,034 |
| **Total** | | **2,818,257** | **2,214,330** | **2,796,225** | **2,595,005** |

## 20 Other payables

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Accrued expenses | 739,727 | 730,115 | 581,064 | 587,050 |
| Deposit from sales | 368,373 | 358,024 | 327,331 | 320,662 |
| Guarantee and deposits | 283,395 | 293,637 | 278,357 | 268,250 |
| Retention payable | 153,294 | 173,130 | 110,804 | 124,788 |
| Machine Payable | 3,039,384 | 2,518,309 | 238,955 | 306,726 |
| Others | 484,798 | 728,487 | 350,424 | 553,055 |
| **Total** | **5,068,971** | **4,801,702** | **1,886,935** | **2,160,531** |

## 21 Non-current provisions for employee benefits

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| **Statement of financial position** | | | | |
| **Non-current provision for:** | | | | |
| Post-employment benefits | | | | |
| Defined benefit plan | 1,443,775 | 1,373,924 | 1,228,884 | 1,178,236 |
| **Total** | **1,443,775** | **1,373,924** | **1,228,884** | **1,178,236** |
| ***Year ended 31 December*** | | | | |
| **Statement of comprehensive income:** | | | | |
| **Recognised in profit or loss:** | | | | |
| Post-employment benefits | 88,462 | 76,495 | 65,898 | 60,212 |
| **Total** | **88,462** | **76,495** | **65,898** | **60,212** |
| **Recognised in other comprehensive income:** | | | | |
| Actuarial (gains) losses recognised in the year | (2,371) | (35,061) | 3,795 | (8,443) |

### *Defined benefit plan*

The Group and the Company operate a defined benefit plan 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 Group to actuarial risks, such as longevity risk, currency risk, interest rate risk and market (investment) risk.

Movement in the present value of the defined benefit obligations.

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| At 1 January | 1,373,924 | 1,317,394 | 1,178,236 | 1,159,678 |
| **Include in profit or loss:** | | | | |
| Current service cost and interest on obligation | 88,462 | 76,495 | 65,898 | 60,212 |
| **Included in other comprehensive income** | | | | |
| Actuarial gain (loss) | (2,371) | (35,061) | 3,795 | (8,443) |
| **Other** | | | | |
| Benefit paid by the plan | (16,240) | (13,684) | (14,325) | (13,297) |
| Transfer of employee benefit obligations | - | - | (4,720) | (19,914) |
| Acquisition through business combination (see note 5) | - | 28,780 | - | - |
| **At 31 December** | **1,443,775** | **1,373,924** | **1,228,884** | **1,178,236** |

Actuarial gains and losses recognised in other comprehensive income were mainly arose from the change of discount rate and future salary growth.

### *Actuarial assumptions*

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

*(%)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Discount rate | 3.00 - 3.21 | 3.38 - 3.49 | 3.00 - 3.13 | 3.38 - 3.46 |
| Future salary growth | 4.00 - 7.64 | 5.10 - 7.72 | 5.12 - 7.64 | 5.10 - 7.72 |

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

At 31 December 2017, the weighted-average duration of the defined benefit obligation was 23 years *(2016: 22 years)*.

***Sensitivity analysis***

Reasonably possible changes at the reporting date to one of the relevant actuarial assumptions, holding other assumptions constant, would have affected the defined benefit obligation by the amounts shown below.

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| **31 December 2017** | Increase | Decrease | Increase | Decrease |
| Discount rate (1% movement) | (146,014) | 174,103 | (124,571) | 148,681 |
| Future salary growth (1% movement) | 153,164 | (131,846) | 130,580 | (112,437) |
| **31 December 2016** | | | | |
| Discount rate (1% movement) | (121,292) | 173,674 | (113,425) | 149,759 |
| Future salary growth (1% movement) | 153,788 | (132,126) | 132,554 | (113,825) |

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.

## 22 Share capital

*(thousand shares / thousand Baht)*

| | *Par value per share (in Baht)* | 2017 | | 2016 | |
|---|---|---|---|---|---|
| | | Number | Amount | Number | Amount |
| ***Authorised*** | | | | | |
| **At 31 December** | | | | | |
| **- ordinary shares** | 1 | **24,815,000** | **24,815,000** | **24,815,000** | **24,815,000** |
| ***Issued and paid-up*** | | | | | |
| **At 31 December** | | | | | |
| **- ordinary shares** | 1 | **20,190,000** | **20,190,000** | **20,190,000** | **20,190,000** |

## 23 Treasury shares held by a subsidiary

The meeting of the Plan Administrator held on 3 March 2003 approved the donation of 20 million ordinary shares at Baht 10 per share of the Company by assigning a subsidiary company to purchase shares of the Company on the Stock Exchange of Thailand at a price per share not exceeding Baht 17 and paid advances to the subsidiary company of Baht 393 million. In the first quarter of 2003, the subsidiary made purchases of the Company's shares on the Stock Exchange of Thailand 20 million shares totaling Baht 333.25 million. These shares are intended to be donated.

As at 31 December 2017 and 2016, the remaining balance of the treasury shares held by subsidiaries of 222.16 million shares at Baht 1 per share at cost of Baht 359.24 million is presented as a separate category within equity and recognised as a deduction from equity in the consolidated financial statements.

## 24 Reserves

Reserves comprise:

***Appropriations of profit***

**Legal reserve**

Section 116 of the Public Companies Act B.E. 2535 requires that a public company shall allocate not less than 5% of its annual net profit, less any accumulated losses brought forward, to a reserve account ("legal reserve"), until this account reaches an amount not less than 10% of the registered authorised capital. The legal reserve is not available for dividend distribution.

