



**Management Discussion &
Analysis of Business Operation**

**Bangchak Corporation
Public Company Limited**

For the first quarter ended March 31st, 2018



Management Discussion & Analysis of Business Operation

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Summary of the Company and its subsidiaries' operating results for the quarter ended March 31st 2018

Unit: THB Million	Q1/2017	Q4/2017	Q1/2018	YoY	QoQ
Total Revenue	43,995	46,306	44,226	1%	-4%
Accounting EBITDA	4,075	3,494	2,992	-27%	-14%
<i>Refinery and Trading Business Group</i> ^{1/}	2,226	2,256	1,279	-43%	-43%
<i>Marketing Business Group</i> ^{2/}	856	302	735	-14%	144%
<i>Power Plant Business Group</i> ^{3/}	706	812	664	-6%	-18%
<i>Bio-Based Product Business Group</i> ^{4/}	179	132	304	70%	130%
<i>Natural Resource Business Group</i> ^{5/}	133	16	68	-49%	311%
<i>Others</i>	22	(30)	(54)	-341%	-78%
<i>Elimination</i>	(47)	6	(3)		
Profit attributable to owners of the Company	2,084	1,386	1,146	-45%	-17%
Basic earnings per share (Baht)	1.51	1.01	0.83		

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 Green Net Co.,Ltd., Bangchak Retail Co., Ltd., and share of profit from Oam Suk Social Enterprise Co., Ltd.

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

4/ EBITDA from BBGI Co., Ltd., its subsidiaries, and share of profit from associated companies

5/ EBITDA from Natural Resources business of Nido Petroleum Limited, BCP Energy International Pte. Ltd. and BCP Innovation Pte. Ltd.

For Q1/2018, Bangchak Corporation PLC (“The Company”) and its subsidiaries recorded revenue from sale of goods and rendering of services THB 44,226 million, recorded total EBITDA of THB 2,992 million.

Performance softened partly as in Q1/2017 and Q4/2017 recorded several non-recurring items, such as interest income from income tax return, gain from selling of asset, and profit from business acquisition, etc. **Net profit was recorded at THB 1,337 million, with net profit attributable to owners of the company of THB 1,146 million, or earning per shares of THB 0.83**

Refinery and Trading Business Group recorded an average production rate of 109.35 KBD, a level adjacent to plan, Market GRM improved from the previous quarter, while Total GRM declined, primarily due to the effect of the widened Crude premium over Dubai, as well as the lowered oil product spread over crude oil price. There was an Inventory Loss of THB 70 million, and GRM hedging loss.

Marketing Business Group recorded its year-to-date market share in terms of retail sales volume at 15.8%, or at the 2nd rank, and continue to increase the shares. Total marketing sales volume reduced from the intensifying competition in industrial market. Marketing margin was at the similar level of Q1/2017, while the Non-oil business recorded a higher revenue from expansion of the branches, but has been under developing and expanding business,



thus incurring high initial selling, general, and administrative expenses, which led to a decline in performance compared to the previous year. However when compared to the previous quarter, its performance highly improved from the higher marketing margin, together with the lower SG&A expenses.

Power Plant Business Group recorded a superior electricity sales (+3% QoQ and 4% YoY), from the commercial operation commencement of Nagi and Gotemba solar power plant in Japan. For Solar power plant projects in Thailand, electricity sales was consistent. There were also shares of profit from Wind power plant and Geothermal power plant. However, in Q1/2017 recorded gain from selling of asset of Suimei project, and in Q4/2017 there was a gain from business acquisition, resulting in the performance in this quarter appeared to be inferior.

Bio-based Product Business Group performance significantly improved. For biodiesel business, performance was better from the expanding B100 product sales volume, as the government mandate the B100 mixing portion in Diesel product to be 7%. For denatured ethanol business, its performance was also advanced as a result of business amalgamation and from the higher sales volume.

Natural Resources Group Exploration and Production business recorded a higher selling price following global crude oil price movement, led to an improvement of gross profit. However, production and sales volume decreased according to the Natural decline curve. In this quarter, there was a loss from crude and product oil price hedging contract, resulting in the performance to decline from Q1/2017. Nevertheless, performance was better than the previous quarter from the expenses reduction which was according to plan.



Statement of Income



Consolidated Statement of Income	Q1/2017	Q4/2017	Q1/2018	YoY	QoQ
Revenue from sale of goods and rendering of services	43,995	46,306	44,226	1%	-4%
Cost of sale of goods and rendering of services	(39,969)	(42,711)	(40,897)	2%	-4%
Gross Profit	4,026	3,594	3,328	-17%	-7%
Interest income and dividend income	55	12	16	-70%	38%
Other income	170	441	59	-65%	-87%
Selling and administrative expenses	(1,432)	(2,327)	(1,660)	16%	-29%
Exploration and evaluation expense	(9)	(11)	(9)	-5%	-22%
Gain (loss) from crude and product oil price hedging contract	1	46	(73)	N/A	-259%
Gain (loss) from foreign currency forward contracts	37	17	-	N/A	N/A
Gain (loss) on foreign exchange	271	227	172	-37%	-24%
Reversal of allowance for gain/(loss) from impairment of assets	(101)	(78)	-	N/A	N/A
Share of profit (loss) of associate	18	324	92	422%	-72%
Profit before finance costs and income tax expense	3,035	2,244	1,926	-37%	-14%
Finance costs	(355)	(380)	(365)	3%	-4%
Profit/(loss) before income tax expense	2,680	1,865	1,561	-42%	-16%
Income tax (expense) credit	(482)	(298)	(223)	-54%	-25%
Profit for the period	2,198	1,567	1,337	-39%	-15%
Owners of the Company	2,084	1,386	1,146	-45%	-17%
Non-controlling interests	114	181	191	67%	6%
Earnings per share (Baht per Share)	1.51	1.01	0.83		

The company and its subsidiaries performance in Q1/2018 recorded a Net Profit of THB 1,337 million, compared to Q1/2017 a decrease of THB 861 million (-39% YoY), and when compared to Q4/2017 decreased by THB 230 million (-15% QoQ) mainly due to the following reasons:

