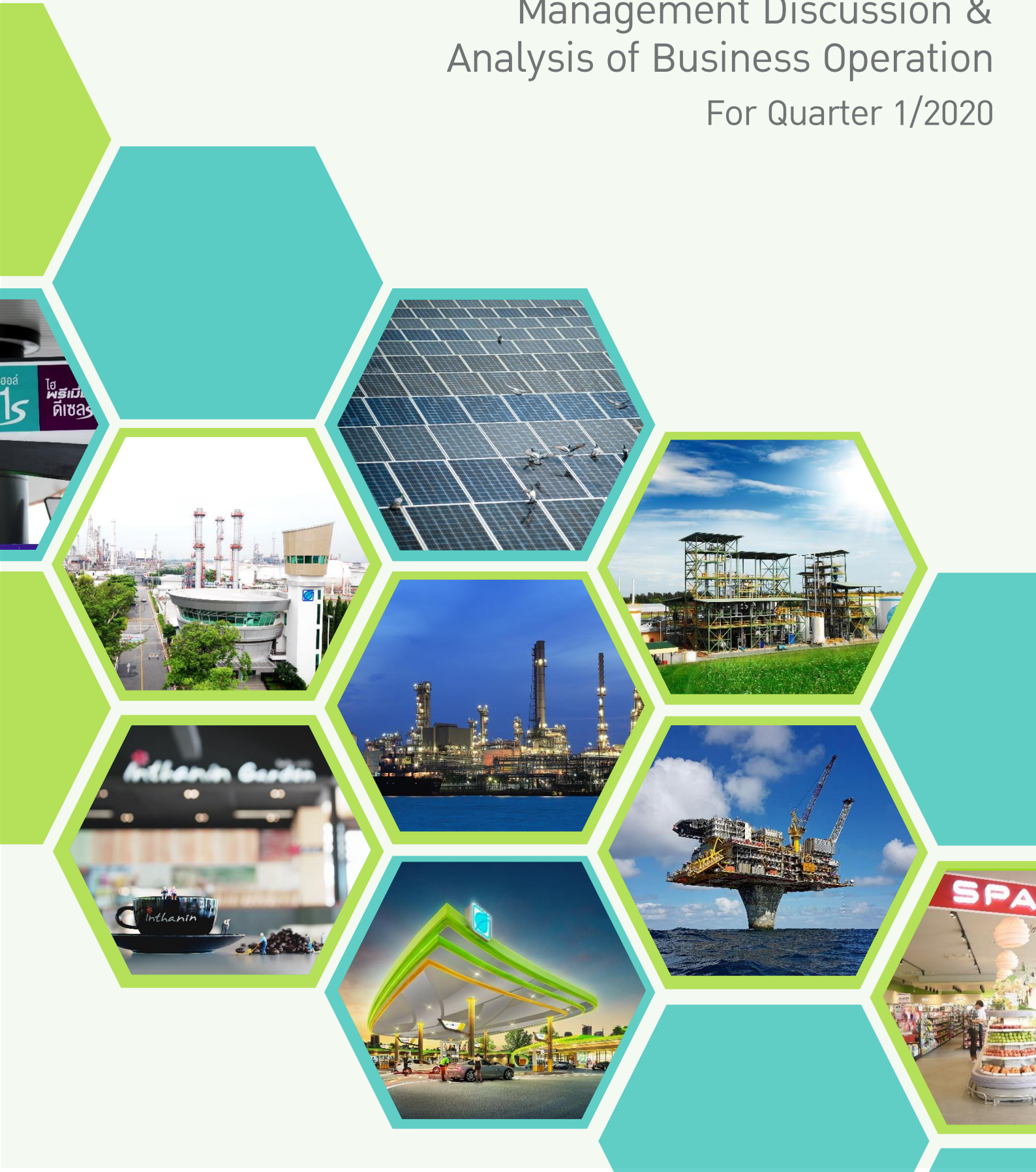




# Bangchak Corporation Plc.

Management Discussion &  
Analysis of Business Operation

For Quarter 1/2020



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## Executive Summary

Summary of the company and its subsidiaries' operating result for the 1<sup>st</sup> quarter ended 31<sup>st</sup> March 2020

Unit: THB Million	Q1/2020	Q4/2019	QoQ	Q1/2019	YoY
<b>Total Revenue</b>	<b>43,070</b>	<b>50,146</b>	<b>-14%</b>	<b>45,535</b>	<b>-5%</b>
<b>Accounting EBITDA</b>	<b>(2,546)</b>	<b>2,420</b>	<b>-205%</b>	<b>1,959</b>	<b>-230%</b>
<i>Refinery and Trading Business<sup>1/</sup></i>	(2,590)	1,073	-341%	517	-601%
<i>Marketing Business Group<sup>2/</sup></i>	81	359	-78%	612	-87%
<i>Green Power Business<sup>3/</sup></i>	770	795	-3%	736	5%
<i>Bio-Based Product Business<sup>4/</sup></i>	510	374	36%	194	162%
<i>Natural Resource Business<sup>5/</sup></i>	(1,227)	(57)	N/A	(18)	N/A
<i>Others<sup>6/</sup></i>	(90)	(124)	27%	(82)	-10%
<b>Profit attributable to owners of the Company</b>	<b>(4,661)</b>	<b>620</b>	<b>-852%</b>	<b>214</b>	<b>N/A</b>
<b>Basic earnings per share (Baht)</b>	<b>(3.49)</b>	<b>0.38</b>		<b>0.16</b>	

Note: 1/ EBITDA from Refinery Business of the Company, BCP Trading Pte. Ltd. and share of profit from associated companies

2/ EBITDA from Marketing Business of the Company, Bangchak Green Net Co., Ltd., Bangchak Retail Co., Ltd., and share of profit from associated companies

3/ EBITDA from Power Plant Business of BCPG Plc., its subsidiaries, and share of profit from associated companies

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

5/ EBITDA from Natural Resources business of Nido Petroleum Pty. Ltd., BCP Energy International Pte. Ltd., BCP Innovation Pte. Ltd., BCPR Co., Ltd. and share of profit from associated companies

6/ Others items and elimination

**As for performance in Q1/2020**, Bangchak Corporation PLC. (The company) and its subsidiaries were affected by the COVID-19 outbreak which had an extensive impact on the entire world. Economic activities slowed down with significance, which was the factor putting pressure on price of crude and finished product to make its downward trend. With demand for fuel consumption declining across the globe, combined with the Organization of Petroleum Exporting Countries [OPEC] and their allies unable to come to terms on oil production cuts. This further exemplified pressure on the price of crude in the global market to make a severe reduction late in the quarter. Average price of Dubai crude in Q1/2020 was at 50.41 \$/BBL, a decline of 11.63 \$/BBL, or a decline approaching almost 20% from the previous quarter. Moreover, the COVID-19 outbreak in Thailand caused demand for fuel consumption to decline. Especially, from the tourism sector and airlines had to suspend services. With the culmination of events being the declaration of the state of emergency and social distancing policies, this has affected the performance of the oil refinery industry in its entirety to decline. The company and its subsidiaries earned revenue from selling of goods and rendering of service of THB 43,070 million (-14% QoQ, -5% YoY). EBITDA was recorded THB -2,546 million (-205% QoQ, -230% YoY), whereas Operating EBITDA was THB 1,173 million. With Inventory Loss recorded at THB 3,434 million [including losses on inventories devaluation [NRV] THB 1,689 million]. And, due to the state of the price of crude oil declining significantly, the company recorded loss on impairments in assets under the Exploration and Production Business THB 1,366 million. All resulting in this quarter recording net loss of THB 4,316 million **of which the net loss attributable to owners of the parent was THB 4,661 million, or loss per share of THB 3.49**. The Company's performance of each business group as follow:

Note: Operating EBITDA is EBITDA excluding Inventory Gain/Loss (net NRV), one-time item and Gain/(Loss) from foreign currencies forward contract.

**The Refinery and Oil Trading Business** recorded Gross Refinery Margin of 2.87 \$/BBL, the refining margin still remains on the low side due to the crack spread of finished product and reference crude oil price declining significantly. A result of severe drop in demand for fuel consumption across the world, attributed to the COVID-19 outbreak. Furthermore, domestic demand for fuel consumption declined leading the refinery to lower its production level to an optimal levels, average production rate was 104.3 KBD or 87% utilization rate of the total refinery production capacity. Also, due to significant declines in crude oil price during this quarter, the refinery business was led to record Inventory Loss of THB 2,774 million [including losses on inventories devaluation (NRV)] causing significant decline in the Refinery Business's performance. As for the oil trading business conducted by BCPT Trading Pte., Ltd., it recorded increase in the amount of trade and transaction of crude oil and finished product from moving forward in increasing transactions with its trade partners and introducing new products, under the company's strategic plan to expand the business.