***Other components of equity***

**Fair value changes in available-for-sale investments**

The fair value changes in available-for-sale investments account within equity comprises the cumulative net change in the fair value of available-for-sale investments until the investments are derecognised or impaired.

***Movements in reserves***

Movements in reserves are shown in the statement of changes in equity.

## 25 Segment information

The Group has four reportable segments, as described below, which are the Group's strategic divisions. The strategic divisions offer different products and services, and are managed separately because they require different technology and marketing strategies. For each of the strategic divisions, the chief operating decision maker (CODM) reviews internal management reports on at least a quarterly basis. The following summary describes the operations in each of the Group's reportable segments.

- Construction Materials
- Petrochemical & Chemicals
- Energy & Utilities
- Agriculture

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*

| | Revenue from external customers | | Inter-segment revenue | | Total segment revenue | | Reportable segment profit (loss) before income tax | |
|---|---|---|---|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 (Restated) |
| Construction Materials | 18,077,561 | 18,556,750 | 6,688,335 | 7,035,489 | 24,765,896 | 25,592,239 | (4,318,725) | (1,726,924) |
| Petrochemical & Chemicals | 6,684,190 | 6,759,341 | 7,471,675 | 5,675,678 | 14,155,865 | 12,435,019 | 962,475 | 456,231 |
| Energy & Utilities | 4,201,598 | 3,714,303 | 663,217 | 576,516 | 4,864,815 | 4,290,819 | 2,650,048 | 1,813,117 |
| Agriculture | 125,003 | 97,821 | 16,147 | 106,996 | 141,150 | 204,817 | (156,467) | (253,594) |
| **Total** | **29,088,352** | **29,128,215** | **14,839,374** | **13,394,679** | **43,927,726** | **42,522,894** | **(862,669)** | **288,830** |
| Other gain (loss) | | | | | | | (11,146) | (9,390) |
| | | | | | | | (873,815) | 279,440 |
| Elimination of inter-segment loss | | | | | | | (63,275) | (502,514) |
| Gain on bargain purchase (see note 5) | | | | | | | - | 434,990 |
| Profit (loss) before income tax expense for the year | | | | | | | (937,090) | 211,916 |

### *(b) Reportable segment financial position*

*(in thousand Baht)*

| | Segment assets | |
|---|---|---|
| | 2017 | 2016 (Restated) |
| Construction Materials | 66,906,422 | 69,725,955 |
| Petrochemical & Chemicals | 8,250,993 | 7,515,723 |
| Energy & Utilities | 24,186,888 | 18,868,518 |
| Agriculture | 2,379,797 | 2,534,211 |
| Others | 426,842 | 421,309 |
| | **102,150,942** | **99,065,716** |
| Unallocated assets | 4,988,681 | 988,732 |
| **Total** | **107,139,623** | **100,054,448** |
| Elimination of inter-segment assets | (3,961,988) | (7,436,346) |
| **Total assets** | **103,177,635** | **92,618,102** |

### *Geographical segments*

In presenting information on the basis of geographical segments, segment revenue is based on the geographical location of customers. Segment assets are based on the geographical location of the assets.

***Geographical information***

*(in thousand Baht)*

| | Revenues | |
|---|---|---|
| | 2017 | 2016 |
| Thailand | 19,632,042 | 19,834,519 |
| China | 3,441,592 | 3,148,714 |
| Bangladesh | 1,544,070 | 2,157,579 |
| Others | 4,470,648 | 3,987,403 |
| **Total** | **29,088,352** | **29,128,215** |

The Group generates revenue from current assets located principally in Thailand.

## 26 Investment income

*(in thousand Baht)*

| | | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|---|
| | *Note* | 2017 | 2016 | 2017 | 2016 |
| ***Dividend income*** | | | | | |
| Subsidiaries | *6* | - | - | 3,257,155 | 3,153,305 |
| Other parties | | 14 | 13 | 14 | 13 |
| | | **14** | **13** | **3,257,169** | **3,153,318** |
| ***Interest income*** | | | | | |
| Subsidiaries | *6* | - | - | 71,519 | 175,523 |
| Other parties | | 99,149 | 28,183 | 28,302 | 22,107 |
| | | **99,149** | **28,183** | **99,821** | **197,630** |
| ***Others*** | | | | | |
| Other investment income | | 8,221 | 6,027 | 16,832 | 15,890 |
| | | **8,221** | **6,027** | **16,832** | **15,890** |
| **Total** | | **107,384** | **34,223** | **3,373,822** | **3,366,838** |

## 27 Other income

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Rental trucks income | 68,666 | 127,744 | 75,626 | 134,894 |
| Income from sale of spare parts | 35,368 | 19,464 | 64,587 | 44,005 |
| Sale steam | 9,328 | 9,241 | 9,328 | 9,241 |
| Share services income | - | - | 90,806 | 129,039 |
| Others | 269,440 | 185,925 | 214,122 | 193,434 |
| **Total** | **382,802** | **342,374** | **454,469** | **510,613** |

## 28 Distribution costs

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Delivery expenses | 2,213,580 | 2,344,408 | 2,045,845 | 2,232,832 |
| Personnel expenses | 671,024 | 609,438 | 536,400 | 494,849 |
| Depreciation and amortization | 171,054 | 144,203 | 163,559 | 135,615 |
| Maintenance expenses | 75,511 | 37,107 | 70,298 | 35,688 |
| Others | 901,556 | 556,652 | 740,622 | 426,313 |
| **Total** | **4,032,725** | **3,691,808** | **3,556,724** | **3,325,297** |

