

*Management's Discussion and Analysis (MD&A) and operating results for the first quarter of 2016***Executive Summary**

*In the first quarter of 2016 (Q1/2016), net income of PTT and its subsidiaries was Baht 23,669 million, increasing by Baht 1,085 million or 4.8% from Baht 22,584 million of net income in the first quarter of 2015 (Q1/2015) mainly due to the drop in feed gas costs in line with crude oil price which had fallen since mid-year 2015. Therefore, PTT's performance increased, especially natural gas business from better performance of products sold from Gas Separation Plant (GSP) and the decrease of NGV losses. For PTT affiliates, performance of PTT Exploration and Production Public Company Limited (PTTEP) decreased in line with the drop in its average selling prices, following the continuous fallen crude oil price. Moreover, the performance of petrochemical and refining business slightly decreased due to the drop in Accounting Gross Refinery Margin (GRM) from the drop in Market GRM. Nonetheless, the performance of olefins and aromatics increased owing to the higher Product to Feed Margin (P2F) mainly from higher product spreads. Depreciation and amortization expenses also dropped in this quarter. In addition, Thai Baht was more appreciated against US\$ compared to Q1/2015, leading to higher gain on foreign exchange rates for PTT group.*

Unit : Million Baht	Q1/2015	Q1/2016	% Inc. (Dec.)
Sales & services income	515,211	386,940	(24.9%)
EBITDA	70,742	71,343	0.8%
Net income (loss)	22,584	23,669	4.8%
Earnings (loss) per share (Baht/share)	7.89	8.23	4.3%

## Economic Overview in the first quarter of 2016

The world economy in Q1/2016 expanded at a slower pace than in the fourth quarter of 2015 (Q4/2015). Specifically, economic growth in emerging market economies and lower-income countries slowed further in Q1/2016, whereas some loss of growth momentum was observed in the advanced economies, amid low commodity prices and relatively volatile financial markets. The US economic recovery weakened on the back of weak exports and falling nonresidential investment, though the labor market remained strong. Meanwhile, China's economy expanded 6.7% in Q1/2016, a slight slowdown in growth but still within the government's target range of 6.5-7%, as the government's growth stimulus measures began to take effect. However, overcapacity and growing corporate debt problems are still of concern. As for the euro area, the economy continued to recover gradually, with robust domestic demand helping to offset weakness from the export sector. The International Monetary Fund (IMF) in April 2016 revised down its global growth forecast for 2016 to 3.2%, against a projection in January 2016 of 3.4%.

According to the International Energy Agency (IEA) in April 2016, global oil demand in Q1/2016 averaged 94.8 million barrels per day (MMBD), decreasing from 95.5 MMBD in Q4/2015 due to lower Europe and Middle East demand, but increasing from 93.6 MMBD in Q1/2015. For the whole year of 2016, global oil demand is expected to average 95.9 MMBD, shooting up from 94.7 MMBD in 2015.

Unit : US\$/barrel	Q1/2015	Q4/2015	Q1/2016	% Inc. (Dec.)	
				YoY	QoQ
Average Dubai crude oil price	51.9	40.7	30.4	(41.4%)	(25.3%)

Dubai oil price in Q1/2016 averaged US\$30.4 per barrel, declining from Q4/2015 and Q1/2015 at US\$40.7 and US\$51.9 per barrel respectively, primarily due to excess supply as OPEC decided to maintain production at high levels and Iran readied to resume oil exports despite falling shale oil production and planned refinery maintenance in the U.S. and Russia.

Petroleum product prices in the Singapore spot market declined in Q1/2016 compared with Q1/2015, following the decline in the Dubai crude oil prices. Gasoline crack spreads in Q1/2016 averaged US\$18.8 per barrel, increased from Q1/2015 due to the higher demand in Asia and U.S. from the lower oil price; while diesel crack spreads averaged US\$9.6 per barrel, a decrease from Q1/2015 on account of the economic slowdown.

Fuel oil crack spreads, meanwhile, averaged US\$-5.2 per barrel, a decrease from Q1/2015 because of declining demand in China and Japan.

Singapore GRM in Q1/2016 averaged US\$7.7 per barrel, decreasing from Q4/2015 and Q1/2015 at US\$8.0 and US\$8.6 per barrel respectively primarily due to lower diesel demand.

Petrochemical prices of Olefins in Q1/2016 both High Density Polyethylene (HDPE) and Polypropylene (PP) declined from Q1/2015, in parallel with continuing decreases in crude and naphtha prices amid low buying activities as most buyers purchase only enough for their short-term productions awaiting clearer market outlook. For Aromatics, the Benzene (BZ) price weakened following the decline in feedstock price and some turnarounds of Styrene Monomer (SM) and Cumene/ Phenol plants. Also, arbitrage window for Asian benzene to the US has been closed since the Asian benzene price has remained higher than the US benzene price. Similarly, Paraxylene (PX) price dropped from sluggish PTA and polyester demand following unplanned shutdown of PTA plant in China. However, the BZ and PX spread over naphtha in Q1/2016 averaging US\$246 and 422 per ton respectively improved from Q1/2015 at US\$191 and 347 per ton respectively as feedstock price declined less than selling prices.