**The Marketing Business** recorded total sales volume declined 6% YoY and 13% QoQ, mainly from the decline in sales of fuel through the industrial market. This is in respect to the fairly high degree of competition in the industrial market, and the 4<sup>th</sup> quarter was a High Season for fuel consumption. As well as, late in the quarter, the COVID-19 outbreak adversely impacted demand for fuel consumption. During this quarter, the company made B10 Diesel available in the service stations across the country and constantly held marketing activities to build awareness of the quality of B10 Diesel. During, the period of the COVID-19 outbreak, Bangchak service stations followed strict measures in regards to hygiene, and staff at forecourt to wear medical masks, as to boost customers' confidence. The company is able to retain continuous growth of throughput per station. The company's cumulative market share between January – February 2020 was at 15.9% (data from Department of Energy Business, Ministry of Energy). Moreover, expansion of the service stations went about simultaneously with the development and expansion of Non - Oil businesses, the total number of service stations as of the end of Q1/2020 was a total of 1,204 locations across the country. In term of Net Marketing Margin, due to decline in oil price in the global market, leading to the company optimally determined retail price correspondingly to product cost. However, during this quarter, Inventory Loss was recorded at THB 591 million [including losses on inventories devaluation (NRV)] which affected overall performance.

**Power Plant Business** recorded increase in total electricity sales 48% YoY due to investments into the hydro power plant in Laos PDR the "Nam San 3A" project in September 2019, the "Nam San 3B" project in February 2020, and the commencement of commercial operation of the wind power plant in Thailand, "Lom Ligor". In spite of the aforementioned, the total quantity of electricity sold declined 23% QoQ, mainly attributed to the sales of the hydro power plant in Laos PDR declining, due to having to endure a state of drought more than usually severe. Furthermore, the solar power plant projects both in Thailand and Japan recorded decline in electricity sales due to lower average irradiation hours in Thailand, and a reduction of electric power purchased (curtailment) from Japan Electric Power Company. As such, this quarter the company realized share of profit from its associate company THB 91 million, attributed to share of profit from the wind power plant business in the Philippines THB 24 million, and share of profit from the geothermal power plant business in Indonesia THB 67 million.

**Bio-Based Product Business**, by **the Biodiesel Production and Distribution Business** performed better in both YoY and QoQ from the B100 product price that adjusted upward quite significantly from various measures from the government sector to promote the use of Biodiesel fuel (B100) within the energy sector such as settling upon the B10 Diesel as the primary grade and, relegating the B7 and B20 Diesel to the alternative grades. Despite, sales volume of B100 product declining from seasonality, and the COVID-19





outbreak that affected quantity demand for consumption of Biodiesel fuel late in the quarter. However, from the increase of the B100 products price combined with the ability to efficiently manage raw material, thus improving gross profit. As for **the Ethanol Production and Distribution Business**, revenue declined in relation to lower sales volume in YoY and QoQ. Mainly, attributed to the intense competition within the Ethanol business from the total national production of Ethanol increasing 4% QoQ, combined with the COVID-19 outbreak, detrimentally affecting demand for consumption of Gasohol. Whereas, the average selling price of Ethanol product increasing in relation to cost of the raw material, due to droughts. However, with the ability to efficiently manage raw material, thus improving gross profit. Moreover, revenue increased from the sales of Ethanol used for production alcohol gel, and disinfectant products permitted by the Excise Department in this quarter.

**Natural Resource Business** was affected by the situation of crude oil price in the global market that declined significantly from the state of excess supplies within the market and declining demand from the COVID-19 outbreak. The company realized loss from invested capital in associate company, OKEA due to the price of oil and natural gas adjusted downward, consequently leading OKEA to earn lower revenue. Furthermore, recorded impairment of Technical Goodwill and Ordinary Goodwill, and also loss on foreign exchange from currency conversion of loans in foreign currencies due to the depreciation of Norwegian Krone against US Dollar. Aside from this, the company realized loss on impairment of assets owned by Nido Petroleum Pty. Ltd. THB 1,366 million. Thus, resulting in significant contraction in performance.

**Other important events in this quarter:**

- Changes in accounting policies. The Company and its subsidiaries (“the Group”) has applied TFRS 9 - Financial instruments standards and TFRS 16 Leases (See Note 3. Changes in accounting policies), effectively from 1<sup>st</sup> January 2020.
  - The Group has adopted TFRS 9 - Financial instruments standards by adjusting the cumulative effects to retained earnings and other components of equity on 1<sup>st</sup> January 2020. Therefore, the Group did not adjust the information presented for 2019.
  - The Group has initially adopted TFRS 16 on contracts previously identified as leases according to TAS 17 Leases and TFRIC 4 Determining whether an arrangement contains a lease using the modified retrospective approach. As at 1<sup>st</sup> January 2020, the Group recognised right-of-use assets and lease liabilities, as a result, the nature of expenses related to those leases was changed because the Group recognised depreciation of right-of-use assets and interest expense on lease liabilities.
- The company reported the result of Share Purchase for financial management purposes [Treasury Stocks] from the initiation of the program until the 15<sup>th</sup> January 2020, the total cumulative number of shares repurchased was 19.238 million shares, the total value of shares repurchased was approximately THB 505 million which is equal to 1.40 percent of paid-up shares. The company has ceased the Share Repurchase Program since January to maintain the cash liquidity.
- In February 2020, BCPG Indochina Company Limited (a subsidiary of BCPG Public Company Limited) invested in a hydro power plant project located in Laos People’s Democratic Republic with total installed capacity of 45 MW. This is an acquisition of 100 percent shares of Nam San 3B Power Sole Co., Ltd. [“Nam San 3B”] from Phongsubthavy Roads and Bridges Construction and Irrigation Sole Co., Ltd. in the amount not exceeding USD 113.2 million [approximately THB 3,581 million]. The company also simultaneously,



invested in the construction and operation of the transmission line system and substation from Nam San 3A and 3B to the Socialist Republic of Vietnam in partnership with the seller for an amount not exceeding USD 10.0 million [approximately THB 305 million].

Moreover, the hydro power plants Nam San 3A and Nam San 3B in Laos People's Democratic Republic successfully signed a power purchasing agreement with Vietnam Electricity [EVN]. The power plants will sell electricity to EVN for a duration of 25 years, beginning from 2022 onwards. Effectively, extending the duration of electricity sales by Nam San 3A and Nam San 3B from its initial termination in 2043 and 2042, respectively, to 2047. The average tariff has been increased from its original agreement, approximately 10 percent and the income received will be settled in US Dollar.

- In March 2020, the Company announced to pay the interim dividend instead of the 2019 annual dividend, to alleviate potential impacts on the shareholders due to the indefinite postponement of the AGM. The interim dividend payment for the second half of 2019 of Baht 0.30 a share or approximately THB 407 million, and the dividend payment date is 24<sup>th</sup> April 2020.

## Management Guidelines to Mitigate the Effects of the COVID-19 Outbreak

Due to the COVID-19 outbreak having widespread effect across the globe, economic activities have slowed down with significance. The occurrence of the outbreak has affected the global economy, including the Thai economy which is poised likely to experience a recession within this year. Due to the COVID-19 outbreak affecting various facets of economic activities, by measures to curb the infection within the population by the government sector via social distancing, city lockdowns, as well as restrictions imposed on travelling between countries with active outbreaks. And, from the said situation, global demand for fuel declined by 20 percent, as well as the Organization for Petroleum Exporting Countries and their allies were unable to come to terms on oil production cuts; triggering an oil price war. Which subsequently, bringing about a state of excess supply within the market that put pressure on the price of crude oil to severely drop during this past March. Demand for fuel consumption declined which adversely affected the trend of product crack spread - directly impacting the performance of refineries and petrochemical businesses.

However, the company has assessed the situation and prepared operational guidelines to contend with the COVID-19 outbreak as follow:

### Safety Measures

The company group has its Business Continuity Management [BCM] which encompasses the Epidemic Crisis Management Plan. Emphasis is put on the safety and health of employees, customers and associates. Meetings took place and plans were adjusted to coincide with current events, which at the time of writing, none of the Company group's employees have been found infected with COVID-19. The company group announced measures to prevent and control the spread of the COVID-19, which is closely monitored and is systematically handled. Furthermore, communications were consistently made to employees and associates, allowing businesses to still operate continuously.