## 29 Administrative expenses

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Personnel expenses | 997,851 | 989,292 | 790,637 | 816,235 |
| Depreciation and amortization | 38,139 | 21,214 | 16,144 | 14,873 |
| Maintenance expenses | 31,630 | 27,355 | 30,718 | 26,615 |
| Others | 709,763 | 634,008 | 694,647 | 898,294 |
| **Total** | **1,777,383** | **1,671,869** | **1,532,146** | **1,756,017** |

## 30 Employee benefit expenses

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| ***Management*** | | | | |
| Wages and salaries | 346,620 | 327,090 | 293,268 | 298,867 |
| Defined benefit plan | 14,898 | 15,984 | 10,208 | 14,431 |
| Others | 44,251 | 40,799 | 27,547 | 25,675 |
| | **405,769** | **383,873** | **331,023** | **338,973** |
| ***Other employees*** | | | | |
| Wages and salaries | 4,886,284 | 4,623,303 | 3,795,905 | 3,622,916 |
| Defined benefit plan | 76,256 | 60,511 | 55,690 | 45,781 |
| Others | 180,817 | 201,867 | 95,050 | 114,715 |
| | **5,143,357** | **4,885,681** | **3,946,645** | **3,783,412** |
| **Total** | **5,549,126** | **5,269,554** | **4,277,668** | **4,122,385** |

The defined contribution plans comprise provident funds established by some companies of the Group for its employees. Membership to the funds is on a voluntary basis. Contributions are made monthly by the employees at rates ranging from 3% to 10% of their basic salaries and by the company at from 3% to 10% 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.

## 31 Expenses by nature

The statements of income include an analysis of expenses by function. Expenses by nature disclosed in accordance with the requirements of various TFRS were as follows:

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 (Restated) | 2017 | 2016 (Restated) |
| ***Included in cost of sales of goods:*** | | | | |
| Changes in inventories of finished goods and work in progress | 2,288,337 | (709,360) | (2,270,532) | (643,119) |
| Raw materials and consumables used | 11,902,052 | 12,514,097 | 7,965,112 | 7,497,341 |
| Loss on decline in value of inventories | 123,984 | 126,089 | 31,393 | 29,925 |
| Depreciation of property, plant and equipment | 2,385,002 | 2,289,243 | 1,727,093 | 1,656,755 |
| Amortisation of intangible assets | 25,692 | 23,304 | 25,692 | 23,304 |
| ***Included in distribution costs:*** | | | | |
| Depreciation of property, plant and equipment | 163,333 | 139,504 | 155,838 | 131,722 |
| Amortisation of intangible assets | 7,721 | 3,893 | 7,721 | 3,893 |
| ***Included in administrative expenses:*** | | | | |
| Depreciation of property, plant and equipment | 32,016 | 15,644 | 10,021 | 9,303 |
| Amortisation of intangible assets | 6,123 | 5,570 | 6,123 | 5,570 |

## 32 Finance costs

*(in thousand Baht)*

| | Note | Consolidated financial statements 2017 | Consolidated financial statements 2016 | Separate financial statements 2017 | Separate financial statements 2016 |
|---|---|---|---|---|---|
| ***Interest expense :*** | | | | | |
| Related party | *6* | - | - | 3,362 | 7,557 |
| Bank loan and overdrafts | | 190,904 | 202,594 | 151,097 | 164,436 |
| Debentures | | 1,536,499 | 1,545,790 | 1,536,499 | 1,545,790 |
| **Total interest expense** | | **1,727,403** | **1,748,384** | **1,690,958** | **1,717,783** |
| Others | | 3,208 | 2,211 | - | - |
| | | **1,730,611** | **1,750,595** | **1,690,958** | **1,717,783** |
| *Less*: amounts included in the cost of qualifying assets: | | | | | |
| - Construction contracts work in progress | *15* | (83,419) | (101,347) | (50,853) | (70,350) |
| **Net** | | **1,647,192** | **1,649,248** | **1,640,105** | **1,647,433** |

## 33 Income tax

***Income tax recognised in profit or loss***

*(in thousand Baht)*

| | Note | Consolidated financial statements 2017 | Consolidated financial statements 2016 (Restated) | Separate financial statements 2017 | Separate financial statements 2016 (Restated) |
|---|---|---|---|---|---|
| **Current tax expense** | | | | | |
| Current year | | 72,985 | 28,232 | - | - |
| Adjustment of under provided in prior years | | - | 510 | - | - |
| | | **72,985** | **28,742** | **-** | **-** |
| **Deferred tax expense** | | | | | |
| Movements in temporary differences | 17 | (313,708) | (331,703) | (282,133) | (371,314) |
| | | **(313,708)** | **(331,703)** | **(282,133)** | **(371,314)** |
| **Total income tax income** | | **(240,723)** | **(302,961)** | **(282,133)** | **(371,314)** |

***Income tax recognised in other comprehensive income***

*(in thousand Baht)*

| | Consolidated financial statements | | | | | |
|---|---|---|---|---|---|---|
| | 2017 | | | 2016 | | |
| | Before tax | Tax (expense) benefit | Net of tax | Before tax | Tax (expense) benefit | Net of tax |
| Net change in fair value of available-for-sale investment | 148 | (27) | 121 | 42 | (6) | 36 |
| Share of other comprehensive income (loss) of investments in associates and joint venture | 3,628 | - | 3,628 | 3,078 | - | 3,078 |
| Defined benefit plan actuarial gains (losses) | 2,371 | (424) | 1,947 | 35,061 | (6,703) | 28,358 |
| **Total** | **6,147** | **(451)** | **5,696** | **38,181** | **(6,709)** | **31,472** |

