

The Bangchak Petroleum Public Company Limited

Management Discussion and Analysis of Business Operation

For the third quarter ended September 30, 2016



Summary of the Company and its subsidiaries' operating result for the third quarter ended 30th September 2016

In Q3/2016, the consolidated financial statement recorded revenue from sale of goods and rendering of services of Baht 36,686 million, and Net Profit of Baht 1,132 million which was the Net Profit attributable to owners of the Company of Baht 1,178 million, or earning per share of 0.86 Baht.

EBITDA Structure of the Company and its subsidiaries.						Unit: Million Baht	
	Q3/2015	Q2/2016	Q3/2016	YoY	QoQ	9M2015	9M2016
Total Revenue	35,203	37,262	36,686	4%	-2%	116,005	104,225
Total EBITDA	2,184	4,085	2,798	28%	-32%	9,681	8,076
<i>EBITDA Refinery^{1/}</i>	764	2,531	1,503	97%	-41%	4,967	3,389
<i>EBITDA Marketing^{2/}</i>	551	882	607	10%	-31%	1,948	2,531
<i>EBITDA Power Plant^{3/}</i>	692	525	612	-12%	17%	2,140	1,765
<i>EBITDA Biofuel^{4/}</i>	62	113	(65)	-204%	-157%	242	195
<i>EBITDA Exploration and Production^{5/}</i>	156	59	171	10%	191%	498	252
<i>EBITDA Others^{6/}</i>	(41)	(25)	(31)	25%	-23%	(114)	(56)
Profit attributable to owners of the Company	432	2,417	1,178	173%	-51%	4,263	3,642
Basic earnings per share (Baht)	0.31	1.76	0.86			3.10	2.64

Note: 1/ EBITDA from Refinery Business of the Company, BCP Trading Pte. Ltd. and Bongkot Marine Services Co., Ltd.

2/ EBITDA from Marketing Business of The Company, Bangchak Greenet Co.,Ltd., and Bangchak Retail Co., Ltd.

3/ EBITDA from Power Plant Business of BCPG Plc. and its subsidiaries

4/ EBITDA from Bangchak Biofuel Co., Ltd., Ubon Bio Ethanol Co, Ltd, and Bangchak Bioethanol (Chachoengsao) Co., Ltd.

5/ EBITDA from Nido Petroleum Limited

6/ EBITDA from BCP Energy International Pte, Ltd., BCP Innovation Pte. Ltd., and others

In Q3/2016, Bangchak refinery recorded an average crude run of 116 KBD, higher than the previous quarter, and was at a similar level when compare to the same period of last year. The refinery continued to maintain its high level of crude run as a result of the well-planned production process, refining logistics system management, together with the YES-R projects which enabled a consistent and smooth production process. Market GRM was decreased, mainly due to the large drop in an average Gasoline/Dubai crack spread (UNL95/DB) (-40% YoY and -20% QoQ) from the product's excess supply in region. Also, Dated Brent/Dubai spread (DTD/DB) was increased during the quarter, led to a higher cost of crude oil.

The company's total sales volume continued to expand from the same period of last year, as a result of the growing domestic oil demand which was supported by a decline in retail oil prices. However, the seasonal effect resulted in the lower sales volume when compared to the previous quarter. Total marketing margin remained at a high level, increased from the same period of last year, although declined from the previous quarter by reasons of the higher price competitiveness during the low season, and the higher cost of finished oil products due to the higher crude oil price.

Moreover, crude oil price increased during the quarter, although the average price of the quarter is at a similar level as the previous quarter. Consequently, refinery business recorded an Inventory Gain of Baht 120 million. For Biofuel

business, the decline in B100 product demand led to a drop in crude palm oil price in the quarter, especially during the end of the quarter, effecting an average price B100 product. Therefore, Biodiesel business recorded an Inventory Loss of Baht 153 million (included an allowance for lower of cost or market of inventories (LCM) of Baht 61 million). As a result, the company and its subsidiaries recorded a total Inventory Loss of Baht 35 million (included an allowance for lower of cost or market of inventories (LCM) of Baht 61 million).

In the quarter, the company and its subsidiaries recorded a gain on foreign exchange of Baht 156 million, from the strengthened value of Thai Baht during the quarter. In conclusion, the company and its subsidiaries recorded a total EBITDA of Baht 2,798 million, increased by 28% YoY, but reduced by -32% QoQ.

Moreover, in September 28, 2016, BCPG Plc., has offered its newly issued ordinary shares for the initial public offering (IPO). The newly issued ordinary shares of 590 million shares is listed in the Stock Exchange of Thailand, with the offering price of Baht 10 per share (par value of Baht 5 per share). Consequently, the company's shareholding portion in BCPG Plc. was reduced to 70.35%

Further, on September 29, 2016, the company's Board of Directors Meeting resolved to establish a new associated company, namely Oam Suk Social Enterprise Co., Ltd., with the objective to engage in business related to the procurement of agricultural products, and other organic crops for processing, marketing, distribution, and research and development, with initial registered capital of Baht 10 million, and the company holds 40% of the shares.

The brief summary of each business performance for the quarter were as follows:

Refinery business recorded an average crude run of 116 KBD, a higher level continuously from the previous quarter. Market GRM was recorded at 5.62 \$/BBL, soften from the sharply narrowed average Gasoline/Dubai crack spread (UNL95/DB) (-40% YoY and -20% QoQ) as Indonesia's gasoline import contracted, and from the product's excess supply in region. Moreover, crude oil price was higher during the quarter before declining at the end of the quarter, leading to Refinery business's an Inventory Gain of Baht 120 million. There was also a gain from crude and product oil price hedging contract of Baht 11 million. Consequently, Refinery business recorded an EBITDA increase of 97% YoY, but decreased by -41% QoQ.

Marketing business sales volume was 1,382 million litres, an expansion of 9% YoY, from a rise in domestic oil demand in both retail and industrial markets supported by a decline in retail oil prices. Sales volume however, was declined from the previous quarter, as the rainy season led to the lower domestic oil demand, especially in the agricultural sector. In this quarter, the company continued to maintain its 2nd rank position in retail market share. Total marketing margin was at 0.80 Baht per litre, an increase of 14% YoY, notably in the Retail and Lubricant marketing margin, but was lowered from the last quarter. By these reasons, marketing business EBITDA increased by 10% YoY, but decreased by -31% QoQ.

Solar Power business which is currently under BCPG Plc., a subsidiary of the company, recorded an increase in total revenue by 7%YoY and 3% QoQ. Solar Power business in Thailand recorded a lower total electricity sales from the higher amount of rainfall in the quarter. For Solar Power business in Japan, total electricity sales rose 135% QoQ from the commercial operation start of an additional 1 project (PPA of 8.8 MW), and from the superior irradiation hours during summer time in Japan.

