



Bangchak Corporation Plc.

Management Discussion & Analysis of Business Operation

For the 2nd quarter period
ended June 30, 2023



S&P Global

MSCI
ESG RATINGS



CCC B BB BBB A AA AAA

THSI
THAILAND
SUSTAINABILITY
INVESTMENT 2022

Carbon Neutrality
by 2030

Net Zero
by 2050

CONTENTS

01

Executive Summary

09

Other Important Events

11

Statement of Income

15

Business Performance



15 – Refinery and Oil Trading Business Group



18 – Marketing Business Group



20 – Clean Power Business Group



22 – Bio-Based Product Business Group



24 – Natural Resources Business Group

26

Statement of
Financial Position

28

Statement of
Cash Flows

29

Financial Ratios

31

Economy and Crude Oil Price Outlook in Q3/2023

Executive Summary

Key Financial Data

| Refinery Business Group | Q2/2023 | Q1/2023 | QoQ | Q2/2022 | YoY | 1H/2023 | 1H/2022 | YoY |
|---|---------|---------|-------|---------|--------|---------|---------|-------|
| Average Crude Run (KBD) | 118.6 | 124.7 | -5% | 122.5 | -3% | 121.7 | 122.3 | -1% |
| Utilization Rate (%) | 99% | 104% | | 102% | | 101% | 102% | |
| GRM (US\$/BBL) | | | | | | | | |
| - Operating GRM | 4.67 | 11.44 | -6.77 | 24.42 | -19.75 | 8.10 | 15.87 | -7.77 |
| - Total GRM | 4.50 | 10.16 | -5.66 | 17.63 | -13.13 | 7.36 | 15.52 | -8.15 |
| Marketing Business Group | | | | | | | | |
| Marketing Margin (Baht/Liter) ^{1/} | 0.93 | 0.93 | 0% | 1.07 | -13% | 0.93 | 0.90 | 4% |
| Sales Volume (Million Liters) | 1,578 | 1,614 | -2% | 1,470 | 7% | 3,191 | 2,878 | 11% |
| Clean Power Business Group | | | | | | | | |
| Electricity Sales Volume (GWh) | 145.5 | 112.8 | 29% | 224.4 | -35% | 258.3 | 403.7 | -36% |
| Bio-based Product Business Group | | | | | | | | |
| Sales Volume (Million Liters) | | | | | | | | |
| - Ethanol | 25.8 | 28.1 | -8% | 25.2 | 2% | 53.9 | 63.4 | -15% |
| - Biodiesel | 65.6 | 67.1 | -2% | 46.6 | 41% | 132.7 | 97.7 | -36% |
| Natural Resources Business Group | | | | | | | | |
| Production Volume-Net to OKEA (kboepd) | 22.78 | 37.94 | -40% | 15.96 | 43% | 30.32 | 15.70 | 93% |
| Realized Liquids Price (US\$/BBL) | 70.10 | 77.70 | -10% | 100.30 | -30% | 75.08 | 94.98 | -21% |
| Realized Gas Price (US\$/mmbtu) | 14.47 | 20.72 | -30% | 14.68 | -1% | 17.51 | 23.16 | -24% |

Note: ^{1/} Marketing Margin of Bangchak and BGN (excluding Inventory gain/(loss) and net realizable value (NRV))

| Unit: THB Million | Q2/2023 | Q1/2023 | QoQ | Q2/2022 | YoY | 1H/2023 | 1H/2022 | YoY |
|--|---------------|---------------|-------------|---------------|-------------|----------------|----------------|-------------|
| Total Revenue | 68,023 | 80,380 | -15% | 83,796 | -19% | 148,403 | 152,852 | -3% |
| Refinery and Trading Business ^{1/} | 58,329 | 65,974 | -12% | 74,171 | -21% | 124,303 | 133,468 | -7% |
| Marketing Business ^{2/} | 45,434 | 49,220 | -8% | 46,926 | -3% | 94,654 | 86,352 | 10% |
| Clean Power Business ^{3/} | 1,053 | 1,057 | -0.4% | 1,436 | -27% | 2,110 | 2,595 | -19% |
| Bio-Based Products Business ^{4/} | 3,049 | 2,942 | 4% | 3,413 | -11% | 5,991 | 7,153 | -16% |
| Natural Resources Business ^{5/} | 5,219 | 9,772 | -47% | 4,618 | 13% | 14,991 | 10,321 | 45% |
| Eliminations and others | (45,061) | (48,585) | 7% | (46,769) | 4% | (93,646) | (87,037) | -8% |
| Accounting EBITDA | 6,628 | 10,992 | -40% | 12,572 | -47% | 17,620 | 26,286 | -33% |
| Refinery and Trading Business | 1,373 | 4,029 | -66% | 6,506 | -79% | 5,402 | 11,527 | -53% |
| Marketing Business | 553 | 737 | -25% | 1,468 | -62% | 1,290 | 2,585 | -50% |
| Clean Power Business | 989 | 852 | 16% | 1,112 | -11% | 1,841 | 4,187 | -56% |
| Bio-Based Products Business | 138 | 107 | 29% | 93 | 48% | 245 | 437 | -44% |
| Natural Resources Business | 3,701 | 5,414 | -32% | 3,541 | 5% | 9,115 | 7,792 | 17% |
| Eliminations and others | (126) | (147) | 14% | (148) | 15% | (273) | (242) | -13% |
| Profit attributable to owners of the parent | 458 | 2,741 | -83% | 5,276 | -91% | 3,199 | 9,633 | -67% |
| Earnings (Loss) per share (Baht) | 0.24 | 1.91 | | 3.79 | | 2.16 | 6.91 | |

Note: ^{1/} EBITDA from Refinery and Trading Business of the company (BCP, BCP Trading Pte. Ltd. (BCPT), Bangchak Fuel Pipeline and Logistic Co., Ltd. (BFPL), BSGF Co., Ltd (BSGF) and others

^{2/} EBITDA from Marketing Business of the company (BCP), Bangchak Green Net Co., Ltd. (BGN), Bangchak Retail Co., Ltd., (BCR) and others

^{3/} EBITDA from Clean Power Business of BCPG Plc. (BCPG Group)

^{4/} EBITDA from Bio-Based Products Business of BBGI Plc. (BBGI Group)

^{5/} EBITDA from Natural Resources Business of OKEA ASA (OKEA), BTSG Co., Ltd. (BTSG), and others



Executive Summary

In 1H/2023, Bangchak Group earned a sales and services revenue of THB 148,403 million (-3% YoY) and EBITDA of THB 17,620 million (-33% YoY). The **Refinery and Oil Trading Business Group** was pressured by lower Operating GRM compared to 1H/2022, aligning with falling energy prices. Such decline was attributed to concerns over the global economic slowdown which affected oil demand, resulting in an Inventory Loss of THB 2,952 million (including a reversal of loss on net realized value (NRV)). However, Bangchak Group has invested and expanded into various potential businesses, such as the acquisition of stakes in Wintershall Dea to continue the expansion of the **Natural Resources Business Group**. As well as the investment in 2 additional projects of natural gas power plant in the United States of America (Carrol & South Field), aiming to generate more revenue to Bangchak Group. As a result, the **net profit attributable to owners of the parent was THB 3,199 million** (-67% YoY), representing the **earnings per share of THB 2.16**. The key operating results of each business group are as follows:



Refinery Business Group

EBITDA -53% YoY

(-) Operating GRM ebbed by US\$7.77/BBL to US\$8.10/BBL, owing to a broad-based decline in the crack spreads across products alongside the global economic backdrop.

(-) Recognition of Inventory Loss totaled US\$3.23/BBL (equivalent to THB 2,443 million). Overall crude oil prices plummeted in 1H/2023 since crude oil supply became less tightened and there were concerns over the economic growth and oil demand. Meanwhile, 1H/2022 recorded an Inventory Gain of US\$9.91/BBL (equivalent to THB 7,434 million) due to rising oil prices as the Russia-Ukraine conflict tightened the global oil supply.

(+) Recognition of gains from the forward contracts of crude oil and oil products (including fair value measurement per the accounting standards) totaled US\$2.50/BBL, whereas 1H/2022 recorded a loss of US\$10.26/BBL.



Marketing Business Group

EBITDA -50% YoY

(-) Recognized an Inventory Loss as a result of lower refined product prices, in contrast to an Inventory Gain in 1H/2022, buoyed by higher refined product prices.

(+) Marketing margin edged up 4% YoY to THB 0.93/liter. The increase was attributed to the retail price adjustment in 1H/2023 to better reflect actual costs.

(+) Total sales volume rose 11% YoY to 3,191 million liter, mainly driven by aviation fuels which rebounded alongside the global tourism sector and marketing campaigns to bolster sales volume at service stations.



Executive Summary

EBITDA -50% YoY

(+) EBITDA (excluding Inventory Loss) improved by 15% YoY, as a result of the higher sales volume growth compared to pre-COVID and the optimum growth of the marketing margin.



Clean Power Business Group

EBITDA -56% YoY

(-) Softened operating performance mainly results from the expiration of the adder scheme for solar projects in Thailand and the temporary halt of hydropower projects in Lao PDR. The hydropower projects were in preparation to transmit electricity production to Vietnam Electricity (EVN); nonetheless, the projects have successfully commenced commercial operation with EVN since 15 June 2023, according to the power purchase agreement.

(-) In 1H/2022, a significant extraordinary item amounting to THB 2,031 million was recognized due to the complete disposal of the investment in Star Energy Group Holdings Pte. Ltd. ("SEGHPL") in March 2022; while there was none of this item in 1H/2023.

(-) Recorded a decline in share of profit, primarily attributable to the divestment of geothermal power plant business ("SEGHPL") in Indonesia. In response, BCPG has made strategic investments in four combined cycle gas turbine power plants in the United States, namely Carrol & South Field (151 MW, transaction completed on February 27, 2023) leading to realized profit sharing since March 2023. Together with the recent acquisitions of Hamilton Liberty & Patriot projects (426 MW, transaction completed on 12 July 2023), these strategic investments have significantly expanded BCPG's production portfolio from its original capacity of 390.7 MW to a remarkable 968.7 MW.



Bio-Based Products Business Group

EBITDA -44% YoY

(-) For production and distribution of biodiesel business (B100), experienced a decline in gross profit, which can be attributed to weakening selling prices of biodiesel, crude glycerin, and refined glycerin compared to 1H/2022 which CPO price experienced a sharp upturn driven by a tight supply situation. Notably, Indonesia, the world's largest palm oil producer and exporter, took the measure of suspending palm oil exports, further contributing to the challenging market conditions in 1H/2022.

