



The Bangchak Petroleum Public Company Limited

Management Discussion and Analysis of Business Operation

For the year ended December 31, 2015



Summary of the Company and its subsidiaries' operating result for the year ended 31th December 2015.

In 2015, the consolidated financial statement recorded revenue from sale of goods and rendering of services of Baht 151,140 million and Net Profit of Baht 4,097 million which was the Net Profit attributable to owners of the Company of Baht 4,151 million, or earning per share of 3.01 Baht.

EBITDA Structure of the Company and its subsidiaries.

Unit: Million Baht

	Q4/2014	Q3/2015	Q4/2015	YoY	QoQ	2014	2015	YoY
Total Revenue	45,749	35,203	35,136	-23%	0%	183,016	151,140	-17%
Total EBITDA	(1,256)	2,184	1,401	212%	-36%	5,162	11,081	115%
<i>EBITDA Refinery</i>	(2,369)	764	130	105%	-83%	285	5,097	N/A
<i>EBITDA Marketing</i> ^{1/}	334	551	549	64%	0%	2,263	2,497	10%
<i>EBITDA Solar Power</i> ^{2/}	740	692	865	17%	25%	2,572	3,005	17%
<i>EBITDA Biofuel</i> ^{3/}	99	62	113	14%	82%	303	355	17%
<i>EBITDA Exploration and Production</i> ^{4/}	13	156	(26)	N/A	-117%	2	472	N/A
<i>EBITDA Others</i> ^{5/}	(74)	(41)	(56)	23%	-37%	(263)	(171)	35%
Profit attributable to owners of the Company	(2,502)	432	(112)	96%	-126%	696	4,151	496%
Basic earnings per share (Baht)	(1.82)	0.31	(0.08)	96%	-126%	0.51	3.01	496%

1/ EBITDA from Marketing Business and Bangchak Greenet Co.,Ltd

2/ EBITDA from Solar Power Plant Business, BCPG Co.,Ltd. and its subsidiaries

3/ EBITDA from Bangchak Biofuel Co., Ltd. and share of profit/ (loss) from Ubon Bio Ethanol Co, Ltd

4/ EBITDA from Nido Petroleum Limited

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

Comparison of 2015 and 2014 operating results

In 2015, the company and its subsidiaries recorded Net Profit of Baht 4,097 million, a 551% increase from 2014, despite a 17% decrease in revenue from sale of goods and rendering of services, which was mainly caused by the sharp drop in crude oil price during the year. The company's total sales volume increased by 12%, following the higher crude run of the refinery, which has been operating in a consistently high rate, along with the domestic oil demand which expanded as the retail oil product prices dropped. The higher domestic demand was also supported by the recovery of Thai economy and the continuous growth of tourism sector. Gross profit increased from the strong level of Market GRM which was reinforced by the lower crude cost, and the wider spread between crude oil price and some types of oil products prices.

However, the crude oil price dropped more than 40% compared to 2014 (Average Dubai Price in 2015: 96.66 \$/BBL, 2014: 50.84 \$/BBL), pressured by the crude oil oversupply from the high production rates, led by Saudi Arabia, Iraq, and Russia. Moreover, the lack of conclusion about oil production ceiling from the last meeting of the Petroleum Exporting Countries (OPEC) had put more pressure on oil price to fall sharply during the end of 2015. In consequence, refinery business recorded an inventory loss of Baht 4,354 million (reversal of allowance for loss on decline in value of inventories (LCM) of Baht 887 million), when combined with its subsidiaries, the company recorded an inventory loss totaling of Baht 4,434 million (reversal of allowance for loss on decline in value of inventories (LCM) of Baht 882 million).

In 2015, there was the loss from crude and product oil price hedging contract of Baht 407 million. And as the Baht continued to weaken from the beginning of the year, the company and its subsidiaries recorded a loss from foreign currency forward contracts of Baht 155 million, and a gain on foreign exchange of Baht 178 million. Also, there was an income from insurance claim of oil lost during transportation of Baht 76 million. Moreover, there was an impairment record of Baht 65 million, mainly from the impairment of assets in Nido Petroleum Limited, as crude oil price dropped. As a result, in 2015, the company recorded a total EBITDA of Baht 11,081 million (+115%).

The details of each business performance for the year were as follow;

Refinery business has been operating in a consistently high rate and created a historical high record due to the strong market GRM and an increase in domestic demand. The average crude run was at 112.94 KBD, Market GRM was recorded at 9.05 \$/BBL, increased from the previous year from the cheaper crude cost, as the spread between Dated Brent/Dubai narrowed down, and from a significant increase in Gasoline/Dubai crack spread (UNL95/DB). Additionally, the decrease in electricity cost of the refinery, from of the purchase of the Cogeneration Power Plant from PTT Public Company Limited (PTT), was another factor supporting the refinery's higher Market GRM. However, because of the continuous decline in crude oil price from last year, the refinery recorded inventory loss of Baht 4,354 million (reversal of allowance for loss on decline in value of inventories (LCM) of Baht 887 million). By these reasons, the refinery's operating result was higher in the year.

Marketing business had a total sales volume of 5,410 million litres, an 8% increase from last year, consistent with the escalation of the refinery's crude run, and was an outcome of the expansion of domestic oil demand following the lower retail oil product prices. In the year, the company continued to maintain in the 2nd rank in market share position, prioritizing its selling of finished products through service stations, opening new and quality service stations, refurbishing its service stations to attract more customers, and keep on developing new products for the market. Total Marketing Margin for the year was at 0.76 baht per litre, increased by 7% from the decline in crude oil prices which reduced the company's crude oil cost, while an adjustment of retail prices was slower.

Solar Power business with PPA of 118 MW recorded a 14% higher electricity sales, as in 2015, all 3 phases of Solar Power Business were commercially operated for the whole year, while in 2014, Solar Power Plant phase 3 was partly operated. For Solar Power Plant phase 1 & 2, the total electricity sales was slightly lower by (-1%), as the higher temperature at the sites led to a lower production efficiency of the 2 phases, despite the higher irradiation during the year. Additionally, the company restructured the group of renewable power business by setting up the new subsidiary, BCPG Co., Ltd. for separation of the renewable power business to be operated by BCPG Co., Ltd., as well as to raise

funding from an initial public offering (IPO) of ordinary shares of BCPG Co., Ltd. and thereafter the listing of such business group on the Stock Exchange of Thailand in 2016.

Biodiesel Business recorded a revenue increase to Baht 5,414 million, even though B100 average price declined. The increment in revenue was a result of an expansion in sales volume. The average daily production rate was at 365 thousand litres per day, an increase of 1% from the previous year, due to an 11% higher B100 sales volume, especially to Bangchak, the major customer, as the company's diesel sales volume rose.

Exploration and Production Business recorded revenue of Baht 2,344 million, total of 1,284,080 barrels. Exploration and Production Business was affected by the crude oil price drop, resulting in the decline in its selling price per cargo and the sales volume. However, in 2015, Nido has completed its Independent Reserves and Resources assessment undertaken by Gaffney Cline and Associates ('GCA') on the mid-Galoc area of the Galoc oil field. The 2C Contingent Resource estimates as of 30 June 2015 are 9.5 million barrels (5.3 million barrels net to Nido), which NIDO and other stakes of Galoc field will use for further development of the field.