- The Bangchak refinery adjusted its operation hours for employees operating in shifts to coincide with curfew measures, and has confined the perimeters of the Control Room building to provide an entryway to only related individuals. Transport was organized to and from between the refinery and the residents of employees operating in the Control Room. As well as preparing areas within the refinery as a makeshift living quarter in circumstances where the outbreak has become widespread.
- Bangchak service stations has measures in place for strict management of hygiene at various touch points such as staff at forecourt to wear medical masks at all times, inquiries and observations are made along with body temperature measurements of employees are consistently carried out, provide alcohol gel for cleaning hands at cashier boxes and at dispensing areas in order to boost the confidence of customers.
- In terms of personnel, the company has made preparations in terms of personnel, daily operations, IT system crucial to operations for employees working from home. Technologies were utilized to make work effective and agile in order for operations to proceed smoothly. Also, strict measures were implemented to prevent and control the spread of COVID-19. As well as mandating medical masks be worn at all times, and including various other regulations to keep the distance between personnel to prevent the spread and infection from the virus.

### Business Continuity Measures

Businesses related to petroleum were affected by the COVID-19 outbreak. The company adjusted plans for production, marketing, lowered expenses and investments as follow:

**Production** The refinery has closely monitored the market to adequately adjust its production levels. The production has been lowered to coincide with falling market demand. It is estimated that production would be reduced from plan by approximately 20 percent. Furthermore, considerations of external procurement of partial portions of products to be sold instead of the company internally refining the said partial portion itself in scenarios where there is more profit to be made from doing so. Moreover, the company considered amendments to its Turn Around Maintenance [TAM] plans. Only Plant no. 2 will be underwent maintenance while the refinery decreases its production. For the other plants, the TAM has been postponed from Q3/2020 to next year due to TAM's requiring experts from abroad and a large number of contractors for onsite operation to avoid COVID-19 outbreak risk.

**Marketing** The company estimated that the quantity sold by the marketing business in this year would decline by 20 to 25 percent, especially, the sales of Diesel products and Jet fuel. The company has put measures in place to stimulate sales, by issuing promotions through Loyalty programs, including collaborations between business alliances. As for the Non-oil business, due to the COVID-19 outbreak affecting reducing the number of incoming customers at the Inthanin Coffee Shop. The business endeavored to adapt to the situation by focusing on increasing sales via Delivery services. As for the location expansion of service stations and the Non-oil businesses, the operations were still being carried out according to plan. However, some investments may be delayed in respect to the economy being in a state of slow down.

**Financials** The company reevaluated and adjusted its plans for OPEX and CAPEX for various projects in the company's business plan via cuts or delays. As well as, postponing low priority projects, however, such postponement must not hinder the core business, and has to follow the principles of law and must give utmost regard to safety. As such, the company group was able to decrease OPEX spending by approximately 20 percent, as well as reducing and postponing CAPEX spending by 15 percent. As for liquidity management, the company established measures for credit line approval, closely monitoring and collecting customer debt. In order to manage the company's working capital to coincide with operations. As well as, managing debts to be paid on time. The company was able to secure funds, both short term loans and long term loans as a contingencies for circumstances that the funds may be required. The company was recently successful in its issuance of its name-registered, unsubordinated, unsecured, and has debenture holder's representative for the benefit of Institutional Investors and/or High Net Worth Investors – in the amount of THB 8,000 million. The debenture was well received amongst Institutional Investors and/or High Net Worth Investors, a reflection of the confidence that investors has in the company. A portion of the funds will be used to redeem maturing debentures this year, and another portion will be reserved for financial management.

Furthermore, a committee of Innovation Continuity Task Force was set up to brainstorm ideas from employees in order to further develop the incumbent business or devise ways to implement new businesses. In order to find an alternate source of earnings and keep pace with the ever changing Business Landscape post COVID-19.

**Corporate Social Responsibility** The company has supported government agencies and the public through various social activities. It has always been Bangchak's mission under the "Bangchak Group Stronger Together" circumscribing all stakeholders, as well as supporting medical innovations, donation of alcohol gels, Inthanin drinks, Bangchak cash cards to various state agencies. Also includes the sales of alcohol and masks at special price, donation of cloth masks, survival bag for residents around the refinery, etc. In order for the company to be part of the relief attempts during the crisis. Currently, the company is going to pilot the "Barrels of Happiness" in service stations and at various locations in communities in order to allow those who have to donate into the barrels with various consumables for those in need to take or consume.



## Statement of Income

Consolidated Statement of Income (Unit: Million Baht)	Q1/2020	Q4/2019	YoY	Q1/2019	QoQ
Revenue from sale of goods and rendering of services	43,070	50,146	-14%	45,535	-5%
Cost of sale of goods and rendering of services	(44,287)	(47,130)	-6%	(43,355)	2%
<b>Gross Profit (Loss)</b>	<b>(1,216)</b>	<b>3,017</b>	<b>-140%</b>	<b>2,181</b>	<b>-156%</b>
Other income	105	140	-25%	118	-11%
Selling and administrative expenses	(1,762)	(2,266)	-22%	(1,721)	2%
Exploration and evaluation expense	(0.2)	4	N/A	(4)	N/A
Gain (loss) from derivatives	(360)	142	N/A	18	N/A
Gain (loss) on foreign exchange	326	274	N/A	57	N/A
Loss on impairment assets	(1,404)	(34)	N/A	-	N/A
<b>Profit (loss) from operating activities</b>	<b>(4,311)</b>	<b>1,277</b>	<b>-438%</b>	<b>649</b>	<b>-765%</b>
Finance costs	(464)	(425)	9%	(443)	5%
Impairment gain and reversal of impairment loss (impairment loss) determined in accordance with TFRS 9	5	-	N/A	-	N/A
Share of profit (loss) of associates and joint ventures accounted for using equity method	(1,082)	52	N/A	157	N/A
<b>Profit (loss) before income tax expense</b>	<b>(5,852)</b>	<b>903</b>	<b>-748%</b>	<b>363</b>	<b>N/A</b>
Tax income (expense)	1,536	(36)	N/A	32	N/A
<b>Profit (loss) for the period</b>	<b>(4,316)</b>	<b>867</b>	<b>-598%</b>	<b>395</b>	<b>N/A</b>
Owners of parent	(4,661)	620		214	
Non-controlling interests	345	247		181	
<b>Basic earnings (loss) per share (Baht per Share)</b>	<b>(3.49)</b>	<b>0.38</b>		<b>0.16</b>	

The Company and its subsidiaries Q1/2020 performance recorded a Gross Loss of THB 4,316 million, of which the net loss attributable to the owners of the parent is THB 4,661 million, or in basic loss per shares of THB 3.49 mainly due to the following reasons:

1. Revenue from sales of goods and rendering of services was THB 43,070 million, a decrease of 14% QoQ mostly be attributed to petroleum related business. The company was affected by the significant decline in average selling price relative to oil price in the global market, and total quantity of products sold by the company dropped 13% QoQ as well.

And, when compared to Q1/2019, revenue declined by 5%, mostly attributed to declining revenue of petroleum related businesses from average selling price per unit and the total amount of oil products sold.

2. Gross loss was recorded at THB 1,216 million mostly from the company group had Inventory Loss of THB 3,434 million (including losses on inventories devaluation (NRV) THB 1,689 million) due to the price of crude oil in the global market declining severely from the COVID-19 outbreak, as well as the Oil Price War, which was a result of the OPEC Group and their allies unable to come to an agreement on oil production cuts. However, excluding inventory loss in Q1/2020, the company group had gross margin of THB 2,218 million, which declined by THB 799 million from Q4/2019 and increased from Q1/2019 by THB 37 million.
1. Selling and administrative expenses was recorded at THB 1,762 million, a decrease of 22% QoQ mainly from employee expenses.
2. Loss from derivatives recorded at THB 360 million, attributed to the derivative measurement under TFRS 9 in regards to Financial Instruments standards which were put in effect on the 1<sup>st</sup> January 2020.
3. Gain on Foreign Exchange recorded at THB 326 million, which can mostly be attributed to the company's subsidiary, BCPG Plc. transitioning its Functional Currency from the Thai Baht to the US Dollar and led to the recognition of gain on foreign exchange from Thai Baht dominated loan.
4. Loss on impairment assets recorded at THB 1,404 million, mainly from impairment assets of natural resource business.
5. Share of loss of associates and joint ventures accounted for using equity method THB 1,082 million, mainly due to share of loss from OKEA at THB 1,199 million, with respect to the state of oil price, natural gas adjusted downward and foreign exchange loss.
6. Tax income THB 1,536 million, mainly from recorded deferred tax assets from net loss on taxes and impairment assets.

