

## Executive Summary

Year 2017 progressed with global crude oil prices recovery benefiting PTTEP's average selling price while the persistent effort in our cost management and operational improvement led to the further reduction of PTTEP's unit cost from 30.46 USD/BOE in 2016 to 29.05 USD per barrel of oil equivalent (BOE). As a result, PTTEP's net income for 2017 was improved by 60% to 594 MMUSD compared to the previous year.

PTTEP's sales revenue stood at 4,281 MMUSD this year, a 2% increase from 2016, while the average sales volume target was met at 299,206 barrel of oil equivalent per day (BOED) through the uplifted condensate and crude production from key projects in Thailand and Australia despite the pressure from low gas nomination in the Gulf of Thailand.

With the aforementioned operational results, the Company reported recurring net profit of 836 MMUSD and loss on non-recurring items of 242 MMUSD, mainly derived from impairment charge from the revision of the Mariana Oil Sands Development plan, which was done in accordance with accounting standards and has no impact on the Company's cash on hand or cash flows, offsetting with tax benefits related to Thai Baht appreciation against US Dollar during the year.

At the end of 2017, the Company upheld its strong financial position with total assets amounted to 19,220 MMUSD, of which 4,468 MMUSD was cash and short-term investments; total liabilities stood at 7,703 MMUSD, comprising interest-bearing debt of 2,907 MMUSD; resulted in total shareholders' equity of 11,517 MMUSD.

Besides, PTTEP is vigorously preparing to participate in Thailand's expiring concessions bidding as well as accelerating the progress on pre-development projects especially the Mozambique Offshore Area 1 Project which is in the process of negotiating the LNG off-take agreements. The Company also continues to seek investment opportunities in both upstream and LNG value chains. In response to the changing energy industry, the Company has restructured its organization to capture the transformation and explore new business opportunities in upstream and other emerging energy businesses for sustainable future growth.

### Table of key financial results

| (Unit: Million US Dollar)   | 2017  | 2016  | %<br>Inc.<br>YTD | Q3<br>2017 | Q4<br>2017 | Q4<br>2016 | %<br>Inc.<br>QoQ | %<br>Inc.<br>YoY |
|---|-------|-------|------------------|------------|------------|------------|------------------|------------------|
| Total Revenue *   | 4,523 | 4,339 | 4                | 1,134      | 1,271      | 1,089      | 12               | 17               |
| Sales Revenue *   | 4,281 | 4,190 | 2                | 1,064      | 1,202      | 1,038      | 13               | 16               |
| EBITDA  | 3,063 | 3,027 | 1                | 777        | 825        | 690        | 6                | 20               |
| Profit(loss) for the period   | 594   | 372   | 60               | (264)      | 289        | (16)       | >100             | >100             |
| Basic earnings(loss) per share from continuing operations (Unit: USD) | 0.13  | 0.07  | 86               | (0.07)     | 0.07       | (0.01)     | >100             | >100             |
| Profit from normal operation  | 836   | 466   | 79               | 218        | 240        | 123        | 10               | 95               |
| Profit(loss) from non-recurring items                                 | (242) | (94)  | >(100)           | (482)      | 49         | (139)      | >100             | >100             |

\* Revenue from continuing operations

 **Economic Outlook in 2017****Crude Oil Prices**

Crude oil prices are among the key determinants of the Company's performance. In 2017, Dubai crude oil price averaged at 53.14 USD/BBL, improving from last year but continuing to exhibit volatility. In the first quarter of this year, Dubai crude oil price averaged at around 53 USD/BBL before moving down to 43 USD/BBL in June 2017 following the rise of the U.S. crude production to 9.8 million barrels per day. The increase was mainly attributed to Shale Oil which represented a million barrel increase from the 2016 production level, and the significant in rig-count increase of 220 rigs over the last year. Nonetheless, in the second half of 2017, global crude oil prices continuously recovered due to the temporary suspension for maintenance of the "Keystone" pipeline in the U.S. with a capacity of 590,000 barrels per day and the "Forties" pipeline in the UK with a capacity of 450,000 barrels per day, a shutdown of the U.S. offshore crude production from the impact of hurricane "Nate", as well as the agreement between OPEC and Non-OPEC countries to extend a 1.8 million barrel per day production cut to December 2018 from the previous March 2018 target along with high compliance rates from the producers. Another bullish factor was the continued decline in the U.S. crude stock from 534 million barrels in March 2017 to 431 million barrels in December 2017. The aforementioned factors pushed Dubai crude oil prices to reach a year high of 64 USD/BBL in December 2017.

**Liquefied Natural Gas (LNG)**

LNG Market in 2017 remained oversupplied due to incremental volumes from new projects, mainly from LNG projects in Australia, Russia and the U.S. with total capacity of 310 million ton, while LNG's demand stood at 290 million ton. This supply glut pressured LNG selling price to stay low with Asian Spot Price for 2017 averaged at 7.1 USD/MMBTU. This weakened LNG price during 2017 provided the opportunity to the buyer to increase LNG import to Thailand which negatively impacted the Company's sales volume through the lower gas nomination in the Gulf of Thailand.

**Thailand's Energy Demand**

Thailand's energy demand from January to November of 2017 was reported at 2.13 million BOED, an increase of 1.6% relative to the same period in the previous year (Source: EPPO, The Ministry of Energy), partly resulting from Thailand's economic expansion. Crude oil and conventional sources of natural gas continued to be the primary sources of the domestic energy supply. However, due to changes in electricity consumption behavior following technological advances, solar power and LNG imports are gradually being adopted as alternative sources of energy supply.

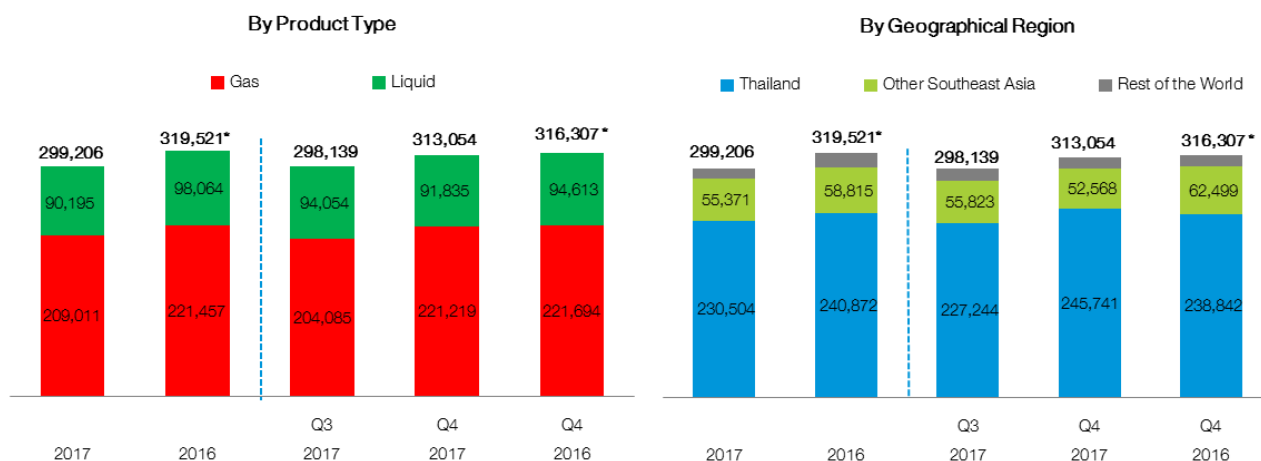
**Exchange Rates (Thai Baht against US Dollar)**

Because PTTEP's functional currency is the US Dollar whereas the tax filing currency is the Thai Baht, the THB:USD exchange rate is another factor affecting the Company's financial performance. The Thai Baht appreciated against US Dollar in 2017 due to a number of factors including the continued uncertainty of the U.S. fiscal policies, monetary policies of major global economies, and geopolitical risks in the Korean Peninsula. These factors resulted in heightened volatility in financial markets and of fund flows. For this year, the THB:USD exchange rate closed stronger at 32.68 THB/USD, appreciating by 3.15 THB/USD from 35.83 THB/USD at the end of 2016, leading to foreign exchange-related gains and tax savings for PTTEP.

## Financial Performance

### Average Sales Volume and Sales Price \*

Unit : Barrels of Oil Equivalent per Day



\*Included sales volume of Oman 44 Project until end of August 2016

| Average selling price and Dubai crude oil price | 2017  | 2016  | % Inc. (Dec.) YTD | Q3 2017 | Q4 2017 | Q4 2016 | % Inc. (Dec.) QoQ | % Inc. (Dec.) YoY |
|---|-------|-------|-------------------|---------|---------|---------|-------------------|-------------------|
| Average selling price (BOE)                     | 39.20 | 35.91 | 9                 | 38.78   | 41.74   | 35.65   | 8                 | 17                |
| Average Dubai crude oil price                   | 53.14 | 41.27 | 29                | 50.43   | 59.31   | 48.32   | 18                | 23                |

#### For the year ended 2017 compared with the year ended 2016

In 2017, average sales volume of PTTEP and its subsidiaries (the "Group") decreased to 299,206 barrels of oil equivalent per day (BOED) when compared with the year ended 2016 (In 2016: 319,521 BOED). The decrease was primarily from the PTTEP Australasia Project due to lower crude sales loading and Sinphuhorm Project due to lower nomination from buyer. However, the average selling price in 2017 increased to 39.20 USD/BOE (In 2016: 35.91 USD/BOE).