*(in thousand Baht)*

| | Separate financial statements | | | | | |
|---|---|---|---|---|---|---|
| | 2017 | | | 2016 | | |
| | Before tax | Tax (expense) benefit | Net of tax | Before tax | Tax (expense) benefit | Net of tax |
| Net change in fair value of available-for-sale investment | 137 | (27) | 110 | 30 | (6) | 24 |
| Defined benefit plan actuarial gains (losses) | (3,795) | 759 | (3,036) | 8,443 | (1,689) | 6,754 |
| **Total** | **(3,658)** | **732** | **(2,926)** | **8,473** | **(1,695)** | **6,778** |

***Reconciliation of effective tax rate***

| | Consolidated financial statements | | | |
|---|---|---|---|---|
| | 2017 | | 2016 (Restated) | |
| | Rate (%) | *(in thousand Baht)* | Rate (%) | *(in thousand Baht)* |
| Profit (loss) before income tax expense | | (937,090) | | 211,916 |
| Income tax using the Thai corporation tax rate | 20 | (187,418) | 20 | 42,383 |
| Income not subject to tax | | (42,813) | | (98,547) |
| Profit was derived from promoted activities | | (398,919) | | (350,403) |
| Expenses not deductible for tax purposes | | 97,661 | | 56,590 |
| Current year losses for which no deferred tax asset was recognised | | 290,766 | | 46,506 |
| Under provided in prior years | | - | | 510 |
| **Total** | **26** | **(240,723)** | **(143)** | **(302,961)** |

| | Separte financial statements | | | |
|---|---|---|---|---|
| | 2017 | | 2016 (Restated) | |
| | Rate (%) | *(in thousand Baht)* | Rate (%) | *(in thousand Baht)* |
| Profit (loss) before income tax expense | | (376,175) | | 980,925 |
| Income tax using the Thai corporation tax rate | 20 | (75,235) | 20 | 196,185 |
| Income not subject to tax | | (663,820) | | (628,636) |
| Expenses not deductible for tax purposes | | 123,473 | | 49,370 |
| Decognition of previously recognised deductible temporary difference | | 76,400 | | - |
| Current year losses for which no deferred tax asset was recognised | | 257,049 | | 11,767 |
| **Total** | **75** | **(282,133)** | **(38)** | **(371,314)** |

*Income tax reduction*

Revenue Code Amendment Act No. 42 B.E. 2559 dated 3 March 2016 grants a reduction of the corporate income tax rate to 20% of net taxable profit for accounting periods which begin on or after 1 January 2016.

## 34 Promotional privileges

By virtue of the provisions of the Industrial Investment Promotion Act of B.E. 2520, the Group has been granted privileges by the Board of Investment relating to chemical products, natural gas stations, power plants, plastic film products, organic fertilizer, concrete roof tile, masterbatch, compound plastic and compound rubber. The privileges granted include:

(a) exemption from payment of import duty on machinery and equipment approved by the Board;

(b) exemption from payment of corporate income tax for certain operations for a period of 3 - 8 years from the dates on which the income is first derived from such operations;

(c) a 50% reduction in the normal income tax rate on the net profit derived from certain operations for a period of 5 years, commencing from the expiry date in (b) above; and

(d) a deduction of twice the actual transportation, electrical and water supply expenses for a period of 10 years from the respective revenues and a 25% reduction of the capital expenditure for the installation or the construction of the facilities in addition to the normal depreciation.

As a promoted company, the Company and it subsidiaries 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 financial statements | | | | | |
|---|---|---|---|---|---|---|
| | 2017 | | | 2016 | | |
| | Promoted business | Non-promote business | Total | Promoted business | Non-promote business | Total |
| Export sales | 98,816 | 9,357,494 | 9,456,310 | 95,209 | 9,201,073 | 9,296,282 |
| Local sales | 4,109,035 | 30,362,381 | 34,471,416 | 4,084,034 | 29,142,578 | 33,226,612 |
| Eliminations | (723,079) | (14,116,295) | (14,839,374) | (720,029) | (12,674,650) | (13,394,679) |
| **Total** | **3,484,772** | **25,603,580** | **29,088,352** | **3,459,214** | **25,669,001** | **29,128,215** |

*(in thousand Baht)*

| | Separate financial statements | | | | | |
|---|---|---|---|---|---|---|
| | 2017 | | | 2016 | | |
| | Promoted business | Non-promote business | Total | Promoted business | Non-promote business | Total |
| Export sales | - | 1,000,365 | 1,000,365 | 46,652 | 1,095,578 | 1,142,230 |
| Local sales | 416,770 | 20,185,108 | 20,601,878 | 296,311 | 20,522,030 | 20,818,341 |
| **Total** | **416,770** | **21,185,473** | **21,602,243** | **342,963** | **21,617,608** | **21,960,571** |

## 35 Basic earnings (loss) per share

The calculations of basic earnings (loss) per share for the years ended 31 December 2017 and 2016 were based on the profit (loss) for the years attributable to ordinary shareholders of the Company and the number of ordinary shares outstanding during the years, after adjusting the own shares held by subsidiaries. The calculations are as follows:

