IRPC Public Company Limited

Management Discussion and Analysis

Operating Results for Year 2023 and the Fourth Quarter of 2023

World Members in Oil & Gas Refining and Marketing Sector for 10th Consecutive Year

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Management Discussion and Analysis (MD&A)
IRPC Public Company Limited and its subsidiaries
Operating Results for Year 2023 and the Fourth Quarter of 2023

Executive Summary

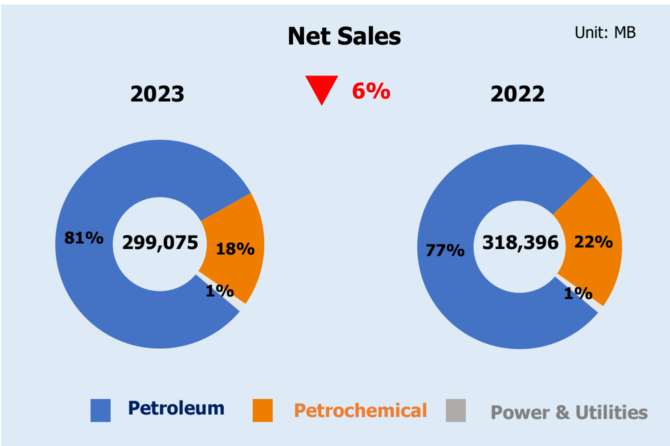
	Unit	Quarter			Change		Year		YoY
		4Q23	3Q23	4Q22	QoQ	YoY	2023	2022	
Crude Intake	Million bbl	17.65	17.17	10.97	3%	61%	70.11	63.86	10%
Sales[1]	Million Baht	79,059	81,642	57,007	(3%)	39%	319,047	324,800	(2%)
Net Sales [2]	Million Baht	75,296	77,264	55,081	(3%)	37%	299,075	318,396	(6%)
Market GIM [3]	Million Baht	2,719	5,373	2,609	(49%)	4%	19,344	23,761	(19%)
	USD/bbl	4.31	8.87	6.50	(51%)	(34%)	7.90	10.57	(25%)
Accounting GIM	Million Baht	733	8,939	(4,207)	(92%)	117%	18,221	17,413	5%
	USD/bbl	1.16	14.76	(10.50)	(92%)	111%	7.44	7.75	(4%)
EBITDA	Million Baht	(2,256)	5,880	(7,836)	(138%)	71%	5,754	3,987	44%
Net Profit	Million Baht	(3,417)	2,439	(7,149)	(240%)	52%	(2,923)	(4,364)	33%

Note: [1] **Sales** include (1) Petroleum Sales (2) Petrochemical Sales (3) Power and Utilities Sales (4) Sales of tank farm and port service, etc

[2] **Net Sales** include (1) Petroleum Sales (excluding excise tax) (2) Petrochemical Sales (3) Power and Utilities Sales

[3] **Market GIM per bbl** : [(Market GIM / Crude Intake)/Exchange Rate]

The operating results in 2023 compared to those in 2022: In 2023, the Company registered net sales of Baht 299,075 million decreasing by 6% from that in 2022. This attributed to a 22% decline in average selling prices following lower crude oil price versus a 16% increase in sales volume. For petroleum business unit, Market Gross Refining Margin (Market GRM) dropped from a decrease in the spread between petroleum product prices and Dubai crude oil price following the softened crude oil price. Diesel spread's decrease was quite obvious due to the conflict between Russia and Ukraine that extremely impacted Diesel supply. Furthermore, petrochemical business unit faced declined Market Product to Feed (Market PTF) owing to the lower spreads between petrochemical product prices and naphtha price. This caused by the continuously sluggish demand for petrochemical products as decelerated global economic conditions. Power plant and utility business units contributed stable margin from sales of electricity and steam. Hence, the Company recorded Market Gross