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

### 1.) Refinery and Oil Trading Business Group

#### Crude Oil Price Situation (Unit: \$/BBL)

Crude Oil Price	Q1/2020			Q4/2019	QoQ	Q1/2019	YoY
	MAX	MIN	AVG	AVG	+/-	AVG	+/-
Dubai (DB)	69.60	23.20	50.41	62.03	-11.63	63.41	-13.00
Dated Brent (DTD)	69.96	17.68	50.10	63.08	-12.99	63.13	-13.04
DTD/DB	3.32	(5.73)	(0.31)	1.05	-1.36	(0.27)	-0.04

#### Crude Oil Price Situation

Dubai crude price in Q1/2020 on average decreased by 11.63 \$/BBL compared to Q4/2019 due to pressure generated by the spread of the COVID-19 in China, and the discovery of the number of infected individuals outside of China growing significantly at a brisk pace in Japan, South Korea, Italy, and the US, to name a few. Thus reducing demand for fuel across the globe by 20%. In combination with the OPEC Group and their allies meeting participants unable to agree on the reduction of crude oil production during the Vienna conference between the 5<sup>th</sup> and 6<sup>th</sup> March 2020. In the session OPEC proposed a reduction in oil production by 1.5 million barrels per day beginning in April 2020, lasting until the end of the year to compensate for the decline in oil demand. With Russia not agreeing to the aforementioned proposal, Saudi Arabia retaliated by recanting its measures to limit oil production of the OPEC group, and announced that it would be increasing its oil production continuously. Further tension is mounted with Saudi Arabia's efforts to increase its market share through Saudi Aramco; the Saudi Arabian government's state enterprise, announced cuts to its Official Selling Price (OSP) by 6 \$/BBL for crude oil delivered to customers in every country – the catalyst for the oil price war, and may produce a state of excess supplies of oil in the global market.

Dubai crude price in Q1/2020 compared to Q1/2019 declined by 13.00 \$/BBL due to pressure from concerns over the receding global economy which can be seen from the production sector, the industrial sector, the infrastructure sector, and the transportation sector due to the spread of COVID-19. As such the International Energy Agency anticipates that demand for oil in Q1/2020 may decline for the first time in 10 years.

Dated Brent and Dubai spread (DTD/DB) in Q1/2020 on average declined by 1.36 \$/BBL when compared to Q4/2019 due to pressures generated after Saudi Arabia increased its efforts to secure a larger portion of the Heavy crude market share. This led Saudi Aramco to announce a discounts for its Official Selling Price (OSP) by 6 \$/BBL, thus leaving Light crude in a state of market excess. In addition, the COVID-19 outbreak resulted in various refineries successively lowering production to coincide with dwindling demand.

Dated Brent and Dubai spread (DTD/DB) average in Q1/2020 declined by 0.04 \$/BBL when compared to Q1/2019 due to pressure from the COVID-19 outbreak which led to the demand for finished product, especially Jet fuel, to decline significantly. Consequently, Light crude which provided high yield of Jet fuel and Diesel was left in a state of oversupply.



### Crack Spreads Situation (Unit: \$/BBL)

Crack Spreads	Q1/2020			Q4/2019	QoQ	Q1/2019	YoY
	MAX	MIN	AVG	AVG	+/-	AVG	+/-
UNL95/DB	12.23	(5.41)	6.54	12.97	-6.44	3.77	2.76
IK/DB	14.62	0.78	8.46	13.94	-5.48	12.95	-4.49
GO/DB	15.01	6.90	11.00	14.32	-3.32	12.75	-1.75
FO/DB	2.36	(16.57)	(7.30)	(18.59)	11.29	0.54	-7.84

### Crack Spreads Analysis

- Gasoline and Dubai crack spread (UNL95/DB) in Q1/2020 averaged at 6.54 \$/BBL, a decline of 6.44 \$/BBL compared to the previous quarter. This is a result of pressure generated by the World Health Organization's announcement classification of the COVID-19 outbreak as a "Pandemic". With various countries around the world engendering their national lockdown measures to prevent the spread of the disease. Done through limiting commute of its citizens, and the closing of service or business- leading to a steep plunge in demand for Gasoline. Furthermore, the US, which is one of the world's largest consumer of Gasoline, saw demand for consumption of Gasoline lowered by nearly half of its daily domestic consumption.
- Gasoline and Dubai crack spread (UNL95/DB) increased by 2.76 \$/BBL, compared to the average of 3.77 \$/BBL in Q1/2019, this is supported by bearish Gasoline supplies. Due to refineries reducing their production of Gasoline produced from the Fluid Catalytic Cracking unit in order to repurpose intermediates towards the production of Low Sulphur Fuel Oil. The said oil is meant to supply the consumption of the bunker oil with Sulphur content not exceeding 0.5% in 2020.
- Jet (Kerosene) and Dubai crack spread (IK/DB) in Q1/2020 averaged at 8.46 \$/BBL, a decline of 5.48 \$/BBL compared to the previous quarter. Due to pressure from the COVID-19 outbreak, airlines around the world had to cancel their flights in order to curb the epidemic. This resulted in the decline for demand of air travel and air freights.
- Jet (Kerosene) and Dubai crack spread (IK/DB) declined by 4.49 \$/BBL compared to the 12.95 \$/BBL averaged in Q1/2019. This is due to pressure from mounting supplies as refineries geared up production capacity to accommodate the use of the bunker oil with Sulphur content not exceeding 0.5% in 2020. Further pressure can be attributed to the COVID-19 outbreak that led countries to adopt measures to stymie the spread of the virus by closing their borders and cancelling international flights - leading to demand for air travel and air freights to decline.
- Gasoil and Dubai crack spread (GO/DB) in Q1/2020 averaged at 11.00 \$/BBL, a decline of 3.32 \$/BBL compared to the previous quarter due to pressure from the COVID-19 outbreak and the lockdown measures adopted by various countries around the world. This led demand for Gasoil consumption to decline in relation to the economic condition and industrial activity that decelerated.
- Gasoil and Dubai crack spread (GO/DB) declined by 1.75 \$/BBL compared to the average 12.75 \$/BBL in Q1/2019. This can be attributed to demand for Gasoil within the region not making significant increase that matched previous market expectation regarding the adoption of the bunker oil with Sulphur content not exceeding 0.5% in 2020. With the Low Sulphur Fuel Oil priced lower than Gasoil, and its supplies ready

for market consumption, traders decided to switch their reserves to Low Sulphur Fuel Oil. Moreover, demand for Gasoil declined after receiving pressure from the spread of the COVID-19 outbreak and the accompanying lockdown measures adopted by various countries around the world.

- Fuel Oil and Dubai crack spread (FO/DB) in Q1/2020 averaged at (7.30) \$/BBL, an increase of 11.29 \$/BBL compared to the previous quarter, this is supported by the decline in crude oil price which declined in a proportion that exceeded the Fuel Oil price. The excessive decline is due to pressure from Saudi Arabia discounting the OSP, combined with supply of High Sulphur Fuel Oil declining from regional refineries that were lowering utilization rate due to slumping Gross Refinery Margin. Meanwhile, demand for High Sulphur Fuel Oil is still present amongst ship fleets that have installed scrubbers.
- Fuel Oil and Dubai crack spread (FO/DB) declined by 7.84 \$/BBL compared to the average of 0.54 \$/BBL in Q1/2019. This is due to pressure from dwindling High Sulphur Fuel Oil demand that was affected by the adoption of the bunker oil with Sulphur content not exceeding 0.5% in 2020.

### Refinery and Trading Business Group Performance

Refinery Business Performance	Q1/2020	Q4/2019	QoQ	Q1/2019	YoY
<b>EBITDA (THB Million)</b>	<b>(2,590)</b>	<b>1,073</b>	<b>-341%</b>	<b>517</b>	<b>-601%</b>
Average Crude Run (KBD)	104.3	116.9	-11%	110.1	-5%
Utilization Rate (%)	87%	97%		92%	
Average FX (THB/USD)	31.45	30.45		31.79	
<i>(Unit: \$/BBL)</i>					
Operating GRM	2.87	5.61	-2.74	3.43	-0.55
Oil Hedging	0.26	0.43	-0.16	0.09	0.17
Inventory Gain/ (Loss) <sup>1/</sup>	(9.29)	0.08	-9.37	(0.03)	-9.27
<b>Total GRM</b>	<b>(6.16)</b>	<b>6.12</b>	<b>-12.28</b>	<b>3.49</b>	<b>-9.65</b>
<b>Total Sales Volume in each market category of the Company<sup>2/</sup> (Million Liters)</b>					
Marketing Business	1,426	1,631	-13%	1,521	-6%
Petroleum traders in accordance with section 7	186	147	27%	138	35%
Export	218	316	-31%	246	-11%
<b>Total Sales Volume<sup>2/</sup></b>	<b>1,829</b>	<b>2,094</b>	<b>-13%</b>	<b>1,904</b>	<b>-4%</b>

Note: 1/ Inventory Gain/(Loss) in the table included (Reversal of) losses on inventories devaluation (NRV)

2/ Sales volume does not include oil swaps between major oil companies (petroleum traders in accordance with section 7) and sales of crude oil products

Performance for Q1/2020, the refinery business recorded EBITDA of THB -2,590 million, a decline of THB 3,663 million compared to Q4/2019. Whereas Operating EBITDA was THB 469 million with the following factors affecting performance as follow:

1. The Bangchak refinery averaged its production in Q1/2020 at 104.3 KBD or 87% utilization rate, which is lower than the previous quarter's average production rate. This is due to the crack spread of finished product and reference crude oil price declining significantly within this quarter, thus production level was lowered to an optimal level.