#### For Fourth quarter of 2017 compared with Third quarter of 2017

In Q4/2017, the Group had an average sales volume of 313,054 BOED, an increase from Q3/2017 of 298,139 BOED, primarily from the Bongkot and Contract 4 Projects. The average selling price in Q4/2017 also increased to 41.74 USD/BOE. (Q3/2017: 38.78 USD/BOE).

#### For Fourth quarter of 2017 compared with Fourth quarter of 2016

The average sales volume in Q4/2017 decreased when compared with the same period in 2016 of 316,307 BOED, primarily from the Yadana and Sinphuhorm Projects. However, during Q4/2017, the average selling price increased to 41.74 USD/BOE. (Q4/2016: 35.65 USD/BOE).

### Overall Operating Results

#### For the year ended 2017 compared with the year ended 2016

For 2017, the Group had a net profit of 594 MMUSD, an increase of 222 MMUSD or 60% from a net profit in 2016 of 372 MMUSD. The increase in profit was primarily due to 1) a decrease in Depreciation, depletion and amortization expenses of 429 MMUSD mainly from an increase in the petroleum reserves, 2) income taxes expenses decreased of 105 MMUSD mainly from the currency appreciation of Thai Baht against US Dollar, and 3) the recognition of loss from financial instruments decreased of 90 MMUSD, while 4) an impairment loss on assets increased of 511 MMUSD.

For 2017, the Group reported a loss from non-recurring items in the amount of 242 MMUSD, an increase in net loss of 148 MMUSD when compared with a loss from non-recurring items of 94 MMUSD in 2016. The increase was primarily due to a higher recognition of an impairment loss on assets of 511 MMUSD, while Income taxes expenses from the currency appreciation of Thai Baht against US Dollar decreased of 236 MMUSD.

#### For Fourth quarter of 2017 compared with Third quarter of 2017

In Q4/2017, the Group had a net profit of 289 MMUSD, an increase of 553 MMUSD or more than 100% when compared with Q3/2017 which reported a net loss of 264 MMUSD. The increase was primarily due to no recognition of impairment loss on assets in Q4/2017, while in Q3/2017, there was recognition of such impairment loss of 558 MMUSD.

For Q4/2017, the Group reported a profit from non-recurring items of 49 MMUSD, an increase of 531 MMUSD when compared with Q3/2017 which reported a loss of 482 MMUSD. The increase was primarily due to no recognition of impairment loss on assets in Q4/2017, while in Q3/2017, there was recognition of such impairment loss of 558 MMUSD.

#### For Fourth quarter of 2017 compared with Fourth quarter of 2016

When compared a net profit for Q4/2017 with the same period last year which reported a net loss of 16 MMUSD, the Group had an increase in operating results of 305 MMUSD or more than 100%. The increase was primarily due to 1) an increase in revenue from sales of 164 MMUSD mainly from an increase in average sales price, 2) a decrease in depreciation, depletion and amortization expenses of 73 MMUSD mainly from an increase in the petroleum reserves, and 3) a decrease in income taxes expenses of 69 MMUSD mainly from the currency appreciation of Thai Baht against US Dollar.

For Q4/2017, the Group reported a profit from non-recurring items of 49 MMUSD, an increase in operating results of 188 MMUSD when compared with Q4/2016 which reported a loss of 139 MMUSD. The increase was primarily due to a decrease in income tax expenses of 155 MMUSD from the currency appreciation of Thai Baht against US Dollar, as well as, in Q4/2017, the Group did not recognize an impairment loss on assets, while in Q4/2016, the Group recognized such impairment loss of 47 MMUSD.

*Operating Results by Segments*

| Net Profit (loss)                | 2017       | 2016       | %<br>Inc. (Dec.)<br>YTD | Q3<br>2017   | Q4<br>2017 | Q4<br>2016  | %<br>Inc. (Dec.)<br>QoQ | %<br>Inc. (Dec.)<br>YoY |
|----------------------------------|------------|------------|-------------------------|--------------|------------|-------------|-------------------------|-------------------------|
| <i>(Unit: Million US Dollar)</i> |            |            |                         |              |            |             |                         |                         |
| Exploration and production       | 254        | 438        | (42)                    | (350)        | 250        | 31          | >100                    | >100                    |
| Thailand                         | 826        | 610        | 35                      | 211          | 264        | 105         | 25                      | >100                    |
| Overseas                         | (572)      | (172)      | >(100)                  | (561)        | (14)       | (74)        | 98                      | 81                      |
| - Other Southeast Asia           | 40         | (11)       | >100                    | 16           | (4)        | (45)        | >(100)                  | 91                      |
| - Australia                      | (46)       | (108)      | 57                      | (21)         | (8)        | (17)        | 62                      | 53                      |
| - America                        | (563)      | (10)       | >(100)                  | (559)        | (3)        | (2)         | 99                      | (50)                    |
| - Africa                         | (3)        | (43)       | 93                      | 3            | 1          | (10)        | (67)                    | >100                    |
| Pipeline transportation          | 238        | 203        | 17                      | 69           | 63         | 45          | (9)                     | 40                      |
| Head office and others           | 102        | (289)      | >100                    | 17           | (24)       | (109)       | >(100)                  | 78                      |
| Discontinued Operations          | -          | 20         | (100)                   | -            | -          | 17          | -                       | (100)                   |
| <b>Total</b>                     | <b>594</b> | <b>372</b> | <b>60</b>               | <b>(264)</b> | <b>289</b> | <b>(16)</b> | <b>&gt;100</b>          | <b>&gt;100</b>          |

**For the year ended 2017 compared with the year ended 2016**

For 2017, the Group reported a net profit of 594 MMUSD, an increase of 222 MMUSD or 60% when compared with a net profit in 2016 of 372 MMUSD, primarily due to an increase in operating result of Head office and others segment and Exploration and production segment in Thailand of 391 MMUSD and 216 MMUSD, respectively, while Exploration and production segment in America had a decrease in operating results of 553 MMUSD.

**Head office and others segment**

For 2017, the Head office and others segment reported a net profit of 102 MMUSD, an increase in operating results by 391 MMUSD or more than 100% when compared with a net loss in 2016 of 289 MMUSD, primarily due to a decrease in income tax expense resulting from the currency appreciation of Thai Baht against US Dollar and in 2017, the Group recognized a gain on oil price hedging, while in 2016, it recognized a loss on oil price hedging.

**Exploration and production segment**

- **Thailand**

For 2017, Thailand reported a net profit of 826 MMUSD, an increase of 216 MMUSD or 35% when compared with a net profit in 2016 of 610 MMUSD, primarily due to a decrease in depreciation, depletion and amortization expenses from an increase in the petroleum reserves and a decrease in sales volume, while income tax expenses increased from an increase in a net profit before tax mainly from increases in revenue from sales as a result of an increase in average sales price.

- **America**

For 2017, America reported a net loss of 563 MMUSD, an increase of net loss of 553 MMUSD or more than 100% when compared with a net loss of 10 MMUSD in 2016. The increase was primarily due to a recognition of impairment loss on assets of the Mariana Oil Sand Project of 558 MMUSD during 2017.

#### For Fourth quarter of 2017 compared with Third quarter of 2017

For Q4/2017, the Group reported a net profit of 289 MMUSD, an increase of 553 MMUSD or more than 100% when compared with a net loss in Q3/2017 of 264 MMUSD, primarily due to an increase of Exploration and production segment in America of 556 MMUSD.

##### Exploration and production segment

- America

In Q4/2017, America reported a net loss of 3 MMUSD, a decrease of 556 MMUSD or 99% when compared with a net loss of 559 MMUSD in Q3/2017, primarily due to the recognition of impairment loss on assets of the Mariana Oil Sand Project of 558 MMUSD during Q3/2017.

#### For Fourth quarter of 2017 compared with Fourth quarter of 2016

For Q4/2017, the Group reported a net profit of 289 MMUSD, an increase in operating results of 305 MMUSD or more than 100% when compared with a net loss in Q4/2016 of 16 MMUSD, primarily due to an increase in operating results of Exploration and production segment in Thailand, Other Southeast Asia and Head office and others segment of 159 MMUSD, 41 MMUSD, and 85 MMUSD, respectively.

##### Exploration and production segment

- Thailand

In Q4/2017, Thailand reported a net profit of 264 MMUSD, an increase in net profit of 159 MMUSD or more than 100% when compared with a net profit in Q4/2016 of 105 MMUSD, primarily due to an increase in revenue from sales as a result of an increase in average sales price and a decrease of depreciation, depletion and amortization expenses from an increase in the petroleum reserves.