Total Sales Volume in each market category of the Company

							Unit: Million Litre		
Marketing Business	Q4/2014	Q3/2015	Q4/2015	YoY	QoQ		2014	2015	YoY
Retail	777	803	851	10%	6%		3,016	3,285	9%
Industrial	558	469	538	-4%	15%		1,991	2,124	7%
Total	1,335	1,272	1,390	4%	9%		5,006	5,410	8%
Wholesale Business									
Petroleum traders in accordance with section 7	142	158	154	8%	-3%		502	653	30%
Export	275	342	278	1%	-19%		902	1,084	20%
Total	417	500	432	4%	-14%		1,404	1,738	24%
Total Sales Volume	1,752	1,773	1,822	4%	3%		6,410	7,148	12%

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

Analysis of the Consolidated Statement of Income

							Unit: Million Litre		
	Q4/2014	Q3/2015	Q4/2015	YoY	QoQ		2014	2015	YoY
Revenue from sale of goods and rendering of services	45,749	35,203	35,136	-23%	0%		183,016	151,140	-17%
Cost of sale of goods and rendering of services	(47,017)	(33,118)	(33,097)	-30%	0%		(178,473)	(139,686)	-22%
Gross Profit	(1,268)	2,085	2,039	261%	-2%		4,543	11,454	152%
Investment income and other income	379	201	99	-74%	-51%		1,197	543	-55%
Selling and administrative expenses	(1,665)	(1,133)	(1,672)	0%	48%		(4,480)	(5,175)	16%
Gain (loss) from crude and product oil price hedging contract	150	(5)	(312)	-309%	N/A		499	(407)	-181%
Gain (loss) from foreign currency forward contracts	(2)	(167)	24	N/A	115%		84	(155)	-285%
Gain (loss) on foreign exchange	192	(155)	92	-52%	160%		674	178	-74%
Reversal of allowance for loss/ (loss) from impairment of assets	(1,162)	(5)	(70)	94%	N/A		(1,157)	(65)	-94%
Share of profit (loss) of associate	10	(2)	4	-64%	308%		5	12	141%
Profit before finance costs and income tax expense	(3,367)	819	203	106%	-75%		1,365	6,385	368%
Finance costs	(403)	(391)	(412)	-2%	5%		(1,427)	(1,615)	13%
Profit/(loss) before income tax expense	(3,769)	429	(208)	94%	-149%		(61)	4,770	N/A
Income tax (expense) credit	1,140	(6)	17	-98%	408%		691	(673)	-197%
Profit for the period	(2,629)	423	(191)	93%	-145%		629	4,097	551%
Owners of the Company	(2,502)	432	(112)	96%	-126%		696	4,151	496%
Non-controlling interests	(127)	(9)	(79)	38%	-802%		(67)	(53)	20%
Earnings per share (Baht per Share)	(1.81)	0.31	(0.09)	95%	-128%		0.51	3.01	491%

Summary of events in 2015

1st Quarter

- **25th February:** Mr. Chaiwat Kovavisarach, president of the company held his first press conference as a new president to unveil Bangchak's "3S" strategy –
 - **Security:** to strengthen the country's energy security, by investing in upstream business in order to supply sufficient energy for the people and businesses.
 - **Stability:** to strengthen both energy and financial stability by investing in renewable energy business domestically and internationally.
 - **Sustainability:** to strengthen the company's sustainability by increasing revenue from Non-oil business in service stations, and at the same time operates Social Enterprise business, adding value from CSR / CSV activities in order to promote jobs and environmental awareness of the people in the community.
- **29th March:** The Board of Directors of the company resolved to jointly invest in solar power plant project in Japan with a capacity of 60MW, which is an investment of Bangchak Solar Energy Co., Ltd. with Chow International Company Limited. The payment of investment fund not exceeding 2,200 million yen (or 600 million baht).

2nd Quarter

- **8th April:** The Annual General Meeting of Shareholders approved the Company's capital decrease from the existing Baht 1,531,643,461 to Baht 1,376,923,157 of newly registered capital through the deduction of 154,720,304 unsold registered shares.
- **10th April:** The Company was awarded Best Investor Relations Company for the 4th consecutive year, and was awarded Asia's Best CFO (Investor Relations), along with Best Environmental Responsibility, in the 5th Asian Excellence Award 2015, held by Corporate Governance Asia in Hong Kong.
- **30th April:** In accordance with the Board of Directors meeting held on 19th February resolution, PTT Public Company Limited, the major shareholder of the company, holding 375,748,571 shares or 27.22% of paid-up capital, has divested its holding of 210,000,000 shares or 15.25% of paid-up capital to Vayupak Fund 1 and 164,748,571 shares or 11.96% of paid-up capital to Social Security Office.
- **28th May:** The Company purchased a cogeneration power plant from PTT Plc. to enhance stability of the electricity and steam system for Bangchak refinery.
- **19th June:** Bangchak was awarded "Social Empowerment" in International CSR Summit 2015, from its development of more than 500 agricultural cooperative service stations nationwide, contributing values for the society, creating income and better standard of living for the farmers for more than 25 years.
- **30th June:** The Board of Directors of the company resolved to approve the establishment of new subsidiary companies in Thailand and Singapore with details as follows:

- BCPG Co., Ltd. which established in Thailand, to operate and invest in alternative energy businesses.
- BCP Innovation Pte. Ltd. which established in Singapore, to operate and invest in overseas businesses related to innovation.

3rd Quarter

- **14th August:** The Board of Directors of the company resolved to approve the allocation of the unallocated retained earnings of the Company in order to pay the interim dividend to the Company's shareholders in total of Baht 1.00 per share.
- **20th August:** The Company released the first shipment of its new value added product "Unconverted Oil (UCO)", a high quality oil with low sulfur and nitrogen for lube feedstock to Korea.
- **9th September:** The Company launched the "Bangchak E20 S" from the new technology "Green S", which contains the additive to enhance the performance and save the energy, increasing the efficiency of the combustion. The new "E20 S" also contains lower sulfur than EURO 5 requirement, making it more environmentally friendly.

4th Quarter

- **9th October:** The Extraordinary General Meeting of Shareholders No. 1/2015 resolved to approve the transfer of entire Company's ordinary shares held in Bangchak Solar Energy Co., Ltd. and the subsidiary companies in the group of renewable power business including the 38 MW solar power plant to BCPG Co., Ltd. according to the Restructuring Plan for the group of renewable power business.
- **9th October:** The Extraordinary General Meeting of Shareholders No. 1/2015 resolved to approve the initial public offering (IPO) of ordinary shares of BCPG Co.,

Ltd. and the listing of BCPG Co., Ltd. on the Stock Exchange of Thailand and the determination of the portion of the shares for an initial public offering (IPO) which shall not be more than 30% of total registered capital. The Extraordinary General Meeting of Shareholders also approved the determination of portion of BCPG Co., Ltd.'s IPO shares to be offered to the Company's existing shareholders in proportion to their shareholdings in the Company's shares (Pre-emptive Right) which shall not be lower than 10% but not more than 25% of total shares for an initial public offering (IPO).

- **16th October:** The Company received "SET Social Enterprise Investment Awards" and Thailand Sustainability Investment" for engaging in businesses while considering the balance in Economics, Social, and Environment, according to Corporate Governance practice.
- **17th November:** The company's Board of Directors was awarded "Board of the Year for Distinctive Practices" and "Board with Consistent Best Practices" by The Thai Institute of Directors Association (IOD), to honor outstanding board of directors that accomplish their duties effectively in line with Corporate Governance practices.
- **24th November:** The Company received Corporate Social Responsibility Excellence award in Thailand Corporate Excellence Awards 2015 which held by Sasin Graduate Institute of Business Administration of Chulalongkorn University.
- **28th December:** The Board of Directors of the Company has passed the resolution on the approval to divest totaling 1,930,500 shares or approximately 10.66% of its paid up capital in ASEAN Potash Chaiyaphum Public Company Limited ("APOT") to S Group AEC (Thailand) Company Limited, for a total transaction value of Baht 202,702,500.

