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Bangchak Corporation Plc.

Management Discussion & Analysis of Business Operation

For the 4th quarter period and
Year ended December 31, 2024



S&P Global

MSCI
ESG RATINGS



CCC B BB BBB A AA AAA



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Executive Summary

Key Financial Data

Unit: (THB Million)	Q4/2023	Q3/2024	Q4/2024	QoQ	YoY	2023	2024	YoY
Total Revenue^{1/}	142,922	154,193	142,246	-8%	-0.5%	385,853	589,877	53%
Accounting EBITDA	10,247	7,170	7,167	-0.04%	-30%	41,680	40,409	-3%
Refinery and Oil Trading Business	1,717	(1,619)	173	>100%	-90%	13,339	5,006	-62%
Marketing Business	1,586	677	806	19%	-49%	4,578	5,577	22%
Clean Power Business	1,048	1,319	1,074	-19%	2%	4,219	4,817	14%
Bio-Based Product Business	253	161	318	98%	26%	667	972	46%
Natural Resources Business	5,683	6,734	5,007	-26%	-12%	19,671	24,816	26%
Eliminations and others	(41)	(102)	(211)	<-100%	<-100%	(794)	(779)	2%
Profit attributable to owners of the parent	(977)	(2,093)	17	>100%	>100%	13,233	2,184	-83%
Earnings (Loss) per share (Baht)	(0.82)	(1.61)	(0.01)			9.27	1.30	
Core Profit (excluding extraordinary items)	2,106	711	1,799	>100%	-15%	9,924	6,120	-38%

Key Performance by Business

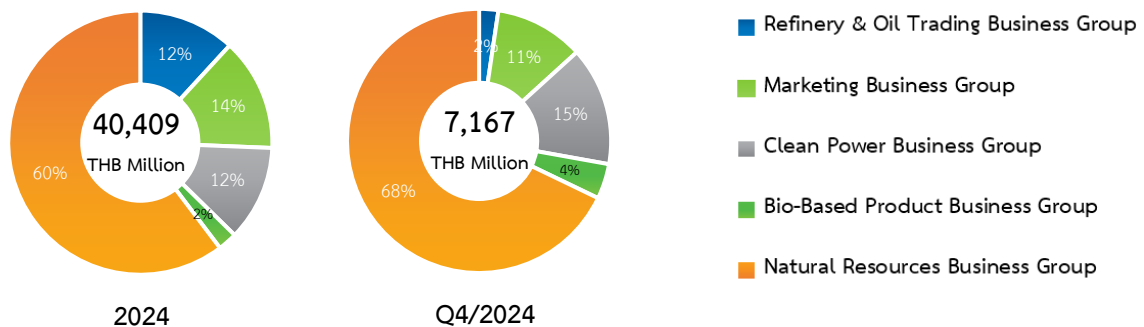
Refinery and Oil Trading Business Group	Q4/2023	Q3/2024	Q4/2024	QoQ	YoY	2023	2024	YoY
Average Crude Run (KBD)	240.2	259.7	271.8	5%	13%	222.0	258.4	16%
Utilization Rate (%)	82%	88%	92%	5%	12%	76%	88%	16%
Operating GRM (US\$/BBL)	5.04	2.49	4.80	2.31	(0.24)	8.03	4.05	(3.98)
Total GRM (US\$/BBL)	2.88	(2.95)	1.75	4.70	(1.13)	7.92	2.30	(5.62)
Marketing Business Group								
Sales Volume under Bangchak Group (Million Liters)	3,388	3,327	3,567	7%	5%	8,595	13,814	61%
- Retail (via Service Stations)	2,094	2,032	2,094	3%	0%	5,890	8,363	42%
- Industrial	1,295	1,295	1,473	14%	14%	2,705	5,451	>100%
Net Marketing Margin under Bangchak Group (Baht/Liter)	0.95	0.77	0.77	0%	-19%	0.94	0.80	-15%
No. of Service Station (Sites)	2,219	2,141	2,163	22	(56)	2,219	2,163	(56)
Clean Power Business Group								
Electricity Sales Volume (GWh)	1,700.3	1,987.0	1,803.6	-9%	6%	3,744.8	7,300.1	95%
Bio-Based Product Business Group								
Sales Volume (Million Liters)	128	163	185	13%	45%	422	651	54%
- Ethanol	50.1	51.6	82.5	60%	65%	144.6	200.0	38%
- Biodiesel	77.8	111.6	102.9	-8%	32%	277.3	451.1	63%
Natural Resources Business Group								
Sales Volume-Net to OKEA (kboepd)	25.6	40.8	29.2	-28%	14%	28.2	37.4	33%
Realized Liquids Price (US\$/BBL)	83.4	74.9	69.2	-8%	-17%	80.1	77.2	-4%
Realized Gas Price (US\$/BBL)	74.6	68.9	80.0	16%	7%	82.2	67.4	-18%

Note: Bangchak Sriracha Plc. ("BSRC") consolidated since September 1, 2023.

1/ Elimination and others reflected transactions between Refinery and Marketing businesses

Executive Summary

Accounting EBITDA breakdown by business unit



In 2024, Bangchak Group achieved a new record for total revenue from sales and services, growing continuously by over 53% YoY to THB 589,877 million, with an EBITDA of THB 40,409 million (-3% YoY). The **core profit (excluding extraordinary items) was THB 6,120 million**, driven by 5 core businesses. The **Refinery and Oil Trading Business Group** reported an increase of 16% YoY in average crude run, reaching 258.4 KBD. Despite the Phra Khanong refinery undergoing scheduled turnaround maintenance in May 2024, its first in 3 years, the Sriracha refinery's improved operational efficiency boosted production capacity to 147.8 KBD, up from 101.9 KBD in the previous year. This helped Bangchak Group maintain continuous production growth amidst headwinds from oil price volatility due to market concerns over the global economic slowdown, which pressured the operating GRM to decline compared to 2023, coupled with the recognition of Inventory Loss (including NRV) of THB 6,940 million, or US\$2.08/BBL. The **Marketing Business Group** saw a robust growth in total sales volume across all channels, reaching 13,814 million liters (+61% YoY), marking an all-time high. This growth was primarily driven by the expansion of the service station network and the effective enlargement of the customer base. Additionally, the Company focused on rebranding and changing the service station logo under the operation of Bangchak Sriracha Public Company Limited ("BSRC"). By the end of 2024, this rebranding process was 100% completed, along with continuous improvements in service station quality. These efforts have enhanced consumer confidence and driven significant sales growth, resulting in the market share through service stations rising to 28.9%. The **Clean Power Business Group** recognized higher revenue from electricity sales and a full-year performance from investments in the four USA-based natural gas power plants in 2024. The hydropower plant in Laos showed a significant improvement in performance compared to the previous year, during which electricity production was halted for six months in preparation for selling electricity to Vietnam Electricity (EVN). This improved performance fully counterbalanced the impacts of the expiration of Thailand's Adder program for solar power plants. Also, the company recognized an after-tax profit of THB 2,159 million from the sale of solar power plant project in Japan in June 2024. The **Bio-Based Product Business Group** saw a 54% YoY increase in sales, driven by growing demand from BSRC. This boost led to a higher capacity utilization rate throughout the year compared to other producers in the market. Meanwhile, the **Natural Resources Business Group** has continuously expanded its investments. The performance recognition of the Statfjord field, acquired on 29 Dec 2023, and the Hasselmus field that commenced commercial operations (COD) in Oct 2023 bolstered growth in sales volume to over 33% YoY. With its diversified business structure, Bangchak Group can effectively offset some of the pressure from the decline in refining margins and inventory losses which enables the company to maintain its competitiveness and strengthen financial stability amidst a challenging economic environment. In 2024, including extraordinary items, the

Executive Summary

company reported a **total profit attributable to owners of the parent of THB 2,184 million** (-83% YoY) and **earnings per share of THB 1.30**.

In Q4/2024, Bangchak Group's **revenue from sales and services totaled THB 142,246 million** (-8% QoQ, -0.5% YoY) with an **EBITDA of THB 7,167 million** (-0.04% QoQ, -30% YoY). The **Refinery and Oil Trading Business Group** reported a 5% QoQ rise in crude run, reaching 271.8 KBD. Also, there was an increase in the crack spread of key products, particularly Middle Distillate Products, supported by a decline in regional inventory and increased demand for heating oil during the winter season, leading to a QoQ increase in the Operating GRM in Q4/2024. However, due to ongoing market volatility, the company recognized a loss from derivatives of THB 806 million and an Inventory Loss (including NRV) of THB 2,258 million as oil prices weakened. For the Marketing Business Group, despite an impact from inventory loss, total sales volume in this quarter reached a record high of 3,567 million liters, marking a 7% QoQ increase, with growth across all product categories. The **Bio-Based Product Business Group** saw a 13% QoQ increase, in line with the sales growth of the Marketing Business Group. Meanwhile, the performance of the **Clean Power Business Group** declined due to seasonal factors, coupled with lower share of profit recognition owing to the scheduled maintenance shutdown of all four natural gas power plants in November 2024. However, the depreciation of the Thai Baht led to foreign exchange gains for the Clean Power Business Group, which holds assets in U.S. dollars, fully offset the impact of seasonal factors. The **Natural Resources Business Group** witnessed a 28% QoQ decline in sales volume, mainly due to the divestment of the investment in Yme which was successfully completed during this quarter, resulting in the recognition of operating results from Yme field for only two months. Lower sales volume than the contracted production capacity (Underlift) in the Draugen field and Brage field also contributed to the decline. In Q4/2024, the company recognized a **total profit attributable to owners of the parent of THB 17 million** (+>100% QoQ, +>100% YoY) and **core profit (excluding extraordinary items) was THB 1,799 million** (+>100% QoQ, -15% YoY).

To sum up the **Financial Position as of 31 December 2024**, Bangchak Group recorded **cash and cash equivalents of THB 28,626 million**, **total assets of THB 316,542 million**, (a THB 23,887 million decrease from 31 December 2023). **Total liabilities of THB 230,068 million** (a THB 10,329 million decrease). **Total equity of THB 86,474 million** (a THB 13,558 million decrease), primarily due to the redemption of a THB 10,000 million perpetual bond in October 2024. Total equity attributable to owners of the parent accounted for THB 59,775 million, whereas the Net Interest-Bearing Debt to Equity ratio remained solid at 1.14 times.

Amid fluctuations in oil prices and weakening refining margins over the past year, Bangchak has demonstrated resilience and adaptability. Following the acquisition of majority stake in BSRC, the company recognized **synergy of THB 6,071 million in 2024**, significantly exceeding the initial target of THB 2,500 million. This outcome reflects the success and efficiency of the group's strategic initiatives, reinforcing its potential and commitment to sustainable growth.

Furthermore, this success has been reaffirmed by **TRIS Rating Co., Ltd.**, which **upgraded Bangchak's corporate credit rating** from "A" to "A+", the highest rating the company has ever received, with a "stable" outlook. This credit rating upgrade reflects confidence in the company's strong financial structure and effective risk management. Additionally, as one of Thailand's largest refineries, Bangchak benefits from its own distribution network, with over

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2,163 service stations nationwide. This integration enhances seamless production and distribution efficiency, helping to mitigate market volatility and its impact on the oil business. Beyond refining, Bangchak Group continues to diversify its energy investments, including power generation, which provides stable cash flow, and exploration and production (E&P), which strengthens its long-term growth potential. These initiatives stem from Bangchak's strategic portfolio design, aimed at managing uncertainties in the oil business while establishing a solid and sustainable foundation for long-term growth.