(+) For the production and distribution of ethanol business, the higher recognition of gross profit can be attributed to the increase in the average ethanol price, which aligns with the corresponding rise in raw material costs.

(+) For the high-value bio-based product business experienced a rise in gross profit, primarily driven by the successfully launching new health and well-being products under the brand "B Nature+" (B Nature Plus). Furthermore, the expansion



Executive Summary

EBITDA -44% YoY

of distribution channels, including online platforms, television, and prominent pharmacies in Bangkok area, has also contributed to this increase in gross profit.



Natural Resources Business Group

EBITDA +17% YoY

(+) Sales volume of OKEA remarkably improved by 93% YoY, owing to the exceeding sales volume of oil and gas than the contracted production capacity in Q1/2023. Furthermore, a performance recognition of the new petroleum field acquired from Wintershall Dea in Q4/2022 contributed to the full half-year performance recognition of 2023.

(-) Average selling price of oil and gas (liquid price) plummeted by 21% YoY, whereas the selling price of natural gas dropped by 24% YoY. The decline was attributed to concerns over the global economic slowdown. In addition, a tight supply triggered by the Russia-Ukraine war has subsided in 1H/2023, unlike in 1H/2022.

In Q2/2023, Bangchak Group earned a sales and services revenue of THB 68,023 million (-15% QoQ, -19% YoY) and EBITDA of THB 6,628 million (-40% QoQ, -47% YoY). In this quarter, oil-related business was impacted by lower crude and refined products prices. The decline was attributed to the weakening economy due to inflationary pressures as well as an impact of soft demand in China and supply surplus, resulting in Bangchak Group's Inventory Loss of THB 1,036 million (including a reversal of loss on net realized value (NRV)). The sales volume of the **Natural Resources Business** declined as there was a significantly exceeding sales volume of oil and gas than the contracted production capacity (Overlift) in Q1/2023. However, for **Clean Power Business**, the hydropower plants in Lao PDR have operated and successfully distributed their electricity output to the Socialist Republic of Vietnam in accordance with the Power Purchase Agreement established with Vietnam Electricity (EVN) in June 2023, after the temporary halt in Q1/2023. Therefore, the **net profit attributable to owners of the parent was THB 458 million** (-83% QoQ, -91% YoY) in Q2/2023, representing the **earnings per share of THB 0.24**. The key operating results of each business group are as follows:



Refinery Business Group

EBITDA -66% QoQ

(-) Operating GRM dropped by US\$6.77 to US\$4.67/BBL due mainly to lower crack spreads across all products in line with global market conditions.

EBITDA -79% YoY

(-) Operating GRM tumbled by US\$19.75/BBL owing to lower crack spreads across all products, driven by modest rebound in oil demand. In contrast, Q2/2022 recorded high



Executive Summary

| EBITDA -66% QoQ | EBITDA -79% YoY |
|--|--|
| <p>(-) As GRM declined, Bangchak Refinery adjusted production level to 118.6 KBD, decreased QoQ.</p> <p>(+) Recognized an Inventory Loss of US\$2.02/BBL or equivalent to THB 757 million (including reversal of loss on net realized value (NRV)); the inventory loss shrank QoQ since the global crude oil prices receded at a slower pace compared to the previous quarter.</p> | <p>crack spreads as the Russia-Ukraine conflict tightened the global oil supply.</p> <p>(-) Recognized an Inventory Loss in Q2/2023 owing to lower global crude oil prices, in contrast to an Inventory Gain of US\$10.04/BBL (equivalent to THB 3,868 million) in Q2/2022.</p> <p>(+) Recognition of gains from the forward contracts of crude oil and oil products totaled US\$1.85/BBL, whereas Q2/2022 recorded a loss of US\$16.83/BBL (equivalent to THB 6,486 million).</p> |



Marketing Business Group

| EBITDA -25% QoQ | EBITDA -62% YoY |
|--|---|
| <p>(-) Total sales volume decreased slightly by 2% QoQ to 1,578 million liter as power plants switched from diesel to liquefied natural gas (LNG), thus causing a shrinkage in industrial demand for diesel. Apart from that, the sales volume at service stations lightly dropped during the rainy season.</p> <p>(0) Marketing margin was unchanged from the previous quarter at THB 0.93/liter.</p> | <p>(-) Recognized an Inventory Loss in Q2/2023 due to falling refined product prices, in contrast to an Inventory Gain in Q2/2022.</p> <p>(-) Marketing margin ebbed by 13% YoY as the retail price could not be properly adjusted to reflect the higher cost of refined products.</p> <p>(+) Total sales volume increased 7% YoY from both retail and industrial segments. The growth in the retail market was attributed to promotional and marketing campaigns to bolster sales and the expansion of service station coverage. Meanwhile, the industrial segment has continuously promoted JET Fuel sales, whilst the global oil demand gradually resumed a firm momentum.</p> |



Clean Power Business Group

| EBITDA +16% QoQ | EBITDA -11% YoY |
|---|---|
| <p>(+) The hydropower plants in Lao PDR experienced an increase in electricity sales volume QoQ following the</p> | <p>(-) The electricity sales volume of hydropower plants in Lao PDR fell by 76% YoY from the operational shutdowns.</p> |



Executive Summary

| EBITDA +16% QoQ | EBITDA -11% YoY |
|---|---|
| <p>commencement of its commercial operation and the successful distribution of electricity (COD) to Vietnam Electricity (EVN), as stated earlier.</p> <p>(-) Total revenue of solar power plants in Thailand declined due to the impact of the expiration of the adder scheme of 16 MW solar power plants in April 2023.</p> <p>(-) The electricity sales volume of wind power plants in Thailand dropped 29% QoQ resulted from lower wind speed.</p> <p>(-) Recognition share of loss from investments in the associated company increased QoQ from the previous quarter. This was mainly due to the recording of losses from wind power projects in the Philippines which entering low season, as well as the share of profit from the Combined Cycle Gas Turbine (CCGT) power business in the United States declined QoQ due to the maintenance shutdown in April.</p> | <p>(-) The revenue from solar power plants in Thailand experienced a decline due to the gradual expiration of the adder scheme, totaling 82 MW, as stated earlier.</p> <p>(-) Recognized share of profit from investments in the associated company of THB 20 million, increased YoY primarily influenced by the wind power projects in the Philippines experiencing lower wind speed at the project.</p> |



Bio-Based Products Business Group

| EBITDA +29% QoQ | EBITDA +48% YoY |
|---|---|
| <p>(+) Biodiesel business (B100)'s gross profit improved as selling price of biodiesel increased in accordance with the decrease in crude palm oil production and Thailand's domestic crude palm oil stock level.</p> <p>(-) Ethanol business recorded lower sales revenue and gross profit due to a decrease in sales volume of ethanol by 8% QoQ in accordance with the sales management plan and higher raw material cost.</p> | <p>(+) For the ethanol business, sales revenue and gross profit improved, driven by an increase in average selling price in accordance with higher raw material cost.</p> <p>(-) For biodiesel business (B100), experienced a drop in gross profit due to decreased selling prices of biodiesel and its by-products, including glycerin and refined glycerin.</p> |



Natural Resources Business Group

| EBITDA -32% QoQ | EBITDA +5% YoY |
|--|--|
| <p>(-) Sales volume of OKEA shrank 40% QoQ, mainly dragged by lower sales volume of oil, which had significantly exceeded the contracted production capacity (Overlift) in Q1/2023, unlike in Q2/2023.</p> <p>(-) Average selling price of oil and gas (Liquid Price) dropped by 10% QoQ as market concerns over the global economic slowdown drove crude oil prices downward. Higher discounts for natural gas liquids (NGL) also led to the shrinking liquid price. Meanwhile, the selling price of natural gas plummeted by 30% QoQ as the winter season came to an end, while European natural gas reserves remained high.</p> | <p>(+) Sales volume of OKEA expanded by 43% YoY, driven by higher petroleum sales thanks to a performance recognition of the field acquired from the Wintershall Dea. Besides, the production capacity at the Yme field has been improving.</p> <p>(-) Average selling price of oil and gas plunged by 30% YoY, owing to concerns over economic challenges. Meanwhile, Q2/2022 witnessed a tight oil supply owing to the Russia-Ukraine war.</p> |

Financial Position as of 30 June 2023, Bangchak Group had **cash and cash equivalents of THB 51,256 million** and **total assets of THB 237,570 million**, a decrease of THB 4,774 million when compared to 31st December 2022, Bangchak Group with **total liabilities of THB 152,238 million** which decreased by THB 6,728 million and **total equity of THB 85,332 million**, an increase of THB 1,954 million. Total equity attributable to owners of the parent was THB 64,599 million.

In June 2023, Bangchak Group signed a construction agreement for **Sustainable Aviation Fuel (SAF)** production unit as Thailand's first and only company to produce SAF from used cooking oil, with a production capacity of 1 million liters per day. This is a joint effort to support the aviation industry in reducing carbon dioxide emissions into the atmosphere, which enhances '**Bangchak's Leading Role in Renewable Energy**' and marks an important step towards a 'Leader in Future Energy.' Additionally, Bangchak Group launched '**Fry to Fly**' (**Tod Mai Ting**) campaign to buy and collect used cooking oil from the public, at designated service stations, to be used for blending with jet fuel. The establishment of the SAF production unit is another clear manifestation of Bangchak's diligent implementation of the BCP 316 NET plan, aiming for Carbon Neutrality by 2030 and achieving Net Zero GHG Emissions by 2050. It is also an integrated effort in developing the BCG Economy Model across three dimensions: Bioeconomy, Circular Economy, and Green Economy, to drive Thailand's economy in tandem with social development and environmental sustainability.

In Q3/2023, oil prices will likely increase, given the anticipated tight crude oil supply as the OPEC+ group announced oil output cuts. In addition, the refining margin of cracking refineries in Singapore is expected to improve backed by the anticipated demand surges, which could be a positive impact to the Refinery and Oil Trading Business.



Executive Summary

Bangchak Group continues to closely monitor and assess the energy situation and stand ready to adjust our business plan accordingly. The Company made an announcement in respect of the acquisition of shares in Esso (Thailand) Public Company Limited from ExxonMobil Asia Holding Pte. Ltd. and received the approval of The Trade Competition Commission Thailand, subject to specific conditions, which the Company is currently under consideration and reviewing the conditions to determine the future course of action. The transaction is expected to be completed by the end of 2023 which will help strengthen Bangchak Group's Refinery and Marketing Businesses.