- Other Southeast Asia

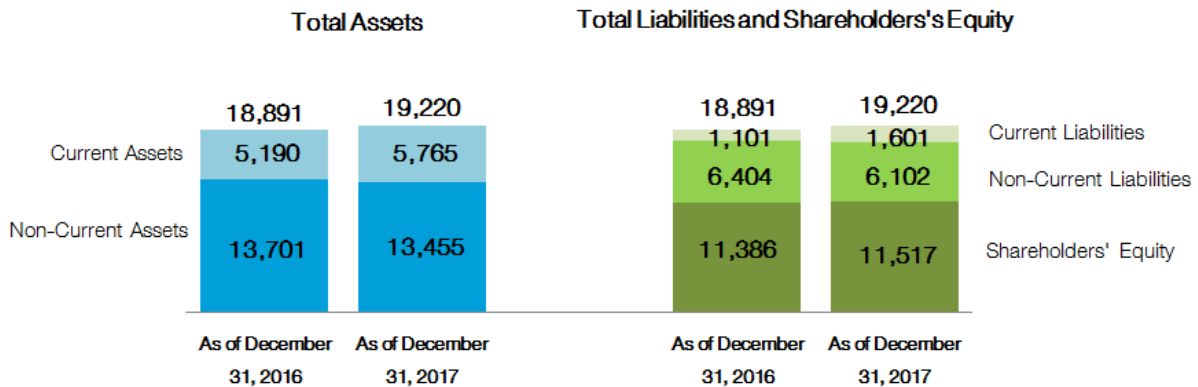
In Q4/2017, the Other Southeast Asia reported a net loss of 4 MMUSD, a decrease in net loss of 41 MMUSD or 91% when compared with a net loss in Q4/2016 of 45 MMUSD, primarily due to no recognition of impairment loss on assets in Q4/2017, while in Q4/2016 such impairment loss on assets was recognized for the Yetagun and Natuna Sea A Projects.

##### Head office and others segment

The Head office and others segment reported a net loss of 24 MMUSD, a decrease in net loss of 85 MMUSD or 78% when compared with the a net loss in Q4/2016 of 109 MMUSD, primarily due to a decrease in income tax expense resulting from the currency appreciation of Thai Baht against US Dollar.

*Financial Position*

*Unit : Million US Dollar*



**Assets**

As at December 31, 2017, the Group had total assets in the amount of 19,220 MMUSD (equivalent to 628,121 MMTHB), an increase of 329 MMUSD from the total assets as of December 31, 2016 of 18,891 MMUSD (equivalent to 676,890 MMTHB), primarily due to;

- (1) Current assets, which were primarily comprised of cash and cash equivalents, short-term investments and account receivable – parent company, increased by 575 MMUSD mainly due to an increase of 446 MMUSD in cash and cash equivalents and short-term investments and 184 MMUSD in account receivable – parent company, while materials and supplies decreased by 48 MMUSD.
- (2) Non-current assets, which were primarily comprised of exploration and production assets in joint venture projects that are recognized as part of the property, plant and equipment, exploration and evaluation assets and goodwill. The decrease of 246 MMUSD was mainly due to 1) recognition of impairment loss on assets of the Mariana Oil Sand Project, 2) depreciation, depletion and amortization expenses even though the Group had additional investment in exploration and production assets during the period, while 3) deferred tax assets increased by 219 MMUSD and 4) investment in associates increased by 166 MMUSD.

**Liabilities**

As at December 31, 2017, the Group had total liabilities of 7,703 MMUSD (equivalent to 251,746 MMTHB), an increase of 198 MMUSD from total liabilities as at December 31, 2016 of 7,505 MMUSD (equivalent to 268,906 MMTHB), primarily due to;

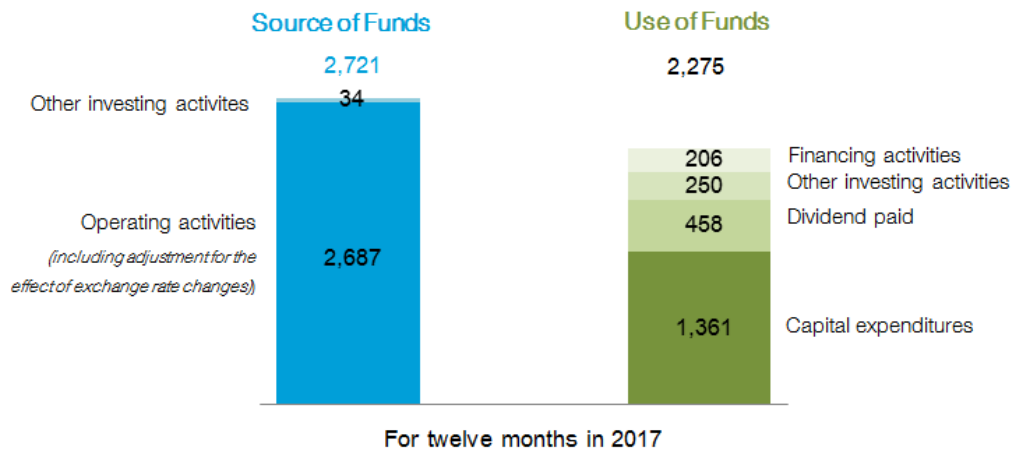
- (1) Current liabilities, which were primarily comprised of accrued expenses, income tax payable and current portion of debentures, increased by 500 MMUSD mainly due to an increase in current portion of debentures of 400 MMUSD, income tax payable increased by 65 MMUSD and account payable increased by 31 MMUSD.
- (2) Non-current liabilities, which were primarily comprised of provision for decommissioning costs, debentures, and deferred tax liabilities, decreased by 302 MMUSD mainly from a reclassification of some portion of debentures due within one year to current liabilities.

**Capital Structure**

As at December 31, 2017, the capital structure comprised of shareholders' equity in the amount of 11,517 MMUSD and total liabilities of 7,703 MMUSD, including the interest-bearing debts of 2,907 MMUSD with a weighted average cost of debt of 4.50% and the average maturity of 7.15 years. All interest-bearing debts are denominated in US Dollar currency. The proportion of the fixed interest rates to the floating interest rates is 80:20.

### Cash Flows

Unit : Million US Dollar



As at December 31, 2017, the Group had cash and cash equivalents, including short-term investment in the form of bank fixed deposit with a maturity of more than three months, but within twelve months of 4,468 MMUSD, an increase of 446 MMUSD from cash and cash equivalents as at December 31, 2016 of 4,022 MMUSD.

**Sources of funds** in the amount of 2,721 MMUSD primarily came from **Net cash received from operating activities** as a result of the positive net cash flows from sales revenues, offsetting with cash payments for expenditures and income tax expenses.

**Uses of funds** in the amount of 2,275 MMUSD primarily came from **Net cash used in additional investment activities** for exploration and production assets, primarily for the Contract 4 and Zawtika Projects as well as an acquisition of share in the company operated in the LNG business in Malaysia, **Net cash used in financing activities** which mainly for the payment of dividend for the second half of 2016 and the first half of 2017.

### Key Financial Ratios

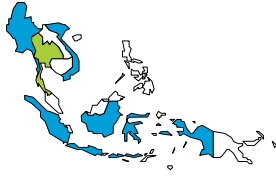
|                                | 2017  | 2016  | Q3<br>2017 | Q4<br>2017 | Q4<br>2016 |
|--------------------------------|-------|-------|------------|------------|------------|
| <b>Profitability Ratio (%)</b> |       |       |            |            |            |
| EBITDA to revenue from sales   | 70.26 | 70.83 | 71.37      | 67.35      | 65.48      |
| Return on equity               | 5.18  | 3.26  | 2.54       | 5.18       | 3.26       |
| Net profit margin              | 13.12 | 8.47  | 6.66       | 13.12      | 8.47       |
| <b>Leverage Ratio (Times)</b>  |       |       |            |            |            |
| Debt to equity                 | 0.25  | 0.25  | 0.26       | 0.25       | 0.25       |
| Debt to EBITDA                 | 0.95  | 0.94  | 0.99       | 0.95       | 0.94       |

#### Remark:

- EBITDA to revenue from sales = Profit before deduction of interest, tax and depreciation to revenue from sales including revenue from pipeline transportation
- Return on equity = Net profit to weighted average shareholders' equity for the past 12 months
- Net profit margin = Net profit to total revenue for the past 12 months
- Debt to equity = Interest Bearing Debt to total shareholders' equity
- Debt to EBITDA = Interest Bearing Debt to profit for the past 12 months before deduction of interest, tax and depreciation



## Operational Highlights



Thailand and Southeast Asia



America



Australasia



Africa

At the end of 2017, PTTEP's domestic and international operations, including projects in the exploration and production phase, altogether sum to 36 projects in 10 countries, with total proved reserves of 631 million barrels of oil equivalent (MMBOE), probable reserves of 400 MMBOE and contingent resources of 3,824 MMBOE respectively. The followings are key project highlights.