Biodiesel business recorded an average daily production rate of 452 thousand litres per day, a higher production rate due to the commercial operation start of the new 2nd Biodiesel plant. However, B100 sales volume decreased as the government announced a reduction in the portion of B100 mixing with diesel from 7% to 3% during the quarter. Gross margin declined from the reduction of B100 mixing portion with diesel, leading to a drop in crude palm oil and B100 average price during the end of the quarter, resulting in an Inventory Loss of Baht 153 million (included an allowance for lower of cost or market of inventories (LCM) of Baht 61 million) for Biodiesel business.

Exploration and Production Business recorded a revenue increase of 72% YoY and 116% QoQ, as a result of the revenue realization from the 2 cargoes of oil sold, while in Q3/2015 and Q3/2016, there was a revenue recognition from only 1 cargo of oil sold. In Q3/2016, the total sales volume was 189,878 barrels (net to Nido). Further, Nido still maintain its cost saving program on both the expense related to production and Selling, General and Administrative expenses.

Consolidated Statement of Income						Unit: Million Baht	
	Q3/2015	Q2/2016	Q3/2016	YoY	QoQ	9M2015	9M2016
Revenue from sale of goods and rendering of services	35,203	37,262	36,686	4%	-2%	116,005	104,225
Cost of sale of goods and rendering of services	(33,118)	(32,986)	(33,774)	2%	2%	(106,590)	(96,088)
Gross Profit	2,085	4,276	2,912	40%	-32%	9,415	8,136
Investment income and other income	201	111	113	-44%	1%	444	350
Selling and administrative expenses	(1,133)	(1,433)	(1,473)	30%	3%	(3,503)	(4,118)
Gain (loss) from crude and product oil price hedging contract	(5)	(0.4)	11	313%	N/A	(94)	174
Gain (loss) from foreign currency forward contracts	(167)	2	13	108%	634%	(180)	71
Gain (loss) on foreign exchange	(155)	250	156	201%	-38%	86	490
Reversal of allowance for gain/(loss) from impairment of assets	(5.1)	0.4	3	168%	808%	5	5
Share of profit (loss) of associate	(2)	(6)	(1)	28%	78%	9	5
Profit before finance costs and income tax expense	819	3,200	1,734	112%	-46%	6,181	5,115
Finance costs	(391)	(327)	(369)	-6%	13%	(1,203)	(1,069)
Profit/(loss) before income tax expense	429	2,874	1,365	218%	-53%	4,978	4,046
Income tax (expense) credit	(6)	(459)	(233)	N/A	-49%	(690)	(525)
Profit for the period	423	2,415	1,132	167%	-53%	4,288	3,521
Owners of the Company	432	2,417	1,178	173%	-51%	4,263	3,642
Non-controlling interests	(9)	(3)	(47)	-435%	N/A	25	(121)
Earnings per share (Baht per Share)	0.31	1.76	0.86	177%	-51%	3.10	2.64

For Q3/2016 performance, the company and its subsidiaries recorded a Net Profit attributable to owners of the Company of Baht 1,178 million, an increase of Baht 746 million (173% YoY) when compared to Q3/2015, and a decrease of Baht 1,239 million (-51% QoQ) when compared to Q2/2016, with details as follows:

- 1) Total revenue from sale of goods and rendering of services of Baht 36,686 million, an increase of 4% YoY, mainly from the growth in the total sales volume by 7% YoY, which grew in every sales channel of the company. But total revenue declined 2% QoQ, as the finished oil product sales volume decreased from the previous quarter, and the sales volume in retail market reduced by 5% QoQ.
- 2) Gross Profit was recorded at Baht 2,912 million, an expansion of 40% YoY but decreased by 32% QoQ, primarily from the effect of Inventory Gain/Loss, as in Q3/2016, the company and its subsidiaries recorded an Inventory Loss of Baht 22 million, while in Q3/2015, there was an Inventory Loss totaling of Baht 1,458 million, and in Q2/2016, there was an Inventory Gain totaling of Baht 941 million.
- 3) Investment income and other income was recorded at Baht 113 million, a decrease of 44% YoY but increased by 1% QoQ, as in Q3/2015, there was an insurance compensation of Baht 76 million.
- 4) Selling and administrative expense was recorded at Baht 1,473 million, an increase of 30% YoY and 3% QoQ, mainly from BCPG Plc., Bangchak Retail Co., Ltd., and increased expense related to human resources.

- 5) Gain on foreign currency forward contracts was recorded at Baht 13 million, as a result of the strengthening of Thai Baht against US Dollar during the quarter, while in Q3/2015, Thai Baht was weakened against US Dollar, resulting in a loss on foreign currency forward contracts during that quarter.
- 6) Gain on foreign exchange was recorded at Baht 156 million, increased from the same period of last year as a result of strengthening of Thai Baht against US Dollar during the quarter.
- 7) Finance costs was recorded at Baht 369 million, a decrease of 6% YoY from the partial repayment of long-term loan from financial institutions, but increased 13% QoQ from the additional long-term loan drawdown of BCPG Plc.
- 8) In Q3/2016, BCP Innovation Pte. Ltd., a subsidiary of the company, recorded a loss from a change in fair value of asset available for sale, LAC (Lithium Americas Corp.), of Baht 115 million, which will be recorded in other comprehensive income.

Performance of each company details are as follows:

Statement of Income of the company and its subsidiaries		Unit: Baht Million
Q3/2016	Revenue from sale of goods and rendering of services	Net Profit
The Bangchak Petroleum Plc.	34,506	949
Bangchak Green Net Co., Ltd.	7,430	27
Bangchak Biofuel Co.,Ltd.	1,153	(108)
BCPG Plc. Group	785	365
Nido Petroleum Ltd.	644	(70)
Other ^{1/}	-	(33)

Note: 1/ BCP Energy International Pte. Ltd., BCP Innovation Pte. Ltd., BCP Trading Pte. Ltd., Bangchak Retail Co., Ltd., and Bangchak Bioethanol (Chachoengsao) Co., Ltd.

Summary of the Company and its subsidiaries' performance by Business unit

1) Refinery Business

Crude Oil Price								Unit: \$/BBL	
	Q3/2015	Q2/2016	Q3/2016			YoY	QoQ	9M2015	9M2016
	AVG	AVG	MAX	MIN	AVG	%	%	AVG	AVG
Dubai (DB)	49.99	43.23	47.21	38.60	43.19	-14%	0%	39.11	54.38
Dated Brent (DTD)	50.47	45.59	51.72	38.75	45.86	-9%	1%	41.88	55.31
DTD/DB	0.48	2.36	4.51	0.15	2.67	455%	13%	2.76	0.93

Crude Oil Price Situation

The average Dubai crude oil price decreased by 6.80 \$/BBL in Q3/2016 compared to Q3/2015. It was pressured by the increasing oil production of OPEC and the high global oil inventories.