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

Refinery and Marketing Business Performance

Crude Oil Price

Unit: \$/BBL

	Q4/2014	Q3/2015	Q4/2015			YoY	QoQ	2014	2015	YoY
	AVG	AVG	MAX	MIN	AVG	%	%	AVG	AVG	%
Dubai (DB)	74.37	49.99	50.05	31.40	40.68	-45%	-19%	96.66	50.84	-47%
Dated Brent (DTD)	76.58	50.47	51.91	35.64	43.76	-43%	-13%	98.95	52.39	-47%
DTD/DB	2.21	0.48	5.24	0.77	3.09	40%	541%	2.29	1.55	-32%

Crude Oil Price Situation

Average Dubai crude oil price in 2015, compared to 2014, was decreased by 45.82 \$/BBL due to the ongoing crude oil oversupply with excess supply of around 1.7 million barrels per day. The supply increased from high production rates of Saudi Arabia, Iraq, and Russia, even though US crude oil production started to decline in mid-2015. While the market concern about weak oil demand in many regions such as China, Japan, and Europe, along with the lack of conclusion about oil production ceiling from the last meeting of the Petroleum Exporting Countries (OPEC) on December 4, resulted in more pressure on oil price to fall sharply during the end of 2015.

In Q4/2015, average Dubai crude oil price was 40.68 \$/BBL, dropped by 9.31 \$/BBL from the previous quarter, pressured by the ongoing supply surplus, as the Organization of the Petroleum Exporting Countries (OPEC) reported crude oil production of the group rose to 31.7 MBD in November, led by Saudi Arabia which maintain its high production rate at 10.2 MBD and Iraq which increased oil production rate to 4.1 MBD. In addition, the OPEC annual meeting in December concluded without any decision on the production ceiling of the group. It therefore put further weight on crude oil price and also showed that OPEC has no clear strategies for dealing with the expected increase in supply from Iran if the sanction is finally lifted. The sanction is expected to be lifted in the late first quarter or early second quarter of 2016. Iran expects to increase crude oil production around 500,000 barrels per day. Meanwhile, the crude oil supply from producers outside OPEC was also at a high level. Furthermore, Russia reported its crude oil production at 10.8 MB, a record high level since the end of the Soviet Union, as Russian Ruble depreciation helped offsetting the decline in revenue from oil price slump. Moreover, the US crude oil stock rose steadily approaching the highest level of 490 MB in April. There was also a pressure from the demand side, as warmer than normal winter in many regions around the world, as a result of the El Niño, caused the collapse of heating oil demand. There was also concerns about crude demand slowdown in Asia, as China's Purchasing Manager Index for manufacturing sector in November signaled a slowdown in industrial sector for nine consecutive months as well as exports of China fell progressively. Additionally, Japan, the world's fourth biggest crude oil importer, reported a fall in domestic oil sale to the lowest level in 46 years. Also, the Islamic State terrorist group attack in Paris, causing several deaths and many injuries, could result in a further slow down in Europe's economic and oil demand, was an additional factor which pushed crude oil prices lower.

However, there are some supports for crude oil price as the US shale oil production showed sign of deterioration following the US active oil rig numbers fell gradually to a level below 540 in the last week of 2015, together with the US

government rejection of the Keystone XL oil pipeline construction project aim to transport crude oil from Canada to the US, which could potentially slow down the development of crude oil production from oil sand in Canada. In addition, the major strike by field employee of Petrobras in Brazil impacted Brazil's crude oil production to fall. Oil price was also supported by the report of increased car sales in China and India due to tax cuts for small-engine cars in China as well as major road and highway construction projects in India. The tension in the Middle East and the counter attacks of France on the Islamic State were other factors supporting oil price in the quarter.

The average Dated Brent/Dubai spread in 2015 declined by 0.74 \$/BBL when compare with the level seen in 2014. The spread was pressured by the abundant supplies of light crude produced from the U.S., which continued to stay at a high level from 2014 to 2015. While the demand of heavy crude increased, as China bought Middle East heavy crude for strategic petroleum reserves. Those two factors combined led to narrow Dated Brent/Dubai spread in 2015.

However, the average Dated Brent/Dubai spread in Q4/2015 stayed at 3.09 \$/BBL, an increase of 2.61 \$/BBL from the same period in 2014. The widening spread was supported by the overall light crude supplies tightening as the U.S. shale oil productions declined in Q4/2015. In addition, Middle East light crude productions was also decreased, due to several oil field maintenances in Saudi Arabia and the United Arab Emirates. Whereas light crude demand rose as the refineries which just return from fall maintenance chose to run more light crude on the back of good gasoline and naphtha demand. The unusually high gasoline demand in Q4/2015 was supported by the warmer than normal winter which stimulated car driving in both the U.S. and Asia, especially in China and India where the car sales rose sharply during the end of 2015. Moreover, the spread was further supported by high petrochemical margins which drove naphtha and light crude demand higher.

Crack Spreads Analysis

Unit: \$/BBL

	Q4/2014	Q3/2015	Q4/2015			YoY	QoQ	2014	2015	YoY
	AVG	AVG	MAX	MIN	AVG	%	%	AVG	AVG	%
UNL95/DB	13.43	19.35	24.24	14.65	18.72	39%	-3%	14.31	18.33	28%
IK/DB	17.67	10.87	16.53	11.63	14.04	-21%	29%	15.85	13.85	-13%
GO/DB	15.96	10.77	16.73	10.59	13.71	-14%	27%	16.03	13.63	-15%
FO/DB	-5.60	-8.05	-4.68	-9.16	-6.56	-17%	19%	-8.26	-5.03	-39%

Crack Spreads Analysis

- ❖ An average Mogas/Dubai crack spread in 2015 increased by 4.02 \$/BBL, compared to 2014, driven by gasoline demand growth in many regions around the world, due to the low oil price and auto sales increase in both China and India. The unusually warm weather caused stronger than normal gasoline demand this winter. There was also a supply side support, as a number of refineries outaged in the US, Middle East, Taiwan and Singapore. Shell's Bukom refinery in Singapore with capacity of 500,000 barrels a day is continued to shut since early August to present, after the fire incident. As a result, gasoline supply was lower in the region.

An average Mogas/Dubai crack spread in the Q4/2015 was 18.72 \$/BBL, compared to the average of 19.35\$/BBL in the previous quarter. The spread had been pressured by the demand that began to slow at the

end of summer driving season, along with the fall in gasoline import demand from Indonesia, Asia's largest importer of gasoline, after the restart of 100,000 barrels per day Condensate Splitter at Trans Pacific Petrochemical refinery and the start of new 62,000 barrels per day Residue Fluid Catalytic Cracker at Cilacap refinery. On the supply side, there were more supply to the market as refineries gradually returned from maintenance, led to the rise in Singapore gasoline stock to 31-week high in November, even though several refinery outages occurred during the time. However, the gasoline price had been boosted significantly in December by the warmer than normal weather as a result of El Niño, causing the more than usual car driving and gasoline demand. Moreover, China's car sales increased from the tax stimulus policy by the Chinese government which in turn, increased gasoline demand in China. In addition, high naphtha demand helped boosted gasoline price further.

- ❖ An average of Jet (Kerosene)/Dubai crack spread was decreased by 2.00 \$/BBL in 2015, compared to 2014. This was due to warmer winter in 2015 compare to previous year in the US, Europe, and Asia, led to lower demand for heating oil. On the supply side, the rise of China's jet fuel export, with more than 75% of such export to other Asian countries, as well as the start of new large refineries in the Middle East, pressured jet crack spread.

An average of Jet (Kerosene)/Dubai crack spread in Q4/2015 was 14.04 \$/BBL, compared to the average of 10.87\$/BBL in the previous quarter. The spread had been supported by the increase in demand for heating compare to the previous quarter as winter began. In addition, the turnaround of 270,000 barrels per day Melaka refinery in Malaysia along with 500,000 barrels per day Shell's Bukom refinery in Singapore due to the fire incident had helped reduce supply in the region. However, China's jet fuel export which rose to 300,000 barrels per day in November pressured on the spread.