Over the past 40 years, as Bangchak has grown alongside Thai society, the company has remained committed to continuously developing and enhancing its environmental, social, and governance (ESG) practices to stay at the forefront both nationally and internationally. Examples of this include the company's global sustainability assessments such as S&P Global Corporate Sustainability Assessment, where it ranks in the **Top 1% of the Oil & Gas Refinery and Marketing industry worldwide**, MSCI AA rating, **the highest for any Refinery & Marketing company in Thailand**, and Refinitiv with a score of 82.5, also **the highest in the Refinery & Marketing sector in Thailand**. These awards and recognitions reflect the pride of the Bangchak team, executives, board members, and employees, all of whom have dedicated themselves to creating a long-lasting ESG culture that has been embedded in the DNA of Bangchak people, which emphasises in **"being a decent person, knowledgeable, and helpful to others."** To make a positive impact on others, a business must first have a strong foundation, and for a business to grow robustly and sustainably, it must be built on trust in the business itself as a critical foundation.

The year 2025 will continue to be another challenging year due to global economic and political uncertainty. However, Bangchak is committed to driving a sustainable growth strategy by expanding synergy continuously from the previous year, while maximizing the utilization of its available assets. Additionally, Bangchak Refinery strives to enhance value through the **Sustainable Aviation Fuel (SAF)** project, which is **the only solution to reduce greenhouse gas emissions in the aviation industry**. Production is scheduled to commence in Q2/2025 with a capacity of 1 million liters per day, reinforcing the company's role in driving the transition to sustainable energy. The **Marketing Business Group** will continue to **expand its service stations, adding over 100 stations this year, with a goal of securing a strong position as the second-leading player**. The **Bio-Based Product Business Group** has also established the first biotechnology facility (CDMO) in Thailand and Southeast Asia, which will begin commercial operations this year. Furthermore, the company is advancing its **Clean Power Business** and Green Energy Infrastructure, focusing on investments in clean power projects in high-potential areas. This year, three power plant projects will commence commercial operations (COD), including a 99 MW wind power project in Vietnam, a 290 MW wind power project in Lao PDR, and some of solar power project in Taiwan. Moreover, the company is expanding its investments in **Natural Resources and New Businesses** through both organic and inorganic (M&A) growth. Bangchak is determined to leverage its experience and expertise in exploration and production (E&P), gained from investments in Norway, to expand further into petroleum sources in the Asia-Pacific region. The company aims to use the crude oil produced from these sources in its two refineries, which will strengthen both Bangchak Group's synergy and enhance energy security.

Other Important Events in 2024 to Present

April 2024

- On April 9, 2024, the subsidiary in Natural Resources Business Group, OKEA together with its partners made the Final Investment Decision to develop the Brasse petroleum field. It was anticipated to have petroleum reserves of approximately 24 million barrels of crude oil equivalent (MBOE), with OKEA's hold in a proportion of 39.2788%. As a result, OKEA's net 2P petroleum reserves have increased from approximately 83 MBOE to over 92 MBOE. This was anticipated to start production during 1H2027, with an estimated net production from this field at approximately 10,000 barrels of crude oil equivalent per day (BOEPD) within the first year of production. OKEA submitted a Plan for Development and Operation (PDO) to the Government authorities of Norway in April 2024 and renamed the petroleum field from "Brasse" to "Bestla" upon approval of the PDO.
- On April 11, 2024, the 2024 Annual General Meeting of Shareholders resolved to approve dividend payment for the second-half-year operations of 2023 at THB 1.50 per share, amounting to approximately THB 2,754 million. The dividend was paid on April 24, 2024. The total dividend payment for the year 2023 is THB 2.00 per share.
- On April 30, 2024, the subsidiary in Natural Resources Business Group, OKEA placed a new USD 125 million senior secured bond issue with a tenor of 4 years. The new bond will carry a fixed interest rate of 9.125% p.a.

May 2024

- On May 7, 2024, Phra Khanong Refinery was shut down for regular Turnaround Maintenance (TAM) from May 7, 2024, to June 2, 2024. The 27 day-period shutdown was the shortest TAM's duration, which was driven by the implementation of best practices, the integrating of experiences and experts from both Phra Khanong Refinery and Sriracha Refinery as well as the adoption of advanced technology and high-performance tools. Additionally, the Company expects to extend the frequency of TAM from every 3 year to every 4 year and the next regular TAM shall be scheduled in 2028.

June 2024

- On June 17, 2024, the Company was selected to become part of Thailand SET 50 Index (Top 50 stocks in terms of market capitalization) in the second half of 2024, which effective from July 1, 2024 - December 31, 2024.
- On June 26, 2024, the subsidiary in Clean Power Business Group, BCPG collaborated with Kasikornbank PCL, issued unsubordinated and unsecured debentures without a debenture holder representative called Thailand's first "Bonds Plus Carbon Credit," offered to institutional investors, with total issuance of THB 2 billion. The debenture consists of 2 tranches: a 3-year debenture with an interest rate of 3.25% p.a. with a size of THB 1.2 billion and a 5-year debenture with an interest rate of 3.69% p.a. with a size of THB 0.8 billion. These debentures provide investors with an option to receive carbon credits certified by the Thailand Greenhouse Gas Management Organization (Public Organization) or renewable energy certificates certified by international organization, which can be used to offset greenhouse gas emissions, aiding in achieving carbon neutrality.

Other Important Events in 2024 to Present

- On June 26, 2024, the subsidiary in Clean Power Business Group, BCPG fulfilled the conditions under the Sales and Purchase Agreements with Obton A/S's group to divest all of 9 solar power plant projects in Japan with a total installed capacity of 116.96 MW and already received the sales of shares and investments, including transferred the shares and investments to the Buyer.
- On June 28, 2024, the Company issued unsubordinated and unsecured debentures with a debenture holder representative, offered to institutional investors and/or high-net-worth investors, with total issuance of THB 10 billion. The debenture consists of 3 tranches: a 3-year debenture with an interest rate of 3.09% p.a. with a size of THB 2.5 billion, a 5-year debenture with an interest rate of 3.60% p.a. with a size of THB 2.5 billion, and a 10-year debenture with an interest rate of 4.03% p.a. with a size of THB 5 billion. These debentures offered attracted significant interest from investors with an overwhelming subscription more than 8 times of its initial target at THB 5 billion. The debentures were assigned a credit rating of "A" by TRIS Rating Co., Ltd.

July 2024

- On July 15, 2024, the subsidiary in Clean Power Business Group, BCPG completed the acquisition of shares in Prathumwan Smart District Cooling Company Limited ("PSDC") from Team Consulting Engineering and Management Public Company Limited. After completing the transaction, BCPG's shareholding increased from 44.00% to 51.16%. As a result, PSDC has changed its status to a subsidiary of BCPG.
- On July 31, 2024, the subsidiary in Refinery Business Group, BSRC issued its first debentures, unsubordinated and unsecured debentures without a debenture holder representative, offered to institutional investors, with total issuance of THB 4 billion. The debenture consists of 2 tranches: a 2-year zero-coupon debenture, with a yield of 3.14% p.a. with a par value of THB 2.5 billion, and a 3-year debenture with an interest rate of 3.16% p.a. with a size of THB 1.5 billion. These offered debentures attracted significant interest from investors with an overwhelming subscription more than 4 times of its initial target at THB 2 billion. The debentures were assigned a credit rating of "A" by TRIS Rating Co., Ltd.

August 2024

- On August 7, 2024, the subsidiary in Bio-Based Product Business Group, BBGI approved the purchase of 0.84 million shares in BBGI Biodiesel Co., Ltd. ("BBGI-BI"), representing 30% of the fully paid-up registered capital. BBGI has successfully completed the purchase of all ordinary shares in BBGI Biodiesel Co., Ltd. ("BBGI-BI") on November 28, 2024, resulting in 100% shareholding of the registered capital in BBGI-BI. This transaction is in line with the key strategy to strengthen as a leading biofuel business operator in Thailand.
- On August 22, 2024, the Company announced its interim dividend payment for 1H2024 to the Company's shareholders at THB 0.60 per share, totaling THB 826 million. The dividend has been paid to the shareholders on September 17, 2024.

Other Important Events in 2024 to Present

September 2024

- On September 25, 2024, the subsidiary in Natural Resources Business Group, OKEA has entered into an agreement to sell its 15% working interest in the Yme Petroleum Field to Lime Petroleum AS ("Lime") for a consideration of USD 15.65 million, which exceeds its book value. Additionally, all related decommissioning costs of Yme Petroleum Field will be transferred to Lime. The agreement with Lime was entered into on September 23, 2024, and the transaction was completed on November 29, 2024.
- On September 30, 2024, TRIS Rating Co., Ltd. ("TRIS") upgraded the Company's credit rating to "A+" from "A" with a "Stable" outlook. Similarly, the subsidiary in Refinery Business Group, BSRC, received an upgrade to a corporate credit rating of "A+" from "A", and the subsidiary in Bio-Based Product Business Group, BBGI, also received an upgrade to a corporate credit rating of "A" from "A-". Furthermore, the subsidiary in Clean Power Business Group, BCPG was reaffirmed a corporate credit rating at "A". All three subsidiaries rating outlook were "Stable" in line with the Company, reflecting the strengthened business structure and financial stability of the Bangchak Group.

November 2024

- On November 12, 2024, the Company entered into a sustainable aviation fuel (SAF) supply agreement with Singapore-based Shell International Eastern Trading Company (Shell). The agreement stipulates the offtake of ISCC EU/CORSIA certified SAF to be delivered to Shell. This collaboration and supply arrangement are further steps in advancing the use of Sustainable Aviation Fuel and encouraging the sustainability of the aviation industry.
- On November 25, 2024, BCPG Investment Holdings Pte. Ltd., a subsidiary in Clean Power Business Group, entered into a Share Purchase Agreement with EP Group (HK) Co., Ltd. To purchase all ordinary shares in EPVN W2 (HK) Co., Ltd. For a total amount not exceeding VND 3,395 billion or approximately THB 4,508 million. This transaction enables to invest in 2 wind power projects: (1) Che Bien Tay Nguyen Wind Power Plant Project and (2) Phat Trien Mien Nui Wind Power Plant Project, with combined installed capacity of 99.0 megawatts in Chu Prong District, Gia Lai Province, Vietnam.

December 2024

- On December 13, 2024, BCV Energy Co., Ltd. (BCVE), a subsidiary of the Company, expanded its investment in mineral resource project development in Thailand, by investing through newly issued ordinary shares subscription in Thai Kali Co., Ltd. in form of joint venture with 65% shareholding. Thai Kali operates a Potash mining project in Nong Sai Subdistrict, Dan Khun Thot District, Nakhon Ratchasima Province, covering a concession area of 9,005 rai (or equivalent to 3,560 Acre). This aims to help minimize reliance on imported fertilizers and to facilitate farmers' access to agricultural fertilizers at affordable and appropriate prices.
- On December 13, 2024, Bangchak Group extended loans under the Transition Finance Framework of THB 6.5 billion from UOB Thailand, in order to finance the construction development and working capital of Thailand's first SAF project. This deal is marked as the first Transition Finance facilities for hard-to-abate sector in Thailand.

Other Important Events in 2024 to Present

January 2025

- On January 31, 2025, the subsidiary in Refinery Business Group, BSRC issued unsubordinated and unsecured debentures with a debenture holder representative, offered to institutional investors and/or high-net-worth investors, with total issuance of THB 8.0 billion. The debenture consists of 3 tranches: a 3-year zero-coupon debenture, with a yield of 2.85% p.a. with a par value of THB 4.0 billion, a 5-year debenture with an interest rate of 3.34% p.a. with a size of THB 2.8 billion, and a 10-year debenture with an interest rate of 3.75% p.a. with a size of THB 1.2 billion. The debentures were assigned a credit rating of “A+” by TRIS Rating Co., Ltd.

