

AUDITOR'S REPORT AND FINANCIAL STATEMENTS
OF
PTT PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
FOR THE YEAR ENDED DECEMBER 31, 2016

PTT PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED DECEMBER 31, 2016

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PTT PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED DECEMBER 31, 2016

1. General Information

PTT Public Company Limited (the Company) is incorporated as a public limited company in Thailand, and is listed on the Stock Exchange of Thailand. The address of its incorporated and registered office is as follows:

The Head Office of the Company is located at 555 Vibhavadi-Rangsit Road, Chatuchak, Bangkok, Thailand.

The Company's principal activity is the operation of its petroleum business. The Company has invested in subsidiaries, joint arrangements and associates (the Group), which are engaged in upstream petroleum and natural gas, downstream petroleum, coal and other related businesses as described in Note 39 Operating Segments.

2. Basis of Financial Statements Preparation

The consolidated and the separate financial statements have been prepared in accordance with Thai Financial Reporting Standards under the Accounting Act, B.E. 2543. These are Thai Financial Reporting Standards under the Accounting Profession Act, B.E. 2547, including guidelines promulgated by the Federation of Accounting Professions (FAP), and the financial reporting requirements of the Securities and Exchange Commission under the Securities and Exchange Act, B.E. 2535.

The Company has presented the financial statements in compliance with the notification of the Department of Business Development "Definition of the abbreviated components required in the financial statements, B.E. 2554", dated September 28, B.E. 2554, under the third paragraph of section 11 of the Accounting Act, B.E. 2543.

The consolidated and the separate financial statements have been prepared based on the assumption that users of the financial statements have an understanding of Thai generally accepted accounting principles and practices, which may differ from generally accepted accounting principles adopted in other countries.

The consolidated and the separate financial statements have been prepared under the historical cost convention with the exception of certain amounts, which are accounted for using the fair value method as disclosed in Note 3.2 Significant Accounting Policies.

The significant transactions arising between the Company and subsidiaries have been eliminated from the consolidated financial statements.

The consolidated and the separate financial statements are prepared and presented in Thai Baht and are rounded in the notes to financial statements to the nearest million unless otherwise stated.

This English translation of the financial statements has been prepared from the statutory financial statements that were issued in Thai language. In the event of a conflict or a difference in interpretation between the two languages, the Thai language statutory financial statements shall prevail.

3. Accounting Policies

- 3.1 Thai Accounting Standards (TASs), Thai Financial Reporting Standards (TFRSs), Thai Standing Interpretations and Thai Financial Reporting Interpretations, effective for accounting periods on or after the current periods and will become effective in the future are as follows:

Effective for accounting periods on or after January 1, 2016

◆Thai Accounting Standard No. 1 (revised 2015)	Presentation of Financial Statements
◆Thai Accounting Standard No. 2 (revised 2015)	Inventories
◆Thai Accounting Standard No. 7 (revised 2015)	Statement of Cash Flows
◆Thai Accounting Standard No. 8 (revised 2015)	Accounting Policies, Changes in Accounting Estimates and Errors
◆Thai Accounting Standard No. 10 (revised 2015)	Events after the Reporting Period
◆Thai Accounting Standard No. 11 (revised 2015)	Construction Contracts
◆Thai Accounting Standard No. 12 (revised 2015)	Income Taxes
◆Thai Accounting Standard No. 16 (revised 2015)	Property, Plant and Equipment
◆Thai Accounting Standard No. 17 (revised 2015)	Leases
◆Thai Accounting Standard No. 18 (revised 2015)	Revenue
◆Thai Accounting Standard No. 19 (revised 2015)	Employee Benefits
◆Thai Accounting Standard No. 20 (revised 2015)	Accounting for Government Grants and Disclosure of Government Assistance
◆Thai Accounting Standard No. 21 (revised 2015)	The Effects of Changes in Foreign Exchange Rates
◆Thai Accounting Standard No. 23 (revised 2015)	Borrowing Costs
◆Thai Accounting Standard No. 24 (revised 2015)	Related Party Disclosures
◆Thai Accounting Standard No. 26 (revised 2015)	Accounting and Reporting by Retirement Benefit Plans
◆Thai Accounting Standard No. 27 (revised 2015)	Separate Financial Statements
◆Thai Accounting Standard No. 28 (revised 2015)	Investments in Associates and Joint Ventures
◆Thai Accounting Standard No. 29 (revised 2015)	Financial Reporting in Hyperinflationary Economies
◆Thai Accounting Standard No. 33 (revised 2015)	Earnings per Share
◆Thai Accounting Standard No. 34 (revised 2015)	Interim Financial Reporting
◆Thai Accounting Standard No. 36 (revised 2015)	Impairment of Assets
◆Thai Accounting Standard No. 37 (revised 2015)	Provisions, Contingent Liabilities and Contingent Assets
◆Thai Accounting Standard No. 38 (revised 2015)	Intangible Assets
◆Thai Accounting Standard No. 40 (revised 2015)	Investment Property
◆Thai Accounting Standard No. 41	Agriculture

3. Accounting Policies (Continued)

- 3.1 Thai Accounting Standards (TASs), Thai Financial Reporting Standards (TFRSs), Thai Standing Interpretations and Thai Financial Reporting Interpretations, effective for accounting periods on or after the current periods and will become effective in the future are as follows: (Continued)

Effective for accounting periods on or after January 1, 2016 (Continued)

◆Thai Financial Reporting Standard No. 2 (revised 2015)	Share-based Payment
◆Thai Financial Reporting Standard No. 3 (revised 2015)	Business Combinations
◆Thai Financial Reporting Standard No. 4 (revised 2015)	Insurance Contracts
◆Thai Financial Reporting Standard No. 5 (revised 2015)	Non-current Assets Held for Sale and Discontinued Operations
◆Thai Financial Reporting Standard No. 6 (revised 2015)	Exploration for and Evaluation of Mineral Resources
◆Thai Financial Reporting Standard No. 8 (revised 2015)	Operating Segments
◆Thai Financial Reporting Standard No. 10 (revised 2015)	Consolidated Financial Statements
◆Thai Financial Reporting Standard No. 11 (revised 2015)	Joint Arrangements
◆Thai Financial Reporting Standard No. 12 (revised 2015)	Disclosure of Interests in Other Entities
◆Thai Financial Reporting Standard No. 13 (revised 2015)	Fair Value Measurement
◆Thai Standing Interpretation No. 10 (revised 2015)	Government Assistance - No Specific Relation to Operating Activities
◆Thai Standing Interpretation No. 15 (revised 2015)	Operating Leases - Incentives
◆Thai Standing Interpretation No. 25 (revised 2015)	Income Taxes - Changes in the Tax Status of an Entity or its Shareholders
◆Thai Standing Interpretation No. 27 (revised 2015)	Evaluating the Substance of Transactions Involving the Legal Form of a Lease
◆Thai Standing Interpretation No. 29 (revised 2015)	Service Concession Arrangements: Disclosures
◆Thai Standing Interpretation No. 31 (revised 2015)	Revenue - Barter Transactions Involving Advertising Services
◆Thai Standing Interpretation No. 32 (revised 2015)	Intangible Assets - Web Site Costs
◆Thai Financial Reporting Interpretation No. 1 (revised 2015)	Changes in Existing Decommissioning, Restoration and Similar Liabilities
◆Thai Financial Reporting Interpretation No. 4 (revised 2015)	Determining Whether an Arrangement Contains a Lease
◆Thai Financial Reporting Interpretation No. 5 (revised 2015)	Rights to Interests arising from Decommissioning, Restoration and Environmental Rehabilitation Funds
◆Thai Financial Reporting Interpretation No. 7 (revised 2015)	Applying the Restatement Approach under TAS 29 (revised 2015) Financial Reporting in Hyperinflationary Economies

3. Accounting Policies (Continued)

- 3.1 Thai Accounting Standards (TASs), Thai Financial Reporting Standards (TFRSs), Thai Standing Interpretations and Thai Financial Reporting Interpretations, effective for accounting periods on or after the current periods and will become effective in the future are as follows: (Continued)

Effective for accounting periods on or after January 1, 2016 (Continued)

◆Thai Financial Reporting Interpretation No. 10 (revised 2015)	Interim Financial Reporting and Impairment
◆Thai Financial Reporting Interpretation No. 12 (revised 2015)	Service Concession Arrangements
◆Thai Financial Reporting Interpretation No. 13 (revised 2015)	Customer Loyalty Programmes
◆Thai Financial Reporting Interpretation No. 14 (revised 2015)	TAS 19 (revised 2015) - The Limit on a Defined Benefit Asset, Minimum Funding Requirements and their Interaction
◆Thai Financial Reporting Interpretation No. 15 (revised 2015)	Agreements for the Construction of Real Estate
◆Thai Financial Reporting Interpretation No. 17 (revised 2015)	Distributions of Non-cash Assets to Owners
◆Thai Financial Reporting Interpretation No. 18 (revised 2015)	Transfers of Assets from Customers
◆Thai Financial Reporting Interpretation No. 20 (revised 2015)	Stripping Costs in the Production Phase of a Surface Mine
◆Thai Financial Reporting Interpretation No. 21	Levies

Effective for accounting periods on or after January 1, 2017

◆ Thai Accounting Standard No. 1 (revised 2016)	Presentation of Financial Statements
◆ Thai Accounting Standard No. 2 (revised 2016)	Inventories
◆ Thai Accounting Standard No. 7 (revised 2016)	Statement of Cash Flows
◆ Thai Accounting Standard No. 8 (revised 2016)	Accounting Policies, Changes in Accounting Estimates and Errors
◆ Thai Accounting Standard No. 10 (revised 2016)	Events after the Reporting Period
◆ Thai Accounting Standard No. 11 (revised 2016)	Construction Contracts
◆ Thai Accounting Standard No. 12 (revised 2016)	Income Taxes
◆ Thai Accounting Standard No. 16 (revised 2016)	Property, Plant and Equipment
◆ Thai Accounting Standard No. 17 (revised 2016)	Leases

3. Accounting Policies (Continued)

3.1 Thai Accounting Standards (TASs), Thai Financial Reporting Standards (TFRSs), Thai Standing Interpretations and Thai Financial Reporting Interpretations, effective for accounting periods on or after the current periods and will become effective in the future are as follows: (Continued)

Effective for accounting periods on or after January 1, 2017 (Continued)

- ◆ Thai Accounting Standard No. 18 (revised 2016) Revenue
- ◆ Thai Accounting Standard No. 19 (revised 2016) Employee Benefits
- ◆ Thai Accounting Standard No. 20 (revised 2016) Accounting for Government Grants and Disclosure of Government Assistance
- ◆ Thai Accounting Standard No. 21 (revised 2016) The Effects of Changes in Foreign Exchange Rates
- ◆ Thai Accounting Standard No. 23 (revised 2016) Borrowing Costs
- ◆ Thai Accounting Standard No. 24 (revised 2016) Related Party Disclosures
- ◆ Thai Accounting Standard No. 26 (revised 2016) Accounting and Reporting by Retirement Benefit Plans
- ◆ Thai Accounting Standard No. 27 (revised 2016) Separate Financial Statements
- ◆ Thai Accounting Standard No. 28 (revised 2016) Investments in Associates and Joint Ventures
- ◆ Thai Accounting Standard No. 29 (revised 2016) Financial Reporting in Hyperinflationary Economies
- ◆ Thai Accounting Standard No. 33 (revised 2016) Earnings per Share
- ◆ Thai Accounting Standard No. 34 (revised 2016) Interim Financial Reporting
- ◆ Thai Accounting Standard No. 36 (revised 2016) Impairment of Assets
- ◆ Thai Accounting Standard No. 37 (revised 2016) Provisions, Contingent Liabilities and Contingent Assets
- ◆ Thai Accounting Standard No. 38 (revised 2016) Intangible Assets
- ◆ Thai Accounting Standard No. 40 (revised 2016) Investment Property
- ◆ Thai Accounting Standard No. 41 (revised 2016) Agriculture
- ◆ Thai Accounting Standard No. 104 (revised 2016) Accounting for Troubled Debt Restructuring

3. Accounting Policies (Continued)

3.1 Thai Accounting Standards (TASs), Thai Financial Reporting Standards (TFRSs), Thai Standing Interpretations and Thai Financial Reporting Interpretations, effective for accounting periods on or after the current periods and will become effective in the future are as follows: (Continued)

Effective for accounting periods on or after January 1, 2017 (Continued)

◆ Thai Accounting Standard No. 105 (revised 2016)	Accounting for Investments in Debt and Equity Securities
◆ Thai Accounting Standard No. 107 (revised 2016)	Financial Instruments Disclosure and Presentation
◆ Thai Financial Reporting Standard No. 2 (revised 2016)	Share-Based Payment
◆ Thai Financial Reporting Standard No. 3 (revised 2016)	Business Combinations
◆ Thai Financial Reporting Standard No. 4 (revised 2016)	Insurance contracts
◆ Thai Financial Reporting Standard No. 5 (revised 2016)	Non-currents Assets Held for Sale and Discontinued Operations
◆ Thai Financial Reporting Standard No. 6 (revised 2016)	Exploration for and Evaluation of Mineral Resources
◆ Thai Financial Reporting Standard No. 8 (revised 2016)	Operating Segments
◆ Thai Financial Reporting Standard No. 10 (revised 2016)	Consolidated Financial Statements
◆ Thai Financial Reporting Standard No. 11 (revised 2016)	Joint Arrangements
◆ Thai Financial Reporting Standard No. 12 (revised 2016)	Disclosure of Interests in Other Entities
◆ Thai Financial Reporting Standard No. 13 (revised 2016)	Fair Value Measurement
◆ Thai Standard Interpretations No. 10 (revised 2016)	Government Assistance - No Specific Relation to Operating Activities
◆ Thai Standard Interpretations No. 15 (revised 2016)	Operating Leases - Incentives
◆ Thai Standard Interpretations No. 25 (revised 2016)	Income Taxes - Changes in the Tax Status of an Entity or its Shareholders
◆ Thai Standard Interpretations No. 27 (revised 2016)	Evaluating the Substance of Transactions Involving the Legal Form of a Lease
◆ Thai Standard Interpretations No. 29 (revised 2016)	Disclosure - Service Concession Arrangements
◆ Thai Standard Interpretations No. 31 (revised 2016)	Revenue – Barter Transactions Involving Advertising Services
◆ Thai Standard Interpretations No. 32 (revised 2016)	Intangible Assets - Website Costs

3. Accounting Policies (Continued)

- 3.1 Thai Accounting Standards (TASs), Thai Financial Reporting Standards (TFRSs), Thai Standing Interpretations and Thai Financial Reporting Interpretations, effective for accounting periods on or after the current periods and will become effective in the future are as follows: (Continued)

Effective for accounting periods on or after January 1, 2017 (Continued)

◆ Thai Financial Reporting Interpretations No. 1 (revised 2016)	Changes in Existing Decommissioning, Restoration and Similar Liabilities
◆ Thai Financial Reporting Interpretations No. 4 (revised 2016)	Determining whether an Arrangement contains a Lease
◆ Thai Financial Reporting Interpretations No. 5 (revised 2016)	Rights to Interests arising from Decommissioning, Restoration and Environmental Rehabilitation Funds
◆ Thai Financial Reporting Interpretations No. 7 (revised 2016)	Applying the Restatement Approach under TAS 29 (revised 2016) Financial Reporting in Hyperinflationary Economies
◆ Thai Financial Reporting Interpretations No. 10 (revised 2016)	Interim Financial Reporting and Impairment
◆ Thai Financial Reporting Interpretations No. 12 (revised 2016)	Service Concession Arrangements
◆ Thai Financial Reporting Interpretations No. 13 (revised 2016)	Customer Loyalty Programmes
◆ Thai Financial Reporting Interpretations No. 14 (revised 2016)	TAS 19 (revised 2016) Employee Benefits - The Limit on a Defined Benefit Asset, Minimum Funding Requirements and their Interaction
◆ Thai Financial Reporting Interpretations No. 15 (revised 2016)	Agreements for the Construction of Real Estate
◆ Thai Financial Reporting Interpretations No. 17 (revised 2016)	Distributions of Non-cash Assets to Owners
◆ Thai Financial Reporting Interpretations No. 18 (revised 2016)	Transfers of Assets from Customers
◆ Thai Financial Reporting Interpretations No. 20 (revised 2016)	Stripping Costs in the Production Phase of a Surface Mine
◆ Thai Financial Reporting Interpretations No. 21 (revised 2016)	Levies

Federation of Accounting Professions (FAP) has issued a number of new and revised Thai Accounting Standards, Thai Financial Reporting Standards, Thai Standing Interpretations and Thai Financial Reporting Interpretations, which are effective for accounting periods beginning on or after January 1, 2015 and January 1, 2016. The management of the Group has assessed the effects of the standards and interpretations and believes that they will not have any significant impact on the consolidated and the separate financial statements. However, one standard involves changes to key principles, which are summarised below.

3. Accounting Policies (Continued)

- 3.1 Thai Accounting Standards (TASs), Thai Financial Reporting Standards (TFRSs), Thai Standing Interpretations and Thai Financial Reporting Interpretations, effective for accounting periods on or after the current periods and will become effective in the future are as follows: (Continued)

TAS 27 (revised 2016) Separate Financial Statements

This revised standard stipulates an additional option to account for investments in subsidiaries, joint ventures and associates in separate financial statements under the equity method, as described in TAS 28 (revised 2016) Investments in Associates and Joint Ventures. However, the entity is to apply the same accounting treatment for each category of investment. If an entity elects to account for such investments using the equity method in the separate financial statements, it has to adjust the transaction retrospectively.

This standard will not have any significant impact on the Group's financial statements because the management has decided to continue accounting for such investments under the cost method in the separate financial statements.

3.2 Significant Accounting Policies

3.2.1 Cash and Cash Equivalents

Cash and cash equivalents comprise cash on hand, deposits held at call with banks and other short-term highly liquid investments which have original maturities within three months. Bank overdrafts and short-term loans from financial institutions are included in current liabilities in the statements of financial position.

3.2.2 Trade Accounts and Other Accounts Receivable

Trade accounts and other accounts receivable are carried at net realizable value. Doubtful accounts receivable are estimated based on uncollectible amounts estimating from outstanding receivables at the statement of financial position date based on collection experience of their current financial status, also with percentage of debt aging. Allowance for doubtful debt is recorded as administrative expenses in profit or loss.

3.2.3 Inventories

Inventories are stated at the lower of cost and net realizable value. The cost is calculated by using the weighted average cost method. The cost of inventory comprises total purchasing costs, payments related to purchasing, discounts, quantity discounts, as well as contributions to or compensation from taxes several funds. Net realizable value is calculated from estimated selling price in the ordinary course of business, less the costs of completion and related selling expenses. When net realizable value of inventories is lower than cost of acquisition, it is presented under cost of goods sold in the statement of income. An allowance for impairment will be recognized for obsolete or defective inventories.

3.2.4 Materials and Supplies

Materials and supplies are stated at cost calculated by using the weighted average cost method, less allowance for obsolete, defective or unserviceable items.

3. Accounting Policies (Continued)

3.2 Significant Accounting Policies (Continued)

3.2.5 Non-current Assets and Liabilities Held-for-sale

Disposed assets or asset groups, including non-current assets and liabilities held-for-sale, are classified as asset held-for-sale if their carrying amounts will be recovered through a sale transaction rather than through continuing use. This condition is met only when the sale is highly probable and the asset is available for immediate sale in its present condition, subject only to terms that are usual and customary for sales of such assets. Management must commit to the sale of the assets and they must be actively marketed at a price that is reasonable compared to their current fair value, with the expectation that sale should be recorded as completed within one year from the date of classification. These disposed assets or asset groups are measured at the lower of carrying amount and fair value less costs to sell.

The Group ceases to depreciate and amortize property, plant and equipment and intangible assets from the date the assets meet the criteria for classification as assets held-for-sale. The Group continues to recognize liabilities, including interests and other expenses attributable to liabilities classified as held-for-sale.

3.2.6 Investments in Subsidiaries

Subsidiaries are those companies which directly or indirectly controlled by the parent company. Control exists when the parent company has the power over the subsidiaries so as to obtain variable returns from the involvement with the subsidiaries and has the ability to affect those returns through the power over the subsidiaries. In case of the parent company has voting rights less than half of total voting rights in subsidiaries, the parent company will reconsider the related facts and circumstances in order to determine whether the parent company has the power to control over such subsidiaries or not.

The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases.

The parent company allocates profit or loss and each component of other comprehensive income or loss to its shareholders and the non-controlling interests even if this results in a deficit non-controlling interest balance.

The purchase method of accounting is used to account for business combinations, except the business combination under common control. The cost of a business combination is measured as the sum of fair value of any consideration transferred, the recognized amount of any non-controlling interest in the acquiree, and the fair value of the existing equity interest as of the purchasing date (if the business combination is achieved in stages).

- For each business combination, the Group measures the recognized amount of any non-controlling interest in the acquiree at either the fair value or the non-controlling interest's proportionate share of the net of identifiable assets of the acquiree.
- In the case of a business combination achieved in stages, the Group measures the acquisition-date fair value of the acquirer's previously-held equity interest in the acquiree and recognized gains or losses in statement of income.
- Costs related to the acquisition, including professional fees, advisory fees and other consulting fees, are recognized as expenses in statement of income.

3. Accounting Policies (Continued)

3.2 Significant Accounting Policies (Continued)

3.2.6 Investments in Subsidiaries (Continued)

The Group measures the identifiable assets and liabilities acquired at fair value as of the acquisition date.

Any changes in the equity interest in subsidiaries of the Group while control is retained are recorded as surplus (deficit) from the changes in the ownership interests in subsidiaries in equity.

Upon the disposal of investments, the difference between the net disposal proceeds and the carrying amount of the investments is recorded in profit or loss.

Investments in subsidiaries have been presented in the separate financial statements under the cost method.

The list of investments in subsidiaries of the Group and proportion of ownership interests have been set out in Note 13.

3.2.7 Investments in Joint Ventures and Associates

Joint ventures are joint arrangement whereby the Group has joint control of the arrangement and has rights to the net assets of the arrangement. The joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

Associates are those companies in which the Group has significant influence, but not control or joint control, over the financial and operating policies.

The Group uses the purchase method to record the acquisition of joint ventures and associates. Acquisition costs which are higher than fair value of identifiable assets and liabilities of the Group's equity interest in joint ventures and associates are recorded as goodwill and included in the investment in joint ventures and associates.

The consolidated financial statements of the Group include the share of profit and loss from joint ventures and associates under equity method, from the date that significant influence commences until the date that significant influence ceases. Unrealized gains or losses on transactions between the Group and its joint ventures and associates are eliminated to the extent of the Group's interest in the joint ventures and associates unless the transactions provide evidence of impairment of the transferred assets.

The Group records share of profit or loss from joint ventures and associates in proportion to the Group's equity interest in those gains and losses. Any dividends received from joint ventures and associates are deducted from the book value of the investments.

When the Group's share of loss in joint ventures and associates equals or exceeds its interest in the joint ventures and associates, the Group does not recognize further losses, unless the Group has incurred collateral or constructive obligations or made payments on behalf of the joint ventures and associates.

3. Accounting Policies (Continued)

3.2 Significant Accounting Policies (Continued)

3.2.7 Investments in Joint Ventures and Associates (Continued)

Upon the disposal of investments, the difference between the net disposal proceeds and the carrying amount of the investments is recorded in profit or loss.

Investments in joint ventures and associates have been presented in the consolidated financial statements under the equity method.

The list of investments in joint ventures and associates of the Group and proportion of ownership interests have been set out in Note 13.

3.2.8 Joint Operations

Joint operations are joint arrangement whereby the Group has rights to assets and obligations relating to the joint arrangement. The Group has recognized assets, liabilities, revenues and expenses by the portion of joint operations in the separate and the consolidated financial statements from the date that joint control commences until the date that joint control ceases.

The list of joint operations of the Group and transactions relating to its involvements have been set out in Note 13.

3.2.9 Other Investments

Investments other than investments in subsidiaries, joint ventures, and associates are classified as available-for-sale investments and general investments.

Investments in equity securities and mutual funds that are marketable securities are classified as available-for-sale investments and carried at fair value in the statements of financial position. Any changes in value are recognized as gains (losses) from fair value measurement of available-for-sale investments in other comprehensive income or loss and accumulated amounts are accumulated differences are presented in other components of equity under equity.

Investments in non-marketable securities, which are classified as general investments, are carried at cost in the statement of financial position net of allowance for impairment. Impairment testing is performed when there is a factor indicating that an investment might be impaired. If the carrying value of the investment is higher than its recoverable amount, impairment losses are recognized in profit or loss immediately.

Upon the disposal of investments, the difference between the net disposal proceeds and the carrying amount is recognized in profit or loss. When disposing of some parts of the Group's particular investment in debt or equity securities, the carrying amount of the part disposed is determined by reference to the weighted average carrying amount of the total holding of the investment.

3. Accounting Policies (Continued)

3.2 Significant Accounting Policies (Continued)

3.2.10 Related Parties

Related parties of the Company are those enterprises or individuals that control or are controlled by the Company, or are under common control with the Company, including holding companies, subsidiaries, and fellow Group subsidiaries, as well as those that have equity interests in the Company that result in significant influence or joint control over the Company. In addition, related parties include associates, joint ventures, the management and directors of the Company, and entities which the management or directors of the Company, directly or indirectly, control, jointly controlled, or have significant influence.

In considering each possible related party relationship, attention is directed more to the substance of the relationship than to the legal form.

3.2.11 Foreign Currency Translation

The consolidated financial statements and the separate financial statements have been presented in Thai Baht, which is the Company's functional currency. Transactions of each company included in the consolidated financial statements are recorded in their own functional currencies.

Foreign currency transactions are translated into functional currency at the exchange rates prevailing at the transaction date. Monetary assets and liabilities at the statements of financial position date denominated in foreign currencies are translated into functional currency at the exchange rate prevailing at that date. Gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities denominated in foreign currencies are recognized in profit or loss.

Assets and liabilities of foreign operations are translated into Thai Baht using the closing rate at the statements of financial position date. Revenues and expenses are translated into Thai Baht using the average rate during the period. Differences arising from currency translation are included in other comprehensive income and accumulated differences are presented in other components of equity under equity.

Upon the disposal of self-sustaining foreign entities, accumulated currency translation differences under shareholders' equity are recognized as gains or losses on disposal.

3.2.12 Borrowing Costs

Borrowing costs comprise interest and other costs associated with the borrowings. Borrowing costs incurred on qualifying assets are capitalized as a cost of the qualifying property until all the activities necessary to prepare the property for its intended use are substantially completed. When funds are specifically borrowed for the construction or the production of asset, the amount of borrowing costs capitalized is determined from the actual borrowing costs during the year less any income on the temporary investment of those borrowings. When funds are borrowed for general purpose, the Group multiplies the capitalization rate by the capital expenditure in allocating borrowing costs to costs of assets.

All other borrowing costs are expensed in the period they incurred.

3. Accounting Policies (Continued)

3.2 Significant Accounting Policies (Continued)

3.2.13 Property, Plant and Equipment

Property, plant and equipment are initially recognized at cost less accumulated depreciation and allowance for impairment. The costs comprise any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by the management. These include decommissioning costs, delivery and restoration costs, and any obligation associated with either its acquisition or a consequence of having used the items.

Repair and maintenance costs are recognized as expenses in profit or loss during the financial period in which they are incurred. The costs of significant asset improvements, major turnarounds and inspections are included in the carrying amount of the asset. In case of replacement, the Group writes off carrying value of replaced items.

The Group depreciates each significant component of property, plant and equipment separately.

The Group estimates the residual value of the property, plant and equipment based on current assessment of the recoverable amount less cost to sell. The Group reviews the residual value, the useful lives and depreciation methods of assets at least once a year.

Depreciation is recorded as expenses in profit or loss and is calculated using the straight-line method or unit of production method over the estimated useful lives of the assets, which are as follows:

Buildings and building improvements	3 - 30 years
Machinery and equipment	3 - 40 years
Other machinery	Unit of production
Other assets	5 - 10 years

Land and construction in progress are not depreciated.

Gains or losses on disposal of property, plant and equipment are determined by comparing the proceeds from sales with the carrying amounts on the disposal dates, and are included in operating income or loss.

Oil and Gas Exploration and Production Properties

The petroleum exploration and production business accounts for its oil and gas exploration and production properties in accordance with the successful efforts method for which the accounting policies are as follows:

Cost of Properties

The cost of properties comprises the total acquisition costs of concession rights or a portion thereof proportionate to the Company's interest in the properties and decommissioning costs.

Exploratory drilling costs are capitalized and are classified as assets of the projects if the exploratory wells have found proved reserves to be commercially produced. Otherwise, such drilling costs are expensed profit or loss.

- 3. Accounting Policies (Continued)**
- 3.2 Significant Accounting Policies (Continued)
- 3.2.13 Property, Plant and Equipment (Continued)

Oil and Gas Exploration and Production Properties (Continued)

Exploratory costs, comprising geological and geophysical costs as well as area reservation fees during the exploration stage, are charged as expenses when incurred in profit or loss.

Development costs, whether relating to successful or unsuccessful development wells, are capitalized and classified as assets.

Depreciation

The capitalized acquisition costs of concession rights are depleted and amortized using the unit of production method based on estimated proved reserves. Depreciation, depletion and amortization of exploratory wells, development costs, equipment and the operating costs of support equipment as well as decommissioning costs, except unsuccessful projects, are calculated using the unit of production method based on estimated proved reserves or proved developed reserves. Changes in reserve estimates are recognized prospectively.

Proved reserves and proved developed reserves are calculated by the Group's own engineers and information from the joint operators.

Carried Cost under Petroleum Sharing Contracts

The petroleum exploration and production business records the carried costs under Petroleum Sharing Contracts using the following accounting policies.

Under some Petroleum Sharing Contracts in which the government has a participating interest require the contractor parties excluding the government to fund the costs of all exploration operations until determination of the first development area (carried cost). The carried costs are funded by the contractor parties at the proportion agreed among the parties. When the project commences production, the carried costs will be fully recouped without interest among the contractor parties under the agreed procedures, in the form of petroleum product sharing. The Group records the carried costs according to the type of petroleum operations, under the successful efforts method. Most of them are recorded as oil and gas properties in the statements of financial position while exploration expenses are recorded in profit or loss.

- 3.2.14 Investment Properties

Investment properties are initially recognized at cost, including expenses directly associated with the asset acquisition, less accumulated depreciation and allowance for impairment.

The Group has selected the cost model for accounting for its investment properties. This model is in accordance with that described in the accounting policy for property, plant and equipment.

Depreciation is recorded as expenses in profit or loss and is calculated using the straight-line method over the estimated useful lives of the assets, which range from 5 to 30 years. Land and construction in progress are not depreciated.

3. Accounting Policies (Continued)

3.2 Significant Accounting Policies (Continued)

3.2.15 Intangible assets

Intangible assets are initially recognized at cost less accumulated amortization and allowance for impairment. Amortization is recorded as expenses in profit or loss.

The Group records the initial costs of intangible assets from business combination at the acquisition-date fair value of the assets. Intangible assets from other sources are initially recognized at their costs.

Intangible assets include computer software licenses, asset rights such as gas transmission pipelines, resource exploration and valuation assets, and other intangible assets, such as other operating rights, patents, and customer contracts.

Exploration and evaluation assets are intangible assets that are recognized at cost in a petroleum exploration and production business. If exploratory projects have found sufficient reserves to be commercially produced, assets under those projects will be transferred to assets under proved reserve project. Subsequently, their values are evaluated based on the method stated in Note 3.2.13 Property, Plant and Equipment. Otherwise, assets under those projects will be fully expensed in profit or loss.

Intangible assets are amortized and recorded as expenses in profit or loss using the straight-line method over the useful lives of the assets which range from 3 to 40 years, except customer contracts which are amortized based on estimated sales volume.