Unit : US\$/ton	Q1/2015	Q4/2015	Q1/2016	% Inc. (Dec.)	
				YoY	QoQ
HDPE	1,188	1,153	1,103	(7.2%)	(4.3%)
PP	1,149	995	930	(19.1%)	(6.5%)
BZ	670	606	574	(14.3%)	(5.3%)
PX	827	793	751	(9.2%)	(5.3%)

The Thai economy in Q1/2016 slowly recovered, supported by government spending and continual growth in tourism sector. However, domestic consumption started to lose momentum, following dissipation of the temporary positive factors such as the government's stimulus. In the meantime, exports have not shown a clear sign of rebound due to sluggish global economy. Thus, the National Economic and Social Development Board (NESDB) in February 2016 projected that the Thai economy in 2016 will expand in the range 2.8-3.8%.

## Non-recurring items in the first Quarter of 2016 until present

Summary of non-recurring items for Q1/2016 are as follows:

January 2016	<ul style="list-style-type: none"> <li>Energy Policy Management Committee (EPMC) announced, on January 21, 2016 to float NGV price for private cars on the condition that PTT be responsible for the price differential when the cost exceeds Baht 13.50/kg for 6 months.</li> </ul>
March 2016	<ul style="list-style-type: none"> <li>On March 25, 2016 the tribunal renders the majority award that since PTT's termination of the commercial contract with RPCG Public Company Limited (RPC) is not in accordance with the contract condition and the tribunal rules that PTT make a payment for damages to RPC. However, PTT is respectfully unable to concur with such award and together with the fact that the award is not unanimously rendered. As a result, PTT exercise its legal right by filing a motion with the court requesting the award be abrogated and currently PTT is preparing a petition to be submitted to the court of jurisdiction to withdraw the arbitration's award.</li> </ul>
April 2016	<ul style="list-style-type: none"> <li>The Chief Ombudsman submitted the complaint to the Administrative Court on April 4, 2016, regarding PTT not returning the natural gas pipeline assets in accordance with the judgment of the Supreme Administrative Court which there is no new allegation. However, the Supreme Administrative Court, on February 16, 2015, ordered that PTT had returned all assets completely according to the judgment of the Supreme Administrative Court since 2008. Therefore, the Ombudsman's request to the Supreme Administrative Court that PTT be ordered to return all gas pipeline assets would be deemed a repeated proceedings, which refrain the court from accepting such complaint.</li> </ul>

## Overall performance of PTT and its subsidiaries

Financial performance of Q1/2016 compared with Q1/2015 are summarized as follows:

Unit: Million Baht	Q1/2015	Q1/2016	% Inc. (Dec.)
<b>Sales &amp; services income</b>	<b>515,211</b>	<b>386,940</b>	<b>(24.9%)</b>
: Exploration & Production	47,632	38,165	(19.9%)
: Natural gas <sup>1/</sup>	140,222	118,285	(15.6%)
: Oil	133,782	112,762	(15.7%)
: International trading	238,085	150,908	(36.6%)
: Petrochemical & Refining	216,165	176,205	(18.5%)
: Coal	4,693	3,263	(30.5%)
: Others	1,087	1,119	2.9%
<b>EBITDA</b>	<b>70,742</b>	<b>71,343</b>	<b>0.8%</b>
: Exploration & Production	35,692	28,549	(20.0%)
: Natural gas	9,204	14,562	58.2%
: Oil	4,015	5,875	46.3%
: International trading			
- Excluding effect of FX	157	663	>100%
- Including effect of FX	1,113	1,548	39.1%
: Petrochemical & Refining	20,355	20,915	2.8%
: Coal	1,462	704	(51.8%)
: Others	410	125	(69.5%)
<b>Depreciation and amortization expenses</b>	<b>36,163</b>	<b>31,828</b>	<b>(12.0%)</b>
<b>Operating Income</b>	<b>34,579</b>	<b>39,515</b>	<b>14.3%</b>
: Exploration & Production	11,923	10,045	(15.8%)
: Natural gas	5,467	10,160	85.8%
: Oil	3,250	4,995	53.7%
: International trading			
- Excluding effect of FX	149	655	>100%
- Including effect of FX	1,105	1,540	39.4%
: Petrochemical & Refining	13,753	13,508	(1.8%)
: Coal	565	325	(42.5%)
: Others	23	(124)	>(100%)
<b>Share of net income from investments in associates and jointly ventures</b>	<b>1,891</b>	<b>865</b>	<b>(54.3%)</b>
<b>Gain on foreign exchange</b>	<b>1,941</b>	<b>2,349</b>	<b>21.0%</b>
<b>EBIT</b>	<b>44,433</b>	<b>43,431</b>	<b>(2.3%)</b>
<b>Finance costs</b>	<b>7,893</b>	<b>7,235</b>	<b>(8.3%)</b>
<b>Income taxes</b>	<b>3,451</b>	<b>3,798</b>	<b>10.1%</b>
<b>Net income</b>	<b>22,584</b>	<b>23,669</b>	<b>4.8%</b>
<b>Earnings per share (Baht/share)</b>	<b>7.89</b>	<b>8.23</b>	<b>4.3%</b>