The average Dubai crude oil price in Q3/2016 decreased by 0.05 \$/BBL compared to Q2/2016. During the beginning of the quarter, oil price fell on concerns of The United Kingdom's referendum vote to leave the EU in June 2016, which could result in the global economic slowdown. Moreover, the market worried that oil production in Libya and Nigeria would return after the political and military situation has improved in both countries. In Nigeria, the rebel declared to stop attacking oil facility after several attacks this year. In addition, U.S. oil rig activities continue to increase steadily throughout the quarter, after crude oil price rebounded from the lowest level earlier of this year, creating concerns that the US crude production will increase sooner than expected.

On the contrary, in late of the quarter, crude oil prices rebounded after OPEC members proposed to cut oil production from its current level of 33.24 MBD to 32.5-33.0 MBD during the meeting in Algeria. It was the first deal of OPEC members in eight years which surprised the market. In addition, crude oil prices have been driven after the US Energy Information Administration (EIA) reported crude stockpiles continued to decline in September.

The spread between the average Dated Brent oil price and average Dubai oil price (DTD/DB) in Q3/2016 increased by 2.19 \$/BBL when compared to Q3/2015, as shale oil production in the U.S. declined, led to a better situation of the light crude oil oversupply. On the other hand, the heavy crude oil production from OPEC producers has increased.

When compared to Q2/2016, the spread between average Dated Brent oil price and average Dubai oil price (DTD/DB) in Q3/2016 increased by 0.32 \$/BBL. The spread was supported by an increase in demand of light products during summer. The West African light crude supply fell after the disruption of oil exports of Nigeria since late July to early September.

Crack Spreads								Unit: \$/BBL	
	Q3/2015	Q2/2016	Q3/2016			YoY	QoQ	9M2015	9M2016
	AVG	AVG	MAX	MIN	AVG	%	%		
UNL95/DB	19.35	14.42	16.10	8.07	11.59	-40%	-20%	14.91	18.19
IK/DB	10.87	11.16	13.32	8.76	11.11	2%	0%	11.32	13.78
GO/DB	10.77	10.53	13.34	8.52	10.93	1%	4%	10.38	13.61
FO/DB	-8.05	-8.74	-1.83	-6.56	-4.27	47%	51%	-6.11	-4.49

Crack Spreads Situation

- An average Gasoline/Dubai crack spread (UNL95/DB) decreased by 7.76 \$/BBL, compared to Q3/2015, as refineries continue to increase gasoline yield to serve robust gasoline demand. However, the growth of gasoline demand slowed down compared to the same period last year which was extraordinarily high. Indonesia's gasoline import has contracted since last year after the commissioning of a new gasoline refining unit and new condensate splitter.

When compared to Q2/2016, the Gasoline/Dubai crack spread (UNL95/DB) decreased by 2.83 \$/BBL. During the quarter, the spread was pressured by excess supply in region and heavy exports from China after domestic demand slowdown because of the flooding in rainy season. Chinese gasoline export rose to its record high in June and continued to stay at a high-level in July. Indonesia's import demand also declined after its peak in the fasting month during June to early July.

- An average Jet (Kerosene)/Dubai crack spread (IK/DB) increased by 0.25 \$/BBL, compared to Q3/2015, supported by the slower new refinery capacity increment from the same period in 2015. While last year the crack spread was weighted by the commissioning of new large refineries in Saudi Arabia and the United Arab Emirates, flooding new oil products supply into market.

When compared to Q2/2016, the Jet (Kerosene)/Dubai crack spread (IK/DB) decreased by 0.05 \$/BBL, as it was pressured by the slower exports from Asia to U.S. West Coast, after refineries in the area returned to normal operation. Moreover, Jet Fuel exports from China was increased from the higher production, even though Chinese demand indicated further growth this year. Jet Fuel demand for air travel also began to decline after the end of summer season in September, despite an increased demand in Africa. However, scheduled refinery maintenance in China, Japan and South Korea in September helped supporting the cracks spread.

- An average Gas Oil/Dubai crack spread (GO/DB) increased by 0.15 \$/BBL, compared to Q3/2015, as many refineries reduced gasoil yields to produce more gasoline, after the gasoil demand in the region showed sign of slowing down, especially in China, in response to the structural change in service sector.

When compared to Q2/2016, Gas Oil/Dubai crack spread (GO/DB) increased by 0.40 \$/BBL. The spread gained support from the demand for mining sector in Indonesia which increased for the first time in four years. Diesel demand increased following the rose of coal production activity to meet with demand in China. Schedule refinery maintenance in North Asia over September also lent support on cracks spread. However, at the beginning of

the quarter, Chinese diesel export had increased after facing heavy rain and flooding destruct transport and construction demand.

- An average Fuel Oil/Dubai crack spread (FO/DB) increased by 3.78 \$/BBL, compared to Q3/2015. The spread was supported by a stronger demand for power generation in summer in the Middle East. Saudi Arabia minimize its crude direct burn for power to keep high crude export and increase its fuel oil source to generate power.

When compared to Q2/2016, Fuel Oil/Dubai crack spread (FO/DB) increased by 4.47 \$/BBL, driven by the reduced supply from Russia after the government raised its fuel oil export tax and the refiners has upgraded its refinery to minimize fuel oil export. Moreover Middle East and Europe fuel oil export was decreased in the quarter because of the higher domestic demand for power generation during summer season. Fuel oil demand for electricity generation in Japan also increased due to an emergency shutdown of coal power plant in the west of the country. Moreover, increasing marine bunker demand during the quarter also gave support for fuel oil crack spreads.

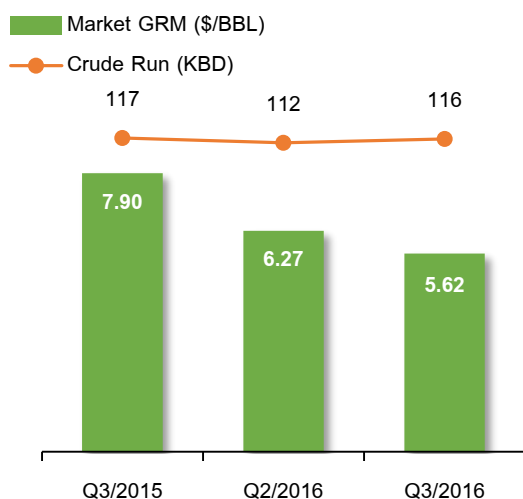
Refinery Business Performance

Refinery Business Performance							
	Q3/2015	Q2/2016	Q3/2016	YoY	QoQ	9M2015	9M2016
Average Crude Run (KBD)	116.70	111.68	115.59	-1%	3%	112.45	97.22
Utilization Rate (%)	97%	93%	96%	-1%	3%	94%	81%
Average FX (THB/USD)	35.40	35.45	35.01	-1%	-1%	33.87	35.43
						(Unit: Million Baht)	
Market GRM	3,004	2,258	2,092	-30%	-7%	9,816	5,471
GRM Hedging	(44)	3	11	125%	286%	(133)	186
Inventory Gain/ (Loss) ^{1/}	(1,415)	905	120	108%	-87%	(2,724)	(317)
Total GRM	1,546	3,166	2,223	44%	-30%	6,959	5,339
EBITDA^{2/}	764	2,531	1,503	97%	-41%	4,967	3,389

Note: 1/ Inventory Gain/ (Loss) was included an allowance or reversal of LCM.