The Group reviews the residual value, useful lives and amortization of intangible assets at least once a year.

3.2.16 Mining Properties

The coal business applies the following accounting policy for coal exploration and production properties including coal mining property rights and deferred mining exploration and development expenditures.

Coal Mining Property Rights

Coal mining property rights comprise the total acquisition costs of concession rights in coal mining including both coal mining exploration and development expenditures.

Deferred Mining Exploration and Development Expenditures

Exploration expenditures relating to areas of interest are recorded at cost as deferred exploration expenditures, which comprise net direct costs, such as licenses, geological and geophysical exploration expenditures, excluding general overheads and administrative expenditures not directly attributable to a particular area of interest, where:

- a) Such costs are expected to be recovered when the areas are successfully developed and mining operations commence, or from the sales of the areas of interest.
- b) Exploration activities in the areas of interest have not reached the stage which permits a reasonable assessment of the existence of commercial recoverable reserves, and active operations in the areas of interest are continuing.

3. Accounting Policies (Continued)

3.2 Significant Accounting Policies (Continued)

3.2.16 Mining Properties (Continued)

Deferred Mining Exploration and Development Expenditures (Continued)

The recoverable amount of exploration expenditures is thus dependent upon a successful development and receivable economic benefits. When the economic benefits are expected to be minimal or non-existent, deferred exploration expenditures are written off as expenses in profit or loss immediately.

Development expenditures and costs of area development prior to commencement of operations are capitalized as deferred mining costs so long as they meet the above criteria and it is highly probable that they can create future economic benefits.

Amortization

Amortization of coal mining property rights is calculated using the units of production method over the production amount.

The amortization of deferred mining exploration and development expenditures commences when commercial coal production activities commence, using the units of production method.

The volume of proportional production and the useful lives of coal mining concessions are estimated and reviewed by the Group.

3.2.17 Leases

Finance Leases - Where the Group is the Lessee

Leases of property, plant and equipment, where the Group assumes substantially all the risks and rewards of ownership are classified as finance leases. The leased assets are capitalized at the lower of the estimated net present value of the underlying minimum lease payments or fair value of assets. Each minimum lease payment is allocated between liabilities and finance charges in order to achieve a constant interest rate on the remaining balance of the liabilities. The finance leases' liabilities less finance charges are presented as long-term loans. Finance costs are charged to profit or loss over the lease period. Depreciation is charged over the shorter of the useful life of the asset on the lease period.

Finance Leases - Where the Group is the Lessor

Leases of property, plant and equipment under which the Group transfers substantially all the risks and rewards of ownership to lessees are classified as finance leases. The Group realizes the leased assets under asset in the statement of financial position as loans at an amount equal to the net investment in the lease, and allocates finance income based on a pattern reflecting a constant periodic rate of return on the lessor's net investment outstanding in respect of the finance lease.

Operating Leases - Where the Group is the Lessee

Leases of property, plant and equipment where the lessor assumes a significant portion of the risks and rewards of ownership are classified as operating leases. Payments made under operating leases are charged to profit or loss using the straight-line method over the period of the lease.

3. Accounting Policies (Continued)

3.2 Significant Accounting Policies (Continued)

3.2.17 Leases (Continued)

Operating Leases - Where the Group is the Lessee (Continued)

The costs incurred upon termination of the operating lease agreements prior their maturity, such as penalty paid to the lessor, are recognized as expenses in the period in which the termination takes place.

Operating Leases - Where the Group is the Lessor

Leases of property, plant and equipment where the lessor assumes a significant portion of the risks and rewards of ownership are classified as operating leases. The assets held for operating leases are stated at cost and presented in the statement of financial position according to the nature of the assets. The group recognizes costs, including depreciation, relating to rental income as expenses and recognizes lease income over the lease term on a straight-line basis.

Accounting for an Arrangement contains a Lease

The Group determined whether an arrangement contains a lease based on the substance of the arrangement. The arrangement contains a lease which depends on the use of a specific asset and the arrangement conveying to the purchaser (lessee) the right to control the use of the underlying asset.

The Group separates payments for the lease and other elements on the basis of their relative fair values. If the Group concludes that it is a finance lease but it is impracticable to separate the payments reliably, the Group will recognize an asset and a liability 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 recognized using the Group's incremental borrowing rate of interest.

3.2.18 Goodwill

The Group initially records goodwill at cost, which equals to the excess of the acquisition costs over the fair value of the net assets acquired, and carries out a test for impairment of goodwill at least once a year and when there are circumstances indicate that an investment might be impaired. Where the fair value of the net assets exceeds the cost of acquisition at the acquisition date, the excess is recognized as a gain in profit or loss.

To test for impairment, the Group allocates goodwill from business combinations to each cash-generating unit (or group of cash-generating units) that is expected to benefit from the synergies of the combination. The Group evaluates the recoverable amount of each cash-generating unit (or group of cash-generating units) and if it is lower than the carrying amount of the unit, the Group recognizes impairment losses in profit or loss. Impairment losses of goodwill will not be reversed.

3.2.19 Income Taxes

Current Tax

The Group is taxed on its non-promoted businesses pursuant to the Revenue Code of Thailand, the Petroleum Income Tax Act, B.E. 2514 and Amendment, B.E. 2532 and other applicable laws and regulations of other countries in which the Group has invested.

3. Accounting Policies (Continued)

3.2 Significant Accounting Policies (Continued)

3.2.19 Income Taxes (Continued)

Current Tax (Continued)

Current tax is the expected tax payable on the taxable profit for the year, using tax rates enacted at the statements of financial position date in the taxable period, and any adjustment to tax payable in respect of previous years.

Deferred Tax

Deferred tax is recognized in the statements of financial position using the liability method for temporary differences between tax base of assets and liabilities and the carrying amounts in the financial statements. The principal temporary differences arise from property, plant and equipment, intangible assets, and provision for decommissioning costs.

Deferred tax is measured using the tax rates enacted at the statements of financial position date.

Deferred tax assets are recognized to the extent that it is highly probable that the future taxable profits of the Group will be available against which the temporary differences can be utilized. Deferred tax assets are reduced to the extent that it is no longer probable that the related tax benefits will be realized.

The Group recognized deferred tax as income or an expense and included in profit or loss for the period, except to the extent that the tax arises from a transaction or event which is recognized outside profit or loss, either in other comprehensive income or directly in equity, or a business combination.

Deferred tax assets and liabilities can only be offset if the entity has the legal right to settle on a net basis and the deferred tax balances relate to the same taxation authority.

The Group offsets deferred tax assets and deferred tax liabilities for presentation in the statement of financial position.

3.2.20 Advance Payments for Gas Purchased under Take-or-Pay Agreements

The Company has entered into gas purchase agreements with natural gas producers, under which the Company is required to take delivery of natural gas at annual minimum quantities. During each contract year, if the Company cannot accept natural gas according to the minimum quantities under the agreements, it is required to pay for the volume of natural gas which it cannot actually take (Take-or-Pay). After the end of each contract year, the Company and the natural gas producers have to agree on and accept the volume of gas that should be taken into the calculation of Take-or-Pay for that contract year, which is subject to the basis and conditions in the agreements. Under the agreements, the Company can take certain volumes of prepaid gas (Make-up) in subsequent years after taking delivery of natural gas at the minimum quantities for that given contract year. The Company recognizes its obligations under the agreements as advance payments for gas purchased.

3. Accounting Policies (Continued)

3.2 Significant Accounting Policies (Continued)

3.2.21 Impairment of Assets

The Group performs the following tests for impairment of assets:

- Goodwill is performed annually or whenever there is an indication that the asset may be impaired.
- Investment properties, property, plant and equipment, intangible assets or mining properties are performed whenever there is an indication that the assets may be impaired.

The Group recognizes an impairment loss when the recoverable amount of an asset is lower than its carrying amount, which is the higher of the asset's fair value less cost to sell and its value in use. The Group determines value in use by estimating the present value of future cash flows generated by the asset, discounted using a pre-tax discount rate which reflects current market assessments of the time value of money and the risk specific to the asset.

In determining fair value less costs to sell, an appropriate valuation model is used. The calculation reflects the amount that the Group could obtain from the disposal of the asset after deducting the costs of disposal. Fair value means the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

The Group recognizes an impairment loss in profit or loss.

3.2.22 Provision for Decommissioning Costs

The Group records a provision for decommissioning costs whenever it is highly probable that an obligation will arise as a result of a past event and the amount of the obligation can be reliably estimated.

The Group recognizes a provision for decommissioning costs based on an estimate of the eventual costs that relate to the removal of the production facilities and plant and equipment. These costs are included as part of the cost of the oil and gas properties and plant and equipment, and are amortized based on proved reserves using the unit of production method and the straight-line method over the estimated useful lives of the assets, respectively. The estimates of decommissioning costs are determined based on reviews and estimates by the Group's engineers and management's judgment.

3.2.23 Employee Benefit Obligations

Employee benefit obligations of the Group are measured and recognized as follows:

1. Short-term employee benefits are recognized in profit or loss as expenses when incurred.
2. Post-employment benefits - defined contribution plans
The Company and its employees have jointly established a provident fund. The fund is monthly contributed by employees and by the Company. The fund's assets are held in a separate trust fund and the Company's contributions are recognized as expenses in profit or loss when incurred.

3. Accounting Policies (Continued)

3.2 Significant Accounting Policies (Continued)

3.2.23 Employee Benefit Obligations (Continued)

3. Post-employment benefits - defined benefit plans

The obligation under the defined benefit plan is determined based on actuarial techniques, using the projected unit credit method, in order to determine present value of the obligation and be recognized as a liability in the statements of financial position. Current service cost, past service cost, net interest on the net defined benefit liability are recognized as expenses in profit or loss. Remeasurements of the net defined benefit liability or asset, including actuarial gains and losses are recognized in other comprehensive income and accumulated amounts are recognized as retained earnings in equity.

4. Other long-term employment benefits

The obligation under the defined benefit plan is determined based on actuarial techniques, using the projected unit credit method, in order to determine present value of the obligation and be recognized as a liability in the statements of financial position. Current service cost, past service cost, net interest on the net defined benefit liability are recognized as expenses in profit or loss. Remeasurements of the net other long-term benefit liability or asset, including actuarial gains and losses are recognized in profit or loss immediately.

5. Termination benefits are recognized as a liability or an expense when, and only when, the Company is demonstrably committed to either:

- Terminate the employment of an employee or a group of employees before the normal retirement date; or
- Provide termination benefits as a result of an offer made in order to encourage voluntary redundancy.

3.2.24 Revenue Recognition

The Group recognizes revenue from sales upon the delivery of products or when the significant risks and rewards of ownership are transferred to the customers. Revenue from services is recognized over the period in which the services are rendered. These revenues are net of trade discounts.

Other revenue is recognized on the following basis:

Interest income - Time proportion basis using the effective yields of interest bearing assets
Royalty income - Accrual basis in accordance with the substance of the relevant agreements
Dividend income - When the right to receive the dividend is established.

Loyalty programmes

The Group has a customer loyalty programme whereby customers are awarded credits (Points) entitling them to the right to purchase products from the Group at a discount or qualify for a free gift. 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 right to purchase products at a discount or 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 recognised as revenue only when the Points are redeemed and the Group has fulfilled its obligations to supply the products.

3. Accounting Policies (Continued)

3.2 Significant Accounting Policies (Continued)

3.2.24 Revenue Recognition (Continued)

Loyalty programmes (Continued)

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. In addition, deferred revenue is also released to profit or loss when it is no longer considered probable that the Points will be redeemed.

Revenue from sources other than those mentioned above is recognized using the accrual basis.

3.2.25 Government Grants

Government grants, including non-monetary grants, are recognized where there is reasonable assurance that the recipient will comply with all attached conditions and that the grant will be received. The Group recognizes the grants as income on a systematic basis over the periods for which the costs that the government grants are compensating. In adopting this standard, the Group recognizes the grants as a part of income in profit or loss.

3.2.26 Earnings per Share

Basic earnings per share is calculated by adjusting the profit attributable to owners of the parent with interests for subordinated capital debentures net of taxes related to such debentures and dividing the adjusted profit by the weighted average number of ordinary shares held by third parties during the year.

3.2.27 Financial Instruments

Financial assets in the statements of financial position include cash and cash equivalents, current investments, trade accounts receivable, other accounts receivable, short-term loans, available-for-sale investments, other long-term investments, long-term loans, and derivative assets. Financial liabilities in the statements of financial position include bank overdrafts and short-term loans from financial institutions, trade accounts payable, other accounts payable, short-term loans, long-term loans, and derivative liabilities. The particular recognition methods adopted are disclosed in the individual policy statements associated with each item.

The Group uses financial instruments to reduce its risk exposure associated with fluctuations in foreign currency exchange rates, interest rates as well as oil and product market prices. These instruments primarily comprise:

Forward Foreign Exchange Contracts

Forward foreign exchange contracts protect the Group from fluctuations in exchange rates by establishing the rates at which foreign currency assets will be realized or foreign currency liabilities will be settled. Forward foreign exchange contracts are recognized in the financial statements at inception. The premium or discount on the establishment of each agreement is amortized over the contract period.

3. Accounting Policies (Continued)

3.2 Significant Accounting Policies (Continued)

3.2.27 Financial Instruments (Continued)

Cross-currency and Interest Rate Swap Contracts

Cross-currency and interest rate swap contracts protect the Group from fluctuations in exchange rates and interest rates. Foreign currency financial assets and liabilities as at the statements of financial position date are protected by cross-currency contracts. The Group recognizes the total amount of interest received from/paid to the counterparties, according to derivatives under cross-currency and interest rate swap contracts in finance costs using the accrual basis and recognizes derivative assets/liabilities of cross-currency and interest rate swap contracts at fair value at the end of reporting period, in the statements of financial position. The Group recognizes movements in the fair value of derivatives in profit or loss.

Oil and Products Hedging Contract

The hedging contracts of oil and product prices aim to reduce the risk exposure associated with fluctuations in the global oil and product market prices in accordance with its purchase and sale agreements by determining its future prices. Gains or losses arising from these contracts are recorded in profit or loss at the maturity date of the contracts.

The risk management policy is described in Note 40.

Hedge Accounting

The Group considers hedge accounting criteria as follows:

For fair value hedges, a change in fair value of the hedging instruments and a change in fair value of the hedged items attributable to the risk being hedged are both recognized in profit or loss.

For cash flow hedges, a change in fair value of the effective portion of the hedging instrument is recognized in other comprehensive income, while a change in fair value of the ineffective portion of the hedging instruments is recognized in profit or loss.

3.2.28 Fair Value Measurement

The Group has measured fair value and disclosed the information relating to fair value measurement in accordance with Thai Financial Reporting Standard No. 13 (revised 2015) “Fair Value Measurement”. The guidance under this standard will be applied when the Group requires to measure any assets and liabilities at fair value under relevant standards including of disclosures related with such fair value measurement.

The Group uses the market approach to measure their assets and liabilities that are required to be measured at fair value by relevant financial reporting standards, except that the cost approach or income approach is used when there is no active market or a quoted market price is not available.

3. Accounting Policies (Continued)

3.2 Significant Accounting Policies (Continued)

3.2.28 Fair Value Measurement (Continued)

Fair Value Hierarchy

In applying the above-mentioned valuation techniques, the Group endeavors to use relevant observable inputs as much as possible by determining a fair value hierarchy that categorizes inputs into three levels as follows:

- Level 1 Use of quoted market prices in an observable active market for such assets or liabilities
- Level 2 Use of other observable inputs for such assets or liabilities, whether directly or indirectly
- Level 3 Used of unobservable inputs for such assets or liabilities such as the Group's estimates of future cash flows

3.2.29 Use of Estimates and Significant Assumptions

The preparation of financial statements in conformity with Thai Financial Reporting Standards requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, income and expenses.

Estimates and underlying assumptions used in the preparation of financial statements are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

Information about significant assumptions and the sources of contingent estimates that might impact on the carrying amounts of assets and liabilities presented in the financial statements are as follows:

Provisions

The Group recognizes a provision in the statements of financial position if, as a result of a past event, the Group has a present obligation that can be estimated reliably and it is probable that an outflow of economic benefits will be required to settle the obligation.

The Group records provisions for decommissioning costs when it is highly probable that a commitment will arise as a result of past circumstances and the amount can be estimated reliably. The Group recognizes the provisions for decommissioning costs based on estimated amount of decommissioning of completed construction that is ready for its intended use. These costs are included as part of assets and are amortized using the units of production method based on estimated proved reserves and the straight-line method over the estimated useful lives of the assets. The provision for decommissioning costs is determined based on reviews and estimates by the Group's engineers together with the management's judgment.

Provisions depend on various current circumstances such as laws and regulations, technologies and market prices. Therefore, the actual result is likely to be different from estimates and assumptions.

3. Accounting Policies (Continued)

3.2 Significant Accounting Policies (Continued)

3.2.29 Use of Estimates and Significant Assumptions (Continued)

Income Tax

The Group is responsible for the payment of tax in various countries. When income tax payable is estimated, the Group uses significant judgment due to the numerous transactions and calculations arising from its operations.

The Group recognizes income tax payable based on estimated incremental tax payments. The difference between the actual tax paid and the estimate will affect income tax and deferred tax in the period the difference occurs.

A deferred tax asset will be recognized when it is highly probable that the Group will have sufficient net income against which to utilize the temporary difference. Assumptions related to future taxable income are uncertain and may change affecting the recognition of deferred tax assets.

Estimates of Petroleum Reserves

Petroleum reserves are of fundamental importance when assessing investments in various exploration projects and petroleum production businesses, including impairment testing. Changes in proved reserves will affect the present value of net cash flows and depreciation expenses which are calculated using the unit of production method.

The proved reserves are the volume of commercial petroleum production as of a certain date with a high probability of achievement under current economic conditions and production methods, as well as government's rules and regulations. The proved reserves will be checked and assessed annually by the Group's geologists and reservoir engineers.

Exploration Costs

The petroleum exploration and production businesses capitalize drilling costs as assets. When they are over 12 months old, they are amortized as expenses in profit or loss except where there is (1) a discovery of proved reserves, or (2) a discovery of commercially adequate reserves whilst having future exploration and assessment plans. The decision to amortize drilling petroleum costs recorded as assets over 12 months should be made using the assumptions under current circumstances. In case those assumptions change in subsequent accounting periods, the petroleum drilling costs that are capitalized as assets will be written off as expenses in that accounting period.

Impairment of Assets

The Group considers recording an allowance for impairment of assets when an event or a circumstance indicates that the carrying amount of an asset is higher than its recoverable amount, which is the higher of the anticipated discounted cash flows from the continuing use of the asset or the fair value of the asset less any costs of disposal. As a result, the carrying amount of an asset is written down immediately to its recoverable amount. The decrease is recorded in profit or loss. Thus, the loss on impairment of assets excluding goodwill recognized in the prior period will be reversed if the estimates for indicated recoverable amount changes.

3. Accounting Policies (Continued)

3.2 Significant Accounting Policies (Continued)

3.2.29 Use of Estimates and Significant Assumptions (Continued)

Impairment of Assets (Continued)

The Group's estimate of the expected amount of future petroleum production in exploration and production business is a key factor in impairment tests. The Group believes that these are the most reasonable indicators for estimating future cash flows. The future petroleum production comprises proved reserves, including expected proved reserves.

The estimation of discounted future cash flows depends on various factors such as the expected amount of future production, future selling prices, demand and supply in the market, risks and gross margins. The discounted rates used in the calculation of present value of future cash flows depend on the cost of capital of the asset unit.

3.2.30 Capital Risk Management

The capital management objective of the Group is to create returns for shareholders and other stakeholders whilst maintaining a reasonable capital structure to decrease the cost of capital.

3.2.31 Operating Segment

The operating segment information is reported by business segments and based on the internal management reports that are received and regularly reviewed by the Chief Operating Decision Maker (CODM) for allocating resources to the segments and assessing its performance.

4. Cash and Cash Equivalents

Cash and cash equivalents as at December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Cash on hand	202.76	136.42	47.59	51.60
Call deposits held at banks	106,286.14	129,806.00	37,489.76	38,762.90
Fixed deposits	79,397.13	87,770.82	17,064.79	8,738.15
Treasury bills	16,583.42	774.47	-	499.46
Promissory notes	4,691.57	1,782.28	-	-
Bank of Thailand bonds	8,046.15	19,472.47	8,046.15	19,472.47
Restricted bank cash within 3 months	359.24	235.49	-	-
Total	215,566.41	239,977.95	62,648.29	67,524.58

Call deposits held at banks, fixed deposits, treasury bills, promissory notes, Bank of Thailand bonds, and restricted cash within 3 months, as at December 31, 2016 bear the interest at rates ranging from 0.12% - 13.05% per annum (December 31, 2015: interest rates range from 0.01% - 13.00% per annum).

5. Current Investments

Current investments as at December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Fixed deposits	150,351.08	100,714.69	36,938.69	34,908.22
Promissory notes	3,486.66	5,785.09	-	-
Bonds	1,044.44	149.88	3,047.45	-
Other investments	21,931.45	97.75	19,206.41	-
Total	176,813.63	106,747.41	59,192.55	34,908.22

Current investments as at December 31, 2016 bear the interest at rates ranging from 1.00% to 2.12% per annum (December 31, 2015: interest rates range from 0.78% to 3.00% per annum).

6. Trade Accounts Receivable

Trade accounts receivable as at December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements	financial statements	2016	2015
	2016	2015	2016	2015
Trade accounts receivable - others	140,502.28	137,721.74	71,335.20	76,382.53
<u>Less</u> Allowance for doubtful accounts	(3,409.99)	(3,499.35)	(2,076.63)	(2,135.07)
Trade accounts receivable - others - net	137,092.29	134,222.39	69,258.57	74,247.46
Trade accounts receivable - related parties - net (Note 9.1)	6,098.77	7,756.39	55,303.90	50,988.33
Total	143,191.06	141,978.78	124,562.47	125,235.79

Aging analysis is as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements	financial statements	2016	2015
	2016	2015	2016	2015
Within credit terms	138,347.50	136,308.90	122,382.46	121,407.63
Overdue				
- Within 3 months	3,618.05	4,425.61	1,297.60	2,698.32
- Over 3 - 6 months	442.28	850.05	299.41	729.97
- Over 6 - 12 months	746.85	352.80	627.93	322.60
- Over 12 months	3,702.97	3,829.56	2,288.30	2,501.13
	146,857.65	145,766.92	126,895.70	127,659.65
<u>Less</u> Allowance for doubtful accounts	(3,666.59)	(3,788.14)	(2,333.23)	(2,423.86)
Total	143,191.06	141,978.78	124,562.47	125,235.79

Trade accounts receivable - others as at December 31, 2016 include receivables from government agencies and state enterprises in the consolidated financial statements amounting to Baht 11,589.18 million (December 31, 2015: Baht 14,477.70 million), and in the separate financial statements amounting to Baht 10,927.55 million (December 31, 2015: Baht 14,214.00 million).

7. Other Accounts Receivable

Other accounts receivable as at December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements	financial statements	financial statements	financial statements
	2016	2015	2016	2015
Other accounts receivable	13,181.35	26,083.41	3,189.74	7,267.29
<u>Less Allowance for doubtful accounts</u>	<u>(319.10)</u>	<u>(184.92)</u>	<u>(252.47)</u>	<u>(247.47)</u>
Other accounts receivable	12,862.25	25,898.49	2,937.27	7,019.82
Refund receivable from the Oil Stabilization Fund	6,081.06	5,635.51	5,916.93	5,471.65
Advances	21,977.76	18,331.61	415.44	498.03
Other accounts receivable - others - net	40,921.07	49,865.61	9,269.64	12,989.50
Other accounts receivable - related parties - net (Note 9.2)	1,786.77	3,003.80	1,587.97	2,569.71
Advances - related parties (Note 9.2)	516.11	635.86	372.21	575.30
Total	<u>43,223.95</u>	<u>53,505.27</u>	<u>11,229.82</u>	<u>16,134.51</u>

The refund receivable from the Oil Stabilization Fund mostly comprises compensation for locally manufactured oil and liquefied petroleum gas (LPG), or imported LPG for local uses, as well as compensation for Natural Gas for Vehicles (NGV) prices. The compensation rates are determined by the Committee of Energy Policy Administration.

8. Loans

8.1 Short-term loans as at December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Current portion of financial lease receivable - others	436.71	532.56	-	-
Current portion of financial lease receivable - related parties (Note 9.2)	3.66	3.53	-	-
Short-term loans - related parties - net (Note 9.2)	90.00	438.89	8,160.73	6,398.23
Total	530.37	974.98	8,160.73	6,398.23

8.2 Long-term loans as at December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Long-term financial lease receivable - others	5,959.37	6,396.08	-	-
Long-term financial lease receivable - related parties (Note 9.3)	60.47	64.13	-	-
Long-term loans - others	734.69	741.53	-	-
Long-term loans - related parties - net (Note 9.3)	8,263.29	3,343.97	27,582.21	33,113.58
Total	15,017.82	10,545.71	27,582.21	33,113.58

9. Related Party Transactions

Significant transactions carried out with related parties are as follows:

9.1 Trade accounts receivable - related parties as at December 31, 2016 and 2015

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Subsidiaries	-	-	51,470.79	45,266.64
Joint ventures	2,927.52	3,869.48	1,390.73	2,697.65
Associates	1,149.42	1,318.30	420.56	466.00
Other related parties	2,278.43	2,857.40	2,278.42	2,846.83
Total	6,355.37	8,045.18	55,560.50	51,277.12
<u>Less Allowance for doubtful accounts</u>	(256.60)	(288.79)	(256.60)	(288.79)
Trade accounts receivable - related parties - net (Note 6)	<u>6,098.77</u>	<u>7,756.39</u>	<u>55,303.90</u>	<u>50,988.33</u>

Aging analysis is as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Within credit terms	6,064.67	7,362.06	55,134.14	50,345.70
Overdue				
- Within 3 months	15.72	380.69	154.27	641.21
- Over 3 - 6 months	1.95	13.40	-	1.21
- Over 6 - 12 months	0.93	57.27	-	57.27
- Over 12 months	272.10	231.76	272.09	231.73
Total	6,355.37	8,045.18	5,560.50	51,277.12
<u>Less Allowance for doubtful accounts</u>	(256.60)	(288.79)	(256.60)	(288.79)
Trade accounts receivable - related parties - net	<u>6,098.77</u>	<u>7,756.39</u>	<u>55,303.90</u>	<u>50,988.33</u>

9. Related Party Transactions (Continued)

9.2 Other accounts receivable, advances, current portion of financial lease receivable, and short-term loans - related parties as at December 31, 2016 and 2015

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements	financial statements	financial statements	financial statements
	2016	2015	2016	2015
<u>Other accounts receivable</u>				
Subsidiaries	-	-	5,136.41	3,257.25
Joint ventures	177.05	132.45	26.26	25.75
Associates	212.86	1,476.69	6.37	1,295.94
Other related parties	1,505.30	1,459.65	-	2.59
	1,895.21	3,068.79	5,169.04	4,581.53
<u>Less Allowance for doubtful accounts</u>	(108.44)	(64.99)	(3,581.07)	(2,011.82)
Total (Note 7)	1,786.77	3,003.80	1,587.97	2,569.71
<u>Advances</u>				
Subsidiaries	-	-	62.46	64.33
Joint ventures	11.49	60.00	-	60.00
Other related parties	504.62	575.86	309.75	450.97
Total (Note 7)	516.11	635.86	372.21	575.30

9. Related Party Transactions (Continued)

9.2 Other accounts receivable, advances, current portion of financial lease receivable, and short-term loans - related parties as at December 31, 2016 and 2015 (Continued)

	Unit: Million Baht			
	Consolidated		Separate	
	2016	2015	2016	2015
<u>Current portion of financial lease receivable</u>				
Joint ventures (Note 8.1)	3.66	3.53	-	-
<u>Short-term loans</u>				
Subsidiaries	-	-	8,160.73	6,398.23
Joint ventures	-	348.89	-	-
Associates	90.00	90.00	-	-
Total (Note 8.1)	90.00	438.89	8,160.73	6,398.23

Movements in short-term loans - related parties are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	2016	2015	2016	2015
Balance as at January 1	438.89	313.29	861.84	4,331.29
- Payment for loans granted	65.69	99.10	318.87	388.04
- Receipt from loans granted	-	-	(235.37)	(3,684.97)
- Loss on exchange rate	-	-	(3.50)	(172.52)
- Currency translation differences	(1.49)	26.50	-	-
Balance as at December 31	503.09	438.89	941.84	861.84
<u>Add Current portion of long-term loans (Note 9.3)</u>	-	-	7,218.89	5,536.39
<u>Less Allowance for doubtful accounts</u>	(413.09)	-	-	-
Balance as at December 31 - net	90.00	438.89	8,160.73	6,398.23

Short-term loans - related parties as at December 31, 2016 in the consolidated financial statements bear the interest at rates ranging from 0.25% - 4.20% per annum (December 31, 2015: interest rates range from 3.50% - 4.20% per annum), and in the separate financial statements bear the interest at rates ranging from 2.53% - 3.27% per annum (December 31, 2015: interest rates range from 1.75% - 2.58% per annum).

9. Related Party Transactions (Continued)

9.3 Other accounts receivable, advances, Long-term financial lease receivable, long-term financial lease receivable, and long-term loans - related parties as at December 31, 2016 and 2015

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
<u>Long-term other accounts receivable</u>				
Subsidiaries	-	-	2,414.67	3,538.31
Joint ventures	338.01	186.64	338.01	186.64
Associates	66.42	-	-	-
Total	404.43	186.64	2,752.68	3,724.95
<u>Long-term advances</u>				
Subsidiaries	-	-	271.08	156.19
Total long-term other accounts receivable	404.43	186.64	3,023.76	3,881.14
<u>Long-term financial lease receivable</u>				
Joint ventures (Note 8.2)	60.47	64.13	-	-
<u>Long-term loans</u>				
Subsidiaries	-	-	75,240.86	79,547.08
Joint ventures	5,753.77	3,308.76	5,753.77	3,308.76
Associates	2,509.52	35.21	-	-
Total	8,263.29	3,343.97	80,994.63	82,855.84
Less Allowance for doubtful accounts*	-	-	(53,412.42)	(49,742.26)
Total long-term loan - net (Note 8.2)	8,263.29	3,343.97	27,582.21	33,113.58

* The Company recorded allowance for doubtful accounts as at December 31, 2016 amounting to Baht 53,412.42 million (December 31, 2015: Baht 49,742.26 million) for a long-term loan to a subsidiary. The subsidiary used this loan to invest in its foreign subsidiary and associate; both of which encountered operational problems. The Company therefore recognized allowance for doubtful accounts based on assessment of the recoverable amount of the long-term loan to the subsidiary.

9. Related Party Transactions (Continued)**9.3 Other accounts receivable, advances, Long-term financial lease receivable, long-term financial lease receivable, and long-term loans - related parties as at December 31, 2016 and 2015 (Continued)**

Details of financial lease receivable - related parties as at December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements	financial statements	2016	2015
	2016	2015	2016	2015
Financial lease receivable				
- Within 1 year	6.00	6.00	-	-
- Over 1 year but not over 5 years	24.00	24.00	-	-
- Over 5 years	52.00	58.00	-	-
Future finance income	(17.87)	(20.34)	-	-
Total financial lease receivable	<u>64.13</u>	<u>67.66</u>	<u>-</u>	<u>-</u>

Movements in long-term loans to related parties are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements	financial statements	2016	2015
	2016	2015	2016	2015
Balance as at January 1	3,343.97	8,618.51	88,392.23	81,221.93
- Payment for loans granted	4,926.65	531.18	6,840.22	21,528.14
- Receipt from loans granted	-	(6,052.44)	(6,477.19)	(19,540.93)
- Gain (loss) on exchange rate	(7.25)	244.42	(541.74)	5,183.09
- Currency translation differences	(0.08)	2.30	-	-
Balance as at December 31	8,263.29	3,343.97	88,213.52	88,392.23
<u>Less</u> Current portion of long-term loans (Note 9.2)	-	-	(7,218.89)	(5,536.39)
<u>Less</u> Allowance for doubtful accounts	-	-	(53,412.42)	(49,742.26)
Balance as at December 31 - net	<u>8,263.29</u>	<u>3,343.97</u>	<u>27,582.21</u>	<u>33,113.58</u>

Long-term loans - related parties as at December 31, 2016 in the consolidated financial statements bear the interest rates at 1.00 - 6.56% per annum (December 31, 2015: interest rates is 2.61% per annum), and in the separate financial statements bear the interest at rates ranging from 2.55% - 4.50% per annum (December 31, 2015: interest rates range from 2.08% - 4.50% per annum).