<sup>1/</sup> Including Infrastructure business

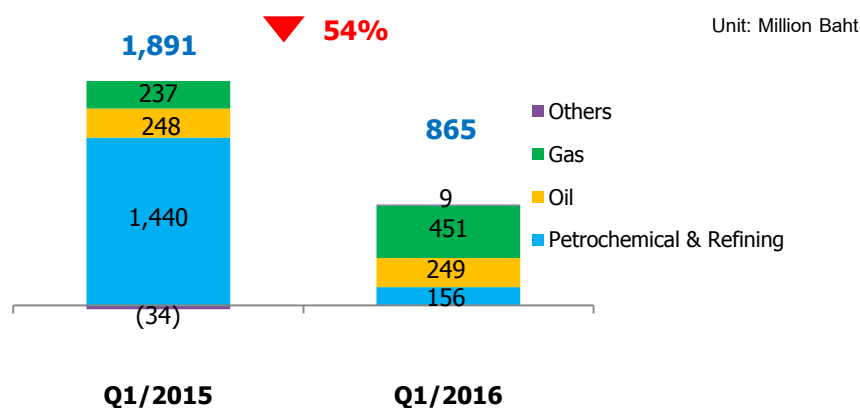
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## First quarter of 2016 compared with First quarter of 2015

In Q1/2016, sales revenue of PTT and its subsidiaries was Baht 386,940 million, decreasing by Baht 128,271 million or 24.9%. The main reason was the sharply drop in average selling prices following the decline in crude oil price which dropped by 41.4% compared with Q1/2015 resulting in the drop in sales revenue of all business groups. Moreover, effects from the continuous drop in oil prices since the second half of 2015 led to the significant decrease in natural gas prices in Q1/2016. The performance of PTT's GSP increased due to decline of feed gas costs higher than the decline in selling prices. However, the decrease in natural gas prices also brought about the lower performance of PTTEP from the drop in average selling prices. For the performance of petrochemical and refining business slightly decreased because of the lower petroleum product crack spreads, especially diesel. Even though stock losses declined, the reversal of allowance for loss on decline in value of inventories (NRV) also decreased. On the other hand, the performance of olefins and aromatics businesses increased following a higher in P2F. Hence, earnings before interest, taxes, depreciation and amortization (EBITDA) of PTT and subsidiaries in Q1/2016 was Baht 71,343 million, increasing by Baht 601 million or 0.8%.

### Share of net income (loss) from investments in associates and joint ventures



In Q1/2016, the share of net income from investments in associates and joint ventures was Baht 865 million, decreasing by Baht 1,026 million from Baht 1,891 million in Q1/2015. The main reasons was the recognition of the share of net income from investments in SPRC and BCP amounting to Baht 952 million in Q1/2015, while there was no such recognition in this quarter (PTT sold all shares it held in BCP on April 30, 2015 and decreased its investment in SPRC to 5.41% on December 3, 2015)

Depreciation and amortization expenses was Baht 31,828 million, decreasing by Baht 4,335 million mainly due to the increase in petroleum reserves and the recognition of loss on impairment of exploration and production assets of PTTEP in Q3/2015.

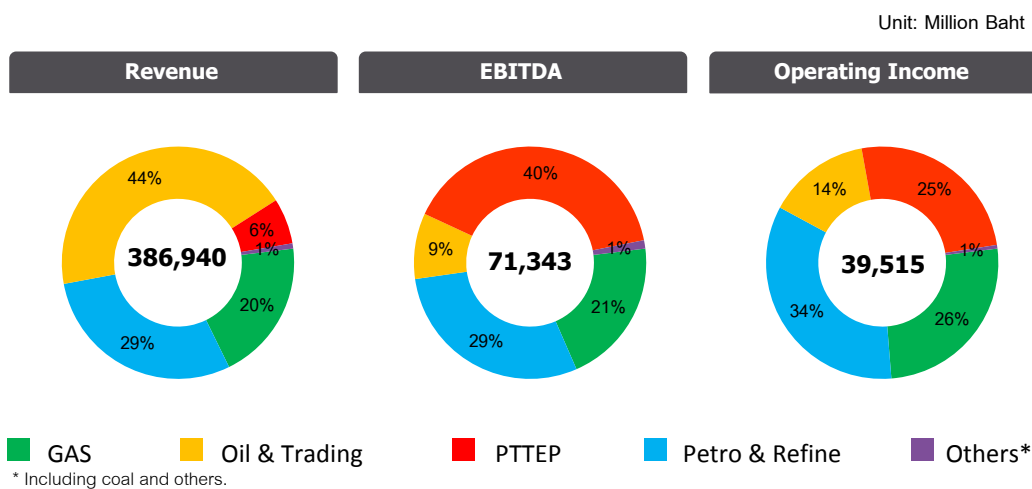
In Q1/2016, there was gain on foreign exchange rate of Baht 2,349 million, increasing by Baht 408 million from Q1/2015 mainly resulted from the effect of the Baht appreciation against US\$. Hence, many affiliates within PTT Group had unrealized gain on foreign exchange from foreign currency debts. Nonetheless, gain on foreign exchange of PTT decreased mainly due to the drop in outstanding USD debts compared with Q1/2015.

Moreover, loss on financial derivatives increased by Baht 2,386 million from gain on financial derivatives of Baht 1,470 million in Q1/2015, mainly resulted from oil price hedging contracts of PTTEP.

In Q1/2016, corporate income taxes were Baht 3,798 million, increasing by Baht 347 million from Baht 3,451 million in Q1/2015, mainly resulted from the better performance of PTT in Q1/2016. Nevertheless, the performance of IRPC dropped owing to the recognition of deferred tax from loss carry forward and the dissolution of its subsidiaries.