### Projects in Thailand

PTTEP currently has 16 projects in Thailand, the majority of which are in the *production phase*. These projects are located in both the Gulf of Thailand and onshore; including the **Bongkot Project**; the project succeeded in increasing condensate production to alleviate the impact of natural gas low nomination and currently is in the process of concession bidding preparation for the Bongkot project which its current concession will be expired in 2022-2023. The **S1 Project** has continuously drilled additional production wells with exploration drilling plan in 2018 in order to increase production levels of the project. For the year 2017, total sales volume from projects in Thailand amounted to 230,504 BOED, accounting for 77% of PTTEP's total sales volume. Apart from production projects, **Ubon Field of the Contract 4 Project** is the process of negotiation with current partners on development preparation with expected first oil production by 2022 at planned capacity of 25,000-30,000 barrel per day (BPD).

### Projects in Southeast Asia

PTTEP has 13 projects in this region which are located in the Republic of the Union of Myanmar (Myanmar), the Socialist Republic of Vietnam (Vietnam), Malaysia and the Republic of Indonesia (Indonesia). Sales volume for the year ended 2017 from the projects in the Southeast Asian region amounted to 55,371 BOED, representing 19% of PTTEP's total sales volume.

Most of the projects in the *production phase* have maintained production levels as planned. The highlights of key projects within this region for this year as follows. The **Zawtika Project**, located in the Gulf of Moattama, Myanmar, has maintained its production as planned and completed the construction of 1 production platform in Phase 1C in 2017 while the remaining 3 production platforms have been scheduled to set up in 2018. The project also continues to carry out drilling activities. In 2017, current gas sales volume was 301 MMSCFD (approximately 47,747 BOED). The **Vietnam 16-1 Project**, located offshore in the southeast of Vietnam, started the production from 4 additional developed wells as planned in order to maintain its production level. In 2017, current crude oil sales recorded volume averaged of 21,087 BPD and natural gas sales volume averaged 2 MMSCFD (approximately 486 BOED).

The *exploration phase* projects in this region are mainly located in onshore and offshore of Myanmar. The major highlights include the **Myanmar M3 Project**, is currently in the process of negotiation on commercial framework with the Government of Myanmar. The **Myanmar MD-7 Project**, is in the process of assessing for the fields' resource potential. The **Myanmar M11 Project**, the **Myanmar MOGE 3 Project** and the **Sarawak SK410B Project** in Malaysia, are currently assessing for the fields' resource potential with a plan to drill exploration wells in 2018. The **Vietnam B & 48/95 Project** and the **Vietnam 52/97 Project** are located offshore of Vietnam. In 2017 the projects have signed a letter of agreement between joint venture partners on wellhead gas prices and transportation costs and currently are in the negotiation process on commercial contracts in order to push forward the Final Investment Decision (FID) with targeted first production at 490 MMSCFD by the end of 2021.

### Projects in the Americas

PTTEP has 3 projects in this region located in Canada and the Federative Republic of Brazil (Brazil).

All projects are in the *exploration phase*. The **Mariana Oil Sands Project**, located in Alberta, Canada, has revised its development plan and is seeking for appropriate approach to develop the project.

PTTEP has 2 projects in Brazil. The **Barreirinhas AP1 Project** is located in the Barreirinhas Basin, offshore to the northeast of Brazil, and the **Brazil BM-ES-23 Project**, located offshore in the Espirito Santo basin, east of Brazil, are currently studying the petroleum potential for future development plan.

### Projects in Australasia

PTTEP has 1 project in this region which is located in the Commonwealth of Australia (Australia), comprising 12 permits.

The **Montara Field** which is in the *production phase*, completed the drilling of producing well in 2017 in order to accelerate production levels. The project has average sales volume for the year 2017 of 10,580 BPD in accordance with the production plan.

The **Cash Maple Field** is in the *exploration phase*. The project has achieved the Pre-FEED study and is currently in the process of FEED study preparation which is scheduled to complete by 2018.

### Projects in Africa

PTTEP has 3 projects in this region, located in the People's Democratic Republic of Algeria (Algeria) and the Republic of Mozambique (Mozambique).

The **Algeria 433a and 416b Project**, which is in *production phase*, and is located onshore in the eastern part of Algeria, has achieved its average production volumes for the year 2017 at 17,360 BPD.

The **Algeria Hassi Bir Rekaiz Project**, which is in the *exploration phase*, and is located onshore in the eastern part of Algeria, successfully finished a drilling campaign with satisfactory crude oil and natural gas flow rates. Currently, the project's development plans have been submitted to the Algerian government since December 2017 and expected to receive the approval within the first quarter of 2018 to support the Final Investment Decision (FID). The project is expected to start production within 2019 with the first phase capacity of around 10,000-13,000 BPD. Subsequently, further investment will be considered to ramp up to full capacity at around 50,000 BPD. The **Mozambique Rovuma Offshore Area 1 Project**, which is a large gas project located in offshore Mozambique, in 2017, the project has made a significant progress by achieving several key milestones including the receipt of government approval on Legal & Contractual Framework as well as the receipt of official approval the marine concessions from the government of Mozambique. The resettlement has been commenced since November 2017, while the Project's development plan is currently in the process of final approval from the Government of Mozambique which is expected to achieve by early 2018. The project also expedites the finalization of LNG off-take agreements, and is negotiating for project finance with financial institutions in order to support the Final Investment Decision (FID), with planned first phase of production at 12 Million tons per annum (MTPA) starting in 2023.

## Company Strategy

The Company continuously carries out its operations through the concept of “RESET REFOCUS RENEW” in order to enhance our competitive advantage and sustainable growth.



### Portfolio Management

PTTEP continues to undertake portfolio management activities to achieve an optimal balance between project value-added and risk management through the consistent study and analysis of pertinent investment factors to keep abreast of the constant changes in the industry landscape as well as promoting sustainable growth in the future as follows.

1. Sustain production volumes in existing projects with low operating cost and maximize condensate production from the projects in Gulf of Thailand together with increasing production in S1 Project, Myanmar Projects and Montara Project.
2. Enhance petroleum reserves addition in near and longer terms through the participation in the bidding process of expiring concessions in Gulf of Thailand, including the Bongkot and Erawan concessions. The Company is well-positioned and ready to be a part of the upcoming biddings within the Ministry of Energy's timeframe. Moreover, the Company strives to push forward the Final Investment Decision (FID) of pre-development projects including the Mozambique Rovuma Offshore Area 1 Project, the Algeria Hassi Bir Rekaiz Project, the Vietnam B & 48/95 Project and the Vietnam 52/97 Project as well as the Contract 4 (Ubon Field). More importantly, the Company pursues to engage in M&A deals with particular focus on producing assets or those which are in the final stage of development, located in PTTEP's region of experience such as South East Asia, or in other areas of high petroleum potential where the operating risk is moderately low with market readiness and attractive return as well as to accelerate exploration activities in exploration projects in the current portfolio, with particular focus on Myanmar and Malaysia, while also seeking new opportunities in the Company's strategic regions.
3. Expand the cooperation in the LNG value chain with PTT in order to achieve business growth and secure Thailand's energy security by seeking strategic investment opportunities in LNG projects globally. A part of success in 2017 was PTT Global LNG Company Limited (PTTGL), owned by PTT and PTTEP, acquired 10% stake in MLNG Train 9 from Petronas, an LNG liquefaction plant in Malaysia, with nameplate capacity of 3.6 million tons per annum.

Also, the Company carried out portfolio rationalization activities during 2017, including the selection of Total E&P Myanmar (TOTAL), who possesses world class knowledge and experience in oil and gas exploration, as a joint-partner to mitigate risk in the Myanmar MD-7 Project, together with the relinquishment of the Myanmar PSC G & EP 2 Project which is in the process of receiving the official approval from the Government of Myanmar.

### Capital Management

PTTEP focuses on ensuring effective financial management by maintaining a robust capital structure. During 2017, the Company implemented liability management activities through its group companies with respect to USD denominated debts to increase the efficiency of the Company's financial management, reduce interest burden, as well as to leverage PTTEP Treasury Center Company limited, the financial center of PTTEP group. As reflection of this success, the Company has received “Best Liability Management Awards” from the Asset, Asian's leading financial magazine, for the two consecutive years.

As of the end of 2017, the Company maintained a strong liquidity position with cash on hand approximately USD 4.5 billion and debt-to-equity ratio of less than 0.3x, which is in line with the Company strategic policies and also provides adequate liquidity in order to fund capital expenditure to maintain production, develop future projects in the pipeline, and carry out exploration activities as well as to support new investment opportunities through Merger and Acquisitions (M&A).

### Cost Management

The Company continues its focus on cost control and has initiated the SPEND SMART to Business Sustainability campaign with the theme “Think Smart, Work Smart for Better Efficiency”. For the year 2017, the Company was able to reduce expenditures by over USD 200 million from the initial budget, as a result of efficient cost management and productivity gain such as the reduction of drilling days and cost optimization of wellhead platform design, contract renegotiations on current and future equipment rental and services, and logistical optimization through reducing number of supply boats as well as optimizing inventory management. In consequence, the Company’s unit cost was reduced from 30.46 USD/BOE in 2016 to 29.05 USD/BOE in 2017.