2. Within this quarter, the refinery's Total Gross Refinery Margin (Total GRM) recorded a loss 6.16 \$/BBL which decline of 12.28 \$/BBL, when compared to the previous quarter, mainly due to the following reasons.

- Operating GRM was recorded at 2.87 \$/BBL, a decline of 2.74 \$/BBL when compared to the previous quarter, mainly attributed to the crack spread of finished product and reference crude oil price declining significantly from the COVID-19 outbreak affair. Countries around the world were prompted to announce lockdown measures to stop the outbreak. The said measures affected economic activities and global demand for oil consumption.
- During this quarter the refinery recorded gains from fair value of crude and product oil price hedging contract 0.26 \$/BBL, attributed to the derivative measurement under TFRS 9 in regards to Financial Instruments standards which were put in effect on the 1<sup>st</sup> January 2020.
- Due to the price of crude oil in the global market declining severely from the COVID-19 outbreak, as well as the Oil Price War, which was a result of the OPEC Group and their allies unable to come to an agreement on oil production cuts. This resulted in average March Dubai crude price to decline to the level of 33.70 \$/BBL, consequently, the Refinery Business recorded an inventory loss of THB 2,774 million or 9.29 \$/BBL [including losses on inventories devaluation (NRV)]. Whereas Q4/2019 recorded an inventory gain of THB 26 million or 0.08 \$/BBL.

3. BCP Trading Co., Ltd. ("BCPT") recorded larger gross profit from Q4/2019 due to an increase in its transactions in terms of both trade volume and transactions with new trade partners. During this quarter, transaction of crude oil and petroleum product trade amounted to 8.01 million barrels, an increase of 0.43 million barrels (+6%) compared to the previous quarter. Most of the increase can be attributed to the crude oil transaction and other petroleum products traded with partners abroad in the form of Overseas Trading (Out-Out), and the trade of Low Sulphur Fuel Oil products that were further upgraded to be more valuable product. The market experienced increases in trade of Low Sulphur Fuel Oil adhering to the IMO standards that has been in effect since the 1<sup>st</sup> January 2020.

4. Selling and Administrative expenses declined from the previous quarter, which was a quarter that incurred higher than normal expenses. Moreover, the contributing factor is the lease expenses declining under TFRS 16 Lease which came into effect on the 1<sup>st</sup> January 2020. It will positively affected EBITDA.

Performance comparison between Q1/2020 and Q1/2019, the refinery business group recorded EBITDA decline of THB 3,107 million, with the following factors affecting performance:

1. The Bangchak refinery's average production rate declined 5% YoY due to the finished product and reference crude price crack spread significantly adjusting downward from the COVID-19 outbreak that has slowed down demand of finished product. Thus, production level was lowered to an optimal level.

2. Total Gross Refinery Margin (Total GRM) declined 9.65 \$/BBL compared to Q1/2019, mainly due to the following reasons:

- Operating GRM declined by 0.55 \$/BBL when compared to Q1/2019, mainly attributed to the crack spread of finished product and reference crude oil price declining significantly from declining demand for finished product after the COVID-19 outbreak. Furthermore, crude premium adjusted upward with significance.
- During this quarter the refinery business recorded gains from fair value of crude and product oil price hedging contract 0.26 \$/BBL as aforementioned.



- The Refinery Business recorded inventory loss of THB 2,774 million or 9.29 \$/BBL [including losses on inventories devaluation (NRV)] from the price of crude oil price in the global market making severe adjustments downward within this quarter, especially during March. Whereas, Q1/2019 experienced inventory loss of THB 9 million or 0.03 \$/BBL [including reversal of losses on inventories devaluation (NRV)].

3. BCPT saw increase in gross profit compared to Q1/2019 from increases in trade transactions of crude oil and finished product by 1.10 million barrels [+16%]. Especially, the Low Sulphur Fuel Oil product which saw increase in demand from the IMO measure. The company also expanded its operations to execute trades in a new group of countries. Furthermore, the company saw increase in revenue from logistic service provider. Thus, BCPT is still gathering forward momentum expanding its trade transactions with partners and new product roster following the strategies to expand the company's business.

## 2.) Marketing Business Group

Marketing Business	Q1/2020	Q4/2019	QoQ	Q1/2019	YoY
<b>EBITDA (THB Million)</b>	<b>81</b>	<b>359</b>	<b>-78%</b>	<b>612</b>	<b>-87%</b>
<b>Total Marketing Margin (Baht / Liter)</b>	<b>0.79</b>	<b>0.70</b>	<b>12%</b>	<b>0.71</b>	<b>11%</b>
<b>Sales Volume (Million Liters)</b>					
Retail (Service Stations)	1,020	1,095	-7%	1,032	-1%
Industrial	405	536	-24%	489	-17%
<b>Total</b>	<b>1,426</b>	<b>1,631</b>	<b>-13%</b>	<b>1,521</b>	<b>-6%</b>
<b>Sales volume in each product category (Million Liters)</b>					
LPG	39	46	-16%	34	13%
Gasoline	15	12	19%	8	84%
Gasohol	395	437	-10%	412	-4%
Jet Fuel	216	258	-16%	212	2%
Diesel	715	841	-15%	814	-12%
Fuel Oil and Others	47	36	30%	40	16%
<b>Total</b>	<b>1,426</b>	<b>1,631</b>	<b>-13%</b>	<b>1,521</b>	<b>-6%</b>

Note: Marketing Margin of Bangchak only (excluding Inventory Gain/[Loss] and NRV)

Performance in Q1/2020 of the Marketing Business Group recorded EBITDA of THB 81 million, a decline of THB 279 million compared to Q4/2019. Whereas Operating EBITDA was THB 672 million, with the following factors affecting performance:

1. Total sales volume of the marketing business lowered 13% QoQ, mainly from the declining amount of fuel sold through the industrial market 24% QoQ, and the retail market 7% QoQ. As a result of declined in demand for fuel consumption, due to end of the harvest and travel season in the 4<sup>th</sup> quarter of every years. Further escalating the situation is the repercussions from the outbreak of COVID-19 late in this quarter, which resulted in the contraction of the Thai economy, especially on the tourism industry and airlines that have to halt services. As well as, the announcement of a state of emergency and the limitations imposed on travel which led to the decline in demand for fuel consumption.

2. The company adopted an allocation policy for Inventory Gain/ [Loss], including losses on inventories devaluation [NRV] between the Refinery Business and Marketing Business. During this quarter, the Marketing Business Group recorded Inventory Loss of THB 591 million [including losses on inventories devaluation [NRV]]. This stems from the price of finished product severely adjusting downwards following crude oil price in the global market, causing EBITDA to decrease.

3. Net marketing margin increased 12% QoQ from the significant oil price drop in the global market, due to the COVID-19 outbreak, and the oil price war. This resulted in the lower cost of oil product production, thus allowing the company to optimally determined retail price correspondingly to product cost.

4. The company has been operating under the strategy to expand its customer base and to garner higher throughput per station, by expanding the number of standard sized service stations to cover more areas with high potential. As of Q1/2020, the total number of service stations was 1,204 locations, within this quarter there was a total 7 new stations opening. As a result, the company's retail market share of throughput per service station has continuously increased, with the cumulative market share between the month of

January - February 2020 at 15.9% (data from Department of Energy Business, Ministry of Energy). During this quarter, the company sold B10 Diesel in service stations across the country in accordance to policies by the Ministry of Energy requiring B10 Diesel to become the primary grade of High Speed Diesel fuel since 1<sup>st</sup> January 2020. The company held successive marketing activities to build public awareness in regards to B10 Diesel quality, and simultaneously campaigned for trials by Diesel vehicle owners. Moreover, the company has proceeded with enhancements to the quality of Diesel products available at Bangchak service stations within the Bangkok area to the Euro 5 standard with Sulphur content lower than 10 PPM, effectively lowering Sulphur content by 5 folds when compared to the Euro 4 standard in order to reduce the pollution generated by the PM 2.5 dust particles; these products will be sold at the same price as their predecessors between 15<sup>th</sup> December 2019 - 29<sup>th</sup> February 2020. Moreover, due to the state of the COVID-19 outbreak, the company has prescribed hygienic measures for Bangchak customers and has instructed staff at forecourt to wear medical masks to boost customers' confidence in Bangchak service stations. As well as, the company had launched the "Bangchak Fights Against COVID-19" campaign by distributing sanitizing alcohol gel to Bangchak customers and the public to ease Thais' burden in the wake of the COVID-19 outbreak.