## Segmentation performance of PTT and its subsidiaries

The details by segmentation of revenue, EBITDA and operating income of Q1/2016 are as follow;



### 1. Upstream Petroleum and Natural Gas Business Group

#### Petroleum Exploration and Production Business: PTT Exploration and Production Public Co., Ltd. (PTTEP)

	Q1/2015	Q4/2015	Q1/2016	%Inc. (Dec.)	
				YoY	QoQ
Average selling price (US\$/BOE)	48.9	39.2	35.1	(28.2%)	(10.5%)
Average sales volume (BOED)	315,851	336,363	329,858	4.4%	(1.9%)

#### First quarter of 2016 compared with First quarter of 2015

In Q1/2016, sales revenue of PTTEP was Baht 38,165 million, decreasing by Baht 9,467 million or 19.9% mainly from the decrease in average selling prices by 28.2% from US\$ 48.9 per barrel of oil equivalent (BOE) in Q1/2015 to US\$ 35.1 per BOE in Q1/2016, primarily because of the drop of crude oil prices. Nonetheless, the average sales volume increased by 4.4% from 315,851 barrel of oil equivalent per day (BOED) to 329,858 BOED in Q1/2016 mainly from Montara project, Algeria 433 a and 416 b projects, and domestic fields in Thailand.

EBITDA in Q1/2016 was Baht 28,549 million, decreasing by Baht 7,143 million or 20%, mainly from the drop in sales revenue as aforementioned. In addition, operating expenses decreased from cost reduction policy and efficiency improvement activities under the SAVE to be SAFE program.

Operating income in Q1/2016 was Baht 10,045 million, decreasing by Baht 1,878 million or 15.8% in line with a decline in EBITDA as mentioned above. Even though, depreciation, depletion and amortization expenses decreased by Baht 5,265 million as a result of an increase in the petroleum reserve from both domestic and overseas projects, such as Contract 4, Vietnam 16-1 and Zawtika projects, and the recognition of loss on impairment of assets from PTTEP Australasia project in Q3/2015.



## Natural Gas Business Group

The details of all product sales volume from GSPs are as follows:

Unit : Ton	Q1/2015	Q4/2015	Q1/2016	%Inc.(Dec.)	
				YoY	QoQ
LPG	674,488	802,713	680,152	0.8%	(15.3%)
Ethane	551,581	603,765	449,673	(18.5%)	(25.5%)
Propane	204,197	128,564	186,792	(8.5%)	45.3%
NGL <sup>1/</sup>	189,972	174,948	175,624	(7.6%)	0.4%
<b>Total</b>	<b>1,620,238</b>	<b>1,709,990</b>	<b>1,492,241</b>	<b>(7.9%)</b>	<b>(12.7%)</b>

Note: <sup>1/</sup>include Pentane (start to sell in February 2015)

The details of reference product prices of GSPs are as follows:

Unit : US\$ per Ton	Q1/2015	Q4/2015	Q1/2016	%Inc.(Dec.)	
				YoY	QoQ
LPG <sup>1/4/</sup>	463	413	321	(30.7%)	(22.3%)
Ethylene <sup>2/</sup>	1,026	1,033	1,012	(1.4%)	(2.0%)
Propylene <sup>2/</sup>	833	587	649	(22.1%)	10.6%
HDPE <sup>2/</sup>	1,188	1,153	1,103	(7.2%)	(4.3%)
PP <sup>2/</sup>	1,149	995	930	(19.1%)	(6.5%)
Naphtha <sup>3/</sup>	444	399	304	(31.5%)	(23.8%)

Note: <sup>1/</sup> Contract Price (CP) 60:40

<sup>2/</sup> South East Asia - Spot Price

<sup>3/</sup> MOP Singapore (MOP'S)

<sup>4/</sup> On December 15, 2014, NEPC passed a resolution of LPG price restructuring effective from February 2, 2015 onwards, with the cancellation of LPG Ex-GSP pricing at US\$ 333 per ton and setting the calculating method for LPG Pool price which reflects actual costs of LPG production and supply (GSPs, Refineries and Aromatics plants, Imported) based on weighted average of the volume from production and supply for the last 3 months

### First quarter of 2016 compared with First quarter of 2015

In Q1/2016, sales revenue of natural gas business was Baht 118,285 million, decreasing by Baht 21,936 million or 15.6% from Q1/2015 mainly from lower sales revenue of PTT Natural Gas Supply and Trading (GSM), Natural Gas Transmission (GTM) and Natural Gas Distribution (NGR) business units, as a result of the drop in average selling prices in all customer groups compared with Q1/2015. Moreover, the average natural gas sales volume (calculated at heating value of 1,000 BTU per cubic foot) decreased by 204 million standard cubic feet per day (MMSCFD) or 4.2% from 4,832 MMSCFD in Q1/2015 to 4,628 MMSCFD in Q1/2016 mainly from power producer customers (EGAT and IPP) and Ethane separation plant (ESP) major turnaround for 23 days (during 1-23 March 2016).

Sales revenue of PTT's GSP decreased from the lower sales volume. The sales volume of all products from GSPs (including NGL derived from Dew Point Control units) decreased from 1,620,238 tons in Q1/2015 to 1,492,241 tons in Q1/2016, especially Ethane, as a result of ESP major turnaround of PTT and planned shutdown of PTTGC's Olefins and Polymer plants in Q1/2016. Moreover, sales revenue decreased in line with the drop in product selling price in Q1/2016 following global product reference prices.