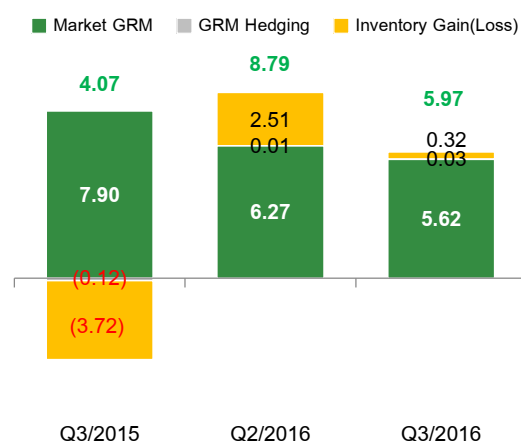
2/ EBITDA from Refinery Business of the Company, BCP Trading Pte. Ltd. and Bongkot Marine Services Co., Ltd.

Market GRM and Crude Run



Total GRM

Unit: \$/BBL



Total Sales Volume in each market category of the Company

Unit: Million Litre

	Q3/2015	Q2/2016	Q3/2016	YoY	QoQ	9M2015	9M2016
Marketing Business							
Retail	803	921	879	9%	-5%	2,434	2,687
Industrial	469	529	503	7%	-5%	1,586	1,610
Total	1,272	1,450	1,382	9%	-5%	4,020	4,297
Wholesale Business							
Petroleum traders in accordance with section 7	158	236	260	65%	10%	500	549
Export	342	222	259	-24%	16%	806	687
Total	500	458	519	4%	13%	1,306	1,236
Total Sales Volume	1,773	1,908	1,902	7%	-0.3%	5,326	5,533

Note: Total sales volume figures excluding the swap amount between petroleum traders in accordance with section 7 and the sales volume of crude

The performance in Q3/2016 compared to Q3/2015, Bangchak refinery's average crude run was steadily high around 116 KBD or approximately 96% of the total refining capacity. The consistently high crude run was a result of the well-planned production process, refining logistics system management, together with the YES-R projects which enabled a consistent and smooth production process.

Market GRM was decreased by Baht 912 Million (-30%) when compared to the same period last year, from the contraction in some products crack spreads, especially in Gasoline/Dubai spread (UNL95/DB) which was narrower as Indonesia's gasoline import fell down since last year after the commissioning of a new gasoline refining unit and new condensate splitter. In Q3/2015, however, the Market GRM was abnormally high due to a steep drop in crude oil price over the supply glut issue while there were still oil demand, as a result, the overall crack spreads were high and crude cost for the period was low.

When compared to Q2/2016, an average crude run was increased by 3% QoQ. Market GRM was decreased Baht 166 million (-7%), from the contraction of Gasoline/Dubai spread (UNL95/DB) by more than 20%, even though Fuel Oil/Dubai crack spread (FO/DB) was improved. Moreover, Dated Brent/Dubai spread (DTD/DB) was increased to 2.76 \$/BBL, resulting in a softened Market GRM when compared to the previous quarter.

In Q3/2016, Crude oil price was increased during the quarter, although the closing price of crude oil was slightly decreased in late of the quarter. Consequently, refinery business recorded an Inventory Gain of Baht 120 million. Yet, there was a gain from crude and product oil price hedging contract of Baht 11 million. As a result, total GRM was recorded at Baht 2,223 million. EBITDA is recorded at Baht 1,503 million.

2) Marketing Business

Marketing Business Performance						Unit: Million Litre	
Sales Volume (Million Litre)	Q3/2015	Q2/2016	Q3/2016	YoY	QoQ	9M2015	9M2016
Retail (Service Stations)	803	921	879	9%	-5%	2,434	2,687
Industrial	469	529	503	7%	-5%	1,586	1,610
Total	1,272	1,450	1,382	9%	-5%	4,020	4,297
Sales volume in each product category (Million Litre)							
LPG	25	21	12	-52%	-43%	48	59
Gasoline	5	10	11	125%	4%	31	30
Gasohol	379	412	423	12%	3%	1,115	1,234
Jet Fuel	162	211	187	15%	-11%	497	597
Diesel	661	745	694	5%	-7%	2,187	2,221
Fuel Oil and Others	41	52	56	34%	8%	142	156
Total	1,272	1,450	1,382	9%	-5%	4,020	4,297
Total Marketing Margin (Baht / Litre)	0.70	0.87	0.80	14%	-8%	0.72	0.87
EBITDA (Million Baht)	551	882	607	10%	-31%	1,948	2,531

Note: Marketing Margin figure was the attributable to the Company only.

In Q3/2016, when compared to Q3/2015, Total marketing business sales volume was increased by 110 million litres (+9%), as a result of a rise in domestic oil demand in both retail and industrial markets which was supported by a decline in retail oil prices encouraging demand, and a growth in tourism sector from the incremental numbers of Chinese, CLMV, Japanese and South Korean tourists. Sales volume of Gasohol products and Jet Fuel was increased by 12% YoY and 15% YoY respectively.

Retail market (service stations) sales volume increased by 76 million litres (+9%) as a result of the company's strategy focusing on retail market as its main priority. Majority of the sales volume increase were from gasohol products, especially gasohol 95 and gasohol E20. Diesel sales volume also increased. The number of service stations at the end of the quarter was 1,065 stations. There were 8 newly opened service stations during the quarter, most of which were standard stations with modern image and include other non-oil businesses such as Inthanin coffee shops, minimarts, commercial partner of leading brands etc., in order to meet with customers' need. The company also improves quality and appearance of existing service stations, and closes down service stations with less than target sales volume. The company continued to maintain its 2nd rank position in retail market share.