*(in thousand Baht / thousand shares)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 (Restated) | 2017 | 2016 (Restated) |
| **Profit (loss) attributable to ordinary shareholders of the Company (Basic)** | **(1,259,738)** | **512,022** | **(94,042)** | **1,352,239** |
| Number of ordinary shares outstanding at 1 January | 20,190,000 | 20,190,000 | 20,190,000 | 20,190,000 |
| Effect of own shares held by subsidiaries | (222,164) | (222,164) | - | - |
| **Weighted average number of ordinary shares outstanding (basic)** | **19,967,836** | **19,967,836** | **20,190,000** | **20,190,000** |
| **Earnings (loss) per share (basic) (in Baht)** | **(0.063)** | **0.026** | **(0.005)** | **0.067** |

## 36 Dividends

At the annual general meeting of the shareholders of the Company held on 27 April 2017, the shareholders approved the appropriation of dividend of Baht 0.02 per share, amounting to Baht 403.80 million. The dividend was paid to the shareholders in May 2017.

At the annual general meeting of the shareholders of the Company held on 29 April 2016, the shareholders approved the appropriation of dividend of Baht 0.02 per share, amounting to Baht 403.80 million. The dividend was paid to the shareholders in May 2016.

## 37 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:

| | | **Consolidated financial statements** | | | |
|---|---|---|---|---|---|
| | Effective Interest rate | Within 1 year | After 1 year but within5 years | After 5 years | Total |
| | *(% per annum)* | | *(in thousand Baht)* | | |
| ***2017*** | | | | | |
| **Current** | | | | | |
| Short-term loans from financial institutions | 1.50 to 3.50 | 2,178,403 | - | - | 2,178,403 |
| Current portion of long-term loans from financial institutions | 3M EURIBOR+1.65, 6M EURIBOR+1.10, 6M USD LIBOR+2.20, MLR-1.75 | 751,049 | - | - | 751,049 |
| Current portion of debentures | 4.10 to 5.30 | 5,000,000 | - | - | 5,000,000 |
| **Non-current** | | | | | |
| Long-term loans from financial institutions | 3M EURIBOR+1.65, 6M EURIBOR+1.10, 6M USD LIBOR+2.20 MLR-1.75 | - | 2,930,010 | 2,109,367 | 5,039,377 |
| Debentures | 3.20 to 5.20 | - | 25,355,000 | 2,645,000 | 28,000,000 |
| **Total** | | **7,929,452** | **28,285,010** | **4,754,367** | **40,968,829** |
| ***2016*** | | | | | |
| **Current** | | | | | |
| Short-term loans from financial institutions | 2.00 to 2.24 | 5,609,638 | - | - | 5,609,638 |
| Current portion of long-term loans from financial institutions | 3M EURIBOR+1.65, 6M EURIBOR+1.10, 6M USD LIBOR+2.20, MLR-1.75 | 906,485 | - | - | 906,485 |
| Current portion of debentures | 5.00 | 3,000,000 | - | - | 3,000,000 |
| **Non-current** | | | | | |
| Long-term loans from financial institutions | 3M EURIBOR+1.65, 6M EURIBOR+1.10, 6M USD LIBOR+2.20 MLR-1.75 | - | 4,944,341 | 3,057,717 | 8,002,058 |
| Debentures | 4.10 to 5.30 | - | 21,155,000 | 7,845,000 | 29,000,000 |
| **Total** | | **9,516,123** | **26,099,341** | **10,902,717** | **46,518,181** |

| | Effective Interest rate | Separate financial statements | | | |
|---|---|---|---|---|---|
| | | Within 1 year | After 1 year but within5 years | After 5 years | Total |
| ***2017*** | *(% per annum)* | | *(in thousand Baht)* | | |
| **Current** | | | | | |
| Short-term loans from financial institutions | 1.50 to 3.50 | 1,844,119 | - | - | 1,844,119 |
| Current portion of long-term loans from financial institutions | 3M EURIBOR+1.65, 6M EURIBOR+1.10, 6M USD LIBOR+2.20 | 751,049 | - | - | 751,049 |
| Current portion of debentures | 4.10 to 5.30 | 5,000,000 | - | - | 5,000,000 |
| **Non-current** | | | | | |
| Long-term loans from financial institutions | 3M EURIBOR+1.65, 6M EURIBOR+1.10, 6M USD LIBOR+2.20 | - | 2,930,010 | 2,109,367 | 5,039,377 |
| Debentures | 3.20 to 5.20 | - | 25,355,000 | 2,645,000 | 28,000,000 |
| **Total** | | **7,595,168** | **28,285,010** | **4,754,367** | **40,634,545** |
| ***2016*** | | | | | |
| **Current** | | | | | |
| Short-term loans from financial institutions | 2.00 to 2.24 | 4,718,066 | - | - | 4,718,066 |
| Current portion of long-term loans from financial institutions | 3M EURIBOR+1.65, 6M EURIBOR+1.10, 6M USD LIBOR+2.20 | 741,485 | - | - | 741,485 |
| Current portion of debentures | 5.00 | 3,000,000 | - | - | 3,000,000 |
| **Non-current** | | | | | |
| Long-term loans from financial institutions | 3M EURIBOR+1.65, 6M EURIBOR+1.10, 6M USD LIBOR+2.20 | - | 2,965,941 | 2,704,489 | 5,670,430 |
| Debentures | 4.10 to 5.30 | - | 21,155,000 | 7,845,000 | 29,000,000 |
| **Total** | | **8,459,551** | **24,120,941** | **10,549,489** | **43,129,981** |

### *Foreign currency risk*

The Group is exposed to foreign currency risk relating to purchases and sales of goods, purchases of machine and equipment and loans which are denominated in foreign currencies.