EBITDA of natural gas business in Q1/2016 was Baht 14,562 million, increasing by Baht 5,358 million or 58.2% mainly from the decrease of feed gas costs which decreased more than the drop in selling prices. Therefore, gross profit of PTT's natural gas business increased mainly from GSPs as a result of the rise in the sales margin of Ethane and LPG as well as less loss from NGV. Operating income in Q1/2016 was Baht 10,160 million, increasing by 85.8% in line with the increased EBITDA.

The overall performance of infrastructure business in Q1/2016, consisting of GPSC, ENCO and PTES, increased compared with Q1/2015, especially GPSC which had better performance from the rise in electricity supply. In addition, the power plant of IRPC Clean Power (IRPC-CP) Phase-1 has started its commercial operation since November 2015 and fully operated in this quarter.

## 2. Downstream Petroleum Business Group

### Oil Business Group

Unit : million liter	Q1/2015	Q4/2015	Q1/2016	%Inc.(Dec.)	
				YoY	QoQ
Average sales volume	6,386	6,511	6,677	4.6%	2.5%

#### First quarter of 2016 compared with First quarter of 2015

Sales revenue of oil business in Q1/2016 was Baht 112,762 million, decreasing by Baht 21,020 million or 15.7% mainly from the decrease in product selling prices following the decline in average Dubai crude oil price from US\$ 51.9 per barrel in Q1/2015 to US\$ 30.4 per barrel in Q1/2016 despite average sales volume in this quarter increased by 291 million liters or 4.6% from 6,386 million liters or equivalent to 446,281 barrels per day in Q1/2015 to 6,677 million liters or equivalent to 461,509 barrels per day in Q1/2016. This was resulted mainly from the rise in sales volume of diesel, gasoline and aviation fuel due to low petroleum product prices.

EBITDA in Q1/2016 was Baht 5,875 million, increasing from Q1/2015 by Baht 1,860 million or 46.3%, mainly from the increase in contribution margins almost all petroleum products especially diesel and gasoline. Therefore, operating income in Q1/2016 was Baht 4,995 million, increasing from the prior year by Baht 1,745 million as a result of the increase in EBITDA as aforementioned.

International Trading Business Group

Unit : million liter	Q1/2015	Q4/2015	Q1/2016	%Inc.(Dec.)	
				YoY	QoQ
Average sales volume	21,067	20,438	18,823	(10.7%)	(7.9%)

**First quarter of 2016 compared with First quarter of 2015**

Sales revenue of international trading business was Baht 150,908 million in Q1/2016, decreasing by Baht 87,177 million or 36.6% from Q1/2015 mainly from the drop in global crude oil price. Moreover, sales volume in this quarter decreased by 2,244 million liters or 10.7% from 21,067 million liters or equivalent to 1,472,306 barrels per day in Q1/2015 to 18,823 million liters or equivalent to 1,301,057 barrels per day in Q1/2016, mainly due to the drop in sales volume of petroleum products and crude oil overseas from the Out – Out trading, despite the rise in sales volume of crude oil and imported condensate from Out – In trading resulted from the turnaround of PTT group refineries in Q1/2015.

EBITDA, which adjusted the effect of foreign exchange, in Q1/2016 was Baht 1,548 million, increasing by Baht 435 million mainly from the rise in domestic condensate margins. Operating income, which adjusted the effect of foreign exchange, in Q1/2016 was Baht 1,540 million.

## Petrochemical and Refining Business Group

Unit : US\$ per ton	Q1/2015	Q4/2015	Q1/2016	%Inc. (Dec.)	
				YoY	QoQ
HDPE	1,188	1,153	1,103	(7.2%)	(4.3%)
PP	1,149	995	930	(19.1%)	(6.5%)
BZ - Cond	217	231	271	24.9%	17.3%
PX - Cond	332	411	415	25.0%	1.0%

Unit : US\$ per barrel	Q1/2015	Q4/2015	Q1/2016	%Inc. (Dec.)	
				YoY	QoQ
Market GRM	6.97	7.32	4.92	(29.4%)	(32.8%)
Inventory gain (loss)	(2.91)	(2.61)	(0.97)	66.7%	62.8%
Accounting GRM	5.07	5.80	3.59	(29.2%)	(38.1%)
Refinery Utilization rate (%)	97.6%	92.0%	97.2%	(0.4%)	5.7%

Note: GRM is calculated from refineries of TOP, IRPC, and PTTGC except for GRM of Q4/2015 which included 2-months performance of SPRC since PTT partially sold its shareholding in December, 2015.

### First quarter of 2016 compared with First quarter of 2015

Sales revenue of petrochemical and refining business groups in Q1/2016 was Baht 176,205 million, decreasing by Baht 39,960 million or 18.5% mainly from the decrease in average petroleum and petrochemical product prices, following the continuous drop in crude oil prices which had fallen to its lowest point for 13 years due to oversupply on the crude oil market.

In Q1/2016, the refinery utilization rate was similar to Q1/2015. Olefins utilization rate was lower mainly from the planned shutdown of olefins and polymers plants of PTTGC, while aromatics utilization rate improved, especially TOP following the rise in market spread.

EBITDA in Q1/2016 was Baht 20,915 million, increasing by Baht 560 million from Q1/2015, and Operating income was Baht 13,508 million, decreasing by Baht 244 million, mainly due to

- Refinery performance declined from Market GRM decreased due to the lower petroleum product spreads, especially diesel, which resulted from lower demand from warmer climate. However, gasoline spreads increased due to the higher demand in Asia and U.S. from the lower oil price. In addition, PTT Group refineries had lower stock loss from US\$2.91 per barrel in Q1/2015 to US\$0.97 per barrel in Q1/2016 because crude oil price had declined in the beginning of Q1/2016 but gradually increased since the mid quarter.
- Aromatics Petrochemical performance – Aromatics market P2F increased due to the higher product spreads in almost all products. This was resulted from the drop in selling prices that

was lower than the decline in feeds costs because of tight supply from petrochemical plants in China and Singapore ceasing their operations.