1. Total revenue from sale of goods and rendering of services was THB 44,226 million, increased by 1% YoY and decreased by 4% QoQ, mainly from the performance of Bio-Based Product business which enhanced from the amalgamation under BBGI Plc. in Q4/2017. While revenue from petroleum related businesses increased slightly YoY, however slipped QoQ due to the decrease in overall sales volume, especially in wholesale channel. As for other businesses units, revenue from sale of goods and rendering of services increased.
2. Gross Profit was THB 3,328 million, decreased by 17% YoY and 7% QoQ, mainly attributed to the refinery business in Q1/2018, where Total GRM decreased to 6.37 \$/BBL (Q1/2017: 7.96 \$/BBL, Q4/2017: 8.75 \$/BBL), as there was an Inventory Loss of THB 70 million in this quarter, whereas in Q1/2017 and Q4/2017 had enjoyed



Inventory Gain of THB 299 million and THB 1,094 million, respectively. However, gross profit attributed to the Bio-Based Product business and the Exploration and Production business improved both YoY and QoQ.

3. Other Income of THB 59 million, decreased by 65% YoY and 87% QoQ, the majority attributed to non-recurring items. In Q1/2017, the company group realized gains from sales of Suimei Power Plant in the amount of THB 62 million, and interest income from the corporate tax return in the amount of THB 49 million. While in Q4/2017 recorded an interest revenue from corporate tax return in the amount of THB 352 million.
4. Selling and administrative expenses recorded THB 1,660 million, an increase of 16% YoY, the increase coincides with the expansion of the business group, mainly attributed to (1) personnel expense (2) land lease which increase parallel to service station expansion, (3) market promotion expense, and (4) corporate image related expense. However, selling, general and administrative expenses decreased 29% QoQ, as per usual that every 4th quarter in any year would see large amounts of expenses disbursed.
5. Losses from crude and finished product hedging contract of THB 73 million due to oil price fluctuations in this quarter.
6. Gain on Foreign Exchange recorded at THB 172 million, due to the Thai Baht appreciating against the US Dollar which led to gain on exchange rate conversion of foreign currency loan.
7. In Q1/2018, there was no losses from asset impairment, whereas Q1/2017 and Q4/2017 recorded losses from asset impairment in petroleum oil field of exploration and production business.
8. Share of profit from associate companies was THB 92 million, comprised of (1) Star Energy Group Holdings Pte. Ltd. in the amount of THB 54 million, (2) PetroWind Energy Inc. in the amount of THB 14 million, (3) Ubon Bioethanol Plc. in the amount of THB 14 million, and (4) Bongkot Marine Services Co., Ltd. in the amount of THB 10 million. This led to the share of profit from associate companies to increase by THB 74 million from the same period of the previous year, as the investment in Wind and Geothermal power plant has not yet been made. But share of profit from associate companies decreased by THB 232 million from the previous quarter, as there was gain from business acquisition booked in Q4/2017.



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



1.) Refinery and Trading Business Group

Crude Oil Price Situation

(Unit : USD/BBL)

Crude Oil Price	Q1/2017	Q4/2017	Q1/2018			YoY	QoQ
	AVG	AVG	MAX	MIN	AVG	%	%
Dubai (DB)	53.03	59.31	68.05	59.36	63.96	21%	8%
Dated Brent (DTD)	53.69	61.26	70.71	61.52	66.82	24%	9%
DTD/DB	0.66	1.95	5.08	0.53	2.86	331%	47%

Crude Oil Price Situation

Dubai crude oil price in Q1/2018 compared to Q1/2017 increased by 10.93 \$/BBL with respect to the global oil market situation tightening, after OPEC consistently followed through with their measures to reduce oil production more than the level agreed; culminating in a tighter oil market.

Dubai crude price in Q1/2018 on average increased by 4.65 \$/BBL when compared to Q4/2017 supported by demands for oil in the US, Europe, and Asia that increased over the Winter season, and the colder than usual weather condition led to some European refineries postponing their maintenance period from March to Q2/2018. On the other hand, supply-side support came in the form of the cooperation between OPEC countries to reduce production volume, which reduced more than 150% of their target in Q1; majority of the reduction can be attributed to Saudi Arabia. Crude oil price is further backed by concerns over supply after the replacement of the US Secretary of State, creating tension that the US may revisit its sanction policy on Iran with respect to the country's nuclear weapon program, which would serve to further tighten supply in the global oil market. Furthermore, tension between Saudi Arabia and Iran escalated after the Saudi Arabian Crown Prince made reproachful remarks towards Iran and accused Iran of supporting the Houthi rebels that is causing unrest in Yemen. However, throughout the quarter crude oil price partially received pressure from the amount of crude oil production in the US that increased by 650,000 barrels per day in Q1/2018, coming to a total of 10.4 million barrels per day late in the quarter. While the amount of active rigs in the US increased to an all-time high from the past 3 years, as well as market sentiment fearing for the prospect of trade war after the US increased import tax of various raw materials, which would inadvertently affect the volume of trade and global economic expansion.

When compared to Q1/2017, The average spread between the Dated Brent and Dubai price in Q1/2018 increased by 2.20 \$/BBL, a result of the oil market reverting back to a state of rigid supplies as oppose to the previous year's state of excess market supply.

The average spread between the Dated Brent and Dubai price in Q1/2018 increased by 0.91 \$/BBL when compared to Q4/2017, with respect to the increased demand for crude oil during the winter in Europe, leading to higher utilization rate amongst refineries in the region; driving up price of Dated Brent as oppose to Dubai. Another contributing factor is the emergency shutdown of crude production sources in Libya due to unrest during the quarter; Libya being a producer of Light Crude Oil.



Crack Spreads Situation

(Unit: USD/BBL)

Crack Spreads	Q1/2017	Q4/2017	Q1/2018			YoY	QoQ
	AVG	AVG	MAX	MIN	AVG	%	%
UNL95/DB	14.70	14.42	15.80	11.25	13.69	-7%	-5%
IK/DB	11.29	13.27	19.88	13.79	16.05	42%	21%
GO/DB	11.83	13.01	16.43	13.56	14.76	25%	13%
FO/DB	-3.16	-3.03	-2.94	-6.83	-4.96	-57%	-63%

Crack Spreads Analysis

- The Mogas/Dubai crack spread (UNL95/DB) in Q1/2018 averaged at 13.69 \$/BBL, a decrease of 1.01 \$/BBL compared to Q1/2017, resulting from the demand slowing growth for Mogas after the price adjusted upward, and China's increasing export after ending their tax program to stimulate car sales for this year.