Other Important Events until Present

April 2023

- BBGI: On April 5, 2023, the 2023 Annual General Meeting of Shareholders of BBGI resolved to approve dividend payment for the second-half-year operations of 2022 at THB 0.05 per share (paid on May 3, 2023) equivalent to approximately THB 72.3 million. The total dividend payment for the year 2022 is THB 0.25 per share.
- BCPG: On April 10, 2023, the 2023 Annual General Meeting of Shareholders of BCPG resolved to approve dividend payment for the second-half-year operations of 2022 at THB 0.16 per share (paid on April 21, 2023) equivalent to approximately THB 465.24 million. The total dividend payment for the year 2022 is THB 0.36 per share.
- BCP: On April 11, 2023, the 2023 Annual General Meeting of Shareholders resolved to approve as follows.
 - Dividend payment for the second-half-year operations of 2022 at the rate of THB 1.00 per share (paid on April 24, 2023). The total dividend payment for the year 2022 is THB 2.25 per share.
 - The direct acquisition of 2,283,750,000 ordinary shares of ESSO (Thailand) Public Company Limited (equivalent to approximately 65.99% of the total issued shares of ESSO as of September 30, 2022) from ExxonMobil Asia Holdings Pte. Ltd. and the tender offer for all remaining no more than 1,177,108,000 ordinary shares in ESSO (equivalent to approximately 34.01% of the total issued shares in ESSO as of September 30, 2022) after the completion of the Shares Acquisition Transaction to acquire the remaining ESSO shares at the same price as the purchase price of Esso shares from ExxonMobil Asia Holdings Pte.
 - The limit for debenture issuance and offer of up to THB 80,000 million or equivalent currencies at a given period for five years (2023-2027).

May 2023

- BBGI: On May 12, 2023, BBGI increased its stake in BBGI Bioethanol (Chachoengsao) Company Limited (“BBGI-PS”) by purchasing from Sima Inter Product Company Limited, causing its stake to increase from 85% to 100%. Currently, BBGI-PS operates in the business of production and distribution of ethanol with a factory located in Phanom Sarakham, Chachoengsao Province and a capacity of 150,000 liters/day.
- BCPG: On May 18, 2023, Indochina Development and Operation Holding Pte. Ltd. (“IDO”), BBGI’s indirect subsidiary, acquired 100% share of SMP. AS Pte. Ltd. (“SMP AS”). SMP AS holds 10% of Monsoon Wind Power Company Limited (“MWP”). Therefore, BCPG becomes a net indirect shareholder in MWP with the total proportion of 48.25%, increasing from 38.25%, for an additional investment of 600-Megawatt Wind Farm in Lao People’s Democratic Republic.
- BCPG: On May 23, 2023, BCPG established a new subsidiary, BCPG Energy Logistics Company Limited, with an initial registered capital of THB 1 million. BCPG holds 100% of issued shares.



Other Important Events until Present

- BCPG: On May 31, 2023, BCPG completed the acquisition of all shares of Asia Link Terminal Company Limited (“ALT”) and intended for ALT to enter the appointment of Bangkok Fuel Pipeline and Logistics Company Limited (“BFPL”) as the Asset and Tank & Terminal Management Contract including operating the seaport and pipeline of ALT in Phetchaburi Province. The transaction size is THB 410 million with no more than 6 years in total of the contract life (starting 1 June 2023 to 31 May 2029).
- BCP: On May 31, 2023, the Company announced the end of the Resale of Share Repurchase Project for Financial Management Purpose. Starting from December 23, 2022, the Company resold shares of 19,238,000 shares (of which 16,221,300 shares were sold to directors and employees of the Company and 3,016,700 shares were sold via the trading system of the Stock Exchange of Thailand), equivalent to 1.40% of the total shares sold. The total amount received was THB 551,213,532.

June 2023

- BCPG: BCPG Indochina Company Limited (“BIC”), a subsidiary of BCPG, invested in the hydropower plant projects, named Nam San 3A and Nam San 3B, in Lao People’s Democratic Republic with total capacity of 114 MW. The projects have commenced commercial operation and already distributed electricity to the Socialist Republic of Vietnam according to the Power Purchase Agreement with Electricity of Vietnam (“EVN”) on June 15, 2023. The revenue recognition has started since mid-June 2023.
- OKEA: The dividend payment for Q1/2022 of NOK 1.00 per share, or approximately NOK 104 million, was paid on June 15, 2023.

July 2023

- BCPG: On July 12, 2023, BCPG has fulfilled the terms and conditions under the Purchase and Sale Agreement and the transfer of the 25% stake in total shares in Hamilton Holding II LLC (“Hamilton”) has been successfully completed. Hamilton holds 100% stake in two projects of natural gas power plants in the United States of America (Liberty and Patriot). These two investments have increased BCPG’s total installed capacity by an additional 426 MW.
- OKEA: On July 13, 2023, OKEA announced the dividend payment for Q2/2023 at the rate of NOK 1.00 per share or approximately NOK 104 million, to be paid in September 2023.
- BCP: On July 18, 2023, the Company received an approval of The Trade Competition Commission Thailand, subject to specific conditions, in respect of the acquisition of shares in Esso (Thailand) Public Company Limited.

August 2023

- BCPG: On August 7, 2023, BCPG entered into the Purchase and Sale Agreement to acquire additional 40% of total shares in Carroll County Energy Holdings LLC (“CCE”), which operates Combined Cycle Power Generation Plant Project, with an amount not exceeding USD 145 million or equivalent to THB 5,031 million. This investment has increased BCPG’s total installed proportion from its original capacity by 280 MW to 341 MW.



Statement of Income

| Consolidated Statement of Income (THB Million) | Q2/2023 | Q1/2023 | QoQ | Q2/2022 | YoY | 1H/2023 | 1H/2022 | YoY |
|--|--------------|--------------|-------------|---------------|-------------|---------------|---------------|-------------|
| Revenue from sale of goods and rendering of services | 68,023 | 80,380 | -15% | 83,796 | -19% | 148,403 | 152,851 | -3% |
| Cost of sale of goods and rendering of services | (62,631) | (72,071) | 13% | (65,578) | 4% | (134,702) | (122,379) | -10% |
| Gross Profit | 5,392 | 8,309 | -35% | 18,218 | -70% | 13,701 | 30,472 | -55% |
| Other income | 717 | 627 | 14% | 477 | 50% | 1,344 | 826 | 63% |
| Selling and administrative expenses | (2,100) | (1,860) | 13% | (2,074) | 1% | (3,960) | (3,743) | 6% |
| Exploration and evaluation expenses | (398) | (78) | >100% | (95) | >100% | (476) | (441) | 8% |
| Gain (loss) from derivatives | 210 | 1,225 | -83% | (6,422) | >100% | 1,435 | (7,742) | >100% |
| Gain on foreign exchange | 239 | 292 | -18% | (516) | >100% | 531 | (456) | >100% |
| Gain (loss) from fair value adjustment of contingent consideration | 58 | (52) | >100% | - | N/A | 6 | - | N/A |
| Gain from sale of investment | - | - | N/A | - | N/A | - | 2,031 | -100% |
| Reversal of (loss) from impairment of assets | (966) | (412) | <-100% | 4 | <-100% | (1,378) | 567 | <-100% |
| Profit from operating activities | 3,152 | 8,051 | -61% | 9,592 | -67% | 11,203 | 21,514 | -48% |
| Finance costs | (1,000) | (1,032) | -3% | (1,043) | -4% | (2,032) | (1,879) | 8% |
| Impairment gain and reversal of impairment loss (impairment loss) determined in accordance with TFRS 9 | 3 | 10 | -70% | (20) | >100% | 13 | (404) | >100% |
| Share of profit (loss) of associates and joint ventures accounted for using equity method | (40) | 29 | <-100% | (7) | <-100% | (11) | 141 | <-100% |
| Profit (loss) before income tax expense | 2,115 | 7,058 | -70% | 8,522 | -75% | 9,173 | 19,372 | -53% |
| Tax expense | (1,406) | (3,689) | -62% | (3,033) | -54% | (5,095) | (8,380) | -39% |
| Profit (loss) for the period | 709 | 3,369 | -79% | 5,489 | -87% | 4,078 | 10,992 | -63% |
| Owners of the parent | 458 | 2,741 | -83% | 5,276 | -91% | 3,199 | 9,633 | -67% |
| Non-controlling interests | 251 | 628 | | 213 | | 879 | 1,359 | |
| Basic earnings per share (Baht) | 0.24 | 1.91 | | 3.79 | | 2.16 | 6.91 | |
| Net profit from normal operations (excluding extraordinary items) | 937 | 2,932 | -68% | 5,503 | -83% | 3,869 | 6,503 | -41% |



Statement of Income

Performance of 1H/2023 compared to 1H/2022

Total revenue from sales and services was THB 148,403 million, decreased by 3% YoY, mainly driven by revenue from oil-related businesses. The decline was attributed to lower average selling prices in accordance with falling crude and refined product prices, which in line with global market conditions.

Gross profit was THB 13,701 million, decreased by 55% YoY, as the Refinery Business recognized Inventory Loss of US\$3.23/BBL (including reversal of loss on NRV). Meanwhile, 1H/2022 recorded an Inventory Gain of US\$9.91/BBL. Operating GRM plummeted by US\$7.77/BBL to US\$8.10/BBL, also resulted in lower gross profit.

Selling and administrative expenses were THB 3,960 million, an increase of 6% YoY, mostly from employee-related expenses and expenses for consultant services.

Profit from derivatives was THB 1,435 million, mainly from gains on fair value measurement of crude and refined products price futures contracts in accordance with accounting standards.

| Unit: THB Million | 1H/2023 | 1H/2022 | YoY |
|---|----------------|--------------|------------------|
| Extraordinary items | (2,035) | 5,145 | <-100% |
| Main item as follows: | | | |
| Inventory Gain (loss) (including reversal of / loss on NRV) | (2,952) | 8,393 | |
| Gain (loss) from unrealized of derivatives | 1,436 | (5,119) | |
| Gain (loss) on foreign exchange | 531 | (456) | |
| Reversal of (loss) from impairment of assets | (1,378) | 567 | |
| Reversal of (loss) of impairment in accordance with TFRS 9 | 13 | (404) | |
| Gain from sale of investment | - | 2,031 | |

- **Loss from inventory loss (including reversal of loss on NRV)** was due to the decline in global crude oil prices in 1H/2023. Meanwhile, 1H/2022 experienced an uptrend in crude oil prices.
- **Gain from unrealized derivatives** increased as crack spread is likely to narrow YoY.
- **Gain on foreign exchange** increased due to the weakening Thai Baht in 1H/2023. Meanwhile, the Natural Resources business recorded loss on foreign exchange owing to weakening Norwegian Krone in 1H/2022.
- **Loss on impairment of assets** was due to the impairment of OKEA's assets from the adjustment of the reserve volume of the Yme field, which Bangchak Group recognized the loss after tax and equity share of approximately THB 128 million in 1H/2023.
- **Gain from sale of investment** was from the disposal of whole investment in Star Energy Group Holdings Pte. Ltd. ("SEGHPL") which Bangchak Group recognized a gain of THB 2,031 million in 1H/2022.