- Olefins Petrochemicals performance – P2F of IRPC's olefins products increased due to higher product spread between HDPE/PP and Naphtha. The spread of HDPE increased by 14% owing to naphtha price decreased more than HDPE price following low crude oil price. Nonetheless, olefins performance of PTTGC decreased from lower utilization rate because of the olefins plant shutdowns as aforementioned and the drop in HDPE/PP prices.

Share of net income from investments in associates and joint ventures of petrochemical and refining business group decreased by Baht 1,285 million from Q1/2015, mainly from the performance of SPRC and BCP amounting to Baht 952 million which PTT sold its investment in BCP on April 30, 2015 and decreased its shareholding in SPRC to 5.41% on December 3, 2015.

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## Coal Business

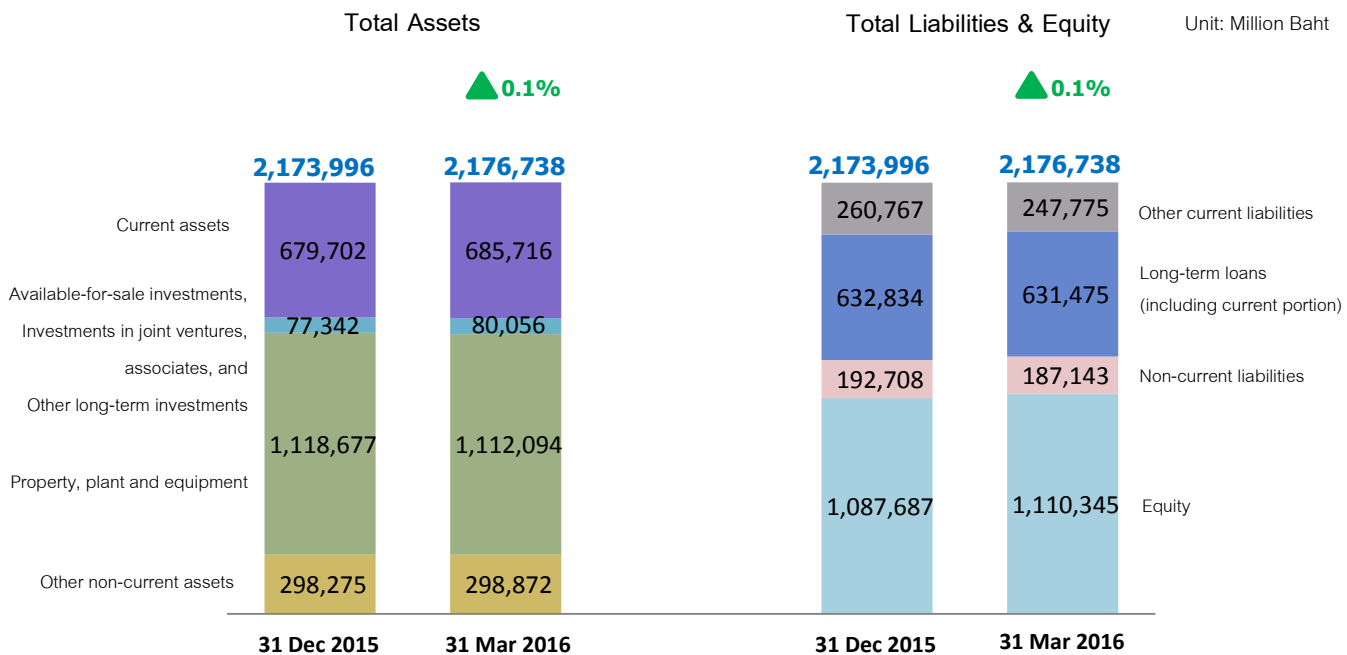
	Q1/2015	Q4/2015	Q1/2016	%Inc. (Dec.)	
				YoY	QoQ
Newcastle index price (US\$ per ton)	65.8	52.6	50.5	(23.3%)	(4.0%)
Average selling price (US\$ per ton)	56.2	51.7	44.6	(20.6%)	(13.7%)
Sales volume (million ton)	2.5	1.4	2.1	(16.0%)	50.0%

### First quarter of 2016 compared with First quarter of 2015

Sales revenue of coal business in Q1/2016 was Baht 3,263 million, decreasing by Baht 1,430 million or 30.5% mainly from the drop in average selling price in Q1/2016 by US\$ 11.6 per ton from US\$ 56.2 per ton to US\$ 44.6 per ton. In addition, sales volume decreased by 0.4 million tons or 16% from 2.5 million tons in Q1/2015 as a result of market oversupply condition and coal price downturn.

In Q1/2016, EBITDA was Baht 704 million, decreasing by Baht 758 million or 51.8% mainly caused by the drop in average selling prices and sales volume as aforementioned. However, drill costs decreased due to the higher discount provided by the contractor. Operating income in Q1/2016 was Baht 325 million, decreasing by only Baht 241 million or 42.5% due to the drop in depreciation and amortization expenses from the lower production volume and the recognition of impairment losses on coal mining assets in December 2015.