In Q3/2016, industrial market sales volume increased by 34 million litres (+7%) as the company successfully push forward the sales volume in Jet Fuel this year, and from the Annual Turnaround Maintenance of another refinery in Thailand which led to a supply shortage situation, enable the company to increase its sales volume during the period. While in Q3/2015, the draught affected agricultural products and agriculture related industrial factories, decreased its oil products demand.

When compared to Q2/2016, total sales volume decreased by -5% in both retail and industrial markets. The sales volume through retail market decreased by 42 million litres (-5%) from a lessened demand in agricultural sector

due to the rainy season, resulted in a decrease of cooperative service stations sales volume. While the flood in some areas resulted in a decrease in sales volume of some upcountry service stations, and a lower oil demand from agriculture related industrial factories. Moreover, the oil excess supply situation resulted in the industrial sales volume decrease by 26 million litres (-5%).

Total marketing margin was at 0.80 Baht per litre, increased by 14% YoY from the Retail and Lubricant marketing margin, but decreased when compared to the Q2/2016, due to higher crude oil price affecting refined products cost, while retail oil prices adjusted slower than its cost. Also, the higher competition during the low season resulted in a lower marketing margin in industrial markets. In Q3/2016, marketing business recorded an EBITDA of Baht 607 million, an increase of Baht 56 million (+10%) YoY from the higher sales volume in service stations, the superior marketing margin, and the higher income of Non-Oil businesses from the strategy to expand into the market segment. However, when compared to the previous quarter, marketing business recorded an EBITDA decrease of Baht 275 million (-31%), from the seasonal effect leading to the higher competition and a higher product costs.

3) Solar Power Business

Solar Power Business Performance							
	Q3/2015	Q2/2016	Q3/2016	YoY	QoQ	9M2015	9M2016
Revenue (Million Baht)	731	759	785	7%	3%	2,258	2,327
Electricity Sales (Million kWh)							
Solar Power Business – Thailand (PPA of 118 MW)	63.88	65.03	61.01	-4%	-6%	197.21	191.38
Solar Power Business – Japan (PPA of 11 MW)	N/A	3.44	8.07	N/A	135%	N/A	14.65
Total Electricity Sales	63.88	68.47	69.07	8%	1%	197.21	206.02
EBITDA (Million Baht)	692	525	612	-12%	17%	2,140	1,765

In Q3/2016 when compared to Q3/2015, Solar Power business recorded an increase in total revenue of Baht 54 million (+7%). Solar Power business in Thailand (PPA of 118 MW) recorded a lower total electricity sales by 2.87 MW (-4%), as a result of a decrease in irradiation hours of all the 3 phases when compared to the same period of last year. This was due to the higher amount of rainfall in the quarter, while the same period of last year experienced a draught from the El Niño phenomenon, led to the higher than normal irradiation hours during the period. For Solar Power business in Japan (operating plant with PPA of 20 MW), total electricity sales from the operating projects was 8.07 million kWh during the quarter.

When compared to Q2/2016, total revenue from Solar Power business was increased by 26 million (+3%). For Solar Power business in Thailand (PPA of 118 MW), total electricity sales declined by 4 MW (-6%) from the lower irradiation hours of all the 3 phases, as a result of the higher rainfall during the quarter, especially in July where The Meteorological Department reported a 19% higher-than-normal average rainfall throughout the country, and in September where there was a tropical storm entering Thailand for the first time in this year. For Solar Power business in Japan, total electricity sales rose 4.63 MW (+135%), partly from a commercial operation start of 1 additional project (PPA of 8.8 MW) in July 2016, increasing the current PPA of Solar Power business in Japan to be a total of 20 MW. Another part was due to the higher irradiation of all projects, as Japan was entering summer in the quarter.

Nevertheless, in Q3/2016, the Selling, General and Administrative expense of Solar Power business was reduced when compared to the previous quarter, as in Q2/2016, some expenses was financial advisory related, which occur only one time. However, Solar Power business in Japan still record the costs incurred from the preparation of other projects under construction and development. In addition, there was a loss on foreign exchange of Baht 12 million, from the depreciation of the Japanese Yen when compared to the last quarter. As a result, Solar Power business recorded an EBITDA of Baht 612 million, a decrease of Baht 80 million (-12%) YoY, but an increase of Baht 87 million (+17%) QoQ.

4) Biofuel Business

In Q3/2016, Biofuel business recorded an EBITDA loss of Baht 65 million, which comprised of an EBITDA loss from Bangchak Biofuel Co, Ltd. of Baht 61 million, a share of loss from Bangchak Bioethanol (Chachoengsao) Co., Ltd. of Baht 3 million, and a share of loss from Ubon Bio Ethanol Co, Ltd of Baht 1 million.

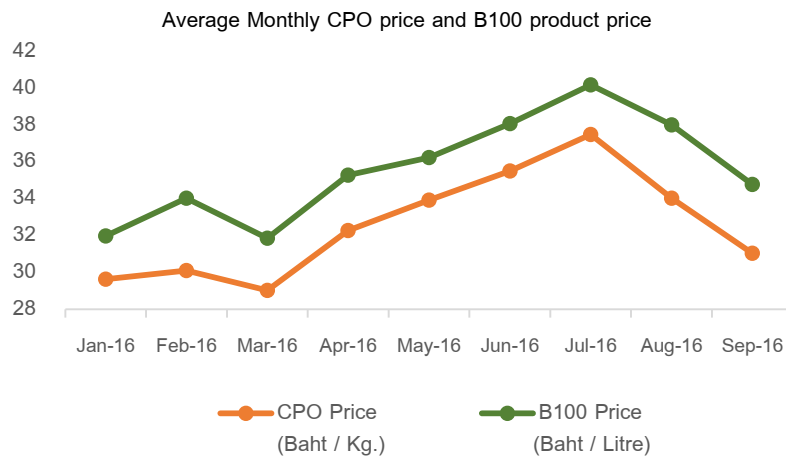
Biodiesel business performance by Bangchak Biofuel. Co., Ltd									
	Q3/2015	Q2/2016	Q3/2016	YoY	QoQ		9M2015	9M2016	YoY
Revenue (Million Baht)	1,326	2,221	1,553	17%	-30%		3,991	5,641	41%
Utilization Rate (%)	102%	108%	56%	-45%	-48%		101%	90%	-11%
Average Daily Production Rate (Thousands of litres per day)	366	387	452	24%	17%		364	408	12%
B100 Sales Volume (Million litre)	52	67	44	-16%	-35%		142	176	24%
EBITDA (Million Baht)	64	119	(61)	-195%	-151%		232	192	-18%

Average Sales Price (Source: Department of Energy Business, Ministry of Energy)									
B100 (Baht / Litre)	28.54	36.55	37.62	32%	3%		31.83	35.62	12%
Crude Palm Oil (CPO) (Baht / Kg.)	24.30	34.04	33.96	40%	0%		28.07	32.56	16%

In Q3/2016, when compared to Q3/2015, Biodiesel business recorded a revenue increase of Baht 227 million, as a result of the higher B100 average price which rose by 32% as the crude palm oil (CPO) price elevated. The B100 sales volume, however, reduced by 8 million litres (-16%), as the government announced a reduction in the portion of B100 mixing with diesel from 7% to 5% on July 25, 2016, and a further reduction to 3% on August 25, 2016. In July, Biodiesel business has total production capacity increased to 810 thousands litres per day, from the new 2nd Biodiesel Plant. But as the government reduced the portion of B100 mixing with diesel, the Biodiesel plants recorded a 56% utilization rate, or an average daily production rate of 452 thousands litres.