February 2025

- On February 14, 2025, the Company issued “Bangchak Digital Debenture” through the Paotang Application. Bangchak digital debentures are unsubordinated and unsecured debentures with a debenture holder representative, offered to general investors. These offered digital debentures are a 4-year debenture with an interest rate of 3.15% p.a. with a size of THB 3.0 billion, and were assigned a credit rating of "A+" by TRIS Rating Co., Ltd. These debentures attracted significant interest from investors with an overwhelming subscription.
- On February 20, 2025, the Board of Directors’ meeting of the Company approved to submit for approval at the Annual General Meeting of the Shareholders, a full year 2024 dividend payment at the rate of THB 1.05 per share of which THB 0.60 per share was paid as an interim dividend. Thus, the remaining dividend will be at the rate of THB 0.45 per share payable to the shareholders entitled to receive dividends. This dividend is subject to the approval of the Shareholders at the Annual General Meeting to be held on April 11, 2025.
- On February 20, 2025, the Board of Directors of the Company’s Meeting No. 3/2025, approved for the proposal to the 2025 Annual General Meeting of Shareholders, held on April 11, 2025, to consider and approve the Company's shareholding and management restructuring and other relevant matters, including the tender offer to purchase all securities in Bangchak Sriracha Public Company Limited (BSRC). The Company will pay the tender offer price with newly issued ordinary shares of the Company (share swap), at the swap ratio of one newly issued ordinary share of the Company per 6.5 ordinary shares of BSRC.

Crude Oil and Crack Spread Situation

Crude Oil and Crack Spread Situation

Crude Oil Price (US\$/BBL)	Q4/2023	Q3/2024	Q4/2024	QoQ	YoY	2023	2024	YoY
Dubai (DB)	83.75	78.48	73.62	(4.86)	(10.13)	82.09	79.58	(2.51)
Dated Brent (DTD)	84.34	80.34	74.73	(5.61)	(9.60)	82.64	80.76	(1.88)
DTD-DB	0.59	1.86	1.11	(0.74)	0.53	0.55	1.18	0.63
Crack Spread (US\$/BBL)	Q4/2023	Q3/2024	Q4/2024	QoQ	YoY	2023	2024	YoY
UNL95-DB	12.47	11.18	11.42	0.24	(1.05)	16.67	13.37	(3.29)
Jet (Kerosene)-DB	23.63	13.17	14.76	1.59	(8.88)	22.48	15.55	(6.93)
Gasoil (10 ppm)-DB	24.49	13.69	15.05	1.36	(9.44)	24.32	16.62	(7.70)
Low Sulfur Fuel Oil -DB	7.98	7.85	7.60	(0.25)	(0.38)	5.70	6.80	1.10

The average Dubai crude oil price in Q4/2024 declined by US\$4.86/BBL QoQ, pressured by an increasing crude oil supply amid weak global oil demand, especially from China. Economic data indicates that China's economy has yet to recover, and issues in the real estate sector remain unresolved. Both OPEC and the International Energy Agency (IEA) have continuously revised down their global oil demand forecasts. Meanwhile, OPEC+ has decided to delay its oil production increase plan, originally scheduled for January 2025, to April 2025 due to sluggish oil demand. Additionally, the market has reduced concerns about potential crude oil supply shortages resulting from conflicts in the Middle East, after Israel and Hezbollah reached a temporary ceasefire agreement in mid-November. The average Dubai crude oil price in 2024 declined by US\$2.51/BBL compared to 2023.

The average Dated Brent-Dubai spread (DTD-DB) in Q4/2024 decreased by US\$0.74/BBL QoQ, with Brent crude prices pressured by an increase in crude oil supply in Europe, following the resolution of internal conflicts in Libya. This allowed Libya to resume its normal crude oil production and exports. On a yearly basis, the average DTD-DB spread in 2024 increased by US\$0.63/BBL compared to 2023. Brent crude prices are supported by concerns over tight crude oil supply in the European region, due to reduced crude oil exports from the USA during the cold weather period and decreased exports from Libya owing to internal conflicts.

The spread between finished products and Dubai Price

- **Gasoline and Dubai crack spread** in Q4/2024, on average, increased QoQ, driven by a decline in China's exports due to unattractive export margins after the Chinese government changed its export tax policy. On a yearly basis, the average spread in 2024 declined compared to 2023 as overall demand was constrained by the economic slowdown and the growing adoption of alternative energy vehicles
- **Jet (Kerosene) and Dubai crack spread** in Q4/2024, on average, increased QoQ, backed by higher demand for heating oil as the winter season arrived with colder temperatures than the previous year. However, on a yearly basis, the average spread narrowed in 2024 compared to 2023 due to increased supply from China's exports, which outpaced the recovery in overall aircraft demand.
- **Diesel and Dubai crack spread** in Q4/2024, on average, rose QoQ driven by seasonal winter demand and additional economic stimulus signals from China. On a yearly basis, the average spread in 2024 decreased from 2023

Crude Oil and Crack Spread Situation

due to an overall increase in supply as refineries maintained high production levels. Meanwhile, demand slowed due to the economic downturn, resulting in a supply surplus.

- **Low-sulfur fuel oil and Dubai crack spread** in Q4/2024, on average, slightly decreased QoQ as concerns over tight supply in the Asian region eased, following China's announcement of a new fuel oil export quota in late 2024. Additionally, Nigeria's Dangote refinery has also been exporting low-sulfur fuel oil to Asia. On a yearly basis, the average spread for 2024 increased from 2023, driven by the ongoing conflict along the Red Sea shipping route, forcing ships to avoid the area for safety, resulting in longer shipping routes.

Performance by Business Group



Refinery and Oil Trading Business Group

Refinery and Oil Trading Business Group Performance ^{1/}	Q4/2023	Q3/2024	Q4/2024	QoQ	YoY	2023	2024	YoY
Revenue (THB Million) ^{2/}	122,184	129,152	119,277	-8%	-2%	324,651	492,993	52%
EBITDA (THB Million)	1,717	(1,619)	173	>100%	-90%	13,339	5,006	-62%
Average Crude Run (KBD)	240.2	259.7	271.8	5%	13%	222.0	258.4	16%
Utilization Rate (%)	82%	88%	92%	5%	12%	76%	88%	16%
Operating GRM (US\$/BBL)	5.04	2.49	4.80	2.31	(0.24)	8.03	4.05	(3.98)
- Operating GRM at Phra Khanong Refinery	7.27	3.48	5.05	1.57	(2.22)	9.50	4.78	(4.72)
- Operating GRM at Sriracha Refinery	2.78	1.61	4.59	2.98	1.81	2.84	3.51	0.67
Oil Hedging (US\$/BBL)	0.42	0.68	(0.40)	(1.08)	(0.82)	0.99	0.33	(0.66)
Inventory Gain/(Loss) ^{3/} (US\$/BBL)	(2.57)	(6.13)	(2.64)	3.49	(0.07)	(1.10)	(2.08)	(0.98)
Total GRM (US\$/BBL)	2.88	(2.95)	1.75	4.70	(1.13)	7.92	2.30	(5.62)
Average FX (THB/USD)	35.82	34.99	34.16	(0.83)	(1.66)	35.0	35.5	0.50
Product Yield (%)								
LPG	4%	4%	5%	0.6%	1%	4%	4%	0%
Naphtha	0%	1%	2%	1.3%	2%	0%	1%	1%
Gasoline	26%	26%	26%	0.1%	0.3%	25%	27%	2%
Jet (Kerosene)	8%	9%	10%	0.4%	1%	9%	10%	1%
Diesel	47%	43%	43%	-0.7%	-4%	47%	43%	-4%
Non-Transportation fuels	0%	0%	0%	0%	0%	0%	0%	0%
Unconverted Oil (UO)	4%	4%	4%	0%	0%	5%	4%	-1%
Fuel Oil	9%	9%	9%	0%	0%	8%	9%	1%
Asphalt	1%	1%	2%	1.2%	1%	1%	1%	0%
Total Sales Volume by Market ^{4/} (Million Liters)	4,352	4,150	4,460	7%	2%	10,877	17,041	56%
Marketing Business	3,388	3,327	3,567	7%	5%	8,595	13,814	61%
Petroleum traders in accordance with section 7	559	418	479	15%	-14%	1,020	1,623	59%
Export	405	405	413	2%	2%	1,261	1,603	27%

Note: 1/ Business of Bangchak Sriracha Plc. ("BSRC") consolidated since September 1, 2023.

2/ Elimination and others reflected transactions between Refinery and Marketing businesses

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

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

In 2024, the Refinery and Oil Trading Business Group recorded a total revenue of THB 492,993 million, an increase of 52% YoY. The EBITDA of THB 5,006 million, a decline of 62% YoY, as a result of the following factors:

EBITDA -62% YoY

(-) Operating GRM decreased by US\$3.98/BBL to US\$4.05/BBL, mainly attributed to the decline in the crack spread of key products due to weakening oil demand, in line with the economic slowdown. Additionally, the easing of conflict in the Middle East reduced concerns over crude oil supply, resulting in market pressure from excess supply amidst a limited recovery in demand.

Performance by Business Group

EBITDA -62% YoY

(-) Recognized an inventory loss (including NRV) of US\$2.08/BBL, equivalent to THB 6,940 million. This loss was mainly attributed to falling crude oil prices due to concerns over the global economic, specifically China and USA, which have shown signs of a potential slowdown. Meanwhile, supply remained high, further pressuring oil prices downward. In contrast, 2023 saw a lower inventory loss, totalling US\$1.10/BBL (equivalent to THB 2,183 million).

(-) Recognized a lower gain from forward contracts of crude oil and oil products (including fair value measurement per the accounting standards) totalling US\$0.33/BBL, compared to a gain of US\$0.99/BBL in 2023.

(+) Average crude run at Bangchak refineries significantly increased to 258.4 KBD from 222 KBD in 2023, thanks to the full-year performance recognition of Sriracha Refinery, which continued to expand its crude run in 2024. This partially offset a decline in average crude run at Phra Khanong Refinery due to a 27-day turnaround maintenance from 7 May to 2 Jun 2024. Meanwhile, Bangchak Group recognized performance of Sriracha Refinery for only 4 months in 2023 after the acquisition of share in BSRC on 1 Sep 2023.

Additionally, BCPT has benefited from the expansion of Bangchak's Refinery and Oil Trading Business Group following the BSRC acquisition, coupled with the significant growth of its overseas crude oil trading business (Out-Out), which increased by 97% YoY. This growth was backed by a strategy of securing long-term sales contracts with trading partners to guarantee sales volumes even during market downturns. As a result, crude oil and refined oil product trading transactions rose substantially by more than 100% YoY, increasing by 63.3 million barrels to reach 112.7 million barrels. BCPT is also accelerating the expansion of its Out-Out trading network for both crude oil and refined oil products to support business growth and enhance trading flexibility.