Tax expense was THB 5,095 million, declined by 39% YoY mainly driven by lower profits from Natural Resources and oil-related businesses. However, the effective tax rate increased YoY.

Net profit attributable to the owners of the parent was THB 3,199 million, a decrease of 67% YoY, representing the earning per share of THB 2.16.

Net profit from normal operations (excluding extraordinary items) was THB 3,869 million, decreased by 41% YoY.



Statement of Income

Performance of Q2/2023 compared to Q1/2023

Total revenue from sales and services was THB 68,023 million, decreased by 15% QoQ, mainly driven by revenue of oil-related businesses. The decline was attributed to the lower sales volume of oil products from the industrial segment.

Gross profit was THB 5,392 million, declined by 35% QoQ, as the Operating GRM dropped by US\$6.77/BBL to US\$4.67/BBL. Although, Inventory Loss (including reversal of loss on NRV) dropped to US\$2.02/BBL, decreased by US\$2.39/BBL. Also, there was a significant decline in sales volume of oil and natural gas in the Natural Resources Business.

Selling and administrative expenses were THB 2,100 million, an increase of 13% QoQ, mainly from expenses related to marketing campaign.

Profit from derivatives was THB 210 million, mainly from gains on fair value measurement of crude and refined products price futures contracts in accordance with accounting standards.

| Unit: THB Million | Q2/2023 | Q1/2023 | QoQ |
|--|----------------|--------------|------------------|
| Extraordinary items | (1,539) | (496) | <-100% |
| Main item as follows: | | | |
| Inventory Loss (including reversal of / loss on NRV) | (1,036) | (1,916) | |
| Gain from unrealized of derivatives | 4 | 1,432 | |
| Gain on foreign exchange | 239 | 292 | |
| Loss on impairment of assets | (966) | (412) | |

- **Loss from inventory loss (including reversal of /loss on NRV)** declined as the global crude oil prices receded at a slower pace compared to the previous quarter.
- **Gain from unrealized derivatives** was mainly due to gains on fair value from the forward contracts of crude oil and oil products in accordance with accounting standards, as crack spread tends to decline from the previous quarter. However, there was loss on fair value from the forward contracts of foreign exchange from the weakening of Thai Baht.
- **Gain on foreign exchange** was slightly decreased owing to the depreciation of Thai Baht.
- **Loss from impairment of assets** increased mainly from the impairment of OKEA's assets, as a result of the adjustment in reserve of the Yme field. Bangchak Group recognized the loss after tax and equity share of approximately THB 96 million in Q2/2023 and THB 31 million in Q1/2023.

Tax expense was THB 1,406 million, decreased by 62% QoQ. The decline was attributed to the lower operating profits from Natural Resources and oil-related businesses. However, the effective tax rate was higher than the previous quarter.

Net profit attributable to the owners of the parent was THB 458 million, a decrease of 83% QoQ, representing the earnings per share of THB 0.24.

Net profit from normal operations (excluding extraordinary items) was THB 937 million, decreased by 68% QoQ.



Statement of Income

Performance of Q2/2023 compared to Q2/2022

Total revenue from sales and services was THB 68,023 million, decreased by 19% YoY, mainly driven by revenue of oil-related businesses. The decline was attributed to the lower average selling prices per unit, which aligns with falling crude oil and refined products prices in line with the global market conditions.

Gross profit was THB 5,392 million, dropped by 70% YoY, as the Refinery Business recorded Inventory Loss (including reversal of loss on NRV) of US\$2.02/BBL in Q2/2023, in contrast to an Inventory Gain of US\$10.04/BBL in Q2/2022. Also, the Operating GRM tumbled by US\$19.75/BBL to US\$4.67/BBL.

Selling and administrative expenses were THB 2,100 million, slightly increased by 1% YoY, mostly from expenses related to marketing campaign and logistics.

Profit from derivatives was THB 210 million, mainly from gains on fair value measurement of crude and refined products price futures contracts in accordance with accounting standards.

| Unit: THB Million | Q2/2023 | Q2/2022 | YoY |
|--|----------------|--------------|------------------|
| Extraordinary items | (1,539) | (296) | <-100% |
| Main item as follows: | | | |
| Inventory Loss (including reversal of / loss on NRV) | (1,036) | 4,276 | |
| Gain from unrealized of derivatives | 4 | (4,059) | |
| Gain (loss) on foreign exchange | 239 | (516) | |
| Loss on impairment of assets | (966) | 4 | |

- **Loss from inventory loss (including reversal of /loss on NRV)** was due to the falling global crude oil prices in Q2/2023, while there was an Inventory gain in Q2/2022 as crude oil prices experienced an uptrend.
- **Gain from unrealized derivatives** increased as crack spread tended to decline YoY.
- **Gain on foreign exchange** was increased as Thai Baht slightly weakened in Q2/2023. Meanwhile, Natural Resources business recorded loss on foreign exchange in Q2/2022, as a result of the weakening of US Dollar.
- **Loss from impairment of assets** was mainly from the impairment of OKEA's assets, resulting from the adjustment in reserve of the Yme field. Bangchak Group recognized the loss after tax and equity share of approximately THB 96 million in Q2/2023.

Tax expense was THB 1,406 million, decreased by 54% YoY. The decline was attributed to the lower operating profits from oil-related businesses. The effective tax rate rose QoQ.

Net profit attributable to the owners of the parent was THB 458 million, decreased by 91% YoY, representing the earnings per share of THB 0.24.

Net profit from normal operations (excluding extraordinary items) was THB 937 million, a decrease of 83% YoY.



Performance by Business Group



1) Refinery and Oil Trading Business Group

Crude Oil and Crack Spread Situation

| Crude Oil Price (US\$/BBL) | Q2/2023 | Q1/2023 | QoQ +/- | Q2/2022 | YoY +/- | 1H/2023 | 1H/2022 | YoY |
|-------------------------------|---------|---------|------------|---------|------------|---------|---------|--------|
| Dubai (DB) | 77.59 | 80.23 | -2.64 | 108.22 | -30.63 | 78.92 | 102.17 | -23.25 |
| Dated Brent (DTD) | 78.05 | 81.17 | -3.12 | 113.93 | -35.88 | 79.66 | 107.94 | -28.28 |
| DTD-DB | 0.46 | 0.94 | -0.48 | 5.71 | -5.24 | 0.74 | 5.77 | -5.03 |
| Crack Spread (US\$/BBL) | Q2/2023 | Q1/2023 | QoQ | Q2/2022 | YoY | 1H/2023 | 1H/2022 | YoY |
| UNL95-DB | 16.54 | 18.71 | -2.17 | 35.14 | -18.60 | 17.63 | 26.41 | -8.77 |
| IK-DB | 13.97 | 26.03 | -12.06 | 39.62 | -25.65 | 20.05 | 27.98 | -7.93 |
| GO-DB | 14.54 | 24.81 | -10.27 | 43.60 | -29.06 | 19.72 | 31.64 | -11.92 |
| LSFO-DB | 5.29 | 6.45 | -1.16 | 24.80 | -19.51 | 5.87 | 19.34 | -13.47 |

The average Dubai crude oil price in Q2/2023 dropped by US\$2.64/BBL compared to Q1/2023. The decline was attributed to market concerns over the global economic deceleration, given a persistently high US inflation that could impair future economic growth and oil demand. Meanwhile, China's economic rebound has fallen behind the market forecast, fueling concerns over the global oil demand outlook. Nonetheless, crude oil prices should gain impetus in 2H/2023 as tight oil demand will likely ease, following the OPEC+ announcement of oil production cuts. On a yearly basis, the average Dubai crude oil price tumbled by US\$30.63/BBL compared to Q2/2022, given downward pressures from the Fed's hawkish hikes and subsiding concerns over tight supply from the Russia-Ukraine conflict.

The average Dated Brent-Dubai spread (DTD-DB) in Q2/2023 slightly weakened by US\$0.48/BBL compared to Q1/2023, owing to the European economic slowdown despite lower crude run rates among European refineries during the maintenance season. Compared to Q2/2022, the average Dated Brent-Dubai spread (DTD-DB) ebbed by US\$5.24/BBL as the European Central Bank's hawkish stance continued to weigh down European economic activities.

The spread between finished products and Dubai Price

- **Gasoline and Dubai crack spread (UNL95-DB) in Q2/2023, on average,** declined from Q1/2023 due to a slowdown in gasoline demand from Asia. Besides, a rebound in China's road transport demand was weaker than anticipated and thus resulting in higher Chinese gasoline exports. On a yearly basis, the average Gasoline and Dubai crack spread (UNL-DB) tumbled from Q2/2022, as persistent inflation undermined gasoline demand whilst the Russia-Ukraine tension gradually eased off.
- **Jet (Kerosene) and Dubai crack spread (IK-DB) in Q2/2023, on average,** dipped from Q1/2023 since the lifting of travel restrictions proceeded slower than expected—particularly in China. By contrast, the supply has been on



Performance by Business Group

the rise. Compared to Q2/2022, the average Jet (Kerosene) and Dubai crack spread (IK-DB) dropped in Q2/2023, owing to easing concerns over tight supply. This quarter, pressures from the Russia-Ukraine conflict started to moderate, while global supply continued rising as global refineries maintained a high crude run.

- **Diesel and Dubai crack spread (GO-DB) in Q2/2023, on average**, shrank from Q1/2023 as persistently high inflation has impaired economic activities—particularly in Europe—and weakened global oil demand. Similarly, China’s oil demand remained dormant, fueling concerns over diesel exports. On a yearly basis, the average Diesel and Dubai crack spread (GO-DB) plunged in Q2/2023 compared to Q2/2022. The decline was attributed to easing concerns over tight supply from the Russia-Ukraine tension as the European sanctions on Russian refined products did not severely disrupt the market as widely anticipated. Meanwhile, the oil demand has plummeted alongside global economic conditions.