When compared to Q2/2016, Biodiesel business recorded a decrease in revenue due to the lower B100 sales volume by 23 million litres (-35%), although the B100 average price was slightly increased by 3%. The smaller B100 sales volume was a result of the government's announcement to reduce the portion of B100 mixing with diesel from 7% to 3% during the quarter, while in the previous quarter, the portion of B100 mixing with diesel was at 7%. The expansion in average daily production rate by 17% was due to the starting of new 2nd Biodiesel Plant.

In Q3/2016, Biodiesel business recorded a decline of Gross Margin, primarily was because the government reduced the portion of B100 mixing with diesel from 7% to 5% and to 3% during the quarter, B100 demand diminished and hence the crude palm oil decreased by 6 Baht per kilogram, leading to B100 average price contraction as well. As such, Biodiesel business recorded an Inventory Loss of Baht 153 million (including allowance for loss on decline in value of inventories (LCM) of Baht 61 million.)



Source: Department of Energy Business, Ministry of Energy

From the reasons mentioned above, in Q3/2016 Biodiesel business recorded an EBITDA loss of Baht 61 million, a decrease of Baht 125 million (-195%) YoY, and a decrease of Baht 180 million (-151%) QoQ.

In addition, on September 21, 2016, Ethanol plant (production capacity of 150 thousands litres per day) of Bangchak Bioethanol (Chachoengsao) Co., Ltd., a subsidiary of the company, has started its commercial operation, and expected to start selling its Ethanol product in October 2016, hence it has not realized the revenue in this quarter.

5) Exploration and Production Business

Exploration and Production Business Performance							
	Q3/2015	Q2/2016	Q3/2016	YoY	QoQ		
						9M2015	9M2016
Production Volume ^{1/} (barrels per day net to Nido)	3,414	2,861	2,838	-17%	-1%	3,166	2,937
Sales Volume (barrels net to Nido)	201,003	393,375	196,474	-2%	-50%	874,961	791,977
Revenue (Million Baht)	374	299	644	72%	116%	1,724	1,176
EBITDA (Million Baht)	156	59	171	10%	191%	498	252

Note: 1/ production volume of Galoc oil field only

In Q3/2016, Galoc oil field recorded an Uptime of 99.3%, and a production volume of 5,079 barrels per day (2,838 barrels per day net to Nido). The details of crude oil selling during the quarter, as disclosed by the Nido Petroleum Limited (NIDO) in the Australian Securities Exchange (ASX) were as follows:

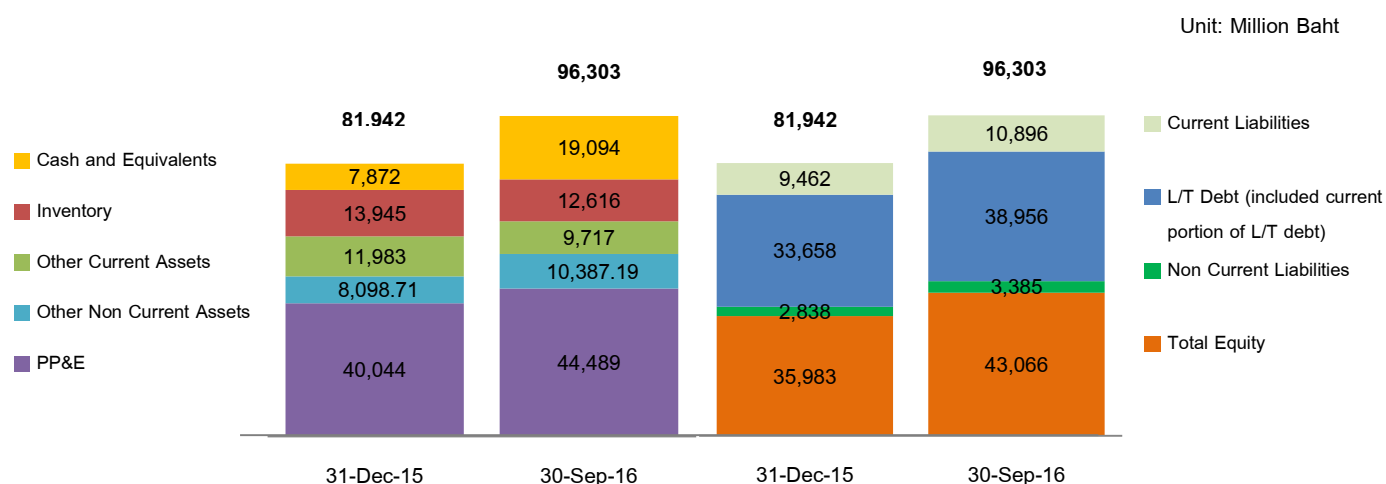
- Galoc oil field in August sold 1 cargo totaling of 339,799 barrels (189,878 barrels net to Nido) with FOB price of 45.46 \$/BBL.
- Nido & Matinloc oil field totaling 25,801 barrels (6,596 barrels net to Nido).

Compared Q3/2016 to Q2/2015, Exploration and Production business recorded a revenue of Baht 644 million, an increase of Baht 270 million (+72%), as in the quarter, Nido has realized revenue of 2 Cargoes of oil sold, which are: the cargo sold in June 2016 that was delivered to the customer in July, and was subject to the DES condition (Delivery Ex Ship – Realize revenue when the merchandise is delivered to the customer), and the cargo sold in August 2016. While in Q3/2015, Nido realized revenue of only 1 cargo of oil sold in August 2015. The selling price per cargo in the quarter was lower when compared to the same period of last year following the drop in global crude oil price. (Cargo sold in August 2015, June 2016, and August 2016 was with FOB price of 49.84, 48.15 and 45.46 \$/BBL respectively). The production volume was lower according to the Natural-Decline Production Curve.