In Q4/2024, the Refinery and Oil Trading Business Group recorded a total revenue of THB 119,277 million, a decrease of 8% QoQ and 2% YoY. The EBITDA of THB 173 million (+>100% QoQ and -90% YoY), as a result of the following factors:

EBITDA +>100% QoQ	EBITDA -90% YoY
(+) Operating GRM rose by US\$2.31/BBL to US\$4.80/BBL thanks to an increase in the crack spread of key products, particularly Middle Distillate Products which were driven by a decline in regional oil product inventories, coupled with rising demand for heating oil during the winter season.	(-) Operating GRM ebbed from weak demand, as previously mentioned. However, the decline was partially offset by the performance of Sriracha Refinery which saw an increase in the crack spread of Asphalt, a high-value product, by >100%.
(+) Average crude run at Bangchak's refineries improved by 12.1 KBD to 271.8 KBD as Sriracha refinery slowed down its refining activities due to planned maintenance on certain units during Q3/2024.	(-) Recognized an inventory loss, almost similar level as an inventory loss of US\$2.57/BBL (equivalent to THB 2,035 million) recognized in Q4/2023.
(-) Recognized an inventory loss of US\$2.64/BBL or equivalent to THB 2,258 million (including NRV) due to the	(-) Recognized a loss from forward contracts of crude oil and refined oil products (including fair value

Performance by Business Group

EBITDA +>100% QoQ	EBITDA -90% YoY
<p>decline in global crude oil prices following the global economic downturn. However, the rate of decline was lower compared to Q3/2024 which recognized an inventory gain of US\$6.13/BBL (equivalent to THB 5,121 million).</p> <p>(-) Recognized a loss from forward contracts of crude oil and refined oil products (including fair value measurement per the accounting standards) totaling US\$0.40/BBL, as crack spreads of contracted products trended upward in Q4/2024.</p>	<p>measurement per the accounting standards). Meanwhile Q4/2023 recognized a gain of US\$0.42/BBL.</p> <p>(+) Average crude run at Bangchak’s refineries significantly improved, thanks to the full-quarter performance recognition of Sriracha Refinery. Meanwhile, during the same period last year, the Sriracha refinery halted operations for maintenance from September to October 2023 for a duration of 40 days.</p>

Performance by Business Group



Marketing Business Group

Marketing Business Group Performance ^{1/}	Q4/2023	Q3/2024	Q4/2024	QoQ	YoY	2023	2024	YoY
Revenue (THB Million) ^{2/}	97,240	95,074	98,078	3%	1%	252,737	393,688	56%
EBITDA (THB Million)	1,586	677	806	19%	-49%	4,578	5,577	22%
Marketing Margin under Bangchak Group (Baht / liter)	1.00	0.96	0.87	-9%	-13%	0.93	0.90	-3%
Net Marketing Margin under Bangchak Group ^{3/} (Baht / liter)	0.95	0.77	0.77	0%	-19%	0.94	0.80	-15%
Sales Volume under Bangchak Group (Million Liters)	3,388	3,327	3,567	7%	5%	8,595	13,814	61%
- Retail (via Service Stations)	2,094	2,032	2,094	3%	0%	5,890	8,363	42%
- Industrial	1,295	1,295	1,473	14%	14%	2,705	5,451	>100%
Sales Volume by Product (Million Liters)	3,388	3,327	3,567	7%	5%	8,595	13,814	61%
LPG	83	150	183	22%	>100%	190	622	>100%
Gasoline	908	914	958	5%	6%	2,360	3,718	58%
Jet Fuel	318	363	380	5%	19%	904	1,474	63%
Diesel	1,963	1,722	1,824	6%	-7%	4,854	7,244	49%
Fuel Oil and Others	117	178	222	25%	90%	288	757	>100%
Unit: Sites								
Service Station	2,219	2,141	2,163	22	(56)	2,219	2,163	(56)
- under Bangchak operation	1,389	1,396	1,411	15	22	1,389	1,411	22
- under BSRC operation	830	745	752	7	(78)	830	752	(78)
EV Chargers	264	321	365	44	101	264	365	101
Inthanin Coffee Shop	1,020	1,003	1,028	25	8	1,020	1,028	8

Note: 1/ Business of Bangchak Sriracha Plc. ("BSRC") consolidated since September 1, 2023

2/ Elimination and others reflected transactions between Refinery and Marketing businesses

3/ Net Marketing Margin (including Inventory gain/(loss) and NRV)

In 2024, the Marketing Business Group recorded a total revenue of THB 393,688 million (increased by 56% YoY) and EBITDA of THB 5,577 million (grew by 22% YoY), as a result of the following factors:

EBITDA +22% YoY

(+) Bangchak Group's retail market share reached 28.9% in 2024, driven by the group's efforts to enhance "Bangchak" brand image and rebrand service station network under BSRC operation. By the end of 2024, the rebranding process was 100% completed. This, combined with continuous improvements in service station quality, helped strengthen the brand image and boost consumer confidence, resulting in a significant increase in sales.

(+) Total sales volume significantly grew to 13,814 million liters (+61% YoY), achieved the record high, thanks to the expanding networks of Bangchak service stations and broader industrial client base, supported by the full-year performance recognition of BSRC in 2024. Additionally, Bangchak Group has adjusted its marketing strategies to effectively target all customer segments, thereby significantly bolstering Bangchak's throughput per station.

Performance by Business Group

EBITDA +22% YoY

(-) Bangchak Group's net marketing margins slightly dropped to THB 0.80/liter. The decline was primarily due to the recognition of an inventory loss following declining oil product prices observed in 2H/2024, contrasting with a recognition of inventory gain in 2023.

In Q4/2024, the Marketing Business Group recorded a total revenue of THB 98,078 million (+3% QoQ, +1% YoY) and EBITDA of THB 806 million (+19% QoQ and -49% YoY), as a result of the following factors:

EBITDA +19% QoQ

(+) Total sales volume of the Marketing Business Group reached 3,567 million liters, a 7% increase QoQ, driven by growth in both the retail and industrial markets, with higher sales volumes across all product categories. Key supporting factors included the recovery of economic activities and the domestic tourism season, which boosted consumption demand. As a result, total oil sales for this quarter reached an all-time high.

(0) Bangchak Group's net marketing margins were recorded at THB 0.77/liter, mostly unchanged QoQ. This was mainly due to the rising trend in refined product prices, causing retail prices at service stations not to fully reflect the increased cost of refined oil. However, this impact was offset by the lower impact of inventory loss.

(-) Selling and administrative expenses increased, which is typical for the 4th quarter, due to year-end employee-related costs, advertising, and marketing promotion expenses, in line with the rise in sales volume.

EBITDA -49% YoY

(-) Net marketing margins declined by 19% YoY, primarily due to an increased inventory loss realization. Meanwhile, Q4/2023 benefited from a significant decrease in refined oil prices and lower inventory loss recognition.

(+) Total sales volume improved by 5% YoY, with increases observed in both retail and industrial segments. This growth mostly reflected the full-year performance recognition of BSRC. The successful transformation, complete logo change, and 100% revamp of BSRC service stations into "Bangchak" also helped enhance the brand image and build customer confidence, leading to a significant sales growth.

Performance by Business Group

Bangchak Group is committed to delivering high-quality oil products and enhancing the retail experience through an in-depth understanding of our clients, steered by the vision of becoming the **“Greenovative Destination for Intergeneration.”** The company aims to offer a diverse range of products and premium services, making Bangchak stations the preferred destination for every customer segment, alongside providing premium-level services. As of the end of Q4/2024, Bangchak Group operates a total of 2,163 service stations, 1,028 Inthanin coffee shops, over 2,050 FURIÖ (Bangchak Lubricant) distribution sites, and 365 EV chargers nationwide. In 2024, Bangchak received the ‘Superbrands Thailand’ award for the 7th consecutive year while Inthanin coffee brand was recognized for the 4th consecutive year. This reflects the success of Bangchak Group, which is committed to developing products and services that have earned continuous trust and confidence in its brands. The Bangchak brand highlights its success in developing high-quality fuel products, such as "Bangchak Hi Premium 97," which has been carefully selected and created under the concept of **"Unleashing Endless Power,"** making it the best fuel product from Bangchak. It was also chosen as First Fuel for Super Cars distributed by AAS Auto Service. The market share for Bangchak’s premium product reached 13.8%, more than 4.5 times compared to the previous year. As for Inthanin, Thailand's number one environmentally friendly coffee brand, it stands out for its efforts to reduce environmental impact and support a sustainable lifestyle under the concept **"Inthanin for You, for the World."**



Performance by Business Group



Clean Power Business Group

Clean Power Business Performance (THB Million)	Q4/2023	Q3/2024	Q4/2024	QoQ	YoY	2023	2024	YoY
Revenue from sales and rendering of services	1,318	1,125	921	-18%	-30%	5,031	4,322	-14%
EBITDA (including share of profit from investment)	1,048	1,319	1,074	-19%	2%	4,219	4,817	14%
- Share of profit (loss) from associated companies	59	386	339	-12%	>100%	252	1,014	>100%
Contracted Capacity (Equity MW)								
Solar Power Plant - Thailand	175.9	183.9	183.9	0%	5%	175.9	183.9	5%
Wind Power Plant - Thailand	9.0	9.0	9.0	0%	0%	9.0	9.0	0%
Solar Power Plant - Japan ^{1/}	79.7	-	-	NA	-100%	79.7	-	-100%
Hydropower Plant - Lao PDR	114.0	114.0	114.0	0%	0%	114.0	114.0	0%
Wind Power Plant - Philippines	14.4	17.1	17.1	0%	18%	14.4	17.1	18%
Natural Gas Power Plants - USA	857.0	857.0	857.0	0%	0%	857.0	857.0	0%
Total	1,250.0	1,180.9	1,180.9	0%	-6%	1,250.0	1,180.9	-6%
Electricity Sales (GWh)								
Solar Power Plant - Thailand	82.2	80.4	86.3	7%	5%	327.5	336.8	3%
Wind Power Plant - Thailand	2.7	3.3	2.5	-24%	-7%	12.0	11.2	-7%
Solar Power Plant - Japan	23.3	-	-	NA	-100%	120.4	57.9	-52%
Hydropower Plant - Lao PDR	142.7	234.5	155.3	-34%	9%	350.1	533.7	52%
Wind Power Plant - Philippines	8.4	9.4	13.2	40%	57%	35.4	45.9	30%
Natural Gas Power Plants - USA	1,441.0	1,659.4	1,546.3	-7%	7%	2,899.4	6,314.6	>100%
Total	1,700.3	1,987.0	1,803.6	-9%	6%	3,744.8	7,300.1	95%
Terminal and Pipeline throughput Capacity (Million Liters)								
Volume Through Oil Tank Terminal	707.2	689.0	683.6	-1%	-3%	701.6	693.0	-1%
Volume Through Pipeline	318.9	313.4	341.5	9%	7%	242.9	304.3	25%

Note: 1/ On June 26, 2024, the Clean Power Business Group successfully divested all nine solar power plants in Japan, with a total contracted production capacity of 89.7 MW.

In 2024, the Clean Power Business Group's revenue was THB 4,322 million, a decline of 14% YoY. The EBITDA was THB 4,817 million, an increase of 14% YoY, with factors affecting operations as follows:

EBITDA +14% YoY

(+) Electricity sales volume of hydropower plants in the Lao PDR rose by 52% YoY, thanks to the La Niña phenomenon, resulting in a greater inflow of water into the dams. Meanwhile, there was a temporary shutdown in preparation for electricity transmission to Vietnam Electricity (EVN) in 2023. The plants commenced commercial operation and distributed electricity in June 2023, in alignment with the Power Purchase Agreement with EVN.