- **Low-sulfur fuel oil and Dubai crack spread (LSFO-DB) in Q2/2023, on average**, tumbled from Q1/2023. The crack spread was pressured by regional oversupply after the Kuwait refinery ‘Al Zour’ ramped up its crude run and continuously exported Low-sulfur fuel oil to the global market. On a yearly basis, the average Low-sulfur fuel oil and Dubai crack spread (LSFO-DB) narrowed in Q2/2023 compared to Q2/2022, given an oversupply from the Kuwait refinery exports.

Refinery and Oil Trading Business Group Performance

| Refinery and Oil Trading Business Group Performance | Q2/2023 | Q1/2023 | QoQ | Q2/2022 | YoY | 1H/2023 | 1H/2022 | YoY |
|---|-------------|--------------|--------------|--------------|---------------|-------------|--------------|--------------|
| Revenue (THB Million) | 58,329 | 65,974 | -12% | 74,171 | -21% | 124,303 | 133,468 | -7% |
| EBITDA (THB Million) | 1,373 | 4,029 | -66% | 6,506 | -79% | 5,402 | 11,527 | -53% |
| Average Crude Run (KBD) | 118.6 | 124.7 | -5% | 122.5 | -3% | 121.7 | 122.3 | -1% |
| Utilization Rate (%) | 99% | 104% | | 102% | | 101% | 102% | |
| Average FX (THB/USD) | 34.64 | 34.07 | | 34.56 | | 34.36 | 33.90 | |
| (Unit: US\$/BBL) | | | | | | | | |
| Operating GRM | 4.67 | 11.44 | -6.77 | 24.42 | -19.75 | 8.10 | 15.87 | -7.77 |
| Oil Hedging | 1.85 | 3.13 | -1.28 | (16.83) | 18.68 | 2.50 | (10.26) | 12.75 |
| Inventory gain/ (Loss) ^{1/} | (2.02) | (4.41) | 2.39 | 10.04 | -12.06 | (3.23) | 9.91 | -13.14 |
| Total GRM | 4.50 | 10.16 | -5.66 | 17.63 | -13.13 | 7.36 | 15.52 | -8.15 |
| Product Yield (%) | | | | | | | | |
| LPG | 2% | 2% | -0.5% | 2% | 0.0% | 2% | 2% | 0.2% |
| Gasoline | 19% | 19% | -0.3% | 20% | -1.5% | 19% | 20% | -0.5% |
| Jet (Kerosene) | 11% | 10% | 0.8% | 4% | 6.6% | 11% | 4% | 6.3% |
| Diesel | 51% | 52% | -0.7% | 54% | -2.7% | 52% | 53% | -1.1% |
| Non-Transportation fuels | 0.1% | 0% | 0.1% | 0% | 0.0% | 0% | 0.2% | -0.2% |
| Unconverted Oil (UO) | 9% | 9% | 0.0% | 12% | -2.9% | 9% | 12% | -2.9% |
| Fuel Oil | 8% | 8% | 0.0% | 7% | 1.1% | 8% | 9% | -0.3% |



Performance by Business Group

| Total Sales Volume in each market category of the Company ^{2/} (Million Liters) | | | | | | | | |
|--|--------------|--------------|------------|--------------|------------|--------------|--------------|------------|
| Marketing Business | 1,578 | 1,614 | -2% | 1,470 | 7% | 3,191 | 2,878 | 11% |
| Petroleum traders in accordance with section 7 | 152 | 157 | -3% | 152 | 0% | 308 | 341 | -10% |
| Export | 273 | 319 | -14% | 501 | -46% | 592 | 923 | -36% |
| Total Sales Volume | 2,002 | 2,089 | -4% | 2,124 | -6% | 4,091 | 4,142 | -1% |

Note: 1/ Inventory gain/(loss) in the table included (reversal of) losses on inventories devaluation (NRV)

2/ Sales volume excluded oil swaps between petroleum traders in accordance with section 7 and sales of crude oil

In 1H/2023, the Refinery and Oil Trading Business Group recorded a total revenue of THB 124,303 million, a decrease of 7% YoY. The EBITDA of THB 5,402 million, a decrease of 53% YoY, as a result of the following factors.

EBITDA -53% YoY

(-) Operating GRM ebbed by US\$7.77/BBL to US\$8.10/BBL, owing to a broad-based decline in the crack spreads across products alongside the global economic backdrop. The first half of 2023 witnessed a modest rebound in oil demand due to looming concerns over global economic deceleration. Meanwhile, Operation GRM in 1H/2022 gained impetus from a tight supply fueled by the Russia-Ukraine war.

(-) Recognition of Inventory Loss totaled US\$3.23/BBL or equivalent to THB 2,443 million. Overall crude oil prices plummeted in 1H/2023 since crude oil supply became less tightened. Meanwhile, 1H/2022 recorded an Inventory Gain of US\$9.91/BBL (equivalent to THB 7,434 million) due to rising oil prices as the Russia-Ukraine conflict tightened the global oil supply.

(+) Recognition of gains from the forward contracts of crude oil and oil products (including fair value measurement per the accounting standards) totaled US\$2.50/BBL, whereas 1H/2022 recorded a loss of US\$10.26/BBL.

In addition, BCPT's total trade of crude oil and refined products rose by 5.7 million barrels (+41% YoY) to 19.8 million barrels in 1H/2023, led by Bangchak refinery crude procurement and the expansion of overseas trading business (Out-Out). The total overseas trade grew 70% YoY, thanks to the long-term trading contracts with business partners, which helped maintain the sales volume despite a subdued market. Furthermore, BCPT has continuously expanded the Out-Out trading network for crude oil and crude products to support business expansion and diversification via broader sales channels.

In Q2/2023, the Refinery and Oil Trading Business Group recorded a total revenue of THB 58,329 million, a decrease of 12% QoQ and 21% YoY. The EBITDA of THB 1,373 million, a decrease of 66% QoQ and 79% YoY, as a result of the following factors:



Performance by Business Group

| EBITDA -66% QoQ | EBITDA -79% YoY |
|--|--|
| <p>(-) Operating GRM dropped to US\$4.67/BBL due mainly to lower crack spreads across all products in line with global market conditions. The tight oil supply gradually eased as new refineries in the Middle East and Asia kicked off the COD in Q2/2023, while the Russian oil supply was on the rise.</p> <p>(-) As GRM declined, Bangchak Refinery adjusted production level to 118.6 KBD, decreased QoQ.</p> <p>(-) Recognition of gains from the forward contracts of crude oil and oil products (including fair value measurement per the accounting standards) dipped from the previous quarter due to the widening crack spreads of contracted products.</p> <p>(+) Recognized an Inventory Loss of US\$2.02/BBL or equivalent to THB 757 million (including NRV); the inventory loss shrank from Q1/2023 since the global crude oil prices receded at a slower pace compared to the previous quarter.</p> | <p>(-) Average crude run plummeted by 3% YoY due to weak GRM.</p> <p>(-) Operating GRM tumbled by US\$19.75/BBL owing to lower crack spreads across all products. In contrast, Q2/2022 recorded high crack spreads as the Russia-Ukraine conflict tightened the global oil supply.</p> <p>(-) Recognized an Inventory Loss in Q2/2023 owing to lower global crude oil prices, in contrast to an Inventory Gain of US\$10.04/BBL (equivalent to THB 3,868 million) in Q2/2022.</p> <p>(+) Recognition of gains from the forward contracts of crude oil and oil products totaled US\$1.85/BBL, whereas Q2/2022 recorded a loss of US\$16.83/BBL (equivalent to THB 6,486 million).</p> |



2) Marketing Business Group

Marketing Business Group Performance

| Unit: Sites | Q2/2023 | Q1/2023 | QoQ | Q2/2022 | YoY | 1H/2023 | 1H/2022 | YoY |
|---|--------------|--------------|------------|--------------|-----------|--------------|--------------|------------|
| Service Stations | 1,361 | 1,353 | 8 | 1,301 | 60 | 1,361 | 1,301 | 60 |
| EV Chargers | 199 | 189 | 10 | 102 | 97 | 199 | 102 | 97 |
| Inthanin Coffee Shop | 1,023 | 1,021 | 2 | 886 | 137 | 1,023 | 886 | 137 |
| Marketing Business Performance | | | | | | | | |
| Revenue (THB Million) | 45,434 | 49,220 | -8% | 46,926 | -3% | 94,654 | 86,352 | 10% |
| EBITDA (THB Million) | 553 | 737 | -25% | 1,468 | -62% | 1,290 | 2,585 | -50% |
| Marketing Margin (Baht / liter) | 0.93 | 0.93 | 0% | 1.07 | -13% | 0.93 | 0.90 | 4% |
| Net Marketing Margin (Baht / liter) ^{1/} | 0.76 | 0.79 | -3% | 1.39 | -45% | 0.77 | 1.25 | -38% |
| Sales Volume (Million Liters) | | | | | | | | |
| Retail (via Service Stations) | 1,181 | 1,186 | -0.5% | 1,170 | 1% | 2,367 | 2,292 | 3% |
| Industrial | 397 | 427 | -7% | 300 | 32% | 824 | 586 | 41% |
| Total | 1,578 | 1,614 | -2% | 1,470 | 7% | 3,191 | 2,878 | 11% |



Performance by Business Group

| Sales volume in each product category (Million liters) | | | | | | | | |
|--|--------------|--------------|------------|--------------|-----------|--------------|--------------|------------|
| LPG | 29 | 35 | -16% | 26 | 13% | 64 | 51 | 26% |
| Gasoline | 12 | 9 | 32% | 5 | >100% | 20 | 11 | 91% |
| Gasohol | 435 | 422 | 3% | 416 | 5% | 857 | 804 | 7% |
| Jet Fuel | 202 | 167 | 21% | 88 | >100% | 369 | 176 | >100% |
| Diesel | 849 | 929 | -9% | 884 | -4% | 1,778 | 1,733 | 3% |
| Fuel Oil and Others | 50 | 53 | -4% | 51 | -1% | 103 | 103 | 0% |
| Total | 1,578 | 1,614 | -2% | 1,470 | 7% | 3,191 | 2,878 | 11% |

Note: 1/ Net Marketing Margin (including Inventory gain/(loss) and NRV)

In 1H/2023, the Marketing Business Group recorded a total revenue of THB 94,654 million, an increase of 10% YoY and EBITDA of THB 1,290 million, a decrease of 50% YoY, as a result of the following factors:

EBITDA -50% YoY

- (-) Recognized an Inventory Loss as a result of lower refined product prices, in contrast to an Inventory Gain in 1H/2022, buoyed by higher refined product prices.
- (+) Marketing margin edged up 4% YoY to THB 0.93/liter. The increase was attributed to the retail price adjustment in 1H/2023 to better reflect actual costs.
- (+) Total sales volume rose 11% YoY to 3,191 million liter, mainly driven by aviation fuels which rebounded alongside the global tourism sector and marketing campaigns to bolster sales volume at service stations.
- (+) EBITDA (excluding Inventory Loss) improved by 15% YoY, as a result of the higher sales volume growth compared to pre-COVID and the optimum growth of the marketing margin.