When compared to Q2/2016, Exploration and Production business recorded a revenue increment of Baht 346 million, partly as a result of the revenue realization from the 2 cargoes of oil sold, while in the previous quarter, there was a revenue recognition from only 1 cargo of oil sold. Another part was due to the recovery of the global crude oil price since late Q2/2016, resulting in the selling price of the cargo sold in June and August, of which revenue was recorded in this quarter, to be higher than the selling price of the cargo sold in April, of which revenue was recorded in the previous quarter. (Cargo sold in April 2016 was with FOB price of 40.53 \$/BBL.)

Further, Nido still maintain its cost saving program on both the expense related to production and Selling, General and Administrative expenses in response to the lower crude oil price environment. As a result, Exploration and Production Business recorded an EBITDA of Baht 171 million, an increase of Baht 15 million (+10%) YoY, and an increase of Baht 112 million (+191%) QoQ. Moreover, the Board of Directors of the company resolved to inject equity into BCP Energy International Pte. Ltd. (BCPE) for BCPE to take up all of its pro rata entitlement under the Nido Petroleum Limited's entitlement offer representing AUD 25.94 million in proceeds, to fund appraisal wells program in the Mid-Galoc area of Galoc oil field in Philippines, which NIDO and other stakes of Galoc field will use for further development of the field.

Financial Position of the Company and its subsidiaries (Consolidated)



Assets

As of September 30, 2016, Total Assets of the Company and its subsidiaries were Baht 96,303 million, an increase of Baht 14,361 million when compared to the end of 2015. The changes in assets were mainly from:

- Cash and cash equivalents was increased by Baht 11,222 million. Details are stated under Analysis of the Cash Flow Statement.
- Current Investment was decreased by Baht 3,500 million from the maturity of the company's short term fixed deposits in financial institutions.
- Trade Accounts Receivable was decreased by Baht 498 million, due to a lower total sales volume in September 2016, compared to December 2015, although the selling price per unit was slightly higher.
- Inventory was decreased by Baht 1,329 million, mainly from the lower volume of finished oil inventory from 3.25 million barrels to 2.11 million barrels, as in the end of 2015, the company accumulated its inventory to support its annual turnaround maintenance in Q1/2016. Price per unit was also decreased.
- Other current asset was increased by Baht 1,337 million, as the company had a corporate income tax receivable.
- Investment in subsidiaries increased by Baht 4,741 million, from the capital increase of BCPG Plc. of Baht 3,300 million, BCP Innovation Pte. Ltd. of Baht 181 million, Bangchak Retail Co., Ltd. of 800 million, Bangchak Bioethanol (Chachoengsao) Co., Ltd. of Baht 425 million, and BCP Energy International Pte. Ltd. of Baht 35 million. However, the elimination of related parties transaction resulted in the consolidated financial statement showing total investment in subsidiaries of Baht 0.
- Property, plant and equipment was increased by Baht 4,445 million, primarily from Baht 2,700 million investment in refinery machinery and equipment of the company and of Bangchak Biofuel Co, Ltd., Marketing and office equipment of Baht 953 million. For BCPG Plc., the increment was from an acquisition of solar power business of Baht 1,532 million, and construction work in progress of Baht 1,594 million. An increase from Bangchak Bioethanol (Chachoengsao) Co., Ltd. of Baht 848 million, and others of Baht 143 million. Depreciation was recorded at Baht 3,278 million, and a foreign currency translation differences for foreign operations resulted in a decrease in the value of assets by Baht 45 million.

- Intangible Assets increased by Baht 311 million, from the company's investment in SAP license, and from the right to sell electricity of the Solar Power Plant in Japan of BCPG Plc.

Liabilities

As of September 30, 2016, Total Liabilities of the Company and its subsidiaries was Baht 53,237, an increase of Baht 7,278 million, mainly from:

- Trade Accounts Payable was increased by Baht 1,592 million, from the higher value of crude oil purchase in September 2016 than in December 2015, and from the finished oil products imports of Baht 400 million.
- Other payables was decreased by Baht 599 million, from the lower hedging contracts liabilities by Baht 153 million, and the lower accrued expenses at the end of quarter by Baht 459 million.
- Long-term loans from financial institutions (including current portion of long-term loans) was increased by Baht 5,298 million, primarily due to an increment from the long term loans of BCPG Plc., Bangchak Biofuel Co., Ltd., Bangchak Bioethanol (Chachoengsao) Co., Ltd. But decreased from the company's long-term loan repayment.
- Other non-current liabilities was increased by Baht 546 million, mostly from the Contingent Liability of BCPG Plc.

Equities

As of September 30, 2016, Total Equity attributable to owners of the Company was Baht 38,429 million, an increase of Baht 2,948 million, from Net Profit attributable to owners of the Company of Baht 3,642 million, dividend payment of Baht 2,478 million, and other component of equity of Baht 236 million (loss from foreign currency translation differences for foreign operations of Baht 59 million), and change in fair value of available for sale assets of Baht 295 million. The Consolidated book value was Baht 27.91 per share.

Cash Flows Statement of the Company and its subsidiaries (Consolidated)

In Q3/2016, the Company and its subsidiaries had net cash received from operating activities of Baht 8,660 million, net cash used in investing activities of Baht 4,134 million, net cash received in financing activities of Baht 6,729 million. As a result, the Company and its subsidiaries had an increase in Cash and cash equivalents of Baht 11,255 million, as there was Cash and cash equivalents of Baht 7,872 million on January 1, 2016 and an effect of exchange rate changes on balances held in foreign currencies of Baht -33 million, resulting in Cash and cash equivalents as of September 30, 2016 at Baht 19,094 million.

Details of cash received and used are as follows:

Cash Flows		Unit: Million Baht	
Cash Flows	30-Sep-15	30-Sep-16	
Net cash received (used in) operating activities	11,337	8,660	
Net cash received (used in) investing activities	(14,282)	(4,134)	
Net cash received (used in) financing activities	(169)	6,729	
Net increase (decrease) in cash and cash equivalents	(3,113)	11,255	
Cash and cash equivalents as at 1 January	7,954	7,872	
Effect of exchange rate changes on balances held in foreign currencies	96	(33)	
Cash and cash equivalents as at 30 September	4,937	19,094	

Cash received and used details are as follows:

- 1) The Company and its subsidiaries had net cash received from operating activities of Baht 8,660 million, mainly from
 - Net cash received from operating activities of Baht 8,203 million which was from Net Profit of Baht 3,521 million added back Non-Cash Expenses of Baht 3,088 million, Finance Costs and Income Tax credit of Baht 1,594 million.
 - Cash used in the operating assets of Baht 292 million, mainly from a decrease in Inventory of Baht 1,365 million, a decrease in Trade Accounts Receivable of Baht 518 million, a decrease in Other Receivables of Baht 334 million, and an increase in Other Assets of Baht 1,925 million.
 - Cash from operating liabilities increased by Baht 547 million, mainly from an increase in Trade Accounts Payable of Baht 1,632 million, a decrease in Other Payables of Baht 908 million and a decrease in Other liabilities of Baht 177 million.
 - Income Tax Paid of Baht 382 million.
- 2) Net Cash used in investing activities of Baht 4,134 million, mainly from
 - Investment in property, plant and equipment of Baht 6,196 million, which were from an investment in refinery machinery and equipment, marketing and office equipment of the company of Baht 3,243 million, an investment in Biodiesel plant machinery and equipment of Baht 565 million, construction work in progress in solar power

plant of BCPG Plc. of Baht 1,537 million, from Bangchak Bioethanol (Chachoengsao) Co., Ltd. of Baht 848 million, and from Bangchak Retail Co., Ltd. of Baht 24 million.