The Mogas/Dubai crack spread (UNL95/DB) decreased by 0.73 \$/BBL compared to the averaged 14.42 \$/BBL in Q4/2017, due to contracting demand that resulted from the heavy snowfall during the winter in various regions. As well as, China increasing export of finished product from high utilization rates of refineries that received new rounds of finished product export quota at the beginning of the year, and a refinery recommencing operation after a fire incident that occurred during the middle of Q3/2017.

- Jet (Kerosene)/Dubai crack spread in Q1/2018 averaged at 16.05 \$/BBL, an increase of 4.76 \$/BBL when compared to Q1/2017, which was a result of the current quarter's colder weather compared to the previous year's climate.

Jet (Kerosene)/Dubai crack spread increased by 2.78 \$/BBL, compared to the average 13.27 \$/BBL in the previous quarter. The widened crack spread resulted from the cold weather, leading to higher demand for kerosene used in heating, as well as, increase in demand for air travel during the winter and Chinese New Year.

- Gas oil/Dubai Q1/2018 crack spread averaged at 14.76 \$/BBL, an increase of 2.93 \$/BBL when compared to Q1/2017 with respect to rising demand in Asia, especially in India where the government sector had numerous base infrastructure investment project in place.

Gas oil/Dubai crack spread increased by 1.75 \$/BBL compared to the average 13.01 \$/BBL in the previous quarter, with respect to the winter demands, especially from Europe which led to Asia being able to increase more Diesel export to the European region. Furthermore, the cold weather experienced in Northern China led to household and electricity production to depend more on LNG which its pipeline is insufficient of demand, thus leading to more usage of trucks to transport of LNG which supported demand for Diesel.

- Crack spread for FO/DB Q1/2018 was on average -4.96 \$/BBL a decrease of 1.80 \$/BBL compared to Q1/2017 with respect to downward pressure from demand for Fuel Oil in the electricity production sector in Asia decreasing in Japan and Pakistan, and refineries operating at high utilization rate leading to more supplies of Fuel Oil.



FO/DB crack spread dipped by 1.93 \$/BBL compared to the average -3.03 \$/BBL in the previous quarter, consequently, a result of increased production from refineries during the winter and Europe increasing its Fuel Oil export to Asia. Moreover, demand for Fuel Oil in the electricity production sector decreased after 2 of the nuclear power plant units in Japan during the quarter. Furthermore, Pakistan cut imports of Fuel Oil after alternating to natural gas for electricity production.

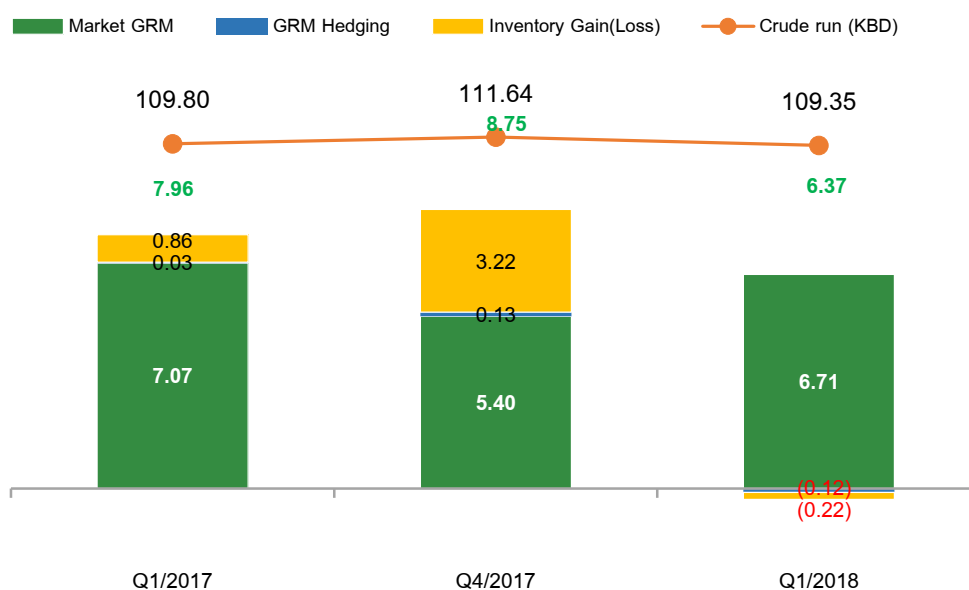
Refinery and Trading Business Group Performance

For Q1/2018 performance, Refinery Business group recorded EBITDA of THB 1,279 million, mainly attributed to the operations of the Bangchak refinery THB 1,224 million and to BCP Trading Co., Ltd. THB 5 million, shares of profit from the Bongkot Marine Service Co., Ltd. in the amount of THB 10 million.

Refinery and Trading Business Performance	Q1/2017	Q4/2017	Q1/2018	YoY	QoQ
Average Crude Run (KBD)	109.80	111.64	109.35	-0.4%	-2%
Utilization Rate (%)	92%	93%	91%		
Average FX (THB/USD)	35.29	33.11	31.71		
(Unit: Million Baht)					
Market GRM	2,465	1,837	2,095	-15%	14%
GRM Hedging	10	46	(37)	-475%	-181%
Inventory Gain/ (Loss)	299	1,094	(69)	-123%	-106%
Total GRM	2,774	2,977	1,988	-28%	-33%
EBITDA	2,226	2,256	1,279	-43%	-43%

GRM and Crude Run

Unit: \$/BBL



Total Sales Volume in each market category of the Company				(unit: million litres)	
Marketing Business	Q1/2017	Q4/2018	Q1/2018	YoY	QoQ
Retail	932	1002	997	7%	-0.5%
Industrial	607	553	517	-15%	-7%
Total	1,539	1,555	1,514	-2%	-3%
Wholesale Business					
Petroleum traders in accordance with section 7	185	173	151	-19%	-13%
Export	203	336	199	-2%	-41%
Total	388	509	350	-10%	-31%
Total Sales Volume	1,928	2,064	1,864	-3%	-10%