In Q2/2023, the Marketing Business Group recorded a total revenue of THB 45,434 million (declined 8% QoQ and 3% YoY) and EBITDA of THB 553 million (dropped 25% QoQ and 62% YoY), as a result of the following factors:

EBITDA -25% QoQ

- (-) Total sales volume decreased slightly by 2% QoQ to 1,578 million liter as power plants switched from diesel to liquefied natural gas (LNG), thus causing a shrinkage in industrial demand for diesel. Apart from that, the sales volume at service stations lightly dropped during the rainy season.
- (-) Recognition of Inventory Loss rose from the previous quarter since refined product prices tumbled in line with global market conditions.

EBITDA -62% YoY

- (-) Recognized an Inventory Loss in Q2/2023 due to falling refined product prices, in contrast to an Inventory Gain in Q2/2022 since the Russia-Ukraine conflict sent oil prices soaring.
- (-) Marketing margin ebbed by 13% YoY as the retail price could not be properly adjusted to reflect the higher cost of refined products.
- (+) Total sales volume increased 7% YoY from both retail and industrial segments. The growth in the retail market was attributed to promotional and marketing campaigns to bolster sales and the expansion of service station



Performance by Business Group

| EBITDA -25% QoQ | EBITDA -62% YoY |
|--|---|
| (-) Selling and administration expenses increased, mainly from marketing campaigns and advertising-related expenses to promote the new product, Hi Premium 97. | coverage. Meanwhile, the industrial segment has continuously promoted jet fuel sales, whilst the global oil demand gradually resumed a firm momentum. |
| (0) Marketing margin was unchanged from the previous quarter at THB 0.93/liter. | |

Bangchak strives to deliver the best fuel products and finest retail experiences based upon an in-depth understanding of our customers. Under the vision to be “**Your Greenovative Destination**,” the company aims to offer a wide selection of Greenovative Products (high-quality, clean, and environmentally friendly) such as Bangchak Hi Premium 97, Hi Premium Diesel S, and Gasohol E20 S EVO. Over the year, Bangchak has leveraged technologies to uplift our services and enhance cost efficiency. We also place a great emphasis on energy efficiency by installing solar roofs and solar-powered air conditioners. As for the service station coverage, the company recently launched 10 new stations, making a total of 1,361 service stations as of Q2/2023—82 of which are ‘Bangchak Unique Design’ service stations and over 199 are fully equipped with electric vehicle (EV) chargers. Aside from the oil business, Bangchak seeks to enhance retail experiences at service stations nationwide. The company partnered with seven Michelin-awarded restaurants to open branches at Bangchak stations, bringing our customers the best quality and distinctive food experiences. Our stations also offer 24-hour battery swapping services for e-bike riders, operated by Bangchak’s brainchild “Winnonie.” Meanwhile, the café brand—Inthanin Coffee—continues offering a wide array of products and services to customers, such as the new beverages: Inthanin PalmDates Series, Inthanin Summer Pop, Inthanin Kopi, and Es All Day, just to name a few. Furthermore, Inthanin Coffee targets expanding its merchandise into home products and premium goods such as Inthanin Instant and SINGLE ORIGIN Drip Coffee Special Series.



3) Clean Power Business Group

| Clean Power Business Performance (THB Million) | Q2/2023 | Q1/2023 | QoQ | Q2/2022 | YoY | 1H/2023 | 1H/2022 | YoY |
|--|--------------|--------------|-----------|--------------|------------|--------------|--------------|------------|
| Revenue from sales and rendering of services | 1,053 | 1,057 | -0.4% | 1,436 | -27% | 2,110 | 2,595 | -19% |
| EBITDA | 989 | 852 | 16% | 1,112 | -11% | 1,841 | 4,187 | -56% |
| Share of profit (loss) from associated companies ^{1/} | (20) | 40 | <-100% | (9) | <-100% | 20 | 133 | -85% |
| BCPG Group’s contracted capacity (Equity MW) | | | | | | | | |
| Solar Power Plant - Thailand | 174.7 | 174.7 | 0% | 173.5 | 1% | 174.7 | 173.5 | 1% |
| Wind Power Plant - Thailand | 9.0 | 9.0 | 0% | 9.0 | 0% | 9.0 | 9.0 | 0% |
| Solar Power Plant - Japan | 79.7 | 79.7 | 0% | 79.7 | 0% | 79.7 | 79.7 | 0% |
| Hydropower Plant - Lao PDR | 114.0 | 114.0 | 0% | 114.0 | 0% | 114.0 | 114.0 | 0% |
| Wind Power Plant - Philippines | 14.4 | 14.4 | 0% | 14.4 | 0% | 14.4 | 14.4 | 0% |
| Natural Gas Power Plants - USA | 151.0 | 151.0 | 0% | - | N/A | 151.0 | - | N/A |
| Total | 542.8 | 542.8 | 0% | 390.6 | 39% | 542.8 | 390.6 | 39% |



Performance by Business Group

| Electricity Sales (GWh) | | | | | | | | |
|------------------------------|--------------|--------------|------------|--------------|-------------|--------------|--------------|-------------|
| Solar Power Plant - Thailand | 83.8 | 84.5 | -1% | 85.9 | -2% | 168.3 | 170.1 | -1% |
| Wind Power Plant - Thailand | 2.2 | 3.1 | -29% | 1.9 | 14% | 5.3 | 5.2 | 2% |
| Solar Power Plant - Japan | 35.0 | 25.2 | 39% | 35.6 | -2% | 60.2 | 50.5 | 19% |
| Hydropower Plant - Lao PDR | 24.5 | - | N/A | 101.0 | -76% | 24.5 | 177.9 | -86% |
| Total | 145.5 | 112.8 | 29% | 224.4 | -35% | 258.3 | 403.7 | -36% |

Note: ^{1/} In March 2022, BCPG disposed the whole investment in SEGHP, which invests in geothermal projects in Indonesia.

In 1H/2023, the Clean Power Business Group's revenue was THB 2,110 million, a decrease of 19% YoY. The EBITDA was at THB 1,841 million, a decrease of 56% YoY, with factors affecting operations as follows:

EBITDA -56% YoY

(-) The electricity sales volume of hydropower plants in Lao PDR dropped 86% YoY due to the temporary halt of the projects to facilitate the preparation and transmission to Vietnam Electricity (EVN). On June 15, 2023, the projects have commenced commercial operation and distributed electricity to the Socialist Republic of Vietnam according to the Power Purchase Agreement with EVN.

(-) Total revenue of solar power plants in Thailand declined due to the impact of the expiration of the adder scheme of 82 MW solar power plants since July and October 2022, and March and April 2023. However, the impact was mitigated by the increase in the Ft rate.

(-) Share of profit from investments in the associated company of THB 20 million, reflecting a decline of THB 112.6 million from 1H/2022. This was mainly from the disposal of all investments in Star Energy Group Holdings Pte. Ltd. (SEGHP) in March 2022. However, there was a subsequent recognition of profit sharing from the Combined Cycle Gas Turbine (CCGT) power business in the United States in March 2023, after the share acquisition was completed on February 27, 2023.

(+) The electricity sales volume of wind power plants in Thailand increased 2% YoY due to higher wind speeds at the project.

(+) The electricity sales volume of solar power plants in Japan increased 19% YoY driven by the full half-year revenue recognition of 2 new projects, including Komagane (COD on 29 March 2022) and Yabuki (COD on 15 April 2022).

In Q2/2023, the Clean Power Business Group's revenue was THB 1,053 million, a decrease of 0.4% QoQ and 27% YoY. The EBITDA was THB 989 million, an increase of 16% QoQ but a decrease of 11% YoY, with factors affecting operations as follows:



Performance by Business Group

| EBITDA +16% QoQ | EBITDA -11% YoY |
|--|--|
| (+) The electricity sales volume of solar power plants in Japan increased 39% QoQ due to higher irradiation from a seasonal factor. | (-) The electricity sales volume of hydropower plants in Lao PDR fell by 76% YoY from the operational shutdowns, as stated earlier. |
| (+) The hydropower plants in Lao PDR experienced an increase in electricity sales volume QoQ following the commencement of its commercial operation and the successful distribution of electricity (COD) to Vietnam Electricity (EVN), as stated earlier. | (-) Total revenue of solar power plants in Thailand experienced a decline due to the gradual expiration of the adder scheme, totaling 82 MW, as stated earlier. |
| (-) Total revenue of solar power plants in Thailand declined due to the impact of the expiration of the adder scheme of 16 MW solar power plants in April 2023. | (-) The electricity sales volume of solar power plants in Japan dropped 2% YoY due to more curtailment days. |
| (-) The electricity sales volume of wind power plants in Thailand dropped 29% QoQ due to lower wind speeds at the project. | (-) The share of loss from investments in the associated company of THB 20 million, increased YoY, mainly from wind power business in the Philippines due to lower wind speed. |
| (-) The share of loss from investments in the associated company of THB 20 million. These were mainly from the share of loss from wind power business in the Philippines due to the low season of the Philippine monsoon. In addition, with the share of loss from Combined Cycle Gas Turbine (CCGT) power business due to its maintenance shutdown in April 2023. | (+) The electricity sales volume of wind power plants in Thailand increased 14% YoY due to higher wind speed. |



4) Bio-Based Product Business Group

| Bio-Based Products Business Performance (THB Million) | Q2/2023 | Q1/2023 | QoQ | Q2/2022 | YoY | 1H/2023 | 1H/2022 | YoY |
|---|---------|---------|------|---------|------|---------|---------|------|
| Sales Revenue | 3,049 | 2,942 | 4% | 3,413 | -11% | 5,991 | 7,153 | -16% |
| EBITDA | 138 | 107 | 29% | 93 | 48% | 245 | 437 | -44% |
| BBGI Performance | | | | | | | | |
| Gross Profit/(loss) | 57 | 75 | -23% | 37 | 55% | 132 | 357 | -63% |
| Selling and Administrative expenses | (115) | (90) | -28% | (68) | -69% | (205) | (153) | -34% |
| Sales Volume (Million Liters) | | | | | | | | |
| Ethanol | 25.8 | 28.1 | -8% | 25.2 | 2% | 53.9 | 63.4 | -15% |
| Biodiesel | 65.6 | 67.1 | -2% | 46.6 | 41% | 132.7 | 97.7 | 36% |



Performance by Business Group

In 1H/2023, Bio-Based Product Business Group recorded revenue of THB 5,991 million, a decrease of 16% YoY and EBITDA of THB 245 million, a decrease of 44% YoY. These were resulted from the following factor:

EBITDA -44% YoY

(-) For production and distribution of biodiesel business (B100), experienced a decline in gross profit, which can be attributed to weakening selling prices of biodiesel, crude glycerin, and refined glycerin compared to 1H/2022 which CPO price experienced a sharp upturn driven by a tight supply situation. Notably, Indonesia, the world's largest palm oil producer and exporter, took the measure of suspending palm oil exports, further contributing to the challenging market conditions in 1H/2022.