(+) Recognized the share of profit from investments in associated companies totaling THB 1,014 million, improved YoY, primarily driven by a full-year recognition of shared profit from the operation of four natural gas power plants in the USA (857 MW). However, in 2024, the company recognized extraordinary items related to refinancing, totaling THB 535 million. This transaction helped enhance financial management efficiency. Excluding these extraordinary items, the Clean Power Business Group recorded a share of profit from USA power plants totaling THB 1,555 million.

Performance by Business Group

EBITDA +14% YoY

Additionally, there was an increase YoY in profit sharing from the wind power business in the Philippines, due to the partial commercial operation of the Nabas2 project and the recognition of insurance claim in Q4/2024.

(+) Oil terminals and seaports in Thailand began recognizing revenue in June 2023, resulting in the full-year performance recognition in 2024.

(-) Revenue from solar power project in Japan declined, as its performance was recognized for only 6 months in 2024. This was due to the divestment of the solar power operations in Japan, totaling nine projects with a combined contracted capacity of 89.7 MW on 26 Jun 2024.

(-) Revenue from solar power plants in Thailand decreased due to the expiry of the adder tariff program. However, electricity' sales volume saw a 3% increase YoY, thanks to the additional operation of rooftop solar projects, solar panel enhancements, and higher electricity generation from three new solar power plants. These new plants were acquired on 30 April 2024, with a total contracted capacity of 8.0 MW.

(-) Revenue from wind power plants in Thailand dropped due to a 7% decline in electricity sales volume caused by lower wind speed and a reduction in the fuel adjustment charge (Ft).

In Q4/2024, the Clean Power Business Group's revenue was THB 921 million, a decrease of 18% QoQ and 30% YoY. The EBITDA was THB 1,074 million (-19% QoQ, +2% YoY), with factors affecting operations as follows:

EBITDA -19% QoQ

(-) The hydropower project in Lao PDR experienced a 34% QoQ decrease in electricity sales due to normal seasonal factors since the 3rd quarter is the peak season.

(-) Electricity sales volume from wind power plants in Thailand dropped by 24% QoQ due to lower wind driven by seasonal factors.

(-) Recognized the share of profit from investments in associated companies totaling THB 339 million. This QoQ decrease was primarily due to THB 323 million profit-sharing from the natural gas power plants in the USA, reflecting a decrease in electricity production caused by planned maintenance in November 2024. Meanwhile, profit sharing from the wind power business in the Philippines increased due to the recognition of insurance claim in Q4/2024.

EBITDA +2% YoY

(+) Electricity sales volume from hydropower plants in the Lao PDR improved by 9% YoY owing to the La Niña phenomenon.

(+) Recognized higher share of profit from investments in associated companies totaling THB 339 million, mainly attributed to the full-quarter recognition of shared profits from the operation of four natural gas power plants in the USA (857 MW), coupled with the higher profit margin per unit. Also, profit sharing from the wind power business in the Philippines increased as mentioned earlier.

(-) Revenue from solar power plants in Thailand declined, mainly due to the expiry of the adder tariff program. However, sales volume grew by 5% YoY, thanks to the solar panel enhancements and higher electricity generation from three new solar power plants.

Performance by Business Group

EBITDA -19% QoQ	EBITDA +2% YoY
<p>(+) Revenue from solar power plants in Thailand grew by 7% QoQ as the electricity capacity factor increased from 15.8% in Q3/2024 to 16.6%, thanks to higher irradiation and the additional operation of rooftop solar projects</p> <p>(+) Revenue from oil terminals and seaports in Thailand slightly increased due to higher pipeline usage corresponding with an increase in oil handling services for customers. Although the volume of oil tank usage slightly decreased due to tank improvements for better utilization from September 2024 to January 2025.</p>	<p>(-) Electricity sales volume from wind power plants in Thailand declined by 7% YoY, owing to lower wind speed.</p> <p>(-) Revenue from oil terminals and seaports in Thailand dropped in line with the decline in oil tank usage due to tank improvements for better utilization from September 2024 to January 2025. While pipeline usage increased backed by the higher demand for oil handling services from customers.</p> <p>(-) The recognition of operating results from the solar power projects in Japan was absent in Q4/2024 as previously mentioned.</p>

Performance by Business Group



Bio-Based Product Business Group

Bio-Based Products Business Performance (THB Million)	Q4/2023	Q3/2024	Q4/2024	QoQ	YoY	2023	2024	YoY
Sales Revenue	4,240	5,365	6,659	24%	57%	13,757	22,192	61%
EBITDA	253	161	318	98%	26%	667	972	46%
Performance								
Gross Profit/(loss)	193	143	254	78%	32%	441	783	78%
Selling and Administrative expenses	(72)	(101)	(119)	18%	65%	(349)	(386)	-11%
Sales Volume (Million Liters)	128	163	185	13%	45%	422	651	54%
<i>Ethanol</i>	50.1	51.6	82.5	60%	65%	144.6	200.0	38%
<i>Biodiesel</i>	77.8	111.6	102.9	-8%	32%	277.3	451.1	63%

In 2024, the Bio-Based Product Business Group recorded revenue of THB 22,192 million, an increase of 61% YoY. EBITDA was recorded at THB 972 million, an increase of 46% YoY. These resulted from the following factors:

EBITDA +46% YoY

(+) Biodiesel business (B100) saw an increase in gross profit, due to a significant 63% YoY growth in biodiesel sales volume backed by a strong demand growth within the Bangchak Group following BSRC's integration. Additionally, the selling price of biodiesel continuously increased throughout the year. In December 2024, the Bio-Based Product Business began recognizing operating profits from BBGI-BI based on the increased equity stake, following the completion of the acquisition on November 28, 2024, raising its shareholding from 70% to 100%.

(-) Ethanol business experienced a decline in gross profit, primarily due to higher costs of key raw materials, particularly molasses, owing to lower production output. Also, ethanol selling prices continuously decreased throughout the year. As a result, in 2024, the bio-based product business recognized losses on inventories devaluation (NRV) of THB 107 million.

In Q4/2024, the Bio-Based Product Business Group recorded revenue of THB 6,659 million, an increase of 24% QoQ and 57% YoY. EBITDA was recorded at THB 318 million, an increase of 98% QoQ and 26% YoY. These resulted from the following factors:

EBITDA +98% QoQ

(+) Biodiesel business (B100) saw an increase in gross profit as the average selling price of biodiesel dropped, driven by a decline in domestic crude palm oil stock, as it was the off-harvest season. Additionally, many cultivation areas in Southern of Thailand were affected by flooding,

EBITDA +26% YoY

(+) Biodiesel business (B100) reported higher gross profit. This growth was primarily driven by an increased demand within the Bangchak Group, alongside an increasing selling price of biodiesel, in line with the rise in global crude palm oil prices. This was driven by Indonesia's energy plan to

Performance by Business Group

EBITDA +98% QoQ	EBITDA +26% YoY
<p>resulting in lower-than-expected output. This was further compounded by the rising global crude palm oil prices.</p> <p>(-) Ethanol business recorded lower gross profit as the average selling price of ethanol dropped, due to high domestic ethanol stock levels.</p>	<p>increase the blending ratio of palm oil in biodiesel to B40, leading to higher demand for crude palm oil.</p> <p>(-) Ethanol business recorded lower gross profit, due mainly to the rising cost of molasses, as production output in the market remains at a low level.</p>

Performance by Business Group



Natural Resources Business Group

Natural Resources Business (THB Million)	Q4/2023	Q3/2024	Q4/2024	QoQ	YoY	2023	2024	YoY
Revenue	6,710	9,570	6,728	-30%	0%	28,848	36,229	26%
EBITDA	5,683	6,734	5,007	-26%	-12%	19,671	24,816	26%
OKEA Performance								
Revenue from crude oil and gas sales	6,710	9,570	6,728	-30%	0%	28,847	36,229	26%
EBITDA	5,761	6,730	5,268	-22%	-9%	19,778	25,186	27%
Production volume – Net to OKEA (kboepd)	30.08	37.26	37.77	1%	26%	24.59	38.87	58%
Sales volume – Net to OKEA (kboepd)	25.64	40.79	29.20	-28%	14%	28.22	37.45	33%
Realized liquids price (US\$/BBL)	83.40	74.90	69.20	-8%	-17%	80.10	77.20	-4%
Realized gas price (US\$/BBL)	74.60	68.90	80.00	16%	7%	82.20	67.40	-18%

In 2024, Natural Resources Business Group's revenue was THB 36,229 million, an increase of 26% YoY. EBITDA was THB 24,816 million, an increase of 26% YoY. The factors impacting the performance are as follows.

EBITDA +26% YoY

(+) Production capacity and sales volume grew by 58% YoY and 33% YoY, respectively. The increase was mainly driven by a performance recognition of the Statfjord field, of which the acquisition was completed on 29 Dec 2023. Furthermore, the Brage field, acquired from the Wintershall Dea in Q4/2022 and now operated by OKEA, has been able to continuously increase its production capacity. The full half-year performance recognition from the Hasselmus field that began commercial operations in Oct 2023 also contributed to improved performance.

(-) Average selling price of oil and gas (Liquid price) dropped by 4% YoY, in line with the decline in global oil prices. Additionally, the proportion of natural gas liquids (NGL) production, which is priced lower than oil, increased. Meanwhile, the selling price of natural gas (Gas price) dropped by 18% YoY, primarily due to warmer-than-usual weather and high natural gas reserves during the 1H/2024, leading to a decline in natural gas consumption.

In Q4/2024, Natural Resources Business Group's revenue was THB 6,728 million, declined by 30% QoQ but remained stable YoY. EBITDA was THB 5,007 million, down by 26% QoQ and 12% YoY. The factors impacting the performance are as follows.

EBITDA -26% QoQ

(-) OKEA's Sales volume dropped by 28% QoQ, mainly due to the divestment of the investment in Yme field which successfully completed during this quarter, resulting in the recognition of operating results from Yme field for only two months. Additionally, lower sales volume than the

EBITDA -12% YoY

(-) Average selling price of oil and gas (Liquid price) decreased by 17% YoY due to the overall economic slowdown. However, this impact was partially offset by a 7% YoY increase in the average selling price of natural gas.