- ❖ An average of Gasoil/Dubai crack spread in 2015 decreased by 2.40 \$/BBL, compared to 2014. This was due to the weaken in overall demand as a result of the warmer than usual winter in many regions, which led to a decrease in heating oil demand. Furthermore, Chinese oil demand slowed down as Chinese economy is in the transition from an economy lead by industrial sector, which consecutively increased diesel demand in China for many years, to an economy lead by service sector. From that reason, China exported more gasoil than the previous year, and significantly weighted on the already oversupplied market, as refiners were operating at high utilization rate on the back of rising gasoline demand. As a result, gasoil/diesel stock rose to a record high level in both Asia and Europe.

An average of Gasoil/Dubai crack spread was 13.71 \$/BBL, compared to the average of 10.77 \$/BBL in the previous quarter. The spread had been driven by strong diesel demand from India for the pump in agricultural irrigation and electricity generation, due to weak monsoon and dry weather. The Indian gasoil demand in October rose more than 16% from the same period last year. Moreover, there was also steady demand coming from Vietnam, Australia, and Africa. Although Indonesia's gasoil import demand partly declined following Indonesian government mandated the increase in biodiesel blending ratio from 10% to 15% in transportation sector from August onwards. While the supply in the region increased, as refineries gradually returned from maintenance as well as diesel exports from China increased. In the fourth quarter, China's government granted

an increase of 17% of gasoil/diesel export quota to refineries from the previous quarter. In addition, the arbitrage from Asia and the Middle East to Europe was closed due to record high stock in Europe.

- ❖ The average of Fuel Oil/Dubai crack spread increased by 3.23 \$/barrel in 2015, compared to 2014, as the overall bunker demand increased, supported by low flat price. The spread was also driven by demand from South Korea and Japan for electricity generation in the early 2015; while the fuel oil arbitrage inflow from Europe to Asia slowed down due to high freight cost early in the year and severe weather in the last quarter led to the delay in shipment.

The average of Fuel Oil/Dubai crack spread was -6.56 \$/BBL, compared to an average of -8.05 \$/BBL in the previous quarter. The spread was stronger as fuel oil supply from Europe to Asia was lower, due to refineries maintenance in the first half of the quarter, as well as high freight cost. The spread was also driven by demand for construction and electricity generation from India which increased by over 28% in November, compared to previous year. There was also an increase in bunker demand in the last quarter due to higher shipping activities before year end. However, the fuel oil demand for power plant declined, due to the warm weather in many regions and the restart of two nuclear power plants in Japan. Moreover, fuel oil demand from teapot refineries in China had substantially decreased after they were granted the crude oil import quotas from the government.

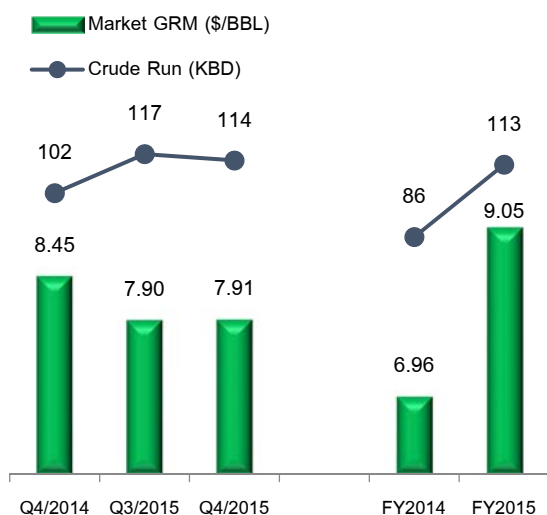
1.) Refinery Business

Refinery Business Performance

	Q4/2014	Q3/2015	Q4/2015	YoY	QoQ		2014	2015	YoY
Average Crude Run (KBD)	102.48	116.70	114.37	12%	-2%		86.48	112.94	31%
Utilization Rate (%)	85%	97%	95%	12%	-2%		72%	94%	31%
Average FX (THB/USD)	32.85	35.40	36.00	10%	2%		32.63	34.40	5%
(Unit: Million Baht)									
Market GRM	2,617	3,004	3,023	16%	1%		7,167	12,838	79%
GRM Hedging	150	(44)	(339)	-327%	676%		499	(472)	-195%
Inventory Gain/ (Loss)	(4,400)	(1,415)	(1,631)	63%	-15%		(5,454)	(4,354)	20%
Total GRM	(1,634)	1,546	1,053	164%	-32%		2,213	8,012	262%
EBITDA	(2,369)	764	130	105%	-83%		285	5,097	N/A

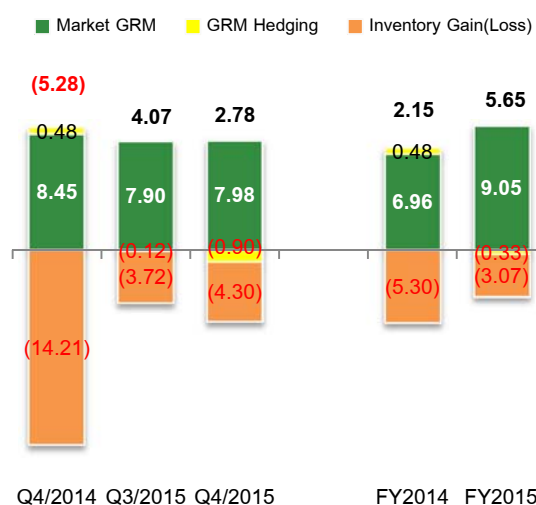
Note: 1/ Inventory Gain/ (Loss) in 2015 was included a reversal of LCM of Baht 887 million.

Market GRM and Crude Run



Total GRM

Unit: \$/BBL



Comparison of 2015 and 2014 operating results

Over the past year, the refinery has been operating in a consistently high rate and created a historical high record, as market was in a favorable conditions, strong market GRM and beneficial refining economic as well as an increase in domestic demand. For instance, Bangchak's refinery was able to increase its crude run rate to be higher than 120 KBD for a certain period of time during the past 12 months. The average crude run rate for FY2015 was 112.94 KBD, an increase from last year which was recorded at 86.48 KBD as there was a schedule annual turnaround maintenance in 2014.

The company's market GRM was recorded at Baht 12,838 million (+79%), as a result of cheaper crude cost from a narrow down spread between Dated Brent/Dubai to an average of 1.55 \$/BBL from an average of 2.29 \$/BBL in FY2014. And, from a significant increase in Gasoline/Dubai crack spread (UNL95/DB) which was driven up by regional demand increase however, Gas Oil/Dubai crack spread (GO/DB), which was the majority of Bangchak's refining products, was pressured down from a weaker demand as a result of lower than expected economic growth of China and a greater regional supply from the higher average crude run rate of refineries to capture a strong market GRM. Additionally, electricity cost of the refinery was decreased from of the purchase of the Cogeneration Power Plant with a capacity of 25 MW from PTT Public Company Limited (PTT) at the end of May 2015.

The continuity of downward trend in crude oil prices since late FY2014, as it was pressured by the over-supply issue and lagged economic growth, resulted in an inventory loss of Baht 4,354 million in FY2015. Refinery business recorded a loss from crude and product oil price hedging contract of Baht 472 million. As a result, the total GRM was Baht 8,012 million (+262%). EBITDA was Baht 5,097 million, an increase of Baht 4,811 million compared to the previous year.

Comparison of Q4/2015 and Q3/2015 operating results

The refinery continued to operate at a consistently high rate. The average crude run for 4Q/2015 was 114.37 KBD or 95% utilization rate, a slight 2% decrease from previous quarter.