Note: Sales volume does not include oil swaps between major oil companies and sales of crude oil products

Refinery and Trading business group performance in Q1/2018 comparing to Q1/2017 decreased by THB 947 million, with factors affecting operations as follow:

1. The Bangchak Refinery average crude run in Q1/2018 was recorded at 109.35 KBD or 91% utilization rate of refinery capacity, which is comparable to the average production in Q1/2017.
2. Total gross refinery margin was 6.37 \$/BBL, a decrease of 1.59 \$/BBL from Q1/2017, due to Market GRM in Q1/2018 decreasing by 0.36 \$/BBL, as DTD Brent/DB spread widened, essentially increasing the crude cost, whereas the crack spread between finished product and crude contracted for some products. The FO/DB spread decreased by more than 57%, and the UNL95/DB lowered by 7% from the previous year. Further, in this quarter, the refinery business suffered a loss from GRM hedging THB 37 million, while in Q1/2017 recorded a profit of THB 10 million.
3. The refinery business saw Inventory Loss in Q1/2018 in the amount of THB 70 million, due to turbulent average oil price seen throughout the quarter; oil price in February to March 2018 lowered significantly when compared to January 2018. However, in Q1/2017 Inventory Gain was recorded at THB 299 million.
4. BCP Trading Co., Ltd. recorded a revenue of THB 3,784 million, an increase of 17% from Q1/2017, with oil products trading transaction volume of 1.66 million barrels. The majority of trade consist of Naptha and UNL 95 product.

Q1/2018 performance compared to Q4/2017, Bangchak Refinery and Trading business group recorded a decreased EBITDA by THB 977 million due to factors affecting operations as follow:

1. The Bangchak Refinery average crude run was marginally lower than Q4/2017 (-2%, QoQ).
2. Total gross refinery margin lowered 2.38 \$/BBL, mainly attributed to Inventory Loss and GRM Hedging loss. While Market GRM in Q1/2018 was 6.71 \$/BBL, an increase of 1.31 \$/BBL due to the Diesel product, which is the refinery's main product, recorded an increase in crack spread between GO and Dubai crude by 13% from the previous quarter. As well as the Jet (Kerosene) and Dubai crack spread that increased 21% from the previous quarter.



- The Refinery Business suffered an Inventory Loss in Q1/2018 in the amount of THB 70 million, while Q4/2017 enjoyed an Inventory Gain of THB 1,094 million.
- BCP Trading Co., Ltd. recorded a decrease in revenue by 7% from Q4/2017, due to lower amount of transaction pertaining to buying and selling of petroleum products.

2.) Marketing Business Group

Q1/2018 performance of the Marketing Business Group recorded EBITDA of THB 735 million, attributed to the following, Bangchak marketing business in the amount of THB 764 million, Bangchak Green Net Co., Ltd. in the amount of THB 23 million, Bangchak Retail Co., Ltd. in the amount of THB -51 million.

Marketing Business of Bangchak Corporation Plc.					
Sales Volume (Million Litre)	Q1/2017	Q4/2017	Q1/2018	YoY	QoQ
Retail (Service Stations)	932	1002	997	7%	-0.5%
Industrial	607	553	517	-15%	-7%
Total	1,539	1,555	1,514	-2%	-3%
Sales volume in each product category (Million Litre)					
LPG	14	25	37	173%	47%
Gasoline	12	8	9	-22%	10%
Gasohol	400	442	404	1%	-9%
Jet Fuel	244	209	209	-14%	-0.4%
Diesel	813	825	802	-1%	-3%
Fuel Oil and Others	58	46	53	-8%	16%
Total	1,539	1,555	1,514	-2%	-3%
Total Marketing Margin (Baht / Litre)	0.84	0.70	0.83	-1%	19%
EBITDA (Million Baht)	856	302	735	-14%	144%

Note: marketing margin of Bangchak only

For Q1/2018, compared to Q1/2017, Marketing Business Group EBITDA lowered by THB 121 million, with factors affecting operations as follow:

- Sales volume of the Marketing Business declined slightly, mainly from the sales volume of the industrial market which lowered by 15%, chiefly from the company's stock management in preparation for the refinery's turnaround maintenance, under the intensifying competition situation in the industrial market. While in the late of Q1/2017, there was a supply tightening situation, allowing the company to increase its sales volume during the time. However, the retail market which is the company's primary sales channel grew larger by 7%, outpaced to the overall retail market which grew only 3%.



2. Net Marketing Margin was consistent with the same period of the previous year, despite the company's retail marketing margin growth, following its increasing sales proportion. However, industrial marketing and lubricant margin adjusted downward, due to the intense competition and the higher lubricant raw material costs. This led to the company's net marketing margin to soften marginally.
3. As of Q1/2018, the total number of service stations was 1,127 branches, the company opened new 65 branches, most of them being standard stations, emphasizing a modern aesthetic on main roads and locales with potential. Additionally, existing location underwent renovation to increase throughput per station, and stations that are performing beneath target are still being close down.
4. The company's retail sales volume remains in the 2nd place and continues to rise, thus far the cumulative market share for January to March 2018 was at 15.8%, an increase of 0.6% from the same period of the previous year.
5. Non-oil business under the Bangchak Retail Co., Ltd. are still developing and expanding the business of the SPAR supermarket and convenience store, and Inthanin coffee shop. Thus, as of Q1/2018, there are altogether 457 branches of Inthanin coffee shop and 35 branches of SPAR. In January, Bangchak Retail Co., Ltd. signed a contract granting master franchise rights of Inthanin Coffee in Cambodia and Laos PDR to RGC Retail Co., Ltd. (Cambodia), which had opened the first Inthanin coffee shop in Siem Reap, and also a flagship stores in the center of Phnom Penh in April 2018. There is also a plan to expand the branches to Laos PDR within Q3/2018, and increase the number of branches to 100 between Laos PDR and Cambodia.
6. Bangchak Retail Co., Ltd. recorded a higher revenue from expansion of the branches, but is undergoing development of its infrastructure and expanding SPAR branches to reach logistical efficiency, thus incurring in high selling, general and administrative expenses, leading to the Bangchak Retail Co., Ltd. EBITDA to still record in negative. Moreover, in Q1/2018, Marketing Business incurred in a higher selling, general and administrative expenses when compared to the same period of the previous year, from accrued expense related to personnel, and increased market promotional activities, causing the EBITDA in this quarter to soften.