### Organization Restructuring

In order for more efficient management and operations to cope with the changing E&P industry landscape as well as to explore other potential business opportunities, PTTEP has updated its organizational structure in 2017. Mr. Somporn Vongvuthipornchai as Chief Executive Officer (CEO) is in charge of the Company’s overall performance, strategic planning and business development on E&P related and new business opportunities, and Mr. Phongsthorn Thavisin as President of Exploration and Production (PEP) is responsible for management of the Upstream Value Chain business including Exploration, Development and Production activities per the Company’s strategic plans.

### Sustainable Development

PTTEP’s Sustainable Development is aligned with global indices and UN principles. In 2017, PTTEP was selected, for the fourth consecutive year, as a member of the 2017 Dow Jones Sustainability Index (DJSI) in the Oil and Gas Upstream & Integrated Industry sector; and for the second consecutive year, PTTEP was 1 of 32 oil and gas companies selected as a constituent of the FTSE4Good Index Series, in the category of FTSE4Good Emerging Index 2017. In addition, PTTEP received the Sustainability Report Award 2017 – Best Category and also received the Thailand Sustainability Investment Award 2017 from the Stock Exchange of Thailand.

This recognition underlines our ongoing commitment to sustainability as a leading sustainable organization. Key activities in 2017 covering business, social, and environmental matters, are as follows:

**Business** PTTEP promotes research and development of technologies and innovations to increase exploration success and production efficiency. Key projects in 2017 are as follows:

- Development of technologies to monitor subsea pipeline conditions, as well as the development of decommissioning procedures for future decommissioning work to minimize environmental impact;
- Development of electromagnetic tools to monitor the flow of liquids in petroleum reservoirs;
- Development of robotic technologies such as Autonomous Underwater Vehicles (AUV) to inspect subsea production equipment; In-pipe Inspection Robots to inspect damage inside pipelines; and Beach Cleaning Robots to reduce environmental pollution.

PTTEP also received several awards as a testament of recognition from the industry. The Company was awarded The Asset Best Initiative in Innovation Award 2017, from The Asset Magazine, as well as Outstanding Innovative Company Awards from the Stock Exchange of Thailand.

**Social** PTTEP is committed to carrying out its business operations in a socially responsible manner, and is focused on four development areas: fundamental needs, education, environment, culture and sports. PTTEP continuously promotes projects and receives various awards and recognition, such as the Bronze Stevie Award from the Asia-Pacific Stevie Awards Program, as well as the Platinum Award from the 9<sup>th</sup> Annual Global CSR Summit and Awards. These awards recognize PTTEP contribution to the Stimulation, Intervention, and Optimization of Services for Children (SIOLA) project in Indonesia and Crab Hatchery Learning Center project in Songkhla.

**Safety, Security, Health and Environment** PTTEP has an environmental management system which encompasses a project’s entire life cycle, and is a subset of PTTEP’s Safety, Security, Health and Environment Management System (SSHE MS). In 2017, PTTEP had a Lost Time Injury Frequency (LTIF) score of 0.10 and a Total Recordable Incident Rate (TRIR) score of 0.74. The Company’s performance on both safety indicators is superior to that of the average of the members in the International Association of Oil and Gas Producers (IOGP). Moreover, PTTEP aims to become a Low Carbon Footprint organization, and has revised a goal to reduce its greenhouse gas (GHG) emissions by a minimum 25% by the year 2030 versus its 2012 base year figure.

## Future Business Outlook

### *Energy Outlook*

The current global energy consumption still relies heavily on Fossil fuels which include oil, natural gas, and coal. The current consumption figures are at 84% contribution and are expected to continue to account for up to 76% of energy consumption in the next 20 years (Source: IHS), mainly driven by increasing natural gas demand from the industrial sector due to economic expansion. While oil is mainly consumed in the transportation sector, demand is forecasted to decline as a result of the rising numbers in electric vehicles as supported by several factors including improving electric vehicle performance and decreasing costs, changing consumer behavior, and support from the government. However, the future trend of electric vehicle usage will depend on advancements in Energy Storage technology which requires a lengthy development time in order to be comparable to conventional internal combustion engines (ICE) in terms of price and performance.

Due to rising concerns about pollution and global warming from the use of fossil fuels, many countries have become more focused on increasing the share of Renewable Energy usage which predominantly includes solar and wind. It is expected that Renewable energy will account for about 5% of total global energy sources in the next 20 years, increasing by around 800 million tons of oil equivalent (TOE) from the current year (Source: IHS) due to support from governments and advancements in production technology resulting in lower costs and greater efficiency.

As for Thailand, the Power Development Plan (PDP) is revisited by the Government to reflect current circumstances and the change in electricity consumption pattern. Nonetheless, Thailand still relies heavily on fossil fuels, mainly natural gas and coal. Since domestic gas production being naturally decline and a delay in development of several coal power plant projects, the Country has to increase LNG imports to support power generation.

PTTEP has adopted the “REFOCUS” strategy to focus on gas-weight portfolio with current product mix of 70:30 natural gas to liquids, in-line with the global trend of increasing natural gas demand. In addition, the Company endeavors to expedite the development of large natural gas projects in the portfolio, including Mozambique Rovuma Offshore Area 1 Project and Cash Maple Project in Australia, to support LNG production and seek more investment opportunities in natural gas fields. This is also in line with PTTEP’s strategy to jointly invest with PTT in the integrated LNG projects globally with the key objectives to enhance competitiveness and strengthen energy security in Thailand.

In addition, PTTEP realizes the importance and trend of the energy industry and consequently adopted the “RENEW” strategy by establishing a business unit to explore new opportunities relating to E&P activities such as the decommissioning business, expansion of our expertise on “Gas Value Chain” as well as the study on potential business opportunities in Renewable Energy, particularly in wind and solar. In summary, the Company strives to enhance competitiveness in core businesses while seeking to increase business opportunities to support the rapidly changing global energy landscape.

### *Oil Price Outlook*

PTTEP expects Dubai crude prices in 2018 to average between 55 and 65 USD/BOE with the following key influencing factors.

**Demand side:** it is expected that global crude demand will expand by 1.8 million barrels per day (Source: PIRA) following the economic expansion driven by OECD and India. In addition, strong crude demand is supported by increasingly cold winters in many countries especially the U.S.

**Supply side:** key factor is to monitor the production policies of key producers. Crude oil price will surge if Nigeria and Libya, which are currently excluded from production cuts, decide to join the agreement in 2018. Other bullish factors include the U.S. sanction against Iran’s nuclear proliferation and the political unrest among key producers such as Saudi-Iran and Iraq-Kurdish. However, crude oil prices may be pressured downwards by the U.S. President’s policy in support of Keystone XL pipeline’s expansion, which will increase crude oil transportation capabilities from Canada to the U.S. Crude production from the U.S. is also expected to reach over 10 million barrels per day. However, various researchers believe that the estimated global commercial stock will continue to decline and that the oversupply situation will rebalance within 2018.

### LNG Market

It is forecasted that global LNG oversupply situation will prolong towards 2018 with total capacity of existing and upcoming LNG projects growing by 3% to 320 million ton, while demand side is expected to stabilize at 310 million ton as well as the global LNG price to remain steady compared to the previous year. Average Asian Spot LNG price is predicted to be in a range between 6.5-7.6 USD/MMBTU. However, the global LNG price could vary depending on other factors including bearish factor from increasing LNG supply from new project sanction and bullish factors such as disruption in existing LNG projects, better-than-expected demand in Asian Market especially from China and India coupled with Energy policy from the governments. Nonetheless, the market foresees that LNG demand-supply tend to rebalance after 2022.

### Thai Economy and Foreign Exchange Outlook

The Bank of Thailand expects the economy to expand at 3.9% in 2018, driven mainly by export growth and the recovery of the tourism sector following the improving global economy, increasing private spending, and continual fiscal stimulus in the form of spending and investments. In general, energy demand often grows in tandem with the economy.

The THB:USD exchange rate continues to embed a high degree of uncertainty as capital markets remain volatile and require close monitoring due to a number of factors such as the implementation of the U.S. Tax Reform, the political uncertainty in Europe despite the European Central Bank's (ECB) tendency towards easy monetary policies, and increasing geopolitical risks. PTTEP's financial performance will be affected by THB:USD exchange rate fluctuations mainly through income taxes. The effect arises because the Company adopts two different functional currencies, the THB for tax purposes and the USD for accounting. The effects mainly, however, do not impact the Company's cash flows. Moreover, the possibility of increased interest rates is expected to not have any significant impact on the Company's financial performance as approximately 80% of the Company's total interest-bearing debt is fixed-rate.

### Other important factors that affect the Company's operations

**The Bidding of "Bongkot" concession due to expire between 2022-2023:** The bidding process is expected to finalize by the end of 2018. With 20 years of experience as operator of the Bongkot field, PTTEP is well-prepared to participate in the bidding with a competitive cost base in order to provide continuity in natural gas production and maintain Thailand's energy security.