Performance by Business Group

EBITDA -26% QoQ	EBITDA -12% YoY
<p>contracted production capacity (Underlift) in the Draugen field and Brage field also contributed to the decline.</p> <p>(+) Average selling price of natural gas increased by 16% QoQ following the global market trend, due to higher demand for natural gas during the winter season. Meanwhile, the average selling price of oil and gas (Liquid price) declined by 8% QoQ due to weak global oil demand.</p>	<p>(+) Production capacity and sales volume expanded by 26% YoY and 14% YoY, respectively. The increase was mainly from the full year performance recognition of the Statfjord field and the Hasselmus field.</p>

Statement of Income

Statement of Income

Unit: THB Million	Q4/2023	Q3/2024	Q4/2024	QoQ	YoY	2023	2024	YoY
Revenue from sale and services	142,922	154,193	142,246	-8%	-0.5%	385,853	589,877	53%
Gain (loss) from derivatives	1,266	2,256	(806)	<-100%	<-100%	2,287	928	-59%
Accounting EBITDA	10,247	7,170	7,167	-0.04%	-30%	41,680	40,409	-3%
Gain (loss) on foreign exchange	(22)	(587)	(115)	80%	<-100%	401	(114)	<-100%
Reversal of (loss) from impairment of assets*	(6,190)	4,767	(448)	<-100%	93%	(9,497)	4,062	<-100%
Finance costs	(1,634)	(1,740)	(1,769)	2%	8%	(4,980)	(7,001)	41%
Tax expense	(1,193)	(7,535)	(920)	-88%	-23%	(8,766)	(16,818)	92%
Profit (loss) for the period	(3,365)	(1,687)	143	>100%	>100%	11,908	4,040	-66%
Owners of the parent	(977)	(2,093)	17	>100%	>100%	13,233	2,184	-83%
Basic earnings per share (Baht)	(0.82)	(1.61)	(0.01)			9.27	1.30	
Core Profit (excluding extraordinary items)	2,106	711	1,799	>100%	-15%	9,924	6,120	-38%
Extraordinary items (before tax)	(7,657)	691	(3,116)	<-100%	-59%	(3,876)	(252)	-93%
<i>Main item as follows:</i>								
Inventory Gain (loss) (including reversal of/ loss on NRV)	(2,236)	(5,840)	(2,629)	-55%	18%	(2,096)	(7,897)	<-100%
Gain (loss) from unrealized of derivatives	719	2,167	(1,375)	<-100%	<-100%	1,597	293	-82%
Gain (loss) on foreign exchange	(22)	(587)	(115)	-80%	>100%	401	(114)	<-100%
Gain from sale of investment (after tax)	-	-	-	N/A	N/A	-	2,159	N/A
- based on the shareholding ratio (after tax)	-	-	-	N/A	N/A	-	1,248	N/A
Gain on bargain purchase	-	-	-	N/A	N/A	7,389	-	-100%
Reversal of (loss) from impairment of assets*	(6,190)	4,767	(448)	<-100%	-93%	(9,497)	4,062	>100%
- based on the shareholding ratio (after tax)*	(428)	116	(282)	<-100%	-34%	(2,907)	(981)	66%
Reversal of impairment loss determined in accordance with TFRS 9	(5)	3	574	>100%	>100%	50	634	>100%
Others	77	181	877	>100%	>100%	(1,720)	611	>100%

Performance in 2024 compared to 2023

Total revenue from sales and services was THB 589,877 million, rose by 53%. This significant growth was attributed to the Refinery Business Group and the Marketing Business Group from the full-year performance recognition of BSRC. Also, there was higher revenue from the Natural Resources Business Group, thanks to a full-year performance recognition of the Statfjord field, resulting in an increased production capacity.

Accounting EBITDA declined by 3% to THB 40,409 million, primarily due to the Refinery and Oil Trading Business Group which was impacted by a decline in Operating GRM resulting from a decrease in the crack spread of key products. This was driven by a decline in global oil demand and supply amid the economic slowdown. Additionally, the company recorded an inventory loss of THB 7,897 million in 2024. This loss was mostly offset by growth observed in the Natural

Statement of Income

Resources Business Group as its production capacity and sales volume expanded thanks to performance recognitions of the Statfjord field and Hasselmus field. The Marketing Business Group achieved robust growth in sales volume, attributed to the expansion of the service station network and industrial customer base, along with the full-year performance recognition of BSRC.

Extraordinary items

- **Inventory Loss (including reversal of/ loss on NRV)** for Bangchak Group amounted to THB 7,897 million, in 2024 due to decreasing crude oil prices driven by the global economic slowdown
- **Gain from unrealized derivatives** was at THB 293 million from gain on fair value from forward contracts of crude oil and oil products which completely offset loss on fair value from the forward contracts of foreign exchange.
- **Loss on foreign exchange** recorded at THB 114 million in 2024, mainly driven by the Natural Resources Business Group and the Clean Power Business Group, which have liabilities in U.S. dollars, and recognized foreign exchange losses. Meanwhile, the Refinery and Oil Trading Business recorded foreign exchange gains due to the appreciation of the Thai baht against the U.S. dollar, partially offsetting the losses.
- **Gain from sale of investment** amounted to THB 2,159 million, thanks to the divestment of whole investment in solar power plants in Japan, (or amounting to THB 1,248 million, after tax and based on the shareholding ratio) recognized in Q2/2024.
- **Reversal of loss on impairment of assets** of THB 4,062 million was due to the sale of investment in Yme, at a value higher than its book value, helped offset the impact of asset impairments from the Statfjord field and the Clean Power Business, including solar power projects in Thailand and Taiwan.
- **Gain from other items** amounted to THB 611 million was primarily driven by the reversal of provisions in relation to the acquisition of BSRC in 2023.

Tax expense of THB 16,818 million, surged by 92%, owing to the reversal of loss on impairment of Yme recognized in 2024. Meanwhile, the group incurred an entry related to impairment of technical goodwill of Statfjord field, not tax-deductible, resulting in a higher effective tax rate of 80.6% compared to 42.4% in 2023.

Net profit attributable to the owners of the parent was THB 2,184 million, representing the earnings per share of THB 1.30.

Net profit from normal operations (excluding extraordinary items) stood at THB 6,120 million, down by 38% YoY. This was mainly due to an extraordinary item—gain on sale of investment related to the divestment of solar power plants in Japan, amounting to THB 1,248 million, after tax and based on the shareholding ratio and the reversal of impairment of Yme field.

Performance in Q4/2024 compared to Q3/2024

Total revenue from sales and services decreased by 8% to THB 142,246 million, due mainly to the lower revenue contribution from the Refinery and Oil Trading Business Group as average selling prices of refined products declined in the

Statement of Income

export market. Additionally, the revenue from the Natural Resources Business also declined due to a decrease in sales volume.

Accounting EBITDA stood at THB 7,167 million. Although the sales volume of the Natural Resources Business declined, this impact was offset by the Refinery and Oil Trading Business, which saw an increase in the Operating GRM, driven by a significant recovery in the crack spread of all products due to higher market demand during the winter season, along with a reduction in inventory loss recognition compared to Q3/2024.

Extraordinary items

- **Inventory Loss (including reversal of/ loss on NRV)** for Bangchak Group was reported at THB 2,629 million in Q4/2024, due to falling crude oil prices following a sluggish economy.
- **Loss from unrealized derivatives** amounted to THB 1,375 million resulting from loss on fair value from the forward contracts of foreign exchange on account of the weakening Thai Baht, along with loss on fair value from forward contracts of crude oil and oil products.
- **Loss on foreign exchange** amounted to THB 115 million as in Q4/2024 the Natural Resources Business Group, which has liabilities in U.S. dollars, recorded a loss on foreign exchange. This loss was partially offset by foreign exchange gains in the Clean Power Business Group, which has assets in U.S. dollars.
- **Net reversal of impairment loss determined in accordance with TFRS 9 and assets** of THB 126 million were primarily due to the reversal of account receivables previously provisioned for expected credit losses.
- **Gains from other items** amounted to THB 877 million were mainly driven by the reversal of provisions in relation to the acquisition of BSRC in 2023.

Tax expense amounted to THB 920 million (-88%), attributed to the lower operating profits contributions from the Natural Resources Business and the reversal of loss on impairment of Yme recognized in Q3/2024.

Net profit attributable to the owners of the parent grew by >100%, reaching THB 17 million.

Net profit from normal operations (excluding extraordinary items) amounted to THB 1,799 million (+>100%).

Performance of Q4/2024 compared to Q4/2023

Total revenue from sales and services amounted to THB 142,246 million, slightly dropped 0.5%, primarily driven by lower revenue contributions from Refinery and Oil Trading Business Group following the decline in average selling prices of refined products.

Accounting EBITDA saw a 30% decline to THB 7,167 million driven by the Refinery and Oil Trading Business Group as Operating GRM declined due to a decrease in crack spreads across all main products, resulting from weakened overall market demand amid an economic slowdown. Additionally, the company recognized a higher inventory loss compared to Q4/2023 due to the downward trend in oil prices, coupled with a decline in the marketing margin of the Marketing Business during the period when oil prices sharply declined, allowing for retail price adjustments to align with the cost of oil. However, some impacts from oil price volatility were mitigated by increased production and sales volumes in the Bio-Based Products Business.

Statement of Income

Tax expense of THB 920 million, decline by 23% based on the reasons mentioned above, resulting in a lower effective tax rate YoY.

Net profit attributable to the owners of the parent amounted to THB 17 million, grew by >100%.

Net profit from normal operations (excluding extraordinary items) dropped by 15% to THB 1,799 million.

Statement of Financial Position, Statement of Cash Flows, and Financial Ratios

As of December 31, 2024, Bangchak Group recorded total assets in the amount of THB 316,542 million, a decline of THB 23,887 million compared to the end of 2023, owing to a decrease in cash and cash equivalents from loan repayment, coupled with a reduction in inventories following the weakening of global oil prices, as well as the sale of assets in Japan. Total liabilities declined by THB 10,329 million to THB 230,068 million, from a decrease in account payable and other account payable due to the decline in global oil prices, along with a reduction in long-term loans and bonds. Bangchak Group's total equity amounted to THB 86,474 million, a THB 13,558 million decline compared to the end of 2023, owing to the redemption of perpetual bond and dividend payment. However, in 2024, the profit for the period improved, representing the book value per share of THB 43.39.

Bangchak Groups had cash and cash equivalents in the amount of THB 28,626 million, reflecting a decrease of THB 8,128 million, primarily from the repayment of long-term loans. Net Interest-bearing Debt to Equity stood at 1.14 times. Apart from that, the company has received a credit rating upgrade from TRIS Rating, raising the company's corporate credit rating to "A+" with "Stable" rating outlook, effective from September 30, 2024.

Statement of Financial Positions

(Unit : THB Million)	2023	% to total assets	2024	% to total assets	% change
Cash and cash equivalents	36,754	11%	28,626	9%	-22%
Inventories	47,840	14%	41,210	13%	-14%
Other current assets	37,287	11%	35,395	11%	-5%
PPE	119,374	35%	115,748	37%	-3%
Investments in associates and joint ventures	28,349	8%	31,568	10%	11%
Other non-current assets	70,825	21%	63,995	20%	-10%
Total assets	340,429		316,542		
AP and Other AP	41,287	12%	34,252	11%	-17%
L/T loans and debentures (including current portion of L/T loans and debentures)	114,914	34%	112,480	36%	-2%
Decommissioning	31,905	9%	28,027	9%	-12%
Other liabilities	52,291	15%	55,309	17%	6%
Equity	100,032	29%	86,474	27%	-14%
Total liabilities and equity	340,429		316,542		

Statement of Cash Flows

(Unit : THB Million)	2023	2024	change
Cash and cash equivalents – opening balance (1 January)	45,932	36,754	(9,178)
Profit for the period	11,908	4,040	(7,868)
Adjustment for depreciation and amortization expenses	14,370	20,056	5,686
Other adjustments	8,317	2,649	(5,668)
Changes in operating assets and liabilities	10,909	5,371	(5,538)
Net cash receipts (payments) from operating activities	45,504	32,116	(13,388)
Net cash receipts (payments) in investing activities	(72,900)	(20,193)	52,707
Net cash receipts (payments) for financing activities	18,755	(18,404)	(37,159)
Net increase (decrease) in cash and cash equivalent	(8,641)	(6,481)	2,160
Exchange gain (loss) on cash and cash equivalents	(537)	(1,647)	(1,110)
Cash and cash equivalents (net bank overdraft) – closing balance	36,754	28,626	(8,128)

Statement of Financial Position, Statement of Cash Flows, and Financial Ratios

Financial Ratio

	Q4/2023	Q3/2024	Q4/2024	2023	2024
Profitability Ratios (%)					
Gross Profit Margin	5.61%	2.16%	4.40%	9.01%	5.18%
EBITDA Margin	7.44%	4.85%	4.87%	11.13%	7.02%
Net Profit Margin	-2.46%	-1.10%	0.10%	3.18%	0.70%
Return of Equity (ROE)	19.63%	1.78%	3.31%	19.63%	3.31%
Efficiency Ratio (%)					
Return on Assets (ROA)	8.80%	7.44%	8.48%	8.80%	8.48%