Market GRM was increased to Baht 3,023 million (+1%), despite an increase in crude cost as the average spread of Dated Brent/Dubai was widen to 3.09 \$/BBL, an increase from 0.48 \$/BBL in 3Q/2015, from the higher light crude oil demand. Gasoline/Dubai crack spread (UNL95/DB) was softer compared to the last quarter. The spread was pressured by the sluggish regional demand at the beginning of the quarter. For other product spreads, they were supported by the seasonal factor and from the inconclusive result of the crude oil production ceiling at the last meeting of the Petroleum Exporting Countries (OPEC) in December, along with the Iran sanction lifting which put further weight on crude oil price. Therefore, there was an inventory loss of Baht 1,631 million (included allowance for loss on decline in value of inventories (LCM) of Baht 105 million). As a result, the total GRM was decreased by Baht 493 million (-32%) and recorded an EBITDA of Baht 130 million (-83%) from the previous quarter.

2.) Marketing Business and Bangchak Green Net Co., Ltd.

Sales volume of Marketing Business

Unit: Million Litre

Marketing Business	Q4/2014	Q3/2015	Q4/2015	YoY	QoQ	2014	2015	YoY
Retail (Service Stations)	777	803	851	10%	6%	3,016	3,285	9%
Industrial	558	469	538	-4%	15%	1,991	2,124	7%
Total	1,335	1,272	1,390	4%	9%	5,006	5,410	8%
Sales volume in each product category of Marketing Business								
LPG	13	25	30	134%	22%	61	78	27%
Gasoline	13	5	6	-53%	26%	49	37	-24%
Gasohol	371	379	398	7%	5%	1,402	1,513	8%
Gasohol 91	148	156	157	6%	1%	551	616	12%
Gasohol 95	93	103	115	23%	12%	355	412	16%
Gasohol E20	79	81	86	10%	7%	325	323	0%
Gasohol E85	50	39	40	-21%	1%	170	162	-5%
Jet Fuel	148	162	181	22%	12%	624	678	9%
Diesel	747	661	727	-3%	10%	2,668	2,914	9%
Fuel Oil	34	31	38	12%	25%	156	148	-5%
Lubricant	9	10	9	6%	-9%	46	41	-11%
Others	0	1	1	76%	8%	1	2	30%
Total	1,335	1,272	1,390	4%	9%	5,006	5,410	8%

Details of Marketing Margin

Unit: Baht per Litre

Marketing Margin	Q4/2014	Q3/2015	Q4/2015	YoY	QoQ	2014	2015	YoY
Retail Margin (Service Stations)	0.93	0.97	1.17	26%	21%	0.98	0.99	2%
Industrial Margin	0.32	0.24	0.48	51%	99%	0.31	0.41	33%
Total Marketing Margin	0.67	0.70	0.90	34%	29%	0.71	0.76	7%

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

Comparison of 2015 and 2014 operating results

In 2015, marketing business continued to expand its sales volume in order to support the refinery's higher crude run. The sales volume was 5,410 million litres, an increase of 404 million litres (+8%) compared to the previous year. The sales volume were higher both in the retail and industrial market, as the declining retail oil product prices from the beginning of the year had boosted domestic oil demand.

The number of service stations at the end of 2015 was 1,072 stations. There were 66 newly opened service stations during the year, most of which were standard stations with modern image and include other non-oil businesses such as Inthanin coffee shops, minimarts, etc., in order to meet with customers' need. The company also improves quality and appearance of existing service stations to create throughput per service station growth, and closes down some stations with less than target sales volume.

The sales volume through retail market (service stations) was increased by 270 million litres (+9%), as the decline in retail oil product prices following the lower global oil price helped spur domestic oil demand, especially in gasohol 95, as its price decreased by almost 30% compared to last year. Diesel sales volume also expanded, after its retail price dropped to the lowest level in 6 years, stimulating diesel consumption. Moreover, the company continued to maintain its 2nd rank of market share in retail sales volume, its market share from January to November 2015 was at 15.0%, a slight decrease from 15.2% of the previous year.

Sales volume through industrial market was increased by 134 million litres (+7%). From the economic recovery and the tourism sector which was still growing steadily, resulting in an expansion in the tourism-related industrial transportation. The incremental sales volume was also to support the refinery's higher crude run. The decline in oil prices was another factor inducing industrial factories to switch from other sources of energy to oil products. Moreover, there were temporary shut down of some refineries during the year, enable the company to expand its sales volume in such period.

Total marketing margin was at 0.76 Baht per litre, a 7% higher, as the lower crude oil price affected product cost, while oil product prices adjusted slower to the changing cost, the marketing margin rose temporarily. Retail margin was at 0.99 Baht per litre, while industrial margin was at 0.41 Baht per litre. As a result for the year 2015, marketing business recorded an EBITDA of Baht 2,497 million, an increase of Baht 234 million (+10%).

Comparison of Q4/2015 and Q3/2015 operating results

Total sales volume increased by 117 million litres (+9%) from the previous quarter. The higher sales volume both in retail and industrial market was due to the travelling season and year-end long holiday, combined with the continuous decline in retail oil product prices following the drop in global oil prices, resulted in the rise of oil demand.

The sales volume through retail market (service stations) increased by 48 million litres (+6%), from the continuous expansion of gasohol products sales volume, especially in gasohol 95 and gasohol E20 product. However, sales volume of gasohol 91 was slightly decreased, as the retail price of gasohol 95 and gasohol 91 narrowed down.

The sales volume through industrial market increased by 69 million litres (+15%), from seasonal factor and price factor which induce oil consumption in the quarter. Moreover, year-end travelling season, sugar cane harvesting time of the sugar industrial customers, and a reduction in crude run of some refineries in December, were also the supporting factors for the increase in diesel sales volume.

Total marketing margin was at 0.90 Baht per litre (+29%). Retail margin increased by 0.20 Baht per litre (+21%), as the decreasing crude oil prices in the quarter reduced the company's crude oil cost, while an adjustment of retail prices was slower. Industrial margin increased by 0.24 Baht per litre (+99%), from the lower market supply, as there was a temporary shutdown of a refinery in Thailand. However, in the quarter, there was a higher cost of Selling and

administrative expenses, and a lower Investment income and other income, resulting in an EBITDA of marketing business decrease by Baht 2 million from the previous quarter.

Renewable Business Performance

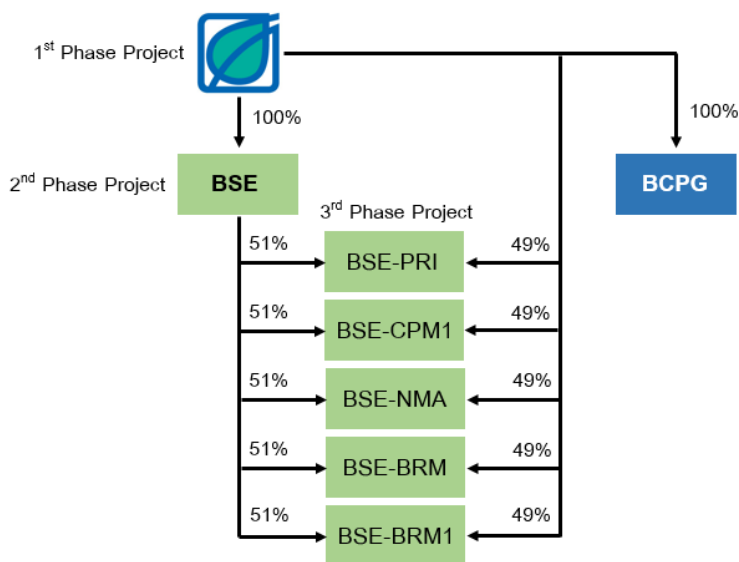
3.) Solar Power Business

In 2015, the company restructured the group of renewable power business by setting up the new subsidiary, BCPG Co., Ltd. for separation of the renewable power business to be operated by BCPG Co., Ltd., as well as to raise funding from an initial public offering (IPO) of ordinary shares of BCPG Co., Ltd. and thereafter the listing of such business group on the Stock Exchange of Thailand in 2016, as the Extraordinary General Meeting of Shareholders No. 1/2015 approved.