**Projected decommissioning costs for the petroleum business:** Regulations from the Ministerial Regulations of Decommission require concessionaires to submit preliminary decommissioning plans and cost projections, pre-verified by a third-party expert, to the Department of Mineral Fuel. PTTEP also utilized these projections to assess and reevaluate decommissioning cost projections for other projects. Currently, the Company estimated and recorded total decommissioning costs for all projects under "Provision for the decommissioning of production" in its financial statements at 2,275 MMUSD as of 31 December 2017, with provisions for domestic projects accounting for about 70%.

**Enactment of Laws and Regulations that affect the Company's operations:** PTTEP places the highest priority in complying with relevant laws in all areas of business. It is imperative that personnel of PTTEP Group, including its directors, executives, and employees understand and abide by those laws to ensure legality and efficiency of Company operations. PTTEP monitors laws and regulations that have the potential to affect its businesses on a continuous basis, reviews working processes to ensure their compliance, and clearly defines responsible persons for each of its operations.

Some laws and regulations enacted in 2017 that are significant to PTTEP's operations include, the Petroleum Act (No.7) B.E. 2560, the Petroleum Income Tax Act (No.7) B.E. 2560, the Government Procurement and Supplies Management Act B.E. 2560, and the Order of the Head of the National Council for Peace and Order (NCPO) No. 31/2560 regarding the Utilization of Agricultural Land under the Laws on Agricultural Land Reform for the Utmost Benefits on Farmers and Public Interests.

For 2018, PTTEP closely monitors the proposed enactment of amendments to the Revenue Code Act and the Petroleum Income Tax Act, which will allow tax filing in non-THB functional currencies. This will subsequently decrease the impact of FX volatility.

*PTTEP's performance outlook for 2018*

PTTEP's performance depends on three major factors including Sales volumes, Gas price and Unit cost with the guidance summary as follows;



\*based on average Dubai price assumption of 60 USD/BBL for 2018

**Sales volume:**

PTTEP focuses on maintaining the production level in Thailand with the estimated sales volume for Q1/2018 and full-year 2018 of approximately 300,000 BOED and 302,000 BOED, respectively. The target sales volume is supported by the improving situation on gas nomination in the Gulf of Thailand, as well as liquid production uplift initiatives in producing assets, especially the Gulf of Thailand projects and the S1 Project.

**Sales price:**

- PTTEP's liquid prices will fluctuate relative with global crude prices.
- PTTEP's gas prices are linked via a price formula with 6-12 months lag-time to referenced global oil prices indices. Average gas price for Q1/2018 and full-year 2018 are estimated at approximately 6.0 USD/MMBTU and 6.2 USD/MMBTU, respectively, reflecting the upturn in oil price environment. (Based on average Dubai price assumption of 60 USD/BBL for full-year 2018)
- Outstanding oil hedging volume as of year-end 2017 is approximately 7.7 MMBOE; the Company, however, consistently monitors crude oil price movements and has the flexibility to adjust the hedging plan as appropriate.

**Unit Cost:**

PTTEP endeavors to uphold its competitive unit cost at around 30 USD/BOE level in Q1/2018 and in a range between 30-31 USD/BOE for the full-year 2018.

## Supplemental Information on Petroleum Exploration and Production Activities (Unaudited)

### (A) PTTEP and Our Subsidiaries' Petroleum Reserve Report As of December 31, 2017

The total Proved Reserves of PTTEP and our subsidiaries as of December 31, 2017 are shown in the attached table. The Proved Reserves are reviewed annually by Company's earth scientists and reservoir engineers to ensure rigorous professional standards. The Proved Reserves are reported on a gross basis, which includes the Company's net working interest and related host country's interest.

As of December 31, 2017, the total amount of Proved Reserves of PTTEP Group's projects was 156 million stock-tank barrels (MMSTB) of crude oil and condensate<sup>1</sup>, and 3,049 billion standard cubic feet (BSCF) of natural gas or 475 million barrels of oil equivalent (MMBOE). The total amount of Proved Reserves in terms of oil equivalent in consolidation was therefore 631 MMBOE. Proved Reserves of crude and condensate are approximately 25% while, for gas, are 75% of the total Proved Reserves in terms of oil equivalent.

In 2017, the total production of PTTEP Group was 127 MMBOE, consisting of 35 MMSTB of crude oil and condensate<sup>1</sup> and 578 BSCF or 92 MMBOE of natural gas. This was equivalent to the production rate of approximately 347,508 barrels of oil equivalent per day (BOED), which was approximately 20,795 BOED or 5.6% decrease from the previous year. The decrease was mainly due to the low nomination from buyers of MTJDA, Bongkot, Sinphuhorm and Contract 4 projects, and the suspension of production of S1 Project in areas under the oversight of the Agricultural Land Reform Office (ALRO). However, the production of S1 Project in these areas has already returned to normal operation since June 26, 2017.

<sup>1</sup> Include the proved reserves and production of LPG

# PTT Exploration and Production Public Company Limited

## Crude Oil and Condensate and Natural Gas Proved Reserves <sup>(1)</sup>

As of December 31, 2017

|   | Proved Reserves of Crude Oil<br>and Condensate <sup>(2)</sup> |         |       | Proved Reserves of Natural Gas |         |       | Barrel of Oil Equivalent |         |       |
|---|---|---------|-------|--------------------------------|---------|-------|--------------------------|---------|-------|
|   | (MMSTB)   |         |       | (BSCF)                         |         |       | (MMBOE)                  |         |       |
|   | Domestic  | Foreign | Total | Domestic                       | Foreign | Total | Domestic                 | Foreign | Total |
| Company's share of reserves of consolidated companies |   |         |       |                                |         |       |                          |         |       |
| As of December 31, 2015                               | 108   | 72      | 180   | 2,021                          | 1,570   | 3,591 | 440                      | 298     | 738   |
| 1) Revision of previous estimates                     | 18  | 1       | 19    | 292                            | (18)    | 274   | 65                       | (1)     | 64    |
| 2) Improved recovery                                  | 4   | -       | 4     | 5                              | -       | 5     | 5                        | -       | 5     |
| 3) Extensions and discoveries                         | 5   | -       | 5     | 111                            | -       | 111   | 23                       | -       | 23    |
| 4) Purchases/Sales of Petroleum in place              | -   | -       | -     | -                              | -       | -     | -                        | -       | -     |
| 5) Production   | (27)  | (11)    | (38)  | (411)                          | (199)   | (610) | (95)                     | (40)    | (135) |
| As of December 31, 2016                               | 108   | 62      | 170   | 2,018                          | 1,353   | 3,371 | 438                      | 257     | 695   |
| Company's share of reserves of consolidated companies |   |         |       |                                |         |       |                          |         |       |
| As of December 31, 2016                               | 108   | 62      | 170   | 2,018                          | 1,353   | 3,371 | 438                      | 257     | 695   |
| 1) Revision of previous estimates                     | 11  | (0)     | 11    | 77                             | (50)    | 27    | 24                       | (7)     | 17    |
| 2) Improved recovery                                  | 2   | 1       | 3     | 9                              | 0       | 9     | 4                        | 1       | 5     |
| 3) Extensions and discoveries                         | 4   | 3       | 7     | 109                            | 111     | 220   | 22                       | 19      | 41    |
| 4) Purchases/Sales of Petroleum in place              | -   | -       | -     | -                              | -       | -     | -                        | -       | -     |
| 5) Production   | (26)  | (9)     | (35)  | (389)                          | (189)   | (578) | (90)                     | (37)    | (127) |
| As of December 31, 2017                               | 99  | 57      | 156   | 1,824                          | 1,225   | 3,049 | 398                      | 233     | 631   |

(1) The Proved Reserves are reported on a gross basis which includes the Company's net working interest and the related host country's interest.

(2) LPG Included

**(B) Capitalized Costs Relating to Oil and Gas Producing Activities**

Capitalized costs represent cumulative expenditures for proved and unproved properties together with related accumulated depreciation, depletion, amortization and allowance for impairment.

Proved properties include exploration wells, development wells, transportation pipeline, producing facilities and decommissioning costs. Unproved properties represent amounts associated with capitalized cost of projects which have not yet found proved reserves.

| (Unit: Million US Dollar)  | 2017                 | 2016                 |
|--|----------------------|----------------------|
| Proved properties  | 27,120               | 25,747               |
| Unproved properties  | <u>5,098</u>         | <u>4,981</u>         |
| <b>Gross capitalized costs</b>   | <b>32,218</b>        | <b>30,728</b>        |
| Accumulated depreciation, depletion, amortization and allowance for impairment | <u>(20,929)</u>      | <u>(18,703)</u>      |
| <b>Net capitalized costs</b>   | <b><u>11,289</u></b> | <b><u>12,025</u></b> |

**(C) Costs Incurred in Oil and Gas Property Acquisition, Exploration, and Development Activities**

Costs incurred in oil and gas property acquisition, exploration and development activities represent amounts both capitalized and charged to expense during the year.

Property acquisition costs include costs to purchase proved and unproved properties.

Exploration costs include geological and geophysical expenses, exploratory drilling cost as well as reservation fee for exploration blocks.