	31 Dec 2023	30 Sep 2024	31 Dec 2024
Liquidity Ratios (Times)			
Current Ratio	1.39	1.30	1.30
Quick Ratio	0.79	0.70	0.77
AR Turnover	20.10	27.69	26.34
Collection Period (days)	18	13	14
AP Turnover	17.02	20.15	25.97
Payment Period (days)	21	18	14
Leverage Ratios (Times)			
Net Interest-bearing Debt to Equity	0.91	1.18	1.14

Sustainability Performance in 2024

Sustainability Performance in 2024

The company has undertaken a comprehensive sustainability assessment across 3 critical dimensions—Environmental, Social, and Governance—alongside prioritizing robust economic performance. In doing so, we aim to achieve corporate sustainability in alignment with the criteria of the Stock Exchange of Thailand and the S&P Global Corporate Sustainability Assessment (S&P Global CSA). Apart from that, Bangchak Group has undergone the Morgan Stanley Capital International (MSCI) ESG Ratings, administered by MSCI ESG Research, an international organization with expertise and credibility in ESG indices. This assessment evaluates the company's resilience to environmental, social, and governance risks (ESG Risks) pertinent to its respective business operations. Results from ESG assessments are explained below:

International ESG Assessments & Awards

- Achieved the “Top 1% S&P Global Sustainability Assessment Score 2024,” the highest ranking globally in the Oil & Gas Refinery and Marketing industry from S&P Global Corporate Sustainability Assessment (S&P Global CSA), the evaluator of Dow Jones Sustainability Indices (DJSI).
- Received the MSCI ESG Rating of “AA,” as the ESG Leader for the sixth consecutive year. The AA rating is the highest level attained by Thai corporates in the Oil & Gas Refining, Marketing, Transportation & Storage industries.
- 1 of 7 Thai Companies recognized as Financial Times Asia-Pacific Climate Leaders 2024, the first and only Thai company in the energy and utilities sector to be assessed and included in the ranking comprising 350 companies in the Asia-Pacific that have demonstrated outstanding climate action commitments. These include reducing greenhouse gas emissions intensity (scopes 1 and 2) from 2017 to 2022, achieving an absolute decrease in core emissions, and committing to greenhouse gas emissions reduction targets towards becoming a low-carbon organization.

Local ESG Assessments & Awards

- Awarded the Sustainability Awards of Honor, the highest recognition in the Sustainability Excellence category, for 5 years in a row.
- Received seven awards at the Thailand Corporate Excellence Awards 2024, including two royal trophies for Product/Service Excellence and Corporate Improvement Excellence, along with five distinguished awards in the categories of Financial Management Excellence, Human Resources Excellence, Innovation, Excellence, Sustainable Development Excellence, and Leadership Excellence.
- Received the Outstanding Role Model Organization in the large-scale business organization category, the highest-level accolade, at Human Rights Award 2024 presented by the Minister of Justice. Bangchak was recognized for its outstanding commitment to business operations guided by strong corporate governance principles, emphasizing human rights management and equality across all stakeholder interactions.

Sustainability Performance in 2024

- Received a Climate Action Leading Organization (CALO) accolade, recognizing the company's "Outstanding" level assessment results.
- Recognized by a global organization and awarded the "Best Employer Thailand 2024" award as the first and only company in Thailand's Oil Industry to receive the honor.

The company places great emphasis on overseeing ESG risks within its business operations as follows:

Risks from economic uncertainties and volatile energy prices

Due to the uncertainty and geopolitical conflicts in various regions, including the Russia-Ukraine war, ongoing tensions in the Middle East, and the impact of oversupply in the market affecting crude oil and petroleum product prices, the refining margin has declined. In 2024, declining refining margins prompted some refineries to cut production capacity due to economic unviability, with some even shutting down operations. In 2025, the oil market is expected to remain in an oversupply condition, as demand continues to be affected by China's economic slowdown, while oil production is likely to increase from non-OPEC countries and the implementation of Trump 2.0 policies. These risks could result in increased volatility in refining margins and oil prices, potentially affecting the ability to adjust retail fuel prices at service stations. To address these complexities, Bangchak Group has put in place the following risk management strategies:

- Develop a budget management plan with two scenarios (Scenario Planning) to prepare for anticipated situations and define trigger points for adjusting the operational plan to align with changing circumstances.
- Closely monitor the oil price volatility, employ partial oil price hedging, and ensure ample funding for oil procurement for BCP Trading Pte. Ltd. (BCPT).
- Closely Monitor oil price movements, crude oil and refined product spreads, and continuously develop new price risk management tools. A subcommittee and the Price and Financial Risk Management Committee will be responsible for evaluating and deciding on risk mitigation options, reporting directly to the company's Executive Board regularly.
- Implement a plan to manage crude oil and product inventory levels in alignment with production and sales strategies to mitigate price risks.
- Focus on developing Niche Refinery Products at Phra Khanong Refinery by upgrading facilities to increase the production capacity of Unconverted Oil (UO) from the hydrocracking unit. This UO will be used as a feedstock for producing lube base oil and paraffin wax for industries such as candle manufacturing, paper coating, and adhesives.
- Extend the turnaround maintenance cycle from every 3 year to every 4 year at Phra Khanong Refinery.
- Maintain the No. 2 market share (based on data from the Department of Energy Business) by designing each station with a unique style that blends with the "Bangchak" identity. The network consists of 2,163 service stations, with continuous service quality upgrades to deliver excellent customer experience, aligned with the concept of "Your Greenovative Destination for Intergeneration." The company also continues to expand its

Sustainability Performance in 2024

Retail Experience business in partnership with strategic. By the end of 2024, there are 1,028 Inthanin coffee shop branches.

- Develop and promote sales of high-quality products under the "Greenovative Product" concept, including "Bangchak HI Premium 97" (the highest-octane gasoline available in the Thai market), "Bangchak HI Premium Diesel S" (featuring the highest cetane rating among diesel products), and "Bangchak E20 S EVO" (a premium-grade E20 fuel).

Risks from changes in digital technology and cyber threats

The changes in digital technology and the threats from cyber risks are external factors that are evolving, complex, and rapidly changing. Due to the current business competition and development, there is an increasing reliance on modern technology and the interconnection of devices and departments through the internet to enhance business efficiency and provide better customer experience. However, this also requires attention to the security of the organization's information technology systems. Therefore, the company has implemented strategic preparations to anticipate potential developments and adapt to changes, while also considering technology-related risks that could severely impact business continuity. This will be addressed through the following actions:

- Establish a Digital Technology Center responsible for planning, monitoring, and acquiring digital technologies to prepare for rapid technological changes and align with shifting consumer behavior. This will help improve work processes to enhance competitive capabilities and service efficiency by incorporating additional digital technologies, such as:
 - Digital Payment Project: Implementing a digital payment system in the form of Mobile EDC (Electronic Data Capture) to minimize physical contact at service stations. Customers can make payments by scanning a QR Code via any bank's app or using a contactless credit card payment system, while also earning Bangchak membership points simultaneously.
 - Personalized Marketing Development: Utilizing analytics technology to analyze individual consumer behavior, allowing for the design of services that cater to consumer needs and increase customer satisfaction.
 - Promote Digitalization of Work Processes: To improve efficiency and reduce work time, by adopting various digital tools, such as Robotic Process Automation (RPA), Power BI, or Power Apps, for work process development.
- Establish a Cybersecurity Department, with the organization's Risk Management Committee prioritizing the monitoring and management of risks associated with business process disruptions caused by cyberattacks. This includes acquiring security tools for the data center, conducting vulnerability assessments to promptly address any gaps, and monitoring risk indicators. Additionally, intelligence (Threat Intelligence) for the monitoring center is continuously provided through a Security System Alert. The Company has also developed an Incident Response Plan to prepare for cyber threats, which is regularly tested at least once a year. Further, the company has strengthened identity protection through Multi-Factor Authentication and zero-trust

Sustainability Performance in 2024

principles for critical system access. A data backup system that prevents data loss, data breaches, and ransomware attacks has been implemented, along with a backup center to ensure continuous business operations. The company's information security systems are certified under the latest international standard ISO 27001 (2022), with enhancements to the Information Security Management System, ISO 27032 for Cybersecurity Management, and ISO 27018 for personal data security management.

- Continuously implement the Refinery Cyber Security System project to specifically mitigate risks from cyberattacks or disruptions that may affect the oil refining process, which has been ongoing since 2020. The project has received certification under the latest ISO/IEC 27001 (2022) standard for Information Security Management, covering the centralized Distributed Control System (DCS) of the Phra Khanong Refinery, ensuring continuous refinery operations without disruptions from cyberattacks.
- Regularly update employees with news and training to raise awareness regarding the importance of the organization's IT security systems. Employees are also tested on their cybersecurity awareness every quarter.

Economic and Crude Oil Price Outlook

Economic Outlook

In 2025, the global economy is projected to grow at a stable rate of 3.3%, according to the International Monetary Fund (IMF), an upward revision from the previous estimate of 3.2% in October 2024. This adjustment is due to the expected boost from increased domestic consumption, driven by low inflation and interest rate cuts by several central banks. Additionally, a strong labor market remains a key factor supporting economic improvement in many regions. However, negative factors persist, such as geopolitical conflicts in various areas, economic and trade policy uncertainties in major economies like the U.S., and China's countermeasures against trade restrictions, which could weigh on the global economy.

The Thai economy in 2025 is expected to gradually recover from the previous year, supported mainly by stable government budget disbursements and an anticipated increase in public investment. Additional factors contributing to the recovery include government stimulus measures and improved consumer confidence, leading to a positive trend in domestic consumption. Private sector investment is also projected to rebound in line with the recovery of industrial production. Meanwhile, the tourism sector shows signs of revival, driven by the increasing number of international flights to Thailand. Exports are expected to continue improving, particularly in the agricultural sector and electronic industries. However, the country's economic growth remains constrained by high levels of household and business debt.

Summary of Thai Economic Projections			
(Unit: %)	2023	2024*	2025*
Economic growth rate	1.9	2.7	2.9
Inflation rate	1.2	0.4	1.1

Source: Bank of Thailand (December 18, 2024)

*Projections

Oil Price Outlook

The average price of Dubai crude oil in 2025 is projected to slightly decline compared to 2024, moving within the range of US\$70–80/BBL. This decline is driven by weak oil demand amid the global economic conditions that have not yet recovered, while oil supply is expected to continue rising, mainly from non-OPEC+ producers such as the U.S., Brazil, Guyana, and Canada. This increase in supply is likely to lead to an oversupply in the oil market. However, oil prices remain at risk of volatility due to uncertainties arising from geopolitical conflicts and unpredictable trade and other policy decisions by the new U.S. President, Donald Trump. The Dated Brent-Dubai (DTD-DB) spread in 2025 is expected to be in the range of US\$0.5–1.5/BBL. The Dated Brent prices will be under pressure from the rising supply of light crude from non-OPEC+ producers, particularly the U.S., which is likely to continue exporting to Europe.

In 2025, the refining margin of cracking refineries in Singapore is expected to remain stable compared to 2024. It will continue to face pressure from the increased supply of refined oil products due to the scheduled commissioning of new refineries in Asia and other regions, as well as the sustained high production levels of existing refineries. Meanwhile, demand for refined oil products remains uncertain amid the economic slowdown in major oil-consuming economies. However, there is market optimism regarding the economic policies of U.S. President Donald Trump, which aim to revive the U.S. economy, along with signs of additional economic stimulus measures in China. These factors are expected to support demand for refined oil products and help limit a decline in refining margins.