(+) For the production and distribution of ethanol business, the higher recognition of gross profit can be attributed to the increase in the average ethanol price, which aligns with the corresponding rise in raw material costs.

(+) For the high-value bio-based product business experienced a rise in gross profit, primarily driven by the successfully launching new health and well-being products under the brand "B Nature+" (B Nature Plus). Furthermore, the expansion of distribution channels, including online platforms, television, and prominent pharmacies in Bangkok area, has also contributed to this increase in gross profit.

In Q2/2023, the Bio-Based Product Business Group recorded revenue of THB 3,049 million, an increase of 4% QoQ but a decrease of 11% YoY. EBITDA was recorded at THB 138 million, an increase of 29% QoQ and 48% YoY. These were resulted from the following factors:

EBITDA +29% QoQ

(+) Biodiesel business (B100)'s gross profit improved as selling price of biodiesel increased in accordance with the decrease in crude palm oil production and Thailand's domestic crude palm oil stock level.

(+) Recorded an additional income of THB 52 million from fines and construction corrections imposed on contractors. This income has helped mitigate the escalation in selling and administrative expenses accounted for the additional work expenses to be remunerated to the contractor, as stipulated by the arbitral tribunal's ruling, in the amount of THB 29 million.

(-) Ethanol business recorded lower sales revenue and gross profit due to a decrease in sales volume of ethanol

EBITDA +48 % YoY

(+) For the ethanol business, sales revenue and gross profit improved, driven by an increase in average selling price in accordance with higher raw material cost.

(-) For biodiesel business (B100), experienced a drop in gross profit due to decreased selling prices of biodiesel and its by-products, including glycerin and refined glycerin, as stated earlier.

(0) For the high-value bio-based product business, achieved a relative stable gross profit compared same quarter last year.



Performance by Business Group

by 8% QoQ in accordance with the sales management plan and higher raw material cost.

(-) For the high-value bio-based product business, observed a reduction in gross profit recognition aligns with a declining sale volume.



5) Natural Resources Business Group

| Natural Resources Business (THB Million) | Q2/2023 | Q1/2023 | QoQ | Q2/2022 | YoY | 1H/2023 | 1H/2022 | YoY |
|---|---------|---------|------|---------|------|---------|---------|------|
| Revenue | 5,219 | 9,772 | -47% | 4,618 | 13% | 14,991 | 10,321 | 45% |
| EBITDA | 3,701 | 5,414 | -32% | 3,541 | 5% | 9,115 | 7,792 | 17% |
| OKEA Performance | | | | | | | | |
| Revenue from crude oil and gas sales | 5,283 | 9,707 | -46% | 4,577 | 15% | 14,991 | 10,239 | 46% |
| EBITDA | 3,709 | 5,416 | -32% | 3,557 | 4% | 9,125 | 7,833 | 16% |
| Production volume – Net to OKEA (kboepd) | 22.26 | 22.21 | 0.2% | 16.04 | 39% | 22.33 | 15.48 | 44% |
| Sales volume – Net to OKEA (kboepd) | 22.78 | 37.94 | -40% | 15.96 | 43% | 30.32 | 15.70 | 93% |
| Realized liquids price (US\$/BBL) | 70.10 | 77.70 | -10% | 100.30 | -30% | 75.08 | 94.98 | -21% |
| Realized gas price (US\$/mmbtu) | 14.47 | 20.72 | -30% | 14.68 | -1% | 17.51 | 23.16 | -24% |

In 1H/2023, Natural Resources Business Group's revenue was THB 14,991 million, increased by 45% YoY. The EBITDA was THB 9,115 million, an increase of 17% YoY. The factors impacting the performance are as follows.

EBITDA +17% YoY

(+) Sales volume of OKEA remarkably improved by 93% YoY, owing to the exceeding sales volume of oil and gas than the contracted production capacity in Q1/2023. Furthermore, a performance recognition of the new petroleum field acquired from Wintershall Dea in Q4/2022 contributed to the full half-year performance recognition of 2023.

(-) Average selling price of oil and gas (liquid price) plummeted by 21% YoY, whereas the selling price of natural gas dropped by 24% YoY. The decline was attributed to concerns over the global economic slowdown. In addition, a tight supply triggered by the Russia-Ukraine war has subsided in 1H/2023, unlike in 1H/2022.

In Q2/2023, Natural Resources Business Group's revenue was THB 5,219 million, a decrease of 47% QoQ but an increase of 13% YoY. The EBITDA was THB 3,701 million, a decrease of 32% QoQ but an increase of 5% YoY. The factors impacting the performance are as follows:



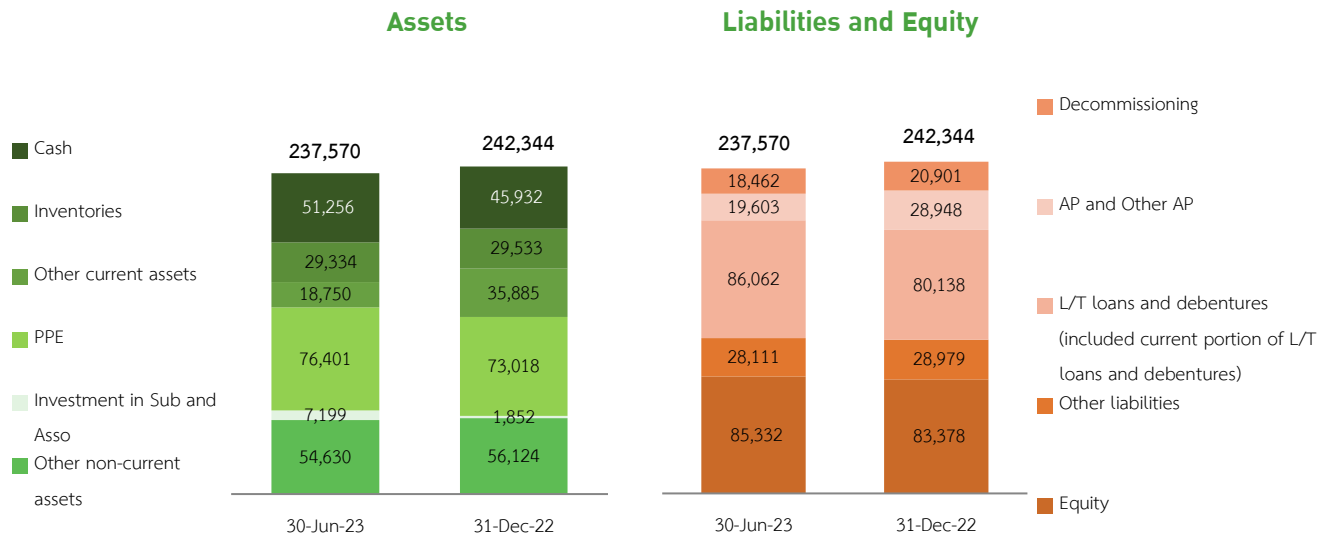
Performance by Business Group

| EBITDA -32% QoQ | EBITDA +5% YoY |
|---|---|
| <p>(-) Sales volume of OKEA shrank 40% QoQ, mainly dragged by the lower sales volume of oil, which had significantly exceeded the contracted production capacity (Overlift) in Q1/2023. In particular, there was 1 lifting cargo from the Draugen field in Q2/2023, compared to 2 lifting cargoes in Q1/2023.</p> <p>(-) Average selling price of oil and gas (Liquid Price) dropped by 10% QoQ as market concerns over the global economic slowdown drove crude oil prices downward. Higher discounts for natural gas liquids (NGL) also led to the shrinking liquid price. Meanwhile, the selling price of natural gas (Gas Price) plummeted by 30% QoQ as the winter season came to an end, while European natural gas reserves remained high.</p> | <p>(+) Sales volume of OKEA expanded by 43% YoY, driven by higher petroleum sales thanks to a performance recognition of the field acquired from the Wintershall Dea in Q4/2022. Besides, the production capacity at the Yme field has been improving.</p> <p>(-) Average selling price of oil and gas plunged by 30% YoY, owing to concerns over economic challenges. Meanwhile, Q2/2022 witnessed a tight oil supply owing to the Russia-Ukraine war.</p> |



Statement of Financial Positions

Unit: THB Million



Assets

As of 30 June 2023, Bangchak Group had total assets in the amount of THB 237,570 million, a decrease of THB 4,774 million compared to 31 December 2022. Changes in assets are as follow:

- Inventory decreased THB 199 million, mainly from declining average costs per unit of crude oil and refined products.
- Other current assets decreased by THB 17,135 million mainly from:
 - (1) Accrued oil fund compensation decreased by THB 9,724 million, partly because there was no oil fund compensation provided for diesel from the Government in 2023. Whereas in 2022, there was government compensation for diesel at an average rate of 3.99 Baht per liter. In addition, another part of it comes from receiving compensation payments of 2022.
 - (2) Trade and other current receivables decreased THB 6,965 million primarily attributable to a reduction in other receivables of the Natural Resources business (OKEA), resulting from the recognition of accrued income.
- Property, plant, and equipment increased THB 3,383 million mainly from:
 - (+) An increase in oil terminal assets from business acquisition amounting to THB 6,487 million.
 - (-) Impairment of assets in amount THB 1,421 million mainly from the impairment assets of the Natural resources business group, was prompted by indications of diminished recoverable reserves in the Yme field.
 - (-) Effect of financial statement translation of THB 1,612 million.



Statement of Financial Positions

- Investments in subsidiaries and associated companies increased by THB 5,347 million, mainly due to BCPG's investment in the power plant project in the US.
- Other non-current assets decreased by THB 1,494 million, mainly from a decrease in right-of-use asset.