Development costs include costs associated with drilling and equipping development wells, improved recovery systems, facilities for extraction, treating, gathering and storage, producing facilities for existing developed reserves, and costs associated with transportation pipeline.

| (Unit: Million US Dollar) | 2017              |                   |                     | 2016              |                   |                     |
|---------------------------|-------------------|-------------------|---------------------|-------------------|-------------------|---------------------|
|                           | Domestic          | Foreign           | Total               | Domestic          | Foreign           | Total               |
| Acquisition of properties |                   |                   |                     |                   |                   |                     |
| - Proved                  | -                 | -                 | -                   | -                 | -                 | -                   |
| - Unproved                | -                 | -                 | -                   | -                 | 1                 | 1                   |
| Exploration costs         | 6                 | 31                | 37                  | 4                 | 54                | 58                  |
| Development costs         | <u>779</u>        | <u>417</u>        | <u>1,196</u>        | <u>747</u>        | <u>303</u>        | <u>1,050</u>        |
| <b>Total</b>              | <b><u>785</u></b> | <b><u>448</u></b> | <b><u>1,233</u></b> | <b><u>751</u></b> | <b><u>358</u></b> | <b><u>1,109</u></b> |

**(D) Results of operations for producing activities**

Results of operations from oil and gas producing activities for the year 2017 and 2016 are shown in the following table.

Operating expenses include lifting costs incurred to operate and maintain productive wells and related equipment.

Exploration expenses consist of geological and geophysical costs, and exploratory well write off expenses.

General administrative expenses are expenses directly related to oil and gas producing activities.

Depreciation, Depletion and Amortization expenses relates to capitalized costs incurred in acquisition, exploration and development activities, transportation pipeline, including amortized decommissioning costs.

Other expenses (income) mainly include impairment loss on assets, foreign exchange gains and losses directly related to oil and gas producing activities and other income.

Income tax expenses are based on the results of operations from petroleum producing activities.

General corporate overhead and finance costs are excluded from the results of operations for petroleum producing activities.

| (Unit: Million US Dollar)                | 2017         |              |              | 2016         |              |              |
|--|--------------|--------------|--------------|--------------|--------------|--------------|
|  | Domestic     | Foreign      | Total        | Domestic     | Foreign      | Total        |
| <b>Gross revenues</b>                    |              |              |              |              |              |              |
| Sales – Related parties                  | 2,929        | 1,066        | 3,995        | 2,873        | 1,018        | 3,891        |
| Sales – Third parties                    | 228          | 390          | 618          | 249          | 355          | 604          |
| <b>Total Sales</b>                       | <b>3,157</b> | <b>1,456</b> | <b>4,613</b> | <b>3,122</b> | <b>1,373</b> | <b>4,495</b> |
| <b>Expenses</b>                          |              |              |              |              |              |              |
| Operating expenses                       | 372          | 511          | 883          | 366          | 461          | 827          |
| Exploration expenses                     | 25           | 27           | 52           | 3            | 70           | 73           |
| General administrative expenses          | 49           | 62           | 111          | 36           | 58           | 94           |
| Petroleum royalties and remuneration     | 368          | -            | 368          | 353          | -            | 353          |
| Depreciation, depletion and amortization | 1,092        | 537          | 1,629        | 1,434        | 623          | 2,057        |
| Other (income)/ expenses                 | (18)         | 538          | 520          | (33)         | 45           | 12           |
| <b>Total expenses</b>                    | <b>1,888</b> | <b>1,675</b> | <b>3,563</b> | <b>2,159</b> | <b>1,257</b> | <b>3,416</b> |
| <b>Results before income taxes</b>       | <b>1,269</b> | <b>(219)</b> | <b>1,050</b> | <b>963</b>   | <b>116</b>   | <b>1,079</b> |
| Income tax expenses                      | 367          | 63           | 430          | 271          | 26           | 297          |
| <b>Net results of operations</b>         | <b>902</b>   | <b>(282)</b> | <b>620</b>   | <b>692</b>   | <b>90</b>    | <b>782</b>   |

**(E) Standardized Measure of Discounted Future Net Cash Flows (SMDCF) Relating to the Proved Oil and Gas Reserves**

The standardized measure of discounted future net cash flows related to the above proved oil and gas reserves, is computed by applying 12-month average prices\* (with consideration of price changes only to the extent provided by contractual arrangements), to the estimated future production of year-end remaining proved oil and gas reserves less estimated future expenditures (based on year-end costs) to be incurred in developing and producing the proved reserves.

Future income taxes are calculated by applying the appropriate year-end statutory tax rates to the future pre-tax net cash flows and deducted by applicable tax deductions or tax credits.

Net Cash flows are discounted using a rate of 10% per year to reflect the estimated timing of the future cash flows.

The estimation of discounted future net cash flow shown below is not intended to represent the fair value of oil and gas properties. The fair value should take into account of several factors, such as probable and possible reserves which may turn into proved reserves in the future, anticipated future oil and gas prices, interest rates, changes in development and production costs and risks associated with future production. Therefore the fair value will subject to the view and perception of analyst.

\* Twelve-month average prices are calculated as the unweighted arithmetic average of the first-day-of-the-month price for each month.

**Standardized Measure of Discounted Future Net Cash Flows Relating to Prove Oil and Gas Reserves**

| (Unit: Million US Dollar)   | Domestic            |                     | Foreign             |                     | Total               |                     |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|   | 2017                | 2016                | 2017                | 2016                | 2017                | 2016                |
| Future cash inflows   | 12,220              | 13,565              | 6,463               | 6,106               | 18,683              | 19,671              |
| Future production costs   | (2,335)             | (2,283)             | (1,710)             | (1,614)             | (4,045)             | (3,897)             |
| Future development costs  | (4,552)             | (4,718)             | (1,301)             | (1,612)             | (5,853)             | (6,330)             |
| Future income tax expenses  | <u>(1,721)</u>      | <u>(2,177)</u>      | <u>(723)</u>        | <u>(626)</u>        | <u>(2,444)</u>      | <u>(2,803)</u>      |
| <b>Future net cash flows</b>  | <b>3,612</b>        | <b>4,387</b>        | <b>2,729</b>        | <b>2,254</b>        | <b>6,341</b>        | <b>6,641</b>        |
| 10% annual discount   | <u>(93)</u>         | <u>(337)</u>        | <u>(849)</u>        | <u>(651)</u>        | <u>(942)</u>        | <u>(988)</u>        |
| <b>Standardized measure of discounted future net cash flows (SMDCF)</b> | <b><u>3,519</u></b> | <b><u>4,050</u></b> | <b><u>1,880</u></b> | <b><u>1,603</u></b> | <b><u>5,399</u></b> | <b><u>5,653</u></b> |

Changes in Standardized Measure of Discounted Future Net Cash Flows Relating to Prove Oil and Gas Reserves

| (Unit: Million US Dollar)  | 2017                | 2016                |
|--|---------------------|---------------------|
| Present value at beginning of year                                   | 5,653               | 7,428               |
| Sales and transfers of oil and gas produced, net of production costs | (3,386)             | (3,210)             |
| Development costs incurred during the period                         | 1,320               | 1,103               |
| Net changes in prices and production costs                           | 335                 | (3,779)             |
| Net changes in development costs                                     | (149)               | 1,495               |
| Extensions, discoveries and improved recovery                        | 837                 | 469                 |
| Revisions of previous quantity estimates                             | 384                 | 967                 |
| Purchases / sales of petroleum in place                              | -                   | -                   |
| Accretions of discount   | 45                  | 839                 |
| Net changes in income taxes  | <u>360</u>          | <u>341</u>          |
| <b>Present value at the year end</b>                                 | <b><u>5,399</u></b> | <b><u>5,653</u></b> |

**(E) Other Information**

**Productive Oil/Condensate and Gas Wells**

The numbers of productive wells at December 31, 2017 were as follows:

|                | Oil/Condensate |            | Gas          |            |
|----------------|----------------|------------|--------------|------------|
|                | Gross          | Net        | Gross        | Net        |
| Thailand       | 767            | 497        | 1,522        | 698        |
| Foreign        |                |            |              |            |
| Southeast Asia | 37             | 9          | 211          | 97         |
| Others         | 19             | 10         | -            | -          |
| Total          | <u>823</u>     | <u>516</u> | <u>1,733</u> | <u>795</u> |

**Drilling in Progress of Oil/Condensate and Gas Wells**

The numbers of wells in progress at December 31, 2017 were as follows:

|                    | Gross     | Net         |
|--------------------|-----------|-------------|
| <u>Exploratory</u> |           |             |
| Thailand           | -         | -           |
| Foreign            |           |             |
| Southeast Asia     | -         | -           |
| Others             | -         | -           |
| Total              | <u>-</u>  | <u>-</u>    |
| <br>               |           |             |
| <u>Development</u> |           |             |
| Thailand           | 29        | 18.9        |
| Foreign            |           |             |
| Southeast Asia     | 2         | 1           |
| Others             | -         | -           |
| Total              | <u>31</u> | <u>19.9</u> |

Net Oil/Condensate and Gas Wells Drilled in 2017

|                        | Net Productive<br>wells drilled | Net dry<br>well drilled |
|------------------------|---------------------------------|-------------------------|
|                        | <hr/>                           | <hr/>                   |
| <u>Exploratory</u>     |                                 |                         |
| Thailand               | 8.6                             | 4.00                    |
| Foreign                |                                 |                         |
| Southeast Asia         | -                               | 0.26                    |
| Others                 | -                               | -                       |
| Total                  | <hr/> <b>8.6</b>                | <hr/> <b>4.26</b>       |
| <br><u>Development</u> |                                 |                         |
| Thailand               | 190.66                          | 4.30                    |
| Foreign                |                                 |                         |
| Southeast Asia         | 15.76                           | -                       |
| Others                 | 1                               | -                       |
| Total                  | <hr/> <b>207.42</b>             | <hr/> <b>4.30</b>       |

Gross wells include the total number of wells in which the Company has an interest excluding utility wells.