At 31 December, the Group and the Company were exposed to foreign currency risk in respect of financial assets and liabilities denominated in the following currencies:

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| ***United States Dollars*** | | | | |
| Cash and cash equivalents | 130,546 | 151,182 | 27,984 | 40,650 |
| Trade accounts receivable | 834,778 | 726,373 | 53,252 | 14,559 |
| Interest-bearing liabilities | (836,786) | (1,497,725) | (506,750) | (678,857) |
| Trade accounts payable | (306,858) | (97,535) | - | (663) |
| Other payables - machines | (2,879,884) | (2,248,539) | (105,862) | (59,122) |
| | **(3,058,204)** | **(2,966,244)** | **(531,376)** | **(683,433)** |
| ***EURO*** | | | | |
| Cash and cash equivalents | 324,466 | 318,032 | 324,012 | 316,596 |
| Trade accounts receivable | 9,901 | 3,452 | - | - |
| Interest-bearing liabilities | (5,337,817) | (5,838,162) | (5,333,569) | (5,765,458) |
| Trade accounts payable | (14,425) | (18,937) | - | - |
| Other payables - machines | (159,500) | (268,724) | (133,092) | (246,764) |
| | **(5,177,375)** | **(5,804,339)** | **(5,142,649)** | **(5,695,626)** |
| *Others* | | | | |
| Cash and cash equivalents | 968 | 1,276 | 883 | 1,146 |
| Trade accounts payable | (6,353) | - | - | - |
| Other payables - machines | - | (840) | - | (840) |
| | (5,385) | 436 | 883 | 306 |
| **Gross financial position exposure** | **(8,240,964)** | **(8,770,147)** | **(5,673,142)** | **(6,378,753)** |
| Foreign currency forward contracts | - | 309,388 | - | 320,042 |
| **Net exposure** | **(8,240,964)** | **(8,460,759)** | **(5,673,142)** | **(6,058,711)** |

At 31 December 2017, the Group had no selling forward contracts *(2016: USD 0.3 million equivalent Baht 10.7 million)*.

At 31 December 2017, the Group had no buying forward contracts *(2016: EUR 8.5 million equivalent Baht 320.0 million)*.

### *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.

Management has a credit policy in place and the exposure to credit risk is monitored on an ongoing basis. Credit evaluations are performed on obtaining sufficient collateral from customers before commencing trading. The collateral include bank guarantees, bill of exchange aval by banks, cash guarantees, or the personal guarantee by a creditworthy person. At the reporting date there were no significant concentrations of credit risk. The maximum exposure to credit risk is represented by the carrying amount of each financial asset in the statement of financial position. However, due to the large number of parties comprising the Group's customer base, Management does not anticipate material losses from its debt collection.

### *Liquidity risk*

The Group monitors its liquidity risk and maintains a level of cash and cash equivalents deemed adequate by management to finance the Group's operations and to mitigate the effects of fluctuations in cash flows.

### *Fair values of financial assets and liabilities*

The following table shows the carrying amounts and fair values of financial assets and financial liabilities, including their levels in the fair value hierarchy for financial instruments measured at fair value. 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.

| | | **Consolidated financial statements** | | | |
|---|---|---|---|---|---|
| | | Fair value | | | |
| | Carrying value | Level 1 | Level 2 | Level 3 | Total |
| | | *(in thousand Baht)* | | | |
| **31 December 2017** | | | | | |
| ***Financial assets/Financial liabilities measured at fair value*** | | | | | |
| Equity securities held for trading (Mutual fund) | 100,113 | - | 100,113 | - | 100,113 |
| Debt securities held for trading | 200,307 | - | 200,307 | - | 200,307 |
| Debt securities held for trading (Private funds) | 2,623,556 | - | 2,623,556 | - | 2,623,556 |
| Equity securities available-for-sale | 429 | 429 | - | - | 429 |
| ***Financial assets/Financial liabilities not measured at fair value*** | | | | | |
| Current portion of debentures | 5,000,000 | - | 5,039,776 | - | 5,039,776 |
| Debentures | 28,000,000 | - | 28,431,254 | - | 28,431,254 |
| **31 December 2016** | | | | | |
| ***Financial assets/Financial liabilities measured at fair value*** | | | | | |
| Debt securities held for trading (Private funds) | 2,169 | - | 2,169 | - | 2,169 |
| Equity securities available-for-sale | 292 | 292 | - | - | 292 |
| Foreign currency forward contracts | - | - | 164 | - | 164 |
| ***Financial assets/Financial liabilities not measured at fair value*** | | | | | |
| Current portion of debentures | 3,000,000 | - | 3,028,712 | - | 3,028,712 |
| Debentures | 29,000,000 | - | 29,166,459 | - | 29,166,459 |

| | Carrying value | Separate financial statements Fair value Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|---|
| | | | *(in thousand Baht)* | | |
| **31 December 2017** | | | | | |
| ***Financial assets/Financial liabilities measured at fair value*** | | | | | |
| Debt securities held for trading (Private funds) | 104 | - | 104 | - | 104 |
| Equity securities available-for-sale | 429 | 429 | - | - | 429 |
| ***Financial assets/Financial liabilities not measured at fair value*** | | | | | |
| Current portion of debentures | 5,000,000 | - | 5,039,776 | - | 5,039,776 |
| Debentures | 28,000,000 | - | 28,431,254 | - | 28,431,254 |
| **31 December 2016** | | | | | |
| ***Financial assets/Financial liabilities measured at fair value*** | | | | | |
| Debt securities held for trading (Private funds) | 2,169 | - | 2,169 | - | 2,169 |
| Equity securities available-for-sale | 292 | 292 | - | - | 292 |
| Foreign currency forward contracts | - | - | 18 | - | 18 |
| ***Financial assets/Financial liabilities not measured at fair value*** | | | | | |
| Current portion of debentures | 3,000,000 | - | 3,028,712 | - | 3,028,712 |
| Debentures | 29,000,000 | - | 29,166,459 | - | 29,166,459 |