9. Related Party Transactions (Continued)

9.4 Trade accounts payable - related parties as at December 31, 2016 and 2015

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements	financial statements	2016	2015
	2016	2015	2016	2015
Subsidiaries	-	-	41,175.35	36,269.51
Joint ventures	957.78	817.52	292.06	309.23
Associates	500.03	352.55	446.57	307.59
Other related parties	1.90	2.62	-	-
Total	1,459.71	1,172.69	41,913.98	36,886.33

9.5 Other accounts payable, current portion of financial lease liability, and short-term loans - related parties as at December 31, 2016 and 2015

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements	financial statements	2016	2015
	2016	2015	2016	2015
<u>Other accounts payable</u>				
Subsidiaries	-	-	4,495.18	4,742.13
Joint ventures	17.85	9.41	3.32	4.14
Associates	21.43	25.43	3.71	3.98
Other related parties	69.39	106.92	44.78	49.70
Total	108.67	141.76	4,546.99	4,799.95
<u>Current portion of financial lease liability</u>				
Joint venture	437.63	437.63	437.63	437.63
<u>Short-term loans*</u>				
Subsidiaries	-	-	2,117.07	1,864.27

* The Company's liquidity management policies within the Group include the use of the cash pooling method. Inter-company loans were used for short-term financial management of cash surpluses or deficits of each affiliate. Interests on these were calculated by using market interest rates.

9. Related Party Transactions (Continued)

9.6 Long-term other accounts payable - related parties as at December 31, 2016 and 2015

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Subsidiaries	-	-	2,998.80	4,126.56
Joint ventures	9.53	10.25	9.53	10.25
Other related parties	495.51	527.31	495.51	527.31
Total	505.04	537.56	3,503.84	4,664.12

9.7 Long-term financial lease liability - related parties as at December 31, 2016 and 2015

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Joint venture	5,155.97	5,635.57	5,155.97	5,635.57

Details of financial lease liability - related parties as at December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Financial lease liability				
- Within 1 year	500.65	505.53	500.65	505.53
- Over 1 year but not over 5 years	2,003.98	2,017.97	2,003.98	2,017.97
- Over 5 years	3,507.31	4,035.94	3,507.31	4,035.94
Future finance charges	(418.34)	(486.24)	(418.34)	(486.24)
Total financial lease liability	5,593.60	6,073.20	5,593.60	6,073.20

9. Related Party Transactions (Continued)

9.8 Revenue and expense transactions carried out with related parties

For the years ended December 31, 2016 and 2015

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Revenues				
<u>Sales and service income</u>				
Subsidiaries	-	-	495,171.23	577,583.22
Joint ventures	24,589.04	22,872.06	12,997.86	12,347.93
Associates	9,029.29	79,588.23	1,821.41	63,353.10
Other related parties	14,695.83	17,663.87	14,688.11	17,523.17
<u>Interest income</u>				
Subsidiaries	-	-	2,647.99	2,648.65
Joint ventures	175.29	81.98	151.36	81.12
Associates	70.22	26.16	-	22.38
<u>Dividends income</u>				
Subsidiaries	-	-	20,136.51	17,553.62
Joint ventures	-	-	3,346.33	3,719.39
Associates	-	-	1,095.44	3,769.56
Other related parties	544.11	378.00	110.00	90.00
<u>Other income</u>				
Subsidiaries	-	-	4,608.96	4,823.62
Joint ventures	165.08	274.77	98.96	101.57
Associates	38.24	9,598.15	23.52	9,498.00
Other related parties	1,213.74	4,622.89	44.42	2,320.02
Expenses				
<u>Cost of goods purchased and services</u>				
Subsidiaries	-	-	455,367.00	495,551.64
Joint ventures	9,675.98	8,713.35	1,693.59	1,883.05
Associates	4,295.40	70,575.44	3,781.34	59,832.22
Other related parties	2,078.62	2,607.48	404.81	477.13
<u>Interest expenses</u>				
Subsidiaries	-	-	31.33	42.11
Joint ventures	67.90	72.71	67.90	72.71
<u>Other expenses</u>				
Subsidiaries	-	-	9,551.25	19,513.17
Joint ventures	947.00	1,510.80	3.07	31.00
Associates	74.77	257.22	4.95	92.68
Other related parties	355.77	409.71	169.81	179.78

9. Related Party Transactions (Continued)

9.8 Revenue and expense transactions carried out with related parties (Continued)

The aforementioned related party transactions exclude transactions carried out with government agencies and state enterprises.

Stipulation prices between the Company and its related parties are based on normal prices for the same types of business transactions carried out with non-related parties. Goods purchased from subsidiaries are charged at the normal prices determined by the subsidiaries with reference to global market prices.

9.9 Details of commitments to subsidiaries, joint ventures, associates and other related parties are stated in Note 45.1.

9.10 Crude oil and petroleum product purchase and sale transactions carried out with related parties without physical delivery, with the objective of maintaining crude oil and petroleum product reserves, were reversed in the financial statements.

Detail of these transactions for the years ended December 31, 2016 and 2015 are as follow:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2016	2015	2016	2015
<u>Sales</u>				
Subsidiaries	-	-	1,824.11	6,061.69
Associates	-	2,176.89	-	2,176.89
<u>Purchases</u>				
Subsidiaries	-	-	1,898.75	6,285.76
Associates	-	2,176.89	-	2,176.89

9.11 Executive remunerations

Detail of remunerations for the years ended December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2016	2015	2016	2015
<u>Directors remuneration</u>				
Meeting remuneration and bonuses	318.02	271.65	43.24	35.43
<u>Managements remuneration</u>				
Salaries, bonuses, and other employee benefits	914.90	989.80	68.64	79.18
Post-employment benefits	9.68	17.79	1.01	2.26
Total	1,242.60	1,279.24	112.89	116.87

Managements are those persons who have authority and responsibility for planning, directing and controlling the activities of an entity, directly or indirectly.

10. Inventories

Inventories as at December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Oil products	84,479.18	58,281.44	21,096.12	15,048.23
Gas products	1,513.34	2,328.44	1,510.07	2,322.19
Petrochemicals products	28,395.53	23,566.16	-	-
Others	3,289.89	3,819.86	689.88	650.32
	<u>177,677.94</u>	<u>87,995.90</u>	<u>23,296.07</u>	<u>18,020.74</u>
<u>Less Allowance for decline in value of inventories and obsolescence</u>	<u>(794.40)</u>	<u>(3,910.64)</u>	<u>(308.09)</u>	<u>(853.58)</u>
Total	<u>116,883.54</u>	<u>84,085.26</u>	<u>22,987.98</u>	<u>17,167.16</u>

The Fuel Oil Trading Act B.E. 2543 was amended by The Fuel Oil Trading Act (No.2) B.E. 2550 in accordance with Notification of the Department of Energy Business “Determination of Types, Rates, Criteria, Methods, and Conditions for Calculation of Oil Reserves B.E. 2558”. This Act prescribes that oil traders under section 7 must reserve crude oil and petroleum products at rates ranging from 1% - 20% of the total production output or imported volume. Inventories - legal reserves as at December 31, 2016 in the consolidated financial statements amounting to Baht 22,900.03 million (December 31, 2015: Baht 16,069.90 million), and in the separate financial statements amounting to Baht 5,808.71 million (December 31, 2015: Baht 3,992.17 million). These amounts were net of allowance for net realizable value.

In 2016, the Group wrote down inventories to their net realizable values, and recorded expenses of Baht (3,116.24) million in the consolidated financial statements (2015: Baht 6,752.83 million) and Baht (545.49) million in the separate financial statements (2015: Baht (736.12) million). In addition, the Group recognized allowance for obsolescence of inventories in the consolidated financial statements amounting to Baht 17.02 million (2015: Baht 0.46 million) and the separate financial statements amounting to Baht 0.46 million (2015: Baht 0.46 million).

11. Materials and Supplies

Materials and supplies as at December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Spare parts, equipment and others	31,894.65	32,476.89	5,682.33	4,843.08
<u>Less Allowance for obsolescence</u>	<u>(868.38)</u>	<u>(833.06)</u>	<u>(20.55)</u>	<u>(13.00)</u>
Total	<u>31,026.27</u>	<u>31,643.83</u>	<u>5,661.78</u>	<u>4,830.08</u>

12. Divestment and Discontinued Operations

On August 17, 2016, PTTEP Offshore Investment Company Limited (PTTEPO), a subsidiary of the Group, has entered into the Sales and Purchase Agreement (SPA) to divest PTTEP Oman Company Limited (PTTEP OM), which held 100% participating interests in the Oman 44 project and sell to ARA Petroleum LLC (ARA). The agreement will become effective upon the fulfillment of all the terms and conditions as prescribed in the SPA.

On December 28, 2016, PTTEPO had fulfilled all the terms and conditions as prescribed in the SPA and the government of Oman had approved the transaction, therefore ARA became the owner of 100% participating interests in Oman 44 project and PTTEPO received cash of US Dollar 16 million (Baht 564 million) and will gradually receive the remaining cash of US Dollar 7 million (Baht 242 million under installment in accordance with the SPA within 18 months from the contract signing date.

The Group recognized profit from the divestment of US Dollar 20 million (Baht 704 million) as part of profit (loss) for the year from discontinued operations in the consolidated financial statements for the year ended December 31, 2016.

As a result of divestment of PTTEP OM, the relevant part of petroleum exploration and production business is classified as discontinued segment. The Company separately presented the operating results of the discontinued segment from normal operating profits and presented it as profit (loss) from discontinued operations, net of tax in the consolidated statement of income and other comprehensive income (loss) from discontinued operations, net of tax in the consolidated statement of comprehensive income. The Group has represented transactions of this segment for the year 2015 to compare with the current year financial statements.

Operating results of the discontinued operations in the consolidated financial information for the years ended December 31, 2016 and 2015 are as follows:

	Unit : Million Baht	
	Consolidated financial statement	
	2016	2015
The consolidated statements of income		
Revenues	1,136.50	1,359.86
Expenses	(923.22)	(2,694.35)
Profit (loss) before income taxes from discontinued operations	213.28	(1,334.49)
Income taxes	(44.83)	216.32
Profit (loss) from discontinued operations	168.45	(1,118.17)
Gain from divestment of investment	703.62	-
Total net profit (loss) from discontinued operations	<u>872.07</u>	<u>(1,118.17)</u>

12. Divestment and Discontinued Operations (Continued)

	Unit : Baht	
	Consolidated financial statement	
	2016	2015
Basic earnings (loss) per share from discontinued operations	0.20	(0.25)

	Unit : Million Baht	
	Consolidated financial statement	
	2016	2015
The consolidated statements of comprehensive income for the year		
Item that may be reclassified to profit or loss in subsequent periods		
Currency translation differences	(146.49)	117.23

Detail of cash flows for years ended December 31, 2016 and 2015 are as follows:

	Unit : Million Baht	
	Consolidated financial statement	
	2016	2015
<u>Cash flow provided by (used in) discontinued operations</u>		
Net cash provided by (used in) operating activities	29.75	(213.15)
Net cash used in investing activities	(0.21)	(339.86)
Net cash provided by (used in) financing activities	-	-
Net cash provided by (used in) discontinued operations	<u>29.54</u>	<u>(553.01)</u>

13. Investments in Subsidiaries, Joint Ventures and Associates

13.1 Details of subsidiaries, joint ventures and associates of the Company

Company	Country of Incorporation	Business	Shareholding (%)	
			2016	2015
<u>Subsidiaries</u>				
PTT Exploration and Production Public Co., Ltd. (PTTEP)	Thailand	Petroleum exploration and production	65.29	65.29
PTT LNG Co., Ltd. (PTTLNG)	Thailand	Natural gas	100.00	100.00
PTT Natural Gas Distribution Co., Ltd. (PTTNGD)	Thailand	Natural gas	58.00	58.00
Energy Complex Co., Ltd. (EnCo) (The Group held 100% shareholding)	Thailand	Real estate development for rent	50.00	50.00
PTT Energy Solutions Co., Ltd. (PTTES) (The Group held 100% shareholding)	Thailand	Technical and operational services	40.00	40.00
PTT Maintenance & Engineering Co., Ltd. (PTTME) (The Group held 100% shareholding)	Thailand	Factory maintenance and engineering services	40.00	40.00
Global Power Synergy Public Co., Ltd. (GPSC) (The Group held 75% shareholding)	Thailand	Generation and supply of electricity, steam and water for industries	22.58	22.58
PTT (Cambodia) Limited (PTTCL)	Cambodia	Oil marketing	100.00	100.00
PTT Oil Myanmar Co., Ltd. (PTTOM)	Myanmar	Business services	100.00	100.00
PTT Oil and Retail Business Co., Ltd. (PTTOR) (Former : PTT Retail Business Co., Ltd. (PTTRB))	Thailand	Management services and oil marketing	100.00	100.00
Subic Bay Energy Co., Ltd. (SBECL)	Cayman Islands	Oil marketing	-	100.00
PTT Tank Terminal Co., Ltd. (PTT TANK)	Thailand	Terminal and warehouse	100.00	100.00
Thai Lube Blending Co., Ltd. (TLBC) (The Group held 100% shareholding)	Thailand	Blending and bottling of lube oil	48.95	48.95
PTT International Trading Pte. Ltd. (PTTT)	Singapore	International oil trading	100.00	100.00
PTT International Trading London Limited (PTTT LDN)	England	International oil trading	100.00	-
PTT Polymer Logistics Co., Ltd. (PTTPL) (The Group held 100% shareholding)	Thailand	Logistics services	50.00	50.00
PTT PMMA Co., Ltd. (PTTPMMA)	Thailand	Manufacturing and distributing of Poly Methyl Methacrylate	100.00	100.00
PTT Polymer Marketing Co., Ltd. (PTTPM) (The Group held 100% shareholding)	Thailand	Petrochemicals marketing	50.00	50.00
PTT Global Chemical Public Co., Ltd. (PTTGC)	Thailand	Petrochemicals and refining	49.42	49.34
Thai Oil Public Co., Ltd. (TOP) (The Group held 49.93% shareholding)	Thailand	Oil refining	49.10	49.10

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.1 Details of subsidiaries, joint ventures and associates of the Company (Continued)

Company	Country of Incorporation	Business	Shareholding (%)	
			2016	2015
<u>Subsidiaries (Continued)</u>				
IRPC Public Co., Ltd. (IRPC)	Thailand	Petrochemicals and refining	38.51	38.51
Thai Oil Power Co., Ltd. (TP) (The Group held 100% shareholding)	Thailand	Generation and supply of electricity and steam	26.00	26.00
PTT Energy Resources Co., Ltd. (PTTER)	Thailand	International investment	100.00	100.00
PTT Green Energy Pte. Ltd. (PTTGE)	Singapore	Investing in palm oil business	100.00	100.00
PTT Regional Treasury Center Pte. Ltd. (PTTRTC)	Singapore	Treasury services	100.00	100.00
Business Services Alliance Co., Ltd. (BSA)	Thailand	Management services	100.00	100.00
PTT ICT Solutions Co., Ltd. (PTTICT) (The Group held 100% shareholding)	Thailand	Information technology and communication services	20.00	20.00
<u>Joint Ventures</u>				
Trans Thai-Malaysia (Thailand) Co., Ltd. (TTM(T))	Thailand	Natural gas	50.00	50.00
Trans Thai-Malaysia (Malaysia) Sdn. Bhd. (TTM(M))	Malaysia	Natural gas	50.00	50.00
District Cooling System and Power Plant Co., Ltd. (DCAP)	Thailand	Generation and supply of electricity and chilled water	35.00	35.00
PTT MCC Biochem Co., Ltd. (PTTMCC)	Thailand	Petrochemicals	50.00	50.00
PTT Asahi Chemicals Co., Ltd. (PTTAC)	Thailand	Petrochemicals	50.00	48.50
HMC Polymers Co., Ltd. (HMC)	Thailand	Petrochemicals	41.44	41.44
<u>Associates</u>				
Thai Petroleum Pipeline Co., Ltd. (THAPPLINE) (The Group held 49.59% shareholding)	Thailand	Oil transmission pipelines	40.40	40.40
KELOIL-PTT LPG Sdn. Bhd. (KPL)	Malaysia	Bottling and sale of LPG	40.00	40.00
Petro Asia (Thailand) Co., Ltd. (PAT)	Thailand	Oil marketing	35.00	35.00

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.2 Details of joint ventures and associates of subsidiaries

Company	Country of Incorporation	Business	Shareholding (%)	
			2016	2015
<i>Joint Ventures</i>				
<i>PTTEP Group</i>				
Erawan 2 FSO Bahamas Limited (Erawan 2)	Bahamas	FSO rental service	13.11	13.11
<i>GPSC Group</i>				
Thai Solar Renewable Co., Ltd. (TSR)	Thailand	Investing in other companies	40.00	40.00
Nam Lik1 Power Company Limited (NL1PC)	Lao	Generation and supply of electricity	40.00	40.00
Nava Nakorn Electricity Generating Co., Ltd. (NNEG)	Thailand	Generation and supply of electricity	30.00	30.00
<i>PTTOR Group</i>				
OGP Energy Solutions Company Limited (OGPS)	Thailand	Supply of ready-to-use energy	40.00	40.00
<i>PTTGC Group</i>				
Thai Ethoxylate Co., Ltd. (TEX)	Thailand	Manufacturing and distributing petrochemicals products	50.00	50.00
Emery Oleochemical (M) Sdn. Bhd. (EOM)	Malaysia	Manufacturing and distributing biochemicals products	50.00	50.00
Emery Specialty Chemical Sdn. Bhd. (ESC)	Malaysia	Manufacturing and distributing chemical specialties	50.00	50.00
NatureWorks LLC (NTR)	United States of America	Manufacturing and distributing bioplastic products	50.00	50.00
<i>TOP Group</i>				
TOP-NTL Pte. Ltd. (TOP-NTL)	Singapore	Fund management services	50.00	50.00
TOP-NTL Shipping Trust (TOP-NTL(BT))	Singapore	Investing in other companies	50.00	50.00
TOP-NYK MarineOne Pte. Ltd. (TOP-NYK)	Singapore	Marine transportation services	50.00	50.00
TOP Nautical Star Co., Ltd. (TOP-NS)	Thailand	Storage and marine transportation services	35.00	35.00
<i>IRPC Group</i>				
IRPC PCC Co., Ltd. (IRPC PCC)	Thailand	Supply of petrochemicals	49.99	49.99
<i>PTTER Group</i>				
FEE (Bru) Pte. Ltd. (FEEBRU)	Singapore	Coal mines	35.00	35.00
<i>PTTGE Group</i>				
Chancellor Oil Pte. Ltd. (Chancellor)	Singapore	Investing in other companies	77.56	77.56

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.2 Details of joint ventures and associates of subsidiaries (Continued)

Company	Country of Incorporation	Business	Shareholding (%)	
			2016	2015
<i>Associates</i>				
<i>PTTEP Group</i>				
PTTEP AP Group's associates*	Australia	Airbase services	50.00	50.00
UAQ Petroleum Limited (UAQ)**	Hong Kong	Petroleum	-	30.00
<i>GPSC Group</i>				
Bangpa-in Cogeneration Limited (BIC)	Thailand	Generation and supply of electricity and steam	25.00	25.00
Xayaburi Power Company Limited (XPCL)	Lao	Hydroelectric power plant	25.00	25.00
<i>PTTOR Group</i>				
FST Aviation Services Limited (FST)	Hong Kong	Aircraft refuelling services	25.00	25.00
<i>PTTGC Group</i>				
PT Indo Thai Trading (ITT)	Indonesia	Petrochemicals	49.00	49.00
Vinythai Public Co., Ltd. (VNT)	Thailand	Petrochemicals	24.98	24.98
Eastern Fluid Transport Co., Ltd. (EFT)	Thailand	Infrastructure	22.65	22.65
Thai Eastern Topseeds Oil Co., Ltd. (TETSO)	Thailand	Petrochemicals	30.00	-
<i>TOP Group</i>				
T.I.M Ship Management Co., Ltd. (TIM)	Thailand	Marine transportation services	33.33	33.33
Maesod Clean Energy Co., Ltd. (MCE)	Thailand	Manufacturing and distributing of Ethanol	30.00	30.00
Ubon Bio Ethanol Co., Ltd. (UBE)	Thailand	Manufacturing and distributing of Ethanol	21.28	21.28
<i>IRPC Group</i>				
UBE Chemicals (Asia) Public Co., Ltd. (UCHA)	Thailand	Manufacturing and distributing of Petrochemicals	25.00	25.00
<i>PTTER Group</i>				
East Mediterranean Gas Company S.A.E. (EMG)	Egypt	Natural gas transmission pipelines	25.00	25.00

* Associates of PTTEP AP Group consist of Mungalalu Truscott Airbase Pty Ltd. and Troughton Island Pty Ltd.

** On October 9, 2016, PTTEP FLNG Holding Company Limited (PTTEP FH) has withdrawn its investment in UAQ Petroleum Limited, which has a joint partnership in the Block Umm Al-Quwain.

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.3 Details of subsidiaries and joint operations of the subsidiaries

Company	Country of Incorporation	Business	Shareholding (%)	
			2016	2015
<u>Subsidiaries of PTTEP Group:</u>				
PTTEP International Limited (PTTEPI)	Thailand	Petroleum	100.00	100.00
PTTEP Offshore Investment Co., Ltd. (PTTEPO)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Southwest Vietnam Co., Ltd. (PTTEP SV)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Kim Long Vietnam Co., Ltd. (PTTEP KV)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Hoang-Long Co., Ltd. (PTTEP HL)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Hoan-Vu Co., Ltd. (PTTEP HV)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Oman Co., Ltd. (PTTEP OM)*	Cayman Islands	Petroleum	-	100.00
PTTEP Algeria Co., Ltd. (PTTEP AG)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Services Limited (PTTEP Services)	Thailand	Human resource support	100.00	100.00
PTTEP Siam Limited (PTTEPS)	Thailand	Petroleum	100.00	100.00
PTTEP Iran Co., Ltd. (PTTEP IR)**	Cayman Islands	Petroleum	-	100.00
PTTEP Holding Co., Ltd. (PTTEPH)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Indonesia Co., Ltd. (PTTEP ID)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Africa Investment Limited (PTTEP AI)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Rommana Co., Ltd. (PTTEPR)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Australia Pty Limited (PTTEP AU)	Australia	Petroleum	100.00	100.00
PTTEP South Asia Limited (PTTEP SA)	Cayman Islands	Petroleum	100.00	100.00
PTTEP New Zealand Limited (PTTEP NZ)***	Cayman Islands	Petroleum	-	100.00
PTTEP Semai II Limited (PTTEP SM)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Australia Perth Pty Limited (PTTEP AP)	Australia	Petroleum	100.00	100.00
PTTEP International Holding Co., Ltd. (PTTEP IH)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Southwest Vietnam Pipeline Co., Ltd. (PTTEP SVPC)	Cayman Islands	Gas transmission pipelines	100.00	100.00
PTTEP FLNG Holding Co., Ltd. (PTTEP FH)	Hong Kong	Petroleum	100.00	100.00
JV Shore Base Limited (JV Shore Base)****	Cayman Islands	Petroleum	-	100.00

* The additional information is disclosed in Note 12 Divestment and Discontinued Operations.

** On September 30, 2016, PTTEP IR had received the approval of dissolution of the company from the registrar.

*** On June 30, 2016, PTTEP NZ had received the approval of dissolution of the company from the registrar.

**** On June 30, 2016, JV Shore Base had received the approval of dissolution of the company from the registrar.

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.3 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company	Country of Incorporation	Business	Shareholding (%)	
			2016	2015
<u>Subsidiaries of PTTEP Group: (Continued)</u>				
PTTEP Netherland Holding Limited (PTTEP NL)	Cayman Islands	Petroleum	100.00	100.00
JV Marine Limited (JV Marine)	Cayman Islands	Petroleum	100.00	100.00
PTTEP South Mandar Limited (PTTEP SMD)	Cayman Islands	Petroleum	100.00	100.00
PTTEP South Sageri Limited (PTTEP SS)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Sadang Limited (PTTEP SD)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Malunda Limited (PTTEP ML)	Cayman Islands	Petroleum	100.00	100.00
PTTEP Netherlands Coöperatie U.A. (PTTEP NC)	Netherlands	Petroleum	100.00	100.00
PTTEP Canada Limited (PTTEP CA)	Canada	Petroleum	100.00	100.00
PTTEP Canada International Finance Limited (PTTEP CIF)	Canada	Funding services for the Group's business	100.00	100.00
PTTEP MEA Limited (PTTEP MEA)	Cayman Islands	Petroleum	100.00	100.00
PTTEP HK Holding Limited (PTTEP HK)	Hong Kong	Petroleum	100.00	100.00
PTTEP Netherlands Holding Coöperatie U.A. (PTTEP NH)	Netherlands	Petroleum	100.00	100.00
PTTEP Brazil Investment B.V. (PTTEP BI)	Netherlands	Petroleum	100.00	100.00
PTTEP Brazil Investments in Oil and Gas Exploration and Production Limitada (PTTEP BL)	Brazil	Petroleum	100.00	100.00
PTTEP Australia Offshore Pty Limited (PTTEP AO)	Australia	Petroleum	100.00	100.00
PTTEP Australia Browse Basin Pty Limited (PTTEP AB)	Australia	Petroleum	100.00	100.00
PTTEP Australia International Finance Pty Limited (PTTEP AIF)*	Australia	Funding services for the Group's business	100.00	100.00
PTTEP Australasia Pty Limited (PTTEP AA)*	Australia	Petroleum	100.00	100.00
PTTEP Australia Timor Sea Pty Limited (PTTEP AT)	Australia	Petroleum	100.00	100.00
PTTEP Australasia (Finance) Pty Limited (PTTEP AAF)*	Australia	Petroleum	100.00	100.00
PTTEP Australasia (Petroleum) Pty Limited (PTTEP AAP)*	Australia	Petroleum	100.00	100.00
Tullian Pty Limited (PTTEP AAT)*	Australia	Petroleum	100.00	100.00

* On December 19, 2016, PTTEP AIF, PTTEP AA, PTTEP AAF, PTTEP AAP, PTTEP AAT have submitted document for liquidation to the registrar.

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.3 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company	Country of Incorporation	Business	Shareholding (%)	
			2016	2015
<u>Subsidiaries of PTTEP Group: (Continued)</u>				
PTTEP Australasia (Operations) Pty Limited (PTTEP AAO)	Australia	Petroleum	100.00	100.00
PTTEP Australasia (Ashmore Cartier) Pty Limited (PTTEP AAA)	Australia	Petroleum	100.00	100.00
PTTEP Australasia (Staff) Pty Limited (PTTEP AAS)	Australia	Petroleum	100.00	100.00
Cove Energy Limited (Cove)	England	Petroleum	100.00	100.00
Cove Energy Mozambique Rovuma Onshore Limited (CEMROL)	Cyprus	Petroleum	100.00	100.00
Cove Energy East Africa Limited (CEEAL)	Cyprus	Petroleum	100.00	100.00
PTTEP Mozambique Area 1 Limited (PTTEP MZA1) (Former : Cove Energy Mozambique Rovuma Offshore Limited (CEMROFL))	Cyprus	Petroleum	100.00	100.00
Cove Mozambique Terra Limitada (CMTL)*	Mozambique	Petroleum	-	100.00
Cove Mozambique Energia Limitada (CMEL)*	Mozambique	Petroleum	-	100.00
Cove Energy Kenya Limited (CEKL)	Kenya	Petroleum	100.00	100.00
Sinphuhorm Holdings Limited (SHL)	Cayman Islands	Petroleum	100.00	100.00
PTTEP SP Limited (PTTEP SP)	England	Petroleum	100.00	100.00
PTTEP G7 Limited (PTTEP G7)	Thailand	Petroleum	100.00	100.00
PTTEP HK Offshore Limited (PTTEP HKO) (Former : PTTEP HK Investment Limited (PTTEP HKI))	Hong Kong	Petroleum	100.00	100.00
PTTEP Treasury Center Co., Ltd. (PTTEP TC)	Thailand	Treasury center for the Group's business	100.00	100.00
PTTEP Business Center Co., Ltd. (PTTEP BC)	Thailand	Petroleum	100.00	-
<u>Subsidiary of PTTNGD Group:</u>				
Amata Natural Gas Distribution Co., Ltd. (AMATA NGD)	Thailand	Natural gas	80.00	80.00
<u>Subsidiaries of GPSC Group:</u>				
Combined Heat and Power Producing Co., Ltd. (CHPP)	Thailand	Generation and supply of electricity and chilled water	100.00	100.00
Natee Synergy Co., Ltd. (NSC)	Thailand	Investing in other companies	100.00	100.00
IRPC Clean power Co.,Ltd. (IRPCCP) (The Group held 100% shareholding)	Thailand	Generation and supply of electricity steam and water for industries	51.00	51.00
Ichinoseki Solar Power 1 GK (ICHINOSEKI)	Japan	Generation and supply of electricity	99.00	99.00
GPSC International Holdings Limited (GPSCIH)	Hong Kong	Investing in other companies	100.00	-

* On June 6, 2016, CMTL and CMEL had received the approval of dissolution of the company from the Government of Republic of Mozambique.