5. Bangchak Retail Co., Ltd. ("BCR") is still continuously developing and expanding the Inthanin coffee shop business. During this quarter, the number of Inthanin coffee shop are 610 branches, where a total of 19 branches were opened, all of which are located in high potential areas both inside and outside the perimeters of service stations. In tandem with various sales promotional campaigns being issued, and innovative menus crafted from quality products. Moreover, BCR hosted the "You Stay Home, We Delivery for You" campaign during the periods advocating people to stay home to curb the COVID-19 outbreak, customers are able to order products through applications: GET, Grab and LINEMAN, or render services from SPAR to deliver products from branches to residents. Due to the aforementioned situation, revenue was recorded lower by 8% QoQ, whereas, EBITDA was recorded 71% higher QoQ due to lower Selling and Administrative expenses from Q4/2019 which was a quarter with higher expenses than usual.

6. Selling and Administrative expenses declined from the previous quarter, which was a quarter that incurred higher than normal expenses. Moreover, the contributing factor is the lease expenses declining under TFRS 16 Lease which came into effect on the 1<sup>st</sup> January 2020. It will positively affected EBITDA.

Performance comparison between Q1/2020 and Q1/2019 the Marketing Business Group recorded EBITDA decline of THB 532 million, with factors affecting operations as follow:

1. Total sales volume of the marketing business group shrank by 6% YoY, due to sales volume of fuel from the industrial market declining by 17% YoY. This is in respect to the intense competition in the industrial market and the repercussion from the COVID-19 outbreak late in the quarter that resulted in demand for oil consumption in the industrial sector lowering. Meanwhile, sales volume generated from the retail market business was marginally lower due to the effects of the COVID-19 outbreak during the month of March when travel bans were imposed and efforts promoting Thais to stay home.

2. The Marketing Business Group recorded Inventory Loss of THB 591 million [including losses on inventories devaluation [NRV]], following to the allocation policy as aforementioned.

3. Net marketing margin increased 11% YoY due to decline in finished product cost within Q1/2020 lowering significantly in accordance to the crude oil price in the global market. This allowed the company to determine retail price that optimally coincides with product cost.



4. The company's cumulative market share between January – February 2020 was 15.9%, whereas the cumulative market share between January - March 2019 was 15.6% (data from Department of Energy Business, Ministry of Energy), and 45 new service stations commenced operation compared to Q1/2019.

5. The Non-oil business, under the supervision of Bangchak Retail Co., Ltd. ("BCR") is still developing and expanding its business continuously. As of Q1/2020, the number of SPAR convenience store was 44 locations, which is continuously launching promotion campaign, the addition of an online distribution channel, as well as a revamp of the product mix to serve customer demands. Whereas, the number of newly opened Inthanin Coffee Shop was 114 locations YoY. With the location expansion, the development of in store management, and various sales promotion activities has led BCR to record an increase of revenue by 27% YoY and recorded increase in EBITDA by 79% YoY.



### 3.) Power Plant Business Group

Power Plant Business Performance (THB Million)	Q1/2020	Q4/2019	QoQ	Q1/2019	YoY
<b>EBITDA</b>	<b>770</b>	<b>795</b>	<b>-3%</b>	<b>736</b>	<b>5%</b>
Revenue	886	981	-10%	808	10%
Share of profit (loss) from associated companies					
Wind Power Plant	24	(7)	460%	29	-17%
Geothermal Power Plant	67	54	24%	93	-27%
<b>Electricity Sales (Million KWh)</b>					
Solar Power Business – Thailand (142.6 MW)	71.33	75.63	-6%	71.88	-1%
Wind Power Business – Thailand (9.0 MW)	3.86	3.19	21%	N/A	N/A
Solar Power Business – Japan (14.7 MW)	3.13	3.52	-11%	4.09	-24%
Hydro Power Business - Laos (114.0 MW)	34.35	64.34	-47%	N/A	N/A
<b>Total Electricity Sales</b>	<b>112.67</b>	<b>146.69</b>	<b>-23%</b>	<b>75.97</b>	<b>48%</b>

Performance in Q1/2020 of the Power Plant Business recorded EBITDA of THB 770 million, a decrease of THB 25 million compared to Q4/2019, with the following factors affecting operations as follow:

1. Solar power plant projects in Thailand recorded decrease in total electricity sales by 6% QoQ, predominantly from average irradiation hours of most projects adjusted downward due to weather conditions becoming less clear.

2. Wind power plant project based in Thailand, “Lom Ligor” recorded increase in electricity sales by 21% QoQ, due to the increase in average wind speed that swept through the project compared to the previous quarter.

3. Solar power plant projects in Japan recorded a decrease in total electricity sales by 11% QoQ, which was an effect of the reduction of electric power purchased (curtailment) from Japan Electric Power Company during periods of low electricity demands.

4. Hydro Power Plant project in Laos recorded lower total electricity sales by 47% QoQ, mainly from a drop in water content due to an off-season period and a severe state of drought compared to previous years; resulting in reduced electricity generation capacity of the hydro power plant. Furthermore, during Q1/2020 BCPG Plc. acquired 100% share of “Nam San 3B” and began realizing revenue from electricity sales in late February 2020.

5. Realized the share of profit from investments in associated companies in amount of THB 91 million, an increase from the previous quarter by THB 44 million, due to the following factors:

- Share of profit from the wind power plant business in the Philippines was THB 24 million. An increase from the previous quarter by THB 31 million, due to the arrival of the monsoon season, which is a High Season period, resulting in increased wind speed moving through the project location. Additionally, in Q4/2019 there was the shutdown of transmission lines maintenance caused by typhoon.
- Share of profit from the geothermal power plant business in Indonesia was THB 67 million. An increase from the previous quarter THB 13 million, a result of the period of shutdown on the

Geothermal power plant for planned maintenance was lower than the previous quarter. Although one-time items of THB 67 million were recorded, consisting of tax provision THB 24 million, and allowance for account receivable THB 43 million.

Performance comparison between Q1/2020 and Q1/2019 for the Power Plant Business recorded EBITDA increase of THB 34 million, with the following factor affecting operation as follow:

1. Solar power plant projects in Thailand recorded similar total electricity sales compared to the same period of the previous year due to identical average irradiation hours.

2. Wind power plant project in Thailand, "Lom Ligor", recorded electricity sales of 3.86 million KWh. The Lom Ligor project (PPA 8.965 MW) commenced its commercial selling of electricity to the Provincial Electricity Authority since April 2019.

3. Solar power plant projects in Japan recorded lower total electricity sales by 24% YoY, mainly attributed to an effect of the reduction of electric power purchased (curtailment) from Japan Electric Power Company during periods of low electricity demands.

4. Hydro power plant projects in Laos recorded total electricity sales 34.35 million KWh from the initial realization of revenue from the electricity sales made by the "Nam San 3A" project (PPA 69 MW) and "Nam San 3B" project (PPA 45 MW). This is after BCPG Plc. acquired 100% share of the projects in late September 2019 and late February 2020, respectively.

5. Recorded a declined in shares of profit from investments in associated companies from the same period of the previous year by THB 30 million, with details as follow:

- Share of profit from the wind power plant business in the Philippines declined by THB 5 million. Due to Q1/2019, the storm sweeping through the project location was higher than usual.
- Share of profit from the geothermal power plant business in Indonesia reduced by THB 25 million. The performance was improved due to lower period of shutdown. Whereas, one-time items of THB 67 million was recorded in Q1/2020 as aforementioned.



#### 4.) Bio-Based Product Business Group

As for the performance of the Bio-based Product Business Group in Q1/2020 total EBITDA was recorded THB 510 million, an increase of THB 136 million when compared to Q4/2019, and an increase of THB 315 million when compared to Q1/2019.

##### Biodiesel Production and Distribution Business

Biodiesel Business Performance	Q1/2020	Q4/2019	QoQ	Q1/2019	YoY
Revenue (THB Million)	2,489	1,543	61%	1,275	95%
Gross Profit (THB Million)	339	209	62%	59	472%
B100 Production Volume (Million Liters)	60.50	78.49	-23%	67.26	-10%
B100 Sales Volume (Million Liters)	68.54	87.53	-22%	71.15	-4%

Performance comparison between Q1/2020 and Q4/2019 are as follow:

1. B100 production volume in Q1/2020 was at 60.50 million liters, and the B100 sales volume was at 68.54 million liters. Both the production and sales volume declined compared to the previous quarter resulting from High Season for fuel consumption in the previous quarter, where it was harvest and travel season taking place concurrently, essentially required higher consumption of Biodiesel fuel than this quarter. Furthermore, the COVID-19 outbreak affected to the quantity demand for consumption of Biodiesel fuel within the energy sector late within the quarter, despite government policy to promote the use of B100 by mandating all service stations across the country to have B10 Diesel available.