Q1/2018 performance compared to Q4/2017 the Marketing Business Group recorded an increased EBITDA by THB 433 million with factors affecting operations as follow:

1. Total marketing sales volume decreased 3% QoQ, mainly from decline in sales of the Industrial Market from increased competition in such market, together with the company's stock management ahead of the refinery's turnaround maintenance in 2018.
2. Net Marketing Margin increased substantially from the previous quarter, mostly from the marketing margin of the retail market, as the price of crude oil adjusted downward throughout the quarter, allowing the company to adjust the selling price according to its reducing costs, thus leading to increase retail marketing margin. On the other hand, Q4/2017 was a period that crude oil rose consistently, while there were time mismatch in retail price adjustment. As well as, in Q4/2017 the company discounted retail price for people traveling to pay respect on the Royal Cremation Day of King Rama the 9th, and the price freeze policy during December as a gift to consumers led to moderate retail marketing margin in the period.



3. The number of service stations as of Q1/2018 totals at 1,127 branches with the opening of 17 new service stations from the previous quarter.
4. Selling, general and administrative expenses was significantly lower compared to the previous quarter, as in Q4/2017 there was personnel related expense and promotional expenses, as well as annual service station maintenance; led to higher disbursement of expense late in the year, resulting in this quarter's EBITDA trumping the previous quarter.

3.) Power Plant Business

Power Plant Business Performance	Q1/2017	Q4/2017	Q1/2018	YoY	QoQ
Solar Power Business – Thailand	65.99	65.72	66.03	0.06%	0.48%
Phase 1-3 (118 MW)	63.34	61.02	61.52	-3%	1%
Cooperative Solar Project (12 MW)	2.66	4.70	4.51	70%	-4%
Solar Power Business – Japan (30 MW)	6.60	7.23	9.16	39%	27%
Total Electricity Sales (Million kWh)	72.59	72.95	75.19	4%	3%
Revenue (Million Baht)	798	781	801	0.4%	3%
EBITDA	706	812	664	-6%	-18%

For Q1/2018 performance compared to Q1/2017, the Power Plant Business recorded THB 801 million revenue, an increase of THB 4 million. While EBITDA was recorded at THB 664 million, a reduction of THB 42 million, with factors affecting operations as follow:

1. Solar power plant projects in Thailand recorded a total electricity sales in adjacent to the previous year. For phase 1 to 3, electricity sales declined by 3%, due to the lower average irradiation hours from the increased rainfall compared to the same period of last year. However, the total electricity sales of all the projects in Thailand to be somewhat unchanged, as there was a full quarter record of performance from Solar Co-op project which commenced its commercial operation in Q1/2017.
2. Solar power plant project in Japan recorded an increase in electricity sales from the realization of the full quarter performance from Nagi project (PPA of 10.5 MW) which has commenced their commercial operation and in March 2017. There was also performance contribution from Gotemba project (PPA of 4 MW) which has commenced its electricity grid connection (pre-COD) since late 2017 (but as Gotemba project has not yet commenced its actual commercial operation (Actual COD at 16th April 2018), revenue from electricity sales in 1Q/2018 was booked as a discount for its investment cost (according to accounting standard). However, in the quarter, average irradiation hours of the projects that had already been in operation since the previous year was marginally lower, from the winter and snow period which was longer than usual.
3. Realized share of profit from investment in associated companies in the amount of THB 69 million, attributed to Wind Power Plant in the Philippines in the amount of THB 14 million, and share of profit from investment in



Geothermal Power Plant in Indonesia in the amount of THB 54 million. While in Q1/2017, such shares of profit has not yet occurred.

4. Power Plant Business recorded a higher selling, general and administrative expenses when compared to the same quarter of last year, led from the higher expenses related to human resources, in order to support its business expansion. Also, there was an amortization expense in relation to ESOP warrant issuance. In contrast, in Q1/2017 there was a record of THB 62 million gain from selling of assets of Suimei project. As a result, Power Plant Business recorded a lower EBITDA from the previous year.

Q1/2018 performance compared to Q4/2017 for Power Plant Business recorded a higher revenue by THB 21 million, and a decreased EBITDA by THB 147 million, with factors affecting operations as follow:

1. Solar power plant projects in Thailand recorded an increase in total electricity sales, as average irradiation hours of every projects was higher from the seasonal effect, which the 1st quarter normally records a superior irradiation than in 4th quarter.
2. Solar power plant project in Japan recorded an increase in electricity sales from the realization of the performance from Gotemba project, also there was a higher irradiation hours due to less precipitation as winter season ends.
3. Share of profit from investment in Wind Power Plant in the Philippines and Geothermal Power Plant in Indonesia was decreased from the previous quarter which recorded a gain on purchase of THB 367 million. As a result, Power Plant Business recorded a lower EBITDA from the previous quarter, but both projects still record profitable performance.
4. Power Plant Business recorded a lower selling, general and administrative expenses when compared to the previous quarter. As in the 4th quarter of every year, expenses are higher than the other quarters, due to the expense related to human resources.



4.) Bio-Based Product Business

As for the Bio-Based Business Group performance in Q1/2018, recorded EBITDA totaled at THB 304 million, mainly attributed to the biodiesel business of THB 160 million, and denatured ethanol business of THB 151 million, with performance as follow:

Note: BBGI Plc. is in the process of filing for its initial public offering with the The Securities and Exchange Commission.