Liabilities

As of 30 June 2023, the company and its subsidiaries had total liabilities THB 152,238 million, a decrease of THB 6,728 million, changes in liabilities are as follow:

- Trade and other current liabilities decrease THB 9,345 million mainly from:
 - (-) Trade account payable of oil business decreased due to lower purchase volume of crude oil and finished products as well as declining in average purchase prices.
 - (-) Other payables of Natural Resources business (OKEA) decreased.
- Provisions related to decommission costs decreased by THB 2,439 million mainly due to the impact of translating financial statement, which was affected by the appreciation of the Thai Baht exchange rate.

Equity

As of 30 June 2023, the Bangchak Group had total equity in the amount of THB 85,332 million, an increase of THB 1,954 million mainly from:

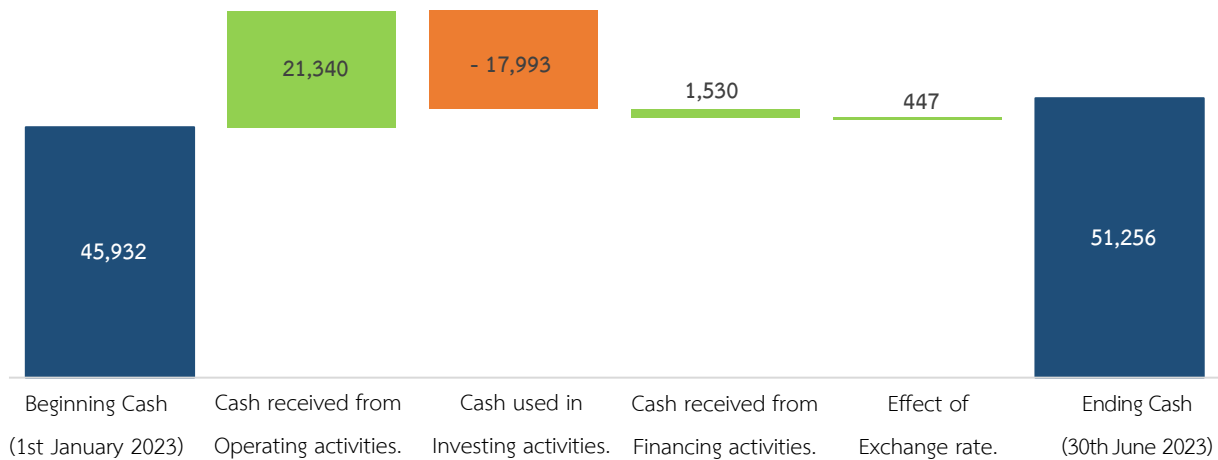
- (+) Profit for the six-month period of THB 4,078 million
- (-) Dividend payment of THB 2,019 million

Total equity attributed to owners of the parent was THB 64,559 million and book value per share (excluding perpetual subordinated bonds) was THB 39.92.



Statement of Cash Flows

Unit: THB Million



As of 30 June 2023, Bangchak Group had cash and cash equivalents in the amount of THB 51,256 million, details for each activity are as follow:

- Net Cash received from operating activities** was THB 21,340 million, main items consist of EBITDA of THB 17,620 million and change in working capital. The main items that increased cash flow, namely trade accounts receivables and other current receivables THB 16,332 million, inventory of THB 228 million. And, the cash flow decreased, including trade payables and other current liabilities of THB 8,062 million and income tax paid in the amount of THB 2,120 million.
- Net Cash used in investing activities** was THB 17,993 million, mainly from the business acquisition of THB 14,964 million and cash paid for property, plant, and equipment THB 4,090 million.
- Net Cash received from financing activities** was THB 1,530 million, mainly from (1) Cash received from long-term loans from financial institution THB 4,572 million and (2) Cash received from debenture issuance of THB 8,191 million. The uses of cash were from (1) repayment of long-term loans of THB 6,574 million (2) dividend payment of THB 2,019 million (3) finance costs of THB 1,606 million, and (4) payment in accordance with lease agreement of THB 699 million.



Financial Ratio

| | Q2/2023 | Q1/2023 | Q2/2022 | 1H/2023 | 1H/2022 |
|---------------------------------|---------|---------|---------|---------|---------|
| Profitability Ratios (%) | | | | | |
| Gross Profit Margin | 7.93% | 10.34% | 21.74% | 9.23% | 19.94% |
| EBITDA Margin | 9.74% | 13.69% | 15.00% | 11.87% | 17.20% |
| Net Profit Margin | 1.04% | 4.19% | 6.55% | 2.75% | 7.19% |
| Return of Equity (ROE) | 9.70% | 17.76% | 23.40% | 9.70% | 23.40% |
| Efficiency Ratio (%) | | | | | |
| Return on Assets (ROA) | 9.34% | 12.39% | 16.66% | | |

| | 30 Jun 23 | 30 Mar 23 | 30 Jun 22 |
|---|-----------|-----------|-----------|
| Liquidity Ratios (Times) | | | |
| Current Ratio | 2.49 | 2.50 | 1.97 |
| Quick Ratio | 1.67 | 1.67 | 1.19 |
| AR Turnover | 39.53 | 24.41 | 24.03 |
| Collection Period (days) | 9 | 15 | 15 |
| AP Turnover | 16.47 | 17.06 | 14.67 |
| Payment Period (days) | 22 | 21 | 25 |
| Leverage Ratios (Times) | | | |
| Debt to Equity | 1.78 | 1.77 | 1.81 |
| Interest bearing Debt to Equity | 1.02 | 0.91 | 0.89 |
| Net Interest-bearing Debt to Equity | 0.42 | 0.35 | 0.37 |
| Release of Debenture Ratio (Times) | | | |
| Net Debt to Equity | 0.40 | 0.32 | 0.34 |

Financial Ratios Calculation

Profitability Ratios

- Gross Profit Margin (%) = $\text{Gross Profit} / \text{Revenue from sale of goods and rendering of services}$
- EBITDA Margin (%) = $\text{EBITDA} / \text{Revenue from sale of goods and rendering of services}$
- Net Profit Margin (%) = $\frac{\text{Profit attributable to owners of the parent}}{\text{Revenue from sale of goods and rendering of services}}$
- Return on Equity (%) = $\frac{\text{Profit attributable to owners of the parent}}{\text{Total Equity attributable to owners of the parent (Average)}}$

Efficiency Ratio

- Return on Assets (%) = $\text{EBIT} / \text{Total asset (Average)}$

Liquidity Ratios

- Current Ratio (Times) = $\text{Current asset} / \text{Current liabilities}$



Financial Ratio

- Quick Ratio (Times) = $(\text{Cash \& Equivalents} + \text{Short-term investments} + \text{Trade and other account receivable}) / \text{Current liabilities}$
- Accounts Receivable Turnover (Times) = $\text{Revenue from sale of goods and rendering of services} / \text{Accounts receivable before doubtful debt (Average)}$
- Collection Period (Days) = $365 / \text{Account receivable turnover}$
- Accounts Payable Turnover (Times) = $\text{Cost of sale of goods and rendering of services} / \text{Accounts payable (Average)}$
- Payment Period (Days) = $365 / \text{Accounts Payable Turnover}$

Financial Policy Ratios

- Debt to Equity (Times) = $\text{Total debt} / \text{Equity}$
- Interest Bearing Debt to Equity (Times) = $\text{Interest bearing debt} / \text{Total equity}$
- Net Interest-Bearing Debt to Equity (Times) = $(\text{Interest bearing debt} - \text{Cash and cash equivalents} - \text{Short-term investments}) / \text{Total equity}$

Issuance of Debenture Ratio

- Net Debt to Equity (Times) = $(\text{Interest bearing debt} - \text{Cash and cash equivalents} - \text{Short-term investments}) / (\text{Total equity} - \text{Unrealized gain/loss from derivatives} - \text{Unrealized gain/loss on foreign exchange} - \text{Inventory gain/loss})$

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 = $(\text{Total assets of the quarter of the year before} + \text{Total assets of the quarter this year}) / 2$

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/ Average accounts receivable before doubtful debt

- Yearly = $(\text{Accounts receivable before doubtful debt of the year before} + \text{Accounts receivable before doubtful debt of the Company of this year}) / 2$
- Quarterly = $(\text{Accounts receivable before doubtful debt of the quarter of the year before} + \text{Accounts Receivable before doubtful debt of the quarter this year}) / 2$

6/ Average accounts payable

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

7/ 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)



Management Outlook towards the Business in Q3/2023

Economic Outlook

The global economy in Q3/2023 will continue to lose momentum amidst rising living costs and high interest rates. Most economies still witnessed growth thanks to improving labor markets, driven mainly by employment in the service sector. China's anticipated reopening failed to revive global growth since China's economic recovery has been modest. Nonetheless, the World Bank upgraded the global economic growth forecast to 2.1% in 2023 (from the previous estimation of 1.7%) as China and major economies slid to a softer contraction. Still, the global economy is poised to decelerate from a 3.1% growth in 2022.

As for the Thai economy in Q3/2023, we expect a steady rebound buoyed by rising tourist arrivals. An upbeat outlook on the tourism sector would buttress the labor market—particularly employment in tourism-related services—and provide thrust to private consumption. The MPC anticipated Thailand's GDP growth of 3.6% this year, yet political uncertainties over the new government formation and policies will overshadow an outlook in 2H/2023. Other headwinds to the Thai economy include global economic volatility, persistently high household debt, and the El Niño phenomenon, which could threaten the agricultural sector in 2023.

Oil Price Outlook

The International Energy Agency (IEA) anticipates soaring crude oil prices in 2023, fueled by tighter supply in the global market. IEA expects the global oil demand to expand by 2.2 million barrels per day in 2023 to reach 102.1 million barrels per day. Apart from that, China's demand will likely account for 70% of the global oil demand growth in 2023.

Based on our assessment, the average Dubai crude oil price in Q3/2023 will likely move between US\$ 75-85/BBL, given the anticipated tight crude oil supply as the OPEC+ group announced oil output cuts throughout 2023, while China's oil demand strongly rebounded.

The Dated Brent-Dubai (DTD-DB) spread in Q3/2023 is expected to settle between US\$ 0.6-1.0/BBL. Compared to Q2/2023, the spread has widened due to market expectations of higher crude oil demand in Europe as refineries resume operations after the spring maintenance.

In Q3/2023, the refining margin of cracking refineries in Singapore is set to rise from Q2/2023, backed by the robust crude oil market and anticipated demand surges following the inflation cooldown. China's oil demand should gain traction thanks to the government stimulus, which will derail China's exports of refined products. Nevertheless, a higher supply of refined products would limit the refining margin increase as refineries still maintained high production capacity.