Appendix

Refinery and Oil Trading Business Group

Refinery and Oil Trading Business Group Performance						2023	2024	YoY
	Q4/2023	Q3/2024	Q4/2024	QoQ	YoY			
Revenue (THB Million)^{1/}	122,184	129,152	119,277	-8%	-2%	324,651	492,993	52%
EBITDA (THB Million)	1,717	(1,619)	173	>100%	-90%	13,339	5,006	-62%
- under Bangchak operation ^{2/}	2,747	(209)	346	>100%	-87%	14,217	4,227	-70%
- under BSRC operation ^{2/}	(1,322)	(1,637)	(298)	82%	77%	(407)	599	>100%
Refinery Business								
Average Crude Run (KBD)	240.2	259.7	271.8	5%	13%	222.0	258.4	16%
Utilization Rate (%)	82%	88%	92%	5%	13%	76%	88%	16%
Operating GRM (US\$/BBL)	5.04	2.49	4.80	2.31	(0.24)	8.03	4.05	(3.98)
- Oil Hedging (US\$/BBL)	0.42	0.68	(0.40)	(1.08)	(0.82)	0.99	0.33	(0.66)
- Inventory Gain/ (Loss) ^{3/} (US\$/BBL)	(2.57)	(6.13)	(2.64)	3.49	(0.07)	(1.10)	(2.08)	(0.98)
Total GRM (US\$/BBL)	2.88	(2.95)	1.75	4.70	(1.13)	7.92	2.30	(5.62)
Average FX (THB/USD)	35.82	34.99	34.16	(0.83)	(1.66)	35.0	35.5	0.50
Phra Khanong Refinery								
Average Crude Run (KBD)	120.8	122.5	122.2	0%	1%	120.1	110.6	-8%
Utilization Rate (%)	101%	102%	102%	0%	1%	100%	92%	-8%
Operating GRM (US\$/BBL)	7.27	3.48	5.05	1.57	(2.22)	9.50	4.78	(4.72)
- Oil Hedging (US\$/BBL)	0.83	0.58	(0.31)	(0.89)	(1.14)	1.28	0.51	(0.77)
- Inventory Gain/ (Loss) ^{3/} (US\$/BBL)	(0.71)	(6.27)	(2.74)	3.54	(2.03)	(0.97)	(2.22)	(1.25)
Total GRM (US\$/BBL)	7.38	(2.22)	2.00	4.21	(5.39)	9.81	3.06	(6.75)
Sriracha Refinery^{4/}								
Average Crude Run (KBD)	119.4	137.2	149.5	9%	25%	101.9	147.8	45%
Utilization Rate (%)	69%	79%	86%	9%	25%	59%	85%	44%
Operating GRM (US\$/BBL)	2.78	1.61	4.59	2.98	1.81	2.84	3.51	0.67
- Oil Hedging (US\$/BBL)	0.00	0.78	(0.48)	(1.26)	(0.48)	0.00	0.19	0.19
- Inventory Gain/ (Loss) ^{3/} (US\$/BBL)	(4.46)	(5.99)	(2.57)	3.42	1.89	(1.58)	(1.98)	(0.40)
Total GRM (US\$/BBL)	(1.67)	(3.61)	1.54	5.15	3.21	1.26	1.72	0.46
Product Yield (%)								
Refinery Business								
LPG	4%	4%	5%	0.6%	1%	4%	4%	0%
Naphtha	0%	1%	2%	1.3%	2%	0%	1%	1%
Gasoline	26%	26%	26%	0.1%	0.3%	25%	27%	2%
Jet (Kerosene)	8%	9%	10%	0.4%	1%	9%	10%	1%
Diesel	47%	43%	43%	-0.7%	-4%	47%	43%	-4%
Non-Transportation fuels	0%	0%	0%	0%	0%	0%	0%	0%
Unconverted Oil (UO)	4%	4%	4%	0%	0%	5%	4%	-1%
Fuel Oil	9%	9%	9%	0%	0%	8%	9%	1%
Asphalt	1%	1%	2%	1.2%	1%	1%	1%	0%
Phra Khanong Refinery								
LPG	2%	2%	3%	1%	1%	2%	2%	0%
Gasoline	19%	21%	22%	1%	3%	19%	21%	2%
Jet (Kerosene)	11%	12%	13%	1%	2%	11%	13%	2%
Diesel	51%	49%	46%	-3%	-5%	51%	47%	-4%
Non-Transportation fuels	0.0%	0.1%	0.1%	0.0%	0.1%	0.1%	0.2%	0.1%
Unconverted Oil (UO)	9%	9%	9%	0%	1%	9%	9%	0%
Fuel Oil	8%	7%	7%	0%	-1%	8%	8%	0%

Appendix

Product Yield (%)	Q4/2023	Q3/2024	Q4/2024	QoQ	YoY	2023	2024	YoY
Sriracha Refinery^{4/}								
LPG	6%	6%	6%	0%	0%	6%	6%	0%
Naphtha	0%	2%	4%	2%	4%	0%	2%	2%
Gasoline	33%	31%	30%	-1%	-3%	33%	31%	-2%
Jet (Kerosene)	6%	7%	7%	0%	1%	7%	7%	0%
Diesel	43%	39%	40%	1%	-3%	43%	40%	-3%
Fuel Oil	9%	10%	10%	0.2%	1%	8%	10%	2%
Asphalt	2%	2%	4%	2%	2%	1%	2%	1%
Total Sales Volume by Market^{5/} (Million Liters)								
Marketing Business	3,388	3,327	3,567	7%	5%	8,595	13,814	61%
Petroleum traders in accordance with section 7	559	418	479	15%	-14%	1,020	1,623	59%
Export	405	405	413	2%	2%	1,261	1,603	27%
Total Sales Volume	4,352	4,150	4,460	7%	2%	10,877	17,041	56%

Note: 1/ Elimination and others reflected transactions between Refinery and Marketing businesses

2/ EBITDA before eliminations and others

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

4/ Business of Bangchak Sriracha Plc. ("BSRC") consolidated since September 1, 2023.

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

Marketing Business Group

Marketing Business Group Performance	Q4/2023	Q3/2024	Q4/2024	QoQ	YoY	2023	2024	YoY
Revenue (THB Million)^{1/}	97,240	95,074	98,078	3%	1%	252,737	393,688	56%
EBITDA (THB Million)	1,586	677	806	19%	-49%	4,578	5,577	22%
- under Bangchak operation ^{2/}	576	324	364	12%	-37%	3,216	3,145	-2%
- under BSRC operation ^{2/}	1,025	621	508	-18%	-50%	1,390	2,212	59%
Marketing Margin (Baht / liter)								
Marketing Margin under Bangchak Group	1.00	0.96	0.87	-9%	-13%	0.93	0.90	-3%
- under Bangchak operation	0.97	0.82	0.78	-5%	-20%	0.92	0.86	-7%
- under BSRC operation	1.04	1.15	1.00	-13%	-4%	0.98	0.95	-3%
Net Marketing Margin (Baht / liter)^{3/} (Baht / liter)								
Net Marketing Margin under Bangchak Group	0.95	0.77	0.77	0%	-19%	0.94	0.80	-15%
- under Bangchak operation	0.93	0.59	0.67	14%	-28%	0.94	0.79	-16%
- under BSRC operation	0.96	1.02	0.92	-10%	-4%	0.96	0.81	-16%
Sales Volume (Million Liters)								
Sales Volume under Bangchak Group	3,388	3,327	3,567	7%	5%	8,595	13,814	61%
- Retail	2,094	2,032	2,094	3%	0%	5,890	8,363	42%
- Industrial	1,295	1,295	1,473	14%	14%	2,705	5,451	>100%
Sales Volume under Bangchak	1,727	1,993	2,146	8%	24%	6,490	8,052	24%
- Retail	1,244	1,194	1,246	4%	0%	4,773	4,917	3%
- Industrial	483	800	900	13%	86%	1,717	3,135	83%
Sales Volume under BSRC	1,673	1,344	1,433	7%	-14%	2,106	5,804	>100%
- Retail	849	838	848	1%	0%	1,117	3,445	>100%
- Industrial	824	506	585	16%	-29%	988	2,359	>100%

Appendix

Sales Volume (Million Liters)	Q4/2023	Q3/2024	Q4/2024	QoQ	YoY	2023	2024	YoY
Sales Volume under Bangchak Group								
LPG	83	150	183	22%	>100%	190	622	>100%
Gasoline	908	914	958	5%	6%	2,360	3,718	58%
Jet Fuel	318	363	380	5%	19%	904	1,474	63%
Diesel	1,963	1,722	1,824	6%	-7%	4,854	7,244	49%
Fuel Oil and Others	117	178	222	25%	90%	288	757	>100%
Sales Volume under Bangchak								
LPG	27	133	164	23%	>100%	120	535	344%
Gasoline	478	500	508	2%	6%	1,801	1,983	10%
Jet Fuel	206	237	258	9%	25%	779	982	26%
Diesel	974	1,064	1,150	8%	18%	3,598	4,323	20%
Fuel Oil and Others	43	59	65	10%	51%	192	229	19%
Sales Volume under BSRC								
LPG	56	18	18	0%	-68%	69	87	26%
Gasoline	435	419	454	8%	4%	559	1,754	>100%
Jet Fuel	112	125	122	-2%	9%	126	492	>100%
Diesel	996	663	680	3%	-32%	1,256	2,944	>100%
Fuel Oil and Others	74	120	157	31%	>100%	89	528	>100%
Unit: Sites								
Service Station	2,219	2,141	2,163	22	(56)	2,219	2,163	(56)
- under Bangchak operation	1,389	1,396	1,411	15	22	1,389	1,411	22
- under BSRC operation	830	745	752	7	(78)	830	752	(78)
EV Chargers	264	321	365	44	101	264	365	101
Inthanin Coffee Shop	1,020	1,003	1,028	25	8	1,020	1,028	8

Note: 1/ Elimination and others reflected transactions between Refinery and Marketing businesses

2/ EBITDA before eliminations and others

3/ Net Marketing Margin (including Inventory gain/(loss) and NRV)

Financial Ratios Calculation

Profitability Ratios

- Gross Profit Margin (%) = $\frac{\text{Gross Profit}}{\text{Revenue from sale of goods and rendering of services}}$
- EBITDA Margin (%) = $\frac{\text{EBITDA}}{\text{Revenue from sale of goods and rendering of services}}$
- 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 (%) = $\frac{\text{EBIT}}{\text{Total asset (Average)}}$

Liquidity Ratios

- Current Ratio (Times) = $\frac{\text{Current asset}}{\text{Current liabilities}}$
- Quick Ratio (Times) = $\frac{(\text{Cash \& Equivalents} + \text{Short-term investments} + \text{Trade and other account receivable})}{\text{Current liabilities}}$

Appendix

- Accounts Receivable Turnover (Times) = $\frac{\text{Revenue from sale of goods and rendering of services}}{\text{Accounts receivable before doubtful debt (Average)}}$
- Collection Period (Days) = $365 / \text{Account receivable turnover}$
- Accounts Payable Turnover (Times) = $\frac{\text{Cost of sale of goods and rendering of services}}{\text{Accounts payable (Average)}}$
- Payment Period (Days) = $365 / \text{Accounts Payable Turnover}$

Leverage Ratios

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

Note:

1/ Average total equity attributable to owners of the parent

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

2/ Average total assets

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

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

6/ Average accounts payable

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

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)