Biodiesel Business

Biodiesel Business Performance	Q1/2017	Q4/2017	Q1/2018	YoY	QoQ
Average Daily Production Volume (K.L/day) (Production Capacity 810 K.L./day)	571	748	788	38%	5%
B100 Sales Volume (Million litre)	53	72	73	38%	1%
Revenue (Million Baht)	1,639	1,745	1,718	5%	-2%
Average Sales Price (Source: Department of Energy Business, Ministry of Energy)					
B100 (Baht / Litre)	34.20	24.79	24.59	-28%	-1%
Crude Palm Oil (CPO) (Baht / Kg.)	30.67	20.49	20.33	-34%	-1%

Q1/2018 performance compared to Q1/2017 performance, Biodiesel business recorded sales revenue of THB 1,718 million, an increase of THB 79 million, with factors that affected operation as follow:

1. Average production volume was recorded at 788 thousand litres per day (+38% YoY).
2. The amount of the B100 product sold increased by 20 million litres, as in the quarter, the mandatory B100 product mixing portion with Diesel product was at 7%, compared to 5% in the previous quarter (on the 8th of May, 2017 an announcement mandated the mixture change from 5% to 7%)
3. Average selling price of B100 product drastically decreased from the same period of the previous year following the dip in Crude Palm Oil price, a result of the high Crude Palm Oil stock and rigid exportation of the product; due to Malaysia's tax policy for export Crude Palm Oil, combined with the gap between the price of Thai and Malaysian Crude Palm Oil widening once again. This resulted in the biodiesel business gross profit to improve, due to declining average selling price of Crude Palm Oil outpacing the declining B100 product price.

Q1/2018 performance compared to Q4/2017, Biodiesel business recorded a decreased sales revenue of THB 27 million, due to the factors that affected operations as follow:

1. Average daily production volume increased by 5%, QoQ, and B100 product sales volume increased slightly. In this quarter and the previous quarter, the mixture of B100 product in Diesel product was at 7%.
2. Average selling price of B100 product marginally adjusted downward from the previous quarter, which was in the same direction as Crude Palm Oil price; Crude Palm Oil stock remains high.



- Gross profit adjusted upward from raw material cost decreased, while selling and administrative expenses decreased as the 4th quarter was the quarter which normally incurred in a higher expense.

Denatured Ethanol Business

Denatured Ethanol Business Performance	Q1/2017	Q4/2017	Q1/2018	YoY	QoQ
Average Daily Production Volume (K.L. / day)					
Bangchak Bioethanol (Chachoengsao) (BBE) <i>(Production capacity 150 K.L./day)</i>	127	131	130	2%	-1%
KSL Green Innovation (KGI) <i>(Production capacity 150 K.L./day)</i>	N/A	190	311	N/A	64%
Ethanol Sales Volume (Million litre)	10.7	24.6	37.1	248%	51%
Revenue (Million Baht)	263	620	867	230%	40%
Average Sales Price (Source: Department of Energy Business, Ministry of Energy)					
Ethanol (Baht / Litre)	24.14	24.91	24.49	1%	-2%

Q1/2018 performance compared to Q1/2017, Denatured Ethanol business revenue was recorded at THB 867 million, increased by THB 604 million. Factors that affected operations are as follow:

- In Q1/2018, the Bangchak Bioethanol (Chachoengsao) Co., Ltd. average daily production volume was 130 thousand litres per day, and KSL Green Innovation Plc. average daily production volume was 311 thousand litres per day.
- Denatured Ethanol sales volume increased, as in Q1/2018 there was a realization of performance of both Bangchak Bioethanol (Chachoengsao) Co., Ltd. and KSL Green Innovation Plc., while within the same period of the previous year only realized the performance of the Bangchak Bioethanol (Chachoengsao) Co., Ltd.
- Average selling price of Denatured Ethanol increased at a slower pace than the price increment of its raw material cost, affecting gross profit per unit of cassava-based Denatured Ethanol to decline.

Q1/2018 performance compared to Q4/2017, Denatured Ethanol business had an increased sales revenue by THB 247 million, due to the following factor that affected operations as follow:

- Bangchak Bioethanol (Chachoengsao) Co., Ltd. recorded its average daily production volume slightly decreased from the previous quarter, while KSL Green Innovation Plc. recorded an increase in its average daily production volume from the previous quarter.
- Sales volume of Denatured Ethanol increased from the previous quarter, due to Q4/2017 bio-based product group realize only 2 months of performance of KSL Green Innovation Plc.
- Gross profit per unit of cassava-based Denatured Ethanol declined from the increase in cassava price, while gross profit per unit of molasses-based Denatured Ethanol was higher from the lower molasses price in the market. Selling and administrative expenses decreased, as the 4th quarter was the quarter which normally incurred in a higher expense.



5.) Natural Resources Business Group

For the performance of the Natural Resources Businesses Group in Q1/2018, EBITDA was recorded at THB 68 million, mainly attributed from the Exploration and Production Business, with performance as follow:

The Exploration and Production Business by Nido Petroleum Limited

E&P Business Performance	Q1/2017	Q4/2017	Q1/2018	YoY	QoQ
Production Volume ^{1/} (barrels per day net to Nido)	2,450	2,045	1,936	-21%	-5%
Sales Volume (barrels net to Nido)	203,364	206,052	195,439	-4%	-5%
Revenue (Million Baht)	399	388	425	6%	9%
EBITDA (Million Baht)	133	25	91	-32%	269%

Note: 1/ production volume of Galoc oil field only

For Q1/2018 performance compared to Q1/2017, the exploration and production business had a revenue of THB 425 million, an increase of THB 26 million. And recorded EBITDA of THB 91 million, a decrease of THB 42 million, with the following factors affecting operations as follow:

- Galoc oil field production had an Uptime of 100% and an average production volume of 3,465 barrels per day (1,936 barrels per day net to Nido, 21% lower than the previous year from the Natural Decline Curve)
- Total sales volume net to Nido was 195,439 barrels (Galoc 188,958 barrels and Nido & Matinloc 6,481 barrels.)
- Sales revenue increased due to the higher Dubai crude oil price, with average Dubai price in Q1/2018 was at 63.96 \$/BBL while in Q1/2017 it was at 53.03 \$/BBL.
- In the quarter, there was a higher gross profit, and a better management of selling, general and administrative expenses, but there was a loss from crude and product oil price hedging contract, due to the higher crude oil price.
- In Q1/2018, there was no record of impairment loss of asset, while in the same period of previous year, there was an impairment loss of USD 3.21 million for withdrawal from the appraisal wells program in Gurita PSC.