Accordingly, on 28th October 2015, the company sold and transferred the 38 MW solar power plant with net asset book value of Baht 3,266.16 million to BCPG Co., Ltd. And on 1st November 2015, the company sold its 49% holding of shares in Bangchak Solar Energy (Buriram) Co., Ltd., Bangchak Solar Energy (Buriram1) Co., Ltd., Bangchak Solar Energy (Chaiyaphum1) Co., Ltd., Bangchak Solar Energy (Nakhornratchasima) Co., Ltd., and Bangchak Solar Energy (Prachinburi) Co., Ltd. To BCPG Co., Ltd., with net asset book value of Baht 2,154.60 million. The company also sold all of its shareholding in Bangchak Solar Energy Co., Ltd. on 1st December 2015, with net asset book value of Baht 1,930.50 million.

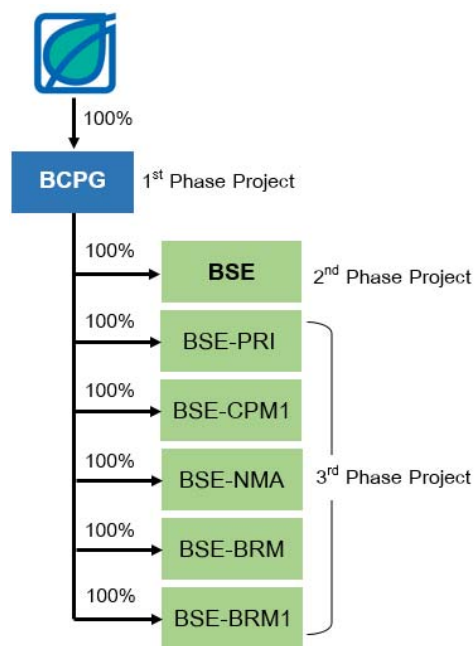
Structure of Renewable Energy Business Group

before restructuring



Structure of Renewable Energy Business Group

after restructuring



Revenue and Electricity Sales of Solar Business

Unit: Million kWh

	Q4/2557	Q3/2558	Q4/2558	YoY	QoQ		FY2557	FY2558	YoY
Revenue (Million Baht)	780	731	752	-4%	3%		2,692	3,010	12%
Electricity Sales									
Phase 1 (PPA of 38 MW)	17.25	17.64	17.00	-1%	-4%		70.12	69.71	-1%
Phase 2 (PPA of 32 MW)	19.79	19.03	19.48	-2%	2%		79.07	77.97	-1%
Phase 3 (PPA of 48 MW)	30.27	27.21	29.92	-1%	10%		82.34	115.93	41%
Total	67.30	63.88	66.40	-1%	4%		231.53	263.61	14%

Comparison of 2015 and 2014 operating results

In 2015, Solar Power Business recorded an increase in total revenue by Baht 318 million (+12%) from last year. Its total electricity sales rose by 32.08 million kWh (+14%), as in 2015, all 3 phases of Solar Power Business were commercially operated for the whole year, while in 2014, Solar Power Plant phase 3 was partly operated (Phase 3 had fully commercialized its operation of its all 5 sites in April 2014). Irradiation for Solar Power Plant phase 3 was at the same level as last year. For Solar Power Plant phase 1 & 2, the total electricity sales was slightly lower by (-1%), as the higher temperature at the sites led to a lower production efficiency of the 2 phases, despite the higher irradiation during the year. Accordingly, in 2015, Solar Power Business recorded an EBITDA of Baht 3,005 million, increased by Baht 433 million (+17%).

Comparison of Q4/2015 and Q3/2015 operating results

In Q4/2015, total revenue from Solar Power Business was increased by Baht 21 million (+3%), from the higher total electricity sales by 2.52 million kWh (+4%). Even though the solar irradiation hours in all 3 phases was lower due to the shorter daylight hour in winter season, but the cool temperature during the quarter led to the superior production efficiency for all phases, especially phase 3 which had higher irradiation hours and located in the coldest location. Moreover, in the quarter, there was an increase of Investment income and other income from selling the investment in subsidiaries. As a result, EBITDA of Solar Power Business was expanded by Baht 173 million (+25%).

4.) Biofuel Business

In 2015, Biofuel business recorded an EBITDA of Baht 355 million, which comprised of an EBITDA from Bangchak Biofuel Co, Ltd. of Baht 342 million and share of profit from Ubon Bio Ethanol Co, Ltd of Baht 12 million.

In Q4/2015, Biofuel business recorded an EBITDA of Baht 113 million, which comprised of an EBITDA from Bangchak Biofuel Co, Ltd. of Baht 109 million and share of profit from Ubon Bio Ethanol Co, Ltd of Baht 4 million.

Table of biodiesel performance by Bangchak Biofuel. Co., Ltd

	Q4/2014	Q3/2015	Q4/2015	YoY	QoQ	FY2014	FY2015	YoY
Revenue (Million Baht)	1,535	1,326	1,423	-7%	7%	5,316	5,414	2%
Utilization Rate (%)	102%	102%	102%	N/A	N/A	100%	101%	1%
Average Daily Production Rate (Thousand litre per day)	366	366	367	0%	0%	361	365	1%
B100 Sales Volume (Million litre)	53	52	57	7%	9%	179	199	11%
EBITDA (Million Baht)	89	64	109	23%	71%	298	342	15%
Average Sales Price								
B100 (Baht / Litre)	31.53	28.54	28.26	-10%	-1%	32.41	30.93	-5%
Crude Palm Oil (CPO) (Baht / Kg.)	28.22	24.30	24.97	-12%	3%	28.55	27.27	-4%

*Source: Department of Energy Business, Ministry of Energy.

Comparison of 2015 and 2014 operating results

In 2015, Biodiesel business recorded a revenue increase of Baht 98 million (+2%), due to an expansion in B100 sales volume by 19 million litres (+11%), which resulted from the higher purchase volume of Bangchak, the major customer, as the company's diesel sales volume rose as well as its refinery's crude run. The Biodiesel business revenue increased despite the decline in B100 average price which move together with the lower Crude Palm Oil (CPO) price, following the oil palm oversupply situation, and a decrease in Malaysian palm oil price. The average daily production rate for the year slightly rose to 365 thousand litres per day from 361 thousand litres per day last year (+1%).

In 2015, Gross Margin of Biofuel business was increased, partly from the higher B100 sales volume, and partly from the efficient inventory management, resulting in the superior average margin per unit of B100. However in 2015, there was an Inventory Loss of Baht 19 million, while Inventory Loss in 2014 was Baht 5 million. Also, there was a gain of Baht 7 million from foreign currency forward contracts for the construction of the 2nd Biodiesel plant. As a result, Biofuel business recorded an EBITDA of Baht 342 million, an increase of Baht 44 million (+15%).

Comparison of Q4/2015 and Q3/2015 operating results

When compared to Q3/2015, Biodiesel business recorded an increase in revenue by Baht 96 million (+7%), caused by the higher B100 sales volume by 5 million litres (+9%) from the seasonal diesel demand surge. Biodiesel business revenue escalated even though the B100 average price declined from the previous quarter, as crude palm oil production and stocks in the country increased, causing the government to ask the private sector to increase their B100

reserve and procure crude palm oil at the suggested price, in order to relieve the on-going oil palm over supply situation (started 1st November 2015). The average daily production rate was slightly increased to 367 thousand litres per day.