The analysis of PTT and its subsidiaries' consolidated financial position as of March 31, 2016 compared with December 31, 2015



### Assets

As of March 31, 2016, total assets of PTT and its subsidiaries were Baht 2,176,738 million, increasing by Baht 2,742 million or 0.1% compared with December 31, 2015. This increase was mainly from the net effect of the followings:

: An increase of Baht 6,014 million or 0.8% in current assets was mainly from the followings:

- An increase of Baht 39,336 million in cash and cash equivalents and current investments mainly due to an increase of Baht 76,345 million in cash inflows from operation. However, the net cash outflows of property, plant and equipment are Baht 32,548 million and the net payment of finance costs are Baht 6,050 million.
- A decrease of Baht 29,833 million in accounts receivable, mainly from the decrease in product sales volume and selling prices compared to the year ended 2015.

: An increase of Baht 2,714 million or 3.5% in long-term investments was mainly from the share of profit from investments in joint ventures and associates.

: A decrease of Baht 6,583 million or 0.6% in property, plant and equipment was mainly from depreciation expenses even though there was additional assets during the period. The major increasing are Nakornsawan onshore gas pipeline project and the Nakornratchasima onshore gas pipeline project of PTT, assets under construction of the Phenol II and LLDE Expansion projects of PTTGC, the Upstream Project for Hygiene and Value Add Products (UHV) of IRPC, and the LNG terminal Phase II project of PTTLNG.

## Liabilities

As of March 31, 2016, PTT and its subsidiaries had total liabilities of Baht 1,066,393 million, decreasing by Baht 19,916 million or 1.8% from the year ended 2015, mainly from the net effect of the followings:

: A decrease of Baht 12,992 million or 5% in other current liabilities mainly from the payment of accounts payable.

: A decrease of Baht 5,566 million or 2.9% in non-current liabilities mainly from deferred tax liabilities and derivative liabilities following the appreciation of Thai Baht.

## Equity

As of March 31, 2016, PTT and its subsidiaries had total shareholders' equity of Baht 1,110,345 million, increasing by Baht 22,658 million or 2.1% from the year ended 2015, mainly due to net income of PTT and its subsidiaries which was Baht 23,669 million.

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Liquidity

For the three-month period ended March 31, 2016, PTT and its subsidiaries had net increase in cash and cash equivalents amounting to Baht 9,855 million, and cash and cash equivalents at the beginning of the period was Baht 239,978 million. As a result, cash and cash equivalents at the end of the period was Baht 249,833 million. Details of cash flow by activities are as follows:

Unit: Million Baht	
Net cash provided by operating activities	76,345
Net cash used in investing activities	(62,819)
Net cash used in financing activities	(8,008)
Effects of exchange rates on cash and cash equivalents	(2)
Currency translation differences	4,339
Net increase in cash and cash equivalents during the period	<u>9,855</u>
Cash and cash equivalents at the beginning of the period	<u>239,978</u>
Cash and cash equivalents at the end of the period	<u>249,833</u>

Net cash provided by operating activities of Baht 76,345 million was derived from Baht 23,669 million of net profit attributable to equity holders of the company, adjusted by net profit to net cash provided (used in) by operating activities. The increase in net cash flow from operating activities mainly resulted from Baht 31,828 million of depreciation and amortization expenses, Baht 7,235 million of finance costs, Baht 3,798 million of income taxes expenses, as well as, the change in net operating assets of Baht 7,992 million and income taxes paid was Baht 2,549 million.

Net cash used in investing activities was Baht 62,819 million mainly resulted from the followings:

: The cash outflow of investments in property, plant and equipment, intangible assets, and mining properties amounting to Baht 32,647 million, mainly due to the additional investments of PTTEP in petroleum exploration and production assets mainly from the investments in Arthit, Zawtika, and S1 projects. Additionally, PTT invested in projects, principally are the Nakornsawan and the Nakornratchasima onshore gas pipeline project. Furthermore, there were investments in Phenol II project and LLDPE Expansion project of PTTGC, UHV project of IRPC, as well as the production of linear alkylbenzene project (LAB) and New Small Power Plants Project (New SPPs) of TOP.

: The cash outflow from current investments amounting to Baht 29,481 million, mainly from fixed deposits and financial securities of PTT and TOP.

Net cash used by financing activities was Baht 8,008 million, mainly from the followings:

: The loans repayment of Baht 8,597 million were principally from Baht and foreign currency loans of PTTGC amounting to Baht 5,200 million and Baht loan of PTT amounting to Baht 1,600 million.

: Cash paid for finance costs amounting to Baht 7,074 million, mainly from PTT, TOP, and PTTGC.

: A decrease of Baht 4,272 million in bank overdrafts and short-term loans from financial institutions, mainly from PTTT.

: Cash received from loans totaling to Baht 12,265 million, mainly was derived from PTTGC, IRPC, and TOP.