### Measurement of fair values

#### *Valuation techniques*

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

| Type | Valuation technique |
|---|---|
| Equity securities held for trading (Mutual fund) | The net asset value as of the reporting date. |
| Debt securities held for trading | Thai Bond Market Association Government Bond Yield Curve as of the reporting date. |
| Foreign currency forward contracts | Market comparison technique: The fair values are based on broker quotes. Similar contracts are traded in an active market and the quotes reflect the actual transactions in similar instruments. |
| Debentures | 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. |

## 38 Commitments with non-related parties

*(in thousand Baht)*

| | Consolidated financial statements | | Separate financial statements | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| ***Capital commitments*** | | | | |
| *Contracted but not provided for* | | | | |
| Agreements for construction, machine and equipment | **1,571,393** | **6,619,364** | **1,082,980** | **1,152,809** |
| ***Non-cancellable operating lease commitments*** | | | | |
| Within one year | 84,943 | 90,626 | 45,718 | 46,940 |
| After one year but within five years | 96,966 | 109,371 | 53,986 | 64,656 |
| **Total** | **181,909** | **199,997** | **99,704** | **111,596** |
| ***Other commitments*** | | | | |
| Unused letters of credit | 1,106,746 | 346,121 | 579,894 | 123,431 |
| Purchase agreement for raw material | 1,404,120 | 64,452 | 113,678 | - |
| Bank guarantees | 358,645 | 351,366 | 302,073 | 301,148 |
| **Total** | **2,869,511** | **761,939** | **995,645** | **424,579** |

## 39 Contingent liabilities

As at 31 December 2017, the Company had the major lawsuits as follows:

1) The Company, the government authority and a government officer were sued by the Claimant that the Claimant processed of 8 plots of land under utilization certificates. Issuance of concession by the government authority was not legitimated and overlapped 8 plots of land of the Claimant.

   The Central Administrative Court had considered and adjudged on 5 July 2012 that Issuance of concession by the government authority did not overlap land of the Claimant. The Complaint was therefore dismissed. The Claimant filed an appeal to the Supreme Administrative Court. This case is in the process of consideration for acceptant of the appeal by the Central Administrative Court.

   The Supreme Administrative Court issued the summon notifying the first hearing date of the case to be on 18 May 2017 and sent documents to the Company for consideration. The Company has considered, viewing that there is no matter to be additionally clarified. The Supreme Administrative Court rendered its judgment dated 21 July 2017 to dismiss the case in accordance with the Central Administrative Court's previous judgment. The judgment thus has become absolute by the dismissal of the case.

2) On 8 July 2015, Department of Primary Industries and Mines, Ministry of Industry, by the public prosecutor from Saraburi province, filed a lawsuit against the Company the Case No.Sor Wor.4/2559 of the Civil Court for violation in relation to its operation of mining outside its concession areas with damage claimed in the total amount of Baht 4,067 million (the public prosecutor amendment damage claim to amount of Baht 4,339 million). The Company opines that it has not committed any offence as accused by the public prosecutor. The above problem land, which has access to public way, is owned by other person, not by the Company. The outcome of lawsuit is uncertain because this case is in process of consideration by the Court.

   On 25 November 2015, the public prosecutor filed a motion tothe Appeal Court requesting for the transfer of the case to the Civil Court. Later on 30 August 2016, the Appeal Court has an order to transfer lawsuit to be under the jurisdiction of the Environmental Division of the Civil Court as the above mentioned case is considered to be an environmental lawsuit and shall be transferred to the Environmental Division of Civil Court, in which the Environmental Division of Civil Court thereafter issued the order of joinder directing the said case and other related cases to be tried together with the Case No.SorWor.6/2559 and set the hearing date to be taken on 31 January 2018 in order to consider the maps of disputed area. On 31 January 2018, the Court settled issues and specified the Plaintiff's witness and Defendant's witness hearing to be taken during September and October 2018.

   In addition on 24 March 2016, Department of Primary Industries and Mines, the Ministry of Industry, by the public prosecutor from Saraburi province, filed 2 lawsuits against the Company the Case No. Sor Wor.6/2559 and Sor Wor.5/2559 of the Civil Court for the violation in relation to its operation of mining outside its concession areas claiming for the damages having the additional claimed amount at Baht 328 million and the breach of the terms and conditions of the Company's concession area claiming for the damages having the claimed amount at Baht 1,671 million. The Company opines that it is not guilty as claimed by the public prosecutor. At present, the outcome of lawsuit is uncertain because this case is in process of consideration by the Court.

   On 14 December 2016, the Appeal Court has ordered the transfer of such lawsuits to be under the jurisdiction of the Civil Court. The Court passed an order that the Case No.SorWor.6/2559 shall be presented together with the Case No.SorWor.4/2559 and set the date to settle the issue hearing to be taken on 31 Jaunary 2018 in order to consider the maps of disputed area. On 31 January 2018, the Court settled issues and specified the Plaintiff's witness and Defendant's witness hearing to be taken during September and October 2018. In the Case No.Sor Wor.5/2559, the Court settled issues and specified the Plaintiff's witness and Defendant's witness hearing to be taken during August and September 2018.