In Q4/2015, Biodiesel business recorded an increase of Gross Margin, from the greater B100 sales volume, and from the larger average margin per unit of B100, as a result of the company's efficient inventory management and the smooth operation of the plant. Moreover in Q4/2015, Biodiesel business recorded an Inventory Gain of Baht 26 million (reversal of allowance for loss on decline in value of inventories (LCM) of Baht 4 million). While in Q3/2015, there was an Inventory Loss of Baht 21 million (allowance for loss on decline in value of inventories (LCM) of Baht 4 million). Therefore, Biofuel business recorded an increase in EBITDA by Baht 45 million (+71%) from the previous quarter.

5.) Exploration and Production Business

In 2015, Exploration and Production Business recorded an EBITDA of Baht 472 million. The Exploration and Production Business was affected by the crude oil price drop, resulting in the decline in its selling price per cargo and the sales volume. The important operating details are as follows:

In 2015, Galoc oil field production was 2,255,209 barrels (1,157,628 barrels net to Nido), Nido & Matinloc oil field production was a total of 141,868 barrels (36,002 barrels net to Nido).

Exploration and Production Business recorded revenue of Baht 2,344 million, total of 1,284,080 barrels. The details of crude oil selling in the quarter, as disclosed by the Nido Petroleum Limited (NIDO) in the Australian Securities Exchange (ASX) are as follows:

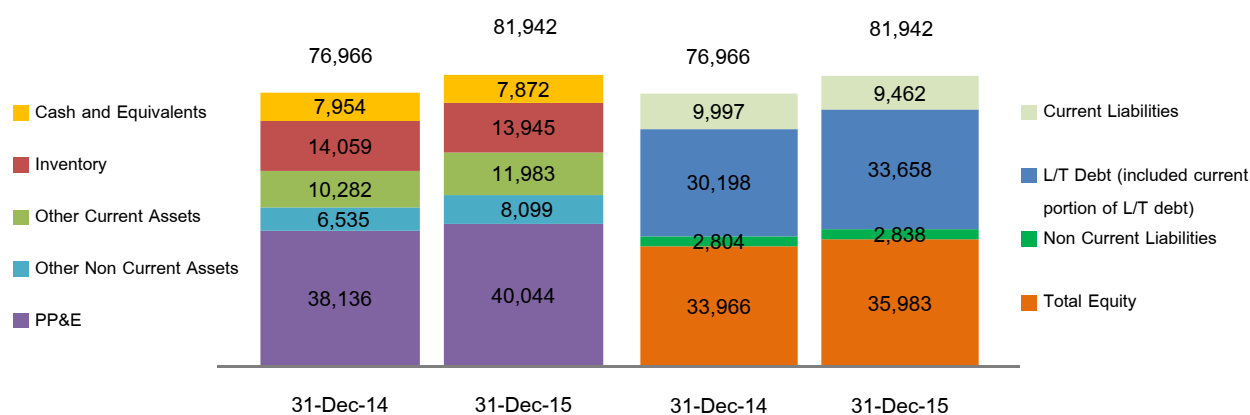
- ❖ Cargo of October totaling 347,883 barrels (194,395 barrels net to Nido) with FOB price of 47.04 \$/bbl.
- ❖ Cargo of December totaling 367,117 barrels (205,143 barrels net to Nido) with FOB price of 37.59 \$/bbl.
- ❖ Nido & Matinloc oil field totaling 37,776 barrels (9,573 barrels net to Nido).

In the year, there was a decrease in the cost of FPSO (Floating Production, Storage, and Offloading) of Galoc oil field. FPSO is a production and transferring vessel. The cost was changed to be variable with oil price, which will reduce the vessel cost when crude oil price fall.

Moreover, on 14th July 2015, Nido has informed Australian Securities Exchange (ASX) that it has completed its Independent Reserves and Resources assessment on the mid-Galoc area of the Galoc oil field, undertaken by Gaffney Cline and Associates ('GCA'). The 2C Contingent Resource estimates as of 30 June 2015 are 9.5 million barrels (5.3 million barrels net to Nido), which NIDO and other stakes of Galoc field will use for further development of the field.

Analysis of Financial Position of the Company and its subsidiaries (Consolidated)

Unit: Million Baht



Assets

As of December 31, 2015, Total Assets of the Company and its subsidiaries were Baht 81,942 million, an increase of Baht 4,977 million when compared to the end of 2014. The changes in assets were mainly from:

- ❖ Cash and cash equivalents was decreased by Baht 82 million. Details are stated under Analysis of the Cash Flow Statement.
- ❖ Current Investment was increased by Baht 3,896 million from the increase in the company's short term fixed deposits in financial institutions by Baht 4,500 million, and a decrease from Bangchak Solar Energy Co., Ltd. By Baht 608 million.
- ❖ Trade Accounts Receivable was decreased by Baht 601 million from lower sales value in 2015, compared to 2014, due to a large decrease in price per unit, even though total sales volume increased.
- ❖ Other Accounts Receivable was decreased by Baht 518 million from the reversal of prepaid expense (from Cogeneration Power Plant) of Baht 416 million, the insurance compensation receivable of Baht 243 million in 2014, which was received in 2015, and decrease in others of Baht 141 million.
- ❖ Inventory was decreased by Baht 114 million as the company's inventory of crude oil value and finished oil products unit price at the end of 2015 was lower when compared to the end of last year. Although the amount of inventory was increased by 214 million litres.
- ❖ Oil fuel fund subsidies receivable was decreased by Baht 389 million, as the company collected its oil subsidies.
- ❖ Other current assets was decreased by Baht 861 million, from the company's VAT refund of Baht 840 million receivable in 2014 which was received in 2015.
- ❖ Investment in subsidiaries decreased by Baht 2,315 million, from additional investment in BCP Energy of Baht 58 million, the establishment of BCPI of Baht 4 million, the establishment of BCPG of 3,700 million, selling of investment in BSE of Baht 6,211 million, and an impairment of NIDO of Baht 135 million. However, the elimination of related parties transaction resulted in the total investment in subsidiaries of Baht 0.

- ❖ Property, plant and equipment was increased by Baht 1,908 million, from an acquisition of an exploration and production of petroleum assets in Galoc Production Company WLL (GPC) of Baht 2,085 million, an investment in refinery machinery and equipment of Baht 3,715 million, Marketing and office equipment of Baht 935 million, recognize an asset increase regarding the purchase of Cogeneration Power Plant from PTT Public Company Limited (earlier was recorded as financial lease) of Baht 236 million, exploration and production of petroleum assets of Baht 173 million, others of Baht 550 million, and depreciation of Baht 4,466 million.
- ❖ Intangible assets were increased by Baht 1,132 million, mainly from exploration and evaluation expenditure, as Nido Petroleum Limited acquired additional shares in Galoc Production Company WLL (GPC).
- ❖ Other non-current assets was increased by Baht 168 million, mainly from a decrease in deferred tax expense by Baht 98 million, and other assets increase of Baht 266 million.

Liabilities

As of December 31, 2015, Total Liabilities of the Company and its subsidiaries was Baht 45,959 million, an increase of Baht 2,960 million when compared to the end of 2014. The change in liabilities was mainly from:

- ❖ Trade Accounts Payable was decreased by Baht 780 million, as the value of crude oil and finished oil products in December 2015 was lower than in December 2014.
- ❖ Other liabilities was increased by Baht 396 million, from the liabilities from hedging contracts of Baht 235 million, accrued expenses as of year end of Baht 393 million, the termination of electricity and steam purchasing agreement between the company and PTT Public Company Limited of Baht 440 million, and other liabilities increased by Baht 208 million.
- ❖ Long-term loans from financial institutions (including current portion of long-term loans) was increased by Baht 461 million, partly from the loan draw down of the company's subsidiaries, and from the effect of exchange rate on foreign currency loan.
- ❖ Debenture was increased by Baht 2,999 million, from a Debenture Issuance of Baht 3,000 million.
- ❖ Other non-current liabilities was increased by Baht 953 million, mainly due to an increase in the Provision for the decommissioning cost of Baht 405 million from NIDO, deferred tax expense of Baht 130 million, and an increase in employee benefit obligations by Baht 383 million.