- Other long-term investments increased by Baht 84 million.
- Current investment decreased by Baht 3,499 million.
- Net cash outflow on acquisition of subsidiary of Baht 963 million, from the acquisition of solar power business of SunEdison in Japan.
- Received cash from interest received of Baht 132 million, from the disposal of other investment in ASEAN Potash Chaiyaphum Public Company Limited of Baht 203 million, and from dividend received of Baht 3 million.
- Leasehold right of service stations increased by Baht 371 million, and intangible assets increased by Baht 358 million.

3) Net cash used in financing activities of Baht 6,729 million, mainly from

- Received cash from short-term loan from financial institution of Baht 350 million.
- Received cash from long-term loan from financial institution of the company and its subsidiaries of Baht 8,388 million.
- Long-term loan from financial institution repayment of the company and BCPG Plc. of Baht 4,309 million.
- BCPG Plc. received cash from selling of equity of Baht 5,711 million.
- Dividend payment of 2,523 million.
- Financial costs of Baht 1,022 million.

Financial Ratios (Consolidated)

Profitability Ratios (%)					
	Q3/2015	Q2/2016	Q3/2016	9M2015	9M2016
EBITDA Margin	6.20%	10.96%	10.88%	8.35%	7.75%
Profit Margin	1.20%	6.55%	3.08%	3.70%	3.38%
Return on Equity (ROE) ^{1/}	4.96%	7.58%	9.52%		
Return on Assets (ROA)	3.80%	5.11%	5.99%		

1/ Profit and Total equity attributable to owners of the Company

Liquidity and Financial Policy Ratios (times)			
	30-Sep-15	31-Jun-16	30-Sep-16
Liquidity Ratios			
Current Ratio	3.55	2.35	2.80
Quick Ratio	2.13	1.59	1.94
Financial Policy Ratios			
Interest bearing Debt to Equity	0.93	0.98	0.91
Net Interest bearing Debt to Equity	0.54	0.52	0.45
	Q3/2015	Q2/2016	Q3/2016
DSCR	2.74	1.46	1.25

Financial Ratios Calculation

▪ EBITDA Margin (%)	=	EBITDA / Revenue from sale of goods and rendering of services
▪ Profit Margin (%)	=	Net Profit (Loss) / Revenue from sale of goods and rendering of services
▪ Return on Equity (%)	=	Net Profit (Loss) attributable to the owners of the company (Yearly) / Total Equity attributable to owners of the Company (Average)
▪ Return on Assets (%)	=	EBIT (Yearly) / Total Asset (Average)
▪ Current Ratio (times)	=	Current Asset / Current Liabilities
▪ Quick Ratio (times)	=	(Current Asset – Inventory) / Current Liabilities
▪ DSCR	=	EBITDA (Yearly) / (Paid for long-term debt + Finance cost)
▪ Interest bearing Debt to Equity (times)	=	Interest bearing Debt / Total equity
▪ Net Interest bearing Debt to Equity	=	(Interest bearing Debt – Cash and cash equivalents – Current investments) / Total equity

Note:

1/ Average Total Equity attributable to owners of the Company

- Yearly = (Total Equity attributable to owners of the Company of the year before + Total Equity attributable to owners of the Company of this year) / 2
- Quarterly = (Total Equity attributable to owners of the Company of the quarter of the year before + Total Equity attributable to owners of the Company the quarter this year) / 2

2/ Average Total Assets

- Yearly = (Total Assets of the year before + Total Assets of the Company of this year) / 2
- Quarterly = (Total Assets of the Company of the quarter of the year before + Total Assets of the Company the quarter this year) / 2

3/ The numerator of ROE is defined as the Profit attributable to owners of the Company and have to be annualized.

4/ The numerator of ROA is defined as EBIT and have to be annualized.

5/ Interest Bearing Debt defined as Short-term loans + Long-term loans (including Current portion of long-term loans) + Debentures + Finance lease liabilities (including current portion of finance lease liabilities)

Environment Management Accounting (EMA)

Having the environmental concerns and social responsibilities, the Company has prepared the environmental management accounting report since 2005, aiming to enable the benefit of its usage for other organizations as well as for the company. The environmental cost accounting helps the Company to keep track with the information which is useful for enhancing the environmental management effectiveness, and resource utilization. The Environmental Cost Accounting report covers refinery business unit, Bangchak and Bang Pa-in Oil distribution Centre.

Environment Management Accounting: EMA		Unit: Million Baht		
	Q3/2015	Q3/2016	Δ	
Material Costs of Product Outputs : Consist of crude oil, ethanol, biodiesel, chemical, energy and utilities in production	23,946	20,754	(3,192)	
Material Costs of Non-Product Outputs : Consist of slop and sludge oil, waste water, chemical surplus	8	16	7	
Waste and Emission Control Costs : Consist of maintenance cost of environmental control equipment and depreciation and other fees	104	82	(22)	
Prevention and Other Environmental Management Costs : Consist of monitoring and measurement cost, environmental management system expenses	3	10	7	
Total Expenses	24,061	20,861	(3,200)	
Benefit from by-product and waste recycling	(6)	(5)	(1)	

In Q3/2016, total expenses related to environment decreased by Baht 3,200 million (-13%) compared to same period of last year. The main reason was due to a decrease in the Material Costs of Product Outputs, from the large decline in oil price (-14%), while in the quarter, the refinery has utilized an efficient use of the refining capacity and recorded a higher crude run (115.59 KBD in Q3/2016 when compared to 111.68 KBD in Q3/2015). However, the Material Costs of Non-Product Outputs was increased by Baht 7 million, from the higher slop and sludge oil. Meanwhile, Waste and Emission Control Costs and Prevention and Other Environmental Management Costs was reduced by Baht 15 million, mainly due to the Baht 30 million lower depreciation of environmental control equipment.

Benefit from by-product and waste recycling decreased by Baht 1.3 million during the quarter, as liquid sulfur and glycerin value was lower by Baht 0.7 million, and the sellable residue metal scrap value were reduced by Baht 0.6 million.