   In addition on 2 March 2017, Department of Primary Industries and Mines, Ministry of Industry, by the public prosecutor from Office of the Attorney General, filed a lawsuit against the Company the Case No.SorWor.1/2560 of the Civil Court for the breach of the terms and conditions of the Company's concession area and the violation in relation to its operation of mining outside its concession areas claiming for the damages having the claimed amount at Baht 345 million. The Company opines that it has not committed any offence as accused by the public prosecutor. The Court set the hearing date to be taken on 19 February 2018 in order to consider the maps of disputed and determine the legal issue. On 19 February 2018, the Court settled issues and specified the Plaintiff's witness and Defendant's witness hearing to be taken during November and December 2018. At present, the outcome of lawsuit is uncertain because this case is in process of consideration by the Court.

3) On 2 June 2017, The Central Administrative Court summoned the Company to be an interpleader of the case where a temple has filed a lawsuit against the government authorities. It has been claimed that the issuance of a mining concession certificates to the Company is not legitimate, therefore, it has requested for the revocation of such mining concession certificates. The Company has filed the answer to the plaint on 6 October 2017. This case is thus pending a view by the Central Administrative Court.

For all above lawsuit, the Company's legal consultant opines that, based on the Company's evidences and information, the Company has a chance to defend itself in the court trial depending on the condideratio of each courts.

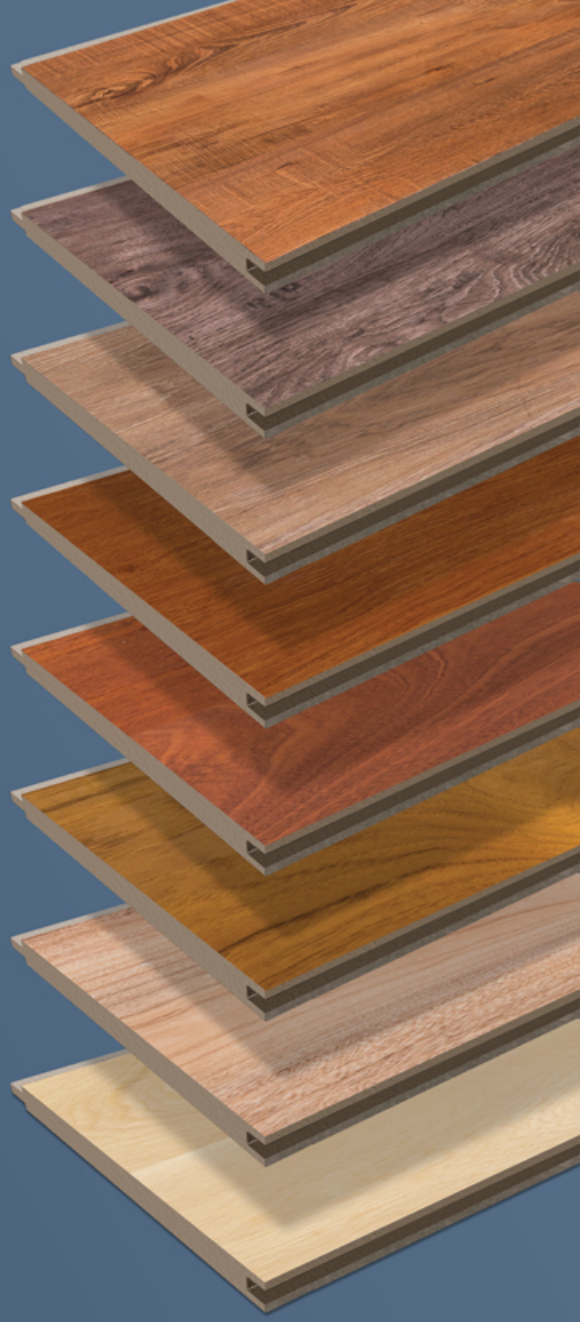
## 40 Reclassification of accounts

Certain accounts in the 2016 financial statements, which are included in the 2017 financial statements for comparative purposes, have been reclassified to conform to the presentation in the 2017 financial statements as follows:

*(in thousand Baht)*

| | 2016 | | | | | |
|---|---|---|---|---|---|---|
| | Consolidated financial statements | | | Separate financial statements | | |
| | Before reclass. | Reclass. | After reclass. | Before reclass. | Reclass. | After reclass. |
| Statement of financial position as at 31 December 2016 | | | | | | |
| Other surpluses (deficits) | - | 52,943 | 52,943 | - | - | - |
| Other components of equity | 163,355 | (52,943) | 110,412 | - | - | - |
| | | - | | | - | |

The reclassifications have been made in order to comply with the classification set out in the Pronouncement of the Department of Business Development *"Determination of items in the financial statements B.E. 2559"* dated 11 October 2016 which is effective for accounting periods starting on or after 1 January 2017.




บริษัท ทีพีไอ โพลีน จำกัด (มหาชน)
TPI POLENE Public Company Limited

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ธุรกิจปูนซีเมนต์
Cement Business

ธุรกิจคอนกรีตผสมเสร็จ
Ready-mixed Concrete Business

ธุรกิจเม็ดพลาสติก
Plastic Resin Business

ธุรกิจปุ๋ยอินทรีย์
Organic Fertilizer Business

ธุรกิจโรงไฟฟ้า
Power Plants Business