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.3 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company	Country of Incorporation	Business	Shareholding (%)	
			2016	2015
<u>Subsidiary of PTTCL Group:</u>				
PTT (Lao) Co., Ltd. (PTT Lao)	Lao	Oil marketing	100.00	100.00
<u>Subsidiaries of PTTOR Group:</u>				
PTT Retail Management Co., Ltd. (PTTRM)	Thailand	Petrol station and convenience store management	100.00	100.00
PTT Retail Service Co., Ltd. (PTTRS)	Thailand	Human resource management	100.00	100.00
Thai Lube Blending Co., Ltd. (TLBC) (The Group held 100% shareholding)	Thailand	Blending and Bottling of lube oil	51.05	51.05
PTT Philippines Trading Corporation (PTTTC)	Philippines	Oil marketing	100.00	100.00
PTT Philippines Corporation (PTTPC)	Philippines	Oil marketing	100.00	100.00
<u>Subsidiary of PTTT Group:</u>				
PTT International Trading DMCC (PTTT DMCC)	United Arab Emirates	International oil trading	100.00	100.00
<u>Subsidiary of PTTPM Group:</u>				
Polymer Marketing DMCC Co., Ltd. (PM DMCC)	United Arab Emirates	Petrochemicals marketing	100.00	100.00
<u>Subsidiaries of PTTGC Group:</u>				
PTT Phenol Co., Ltd. (PPCL)	Thailand	Manufacturing and distributing petrochemicals products	100.00	100.00
PTT Maintenance and Engineering Co., Ltd. (PTTME) (The Group held 100% shareholding)	Thailand	Factory maintenance and engineering services	60.00	60.00
Thai Tank Terminal Limited (TTT)	Thailand	Service for the storage and handling of liquid chemicals, oil and gas	51.00	51.00
NPC Safety and Environmental Service Co., Ltd. (NPCSE)	Thailand	Safety and environmental services	100.00	100.00
PTT Chemical International (Asia Pacific ROH) Ltd. (AP ROH)*	Thailand	Services rendering to the Group	100.00	100.00
Thai Styrenics Co., Ltd. (TSCL)	Thailand	Manufacturing and distributing petrochemicals products	100.00	100.00
PTTGC International (Netherlands) B.V. (GCINTERNL)	Netherlands	Investing and operating in international business	100.00	100.00

* Under liquidation process

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.3 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company	Country of Incorporation	Business	Shareholding (%)	
			2016	2015
Subsidiaries of PTTGC Group: (Continued)				
Vencorex Holding (VCR)	France	Manufacturing and distributing chemical specialties	85.00	85.00
TOC Glycol Co., Ltd. (TOCGC)	Thailand	Manufacturing and distributing petrochemicals products	100.00	100.00
Global Green Chemicals Public Co., Ltd. (GGC)* (Former : Thai Oleochemicals Co., Ltd. (TOL))	Thailand	Manufacturing and distributing biochemical products	100.00	100.00
Solution Creation Co., Ltd. (SOLUTIONCRE)	Thailand	Manufacturing and distributing health and nutrition products	100.00	100.00
Bio Spectrum Co., Ltd. (BIOSPEC)**	Thailand	Manufacturing and distributing biochemical products	100.00	100.00
Auria BioChemicals Co., Ltd. (AURIA)	Thailand	Research and development of bio-based chemicals	100.00	100.00
PTT Chemical International Pte. Ltd. (CHINTER)	Singapore	Investing and operating in international business	100.00	100.00
PTTGC International (USA) Inc. (GCINTERUSA)	United States of America	Investing and operating in international business	100.00	100.00
Bangkok Polyethylene Public Co., Ltd. (BPE)**	Thailand	Manufacturing and distributing petrochemical products	100.00	100.00
Thai Fatty Alcohols Co., Ltd. (TFA)	Thailand	Manufacturing and distributing biochemical products	100.00	100.00
Myriant Corporation (MYRIANT)	United States of America	Research and development of bio-based chemicals	100.00	100.00
PTTGC America Corporation (AMERICACORP)	United States of America	Investing and operating in international business	100.00	100.00
PTTGC America LLC (AMERICALLC)	United States of America	Operating in petrochemical business	100.00	100.00
NPC S&E Security Guard Co., Ltd. (NPCSG)	Thailand	Safety services	100.00	-
Vencorex (Thailand) Co., Ltd. (VENCOREXTH)	Thailand	Manufacturing and distributing chemical specialties	100.00	100.00
Vencorex France S.A.S. (VCF)	France	Manufacturing and distributing chemical specialties	100.00	100.00

* On February 18, 2016, Thai Oleochemicals Co., Ltd. (TOL) completed its registration for transformation to a public company.

** Under liquidation process

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.3 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company	Country of Incorporation	Business	Shareholding (%)	
			2016	2015
<u>Subsidiaries of TOP Group:</u>				
Thaioil Power Co., Ltd. (TP) (The Group held 100% shareholding)	Thailand	Generation and supply of electricity and steam	73.99	73.99
Thai Paraxylene Co., Ltd. (TPX)	Thailand	Paraxylene manufacturing and distribution	99.99	99.99
Thai Lube Base Public Co., Ltd. (TLB)	Thailand	Lube base oil refining and distribution	99.99	99.99
Thaioil Marine Co., Ltd. (TM)	Thailand	Providing marine transportation services for petroleum and liquid chemical products	99.99	99.99
Thaioil Ethanol Co., Ltd. (TET)	Thailand	Investing in ethanol business and alternative energy products	99.99	99.99
Thaioil Energy Services Co., Ltd. (TES)	Thailand	Providing of management and general services	99.99	99.99
Thaioil Solvent Co., Ltd. (TOS)	Thailand	Investing in solvent and chemical businesses	99.99	99.99
TOP SPP Co., Ltd. (TOPSPP)	Thailand	Generation and supply of electricity and steam	99.99	99.99
Sapthip Co., Ltd. (SAPTHIP)	Thailand	Ethanol products manufacturing and distribution	50.00	50.00
TOP Solvent Co., Ltd. (TS)	Thailand	Distribution of solvent and chemical products	99.99	99.99
Sak Chaisidhi Co., Ltd. (SAKC)	Thailand	Solvent and chemical products manufacturing and distribution	80.52	80.52
TOP Solvent (Vietnam) LLC. (TSV)	Vietnam	Distribution of solvent and chemical products	100.00	100.00
Thaioil Marine International Pte. Ltd. (TOMI)	Singapore	Investing in marine transportation for crude oil and petroleum product business	100.00	100.00
TOP Maritime Service Co., Ltd. (TMS)	Thailand	Providing marine transportation services for crew and utilities in Gulf of Thailand	55.00	55.00
LABIX Co., Ltd. (LABIX)	Thailand	Linear Alkyl Benzene manufacturing and distribution	75.00	75.00

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.3 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company	Country of Incorporation	Business	Shareholding (%)	
			2016	2015
<u>Subsidiaries of IRPC Group:</u>				
Thai ABS Co., Ltd. (TABS)*	Thailand	Manufacturing and distributing of plastic resin	99.99	99.99
IRPC A&L Co., Ltd. (IRPCAL)	Thailand	Manufacturing and distributing petrochemicals product	59.94	59.94
IRPC Oil Co., Ltd. (OIRPC)	Thailand	Distributing of oil products and gas	99.99	99.99
Rak Phasak Co., Ltd. (RAKPHASAK) (Former: TPI Oil (2001) Co., Ltd.)	Thailand	Oil vessel rental service	99.99	99.99
IRPC Polyol Co., Ltd. (IRPCP)	Thailand	Manufacturing and distributing of polyol	99.99	99.99
IRPC Technology Co., Ltd. (TECHIRPC)	Thailand	Vocational school	99.99	99.99
R. Solution Co., Ltd. (IRPCS)** (Former: IRPC Service Co., Ltd.)	Thailand	Service for security	99.50	99.50
Rayong Tank Terminal Co., Ltd. (RTC)***	Thailand	Rental service for chemical tanks	-	99.99
IRPC Energy Co., Ltd. (IRPCENERGY)****	Thailand	Manufacturing and distributing of electricity	-	99.99
TPI Internet Portal Co., Ltd. (TPIINTERNETPORTAL)*****	Thailand	Distributing of oil products	99.99	99.99

* On August 1, 2016, TABS transferred its entire business to IRPC and TABS also registered its dissolution with Ministry of Commerce on the same day.

** Under bankruptcy process

*** On February 19, 2016, RTC registered its dissolution.

**** On September 30, 2016, IRPCENERGY registered its dissolution.

***** Under liquidation process.

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.3 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company	Country of Incorporation	Business	Shareholding (%)	
			2016	2015
<u>Subsidiaries of PTTER Group:</u>				
PTT Mining Limited (PTTML)	Hong Kong	Investing in other companies	100.00	100.00
International Coal Holdings Pty Ltd (ICH)*	Australia	Investing in other companies	-	100.00
Straits (Brunei) Pte. Ltd. (Straits (Brunei))	Singapore	Investing in other companies	100.00	100.00
Sakari Resources Ltd. (SAR)	Singapore	Investing in coal mine business	95.49	95.26
Yoxford Holdings (YOXFORD)	Mauritius	Investing in other companies	100.00	100.00
Madagascar Consolidated Mining SA (MCM)	Madagascar	Coal mines	80.00	80.00
Tiger Energy Trading Pte. Ltd. (TET)	Singapore	Coal mine marketing	100.00	100.00
Sakari Energy Pte. Ltd. (SAEnergy)	Singapore	Investing in other companies	100.00	100.00
Reyka Wahana Digdjaya Pte. Ltd. (RWD)	Singapore	Investing in other companies	100.00	100.00
Sakari Energy Trading Pte. Ltd. (SET)	Singapore	Investing in other companies	100.00	100.00
Sakari Marine & Infrastructure Pte. Ltd. (SMI)	Singapore	Marine engineering	100.00	100.00
PT Straits Consultancy Services (SCS)	Indonesia	Management services	100.00	100.00
PT Bahari Perdana Persada (BPPD)	Indonesia	Investing in other companies	100.00	100.00
PT Bahari Putra Perdana (BPPN)	Indonesia	Investing in other companies	100.00	100.00
PT Reyka Wahana Digdjaya (RWD)	Indonesia	Investing in other companies	100.00	100.00
PT Bahari Cakrawala Sebuku (BCS)	Indonesia	Coal mines	100.00	100.00
PT Bumi Borneo Metalindo (BBM)	Indonesia	Investing in other companies	100.00	100.00
PT Citra Pertiwi Nusantara (CPN)	Indonesia	Coal transport equipment and delivery service	100.00	100.00

* On November 4, 2016, ICH completed its dissolution.

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.3 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company	Country of Incorporation	Business	Shareholding (%)	
			2016	2015
<u>Subsidiaries of PTTER Group: (Continued)</u>				
PT Bumiborneo Pertiwi Nusantara (BPN)	Indonesia	Investing in other companies	100.00	100.00
PT Karbon Mahakam (KM)	Indonesia	Coal mines	100.00	100.00
PT Metalindo Bumi Raya (MBR)	Indonesia	Coal mines	100.00	100.00
PT Borneo Citrapertiwi Nusantara (BCN)	Indonesia	Investing in other companies	100.00	100.00
PT Separi Energy (SE)	Indonesia	Investing in other companies	100.00	100.00
PT Jembayan Muarabara (JMB)	Indonesia	Coal mines	100.00	100.00
PT Kemilau Rindang Abadi (KRA)	Indonesia	Coal mines	100.00	100.00
PT Arzara Baraindo Energitama (ABE)	Indonesia	Coal mines	100.00	100.00
PT Cakrawala Abadi Jaya (CAJ)	Indonesia	Investing in other companies	100.00	100.00
PT Sakti Utama Luas (SUL)	Indonesia	Investing in other companies	100.00	100.00
Tri Tunggal Lestari Bersama (TTLB)	Indonesia	Infrastructure business	100.00	100.00
PT Makassar Prima Coal (MPC)	Indonesia	Coal mines	70.00	70.00
PTT International Holding Limited (PTTIH)	Hong Kong	Investing in other companies	100.00	100.00
PTT International Investment Limited (PTTII)	Hong Kong	Investing in other companies	100.00	100.00
PTT International (Singapore) Company Pte. Limited (PTT Inter (Sing))	Singapore	Investing in other companies	100.00	100.00
<u>Subsidiaries of PTTGE Group:</u>				
Sabran Brothers Pte. Ltd. (Sabran)	Singapore	Investing in other companies	100.00	100.00
Kalimantan Thailand Palm Pte. Ltd. (KTP)	Singapore	Investing in other companies	100.00	100.00
PTT Green Energy (Hong Kong) Limited (PTTGE HK)	Hong Kong	Financing	100.00	100.00
PTT Green Energy (Thailand) Co., Ltd. (PTTGE TH)	Thailand	Management services for PTTGE Group	100.00	100.00

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.3 Details of subsidiaries and joint operations of the subsidiaries (Continued)

Company	Country of Incorporation	Business	Shareholding (%)	
			2016	2015
<u>Subsidiary of BSA Group:</u>				
Sport Services Alliance Co., Ltd. (SSA)	Thailand	Football club management	100.00	100.00
<u>Subsidiary held by PTTEP and PTTER:</u>				
PTT FLNG Limited (PTT FLNG)*	Hong Kong	Petroleum	100.00	100.00
<u>Joint operations of PTTEP Group:</u>				
Carigali - PTTEPI Operating Company Sdn. Bhd. (CPOC)	Malaysia	Petroleum	50.00	50.00
Moattama Gas Transportation Company (MGTC)	Bermuda	Gas pipelines transportation	25.50	25.50
Taninthayi Pipeline Company LLC (TPC)	Cayman Islands	Gas pipelines transportation	19.32	19.32
Orange Energy Limited (Orange)	Thailand	Petroleum	53.95	53.95
B 8/32 Partners Limited (B8/32 Partners)	Thailand	Petroleum	25.00	25.00
Andaman Transportation Limited (ATL)	Cayman Islands	Gas pipeline transportation	80.00	80.00
Leismer Aerodrome Limited (LAL)	Canada	Air transportation services	32.00	32.00
Groupement Bir Seba (GBRS)	Algeria	Petroleum	35.00	35.00
Natuna 2 B.V. (Natuna 2)	Netherlands	Petroleum	50.00	50.00

* On December 26, 2014, the Board of Directors of PTT FLNG passed a resolution to close PTT FLNG. Currently, PTT FLNG is in the process of dissolution, which it submitted "No Objection" on September 20, 2016.

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.4 Investments in joint ventures in the consolidated financial statements as at December 31, 2016 and 2015

Unit: Million Baht

Company	Ownership interest (%)		2016		2015		Dividend income	
	2016	2015	Cost method	Equity method	Cost method	Equity method	2016	2015
1. TTM(T)	50.00	50.00	4,341.80	4,724.49	5,666.80	5,950.23	473.85	680.02
2. TTM(M)	50.00	50.00	1,001.31	1,294.15	1,001.31	1,262.93	164.32	-
3. DCAP	35.00	35.00	584.50	804.56	584.50	713.33	15.40	15.36
4. PTTMCC	50.00	50.00	930.12	551.43	930.12	610.28	-	-
5. PTTAC	50.00	48.50	6,909.41	4,310.62	6,909.41	4,173.13	-	-
6. HMC	41.44	41.44	9,117.12	12,315.37	9,117.12	12,461.02	2,692.76	3,024.02
7. Erawan 2	13.11	13.11	610.66	717.37	662.37	768.57	93.92	91.88
8. TSR	40.00	40.00	1,697.00	1,713.58	1,697.00	1,721.80	291.67	277.90
9. NL1PC	40.00	40.00	318.65	291.89	237.27	189.83	-	-
10. NNEG	30.00	30.00	480.90	466.58	324.00	265.38	-	-
11. OGPS	40.00	40.00	40.00	34.33	40.00	39.83	-	-
12. TEX	50.00	50.00	210.00	688.24	210.00	660.04	70.88	122.33
13. EOM	50.00	50.00	4,965.77	5,101.78	4,965.77	5,255.19	-	-
14. ESC	50.00	50.00	407.04	81.61	407.04	227.16	-	-
15. NTR	50.00	50.00	4,793.33	3,236.20	4,793.33	3,704.19	-	-
16. TOP-NTL	50.00	50.00	0.25	10.08	0.25	8.03	-	-
17. TOP-NTL(BT)	50.00	50.00	24.05	27.86	24.05	14.10	-	-
18. TOP-NYK	50.00	50.00	273.88	440.83	273.88	432.64	26.48	18.01
19. TOP-NS	35.00	35.00	52.50	21.82	52.50	-	-	-
20. IRPC PCC	49.99	49.99	5.00	11.02	5.00	3.07	-	-
21. FEEBRU	35.00	35.00	235.55	148.21	222.12	143.76	-	-
22. Chancellor	77.56	77.56	3,257.34	1,422.81	3,280.78	1,433.36	-	-
			40,256.18	38,414.83	41,404.62	40,037.87		
Less Allowance for impairment			(3,492.89)	(1,571.02)	(2,795.20)	(947.78)		
Total			36,763.29	36,843.81	38,609.42	39,090.09	3,829.28	4,229.52

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.5 Investments in associates in the consolidated financial statements as at December 31, 2016 and 2015

Unit: Million Baht

Company	Ownership interest (%)		2016		2015		Dividend income	
	2016	2015	Cost method	Equity method	Cost method	Equity method	2016	2015
1. THAPPLINE	49.59	49.59	3,952.72	4,986.78	3,952.72	5,426.00	1,342.78	261.07
2. KPL	40.00	40.00	21.49	-	21.49	-	-	-
3. PAT	35.00	35.00	131.25	-	131.25	-	-	-
4. PTTEP AP Group's associates	50.00	50.00	53.66	249.98	54.05	277.58	4.00	3.03
5. UAQ	-	30.00	-	-	0.01	0.01	-	-
6. BIC	25.00	25.00	673.44	492.02	673.44	490.47	40.58	40.84
7. XPCL	25.00	25.00	4,404.43	3,801.87	3,321.89	2,923.47	-	-
8. FST	25.00	25.00	0.85	1.56	0.90	1.67	-	-
9. ITT	49.00	49.00	125.28	148.22	125.28	109.69	-	-
10. VNT	24.98	24.98	3,297.39	4,210.33	3,297.39	4,019.89	118.42	29.60
11. EFT	22.65	22.65	2.27	15.64	2.27	15.81	7.25	7.25
12. TETSO	30.00	-	16.65	16.20	-	-	-	-
13. TIM	33.33	33.33	1.00	-	1.00	4.51	-	-
14. MCE	30.00	30.00	202.50	3.10	202.50	42.45	-	-
15. UBE	21.28	21.28	769.55	801.90	769.55	780.65	-	-
16. UCHA	25.00	25.00	5,299.82	4,701.98	5,299.82	4,752.72	-	-
17. EMG	25.00	25.00	17,516.97	4,055.87	17,643.03	14,199.47	-	-
			36,469.27	23,485.45	35,496.59	33,044.39		
Less Allowance for impairment			(17,669.71)	(4,055.87)	(13,710.71)	(10,114.41)		
Total			18,799.56	19,429.58	21,785.88	22,929.98	1,513.03	341.79

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.6 Investments in subsidiaries, joint ventures and associates in the separate financial statements as at December 31, 2016 and 2015

Unit: Million Baht

Company	Ownership interest (%)		Cost method		Dividend income	
	2016	2015	2016	2015	2016	2015
<u>Subsidiaries</u>						
1. PTTEP	65.29	65.29	71,390.42	71,390.42	7,127.62	6,479.65
2. PTTLNG	100.00	100.00	10,958.44	9,163.60	1,730.06	1,462.84
3. PTTNGD	58.00	58.00	418.14	418.14	-	-
4. EnCo	50.00	50.00	900.00	900.00	72.32	42.08
5. PTTES	40.00	40.00	62.50	62.50	-	-
6. PTTME	40.00	40.00	66.40	66.40	-	-
7. GPSC	22.58	22.58	4,949.93	4,949.93	355.18	297.67
8. PTTCL	100.00	100.00	103.49	64.12	-	-
9. PTTOM	100.00	100.00	16.15	16.15	-	-
10. PTTOR	100.00	100.00	8,621.67	8,621.67	-	-
11. SBECL	-	100.00	-	1,154.81	-	-
12. PTT TANK	100.00	100.00	2,500.37	2,500.37	90.00	80.00
13. TLBC	48.95	48.95	140.00	140.00	8.68	8.96
14. PTTT	100.00	100.00	2.50	2.50	-	-
15. PTTT LDN	100.00	-	18.16	-	-	-
16. PTTPL	50.00	50.00	600.00	600.00	-	1,326.00
17. PTTPMMA	100.00	100.00	217.14	194.70	-	-
18. PTTPM	50.00	50.00	20.00	20.00	250.00	55.00
19. PTTGC	49.42	49.34	48,121.52	48,121.52	5,180.15	5,510.80
20. TOP	49.10	49.10	11,380.83	11,380.83	3,305.44	1,502.47
21. IRPC	38.51	38.51	28,467.24	28,467.24	1,731.33	629.58
22. TP	26.00	26.00	2,304.76	2,304.76	255.71	131.51
23. PTTER	100.00	100.00	33,702.67	33,702.67	-	-
24. PTTGE	100.00	100.00	11,750.64	11,750.64	-	-
25. PTTRTC	100.00	100.00	31.40	31.40	-	-
26. BSA	100.00	100.00	0.50	0.50	17.02	13.86
27. PTTICT	20.00	20.00	30.00	30.00	13.00	13.20
Investments in subsidiaries			236,774.87	236,054.87		
<u>Less Allowance for impairment</u>			(26,414.37)	(25,843.63)		
Total investments in subsidiaries			210,360.50	210,211.24	20,136.51	17,553.62

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.6 Investments in subsidiaries, joint ventures and associates in the separate financial statements as at December 31, 2016 and 2015 (Continued)

Unit: Million Baht

Company	Ownership interest (%)		Cost method		Dividend income	
	2016	2015	2016	2015	2016	2015
<u>Joint Ventures</u>						
28. TTM(T)	50.00	50.00	4,341.80	5,666.80	473.85	680.02
29. TTM(M)	50.00	50.00	1,001.31	1,001.31	164.32	-
30. DCAP	35.00	35.00	584.50	584.50	15.40	15.35
31. PTTMCC	50.00	50.00	930.13	930.13	-	-
32. PTTAC	50.00	48.50	6,909.41	6,909.41	-	-
33. HMC	41.44	41.44	9,117.12	9,117.12	2,692.76	3,024.02
Total investments in joint ventures			22,884.27	24,209.27	3,346.33	3,719.39
<u>Associates</u>						
34. THAPPLINE	40.40	40.40	3,173.23	3,173.23	1,095.44	212.98
35. KPL	40.00	40.00	21.49	21.49	-	-
36. PAT	35.00	35.00	131.25	131.25	-	-
Investments in associates			3,325.97	3,325.97		
<u>Less</u> Allowance for impairment			(152.74)	(152.74)		
Total investments in associates			3,173.23	3,173.23	1,095.44	212.98
Total			236,418.00	237,593.74	24,578.28	21,485.99

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.7 Movements in investments in the consolidated and the separate financial statements

13.7.1 Movements in investments in joint ventures under the equity method in the consolidated financial statements are as follows:

	Unit: Million Baht	
	2016	2015
Balance as at January 1	39,090.09	42,782.71
- Share of profit from investments in joint ventures	2,980.57	1,749.94
- Dividend income	(3,829.28)	(4,229.52)
- Additional investments	238.28	165.33
- Disposal of investments	-	(669.86)
- Share capital reduction	(1,371.27)	(44.82)
- Share of other comprehensive income of joint ventures	361.07	1,076.66
- Currency translation differences	(5.14)	(283.14)
- Loss on impairment of investments (Note 21)	(620.51)	(1,457.21)
Balance as at December 31	<u>36,843.81</u>	<u>39,090.09</u>

13.7.2 Movements in investments in associates under the equity method in the consolidated financial statements are as follows:

	Unit: Million Baht	
	2016	2015
Balance as at January 1	22,929.98	46,765.52
- Share of profit from investments in associates	1,162.64	4,281.76
- Dividend income	(1,513.03)	(3,898.36)
- Additional investments	1,099.19	795.95
- Disposal of investments	-	(20,335.24)
- Share capital reduction	(0.01)	(4,549.21)
- Reclassification	-	(2,033.30)
- Share of other comprehensive income (loss) of associates	(161.85)	1,526.55
- Currency translation differences	(92.70)	376.31
- Loss on impairment of investments (Note 21)	(3,994.64)	-
Balance as at December 31	<u>19,429.58</u>	<u>22,929.98</u>

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.7 Movements in investments in the consolidated and the separate financial statements (Continued)

13.7.3 Movements in investments in subsidiaries, joint ventures and associates under the cost method in the separate financial statements are as follows:

	Unit: Million Baht	
	2016	2015
Balance as at January 1	237,593.74	272,149.97
- Additional investments	1,874.81	3,357.53
- Disposal of investments	(887.49)	(14,783.36)
- Share capital reduction	(1,325.00)	(4,549.21)
- Reclassification	-	(1,623.17)
- Loss on impairment of investments (Note 21)	(838.06)	(16,958.02)
Balance as at December 31	236,418.00	237,593.74

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.8 Summary financial information of the joint ventures of the Company, after accounting policy adjustment are as follows:

Statements of financial position as at December 31, 2016 and 2015

Unit: Million Baht

	2016						2015					
	TTM(T)	TTM(M)	DCAP	PTTAC	HMC	PTTMCC	TTM(T)	TTM(M)	DCAP	PTTAC	HMC	PTTMCC
Current assets	4,782.47	2,460.28	1,085.59	5,349.63	8,470.65	310.15	7,849.25	1,862.41	1,082.31	4,295.22	9,531.19	669.27
Non-current assets	17,874.66	5,976.71	2,641.13	23,574.36	26,997.10	3,318.36	19,153.07	6,459.42	2,852.84	24,387.54	26,904.09	2,889.58
Current liabilities	(1,573.98)	(771.59)	(605.68)	(3,624.13)	(3,869.78)	(301.50)	(2,161.89)	(207.68)	(700.85)	(6,850.64)	(3,929.16)	(96.60)
Non-current liabilities	(11,634.16)	(5,077.12)	(822.31)	(16,678.61)	(9,211.43)	(2,224.16)	(12,939.96)	(5,588.29)	(1,196.21)	(13,227.73)	(9,768.14)	(2,241.69)
Net assets	9,448.99	2,588.28	2,298.73	8,621.25	22,386.54	1,102.85	11,900.47	2,525.86	2,038.09	8,604.39	22,737.98	1,220.56

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.8 Summary financial information of the joint ventures of the Company, after accounting policy adjustment are as follows: (Continued)

Statements of income for the years ended December 31, 2016 and 2015

Unit: Million Baht

	2016						2015					
	TTM(T)	TTM(M)	DCAP	PTTAC	HMC	PTTMCC	TTM(T)	TTM(M)	DCAP	PTTAC	HMC	PTTMCC
Revenue*	3,307.40	951.79	2,625.67	11,906.63	31,689.16	20.56	3,929.53	1,125.20	2,920.05	13,138.94	31,980.56	13.60
Expenses	(2,233.01)	(270.68)	(2,244.40)	(11,892.26)	(25,546.81)	(138.26)	(2,157.98)	(249.07)	(2,639.73)	(14,877.59)	(26,621.44)	(362.82)
Profit (loss) before taxes	1,074.39	681.11	381.27	14.37	6,142.35	(117.70)	1,771.55	876.13	280.32	(1,738.65)	5,359.12	(349.22)
Income taxes	(102.73)	(139.20)	(76.98)	2.48	(861.10)	-	(566.52)	(50.31)	(60.88)	(0.77)	(766.79)	-
Net profit (loss)	971.66	541.91	304.29	16.85	5,281.25	(117.70)	1,205.03	825.82	219.44	(1,739.42)	4,592.33	(349.22)

* Including gain (loss) on foreign exchange rate

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.9 Summary financial information of the associates of the Company, after accounting policy adjustment are as follows:

Statements of financial position as at December 31, 2016 and 2015

	Unit: Million Baht	
	2016	2015
	THAPPLINE	THAPPLINE
Current assets	4,910.55	5,855.62
Non-current assets	6,293.28	6,250.88
Current liabilities	(610.50)	(647.62)
Non-current liabilities	(108.89)	(4,053.55)
Net assets	<u>10,484.44</u>	<u>7,405.33</u>

Financial information of PAT and KPL, associates of the Company, was disclosed in Note 13.11

Statements of income for the years ended December 31, 2016 and 2015

	Unit: Million Baht	
	2016	2015
	THAPPLINE	THAPPLINE
Income*	3,517.90	3,437.96
Expenses	(1,229.87)	(1,244.30)
Profit before taxes	2,288.03	2,193.66
Income taxes	(459.79)	(216.09)
Net profit	<u>1,828.24</u>	<u>1,977.57</u>

Financial information of PAT and KPL, associates of the Company, was disclosed in Note 13.11

* Including gain (loss) on foreign exchange rate.

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.10 Significant events during the year ended December 31, 2016

PTTCL

On March 31, 2015, at the Ordinary General Shareholders' Meeting of PTT (Cambodia) Limited (PTTCL) No. 1/2015, the shareholders passed a resolution to increase authorized share capital not exceed USD 2.91 million or equivalent to Baht 96 million by issuing 582,000 additional shares with a par value of KHR 20,000 each. On January 29, 2016, PTTCL called up additional authorized share capital of Baht 39.37 million. The Company made the share payment on February 15, 2016.

SBECL

On August 22, 2014, at the Board of Directors Meeting No. 8/2014 of the Company, the Board passed a resolution to approve the dissolution of Subic Bay Energy Company Limited (SBECL). On October 28, 2015, the Company received USD 25.10 million, or equivalent to Baht 887.49 million, from SBECL and recognized loss on impairment of investment amounting to Baht 267.32 million in the separate financial statements. On February 17, 2016, SBECL registered its dissolution; therefore, the Company wrote off its entire investment in SBECL and recognized loss on the disposal of the investment of Baht 143.79 million in the consolidated financial statements.

PTTLNG

On June 21, 2016, at the Board of Directors Meeting of PTT LNG Company Limited (PTTLNG) No. 5/2016, the Board passed a resolution to approve the call up of additional share capital of Baht 963 million and 731.88 million, respectively. The Company made the additional payment on August 16, 2016 and October 17, 2016, respectively.

On October 31, 2016, at the Board of Directors Meeting of PTT LNG No. 10/2016, the Board passed a resolution to approve the call up of additional share capital of Baht 99.96 million. The Company made the additional payment on December 16, 2016.

TTM(T)

On April 22, 2016, at the Board of Directors Meeting No. 4/2016 of the Company, the Board passed a resolution to decrease the authorized share capital of Trans Thai-Malaysia (Thailand) Company Limited (TTM(T)) from Baht 11,333.60 million to no less than Baht 8,600 million, through a reduction in capital of no more than Baht 2,732 million. On July 25, 2016, TTM(T) registered the decrease in its authorized share capital from Baht 11,333.60 million to Baht 8,683.60 million by decreasing 265 million ordinary shares of Baht 10 each, or amounting to Baht 2,650 million. The Company received capital return of Baht 1,325 million on July 28, 2016.

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.10 Significant events during the year ended December 31, 2016 (Continued)

PTTPMMA

On March 23, 2012, at the Board of Directors Meeting No. 3/2012 of the Company, the Board passed a resolution to increase the authorized share capital of PTT PMMA Company Limited (PTTPMMA) not exceed than Baht 4,480 million. On October 21, 2016, PTTPMMA called for the third payment of 6.6 million additional shares at Baht 3.40 per share, amounting to Baht 22.44 million. The Company made the share payment on October 28, 2016.

PTTAC

On February 19, 2016, at the Board of Directors Meeting No. 2/2016 of the Company, the Board passed a resolution to approve the shareholder restructuring of PTT Asahi Chemicals Company Limited (PTTAC) by decreasing authorized share capital by way of private placement. Additionally, at the Extraordinary General Meeting No. 1/2016 of the shareholders of PTTAC on February 26, 2016, the shareholders passed a resolution to decrease authorized share capital of PTTAC by way of private placement, held by Marubeni Corporation (Marubeni), by decreasing entirely authorized share capital held by Marubeni totaling 4.27 million shares with a par value of Baht 100 each. Therefore, the authorized share capital of PTTAC decreased from Baht 14,246.20 million (142.46 million shares) to Baht 13,818.81 million (138.19 million shares). Consequently, the Company's shareholding in PTTAC increased to 50%. On November 11, 2016, PTTAC registered its capital reduction with Ministry of Commerce.

PTTT LDN

At the Board of Directors Meeting No. 2/2016 of the Company on February 19, 2016 and the Cabinet Meeting on August 30, 2016, the Board and the Cabinet passed a resolution to approve the establishment of PTT International Trading London Limited (PTTT LDN) in London, United Kingdom, to operate international trading business of the Group under the supervision of international trading business unit. The Company holds a 100% shareholding of PTTT LDN, which was established on October 24, 2016.

PTTT LDN has an initial registered share capital of GBP 420,000 or equivalent to Baht 18.16 million comprising 420,000 shares with a par value of GBP 1 each. The Company already paid full amount on November 11, 2016.

PTTOR

On November 18, 2016, at the Board of Directors Meeting No. 11/2016 of the Company, the Board passed a resolution to approved the restructuring of the Company by means of transfer of the oil business unit, including of the assets and liabilities of the business unit, and the shares of companies related to the oil business unit from the Company to PTT Retail Business Company Limited (PTTRB) and the change of PTTRB's name to PTT Oil and Retail Business Company Limited (PTTOR). Consequently, PTTRB registered with Department of Business Development, Ministry of Commerce to change its name to PTTOR on December 15, 2016.