Q1/2018 performance compared to Q4/2017, the exploration and production business recorded an increase in revenue by THB 37 million, and recorded an EBITDA increment of THB 66 million, with the following factors affecting operations as follow:

- An average production volume was 5% lower than the previous quarter from the Natural Decline Curve
- Sales Revenue increased following Dubai crude oil price, with average Dubai price in Q1/2018 was at 63.96 \$/BBL while in Q4/2017 was at 59.31 \$/BBL.
- In the quarter, there was a lower cost of goods sold, and lower selling, general and administrative expenses, compared to the previous quarter, where there was a higher expenses related to head office relocation. However, there was a loss from crude and product oil price hedging contract.

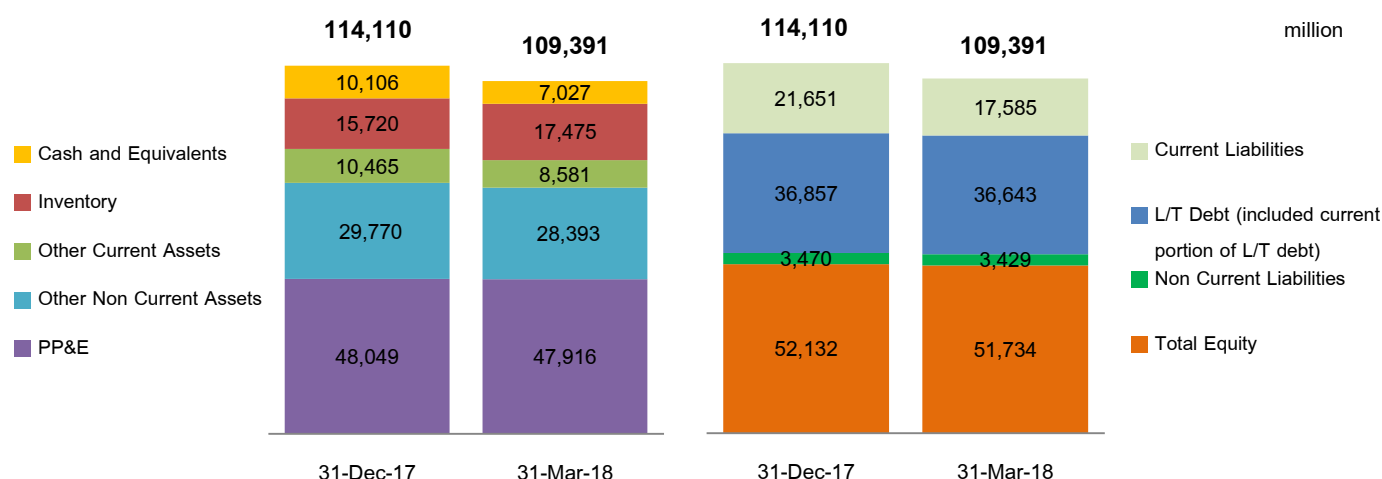


4. In the quarter, there was no record of impairment loss of asset, while in the previous quarter, there was an impairment loss of USD 1.86 million, from the assessment of reserve volume of the resource in the Galoc area decreasing from the previous year.

Statement of Financial Position



Financial Position of the Company and its subsidiaries (Consolidated)



Assets

As of March 31st, 2018, the company and its subsidiaries has Total Assets in the amount of THB 109,391 million, a decrease of THB 4,719 million when compared to December 31st, 2017, changes in assets are as follow:

- Cash and cash equivalents decreased by THB 3,079 million. Details are stated in Analysis of the Cash Flow Statement
- Net Trade Account Receivable decreased THB 1,703 million, primarily from the company's trade account receivable: 1) the decrease in oil product sales volume in Industrial market of THB 570 million. 2.) higher oil demand in the beginning of the month than at the end of the month, resulting in the receivable payments in March to be THB 167 million. 3.) Oil trading business had a less transaction volume by THB 945 million.
- Inventory increased by THB 1,755 million, mainly from the higher oil product reserves to prepare for the turnaround annual maintenance, resulting in the refinery to lower the level of crude oil inventory and increase oil products inventory to serve the sales during refinery maintenance period. However, in Q1/2018, oil trading business recorded no inventory while at 31st December 2017, there was some inventory left due to the delivery term of buying and selling transactions occurred in the different accounting period.



- Other long term investment decreased by THB 1,702 million, primarily from the change in net fair value change in available-for-sale investment (LAC) reduced by THB 1,535 million from share price of CAD 11.18 as of 31st December 2017, to be CAD 6.98 as of 31st March 2018.
- Property, plant and equipment net decreased by THB 133 million, investment was made primarily in refinery machinery of THB 532 million, sales equipment, and office equipment at THB 377 million, with depreciation for the period recorded at THB 1,143 million.
- Other non-current asset increased by THB 195 million, mainly from the lease hold right of THB 150 million, and insurance for importing oil products of THB 60 million.

Liabilities

As of March 31st, 2018, the Company and its subsidiaries has Total Liabilities in the amount of THB 57,658 million, decreased by THB 4,321 million, changes in liabilities were as follow:

- Trade Accounts Payable decreased by THB 3,467 million, mainly from the decrease in the company's Trade Accounts Payable by THB 2,247 million, from the lower crude oil purchase volume as Bangchak refinery was preparing for its turnaround annual maintenance, while crude oil price rose, and average payable payment period was shortened. Moreover, Trade Account Payable of oil trading business was lower from the reduced transaction volume by THB 883 million.
- Other payables decreased by THB 376 million, primarily from annual employee's bonus payment in 2017 which was paid in January 2018. Also, accrued expenses was lower.
- Excise Tax and Oil fund expense payable decreased by THB 245 million according to the lower oil products sales volume.
- Loans from financial institutions and debentures decreased by THB 214 million. Mainly from the repayment according to the schedule by THB 337 million. There was also adjustments to the effects of foreign currency conversion of financial statement in the amount of THB 113 million, and amortization of issuance cost of THB 9 million.

Equities

As of March 31st, 2017, the company and its subsidiaries' Total Equity was THB 51,734 million, Total Equity attributable to owners of the Company was THB 45,054 million, a decrease of THB 595 million, mostly from the Net Profit for the period of THB 1,146 million, decrease in other component of equity by THB 1,751 million (result of differences in net fair value change in available-for-sale investment (LAC) which reduced by THB 1,535 million, and loss in foreign currency conversion of financial statement of THB 216 million) with book value of THB 32.72.