Net wells are the sum of the Company's fractional interests in gross wells.

Quarterly Information in 2017 and 2016 for the consolidated financial statement are as follows:

Unit: US Dollar

|  | <u>Year2017</u> | <u>4thQ</u>          | <u>3rdQ</u>          | <u>2ndQ</u>          | <u>1stQ</u>          |
|--|-----------------|----------------------|----------------------|----------------------|----------------------|
| <b>Revenues</b>  |                 |                      |                      |                      |                      |
| Sales  |                 | 1,202,119,165        | 1,063,670,938        | 975,323,588          | 1,040,091,549        |
| Revenue from pipeline transportation                                   |                 | 22,172,556           | 24,884,575           | 17,488,758           | 13,259,364           |
| Other income   |                 |                      |                      |                      |                      |
| Gain on foreign exchange   |                 | 13,906,376           | 23,129,564           | 10,803,831           | 3,561,976            |
| Interest income  |                 | 18,474,470           | 12,994,974           | 15,236,804           | 12,872,725           |
| Gain on financial derivatives  |                 | -                    | -                    | -                    | 6,244,406            |
| Other income   |                 | 14,089,489           | 9,164,581            | 13,467,704           | 16,550,749           |
| Total Revenues   |                 | <b>1,270,762,056</b> | <b>1,133,844,632</b> | <b>1,032,320,685</b> | <b>1,092,580,769</b> |
| <b>Expenses</b>  |                 |                      |                      |                      |                      |
| Operating expenses   |                 | 168,080,012          | 162,191,500          | 152,874,578          | 141,915,277          |
| Exploration expenses   |                 | 23,078,034           | 8,468,079            | 19,302,802           | 1,344,636            |
| Administrative expenses  |                 | 104,517,340          | 50,119,038           | 50,549,963           | 41,234,942           |
| Petroleum royalties and remuneration                                   |                 | 102,391,207          | 89,664,243           | 84,302,712           | 91,499,703           |
| Depreciation, depletion and amortization                               |                 | 435,662,557          | 413,462,171          | 381,268,098          | 419,826,900          |
| Other expenses   |                 |                      |                      |                      |                      |
| Loss on financial derivatives  |                 | 28,377,168           | 3,318,724            | 2,955,898            | -                    |
| Management's remuneration  |                 | 1,623,370            | 1,209,440            | 1,096,994            | 1,019,848            |
| Impairment loss on assets  |                 | -                    | 558,214,042          | -                    | -                    |
| Finance costs  |                 | 57,294,151           | 56,582,968           | 55,476,839           | 56,873,468           |
| Total Expenses   |                 | <b>921,023,839</b>   | <b>1,343,230,205</b> | <b>747,827,884</b>   | <b>753,714,774</b>   |
| Share of gain from associates and joint ventures                       |                 | 2,588,042            | 2,319,103            | 2,676,899            | 2,161,371            |
| <b>Profit (loss) before income taxes</b>                               |                 | <b>352,326,259</b>   | <b>(207,066,470)</b> | <b>287,169,700</b>   | <b>341,027,366</b>   |
| Income tax   |                 | (63,317,211)         | (57,351,361)         | (67,303,990)         | 8,401,312            |
| <b>Profit (loss) for the period from continuing operations</b>         |                 | <b>289,009,048</b>   | <b>(264,417,831)</b> | <b>219,865,710</b>   | <b>349,428,678</b>   |
| Profit (loss) for the period from discontinued operations - net of tax |                 | (347,441)            | -                    | -                    | -                    |
| <b>Profit (loss) for the period</b>                                    |                 | <b>288,661,607</b>   | <b>(264,417,831)</b> | <b>219,865,710</b>   | <b>349,428,678</b>   |
| <b>Basic earnings (loss) per share</b>                                 |                 |                      |                      |                      |                      |
| Continuing operations  |                 | 0.07                 | (0.07)               | 0.04                 | 0.09                 |
| Discontinued operations  |                 | (0.0001)             | -                    | -                    | -                    |

Unit: US Dollar

| <u>Year2016</u>  | <u>4thQ</u>          | <u>3rdQ</u>          | <u>2ndQ</u>          | <u>1stQ</u>          |
|--|----------------------|----------------------|----------------------|----------------------|
| <b>Revenues</b>  |                      |                      |                      |                      |
| Sales  | 1,037,434,593        | 1,046,476,331        | 1,061,000,216        | 1,044,652,921        |
| Revenue from pipeline transportation                                   | 14,225,854           | 18,934,315           | 16,701,593           | 16,624,759           |
| Other income   | -                    | -                    | -                    | -                    |
| Gain on foreign exchange   | -                    | 14,351,726           | 6,572,363            | 6,223,388            |
| Interest income  | 9,659,695            | 7,210,535            | 7,452,250            | 5,742,545            |
| Gain on financial derivatives  | 14,311,187           | 14,620,515           | -                    | -                    |
| Other income   | 12,375,135           | 7,127,104            | 10,675,095           | 11,305,278           |
| Total Revenues   | <b>1,088,006,464</b> | <b>1,108,720,526</b> | <b>1,102,401,517</b> | <b>1,084,548,891</b> |
| <b>Expenses</b>  |                      |                      |                      |                      |
| Operating expenses   | 167,386,453          | 146,011,694          | 138,679,994          | 130,052,595          |
| Exploration expenses   | 11,920,878           | 20,361,689           | 15,583,064           | 25,486,002           |
| Administrative expenses  | 92,016,021           | 38,466,880           | 58,134,551           | 30,325,339           |
| Petroleum royalties and remuneration                                   | 87,892,910           | 88,924,530           | 87,967,397           | 88,323,501           |
| Depreciation, depletion and amortization                               | 509,335,454          | 534,407,622          | 517,658,659          | 517,980,644          |
| <b>Other expenses</b>  |                      |                      |                      |                      |
| Loss on foreign exchange   | 15,560,457           | -                    | -                    | -                    |
| Loss on financial derivatives  | -                    | -                    | 97,533,923           | 49,586,533           |
| Management's remuneration  | 1,580,811            | 797,861              | 820,214              | 785,642              |
| Impairment loss on assets  | 47,150,837           | -                    | -                    | -                    |
| Finance costs  | 57,896,251           | 59,241,885           | 59,035,264           | 58,292,333           |
| Total Expenses   | <b>990,740,072</b>   | <b>888,212,161</b>   | <b>975,413,066</b>   | <b>900,832,589</b>   |
| Share of gain from associates and joint ventures                       | 2,359,011            | 2,341,048            | 1,828,615            | 2,018,422            |
| <b>Profit before income taxes</b>                                      | <b>99,625,403</b>    | <b>222,849,413</b>   | <b>128,817,066</b>   | <b>185,734,724</b>   |
| Income tax expenses  | (133,322,119)        | (67,481,839)         | (54,598,693)         | (29,904,151)         |
| <b>Profit (loss) for the period from continuing operations</b>         | <b>(33,696,716)</b>  | <b>155,367,574</b>   | <b>74,218,373</b>    | <b>155,830,573</b>   |
| Profit (loss) for the period from discontinued operations - net of tax | 17,635,015           | 272,758              | 1,135,156            | 1,291,184            |
| <b>Profit (loss) for the year</b>                                      | <b>(16,061,701)</b>  | <b>155,640,332</b>   | <b>75,353,529</b>    | <b>157,121,757</b>   |
| <b>Basic earnings (loss) per share</b>                                 |                      |                      |                      |                      |
| Continuing operations  | (0.01)               | 0.04                 | 0.01                 | 0.04                 |
| Discontinued operations  | 0.004                | 0.0001               | 0.0003               | 0.0003               |

## Petroleum Sales Volume and Average Unit Prices

|   | 2017    | 2016    |
|---|---------|---------|
| Net sales of petroleum (BOED)                             | 299,206 | 319,521 |
| Average petroleum unit prices                             |         |         |
| Average unit prices of crude oil and condensate (USD/BBL) | 52.26   | 41.17   |
| Average unit prices of natural gas (USD/MMBTU)            | 5.59    | 5.60    |
| Average unit prices of petroleum (USD/BOE)                | 39.20   | 35.91   |
| Lifting cost (USD/BOE)                                    | 4.19    | 4.18    |