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.11 Additional information in respect of associates

The Company has not recognized its share of profit (loss) from some associates for the year ended December 31, 2016 amounting to Baht (28.67) million (2015: Baht 2.08 million) because, as at December 31, 2016, the Company had an unrealized allowance for its share of loss from these associates amounting to Baht 102.97 million (December 31, 2015: Baht 84.55 million).

13.12 Investments in subsidiaries, joint ventures and associates where voting rights and ownership interests differ are as follows:

<u>Company</u>	<u>Voting rights</u>	Unit: Percentage	
		<u>Ownership</u>	
Subsidiary			
PTTGC	48.89	49.42	
Joint venture			
HMC	42.10	41.44	
Associate			
THAPPLINE	49.22	49.21	

13.13 Material non-controlling interests

Financial information of subsidiaries that have material non-controlling interests are as follow:

<u>Company</u>	<u>Country of Incorporation</u>	<u>Non-controlling interests Shareholding (%)</u>	
		<u>2016</u>	<u>2015</u>
PTT Exploration and Production Public Co., Ltd. (PTTEP)	Thailand	34.71	34.71
Thai Oil Public Co., Ltd. (TOP)	Thailand	50.07	50.07
IRPC Public Co., Ltd. (IRPC)	Thailand	61.49	61.49
PTT Global Chemical Public Co., Ltd. (PTTGC)	Thailand	50.58	50.66
Global Power Synergy Public Co., Ltd. (GPSC)	Thailand	25.00	25.00

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.13 Material non-controlling interests (Continued)

Financial information of subsidiaries that have material non-controlling interests, after accounting policy adjustment, before eliminations:

Summary of financial position as at December 31, 2016 and 2015

Unit: Million Baht

	2016					2015				
	PTTEP	TOP	IRPC	PTTGC	GPSC	PTTEP	TOP	IRPC	PTTGC	GPSC
Current assets	185,972.83	115,730.64	39,970.19	127,513.47	11,665.02	169,641.79	90,489.68	35,984.32	117,900.59	16,316.25
Non-current assets	490,916.70	101,995.80	132,529.68	265,652.73	46,248.10	539,221.77	101,676.01	127,189.35	259,644.26	39,550.27
Current liabilities	(39,442.94)	(34,294.87)	(52,839.53)	(53,267.60)	(4,197.31)	(50,804.42)	(18,179.30)	(36,209.96)	(41,220.79)	(4,568.79)
Non-current liabilities	(229,462.67)	(71,829.57)	(39,666.03)	(91,229.84)	(15,076.86)	(249,248.10)	(76,974.57)	(52,261.05)	(102,059.30)	(14,171.15)
Net assets	<u>407,983.92</u>	<u>111,602.00</u>	<u>79,994.31</u>	<u>248,668.76</u>	<u>38,638.95</u>	<u>408,811.04</u>	<u>97,011.82</u>	<u>74,702.66</u>	<u>234,264.76</u>	<u>37,126.58</u>
Owners of the parent	242,078.98	53,366.84	30,774.60	121,578.77	27,775.64	242,618.97	46,127.39	28,741.14	114,252.45	27,003.66
Non-controlling interests	165,904.94	58,235.16	49,219.71	127,089.99	10,863.31	166,192.07	50,884.43	45,961.52	120,012.31	10,122.92

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.13 Material non-controlling interests (Continued)

Financial information of subsidiaries that have material non-controlling interests, after accounting policy adjustment, before eliminations: (Continued)

Summary of comprehensive income or loss for the years ended December 31, 2016 and 2015

Unit: Million Baht

	2016					2015				
	PTTEP	TOP	IRPC	PTTGC	GPSC	PTTEP	TOP	IRPC	PTTGC	GPSC
Revenue	150,689.32	277,244.03	181,553.68	352,433.97	21,784.83	191,266.95	294,563.43	217,820.00	407,960.00	23,313.75
Expenses	127,744.87	253,355.23	172,530.25	323,528.82	18,772.62	205,988.43	280,868.98	206,566.61	385,300.22	21,334.57
Profit (loss) before taxes	22,944.45	23,888.80	9,023.43	28,905.15	3,012.21	(14,721.48)	13,694.45	11,253.39	22,659.78	1,979.18
Income taxes	10,084.73	2,295.46	282.42	3,025.09	140.23	16,869.01	1,597.36	2,345.84	1,984.09	90.03
Net profit (loss)	12,859.72	21,593.34	8,741.01	25,880.06	2,871.98	(31,590.49)	12,097.09	8,907.55	20,675.69	1,889.15
Other comprehensive income (loss)	(853.02)	(9.41)	(115.58)	(405.34)	(96.73)	37,818.24	(145.74)	201.77	148.98	17.54
Total comprehensive income	12,006.70	21,583.93	8,625.43	25,474.72	2,775.25	6,227.75	11,951.35	9,109.32	20,824.67	1,906.69
Owners of the parent	7,838.74	10,600.20	3,309.95	12,474.81	1,951.89	4,065.87	5,709.06	3,499.96	10,186.74	1,923.25
Non-controlling interests	4,167.96	10,983.73	5,315.48	12,999.91	823.36	2,161.88	6,242.29	5,609.36	10,637.93	(16.56)
Total dividend paid to NCI	3,788.96	3,376.83	2,777.74	5,693.02	393.30	3,443.76	1,534.53	1,021.28	6,254.12	131.10

13. Investments in Subsidiaries, Joint Ventures and Associates (Continued)

13.13 Material non-controlling interests (Continued)

Financial information of subsidiaries that have material non-controlling interests, after accounting policy adjustment, before eliminations: (Continued)

Summary of cash flows for the years ended December 31, 2016 and 2015

Unit: Million Baht

	2016					2015				
	PTTEP	TOP	IRPC	PTTGC	GPSC	PTTEP	TOP	IRPC	PTTGC	GPSC
Cash flows from operating activities	80,480.38	23,181.63	7,227.46	44,490.25	4,130.09	98,754.13	31,708.48	27,840.05	50,822.36	2,631.79
Cash flows from investing activities	(95,999.99)	(18,348.15)	(10,689.87)	(111.18)	(1,049.28)	(73,028.81)	2,529.59	(11,271.35)	(22,344.73)	(14,109.48)
Cash flows from financing activities	(19,211.30)	(9,397.30)	1,928.77	(24,584.06)	(382.97)	(56,821.37)	(14,739.92)	(15,001.48)	(30,027.75)	10,921.62
Others	(292.39)	(76.22)	-	-	-	9,639.22	29.22	-	(786.74)	-
Net increase (decrease) in cash and cash equivalents	<u>(35,023.30)</u>	<u>(4,640.04)</u>	<u>(1,533.64)</u>	<u>19,795.01</u>	<u>2,697.84</u>	<u>(21,456.83)</u>	<u>19,527.37</u>	<u>1,567.22</u>	<u>(2,336.86)</u>	<u>(556.07)</u>

14. Available-for-sale Investments

14.1 Details of available-for-sale investments

Company	Country of Incorporation	Business	Ownership interest (%)	
			2016	2015
<u>Available-for-sale Investments of the Company</u>				
<u>Investments in Equity Securities</u>				
Dhipaya Insurance Public Co., Ltd. (TIP)	Thailand	Insurance	13.33	13.33
Bangkok Aviation Fuel Services Public Co., Ltd. (BAFS)	Thailand	Aircraft refuelling services	7.06	7.06
Star Petroleum Refining Public Co., Ltd. (SPRC)	Thailand	Refining	5.41	5.41
<u>Investments in Mutual Funds</u>				
Core Flexible Fund (CORE)	Thailand	Mutual fund	32.57	32.57
CIMB - PRINCIPAL Energy and Petrochemical Index Fund (CIMB - PRINCIPAL EPIF)	Thailand	Mutual fund		
Vayupak fund 1 (VAYU1)	Thailand	Mutual fund		
<u>Available-for-sale Investments of Subsidiaries</u>				
<u>Investments in Equity Securities</u>				
<i>PTTEP Group</i>				
Wentworth Resources Limited (WRL)	Canada	Oil and natural gas exploration	1.18	1.18
<i>IRPC Group</i>				
Bangkok Union Insurance Public Co., Ltd. (BUI)	Thailand	Insurance	0.35	0.35
<i>PTTER Group</i>				
Xanadu Mines Ltd. (XML)	Mongolia	Mineral exploration	4.82	5.53
<u>Investment in Debt Securities</u>				
<i>PTTGC Group</i>				
Debt Securities Available for Sale (in Private Fund) (DSAFS)*	Thailand	Private Fund		

* During the third quarter of 2016, PTTGC established private funds and engaged independent asset management companies for the purpose of cash balance management of PTTGC. Those private funds have invested in debt securities which have high liquidity and credit quality.

14. Available-for-sale Investments (Continued)

14.1 Details of available-for-sale investments (Continued)

Company	Country of Incorporation	Business	Ownership interest (%)	
			2016	2015
<u>Available-for-sale Investments of Subsidiaries</u> (Continued)				
<u>Investment in Debt Securities</u> (Continued)				
<i>TOP Group</i>				
Debt Securities Available for Sale (in Private Fund) (DSAFS)*	Thailand	Private Fund		
<u>Investments in Mutual Funds</u>				
<i>TOP Group</i>				
Core Flexible Fund (CORE)	Thailand	Mutual fund	16.29	16.29

* During the year of 2016, TOP established private funds and engaged independent asset management companies. Those private funds have invested in debt securities which have credit quality.

14. Available-for-sale Investments (Continued)

14.2 Details of available-for-sale investments as at December 31, 2016 and December 31, 2015 are as follows:

Unit: Million Baht

Company	Ownership interest (%)		Consolidated financial statements		Separate financial statements		Dividend income	
	2016	2015	2016	2015	2016	2015	2016	2015
<u>Investments in Equity Securities</u>								
TIP	13.33	13.33	312.00	312.00	312.00	312.00	110.00	90.00
BAFS	7.06	7.06	24.00	24.00	24.00	24.00	60.75	31.77
WRL	1.18	1.18	37.43	45.48	-	-	-	-
BUI	0.35	0.35	2.35	2.35	-	-	0.07	-
XML	4.82	5.53	262.94	264.84	-	-	-	-
SPRC	5.41	5.41	1,876.50	1,876.50	1,623.17	1,623.17	188.02	3,406.68
Total investments in equity securities			2,515.22	2,525.17	1,959.17	1,959.17		
<u>Investment in Debt Securities</u>								
DSAFS			5,430.65	-	-	-	-	-
Total investment in debt securities			5,430.65	-	-	-	-	-
<u>Investments in Mutual Funds</u>								
CORE	48.86	48.86	674.74	674.74	449.83	449.83	-	-
CIMB - PRINCIPAL EPIF			6,300.00	6,300.00	6,300.00	6,300.00	-	71.83
VAYU1			15.24	15.23	10.00	10.00	0.09	0.14
Total investments in mutual funds			6,989.98	6,989.97	6,759.83	6,759.83		
Total available-for-sale investments before changes in value of investments			14,935.85	9,515.14	8,719.00	8,719.00		
Allowance for changes in value			8,946.03	3,880.50	9,397.25	4,389.79		
<u>Less Allowance for impairment</u>			(42.34)	(42.65)	-	-		
Total			23,839.54	13,352.99	18,116.25	13,108.79	358.93	3,600.42

14. Available-for-sale Investments (Continued)

14.3 Movements in available-for-sale investments are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Balance as at January 1	13,352.99	12,636.20	13,108.79	12,369.98
- Additional investments	5,430.65	-	-	-
- Disposals of investments	-	(75.11)	-	(50.07)
- Reclassifications	-	1,876.50	-	1,623.17
- Unrealized gain (loss) on available-for-sale investments	5,055.51	(1,096.61)	5,007.46	(834.29)
- Currency translation differences	0.39	12.01	-	-
Balance as at December 31	<u>23,839.54</u>	<u>13,352.99</u>	<u>18,116.25</u>	<u>13,108.79</u>

15. Other Long-term Investments

15.1 Details of other long-term investments are as follows:

Company	Country of Incorporation	Business	Shareholding (%)	
			2016	2015
<u>Other Long-term Investments of the Company</u>				
Petro Asia (Sanshui) Co., Ltd. (PA (Sanshui))	China	Oil marketing	25.00	25.00
Petro Asia (Maoming) Co., Ltd. (PA (Maoming))	China	Oil marketing	20.00	20.00
Intoplane Services Co., Ltd. (IPS)	Thailand	Aircraft refuelling services	16.67	16.67
Colour Vision International Co., Ltd. (Corpus)	Thailand	Finished yarn production	0.48	0.48
Fuel Pipeline Transportation Co., Ltd. (FPT)*	Thailand	Oil transmission pipelines	-	-
<u>Other Long-term Investments of Subsidiaries</u>				
<i>GPSC Group</i>				
24M Technologies, Inc. (24M)	United States of America	Research and development of battery	19.00	17.00
Ratchaburi Power Co., Ltd. (RPCL)	Thailand	Electricity generation	15.00	15.00
<i>PTTT Group</i>				
KIC Oil Terminal Sdn. Bhd. (KOT)	Malaysia	Logistics services	10.00	10.00
Kadriah Integrated Facilities Sdn. Bhd. (KIF)	Malaysia	Logistics services	10.00	10.00
Kadriah I Ltd. (K I)	Malaysia	Logistics services	10.00	10.00
Kadriah II Ltd. (K II)	Malaysia	Logistics services	10.00	10.00
<i>PTTGC Group</i>				
Alliance Petrochemical Investment (Singapore) Pte. Ltd. (API)	Singapore	Investment in other companies	15.34	15.34
Exeltium SAS (EXS)	France	Electricity business	4.00	4.00

* As at December 31, 2016, the Company holds 0.0000090% of ownership interest (December 31, 2015: the Company holds 0.00013% of ownership interest).

15. Other Long-term Investments (Continued)

15.1 Details of other long-term investments are as follows: (Continued)

Company	Country of Incorporation	Business	Shareholding (%)	
			2016	2015
<u>Other Long-term Investments of Subsidiaries</u> (Continued)				
<i>IRPC Group</i>				
TPI EOEG Co., Ltd. (TPIE)	Thailand	Finance service	36.31	36.31
TPI Holding Co., Ltd. (TPIH)	Thailand	Investment in other companies	35.01	35.01
Pornchai Enterprises Co., Ltd. (PEC)	Thailand	Real estate for rent	23.65	23.65
Thai Special Steel Industries Public Co.,Ltd. (TSSI)	Thailand	Steel wire manufacturing	16.24	16.24
Rayong Acetylene Co., Ltd. (RAC)	Thailand	Industrial gas manufacturing	13.04	13.04
DIA Polyacrylate Co., Ltd. (DIA)	Thailand	Plastic resin manufacturing	3.65	3.65

15. Other Long-term Investments (Continued)

15.2 Details of other long-term investments as at December 31, 2016 and 2015 are as follows:

Unit: Million Baht

Company	Ownership interest (%)		Consolidated financial statements		Separate financial statements		Dividend income	
	2016	2015	2016	2015	2016	2015	2016	2015
1. PA (Sanshui)	25.00	25.00	6.06	6.06	6.06	6.06	-	-
2. PA (Maoming)	20.00	20.00	14.83	14.83	14.83	14.83	-	-
3. IPS	16.67	16.67	0.02	0.02	0.02	0.02	-	-
4. Corpus	0.48	0.48	0.60	0.60	0.60	0.60	-	-
5. FPT*	-	-	0.02	0.02	0.02	0.02	-	-
6. 24M	19.00	17.00	715.62	479.38	-	-	-	-
7. RPCL	15.00	15.00	888.75	888.75	-	-	420.00	288.00
8. KOT	10.00	10.00	125.90	126.80	-	-	-	-
9. KIF	10.00	10.00	52.17	52.55	-	-	-	-
10. K I	10.00	10.00	262.24	264.12	-	-	-	-
11. K II	10.00	10.00	70.10	70.60	-	-	-	-
12. API	15.34	15.34	290.24	290.24	-	-	14.11	-
13. EXS	4.00	4.00	282.88	282.88	-	-	-	-
14. TPIE	36.31	36.31	828.94	828.94	-	-	-	-
15. TPIH	35.01	35.01	1,415.90	1,415.90	-	-	-	-
16. PEC	23.65	23.65	1,118.95	1,117.06	-	-	-	-
17. TSSI	16.24	16.24	673.35	673.35	-	-	-	-
18. RAC	13.04	13.04	15.00	15.00	-	-	-	-
19. DIA	3.65	3.65	8.50	8.50	-	-	2.55	1.49
20. Other	-	-	0.50	-	-	-	-	-
			6,770.57	6,535.60	21.53	21.53		
Less Allowance for impairment			(4,564.69)	(4,566.47)	(14.14)	(14.14)		
Total			2,205.88	1,969.13	7.39	7.39	436.66	289.49

* As at December 31, 2016, the Company holds 0.0000090% of ownership interest, totaling 66 shares, amounting to Baht 22,220.00 (December 31, 2015: the Company holds 0.00013% of ownership interest, totaling 66 shares, amounting to Baht 22,220.00).

15. Other Long-term Investments (Continued)

15.3 Movements in other long-term investments are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Balance as at January 1	1,969.13	1,969.13	7.39	7.39
- Additional investments	236.75	-	-	-
Balance as at December 31	<u>2,205.88</u>	<u>1,969.13</u>	<u>7.39</u>	<u>7.39</u>

16. Investment Properties

Details of investment properties are as follows:

	Unit: Million Baht		
	Consolidated financial statements		
	Land	Buildings and building improvements	Total
Cost			
As at January 1, 2016	5,204.67	2,308.50	7,513.17
- Additions	7.85	26.64	34.49
- Reclassifications	-	12.56	12.56
- Disposals	(0.50)	(4.02)	(4.52)
As at December 31, 2016	5,212.02	2,343.68	7,555.70
Accumulated depreciation			
As at January 1, 2016	-	(871.20)	(871.20)
- Depreciation for the year	-	(104.77)	(104.77)
- Reclassifications	-	(0.13)	(0.13)
- Disposals	-	2.30	2.30
As at December 31, 2016	-	(973.80)	(973.80)
Allowance for impairment			
As at January 1, 2016	(354.35)	-	(354.35)
As at December 31, 2016	(354.35)	-	(354.35)
Net book value			
As at December 31, 2015	4,850.32	1,437.30	6,287.62
As at December 31, 2016	4,857.67	1,369.88	6,227.55

16. Investment Properties (Continued)

Details of investment properties are as follows: (Continued)

Unit: Million Baht

	Separate financial statements		
	Land	Buildings and building improvements	Total
Cost			
As at January 1, 2016	3,574.41	467.63	4,042.04
- Additions	-	3.23	3.23
- Reclassifications	-	12.56	12.56
- Disposals	-	(3.13)	(3.13)
As at December 31, 2016	3,574.41	480.29	4,054.70
Accumulated depreciation			
As at January 1, 2016	-	(199.51)	(199.51)
- Depreciation for the year	-	(17.17)	(17.17)
- Reclassifications	-	(0.13)	(0.13)
- Disposals	-	1.67	1.67
As at December 31, 2016	-	(215.14)	(215.14)
Net book value			
As at December 31, 2015	3,574.41	268.12	3,842.53
As at December 31, 2016	3,574.41	265.15	3,839.56

17. Property, Plant and Equipment

Detail of property, plant and equipment are as follows:

Unit: Million Baht

	Consolidated financial statements						Total
	Land	Buildings and building improvements	Machinery and equipment	Exploration and production properties	Other assets	Construction in progress	
Cost							
As at January 1, 2016	31,069.00	238,685.22	810,411.63	906,736.85	21,551.73	163,846.46	2,172,300.89
- Additions	2,058.92	763.75	4,017.41	39,803.63	1,084.59	61,340.46	109,068.76
- Borrowing costs	-	-	-	-	-	2,807.53	2,807.53
- Reclassifications	2,689.22	37,393.72	83,319.72	2,291.09	1,090.91	(122,626.14)	4,158.52
- Disposals	(12.07)	(542.32)	(6,790.80)	(17,765.49)	(685.97)	(248.18)	(26,044.83)
- Currency translation differences	(14.25)	(115.69)	(463.16)	(6,124.16)	(11.25)	(146.72)	(6,875.23)
As at December 31, 2016	35,790.82	276,184.68	890,494.80	924,941.92	23,030.01	104,973.41	2,255,415.64

17. Property, Plant and Equipment (Continued)

Detail of property, plant and equipment are as follows: (Continued)

Unit: Million Baht

	Consolidated financial statements						
	Land	Buildings and building improvements	Machinery and equipment	Exploration and production properties	Other assets	Construction in progress	Total
Accumulated depreciation							
As at January 1, 2016	-	(129,632.44)	(342,744.96)	(519,651.56)	(12,491.54)	-	(1,004,520.50)
- Depreciation for the year	-	(10,968.21)	(37,561.30)	(71,071.46)	(2,169.00)	-	(121,769.97)
- Reclassifications	-	155.63	(706.89)	-	(2.00)	-	(553.26)
- Disposals	-	387.26	5,816.46	8,389.46	500.94	-	15,094.12
- Currency translation differences	-	42.54	179.88	2,739.64	8.36	-	2,970.42
As at December 31, 2016	-	(140,015.22)	(375,016.81)	(579,593.92)	(14,153.24)	-	(1,108,779.19)

17. Property, Plant and Equipment (Continued)

Detail of property, plant and equipment are as follows: (Continued)

Unit: Million Baht

	Consolidated financial statements						Total
	Land	Buildings and building improvements	Machinery and equipment	Exploration and production properties	Other assets	Construction in progress	
Allowance for impairment of assets							
As at January 1, 2016	(214.38)	(203.00)	(2,426.68)	(43,711.35)	(12.29)	(2,535.45)	(49,103.15)
- Loss on impairment (Note 21)	-	(0.71)	(0.55)	(1,636.35)	-	(42.89)	(1,680.50)
- Reversal of loss on impairment (Note 21)	4.70	5.80	33.56	-	-	109.07	153.13
- Disposals	-	-	690.68	1,207.04	12.01	204.72	2,114.45
- Reclassifications	-	-	-	(175.57)	-	(104.66)	(280.23)
- Currency translation differences	-	1.52	44.03	327.12	0.28	16.86	389.81
As at December 31, 2016	(209.68)	(196.39)	(1,658.96)	(43,989.11)	-	(2,352.35)	(48,406.49)
Net book value							
As at December 31, 2015	30,854.62	108,849.78	465,239.99	343,373.94	9,047.90	161,311.01	1,118,677.24
As at December 31, 2016	35,581.14	135,973.07	513,819.03	301,358.89	8,876.77	102,621.06	1,098,229.96

As at December 31, 2016, the Group had pledged assets amounting to Baht 45,363.19 million.

17. Property, Plant and Equipment (Continued)

Details of property, plant and equipment are as follows: (Continued)

Unit: Million Baht

	Separate financial statements					Total
	Land	Buildings and building improvements	Machinery and equipment	Other assets	Construction in progress	
Cost						
As at January 1, 2016	8,595.14	39,071.27	329,012.29	13,277.50	46,271.34	436,227.54
- Additions	187.58	289.51	2,451.70	560.40	18,894.81	22,384.00
- Borrowing costs	-	-	-	-	1,055.04	1,055.04
- Reclassifications	2,690.29	2,428.62	21,630.03	817.48	(25,210.55)	2,355.87
- Disposals	-	(218.87)	(4,134.01)	(158.43)	-	(4,511.31)
As at December 31, 2016	11,473.01	41,570.53	348,960.01	14,496.95	41,010.64	457,511.14
Accumulated depreciation						
As at January 1, 2016	-	(16,010.44)	(134,261.77)	(8,744.57)	-	(159,016.78)
- Depreciation for the year	-	(1,684.41)	(14,058.43)	(1,419.70)	-	(17,162.54)
- Reclassifications	-	(2.30)	(393.16)	(0.25)	-	(395.71)
- Disposals	-	192.47	3,786.67	111.45	-	4,090.59
As at December 31, 2016	-	(17,504.68)	(144,926.69)	(10,053.07)	-	(172,484.44)
Allowance for impairment of assets						
As at January 1, 2016	(22.07)	(4.70)	(681.67)	-	-	(708.44)
- Loss on impairment (Note 21)	-	(0.16)	-	-	-	(0.16)
- Reversal of loss on impairment (Note 21)	4.70	4.70	8.83	-	-	18.23
- Disposals	-	-	665.25	-	-	665.25
As at December 31, 2016	(17.37)	(0.16)	(7.59)	-	-	(25.12)
Net book value						
As at December 31, 2015	8,573.07	23,056.13	194,068.85	4,532.93	46,271.34	276,502.32
As at December 31, 2016	11,455.64	24,065.69	204,025.73	4,443.88	41,010.64	285,001.58

During the year, borrowing costs were capitalized as a part of costs of property, plant and equipment. The Group used capitalization rates ranging from 1.50% - 5.75% (2015: 3.00% - 5.75%)

17. Property, Plant and Equipment (Continued)

As at December 31, 2016 and 2015, details of other assets include vehicles and natural gas pipeline acquired under finance leases which were recorded as machinery and equipment are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Cost	10,780.35	10,919.11	10,007.25	10,003.85
<u>Less</u> Accumulated depreciation	<u>(4,109.59)</u>	<u>(3,695.33)</u>	<u>(3,719.78)</u>	<u>(3,170.95)</u>
Net book value	<u>6,670.76</u>	<u>7,223.78</u>	<u>6,287.47</u>	<u>6,832.90</u>

18. Intangible Assets

Details of intangible assets are as follows:

Unit: Million Baht

	Consolidated financial statements				Total
	Computer software	Right of use	Exploration & evaluation assets	Other Intangible assets	
Cost					
As at January 1, 2016	16,943.76	30,567.99	170,606.65	9,273.83	227,392.23
- Business acquisition	118.87	-	-	-	118.87
- Additions	886.30	1,231.36	650.40	579.85	3,347.91
- Reclassifications	577.83	682.04	(2,291.09)	(478.07)	(1,509.29)
- Disposals	(82.28)	(32.63)	(526.68)	(8.42)	(650.01)
- Currency translation differences	(20.67)	(60.79)	577.82	(21.85)	474.51
As at December 31, 2016	18,423.81	32,387.97	169,017.10	9,345.34	229,174.22
Accumulated amortization					
As at January 1, 2016	(7,645.38)	(11,456.61)	-	(4,048.09)	(23,150.08)
- Amortization for the year	(1,729.62)	(1,110.11)	-	(389.58)	(3,229.31)
- Reclassifications	(2.27)	10.01	-	1.91	9.65
- Disposals	53.03	-	-	31.51	84.54
- Currency translation differences	13.58	20.86	-	3.81	38.25
As at December 31, 2016	(9,310.66)	(12,535.85)	-	(4,400.44)	(26,246.95)
Allowance for impairment of assets					
As at January 1, 2016	(11.82)	(122.02)	(40,954.03)	-	(41,087.87)
- Loss on impairment (Note 21)	-	(319.36)	(50.85)	-	(370.21)
- Reversal of loss on impairment (Note 21)	-	32.63	-	-	32.63
- Reclassifications	-	-	175.57	-	175.57
- Disposals	11.56	-	-	-	11.56
- Currency translation differences	0.26	(1.08)	(944.03)	-	(944.85)
As at December 31, 2016	-	(409.83)	(41,773.34)	-	(42,183.17)
Net book value					
As at December 31, 2015	9,286.56	18,989.36	129,652.62	5,225.74	163,154.28
As at December 31, 2016	9,113.15	19,442.29	127,243.76	4,944.90	160,744.10

18. Intangible Assets (Continued)

Details of intangible assets are as follows: (Continued)

Unit: Million Baht

	Separate financial statements			Total
	Computer software	Right of use	Other Intangible assets	
Cost				
As at January 1, 2016	4,665.38	19,732.16	52.50	24,450.04
- Additions	240.94	0.07	15.00	256.01
- Reclassifications	421.93	219.79	-	641.72
- Disposals	(3.39)	-	-	(3.39)
As at December 31, 2016	5,324.86	19,952.02	67.50	25,344.38
Accumulated amortization				
As at January 1, 2016	(2,522.91)	(7,280.35)	(2.66)	(9,805.92)
- Amortization for the year	(667.77)	(522.87)	(2.85)	(1,193.49)
- Reclassifications	0.20	-	-	0.20
- Disposals	2.90	-	-	2.90
As at December 31, 2016	(3,187.58)	(7,803.22)	(5.51)	(10,996.31)
Net book value				
As at December 31, 2015	2,142.47	12,451.81	49.84	14,644.12
As at December 31, 2016	2,137.28	12,148.80	61.99	14,348.07

19. Mining properties

Movements of mining properties are as follows:

	Unit: Million Baht
	<u>Consolidated financial statements</u>
Cost	
As at January 1, 2016	63,116.66
- Additions	581.76
- Reclassifications	0.06
- Disposals	(22.53)
- Currency translation differences	(448.28)
As at December 31, 2016	<u>63,227.67</u>
Accumulated amortization	
As at January 1, 2016	(28,395.30)
- Amortization for the year	(1,523.72)
- Currency translation differences	179.52
As at December 31, 2016	<u>(29,739.50)</u>
Allowance for impairment of assets	
As at January 1, 2016	(14,786.41)
- Loss on impairment (Note 21)	(126.56)
- Currency translation differences	103.71
As at December 31, 2016	<u>(14,809.26)</u>
Net book value	
As at December 31, 2015	<u>19,934.95</u>
As at December 31, 2016	<u>18,678.91</u>

20. Goodwill

Movements of goodwill are as follows:

	Unit: Million Baht	
	Consolidated financial statements	
	2016	2015
Net book value as at January 1	51,408.13	56,987.28
- Business acquisition	(15.98)	29.94
- Loss on impairment (Note 21)	(336.17)	(9,644.17)
- Currency translation differences	(277.81)	4,035.08
Net book value as at December 31	<u>50,778.17</u>	<u>51,408.13</u>

21. Impairment of assets

The Group performs an impairment test on assets whenever events or circumstances indicate that the carrying amount of the assets may exceed its recoverable amount, with the exception of intangible assets with an indefinite useful life or not yet available for use and goodwill from business combination for which an impairment test is required annually or when the indication exists. A loss on impairment is recognized when the recoverable amount of an asset is lower than its carrying amount. The recoverable amount is the higher of the asset's fair value less cost to sell and its value in use.

The loss on impairment of assets excluding the goodwill may be reversed if the estimates and assumptions applied in determining the recoverable amount change.

During the year 2016, the Group performed impairment tests since there are the significant factor indicating that the assets may be impaired such as the decrease in the estimated petroleum reserve, risks from non-operating investments that or delay projects which not along with the plan, and the low opportunity to sell of the business.

In determining recoverable amount, the Group applied significant estimates and assumptions relating to matters such as petroleum and coal reserves, oil and petrochemical prices, coal prices, foreign exchange rates, discount rates, capital expenditure, and operating expenditure.