Financial ratios and earnings per share of PTT and its subsidiaries

Financial Ratio	Unit	Q1/2015	Q1/2016
<u>Profitability Ratios</u>			
Gross profit margin	%	10.27%	14.26%
Net profit margin	%	6.42%	8.37%
<u>Solvency Ratios</u>			
Interest coverage	Time	13.58	11.15
<u>Earnings per share</u>			
Earnings per share	Baht/share	7.89	8.23

Financial Ratio	Unit	Dec 31, 2015	Mar 31, 2016
<u>Liquidity Ratios</u>			
Current ratio	Time	2.16	2.21
Quick ratio	Time	1.55	1.61
<u>Solvency Ratios</u>			
Debt to Equity	Time	0.61	0.59

## Note:

Current ratio	=	Current assets divided by Current liabilities
Quick ratio	=	(Cash and cash equivalent + Current investments + Accounts receivable) divided by Current Liabilities
Gross profit margin	=	Gross profit divided by Sales and service income
Net profit margin	=	Net profit divided by Sales and service income
Debt to equity	=	Interest bearing debt divided by Total shareholder's equity
Interest coverage	=	(Net cash flow from operating activities + Taxes paid from operating activities) divided by Interest paid from financing activities

## Economic Outlook in 2016

The world economy is expected to maintain its growth momentum in the second quarter of 2016 (Q2/2016) at a same pace as in Q1/2016 with growth in emerging market economies and lower-income countries, especially in China where effects of the government's growth stimulus measures on manufacturing and housing sectors are expected to become more pronounced. In advanced economies, growth is expected to remain modest especially with the US economy currently facing strong external headwinds from the sluggish global economy, which expected to take time for recovery, while the euro area economy continues to gradually improve amid easy financial conditions. The world economy is facing downside risk from further US interest rate increases, which will result in capital outflows from emerging countries, and the effect from a potential "Brexit" vote in the United Kingdom's European Union membership referendum in June 2016.

According to the IEA's estimates in April 2016, global oil demand is expected to grow by 1.2 MMBD to average 95.9 MMBD in 2016, mainly from emerging market economies and lower-income countries. Meanwhile, oil demand in the advanced economies is expected to remain the same as previous year. As for global oil supply, Non-OPEC production is expected to decline; however, the production from Iran, Iraq, and Libya is expected to increase. Therefore, the oversupply condition will be slightly improved resulting in oil prices to remain low in the range of US\$35-40 per barrel, which will help maintain demands for refined products at a high level.

Singapore GRM in 2016 is expected to average US\$6-7 per barrel.

Olefins and Aromatics prices in Q2/2016 tend to be higher amid tight supply. HDPE price is expected at US\$1,201 per ton and PP price is expected at US\$1,098 per ton. Likewise, Aromatics price tends to be higher with PX price forecasted at US\$796 per ton, following a strong demand for polyester. BZ price is forecasted at US\$635 per ton, in line with the strong US benzene market from tight supply as BZ feedstock will be switched to produce more gasoline during driving season and the turnaround season of BZ plants.

Thai economy in Q2/2016 is expected to gradually recover, bolstered by fiscal spending, especially government investment in large infrastructure projects that became clearer, which will help spur private investment. In the meantime, tourism sector is likely to continue its expansion. Nevertheless, risk factors that need to be monitored include the slow recovery of export sector due to the impact from Thailand's major trading partners, the volatility in financial market and Thai Baht currency, as well as the intensifying drought.

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## Appendix

**Natural Gas Business** consists of PTT natural gas business unit, PTT Natural Gas Distribution Co., Ltd. (PTTNGD), PTT LNG Co., Ltd (PTTLNG), and PTT FLNG Limited, which is a joint venture of PTT International (Singapore) Pte. Ltd. (a subsidiary of PTTER) with 50% shareholding interest and a joint venture of PTTEP FLNG Holding Company Limited (a subsidiary of PTTEP) with 50% shareholding interest. PTT FLNG is currently under business dissolution.

**Oil Business** consists of PTT oil business unit, PTT (Cambodia) Co., Ltd. (PTTCL), PTT Tank Terminal Co., Ltd. (PTT TANK), PTT Retail Business Co., Ltd. (PTTRB), consolidating Thai Lube Blending Company Limited (TLBC) due to the 100% TLBC's shareholding acquisition by PTTRB and PTT, and PTT Oil Myanmar Co., Ltd. (PTTOM).

**International Trading Business** consists of PTT international business unit and PTT International Trading Pte Ltd (PTTT).

**Petrochemical and Refinery Business** consists of PTT Global Chemical Public Company Limited (PTTGC), PTT Polymer Marketing Co., Ltd. (PTTPM), PTT Polymer Logistics Co., Ltd. (PTTPL), PTT Maintenance and Engineering Co., Ltd. (PTTME) and PTT PMMA Co., Ltd. (PTTPMMA), Thai Oil Public Company Limited (TOP), IRPC Public Company Limited (IRPC), and Thai Oil Power Co., Ltd. (TP).

**Coal Business** consists of Sakari Resources Ltd. (SAR), Straits (Brunei) Pte Ltd (Straits (Brunei)), and Yoxford Holdings (95.26% shareholding in SAR and 100% shareholdings in the others, held by PTT Mining Limited (PTTML), a 100% shareholding subsidiary of PTT Energy Resources Company Limited (PTTER)).

**Infrastructure Business** consists of Global Power Synergy Public Company Limited (GPSC), PTT Energy Solution Co., Ltd. (PTTES) and Energy Complex Co., Ltd. (EnCo).

**Other Business** consists of Business Services Alliance Co., Ltd. (BSA), PTT Green Energy Pte. Ltd. (PTTGE), PTT Energy Resources Company Limited (PTTER), and PTT Regional Treasury Center Pte. Ltd. (PTTRTC) and PTT ICT Solution Co., Ltd. (PTTICT).

**Earnings per share** is calculated by dividing net income attributable to ordinary shareholders by the weighted average number of ordinary shares which are held by third parties during the periods.