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



As of 31 March 2018, the Company and its subsidiaries had net cash used in operating activities of THB 1,124 million, net cash used in investing activities of THB 1,155 million, and net cash used in financing activities of THB 754 million. As a result, net cash and cash equivalents decreased by THB 3,033 million, as there was cash in the amount of THB 10,106 million as of January 1st, 2018, and the effects of exchange rate conversion on balances held in foreign currencies in the amount of THB -46 million, resulting in remaining cash as of March 31st, 2018 in the amount of THB 7,027 million, details for each activity are as follow:

Cash Flows (Unit: Million Baht)	31-Mar-17	31-Mar-18
Net cash received (used in) operating activities	1,283	(1,124)
Net cash received (used in) investing activities	(1,098)	(1,155)
Net cash received (used in) financing activities	(525)	(754)
Net increase (decrease) in cash and cash equivalents	(341)	(3,033)
Cash and cash equivalents as at 1 January	19,287	10,106
Effect of exchange rate changes on balances held in foreign currencies	(66)	(46)
Cash and cash equivalents as at 31 March	18,880	7,027

Details of cash received and used are as follows:

- 1) Net cash used in operating activities of THB 1,124 million from:
 - Cash received from operating activities of THB 3,119 million, which was from Net Profit of THB 1,337 million, added back Non-Cash Expenses of THB 1,194 million, added back Financial Costs and Tax expense of THB 588 million.
 - Net Cash used in the operating assets and liabilities of THB 4,216 million, mainly increased due to cash received from the payment of Trade Accounts Receivable of THB 1,744 million, but reduced from cash paid for inventory and other assets of THB 2,017 million, and cash paid for Trade Accounts Payables and other payables of THB 3,942 million.

- 2) Net Cash used in investing activities of THB 1,155 million, mainly from:
 - Cash received from interest income and dividend received of THB 45 million.
 - Cash paid for investment in property, plant, and equipment, and intangible assets in the amount of THB 1,067 million, mainly from investments in refinery machinery and oil depot, service stations lands, other equipment of the company, and paid for lease hold right of THB 133 million.



3) Net Cash used in investing activities of THB 754 million, mainly from:

- Cash paid for finance costs of THB 413 million.
- Cash paid for Short term loan repayment of THB 29 million, and long term loan repayment of THB 368 million. (Comprised of the company, BCPG Plc., Bangchak Biofuel Co., Ltd., and Bangchak Bioethanol (Chachoengsao) Co., Ltd.)
- Cash received from capital share issuance according to right offering by BCPG Plc. of THB 25 million.

Financial Ratios



Financial Ratios (Consolidated)

Profitability Ratios (%)	Q1/2017	Q4/2017	Q1/2018
Gross Profit Margin	9.15%	7.76%	7.53%
EBITDA Margin	9.26%	7.54%	6.77%
Net Profit Margin	5.00%	3.38%	3.02%
Return on Equity (ROE)	17.02%	13.57%	11.17%
Return on Assets (ROA)	10.28%	7.32%	6.40%

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

	31-Mar-17	31-Dec-17	31-Mar-18
Liquidity Ratios			
Current Ratio	1.79	1.52	1.67
Quick Ratio	1.12	0.80	0.72
Financial Policy Ratios			
Interest bearing Debt to Equity	0.85	0.78	0.78
Net Interest bearing Debt to Equity	0.40	0.59	0.64
	Q1/2017	Q4/2017	Q1/2018
DSCR	3.39	2.47	2.25

* DSCR Calculation is not including long term debt prepayment



Financial Ratios Calculation

▪ Gross Margin	=	Gross Profit / Revenue from sale of goods and rendering of services
▪ EBITDA Margin (%)	=	EBITDA / Revenue from sale of goods and rendering of services
▪ Profit Margin (%)	=	Profit attributable to owners of the Company / Revenue from sale of goods and rendering of services
▪ Return on Equity (%)	=	Profit attributable to 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)	=	(Cash & Equivalents + Short term investments + Trade Account Recievable) / 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	Q1/2017	Q1/2018	Δ
Material Costs of Product Outputs			
: Consist of crude oil, ethanol, biodiesel, chemical, energy and utilities in production	24,638	24,910	273
Material Costs of Non-Product Outputs			
: Consist of slop and sludge oil, waste water, chemical surplus	21.46	14.20	(7.26)
Waste and Emission Control Costs			
: Consist of maintenance cost of environmental control equipment and depreciation and other fees	68.72	62.59	(6.13)
Prevention and Other Environmental Management Costs			
: Consist of monitoring and measurement cost, environmental management system expenses	2.47	3.22	0.75
Total Expenses	24,730	24,990	260
Benefit from by-product and waste recycling	(4.39)	(5.14)	(0.75)

Total environmental cost in Q1/2018 increased from Q1/2017 by approximately THB 260 million (+1%) mainly due to Material Cost of Product Output increased by THB 273 million with respect to the increase in Crude Oil price from the same quarter of previous year. However, average production rate decreased from 109.80 KBD in Q1/2018 to 109.35 KBD in Q1/2017. On the other hand, Material Costs of Non-Product Outputs was reduced by THB 7.26 million in accordance with the quantity of product that is below quality standard decreased by THB 7.58 million, while Waste and Emission Control Costs decreased by THB 6.13 million (-9%), primarily from maintenance cost for environmental equipment, depreciation of environmental control equipment, and waste management that decreased by THB 2.29 million, THB 2.04 million, and THB 1.35 million, respectively. Aside from the aforementioned, Prevention and Other Environmental Management Costs increased by THB 0.76 million (+31%) from the increase in monitoring and measurement cost that. Benefits from by-products and waste recycling inclined by THB 0.75 Million (+17%), mostly due to sellable residue steel and aluminum scrap increased by THB 1.03 million, while Liquid Sulfur value declined by THB 0.25 million.

Air quality from the refinery's flue

To monitor the environment, the Company has been constantly measuring air quality emitted from the refinery's various flues, to which the amount of pollutant such as dust, nitrogen oxide, and sulfur dioxide emitted is far below the required standard set by the Thai Ministry of Industry.