During the year ended December 31, 2016, the Group recognized loss on impairment of assets in statement of income follows:

	Unit: Million Baht	
	<u>Consolidated</u> <u>financial statement</u>	<u>Separate</u> <u>financial statement</u>
Investment in subsidiaries (Note 13.7.3)	-	838.06
Investment in joint ventures (Note 13.7.1)	620.51	-
Investment in associates (Note 13.7.2)	3,994.64	-
Property, plant and equipment (reversal) (Note 17)	1,527.37	(18.07)
Exploration and evaluation assets (note 18)	50.85	-
Intangible assets (Note 18)	286.73	-
Mine properties (Note 19)	126.56	-
Goodwill (Note 20)	336.17	-
Other assets (reversal)	<u>260.17</u>	<u>(26.54)</u>
Total	<u><u>7,203.00</u></u>	<u><u>793.45</u></u>

22. Income Taxes and Deferred Taxes

Applicable tax rates for the Group are as follows:

	<u>Rates (%)</u>
Petroleum income tax on petroleum business in Thailand pursuant to the Petroleum Income Tax Act, B.E. 2514 and B.E. 2532	50
Income tax under the Revenue Code of the Company and subsidiaries	20
Corporate income tax in foreign countries	5 - 50
Corporate Income tax from the Petroleum business in the Thai-Malaysia co-development area under the Petroleum Income Tax Act (No.5) B.E. 2541	0 - 20
Petroleum resource rent tax in Australia	40

22.1 Income taxes recognized in the consolidated and the separate statements of income for the years ended December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	<u>Consolidated financial statements</u>		<u>Separate financial statements</u>	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
Current tax:				
Current tax	30,635.96	33,476.44	8,885.11	5,196.03
Adjustments in respect of current tax of previous year	1,146.50	(424.44)	898.99	(58.45)
	<u>31,782.46</u>	<u>33,052.00</u>	<u>9,784.10</u>	<u>5,137.58</u>
Deferred tax:				
Change in temporary differences	(3,442.61)	(13,899.87)	(711.33)	(1,134.42)
Tax effect of currency translation on tax base	(1,746.78)	5,919.30	-	-
	<u>(5,189.39)</u>	<u>(7,980.57)</u>	<u>(711.33)</u>	<u>(1,134.42)</u>
Total	<u>26,593.07</u>	<u>25,071.43</u>	<u>9,072.77</u>	<u>4,003.16</u>

22. Income Taxes and Deferred Taxes (Continued)

22.2 Movements in deferred taxes are as follows:

Unit: Million Baht

	Consolidated financial statements							
						As at December 31, 2016		
	Net balance as at January 1, 2016	Profit (Loss)	Other comprehensive income (loss)	Business acquisition	Currency translation differences	Net balance	Deferred tax assets	Deferred tax liabilities
Property, plant and equipment	(54,229.89)	(7,423.02)	-	-	(35.45)	(61,688.36)	8,780.45	(70,468.81)
Intangible assets	(9,721.23)	9,621.30	-	(34.29)	(3.01)	(137.23)	230.76	(367.99)
Investments	61.46	54.86	-	-	-	116.32	116.32	-
Available-for-sale investments	(877.45)	-	(1,001.66)	-	(0.10)	(1,879.21)	0.08	(1,879.29)
Trade and other accounts receivable	(2,098.42)	(76.46)	-	-	(1.16)	(2,176.04)	416.33	(2,592.37)
Inventories	20.69	130.19	-	-	(0.87)	150.01	151.49	(1.48)
Loans	268.72	(44.12)	-	-	-	224.60	239.26	(14.66)
Employee benefit obligations	5,144.22	211.31	230.89	-	(19.92)	5,566.50	5,567.20	(0.70)
Provision for decommissioning costs	15,818.31	3,294.16	-	-	474.76	19,587.23	19,940.65	(353.42)
Cumulative loss carried forward	5,754.54	(2,643.27)	407.88	-	(84.94)	3,434.21	3,434.21	-
Petroleum resource rent tax in Australia	2,502.02	-	-	-	(17.89)	2,484.13	2,484.13	-
Tax effect of currency translation on tax base	(5,345.55)	1,747.39	-	-	69.36	(3,528.80)	253.28	(3,782.08)
Others	2,356.96	317.05	1,806.09	-	(72.65)	4,407.45	5,714.66	(1,307.21)
Total before set-off of taxes	(40,345.62)	5,189.39	1,443.20	(34.29)	308.13	(33,439.19)	47,328.82	(80,768.01)
Set-off of taxes						-	(36,747.62)	36,747.62
Net deferred tax assets (liabilities)						(33,439.19)	10,581.20	(44,020.39)

22. Income Taxes and Deferred Taxes (Continued)

22.2 Movements in deferred taxes are as follows: (Continued)

Unit: Million Baht

	Consolidated financial statements							
						As at December 31, 2015		
	Net balance as at January 1, 2015	Profit (Loss)	Other comprehensive income (loss)	Business acquisition	Currency translation differences	Net balance	Deferred tax assets	Deferred tax liabilities
Property, plant and equipment	(61,205.66)	11,997.20	-	-	(5,021.43)	(54,229.89)	8,945.64	(63,175.53)
Intangible assets	(10,389.54)	1,634.00	-	(56.90)	(908.79)	(9,721.23)	244.62	(9,965.85)
Investments	833.00	(762.35)	-	-	(9.19)	61.46	61.46	-
Available-for-sale investments	(1,044.82)	-	167.20	-	0.17	(877.45)	0.51	(877.96)
Trade and other accounts receivable	(3,034.77)	949.76	-	-	(13.41)	(2,098.42)	416.69	(2,515.11)
Inventories	71.27	(52.53)	-	-	1.95	20.69	141.52	(120.83)
Loans	644.56	(375.61)	-	-	(0.23)	268.72	275.52	(6.80)
Employee benefit obligations	4,712.56	325.16	(106.87)	-	213.37	5,144.22	5,144.22	-
Provision for decommissioning costs	8,146.93	6,510.49	-	-	1,160.89	15,818.31	15,818.31	-
Cumulative loss carried forward	12,020.70	(6,465.42)	-	-	199.26	5,754.54	5,754.54	-
Petroleum resource rent tax in Australia	2,689.38	(605.85)	-	-	418.49	2,502.02	2,502.02	-
Tax effect of currency translation on tax base	589.56	(5,919.30)	-	-	(15.81)	(5,345.55)	214.00	(5,559.55)
Others	2,696.92	745.02	(1,319.92)	-	234.94	2,356.96	5,480.14	(3,123.18)
Total before set-off of taxes	(43,269.91)	7,980.57	(1,259.59)	(56.90)	(3,739.79)	(40,345.62)	44,999.19	(85,344.81)
Set-off of taxes						-	(34,563.05)	34,563.05
Net deferred tax assets (liabilities)						(40,345.62)	10,436.14	(50,781.76)

22. Income Taxes and Deferred Taxes (Continued)

22.2 Movements in deferred taxes are as follows: (Continued)

Unit: Million Baht

	Separate financial statements					
	Net balance as at January 1, 2016	Profit (Loss)	Other comprehensive income (loss)	As at December 31, 2016		
				Net balance	Deferred tax assets	Deferred tax liabilities
Property, plant and equipment	(346.59)	(213.74)	-	(560.33)	-	(560.33)
Intangible assets	141.71	(5.20)	-	136.51	136.51	-
Investments	60.48	54.87	-	115.35	115.35	-
Available-for-sale investments	(877.96)	-	(1,001.49)	(1,879.45)	-	(1,879.45)
Trade and other accounts receivable	(682.04)	(90.37)	-	(772.41)	410.98	(1,183.39)
Inventories	60.26	1.48	-	61.74	61.74	-
Loans	275.53	(36.28)	-	239.25	239.25	-
Employee benefit obligations	1,352.12	103.02	172.60	1,627.74	1,627.74	-
Others	(78.34)	897.55	-	819.21	1,147.14	(327.93)
Total before set-off of taxes	(94.83)	711.33	(828.89)	(212.39)	3,738.71	(3,951.10)
Set-off of taxes				-	(3,738.71)	3,738.71
Net deferred tax assets (liabilities)				(212.39)	-	(212.39)

22. Income Taxes and Deferred Taxes (Continued)

22.2 Movements in deferred taxes are as follows: (Continued)

Unit: Million Baht

	Separate financial statements					
	Net balance as at January 1, 2015	Profit (Loss)	Other comprehensive income	As at December 31, 2015		
				Net balance	Deferred tax assets	Deferred tax liabilities
Property, plant and equipment	(118.75)	(227.84)	-	(346.59)	-	(346.59)
Intangible assets	145.43	(3.72)	-	141.71	141.71	-
Investments	2.83	57.65	-	60.48	60.48	-
Available-for-sale investments	(1,044.82)	-	166.86	(877.96)	-	(877.96)
Trade and other accounts receivable	(1,387.55)	705.51	-	(682.04)	412.29	(1,094.33)
Inventories	61.42	(1.16)	-	60.26	60.26	-
Loans	(36.29)	311.82	-	275.53	275.53	-
Employee benefit obligations	1,200.83	88.13	63.16	1,352.12	1,352.12	-
Others	(282.37)	204.03	-	(78.34)	248.51	(326.85)
Total before set-off of taxes	(1,459.27)	1,134.42	230.02	(94.83)	2,550.90	(2,645.73)
Set-off of taxes				-	(2,550.90)	2,550.90
Net deferred tax assets (liabilities)				(94.83)	-	(94.83)

23. Advance Payments for Gas Purchase

Movements of advance payments for gas purchases are as follows:

Unit: Million Baht

	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Balance as at January 1	2,644.25	4,512.79	3,069.55	5,253.77
- Make-up Right	(1,114.57)	(1,868.54)	(1,292.09)	(2,184.22)
Balance as at December 31	1,529.68	2,644.25	1,777.46	3,069.55

The Company made advance payments for some gas that cannot take-up as committed gas purchases according to the established minimum volumes in the Gas Sales Agreements (Take-or-Pay). The Company has the right to take certain volumes of prepaid gas (Make-up Right) in subsequent years, with no maturity period.

As at December 31, 2016, advance payments for gas purchases comprised the balance of advance payments made for gas purchases from the Yadana gas fields in Myanmar, irrespective of take-up in 2000.

24. Other Non-current Assets

Other non-current assets as at December 31, 2016 and 2015 are as follows:

Unit: Million Baht

	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Retention and refundable deposits	724.41	881.53	95.36	78.09
Advances	27,649.97	12,236.49	3,214.61	3,258.56
Deferred compensation	593.91	661.79	-	-
Others	17,114.69	12,692.34	2,567.74	3,696.73
Total	46,082.98	26,472.15	5,877.71	7,033.38

25. Bank Overdrafts and Short-term Loans from Financial Institutions

As at December 31, 2016, the bank overdrafts and short-term loans from financial institutions bear interest at rates ranging from 1.00% to 5.25% per annum (December 31, 2015: interest at rates range from 0.53% to 5.25% per annum).

26. Other Current Liabilities

Details of other current liabilities as at December 31, 2016 and 2015 are as follows:

	Consolidated		Unit: Million Baht Separate	
	financial statements		financial statements	
	2016	2015	2016	2015
Undue output VAT	2,837.80	3,330.19	2,494.78	2,923.48
Provision for remuneration for the renewal of petroleum production	1,965.01	1,919.76	-	-
Others	4,173.60	2,397.48	895.35	883.08
Total	8,976.41	7,647.43	3,390.13	3,806.56

27. Long-term Loans

Details of long-term loans as at December 31, 2016 and 2015 are as follows:

Current portion of long-term loans

	Consolidated		Unit: Million Baht Separate	
	financial statements		financial statements	
	2016	2015	2016	2015
Loans - Baht currency	17,970.11	19,309.05	4,143.52	5,429.02
Loans - foreign currencies	2,561.11	2,251.98	-	-
Debentures - Baht currency	22,820.12	32,128.00	8,136.00	31,070.00
Debentures - foreign currencies	19,775.03	-	11,208.06	-
Liabilities under finance leases	929.32	929.32	652.23	649.49
Total	64,055.69	54,618.35	24,139.81	37,148.51

Long-term loans

	Consolidated		Unit: Million Baht Separate	
	financial statements		financial statements	
	2016	2015	2016	2015
Loans - Baht currency	78,668.68	88,421.46	7,014.51	11,158.03
Loans - foreign currencies	51,583.34	50,261.79	18,321.48	18,202.07
Debentures - Baht currency	206,065.19	228,874.15	128,297.47	136,433.47
Debentures - foreign currencies	177,048.98	204,074.61	51,715.68	62,951.96
Liabilities under finance leases	5,900.71	6,583.36	5,554.54	6,149.32
Total	519,266.90	578,215.37	210,903.68	234,894.85

As at December 31, 2016, Baht 1,000.00 million of the Company's loans are secured by the Ministry of Finance (December 31, 2015: Baht 3,000.00 million).

27. Long-term Loans (Continued)

Long-term loans, including the current portion, outstanding as at December 31, 2016 and 2015 can be classified by types of interest rate as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Floating interest rate	137,231.35	149,075.10	21,260.77	24,738.68
Fixed interest rate	446,091.24	483,758.62	213,782.72	247,304.68
Total	583,322.59	632,833.72	235,043.49	272,043.36

Interest rates charged on long-term loans as at December 31, 2016 and 2015 are as follows:

	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
	Loans - Baht currency	0.50% - 7.83%	0.50% - 7.83%	0.50% - 7.83%
Loans - Foreign currencies				
- US dollar	1.85% - 17.00%	1.16% - 2.68%	2.54%	2.32%
- EURO	2.50% - 6.00%	1.80% - 6.00%	-	-
- Japanese Yen	1.50% - 4.45%	4.45%	4.45%	4.45%
Debentures - Baht currency	3.41% - 6.58%	3.41% - 6.58%	3.50% - 6.58%	3.50% - 6.58%
Debentures - Foreign currencies				
- US dollar	3.38% - 6.51%	3.38% - 6.38%	3.38% - 5.88%	3.38% - 5.88%
- Japanese Yen	2.71%	2.71%	2.71%	2.71%
Liabilities under finance leases	3.76% - 12.00%	3.76% - 9.00%	3.76% - 4.65%	3.76% - 4.65%

27. Long-term Loans (Continued)

27.1 Loans

Movements of loans in Baht currency and foreign currencies for year ended December 31, 2016 are as follows:

Unit: Million

	Consolidated financial statements				Total in Baht equivalent
	Currency				
	Baht	USD	EURO	JPY	
Balance as at January 1, 2016	107,730.51	1,194.91	60.38	23,000.00	160,244.28
- Additions	21,670.88	0.20	102.30	3,160.37	26,692.83
- Repayments	(32,760.83)	(42.53)	(36.36)	-	(35,517.54)
- (Gain) loss on exchange rates	6.94	-	-	-	(132.00)
- Currency translation differences	-	-	-	-	(395.84)
- Others	(8.71)	(3.07)	-	0.57	(108.49)
Balance as at December 31, 2016	96,638.79	1,149.51	126.32	26,160.94	150,783.24
- Current portion	(17,970.11)	(60.23)	(10.58)	-	(20,531.22)
Long-term loans	<u>78,668.68</u>	<u>1,089.28</u>	<u>115.74</u>	<u>26,160.94</u>	<u>130,252.02</u>

Unit: Million

	Separate financial statements			Total in Baht equivalent
	Currency			
	Baht	USD	JPY	
Balance as at January 1, 2016	16,587.05	310.00	23,000.00	34,789.12
- Repayments	(5,429.02)	-	-	(5,429.02)
- Loss on exchange rates	-	-	-	119.41
Balance as at December 31, 2016	11,158.03	310.00	23,000.00	29,479.51
- Current portion	(4,143.52)	-	-	(4,143.52)
Long-term loans	<u>7,014.51</u>	<u>310.00</u>	<u>23,000.00</u>	<u>25,335.99</u>

27. Long-term Loans (Continued)

27.1 Loans (Continued)

Loans - Baht currency

As at December 31, 2016, details of long term loans from financial institutions of the Company in Baht currency are as follows:

Currency	Principal (unit: million)	Interest rate percent (per annum)	Repayment terms
Baht	6,000	Highest rate on 6-month-fixed deposit plus margin	Principal is repayable every 6 months, totalling 12 instalments, commencing in September 2011.
Baht	5,000	6M THBFIX plus margin	Principal is repayable every 6 months, totalling 7 instalments, commencing in June 2016.
Baht	7,000	6M THBFIX plus margin	Principal is repayable every 6 months, totalling 7 instalments, commencing in June 2016.

As at December 31, 2016, details of long term loans from financial institutions of the subsidiaries in Baht currency are as follows:

Currency	Principal (unit: million)	Interest rate percent (per annum)	Repayment terms
Baht	600	MLR minus discount	Principal is repayable every 3 months, totalling 29 instalments, commencing in November 2010.
Baht	1,500	MLR minus discount	Principal is repayable every 6 months, totalling 16 instalments, commencing in September 2012.
Baht	324	MLR minus discount	Principal is repayable every month, totalling 60 instalments, commencing in April 2012.
Baht	228	MLR minus discount	Principal is repayable every month, totalling 60 instalments, commencing in January 2013.
Baht	365	MLR minus discount	Principal is repayable every month, totalling 84 instalments, commencing in June 2014.
Baht	365	MLR minus discount	Principal is repayable every month, totalling 84 instalments, commencing in October 2014.
Baht	300	MLR minus discount	Principal is repayable every 6 months, totalling 12 instalments, commencing in September 2015.
Baht	1,200	6M FDR plus margin	Principal is repayable every 6 months, totalling 12 instalments, commencing in June 2014.
Baht	1,800	6M FDR plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in June 2015.

27. Long-term Loans (Continued)

27.1 Loans (Continued)

Loans - Baht currency (Continued)

As at December 31, 2016, details of long term loans from financial institutions of the subsidiaries in Baht currency are as follows: (Continued)

Currency	Principal (unit: million)	Interest rate percent (per annum)	Repayment terms
Baht	3,875	THBFIX plus margin	Principal is repayable every 3 months, totalling 31 instalments, commencing in June 2016.
Baht	3,875	THBFIX plus margin	Principal is repayable every 3 months, totalling 31 instalments, commencing in June 2016.
Baht	420	MLR minus discount	Principal is repayable every month, totalling 90 instalments, commencing in October 2016.
Baht	141	FDR plus margin	Principal is repayable every 6 months, totalling 8 instalments, commencing in June 2017.
Baht	500	6M THBFIX plus margin	Principal is repayable in full after 5-year maturity.
Baht	5,000	6M FDR plus margin	Principal is repayable every 3 months, totalling 38 instalments, commencing in March 2011.
Baht	3,500	6M FDR plus margin	Principal is repayable every 6 months, totalling 20 instalments, commencing in February 2009.
Baht	3,600	6M FDR plus margin	Principal is repayable every 6 months, totalling 20 instalments, commencing in December 2011.
Baht	3,400	6M FDR plus margin	Principal is repayable every 6 months, totalling 20 instalments, commencing in September 2012.
Baht	5,510	6M FDR plus margin	Principal is repayable every 6 months, totalling 20 instalments, commencing in June 2012.
Baht	10,000	6M FDR plus margin	Principal is repayable every 6 months, totalling 25 instalments, commencing in December 2017.
Baht	169	Fixed rate	Principal is repayable every 6 months, totalling 29 instalments, commencing in June 2017.
Baht	5,400	Highest rate on 6-month-fixed deposit plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in June 2012.
Baht	4,600	6M THBFIX plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in June 2012.
Baht	3,700	3M THBFIX plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in July 2015.

27. Long-term Loans (Continued)

27.1 Loans (Continued)

Loans - Baht currency (Continued)

As at December 31, 2016, details of long term loans from financial institutions of the subsidiaries in Baht currency are as follows: (Continued)

Currency	Principal (unit: million)	Interest rate percent (per annum)	Repayment terms
Baht	10,000	Highest rate on 6-month-fixed deposit plus margin	Principal is repayable every 6 months, totalling 12 instalments, commencing in June 2016.
Baht	3,000	Highest rate on 6-month-fixed deposit plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in September 2017.
Baht	4,000	Highest rate on 6-month-fixed deposit plus margin	Principal is repayable every 6 months, totalling 12 instalments, commencing in December 2018.
Baht	5,000	Highest rate on 6-month-fixed deposit plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in June 2020.
Baht	15,000	Highest rate on 6-month-fixed deposit plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in the 42 nd month from the date of the first draw down.
Baht	2,500	6M THBFIX plus margin	Principal is repayable every 12 months, totalling 3 instalments, commencing in July 2016.
Baht	7,500	Highest rate on 6-month-fixed deposit plus margin	Principal is repayable every 6 months, totalling 15 instalments, commencing in August 2011.
Baht	3,000	Highest rate on 6-month-fixed deposit plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in July 2015.
Baht	7,000	Highest rate on 6-month-fixed deposit plus margin	Principal is repayable every 6 months, totalling 15 instalments, commencing in September 2013.
Baht	3,000	Highest rate on 6-month-fixed deposit plus margin	Principal is repayable every 6 months, totalling 14 instalments, commencing in March 2014.
Baht	3,000	6M THBFIX plus margin	Principle is repayable at the end of contract, in June 2020.

27. Long-term Loans (Continued)

27.1 Loans (Continued)

Loans - Baht currency (Continued)

As at December 31, 2016, details of long term loans from financial institutions of the subsidiaries in Baht currency are as follows: (Continued)

Currency	Principal (unit: million)	Interest rate percent (per annum)	Repayment terms
Baht	6,000	Highest rate on 6-month-fixed deposit plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in March 2016.
Baht	1,300	Fixed rate	Principal is repayable every 3 months, totalling 16 instalments, commencing in September 2016.
Baht	500	Fixed rate	Principal is repayable every 3 months, totalling 33 instalments, commencing in June 2019.

Loans – Foreign currency

As at December 31, 2016, details of long term loans from financial institutions of the Company in foreign currency are as follows:

Currency	Principal (unit: million)	Interest rate percent (per annum)	Repayment terms
JPY	23,000	Fixed rate	Principal is repayable at the end of contract, in April 2036.
USD	310	6M BIBOR plus margin	Principal is repayable at the end of contract, in March 2018.

27. Long-term Loans (Continued)

27.1 Loans (Continued)

Loans – Foreign currency (Continued)

As at December 31, 2016, details of long term loans from financial institutions of the subsidiaries in foreign currency are as follows:

Currency	Principal (unit: million)	Interest rate percent (per annum)	Repayment terms
USD	500	LIBOR plus margin	Principal is repayable at the end of contract, in November 2017 (In March 2016, the subsidiary has extended the loan maturity from November 2017 to March 2021).
USD	75	LIBOR plus margin	Principal is repayable at the end of contract, in December 2017(In March 2016, the subsidiary has extended the loan maturity from December 2017 to March 2021).
JPY	8,503	JPY-LIBOR plus margin	Principal is repayable every 6 months, totalling 37 instalments, commencing in May 2018.
USD	100	LIBOR plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in July 2015.
USD	75	LIBOR plus margin	Principal is repayable at the end of contract, in January 2018.
USD	100	6M LIBOR plus margin	Principal is repayable every 6 months, totalling 10 instalments, commencing in March 2016.

The Group has entered into the contracts to hedge and to manage its financial risks arising from foreign exchange rate and the fluctuation of interest rate on long-term loans as mentioned in Note 40.2 to Note 40.4.

27. Long-term Loans (Continued)

27.2 Debentures

Movements of debentures in Baht currency and foreign currencies for the year ended December 31, 2016 are as follows:

Unit: Million

	Consolidated financial statements			
	Currency			Total in Baht equivalent
	Baht	USD	JPY	
Balance as at January 1, 2016	261,002.15	5,335.39	36,000.00	465,076.76
- Repayments	(32,128.00)	(176.55)	-	(38,358.61)
- (Gain) Loss on exchange rates	190.54	-	-	(422.83)
- Currency translation differences	(190.80)	-	-	(722.05)
- Others	11.42	3.34	-	136.05
Balance as at December 31, 2016	228,885.31	5,162.18	36,000.00	425,709.32
- Current portion	(22,820.12)	(238.00)	(36,000.00)	(42,595.15)
Long-term debentures	<u>206,065.19</u>	<u>4,924.18</u>	<u>-</u>	<u>383,114.17</u>

Unit: Million

	Separate financial statements			
	Currency			Total in Baht equivalent
	Baht	USD	JPY	
Balance as at January 1, 2016	167,503.47	1,435.79	36,000.00	230,455.43
- Repayments	(31,070.00)	-	-	(31,070.00)
- Gain on exchange rates	-	-	-	(55.54)
- Others	-	0.66	-	27.32
Balance as at December 31, 2016	136,433.47	1,436.45	36,000.00	199,357.21
- Current portion	(8,136.00)	-	(36,000.00)	(19,344.06)
Long-term debentures	<u>128,297.47</u>	<u>1,436.45</u>	<u>-</u>	<u>180,013.15</u>

27. Long-term Loans (Continued)

27.2 Debentures (Continued)

Debentures - Baht currency

As at December 31, 2016, the details of unsecured and senior debentures in Baht currency of the Company are as follows:

Currency	Credit facilities (unit: million)	Par value (per share)	Period (years)	Interest rate percent (per annum)	Repayment terms
Baht	2,636	1,000	7	4.1	Interest is repayable every 6 months and mature in February 2017.
Baht	1,500	1,000	10	5.87	Interest is repayable every 6 months and mature in December 2017.
Baht	4,000	1,000	7 years 15 days	Year 1 - 4 : 3.20 Year 5 - 6 : 4.20 Year 7 : 5.00	Interest is repayable every 6 months and mature in December 2017.
Baht	500	1,000	11	5.91	Interest is repayable every 6 months and mature in December 2018.
Baht	18,049	1,000	6 years 9 months 19 days	Year 1 - 4 : 4.00 Year 5 - 6 : 4.40 Year 7 : 5.50	Interest is repayable every 6 months and mature in November 2018.
Baht	1,000	1,000	15	5.9	Interest is repayable every 6 months and mature in May 2019.
Baht	15,000	1,000	6 years 11 months 24 days	Year 1 - 4 : 4.10 Year 5 - 6 : 5.10	Interest is repayable every 6 months and mature in May 2019.
Baht	10,000	1,000	6 years 9 months 15 days	Year 1 - 4 : 4.10 Year 5 - 6 : 5.10	Interest is repayable every 6 months and mature in May 2019.
Baht	22,000	1,000	6 years 11 months 19 days	4.75	Interest is repayable every 6 months and mature in November 2020.
Baht	4,118	1,000	15	5.95	Interest is repayable every 6 months and mature in August 2020.
Baht	1,030	1,000	15	6.53	Interest is repayable every 6 months and mature in May 2021.

27. Long-term Loans (Continued)

27.2 Debentures (Continued)

Debentures - Baht currency (Continued)

As at December 31, 2016, the details of unsecured and senior debentures in Baht currency of the Company are as follows: (Continued)

Currency	Credit facilities (unit: million)	Par value (per share)	Period (years)	Interest rate percent (per annum)	Repayment terms
Baht	10,000	1,000	6 years 11 months	4	Interest is repayable every 6 months and mature in November 2021.
Baht	4,200	1,000	6 years 27 days	3.5	Interest is repayable every 6 months and mature in November 2021.
Baht	4,000	1,000	12	4.5	Interest is repayable every 6 months and mature in February 2022.
Baht	10,000	1,000	10	6.58	Interest is repayable every 6 months and mature in September 2023.

As at December 31, 2016, the details of unsecured and senior debentures with the debenture holders' early redemption right of the Company in Baht currency are as follows:

Currency	Credit facilities (unit: million)	Par value (per share)	Period (years)	Interest rate percent (per annum)	Repayment terms
Baht	15,000	1,000	15	Year 1 - 5 : 5.00 Year 6 - 8 : 6.20 Year 9 - 15 : 6.80	Interest is repayable every 6 months and mature in March 2024. (The debenture holders can early redeem at the end of 8 th years.)
Baht	9,400	1,000	15	Year 1 - 5 : 4.25 Year 6 - 10 : 5.50 Year 11- 15 : 5.75	Interest is repayable every 6 months and mature in July 2024. (The debenture holders can early redemption at the end of 10 th years.)
Baht	4,000	1,000	100	5.9	Interest is repayable every 6 months and mature in December 2110. The debenture holders can early redemption at the end of the years 50 and 75 and other cases specified in the regulations the rights and obligations of the issuer and the debenture holders.

27. Long-term Loans (Continued)

27.2 Debentures (Continued)

Debentures - Baht currency (Continued)

As at December 31, 2016, the details of unsecured and senior debentures in Baht currency of the subsidiaries are as follows:

Currency	Credit facilities (unit: million)	Par value (per share)	Period (years)	Interest rate percent (per annum)	Repayment terms
Baht	2,000	1,000	3	3.41	Interest is payable every 6 months and mature in March 2017.
Baht	3,000	1,000	5	4.13	Interest is payable every 6 months and mature in March 2019.
Baht	3,000	1,000	7	4.61	Interest is payable every 6 months and mature in March 2021.
Baht	7,000	1,000	10	4.84	Interest is payable every 6 months and mature in March 2024.
Baht	3,000	1,000	12	4.80	Interest is payable every 6 months and mature in April 2022.
Baht	7,500	1,000	15	5.05	Interest is payable every 6 months and mature in March 2027.
Baht	2,500	1,000	5	3.99	Interest is payable every 6 months and mature in March 2017.
Baht	3,000	1,000	10	5.29	Interest is payable every 6 months and mature in July 2017.
Baht	5,000	1,000	5	4.76	Interest is payable every 6 months and maturity in August 2018.
Baht	4,746	1,000	3	3.96	Interest is payable every 6 months and maturity in May 2017.
Baht	3,364	1,000	5	4.5	Interest is payable every 6 months and maturity in May 2019.
Baht	6,890	1,000	7	4.96	Interest is payable every 6 months and maturity in May 2021.
Baht	2,800	1,000	10	5.5	Interest is payable every 6 months and maturity in October 2017.
Baht	1,942	1,000	10	5.5	Interest is payable every 6 months and maturity in June 2019.
Baht	10,000	1,000	7	4.5	Interest is payable every 6 months and maturity in August 2021.

27. Long-term Loans (Continued)

27.2 Debentures (Continued)

Debentures - Baht currency (Continued)

As at December 31, 2016, the details of unsecured and senior debentures in Baht currency of the subsidiaries are as follows: (Continued)

Currency	Credit facilities (unit: million)	Par value (per share)	Period (years)	Interest rate percent (per annum)	Repayment terms
Baht	2,500	1,000	15	4.625	Interest is payable every 6 months and maturity in March 2018.
Baht	5,000	1,000	10	4.8	Interest is payable every 3 months and maturity in May 2019.
Baht	8,200	1,000	5	3.91	Interest is payable every 6 months and maturity in June 2019.
Baht	11,400	1,000	15	4.82	Interest is payable every 6 months and maturity in June 2029.

Debentures - Foreign currency

As at December 31, 2016, the details of unsecured and senior debentures in foreign currency of the Company are as follows:

Currency	Credit facilities (unit: million)	Par value (per share)	Period (years)	Interest rate percent (per annum)	Repayment terms
JPY	36,000	100,000,000	10	2.71	Interest is payable every 6 months and maturity in June 2017.
USD	350	1,000	30	5.875	Interest is payable every 6 months and maturity in August 2035.
USD	500	1,000	10	3.375	Interest is payable every 6 months and maturity in October 2022.
USD	600	1,000	30	4.5	Interest is payable every 6 months and maturity in October 2042.

27. Long-term Loans (Continued)

27.2 Debentures (Continued)

Debentures - Foreign currency (Continued)

As at December 31, 2016, the details of unsecured and senior debentures in foreign currency of the subsidiaries are as follows:

Currency	Credit facilities (unit: million)	Par value (per share)	Period (years)	Interest rate percent (per annum)	Repayment terms
USD	500	1,000	10	3.625	Interest is payable every 6 months and maturity in January 2023.
USD	500	1,000	10	4.875	Interest is payable every 6 months and maturity in January 2023.
USD	500	1,000	5	3.707	Interest is payable every 6 months and maturity in September 2018.
USD	700	1,000	10	5.692	Interest is payable every 6 months and maturity in April 2021.
USD	490	1,000	30	6.35	Interest is payable every 6 months and maturity in June 2042.
USD	250	100,000	10	6.375	Interest is payable every 6 months and maturity in May 2017.
USD	1,000	1,000	10	4.25	Interest is payable every 6 months and maturity in September 2022.