Equities

As of December 31, 2015, Total Equity attributable to owners of the Company was Baht 35,481 million, an increase of Baht 2,172 million, from Net Profit for the year of Baht 4,150 million, Dividend Payment of Baht 1,927 million, an actuarial loss of Baht 184 million, and other component of equity (foreign currency translation differences for foreign operations) of Baht 133 million. The Consolidated book value was Baht 25.77 per share.

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

In 2015, the Company and its subsidiaries had net cash received from operating activities of Baht 12,033 million, net cash used in investing activities of Baht 11,342 million, net cash used in financing activities of Baht 893 million. As a result, the Company and its subsidiaries had a decrease in Cash and cash equivalents of Baht 202 million, as there was Cash and cash equivalents of Baht 7,954 million on January 1, 2015 and an effect of exchange rate changes on balances held in foreign currencies of Baht 120 million, resulting in Cash and cash equivalents as of December 31, 2015 at Baht 7,872 million.

Details of cash received and used are as follows:

Cash Flows		Unit: Million Baht	
Cash Flows	31 Dec 2014	31 Dec 2015	
Net cash received (used) from operating activities	6,068	12,033	
Net cash received (used) in investing activities	(10,042)	(11,342)	
Net cash received (used) in financing activities	5,348	(893)	
Net increase (decrease) in cash and cash equivalents	1,374	(202)	
Cash and cash equivalents at 1 January	6,527	7,954	
Effect of exchange rate changes on balances held in foreign currencies	53	120	
Cash and cash equivalents at 31 December	7,954	7,872	

Cash received and used details are as follows:

- 1) The Company and its subsidiaries had net cash received from operating activities of Baht 12,033 million, mainly from
 - ❖ Net cash received from operating activities of Baht 10,526 million which was from Net Profit of Baht 4,097 million added back Non-Cash Expenses of Baht 4,141 million, Finance Costs and Income Tax paid of Baht 2,288 million.
 - ❖ Cash used in the operating assets decreased by Baht 4,095 million, mainly from a decrease in Inventory of Baht 1,287 million, a decrease in Trade Accounts Receivable of Baht 808 million, a decrease in Other Receivables of Baht 652 million, and a decrease in Other Assets of Baht 1,348 million.
 - ❖ Cash used in operating liabilities decreased by Baht 1,911 million, mainly from a decrease in Trade Accounts Payable of Baht 1,007 million, a decrease in Other Payables of Baht 402 million and a decrease in Other liabilities of Baht 502 million.
 - ❖ Income Tax Paid of Baht 677 million.

- 2) Net Cash used in investing activities of Baht 11,342 million, mainly from
 - ❖ Investment in property, plant and equipment of Baht 4,591 million which were from a purchasing of Cogeneration Power Plant of Baht 1,329 million, an investment in Biodiesel plant machinery and equipment

of Baht 1,137 million, an investment in refinery machinery and equipment of Baht 1,249 million, marketing and office equipment of Baht 823 million, and others of Baht 53 million.

- ❖ Current investment increased by Baht 3,896 million.
- ❖ Long Term investment increased by Baht 165 million.
- ❖ Net cash outflow on acquisition of subsidiary of Baht 2,407 million. (Nido Petroleum Limited acquired the shares in Galoc Production Company WLL)
- ❖ Received cash from interest received of Baht 212 million.
- ❖ Leasehold right increased by Baht 390 million.
- ❖ Purchase of intangible assets increased by Baht 107 million.

3) Net cash used in financing activities of Baht 893 million, mainly from

- ❖ Received cash from debenture Issuance of Baht 2,996 million.
- ❖ Received cash from long-term loan from financial institutional of company's subsidiaries of Baht 1,122 million.
- ❖ Repayment of long-term loans from financial institutional of Baht 1,356 million.
- ❖ Dividend Payment of Baht 2,040 million.
- ❖ Financial costs of Baht 1,615 million.

Financial Ratios (Consolidated)

Profitability Ratios (%)

	Q4/2014	Q3/2015	Q4/2015	2014	2015
EBITDA Margin	-2.74%	6.20%	3.99%	2.82%	7.33%
Profit Margin	-5.48%	1.20%	-0.54%	0.41%	2.71%
Return on Equity (ROE) ^{1/}	2.09%	4.96%	12.07%	2.09%	12.07%
Return on Assets (ROA)	2.29%	3.80%	8.04%	2.29%	8.04%

Liquidity and Financial Policy Ratios (times)

	31-Dec-14	30-Sep-15	31-Dec-15
Liquidity Ratios (times)			
Current Ratio	2.86	3.55	3.22
Quick Ratio	1.61	2.13	1.89
Financial Policy Ratios (times)			
Interest bearing Debt to Equity	0.92	0.93	0.94
Net Interest bearing Debt to Equity	0.67	0.54	0.59
	Q4/2014	Q3/2015	Q4/2015
DSCR	1.93	2.74	3.73

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

Financial Ratios Calculation

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

Note:

1/ Average Total Equity attributable to owners of the Company

- Yearly = $\frac{(\text{Total Equity attributable to owners of the Company of the year before} + \text{Total Equity attributable to owners of the Company of this year})}{2}$
- Quarterly = $\frac{(\text{Total Equity attributable to owners of the Company of the quarter of the year before} + \text{Total Equity attributable to owners of the Company the quarter this year})}{2}$

2/ Average Total Assets

- Yearly = $\frac{(\text{Total Assets of the year before} + \text{Total Assets of the Company of this year})}{2}$
- Quarterly = $\frac{(\text{Total Assets of the Company of the quarter of the year before} + \text{Total Assets of the Company the quarter this year})}{2}$

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. 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

	2014	2015	Δ
Material Costs of Product Outputs : Consist of crude oil, ethanol, bio-diesel, chemical, energy and utilities in production	121,687.56	93,031.82	(28,655.74)
Material Costs of Non-Product Outputs : Consist of slop and sludge oil, waste water, chemical surplus	151.74	42.44	(109.30)
Waste and Emission Control Costs : Consist of maintenance cost of environmental control equipment and depreciation and other fees	313.75	397.83	84.08
Prevention and Other Environmental Management Costs : Consist of monitoring and measurement cost, environmental management system expenses	17.17	11.83	(5.34)
Total Expenses	122,170	93,484	(28,686)
Benefit from by-product and waste recycling : The revenue realization from liquid sulfur, glycerin, waste paper	(19.28)	(17.25)	2.03

In 2015, total expenses related to environment decreased by Baht 28,686 million (-23%) compared to last year. The main reason was due to the large decline in oil price, resulted in the lower Material Costs of Product Outputs, despite the higher refinery's crude run from 86 KBD in 2014 to 113 KBD in 2015. Material Costs of Non-Product Outputs reduced by Baht 109 million (-72%), due to the slop and sludge oil which was lower by Baht 110 million, as the turnaround annual maintenance in 2014 led to a higher waste in the year than in 2015. Waste and Emission Control Costs increased 24%, mainly due to the Baht 113 million higher depreciation of environmental control equipment for several projects, for example, waste water reduction project, air pollution control system on sulfur production unit.

Benefit from by-product and waste recycling reduced by Baht 2 million (-11%), as sellable residue metal scrap decreased, even though liquid sulfur and glycerin value were higher in the year.