2. Revenue from sales during this quarter was THB 2,489 million, an increase of 61% QoQ. Average selling price of B100 product remains significantly higher than the previous quarter. This can be attributed to the increase proportion of Biodiesel mixture, wherein the B10 Diesel has been decreed as the primary grade since the 1<sup>st</sup> January 2020. In tandem with the ability to competently manage raw material cost, resulting in gross profit to increase 62% QoQ, despite the decline in sales volume of B100 product. However, average selling price of B100 product adjusted downward slightly late in the quarter following movement of crude palm oil price in the market.

Performance comparison between Q1/2020 and Q1/2019 are as follow:

1. B100 production volume declined by 10% YoY, which correlated with the direction of the sales of B100 product that declined by 4% YoY, with respect to the intense competition of the Biodiesel market, in which the national production capacity increased 8% from the same period of the previous year. Further exacerbated by the COVID-19 outbreak to cause a reduction in fuel consumption.

2. Revenue from selling increased 95% YoY, due to the average selling price of B100 product in this quarter adjusted to almost double from the same period of the previous year. This is in light of various policies put in place by the government sector to alleviate the excess crude palm oil issue in the market. Improved competency in raw material cost management, despite the decline in sales volume of B100 products, the Biodiesel Business recorded increased in gross profit up to 472% YoY.

## Ethanol Production and Distribution Business

Ethanol Business Performance	Q1/2020	Q4/2019	QoQ	Q1/2019	YoY
Revenue (THB Million)	941	969	-3%	1,071	-12%
Gross Profit (THB Million)	146	142	3%	106	37%
Production Volume (Million Liters)	48.27	43.65	11%	53.97	-11%
Ethanol Sales Volume (Million Liters)	40.21	44.51	-10%	47.89	-16%

Performance comparison between Q1/2020 and Q4/2019 are as follow:

1. Total production volume of Ethanol product was at 48.27 million liters, an increase of 11% QoQ, due to the KSL Green Innovation Plc. (“KGI”) plants at Nam Pong district, Khon Kaen province and Bo Ploy district, Kanchanaburi province underwent maintenance simultaneously in the previous quarter. Whereas, maintenance was only carried out at the plant located in Bo Ploy district, Kanchanaburi province during this quarter. Thus, total sales volume of Ethanol product was at 40.21 million liters, a decline of 10% QoQ, mainly due to the intense competition within the Ethanol business resulting from increase in total national Ethanol production capacity by 4% QoQ. Also given the COVID-19 outbreak which detrimentally impacted demand for Gasohol fuel consumption. However, the government allowed Ethanol manufacturing plants to sell industrial grade Ethanol, which is used for production of alcohol gel and other disinfectant products as prescribed by the Excise Department, in order to meet demand for consumption and to extensively serve the public sector during the COVID-19 outbreak. This initiative has led to slightly lower sales of Ethanol from the previous quarter.

2. Revenue from sales was recorded at THB 941 million, a decline of 3% from the previous quarter. An effect of the decrease to total Ethanol product sales volume that declined. Whereas, the average price of Ethanol product increased in conjunction with rising raw material cost by the drought as a result of less sugar cane produced for mill processing. However, due to efficient management of raw material cost, this led the gross profit of the Ethanol Business to increase 3% QoQ. Furthermore, parts of the revenue in this quarter is attributed from the sales of Ethanol to be used in the production of alcohol gel and disinfectant products permitted by the Excise Department.

Performance comparison between Q1/2020 and Q1/2019 are as follow:

1. Total production volume of Ethanol product declined 11% YoY. This is attributed to the KGI plant at Bo Ploy district, Kanchanaburi province undergoing maintenance in January 2020. Moreover, total sales volume of Ethanol product declined by 16% YoY with respect to the annual planned maintenance, combined with the effect of intense competition from the increased total national production capacity, as well as being affected by the COVID-19 outbreak.

2. Revenue from sales declined by 12% YoY from the decreased volume of Ethanol sold by 16% YoY, even though average selling price of Ethanol product increased from the same period of the previous year. However, due to efficient management of raw material cost and effectively continuous improvement of production process, led this quarter to record an increase in gross profit by 37% YoY.



## 5.) Natural Resources Business Group

Natural Resources Business Group Performance	Q1/2020	Q4/2019	QoQ	Q1/2019	YoY
<b>EBITDA (THB Million)</b>	<b>(1,227)</b>	<b>(57)</b>	<b>N/A</b>	<b>(18)</b>	<b>N/A</b>
Share of Profit (Loss) OKEA (THB Million)	(1,199)	4	N/A	8	N/A
Production Volume - Net to OKEA (KBD)	19.10	17.02	12%	19.50	-2%
Net Sold Volume - Net to OKEA (KBD)	15.81	13.84	14%	20.27	-22%

Performance of Natural Resources Business in Q1/2020 recorded an EBITDA of THB -1,227 million, a decline from Q4/2019 THB 1,170 million from the realization of share of loss from invested capital in associate company OKEA, with factors affecting operations as follow:

- During this quarter, OKEA received lower revenue from the price of crude oil and natural gas declining substantially from the previous quarter. This is due to the state of oversupply within the market, and the dwindling demand from the COVID-19 outbreak.
- Realized loss on foreign exchange. With the bulk of the loss attributed to currency conversion of loans in foreign currencies due to the depreciation of Norwegian Krone (NOK) against US Dollar.
- Impairment of Technical Goodwill and Ordinary Goodwill was recorded. A consequence of the state of the price of crude oil and natural gas that declined sharply (impairment tests are carried out every quarter in accordance to Norwegian principles).

Performance comparison between Q1/2020 and Q1/2019 of the Natural Resources business recorded a decline in EBITDA of THB 1,209 million, due to the realization of share of loss from invested capital in associate company OKEA. The main factors affecting performance are the reasons mentioned in the earlier parts of this section.

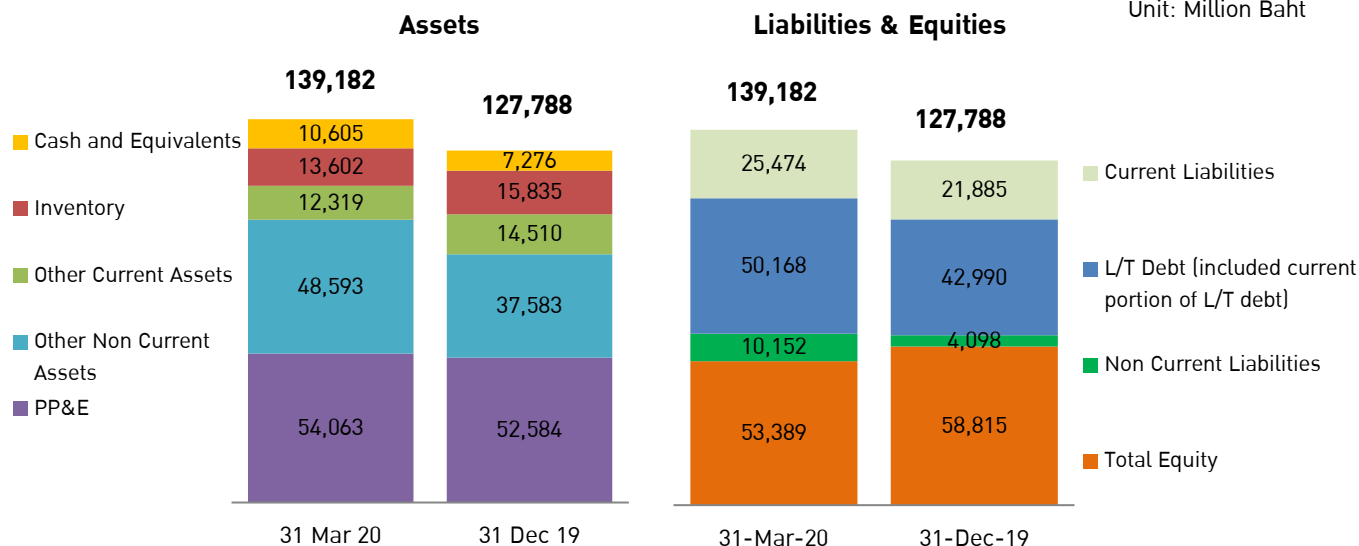
During this quarter, the business recorded loss from impairment of assets owned by Nido Petroleum Pty. Ltd. THB 1,366 million due to the state of the price of crude oil declined precipitously.