The Group has entered into derivative contracts on debentures to cover interest rates risks and foreign currency exchange rates risks as mentioned in Note 40.2 to Note 40.4.

27. Long-term Loans (Continued)

27.3 Liabilities under finance leases

Details of liabilities under finance leases as at December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Liabilities under finance leases				
- Within 1 year	1,030.98	1,044.21	735.85	742.72
- Over 1 year but not over 5 years	2,780.07	3,018.00	2,417.06	2,558.32
- Over 5 years	3,507.32	4,035.94	3,507.31	4,035.94
Future finance charges	<u>(488.34)</u>	<u>(585.47)</u>	<u>(453.45)</u>	<u>(538.17)</u>
Present value of liabilities under finance leases	<u>6,830.03</u>	<u>7,512.68</u>	<u>6,206.77</u>	<u>6,798.81</u>
Present value of liabilities under finance leases				
- Current liabilities	929.32	929.32	652.23	649.49
- Non-current liabilities	<u>5,900.71</u>	<u>6,583.36</u>	<u>5,554.54</u>	<u>6,149.32</u>
Total	<u><u>6,830.03</u></u>	<u><u>7,512.68</u></u>	<u><u>6,206.77</u></u>	<u><u>6,798.81</u></u>

27. Long-term Loans (Continued)

27.4 Maturities of long-term loans as at December 31, 2016 and 2015 are as follows:

Unit: Million Baht

	Consolidated financial statements					
	2016					
	Baht Currency Loans	Foreign Currency Loans	Baht Currency Debentures	Foreign Currency Debentures	Liabilities Under Finance leases	Total
Within 1 year	17,970.11	2,561.11	22,820.12	19,775.03	929.32	64,055.69
Over 1 year but not over 5 years	59,834.93	41,376.95	134,777.01	36,617.82	2,546.45	275,153.16
Over 5 years	18,833.75	10,206.39	71,288.18	140,431.16	3,354.26	244,113.74
Total	96,638.79	54,144.45	228,885.31	196,824.01	6,830.03	583,322.59

Unit: Million Baht

	Consolidated financial statements					
	2015					
	Baht Currency Loans	Foreign Currency Loans	Baht Currency Debentures	Foreign Currency Debentures	Liabilities Under Finance leases	Total
Within 1 year	19,309.05	2,251.98	32,128.00	-	929.32	54,618.35
Over 1 year but not over 5 years	70,684.12	40,617.69	122,472.57	37,515.34	2,743.44	274,033.16
Over 5 years	17,737.34	9,644.10	106,401.58	166,559.27	3,839.92	304,182.21
Total	107,730.51	52,513.77	261,002.15	204,074.61	7,512.68	632,833.72

27. Long-term Loans (Continued)

27.4 Maturities of long-term loans as at December 31, 2016 and 2015 are as follows: (Continued)

Unit: Million Baht

	Separate financial statements					Total
	2016					
	Baht Currency Loans	Foreign Currency Loans	Baht Currency Debentures	Foreign Currency Debentures	Liabilities Under Finance leases	
Within 1 year	4,143.52	-	8,136.00	11,208.06	652.23	24,139.81
Over 1 year but not over 5 years	7,014.51	11,160.77	85,897.47	-	2,200.29	106,273.04
Over 5 years	-	7,160.71	42,400.00	51,715.68	3,354.25	104,630.64
Total	11,158.03	18,321.48	136,433.47	62,923.74	6,206.77	235,043.49

Unit: Million Baht

	Separate financial statements					Total
	2015					
	Baht Currency Loans	Foreign Currency Loans	Baht Currency Debentures	Foreign Currency Debentures	Liabilities Under Finance leases	
Within 1 year	5,429.02	-	31,070.00	-	649.49	37,148.51
Over 1 year but not over 5 years	11,158.03	11,238.68	78,803.47	10,899.22	2,309.41	114,408.81
Over 5 years	-	6,963.39	57,630.00	52,052.74	3,839.91	120,486.04
Total	16,587.05	18,202.07	167,503.47	62,951.96	6,798.81	272,043.36

28. Employee Benefit Obligations

Movements in the present value of the employee benefit obligations are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
As at January 1	18,787.51	17,253.33	6,760.58	6,004.14
Service cost	1,519.84	1,661.63	534.21	476.02
Interest cost	547.23	535.24	225.65	217.05
Actuarial loss from post-employment benefit obligation	1,136.39	130.12	863.03	315.89
Actuarial (gain) loss from other long-term employee benefit obligation	54.82	(137.99)	12.67	(1.04)
Actual payment	(939.33)	(645.88)	(256.04)	(251.48)
Currency translation differences	(34.13)	(8.94)	-	-
As at December 31	<u>21,072.33</u>	<u>18,787.51</u>	<u>8,140.10</u>	<u>6,760.58</u>

Details of actuarial loss from post-employment benefit obligation are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Loss from experience adjustments	817.50	65.36	789.21	0.07
(Gain) Loss from changes in financial assumptions	(4,703.06)	144.65	(4,792.10)	315.82
(Gain) loss from changes in demographic assumptions	5,021.95	(79.89)	4,865.92	-
Total	<u>1,136.39</u>	<u>130.12</u>	<u>863.03</u>	<u>315.89</u>

28. Employee Benefit Obligations (Continued)

Expenses recognized in the statements of income and comprehensive income for the years ended December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Service cost	1,519.84	1,661.63	534.21	476.02
Interest cost	547.23	535.24	225.65	217.05
Actuarial (gain) loss	1,191.21	(7.87)	875.70	314.85
Total	3,258.28	2,189.00	1,635.56	1,007.92

	Consolidated financial statements				Separate financial statements			
	2016		2015		2016		2015	
	Cost of sales and services	721.05	568.62	121.15	106.31			
Selling expenses	71.09	59.24	66.25	58.33				
Administrative expenses	1,319.84	1,413.23	584.12	525.13				
Management remuneration	9.91	17.79	1.01	2.26				
Other comprehensive loss	1,136.39	130.12	863.03	315.89				
Total	3,258.28	2,189.00	1,635.56	1,007.92				

Principal actuarial assumptions used in determining the post-employment benefit obligation of the Group are as follows:

	Annual percentage (%)
Discount rate	1.00- 7.90
Inflation rate	1.00 - 7.86
Employee turnover rate	0.00 - 15.00
Mortality rate	Based on the published statistics of mortality tables B.E. 2551 (TMO08) issued by the Office of Insurance Commission and based on the published statistics of each country

Sensitivity analysis of principal actuarial assumption used in determining the post-employment benefit obligation of the Group are as follows:

	Unit: Million Baht	
	Increase (decrease) in present value of the obligation	
	Increase 1%	Decrease 1%
Discount rate	(2,916.65)	4,051.18

Weighted average duration of the post-employment benefit obligation of the Group is 16.55 years.

29. Provision for Decommissioning Costs

Movements in the provision for decommissioning costs are as follows:

	Unit: Million Baht
	<u>Consolidated financial statements</u>
As at January 1, 2016	75,746.67
- Additions	4,527.35
- Use during the year	(528.09)
- Reversal of non-occurred provision	(6,418.12)
- Currency translation differences	<u>(576.25)</u>
As at December 31, 2016	72,751.56
- Current portion	<u>-</u>
- Long-term portion	<u>72,751.56</u>

30. Other Non-current Liabilities

Other non-current liabilities as at December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	<u>Consolidated financial statements</u>		<u>Separate financial statements</u>	
	2016	2015	2016	2015
Provision for remuneration for the renewal of petroleum production	9,099.33	10,931.36	-	-
Long-term liability: Make-up	10,089.42	9,710.85	10,089.42	9,710.85
Retention	1,283.59	1,296.70	750.50	715.53
Deferred revenue	21,396.40	1,120.17	3,762.41	711.80
Others	<u>6,901.47</u>	<u>7,024.87</u>	<u>4,812.06</u>	<u>5,385.16</u>
Total	<u>48,770.21</u>	<u>30,083.95</u>	<u>19,414.39</u>	<u>16,523.34</u>

Long-term liability (make-up) arises from the amount of the difference between the natural gas price for the committed gas volumes that the Company paid in advance and the natural gas price as at the date of taking the gas that exceeds the interest paid for the advance payment for untaken-up gas volume (Take-or-Pay). The Company has to distribute the difference to the parties who paid for the Take-or-Pay interest for the Yadana and Yetagan gas fields.

31. Share Capital

31.1 Share Capital - Authorized Shares

	Par Value (Baht per share)	The number of authorized shares (shares)	The value of authorized shares (Baht)
As at December 31, 2015	10	2,857,245,725	28,572,457,250
As at December 31, 2016	10	2,857,245,725	28,572,457,250

31.2 Share Capital - Issued and Paid-up Shares

	Number of issued and fully paid-up shares (shares)	Value of issued and fully paid-up shares (Baht)	Premium on share capital (Baht)	Total (Baht)
As at December 31, 2015	2,856,299,625	28,562,996,250	29,211,131,966	57,774,128,216
As at December 31, 2016	2,856,299,625	28,562,996,250	29,211,131,966	57,774,128,216

32. Reserves

32.1 Legal Reserve

Under the Public Limited Companies Act B.E. 2535, the Company is required to appropriate not less than 5% of its annual net profit as legal reserve until the reserve fund reaches 10% of the authorized share capital. The reserve is non-distributable. The Company's reserve has already reached the 10% of its authorized share capital, stipulated in the Act.

32.2 Reserve for Self-insurance Fund

Movements of reserves for self-insurance fund are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Balance as at January 1	1,145.11	1,098.74	1,145.11	1,098.74
Appropriated during the years	29.28	46.37	29.28	46.37
Balance as at December 31	1,174.39	1,145.11	1,174.39	1,145.11

The self-insurance fund was set up to provide insurance coverage for the Company's business. The Company appropriates net profit from operations and the interest income of the self-insurance fund each year to the fund.

33. Basic Earnings (Loss) per Share

Basic earnings (loss) per share for the years ended December 31, 2016 and 2015 are as follows:

	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Profit attributable to owners of the parent from continuing operations (Baht)	94,039,732,600	20,666,429,339	70,808,045,526	9,554,795,531
Adjustment of profit (Baht)	(1,251,699,863)	(726,752,435)	-	-
Profit for calculation of earnings per share from continuing operations (Baht)	92,788,032,737	19,939,676,904	70,808,045,526	9,554,795,531
Profit (loss) for calculation of earnings per share from discontinued operations (Baht)	569,345,640	(730,012,230)	-	-
Profit for calculation of earnings per share (Baht)	93,357,378,377	19,209,664,674	70,808,045,526	9,554,795,531
Number of weighted average of ordinary shares (shares)	2,856,299,625	2,856,299,625	2,856,299,625	2,856,299,625
Earnings per share from continuing operations (Baht/share)	32.48	6.98	24.79	3.35
Earnings (loss) per share from discontinued operations (Baht/share)	0.20	(0.25)	-	-
Earnings per share (Baht/share)	32.68	6.73	24.79	3.35

34. Sales and Service Income

Details of sales and service income for the years ended December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Oil products	955,098.93	1,176,447.69	937,419.90	1,115,612.06
Gas products	385,481.40	489,133.50	462,005.12	575,310.95
Petrochemicals products	318,839.37	307,727.35	32,955.13	15,647.43
Mining products	15,994.85	13,632.79	-	-
Non-oil businesses	11,773.68	10,437.88	6,825.20	5,640.02
Services	11,643.10	9,248.61	50.26	38.63
Others	20,014.71	18,923.89	137.88	2.00
Total	1,718,846.04	2,025,551.71	1,439,393.49	1,712,251.09

Sales and services income for the years ended December 31, 2016 and 2015 include sales to government agencies and state enterprises amounting to Baht 117,298.97 million and Baht 147,529.16 million in the consolidated financial statements, and Baht 106,279.70 million and Baht 145,873.74 million in the separate financial statements, respectively.

35. Other Income

Details of other income for the years ended December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015*	2016	2015
Transportation income	5,033.33	5,069.30	7,749.19	8,807.01
Dividend income	797.96	483.23	24,937.11	25,236.30
Interest income	5,625.35	6,292.92	4,521.72	4,233.12
Compensation for loan interest on advance payments for gas purchases	(2.00)	(1.90)	(2.00)	(1.90)
Gain on disposal of investments	1,887.21	2,423.22	-	10,327.28
Gain (loss) on derivatives	(8,981.50)	4,728.97	181.35	(1,490.87)
Others	5,322.30	11,788.43	3,375.50	6,425.00
Total	9,682.65	30,784.17	40,762.87	53,535.94

Compensation for loan interests on advance payments for gas purchases (Take-or-Pay) represents the compensation, which the Company received from the Electricity Generating Authority of Thailand (EGAT) and the Independent Power Plants (IPP) in order to absorb the interests on loans that the Company obtains to make advance payments for gas purchases.

*The Company has reclassified the financial information to be comparable with the financial statement presentation for the year ended December 31, 2016.

36. Expenses by Nature

Details of expenses by nature for the years ended December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015*	2016	2015
Changes in finished goods and work in process	(3,957.87)	17,199.60	(5,809.65)	12,808.15
Goods purchased and raw materials used	1,265,007.76	1,550,348.93	1,323,745.55	1,600,505.83
Staff costs	43,766.96	46,602.99	9,651.28	8,792.36
Outsourcing	8,434.78	9,757.94	7,654.19	8,175.49
Transportation	17,955.37	21,197.29	6,708.15	7,468.64
Depreciation and amortization	128,733.80	143,336.11	18,674.80	16,740.65
Repairment	15,179.11	17,155.21	3,566.93	4,336.57
Utilities	12,439.22	16,519.82	11,703.90	14,421.86
Rental fees and property insurance premium	9,119.56	8,860.08	3,759.54	3,585.48
(Reversal of) doubtful accounts	276.28	(3,394.45)	5,153.80	35,047.24
Loss on impairment of assets	7,203.00	72,873.22	793.45	16,956.96
Others	31,395.09	46,127.67	6,657.40	13,042.88
Total	1,535,553.06	1,946,584.41	1,392,259.34	1,741,882.11

*The Company has reclassified the financial information to be comparable with the financial statement presentation for the year ended December 31, 2016.

37. Petroleum Royalties and Remuneration

Details of petroleum royalties and remuneration for the years ended December 31, 2016 and 2015 are as follows:

	Unit: Million Baht	
	Consolidated financial statements	
	2016	2015
Petroleum royalties	13,266.05	15,201.82
Special remuneration benefits	304.38	8.95
Total	<u>13,570.43</u>	<u>15,210.77</u>

38. Finance Costs

Details of finance costs for the years ended December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Interest expenses:				
Loans from financial institutions	8,949.88	9,703.88	1,040.92	1,225.12
Debentures	15,082.98	15,770.78	9,155.62	9,475.37
Liabilities under finance leases	124.01	132.63	95.96	103.16
Others	3,442.51	2,914.46	1.27	-
Other finance costs	<u>1,287.87</u>	<u>1,557.65</u>	<u>612.69</u>	<u>571.08</u>
Total	<u>28,887.25</u>	<u>30,079.40</u>	<u>10,906.46</u>	<u>11,374.73</u>

39. Operating Segments

These operating segments are consistent with the internal management reports provided to the Chief Operating Decision Maker (CODM), who makes decisions related to the allocation of resources to the segments and assesses their performance.

For management purposes, the Group is organized into business units based on types of products and services. The major segments of the Group are as follows:

Upstream Petroleum and Natural Gas Business Group

1. Petroleum exploration and production business:
The Group conducts petroleum exploration and production business both domestically and overseas. The Group is the operator and jointly invests with leading petroleum exploration and production companies. Most domestic projects are located in the Gulf of Thailand, while overseas projects are located in Asia Pacific, North America, Africa and the Middle East.
2. Natural gas business:
The Group conducts natural gas business including procurement, natural gas pipeline transmission, distribution, and natural gas separation. Products from the natural gas separation plants are used as feedstock for the petrochemical industry and as fuel in the household, transportation and industry sectors.

Downstream Petroleum Business Group

1. Oil business:
The Group conducts marketing of petroleum products and lube oil in both domestic and overseas markets under an efficient operating system of procurement, storage, and distribution of products as well as the retail business at service stations.
2. International trading business:
The Group conducts international trading business including the import and export of petroleum and petrochemical products as well as other related products. This includes the management of risks arising from oil trading and the procurement and distribution of petroleum and petrochemical products in international markets.
3. Petrochemical and Refining business:
The Group conducts refining business including the production and distribution of petroleum and petrochemicals products in both domestic and overseas markets.

Coal Business

The Group conducts coal mining business, involving overseas exploration, production and distribution of coals.

Other operations of the Group are included in other segments, none of which constitutes a separately reportable segment.

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39. Operating Segments (Continued)Consolidated financial statements

For the year ended December 31, 2016

								Unit: Million Baht	
	Upstream petroleum and natural gas		Downstream petroleum			Coal	Others	Elimination	Total
	Petroleum exploration and production	Natural gas	Oil	International trading	Petrochemicals and Refining				
Sales - others	21,358.25	328,078.96	479,301.12	379,143.87	494,784.02	15,994.85	184.97	-	1,718,846.04
- related parties	128,858.80	129,906.64	5,971.99	369,285.10	289,672.32	311.98	4,312.43	(928,319.26)	-
Net sales	150,217.05	457,985.60	485,273.11	748,428.97	784,456.34	16,306.83	4,497.40	(928,319.26)	1,718,846.04
Gross profit (loss)*	129,831.22	84,231.54	36,692.23	3,861.69	117,923.59	5,450.02	(412.44)	(1,842.50)	375,735.35
EBITDA	107,464.39	72,082.29	23,676.91	2,865.25	101,846.50	4,194.95	669.73	(273.98)	312,526.04
Depreciation and amortization expenses	73,518.95	18,116.02	3,707.97	32.73	30,405.31	1,934.45	1,018.37	-	128,733.80
Segment operating profit (loss)	33,945.44	53,966.27	19,968.94	2,832.52	71,441.19	2,260.50	(348.64)	(273.98)	183,792.24
Share of profit (loss) from investments in joint ventures and associates	73.71	1,203.99	896.87	-	1,969.21	(0.27)	(0.30)	-	4,143.21
Reversal of (loss) on impairment of assets	(1,688.29)	(4,086.04)	35.78	-	(655.53)	(310.65)	(498.27)	-	(7,203.00)
Others	872.10	418.19	17.28	6.27	58.75	1,171.37	(209.60)	-	2,334.36
Unallocated revenue and expenses:									
Interest income									5,625.35
Loss on derivatives									(8,981.50)
Gain on foreign exchange rate									4,472.68
EBIT									184,183.34
Finance costs									(28,887.25)
EBT									155,296.09
Income taxes									(26,593.07)
Profit for the year from continuing operations									128,703.02
Profit for the year from discontinued operations, net of tax									872.07
Profit for the year									129,575.09

* Gross profit (loss) excludes depreciation and amortization expenses in cost of sales.

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39. Operating Segments (Continued)

Consolidated financial statements

For the year ended December 31, 2016 (Continued)

	Upstream petroleum and natural gas		Downstream petroleum			Coal	Others	Elimination	Unit: Million Baht
	Petroleum exploration and production	Natural gas	Oil	International trading	Petrochemicals and Refining				Total
Profit attributable to:									
Owners of the parent									
Profit for the year from continuing operations									94,039.73
Profit for the year from discontinued operations, net of tax									569.35
									<u>94,609.08</u>
Non-controlling interests									
Profit for the year from continuing operations									34,663.28
Profit for the year from discontinued operations, net of tax									302.73
									<u>34,966.01</u>
Profit for the year									<u><u>129,575.09</u></u>

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39. Operating Segments (Continued)Consolidated financial statements

As at December 31, 2016 (Continued)

	Upstream petroleum and natural gas		Downstream petroleum			Coal	Others	Elimination	Unit: Million Baht
	Petroleum exploration and production	Natural gas	Oil	International trading	Petrochemicals and Refining				Total
Segment assets	653,353.23	411,369.32	100,624.72	96,337.48	711,032.03	32,336.26	160,423.45	-	2,165,476.49
Inter-company assets	14,085.07	12,230.93	1,638.12	38,582.19	24,046.29	434.91	89,648.96	(180,666.47)	-
Investments in joint ventures and associates	967.35	13,623.46	4,988.34	-	36,694.24	-	-	-	56,273.39
Total segment assets	668,405.65	437,223.71	107,251.18	134,919.67	771,772.56	32,771.17	250,072.41	(180,666.47)	2,221,749.88
Non-allocated assets									10,581.20
Total assets									<u>2,232,331.08</u>
Segment liabilities	229,580.96	88,524.87	31,420.76	117,536.15	295,035.98	4,596.39	250,018.57	-	1,016,713.68
Inter-company liabilities	677.52	35,040.08	24,495.35	8,757.47	44,398.82	62,395.62	3,912.94	(179,677.80)	-
Total segment liabilities	230,258.48	123,564.95	55,916.11	126,293.62	339,434.80	66,992.01	253,931.51	(179,677.80)	1,016,713.68
Non-allocated liabilities									44,020.39
Total liabilities									<u>1,060,734.07</u>
Capital expenditure	41,067.07	25,958.73	7,785.39	152.86	36,206.03	1,039.34	823.50	-	113,032.92

39. Operating Segments (Continued)Consolidated financial statements

For the year ended December 31, 2015

								Unit: Million Baht	
	Upstream petroleum and natural gas		Downstream petroleum			Coal	Others	Elimination	Total
	Petroleum exploration and production	Natural gas	Oil	International trading	Petrochemicals and Refining				
Sales - others	25,982.15	404,372.55	507,835.07	519,764.08	553,452.33	13,632.79	512.74	-	2,025,551.71
- related parties	158,428.56	138,426.08	3,694.56	430,168.89	320,742.32	-	4,357.21	(1,055,817.62)	-
Net sales	184,410.71	542,798.63	511,529.63	949,932.97	874,194.65	13,632.79	4,869.95	(1,055,817.62)	2,025,551.71
Gross profit (loss)*	160,922.27	61,360.49	28,381.02	3,974.72	100,679.94	3,996.48	(262.44)	(1,095.05)	357,957.43
EBITDA	132,269.39	47,832.02	15,133.11	3,273.98	84,888.16	2,728.59	1,089.25	(1,000.60)	286,213.90
Depreciation and amortization expenses	92,396.33	15,857.08	2,976.21	32.42	27,574.67	2,892.30	1,609.09	(1.99)	143,336.11
Segment operating profit (loss)	39,873.06	31,974.94	12,156.90	3,241.56	57,313.49	(163.71)	(519.84)	(998.61)	142,877.79
Share of profit (loss) from investments in joint ventures and associates	138.46	1,425.26	863.66	-	4,004.13	(0.59)	(399.22)	-	6,031.70
Reversal of (allowance for) doubtful accounts	-	103.61	(210.56)	(6.27)	2,782.09	-	-	725.58	3,394.45
Reversal of (loss) on impairment of assets	(48,610.90)	-	1.05	-	(2,530.90)	(20,275.26)	(1,457.21)	-	(72,873.22)
Others	-	(4.08)	(0.23)	-	(96.72)	-	2,616.34	12.46	2,527.77
Unallocated revenue and expenses:									
Interest income									6,292.92
Gain on derivatives									4,728.97
Loss on foreign exchange rate									(5,992.08)
EBIT									86,988.30
Finance costs									(30,079.40)
EBT									56,908.90
Income taxes									(25,071.43)
Gain for the year from continuing operations									31,837.47
Loss for the year from discontinued operations, net of tax									(1,118.17)
Gain for the year									30,719.30

* Gross profit (loss) excludes depreciation and amortization expenses in cost of sales.

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39. Operating Segments (Continued)

Consolidated financial statements

For the year ended December 31, 2015 (Continued)

	Upstream petroleum and natural gas		Downstream petroleum			Coal	Others	Elimination	Unit: Million Baht Total
	Petroleum exploration and production	Natural gas	Oil	International trading	Petrochemicals and Refining				
Profit (loss) attributable to:									
Owners of the parent									
Profit for the year from continuing operations									20,666.43
Loss for the year from discontinued operations, net of tax									(730.01)
									<u>19,936.42</u>
Non-controlling interests									
Profit for the year from continuing operations									11,171.04
Loss for the year from discontinued operations, net of tax									(388.16)
									<u>10,782.88</u>
Profit for the year									<u><u>30,719.30</u></u>

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39. Operating Segments (Continued)Consolidated financial statements

As at December 31, 2015 (Continued)

	Upstream petroleum and natural gas		Downstream petroleum			Coal	Others	Elimination	Unit: Million Baht Total
	Petroleum exploration and production	Natural gas	Oil	International trading	Petrochemicals and Refining				
Segment assets	682,164.43	405,877.55	88,472.60	79,988.15	668,755.36	31,752.72	144,529.17	-	2,101,539.98
Inter-company assets	17,884.47	12,773.24	1,969.17	32,077.88	20,153.89	27.16	35,676.08	(120,561.89)	-
Investments in joint ventures and associates	1,046.17	17,642.32	5,427.68	-	37,274.56	143.76	485.58	-	62,020.07
Total segment assets	701,095.07	436,293.11	95,869.45	112,066.03	726,183.81	31,923.64	180,690.83	(120,561.89)	2,163,560.05
Non-allocated assets									10,436.14
Total assets									2,173,996.19
Segment liabilities	253,506.01	92,536.53	25,857.55	88,984.01	287,440.18	4,121.76	283,081.01	-	1,035,527.05
Inter-company liabilities	730.59	38,391.94	18,061.68	10,028.28	38,994.07	7,052.92	5,719.52	(118,979.00)	-
Total segment liabilities	254,236.60	130,928.47	43,919.23	99,012.29	326,434.25	11,174.68	288,800.53	(118,979.00)	1,035,527.05
Non-allocated liabilities									50,781.76
Total liabilities									1,086,308.81
Capital expenditure	65,466.38	34,088.91	8,956.60	23.71	54,086.00	1,945.59	2,694.34	-	167,261.53

Pricing among business groups is based on normal market prices except for pricing among business groups within the Company, for which net market prices, after deducting management fees for petroleum terminals and operating fees, are applied.

40. Disclosure of Financial Instruments

The Group faces the principal financial risks associated with fluctuations in exchange rates, interest rates, and global oil market prices. Certain portions of sales, purchases and borrowings are denominated in foreign currencies. The Group borrows at both fixed and floating interest rates to finance its operations. Accordingly, the management has entered into derivative contracts to cover these risks. The financial instruments used for hedging risks are forward foreign exchange contracts, interest rate swap contracts, cross-currency swap contracts, participating swap contracts, etc. Risk exposure relating to global oil market prices is managed by forward oil contracts.

The department responsible for managing exposure to exchange rate risks and fluctuations in oil market prices has to report details of the costs and market prices of all financial instruments to management, including outstanding forward foreign exchange contracts and forward oil contracts. The reported information principally covers risk exposure from:

- foreign exchange rates
- currencies
- currencies and interest rates
- interest rates
- fluctuations in oil market prices
- credit risks

40.1 Foreign Exchange Rate Risk

The Group has entered into forward foreign exchange contracts. The contract prices and exchange rates under the forward foreign exchange contracts as at December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated		Separate	
	2016	2015	2016	2015
Forward foreign exchange purchase contracts				
Baht 33.8475 - 36.6000 = 1 USD	-	50,167.95	-	22,262.43
Baht 34.6210 - 36.6700 = 1 USD	56,544.13	-	-	-
Baht 34.9507 - 36.0642 = 1 USD	-	-	18,206.61	-
Baht 35.5100 - 39.8200 = 1 EUR	-	4,422.66	-	-
Baht 36.9500 - 40.3900 = 1 EUR	182.38	-	-	-
Baht 105.8000 - 106.8000 JPY = 1 USD	18.10	-	-	-
Forward foreign exchange sale contracts				
Baht 33.0145 - 40.3231 = 1 USD	-	11,511.93	-	3,712.29
Baht 34.6670 - 36.0200 = 1 USD	-	-	42,378.86	-
Baht 34.6670 - 36.0880 = 1 USD	60,115.62	-	-	-
Baht 36.1000 - 37.9720 = 1 EUR	-	11.55	-	-
Baht 37.9516 - 37.9769 = 1 EUR	0.18	-	-	-
Baht 5.1360 - 5.3675 = 1 CNY	-	3,277.02	-	-
Baht 0.2776 - 0.3006 = 1 JPY	-	177.80	-	-

40. Disclosure of Financial Instruments (Continued)**40.2 Currency Risk**

The Company has entered into a cross-currency swap of a long-term loan in the form of a participating swap. The terms of such contract as at December 31, 2016 and 2015 detailed as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
JPY 23,000 million/USD 196.94 million	7,160.71	6,963.39	7,160.71	6,963.39

This contract has a maturity later than five years.

40.3 Currency and Interest Rate Risk

The Group has entered into cross-currency swap contracts of long-term loans and debentures. The terms of the outstanding cross-currency swap contracts as at December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
JPY 36,000 million/USD 290.51 million	11,208.06	10,899.22	11,208.06	10,899.22
Baht 2,636 million/USD 79.45 million	2,636.00	2,636.00	2,636.00	2,636.00
Baht 4,000 million/USD 120.55 million	4,000.00	4,000.00	4,000.00	4,000.00
Baht 3,000 million/USD 99.66 million	3,000.00	3,000.00	3,000.00	3,000.00
Baht 9,000 million/USD 285.42 million	9,000.00	9,000.00	9,000.00	9,000.00
Baht 2,500 million/USD 82.92 million	-	2,500.00	-	-
Baht 5,000 million/USD 161.81 million	-	4,997.90	-	-
Baht 8,200 million/USD 251.07 million	-	8,192.96	-	-
Baht 11,400 million/USD 349.05 million	-	11,387.25	-	-
Baht 2,500 million/USD 81.43 million	2,500.00	2,500.00	-	-
Baht 2,640 million/USD 85.59 million	3,081.50	2,640.00	-	-
Baht 5,000 million/USD 162.60 million	5,854.07	5,000.00	-	-
Baht 7,000 million/USD 220.00 million	-	7,910.45	-	-
Baht 5,982 million/USD 90.70 million	-	5,981.80	-	-
Baht 27,100 million/USD 844.85 million	27,100.00	-	-	-
Baht 2,234.32 million/USD 64.10 million	2,234.32	-	-	-
Baht 2,113.43 million/USD 61.75 million	2,113.43	-	-	-
Total	72,727.38	80,645.58	29,844.06	29,535.22

40. Disclosure of Financial Instruments (Continued)**40.3 Currency and Interest Rate Risk (Continued)**

The maturities periods of contracts are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Due within 1 year	23,006.81	8,299.27	16,844.06	-
Over 1 year but not over 5 years	33,020.89	54,431.75	9,000.00	25,535.22
Over 5 years	16,699.68	17,914.56	4,000.00	4,000.00
Total	<u>72,727.38</u>	<u>80,645.58</u>	<u>29,844.06</u>	<u>29,535.22</u>

40.4 Interest Rate Risk

The Group has entered into interest rate swap contracts of long-term loans and debentures. The terms of the outstanding interest rate swap contracts as at December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Interest rate swap contracts to swap floating for fixed rate in USD currency	10.00	3,900.00	-	-
Interest rate swap contracts to swap fixed for floating rate in USD currency	35,795.55	36,034.12	35,795.55	36,034.12
Interest rate swap contracts to swap floating for decreasing floating rate in Baht currency	-	7,000.00	-	7,000.00
Interest rate swap contracts to swap fixed for floating rate in Baht currency	4,000.00	-	4,000.00	-
Interest rate swap contracts to swap floating for fixed rate in JPY currency	7,900.22	-	-	-
Interest rate swap contracts to swap floating for fixed rate in Baht currency	10,020.00	5,802.54	4,000.00	5,000.00
Interest rate swap contracts to swap fixed for decreasing fixed rate in Baht currency	-	2,500.00	-	-
Total	<u>57,725.77</u>	<u>55,236.66</u>	<u>43,795.55</u>	<u>48,034.12</u>

40. Disclosure of Financial Instruments (Continued)**40.4 Interest Rate Risk (Continued)**

The maturity periods of contracts are as follows:

	Unit: Million Baht			
	<u>Consolidated</u>		<u>Separate</u>	
	<u>financial statements</u>	<u>financial statements</u>	<u>financial statements</u>	<u>financial statements</u>
	2016	2015	2016	2015
Due within 1 year	4,520.00	2,700.00	1,500.00	2,400.00
Over 1 year but not over 5 years	47,012.00	34,451.28	42,295.55	45,634.12
Over 5 years	6,193.77	18,085.38	-	-
Total	<u>57,725.77</u>	<u>55,236.66</u>	<u>43,795.55</u>	<u>48,034.12</u>

40.5 Fluctuations in Oil Market Price Risk

The Group has entered into oil price derivatives. As at December 31, 2016, the volume of oil under those contracts that mature during January to December 2017 is 19.26 million barrels in the consolidated financial statements and 3.12 million barrels in the separate financial statements (as at December 31, 2015: 22.87 million barrels in the consolidated financial statements and 5.77 million barrels in the separate financial statements).

40.6 Credit Risk

Credit risk arises when customers do not comply with the terms and conditions of credit agreements, causing financial losses to the Company. However, the Company has managed risk by adjusting its credit policies according to the current economic situation, focusing on developing financial instruments by cooperating with financial institutions to support credit facilities provided to customers in order to buy the Company's products, such as the Dealer Financing and Supply Chain Credit project, the trade credit insurance, and the Payment card and Fleet card, aims to reduce credit risks of the Company. The Company also reduces credit risk by determining procedures for risk prevention and mitigation, including credit rating for all trading partners of the Company.

41. Fair Value Measurement

The fair value of the current portions of financial assets and liabilities approximates the carrying value due to the relatively short-term maturity of these financial instruments.

The fair value of long-term loans and borrowings carrying interest at market rates approximates the carrying values.

As at December 31, 2016 and 2015, the Group had the assets and liabilities that were measured at fair value using different levels of inputs as follows:

As at December 31, 2016

	Unit: Million Baht		
	Consolidated financial statements		
	Level 1	Level 2	Total
Financial assets measured at fair value			
Available-for-sale investments			
Equity instruments	6,709.86	-	6,709.86
Mutual funds	11,719.17	-	11,719.17
Debt instruments	-	5,410.51	5,410.51
Derivatives			
Foreign currency forward contracts	-	957.36	957.36
Cross-currency swap contracts	-	618.97	618.97
Interest rate swap contracts	-	200.16	200.16
Commodity swap contracts	254.61	116.14	370.75
Other derivative contracts	-	378.56	378.56
Financial liabilities measured at fair value			
Derivatives			
Foreign currency forward contracts	-	139.95	139.95
Cross-currency swap contracts	-	6,330.63	6,330.63
Interest rate swap contracts	-	312.77	312.77
Commodity swap contracts	1,742.39	4,109.89	5,852.28
Other derivative contracts	-	45.26	45.26

41. Fair Value Measurement (Continued)

As at December 31, 2016 (Continued)

Unit: Million Baht

	Separate financial statements		
	Level 1	Level 2	Total
Financial assets measured at fair value			
Available-for-sale investments			
Equity instruments	6,549.82	-	6,549.82
Mutual funds	11,566.43	-	11,566.43
Derivatives			
Cross-currency swap contracts	-	618.97	618.97
Interest rate swap contracts	-	99.67	99.67
Financial liabilities measured at fair value			
Derivatives			
Cross-currency swap contracts	-	1,702.63	1,702.63
Interest rate swap contracts	-	212.29	212.29

41. Fair Value Measurement (Continued)

As at December 31, 2015

Unit: Million Baht

	Consolidated financial statements		
	Level 1	Level 2	Total
Financial assets measured at fair value			
Available-for-sale investments			
Equity instruments	5,043.26	-	5,043.26
Mutual funds	8,309.73	-	8,309.73
Derivatives			
Foreign currency forward contracts	-	295.51	295.51
Cross-currency swap contracts	-	6,772.58	6,772.58
Interest rate swap contracts	-	448.52	448.52
Commodity swap contracts	2,136.10	6,466.26	8,602.36
Other derivative contracts	-	601.84	601.84
Financial liabilities measured at fair value			
Derivatives			
Foreign currency forward contracts	-	479.19	479.19
Cross-currency swap contracts	-	7,099.16	7,099.16
Interest rate swap contracts	-	365.65	365.65
Commodity swap contracts	923.30	8,813.04	9,736.34
Other derivative contracts	-	27.09	27.09

41. Fair Value Measurement (Continued)

As at December 31, 2015 (Continued)

Unit: Million Baht

	Separate financial statements		
	Level 1	Level 2	Total
Financial assets measured at fair value			
Available-for-sale investments			
Equity instruments	4,939.04	-	4,939.04
Mutual funds	8,169.75	-	8,169.75
Derivatives			
Cross-currency swap contracts	-	159.11	159.11
Interest rate swap contracts	-	292.50	292.50
Financial liabilities measured at fair value			
Derivatives			
Cross-currency swap contracts	-	1,652.43	1,652.43
Interest rate swap contracts	-	176.81	176.81

41. Fair Value Measurement (Continued)

As at December 31, 2016 and 2015, the Group had the assets and liabilities that were disclosed at fair value using different levels of inputs as follows:

As at December 31, 2016

	Unit: Million Baht			
	Consolidated financial statements			
	Level 1	Level 2	Level 3	Total
Financial assets disclosed at fair value				
Investment properties	-	12,859.24	10,126.40	22,985.64
Derivatives				
Foreign currency forward contracts	-	53.90	-	53.90
Foreign exchange option contracts	-	648.61	-	648.61
Commodity swap contracts	-	136.21	-	136.21
Financial liabilities disclosed at fair value				
Debentures - Baht currency	-	250,494.92	-	250,494.92
Debentures - foreign currencies	-	212,803.71	-	212,803.71
Derivatives				
Foreign currency forward contracts	-	46.53	-	46.53
Commodity swap contracts	-	974.78	-	974.78

41. Fair Value Measurement (Continued)

As at December 31, 2016 (Continued)

Unit: Million Baht

	Separate financial statements			
	Level 1	Level 2	Level 3	Total
Financial assets disclosed at fair value				
Investment properties	-	11,227.50	719.49	11,946.99
Derivatives				
Foreign currency forward contracts	-	53.90	-	53.90
Foreign exchange option contracts	-	648.61	-	648.61
Commodity swap contracts	-	136.21	-	136.21
Financial liabilities disclosed at fair value				
Debentures - Baht currency	-	151,921.49	-	151,921.49
Debentures - foreign currencies	-	63,394.46	-	63,394.46
Derivatives				
Foreign currency forward contracts	-	46.53	-	46.53
Commodity swap contracts	-	60.28	-	60.28

41. Fair Value Measurement (Continued)

As at December 31, 2015

	Unit: Million Baht			
	Consolidated financial statements			
	Level 1	Level 2	Level 3	Total
Financial assets disclosed at fair value				
Investment properties	-	10,659.50	10,131.98	20,791.48
Derivatives				
Foreign currency forward contracts	-	74.16	-	74.16
Foreign exchange option contracts	-	155.15	-	155.15
Commodity swap contracts	-	280.11	-	280.11
Financial liabilities disclosed at fair value				
Debentures - Baht currency	-	323,788.51	-	323,788.51
Debentures - foreign currencies	-	173,901.30	-	173,901.30
Derivatives				
Foreign currency forward contracts	-	120.13	-	120.13
Commodity swap contracts	-	4,157.06	-	4,157.06

41. Fair Value Measurement (Continued)

As at December 31, 2015 (Continued)

Unit: Million Baht

	Separate financial statements			
	Level 1	Level 2	Level 3	Total
Financial assets disclosed at fair value				
Investment properties	-	9,024.68	621.98	9,646.66
Derivatives				
Foreign currency forward contracts	-	74.16	-	74.16
Foreign exchange option contracts	-	155.15	-	155.15
Commodity swap contracts	-	280.11	-	280.11
Financial liabilities disclosed at fair value				
Debentures - Baht currency	-	185,356.89	-	185,356.89
Debentures - foreign currencies	-	62,000.52	-	62,000.52
Derivatives				
Foreign currency forward contracts	-	10.69	-	10.69
Commodity swap contracts	-	148.80	-	148.80

Fair value valuation techniques and inputs for fair Level 2 valuation

The fair values of bonds and derivatives were determined based on discounted future cash flow and valuation model techniques, using an appropriate risk-adjusted discount rate. Most of the inputs used for the valuation are observable in the relevant markets such as spot rates of foreign currencies, yield curves of the respective currencies, interest rate yield curves, yield curves of bonds and commodity price yield curves, etc.

The fair value of land categorized as investment property was determined by external, independent property valuers under the market approach.

Fair value valuation techniques and inputs for Level 3 valuation

The fair values of land and buildings for rent categorized as investment property were determined using the income approach. The inputs used for the valuation consisted of the rate of return and finance costs.

During the year, there were no transfers within the fair value hierarchy.

42. Dividend Payment

On April 11, 2016, at the 2016 Annual General Shareholders' Meeting of the Company, the shareholders approved dividend payments for the year 2015 of Baht 10.00 per share, approximately amounting to Baht 28,560.92 million. On September 25, 2015, the Company paid an interim dividend for the operating results of the first half of 2015 at Baht 6.00 per share for 2,856,090,628 shares, amounting to Baht 17,136.54 million. The remaining dividends were paid as follows:

Dividends	For operating period	Dividend payment rate (Baht/share)	Number of shares (shares)	Total dividend (million Baht)	Payment date
For the year 2015	July 1, 2015 - December 31, 2015	4.00	2,856,093,871	11,424.38	April 29, 2016

On August 19, 2016, at the Board of Directors Meeting No. 8/2016 of the Company, the Board approved interim dividend payments for the first half of 2016 as follows:

Dividends	For operating period	Dividend payment rate (Baht/share)	Number of shares (shares)	Total dividend (million Baht)	Payment date
Interim	January 1, 2016 - June 30, 2016	6.00	2,855,946,746	17,135.68	September 16, 2016

43. Promotional Privileges

The Company has received promotional privileges for the following activities from the Board of Investment (BOI) under the Investment Promotion Act, B.E. 2520

- ◆ the Ethane Separation Plant project
- ◆ the Gas Separation Plant Unit 6 project
- ◆ the North Bangkok Power Plant gas pipeline project
- ◆ the Fourth Rayong-Kangkoi gas pipeline project
- ◆ the Thai-Myanmar onshore gas pipeline project
- ◆ the Nakhon Sawan gas pipeline project
- ◆ the Nakhon Ratchasima gas pipeline project
- ◆ the Fifth onshore gas pipeline project
- ◆ the Ratchaburi - Wang Noi 6 gas metering station to Ratchaburi province gas pipeline project

The promotional privileges include:

- ◆ exemption from import duties on machinery approved by the BOI
- ◆ exemption from corporate income tax on net income from the promoted business for periods of eight years starting from the date on which the income is first derived from such operations.

During the year 2016, the Company has utilized the privileges for the Ethane Separation Plant project and the Gas Separation Plant Unit 6 project.

The sales and service income of the Company from the promoted and non-promoted businesses for the years ended December 31, 2016 and 2015 are as follows:

	Unit: Million Baht	
	Separate financial statements	
	2016	2015
Promoted businesses	120,922.78	144,689.63
Non-promoted businesses	1,318,470.71	1,567,561.46
Total	<u>1,439,393.49</u>	<u>1,712,251.09</u>

43. Promotional Privileges (Continued)

Some subsidiaries received the following promotional privileges from the BOI under the Investment Act, B.E. 2520

TOP received privileges for its oil refinery, power and steam generation, petroleum product production, chemical product production, ethanol product production, marine transportation, offshore crude oil unloading facilities and industrial zone. The promotional privileges include exemption from import duties and tax on the machinery approved by the BOI, exemption from corporate income tax on the net income from the promoted business for 7 to 8 years starting from the date on which income is first derived from such operations, and a 50% reduction of corporate income tax on the net income from the promoted business for five years starting from the expiry date of the corporate income tax exemption.

PTTGC received privileges for its production of upstream, intermediate and downstream petrochemical, utilities and production support facilities, jetty for transportation and storage of liquid product and transportation by marine vessels, production of petroleum product, research and development of polymer products and chemical formula, lab testing services and refinery. The promotional privileges include exemption from import duties and tax on the machinery approved by the BOI, exemption from corporate income tax on the net income from the promoted business up to 100% of its investment for eight years starting from the date on which income is first derived from such operations and a 50% reduction of corporate income tax on the net income from the promoted business for five years starting from the expiry date of the corporate income tax exemption.

GPSC received privileges for its production of electricity, steam, water and chilled water. The promotional privileges include exemption from import duties on the machinery approved by the BOI, exemption from corporate income tax on the net income from the promoted business for eight years starting from the date on which income is first derived from such operations, and a 50% reduction of corporate income tax on the net income from the promoted business for five years starting from the expiry date of the corporate income tax exemption.

IRPC received privileges for its manufacture of Acetylene Black, and Compounded Plastic, The cogeneration and steam power plant project ('CHP'), Propylene project ('PRP'), Blown Film project, Recovery from Purge Gas at PP Plant project, EBSM Upgrading for ABS Specialties project ('EBSM'), Multi Product Pipeline project ('MPPL'), HDPE Catalyst Commercialisation project ('Jet Mill') and Investment project in Industrial area. The promotional privileges include exemption from import duties and tax on materials and necessary parts including machinery approved by the BOI, exemption from corporate income tax on the net income from the promoted business for 5 to 8 years starting from the date on which income is first derived from such operations, a 50% reduction of corporate income tax on the net income from the promoted business for five years starting from the expiry date of the corporate income tax exemption, and double deduction of logistics, electricity and water expenses for a period of ten years since income is first derived from such operations.

PTTLNG received Category 7.1, promotional privileges for its liquefied natural gas transfer business. The promotional privileges include exemption from import duties on the machinery approved by the BOI, exemption from corporate income tax on the net income from the promoted business for eight years starting from the date on which income is first derived from such operations, and exemption from 50% corporate income tax on the net income from the promoted business for five years starting from the expiry date of the corporate income tax exemption.

43. Promotional Privileges (Continued)

PTT TANK received Category 7.1, public utilities and basic services, promotional privileges for its overseas logistics business. The promotional privileges include exemption from import duties and tax on the machinery approved by the BOI, exemption from corporate income tax on the net income from the promoted business up to 100% of its investment for eight years starting from the date on which income is first derived from such operations, and allow to deduct loss carry forward incurred during tax exemption period from net income incurred after tax exemption period for five year starting from expiry date of the corporate income tax exemption.

PTTPMMA received Category 6.11, manufacture of petrochemicals, promotional privileges for its Polymethyl Methacrylate (PMMA) production business. The promotional privileges include exemption from import duties and tax on the machinery approved by the BOI, exemption from corporate income tax of the net income from the promoted business up to 100% of its investment exclude the cost of land and working capital for eight years starting from the date on which income is first derived from such operations, and a 50% reduction of corporate income tax on the net income from the promoted business for five year starting from from the expiry date of the corporate income tax exemption.

As the Group has received promotional privileges from the BOI, it has to comply with all conditions and regulations as stipulated in the promotional certificates.

44. Proceeding regarding the Central Administrative Court's Ordering Temporary Suspension of Projects in Map Ta Phut Area

On June 19, 2009, the Stop Global Warming Association and a group of individuals totaling 43 parties (the Petitioners) filed a complaint with the Central Administrative Court (the Court) as the black case No. 908/2552, against eight government agencies, together with a motion seeking the Court injunction to temporarily suspend all operations and activities of 76 industrial projects in the Map Ta Phut area in Rayong province.

On September 29, 2009, the Court ordered the temporary injunction by requiring the eight accused government agencies to issue the order to temporarily suspend all 76 projects pending the Court's judgment or order otherwise, except for those projects or activities which received the permits before the effective date of the Constitution of Kingdom of Thailand B.E. 2550 or which were not required to prepare the Environmental Impact Assessment (EIA) reports pursuant to the Ministerial Announcement of Ministry of Natural Resources and Environment dated June 16, 2009. 25 projects of the Group were under the suspension order, and three of those 25 projects belonged to the Company.

On October 16, 2009, the Group, as an interested person, submitted a motion to appeal the Court's order to the Supreme Administrative Court.

On December 2, 2009, the Supreme Administrative Court issued an order No. 592/2552 amending the Court's injunction by requiring the eight accused government agencies to order the temporary suspension of all projects or activities listed in the complaint except for 11 projects, which clearly, according to the Supreme Administrative Court, did not severely affect the community but were projects intended to mitigate pollution or only additional installation to the existing projects. Among those 11 projects, seven of them belonged to the Group, comprising one project of the Company and six projects of the other companies in the Group. Two projects of the Company were still under the Court's order to suspend.

On December 18, 2009, the public prosecutor submitted the answer rejecting all allegations in the complaint.

On September 2, 2010, the Court rendered a judgment revoking the permit of the projects listed in the complaint which, according to the law, were categorized as project that might severely affect the community and did not comply with the procedures set forth in Section 67 paragraph 2 of the Constitution, B.E. 2550. The revocation was effective as of the date of the judgment. One project of the Group is within the scope of the judgment.

On October 1, 2010, the 43 prosecutors appealed the Court's judgment to the Supreme Administrative Court. On December 7, 2010, the eight accused government agencies by the public prosecutors submitted a reply to the appeal. The appeal is currently under the consideration of the Supreme Administrative Court.

45. Commitments and Contingent Liabilities

Details of significant changes in commitments and contingent liabilities are as follows:

45.1 Details of commitments to subsidiaries, joint ventures, associates and other related companies are as follows:

45.1.1 The Company has provided loans to its subsidiaries and joint ventures with credit limits totaling Baht 96,378.14 million. As at December 31, 2016, the Company made payments in respect of these loans totaling Baht 88,583.83 million. The remaining credit limits were Baht 7,794.31 million.

45.1.2 The Company entered into the Sponsor Support Agreements with subsidiaries and joint ventures with credit limits equal to the sum of the loan obligations to financial institutions of such subsidiaries and joint ventures. Under these agreements, as at December 31, 2016, the Company had commitments of USD 176.18 million or equivalent to Baht 6,342.92 million.

45.1.3 The Company had obligations under the Shareholder Agreements to pay for ordinary shares in proportion to its shareholding. As at December 31, 2016, the Company had remaining obligations amounting to Baht 4,833.34 million.

45.2 Commitments under operating leases - the Group as a lessee, the future minimum lease payments under uncancellable operating leases as at December 31, 2016 and 2015 are as follows:

	Unit: Million Baht			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Within 1 year	2,195.82	2,571.37	66.39	76.82
Over 1 year but not over 5 years	5,046.53	5,815.44	315.60	300.51
Over 5 years	5,681.37	5,217.06	1,131.64	1,048.57
Total	<u>12,923.72</u>	<u>13,603.87</u>	<u>1,513.63</u>	<u>1,425.90</u>

45.3 As at December 31, 2016, the Group had capital commitments of Baht 18,823.93 million in the consolidated financial statements.

45.4 As at December 31, 2016, the Group had outstanding letters of credit of Baht 17,422.82 million in the consolidated financial statements and Baht 5,342.43 million in the separate financial statements.

45.5 As at December 31, 2016, the Group had contingent liabilities in the form of letter of guarantee amounting to Baht 26,367.14 million in the consolidated financial statements and Baht 127.30 million in the separate financial statements.

45. Commitments and Contingent Liabilities (Continued)

Details of significant changes in commitments and contingent liabilities are as follows: (Continued)

- 45.6 A subsidiary entered into a contract to sell a product to the Company and the Company entered into a contract to resell the same product to a listed company. The term of the two contracts was 15 years, expiring on January 31, 2012. Before the expiration of the contract, the subsidiary notified the Company that the contract would not be renewed. Consequently, without product to resell, the Company had to notify the listed company that the contract would also not be renewed. The Company's notice was served to the listed company in accordance with the terms and conditions set forth in the contract. On December 3, 2009, the listed company submitted claims with the Thai Arbitration Institute (the Institute) requesting that the Company and the subsidiary, as the seller and the supplier, respectively, comply with the contracts by continuing to sell the product to the listed company or be jointly liable to pay damages.

On February 10, 2010, the subsidiary submitted motion with the Institute asking to dismiss the claims against it from the case list. The Institute issued an order to dismiss the claims relating to the subsidiary.

The Company forwarded the case to the Office of the Attorney General to submit a defense to the Institute. On April 28, 2010, the public prosecutor submitted the defense with the Institute for the Company. The tribunal finished the witness examination. Consequently, on March 25, 2016, the tribunal ruled that the Company make a partial payment for damages to the listed company. However, the Company was of the opinion that the arbitral award might be both factually and legally inconsistent. Therefore, the Company will exercise its legal right by filing a motion with the court requesting the arbitral award be revoked. On June 30, 2016, the Company by the public prosecutor filed a motion to revoke the arbitral award with the Civil Court. Currently, this case is under the consideration of the Civil Court. Subsequently, on December 16, 2016, the listed company submitted a motion with the Civil Court asking for the enforcement of the arbitral award. The Company is in the process of forwarding the case to the office of Attorney General for the submission of the motion to object and proceeding of the case.

45. Commitments and Contingent Liabilities (Continued)

Details of significant changes in commitments and contingent liabilities are as follows: (Continued)

- 45.7 On May 26, 2010, the contractor for an onshore natural gas pipeline construction project (the “Contractor”) submitted claims to the Thai Arbitration Institute (the Institute) seeking overdue payment and damages from the Company for the work performed in connection with the project. The Company, however, considered that the submission of the claims was incompliant with the dispute resolution procedure agreed upon under the contract. Therefore, the Company filed an opposition to the Contractor’s claim submission with the Institute and reserved right to protest such contractually incompliant claim submission in the arbitration procedure. After the claim submission, the Central Bankruptcy Court ordered the Contractor be under an absolute receivership which rendered the official receiver to have sole power in any litigation pertaining to the Contractor’s assets. Subsequently, the Contractor’s official receiver has petitioned the Institute to substitute the Contractor in the dispute against the Company. Regarding the Contractor’s bankruptcy case, the Company submitted, as a creditor, a motion for receiving a debt payment in accordance with the law. With respect to the arbitration process, the Company submitted the defense together with counterclaims seeking damages from the Contractor. Subsequently, the arbitral tribunal rendered an award ordering the Company to partially pay for the Contractor’s claims. However, the Company considered that the arbitral award is materially erroneous both in fact and in law, in which case, the Company has a right to protest against such award with the Court of competent jurisdiction requesting for the revocation of the award and therefore the Company has filed the motion to revoke the arbitral award with the Central Administrative Court. Currently the Central Administrative Court has summoned the contractor to submit its opposition and the case is now under the consideration of the Court. The Contractor submitted a motion with the Civil Court asking for the enforcement of the arbitral award. The Company by the public prosecutor already filed a motion to object with the Civil Court. Currently, the case is under the consideration of the Civil Court.

On September 8, 2010, the Contractor by the official receiver submitted the claims to the Institute seeking overdue payment and damages from the Company for the work performed in connection with another pipeline construction project. The Company, however, considered that the submission of the claims was incompliant with the dispute resolution procedure agreed upon under the contract. Therefore, the Company filed an opposition to the Contractor’s claim submission with the Institute and reserved the right to protest such contractually incompliant claim submission in the arbitration procedure. In contention against the alleged claims, the Company submitted the defense together with counterclaims seeking damages from the Contractor. Currently, the arbitral tribunal has been appointed and the case is now under the consideration of the tribunal.

- 45.8 On September 22, 2011, six petitioners, led by the Thailand Watch Foundation filed, a lawsuit against the Company and the Ministry of Finance with the Central Administrative Court (the Court) alleging that the Company’s privatization, the share distribution and the asset evaluation were in violation of law, and therefore, asked for the Court’s judgment that the sale of the Company’s shares be null and void and the shares be resold. The petitioners also asked that the shares in oil refinery plants owned by the Company be returned to state ownership or be sold to the public in order to cease the Company’s monopoly in the oil refinery industry. In addition, the petitioners sought the Court’s order of the confiscation of the Company’s properties, which had been obtained by operation of public law or the force-sale of the Company’s gas separation plants to discontinue the monopoly. In response, the Company rejected all allegations and forwarded the case to the office of the Attorney General for the submission of the answer and the public prosecutor already submitted the answer with the Court. Subsequently on June 30, 2016, the Court issued an order to revoke the acceptance of the complaint and to dismiss the case.

45. Commitments and Contingent Liabilities (Continued)

Details of significant changes in commitments and contingent liabilities are as follows: (Continued)

- 45.9 On February 25, 2014, the contractor for an on-shore natural gas pipeline construction project (the “Contractor”) filed a lawsuit against the Company with the Civil Court on the grounds of wrongful termination and breach of contract and claimed for outstanding payment of the work and damages. On the contrary, the Company considered that all of the Company’s actions have been in accordance with the terms and conditions of the contract. Therefore, the Company forwarded the case to the Office of The Attorney General for consideration to arguing the case for the Company and the prosecutor has submitted the answer with the Court. Consequently, the Court ordered the case be transferred to the Central Administrative Court for consideration and judgment because the Civil Court and the Central Administrative Court has the corresponding opinions that this case was an administrative case. The Civil Court transferred this case to the Central Administrative Court. Currently, the case is under the consideration of the Central Administrative Court.
- 45.10 On August 26, 2010, PTTEP Australasia (PTTEP AA) received a letter from the Government of Indonesia (GoI) claiming compensation relating to an incident in 2009 when oil and natural gas leaked from a well in PTTEP AA’s Montara project in Australian territory in the Timor Sea. PTTEP AA rejected the claim on the basis that the evidence provided by the GoI was considered unproven and unsubstantiated. No verifiable scientific evidence was ever provided to support the claim. No further communication on the claim has been received by PTTEP AA from the GoI since December, 2012.

On March 11, 2016, PTTEP AA received a letter from a firm of Australia lawyers representing a group of West Timorese seaweed farmers, notifying PTTEP AA of their intention to commence a legal action for compensation relating to the 2009 Montara incident. Subsequently, on August 9, 2016 the company was notified of a claim made in the Sydney Registry of the Federal Court of Australia seeking damages on behalf of a group of seaweed farmers (the Class Action). The Statement of Claim as filed does not quantify the claim, and no supporting evidence has yet been presented to the court. PTTEP AA has appointed lawyers and is defending the claim.

Currently, PTTEP considers that the claims from the GoI and the Class Action remain unproven and unsubstantiated.

- 45.11 During the third quarter of 2014, the number of people in Rayong filed several lawsuits with the Civil Court and Rayong Provincial Court against PTTGC to claim the extra compensation from oil spill incident and to perform the rehabilitation of the sea and natural environmental recovery. Some cases have been dismissed and some cases have been passed a judgement by the Civil Court on 25 August 2016 ordered PTTGC to compensate for damages including interest and rehabilitation, of approximately Baht 11.26 million. PTTGC is considering the Court judgment to prepare for an appeal. Nevertheless, there are remaining cases that are still on trial by Rayong Provincial Court, in which PTTGC believes that the outcome of the consideration will not result in material damage and material financial impact to PTTGC. Therefore, PTTGC has not provided against any loss that may result from this matter in the financial statements.

46. Other Event

46.1 On April 4, 2016, the Ombudsman of Thailand submitted a complaint to the Administrative Court (the Court) against the Minister of Finance, the Minister of Energy, the Company and other defendants as the black case No. 510/2559, requesting the Court as follows:

- 1) To revoke the Cabinet Resolutions on December 18, 2007 and August 10, 2010.
- 2) To order the Minister of Finance, the Minister of Energy and the Company to conduct a separation and transfer of net assets according to the plaintiff's allegation as of September 30, 2001 amounting to Baht 68,569.69 million, including other compensations and benefits.
- 3) To revoke the separation of public assets and the preferential rights to establish the gas pipeline system according to the plaintiff's allegation.

On May 26, 2016, the Court ordered the Company to submit a defense, responding to the particular issue that was whether the Company completely transferred the assets of the Petroleum Authority of Thailand (the tenth defendant), which were public assets, to the first defendant (the Minister of Finance) in accordance with the Cabinet Resolution on December 18, 2007. The public prosecutor already submitted the answer and the additional answer with the Court. The case is currently under the consideration of the Court.

Nevertheless, on December 14, 2007, the Supreme Administrative Court in red case No. Fo. 35/2550, rendered the judgment ordering the co-defendants to mutually transfer the public assets to the Minister of Finance, according to the judgment. Therefore, on December 18, 2007, the cabinet acknowledged the aforesaid judgment and ordered the Minister of Finance and the Minister of Energy to mutually conduct with the judgment. On December 26, 2008, the Supreme Administrative Court declared that the Company and all relevant organizations had completely complied with the judgment of the Supreme Administrative Court. Furthermore, the plaintiff and the co-plaintiffs had submitted a complaint regarding the separation of public assets to the Court for four times. The Court had ordered to dismiss the case and reaffirmed that the judgment of the red case No. Fo. 35/2550 was completed. Consequently, on August 10, 2010, the cabinet acknowledged the conduct of the Supreme Administrative Court judgment in accordance with the proposals of the Minister of Energy and of the Minister of Finance.

46.2 On November 18, 2016, at the Board of Directors Meeting No. 11/2016 of the Company, the Board passed a resolution to approved the restructuring of the Company by means of the transfer of the oil business unit, including of the assets and liabilities of the business unit, and the shares of companies related to the oil business unit from the Company to PTT Retail Business Company Limited (PTTRB), the change of PTTRB's name to PTT Oil and Retail Business Company Limited (PTTOR) and the preliminary plan for initial public offering of ordinary shares of PTTOR. In addition, the Board passed a resolution to proceed with the request of approval from the relevant agencies, e.g. the Ministry of Energy, The Board of Directors of State Enterprise Policy Office ("Superboard"), the Cabinet, and the shareholders' meeting of the Company to consider and approve the aforementioned transaction in accordance with the relevant rules and regulations.

46. Other Event (Continued)

- 46.3 On December 16, 2016, at the Board of Directors Meeting No. 12/2016 of the Company, the Board passed a resolution to approve the transfer of all shares the Company holds in HMC Polymers Co., Ltd. (HMC), PTT Asahi Chemicals Co., Ltd. (PTTAC), PTT MCC Biochem Co., Ltd. (PTTMCC), PTT Polymer Marketing Co., Ltd. (PTTPM), PTT Polymer Logistics Co., Ltd. (PTTPL), and PTT Maintenance & Engineering Co., Ltd. (PTTME) to PTT Global Chemical Public Co., Ltd. (PTTGC). In addition, the Board passed a resolution to approve PTT PMMA Co., Ltd. (PTTPMMA), in which the Company holds 100% of shares, to transfer the rights to operate all of the PMMA Projects including any other relevant assets (collectively, the “Target Entities”) to PTTGC as agreed. The total value of the transfer is approximately Baht 26,300 million. However, the transfer of all shares and assets of the Target Entities is expected to be completed following the satisfaction of all conditions precedent (CPs), unless a waiver is granted.

However, on February 14, 2017, at the Board of Directors Meeting No. 2/2017 of PTTGC, the Board passed a resolution to submit for approval at the Annual General Meeting of the Shareholders for the aforementioned transaction with the Company, whereby a resolution of the shareholders meeting shall require no less than three-quarters of the votes of the shareholders present in the meeting and have the right to vote, excluding the votes of the interested shareholders.

47. Events after the Reporting Period

- 47.1 The board of directors of the Company approved these financial statements for public issuance on February 16, 2017.
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