## Statement of Financial Position

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

Unit: Million Baht



#### Assets

As of the 31<sup>st</sup> March 2020, the Company and its subsidiaries has Total Assets in the amount of THB 139,182 million, an increase of THB 11,394 million when compared to the 31<sup>st</sup> December 2019, changes in assets are as follow:

- Cash and cash equivalents increased by THB 3,329 million. Details are stated in Analysis of the Cash Flow Statement.
- Inventory decreased by THB 2,233 million, mostly due to the declining average cost per unit of remaining oil, and an increase of allowance for decline in value THB 1,689 million.
- Other current assets decreased THB 2,191 million, mainly contributed from:
  - Trade and other current receivables decreased THB 2,791 million, mostly from the decline of trade account receivables attributed to the company and BCPT Co., Ltd. in respect to declining price of finished products.
  - Oil fund subsidy receivable increased by THB 715 million, majorly from the average rate of subsidies of the oil fund for every product increasing, combined with the extended duration of receiving the subsidies.
- Other non-current assets rose by THB 11,010 million, mainly due to:
  - Right-of-use assets and Leasehold rights increased by THB 7,844 million from first-time adoption of the Thailand Financial Reporting Standards 16 ["TFRS 16"].
  - Goodwill and Intangible assets increased by THB 255 million and 2,633 million respectively, from BCPG Plc. investing in the hydro power plant project owned by Namsan 3B Power Sole



Co., Ltd. in Laos PDR, through the acquisition of 100 percent share of the latter during late February 2020.

- Deferred tax assets increased by THB 1,759 million from net loss on taxes and impairment assets.
  - Investments in associates and joint ventures decreased by THB 1,656 million mostly from record share of loss from OKEA.
5. Property, plant and equipment net increased by THB 1,479 million. (Depreciation for the period was THB 1,051 million) There were investments made chiefly in Efficiency, Energy, and Environment Enhancement Project (3E) and modify flare system in amount THB 1,663 million. Investment in power plant business (BCPG) in Japan of THB 259 million, and Bio-based products business additional investment of THB 383 million for the construction of its refined glycerin plant.

### Liabilities

As of the 31<sup>st</sup> March 2020, the Company and its subsidiaries has Total Liabilities THB 85,794 million, an increase of THB 16,821 million, changes in liabilities are as follow:

1. Current Liabilities (exclude current portion of long-term loans from financial institutions) increased by THB 3,589 million, mainly contributed from:
  - Short-term loan from financial institutions net increased by THB 7,158 million.
  - Current portion of lease liabilities increased by THB 1,510 million from first-time adoption of the Thailand Financial Reporting Standards 16 ["TFRS 16"].
  - Trade and other current payables decreased by THB 4,678 million, mainly attributed to trade payables attributed to the company from the quantity and price of crude purchased lowering in March 2020 compared to December 2019.
2. Loans from financial institutions and debentures (including current portion of long term debt) increased by THB 7,177 million, due to loan drawdown by THB 6,600 million, and loan repayment by THB 348 million. There was also the adjustments for the effects of foreign currency conversion of financial statement resulted in a loss of THB 925 million.
3. Other non-current liabilities increased by THB 6,054 million mainly attributed to lease liabilities by THB 6,354 million from first-time adoption of the Thailand Financial Reporting Standards 16 ["TFRS 16"].

### Equities

As of 31<sup>st</sup> March 2020, the Company and its subsidiaries' total equity was THB 53,389 million, decreased by THB 5,426 million. The increment was mainly from the net loss for the year of THB 4,316 million, paid dividend by THB 503 million, effects from change in accounting policy resulting in a reduction of retained earnings by THB 20 million, other comprehensive income decreased by THB 514 million and increased in treasury stock of THB 74 million. Total equity attributable to owners of the parent was THB 46,096 million, and book value per share (exclude subordinated perpetual debenture) was THB 26.26.



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

As of 31<sup>st</sup> March 2020, the Company and its subsidiaries had Cash and cash equivalents in the amount of THB 10,605 million, details are as follow:

Cash Flows (Unit: Million Baht)	31-Mar-20	31-Mar-19
Net cash received (used in) operating activities	(3,636)	1,918
Net cash received (used in) investing activities	(5,845)	(2,689)
Net cash received (used in) financing activities	12,663	(605)
Effect of exchange rate changes on balances held in foreign currencies	146	(139)
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>3,329</b>	<b>(1,514)</b>
Cash and cash equivalents as at 1 January	7,276	11,551
<b>Cash and cash equivalents as at 31 March</b>	<b>10,605</b>	<b>10,036</b>

Details of cash received and used are as follows:

Net cash used in operational activities in the amount of THB 3,636 million are mainly attributed to cash received from operating activities of THB 653 million. Net cash used in net operating assets and liabilities of THB 4,258 million, mainly from (1) Trade account receivable and other receivables decreased by THB 1,976 million (2) Inventory decreased by THB 544 million. (3) Other assets decreased by THB 103 million. (4) Trade account payable and other payables decreased by THB 5,936 million (5) Other liabilities decreased by THB 946 million and income tax paid by THB 31 million.

Net Cash used in investing activities of THB 5,845 million, mainly from cash received from interest income and dividend in the amount of THB 121 million. Net cash outflow from acquisition of subsidiaries in the amount of THB 4,310 million. Cash paid for investment in Property, Plant and Equipment by THB 1,759 million. Mostly are work in progress of Efficiency, Energy, and Environment Enhancement Project (3E), modify flare system, power plant business and bio-based products business.

Net Cash received from financing activities of THB 12,663 million, mainly from cash paid for financial cost in the amount of THB 231 million. Received from short term loans from financial institution by THB 7,158 million Cash received from long term loans from financial institution in the amount of THB 6,600 million. Repayment of long - term loans from financial institutions in the amount of THB 348 million and payment of lease liabilities by THB 444 million.



## Financial Ratios

### Financial Ratios (Consolidated)

Profitability Ratios (%)	Q1/2020	Q4/2019	Q1/2019
Gross Profit Margin	-2.82%	6.02%	4.79%
EBITDA Margin	-5.91%	4.83%	4.30%
Net Profit Margin	-10.02%	1.73%	0.87%
Return on Equity <sup>1/</sup> (ROE)	-7.95%	4.10%	3.43%
Return on Assets (ROA)	-1.48%	3.47%	3.56%

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

	31-Mar-20	31-Dec-19	31-Mar-19
<b>Liquidity Ratios</b>			
Current Ratio	1.18	1.39	1.35
Quick Ratio	0.61	0.69	0.67
<b>Financial Policy Ratios</b>			
Interest bearing Debt to Equity	1.21	0.98	1.00
Net Interest bearing Debt to Equity	1.01	0.83	0.80
	<b>Q1/2020</b>	<b>Q4/2019</b>	<b>Q1/2019</b>
DSCR <sup>2/</sup> (Times)	1.01	1.32	1.56

2/ DSCR Calculation is not including long term debt prepayment



## Financial Ratios Calculation

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

### Note:

1/ Average Total Equity attributable to owners of the parent

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

2/ Average Total Assets

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

3/ The numerator of ROE is defined as the Profit attributable to owners of the parent 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 (including current portion of long-term debentures) + Finance lease liabilities (including current portion of finance lease liabilities)



## Environment Management Accounting (EMA)



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, together with financial management.

Currently, EMA report covers refinery business unit, Bangchak and Bang Pa-in Oil distribution Centre.

(Unit: Million Baht)

Environment Management Accounting : EMA	Q1/2020	Q1/2019	△
Material Costs of Product Outputs : Consist of crude oil, ethanol, biodiesel, chemical, energy and utilities in production	23,852	24,988	(1,136)
Material Costs of Non-Product Outputs : Consist of slop and sludge oil, waste water, chemical surplus	9	10	(0.5)
Waste and Emission Control Costs : Consist of maintenance cost of environmental control equipment and depreciation and other fees	73	90	(17)
<b>Prevention and Other Environmental Management Costs</b> : Consist of monitoring and measurement cost, environmental management system expenses	2	4	(2)
<b>Total Expenses</b>	<b>23,937</b>	<b>25,092</b>	<b>(1,155)</b>
Benefit from by-product and waste recycling (Negative number means revenue)	(2)	(4)	(2)

Total environmental cost in Q1/2020 decreased from Q1/2019 by approximately THB 1,155 million (-5% YoY) mainly due to Material Cost of Product Output which was lower by THB 1,136 million. This was due to the fact that global crude price sharply declined because of the COVID-19 outbreak and the Saudi Arabia - Russia oil price war which affected to a 7% drop in crude cost compared to the same period of the previous year. Also, the company's crude run decreased from 110.12 KBD in Q1/2019 to 104.26 KBD in this quarter.

Moreover, the company operated by cost control measure. This resulted in Material Costs of Non-Product Outputs, Waste and Emission Control Costs, and Prevention and Other Environmental Management Costs reduced by THB 19 million, mainly from the quantity of product that was below quality standard decreased by THB 0.6 million and cost of monitoring and measuring declined by THB 2 million.

Benefits from byproducts and waste recycling declined by THB 2 Million (-49% YoY), mostly due to amount of sellable liquid sulfur decreased.

### 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.