Integrated Margin (Market GIM) of Baht 19,344 million (USD 7.90 per barrel) decreasing by 19%. However, the average crude oil price in 2023 dropped from that last year, substantially pressured by the unfavorable global economic conditions. The global economy slowdown was contributing from the inflation control measures, of which included the series of interest rate increases imposed by several central banks, as well as from the continuing property sector crisis in China and bank collapses in the U.S., Europe, and China. Such factors affected oil demand globally, despite the crude oil price fluctuations from time to time caused by OPEC and allies' production cuts aiming to balance the market and political conflicts in many areas including Israel-Hamas and Russia-Ukraine. The drop in the crude oil price led to the stock loss of Baht 2,488 million or USD 1.02 per barrel against a reversal on Net Realizable Value (NRV) of Baht 1,026 million or USD 0.42 per barrel. Nevertheless, the Company recorded the realized gain from oil hedging of Baht 339 million or USD 0.14 per barrel. All previous mentioned resulted in net inventory loss of Baht 1,123 million or USD 0.46 per barrel. Therefore, the Accounting Gross Integrated Margin (Accounting GIM) was Baht 18,221 million or USD 7.44 per barrel rising by 5% from that last year. Moreover, the earnings before interest, tax, depreciation and amortization (EBITDA) of Baht 5,754 million escalated by Baht 1,767 million or by 44%. In 2023, there was a gain on impairment and disposal of assets amounting to Baht 822 million, mainly owing to the reversal impairment on spare part. As a result, the Company recorded the net loss of Baht 2,923 million in 2023 being less than the 2022 net loss by 33%.

The operating results in the fourth quarter of 2023 (4Q23) compared to those in the third quarter of 2023 (3Q23): In 4Q23, the Company registered net sales of Baht 75,296 million decreasing by Baht 1,968 million or by 3% from that in 3Q23. This attributed to a 4% decrease in average selling prices following lower crude oil price versus a 1% increase in sales volume. For petroleum business unit, The Market GRM dropped being caused by a decrease in the spreads between petroleum product prices and Dubai crude oil price following the crude oil price trend, especially Diesel and Gasoline spreads that lowered as a result of Russia's announcement about a lift of petroleum product export ban. Still, Market PTF for petrochemical business unit slightly increased because of higher margin despite the remaining softened petrochemical product demand as a result of the global economic slowdown. Power plant and utility business units contributed stable margin from sales of electricity and steam. Hence, the Company recorded Market GIM of Baht 2,719 million (USD 4.31 per barrel) decreasing by 49% from that in 3Q23. According to high U.S. crude oil production, Dubai crude oil price decreased from that last quarter, thus a stock loss of Baht 1,464 million or USD 2.32 per barrel and an NRV of Baht 1,142 million or USD 1.81 per barrel. However, the Company recorded a gain from realized oil hedging of Baht 620 million or USD 0.98 per barrel. All previous mentioned resulted in a net inventory loss of Baht 1,986 million or USD 3.15 per barrel. Therefore, the Accounting GIM was Baht 733 million or USD 1.16 per barrel declining by 92% from that last quarter. There was a loss on EBITDA amounting to Baht 2,256 million compared to an EBITDA of Baht 5,880 million in 3Q23. In 4Q23, there was a gain on financial derivatives amounting to Baht 443 million and a gain on foreign exchange from US Dollar – borrowings of Baht 182 million owing to Thai Baht appreciation. The Company recorded a net loss of Baht 3,417 million in 4Q23 decreasing by 240% from the net profit of Baht 2,439 million in 3Q23.

The operating results in the fourth quarter of 2023 (4Q23) compared to those in the fourth quarter of 2022 (4Q22): The Company's net sales increased by Baht 20,215 million or by 37% from that in 4Q22 due to a 53% increase in sales volume versus a 16% decrease in average selling prices following the lower crude oil price. The rise in sales volume was mainly from the operating resumption after the major turnaround in 4Q22 that the Company managed production and sales to align with the planned major turnaround. For petroleum business unit, the Market GRM declined owing to a decrease in the spread between Diesel price and Dubai crude oil price following the crude oil price trend against a significant decrease in the cost of crude premium. In addition, the Market PTF slightly increased. Power plant and utility business units obtained stable margin. Hence, the Company recorded increased the Market GIM by 4%. However, a net inventory loss in 4Q23 was less than that in 4Q22 by 71%. Therefore, the Accounting GIM was Baht 733 million compared to the loss on Accounting GIM of Baht 4,207 million in 4Q22. Moreover, the loss on EBITDA was less than that in 4Q22 by 71%. Consequently, the Company's 4Q23 net loss was less than the net loss in 4Q22 by 52%.

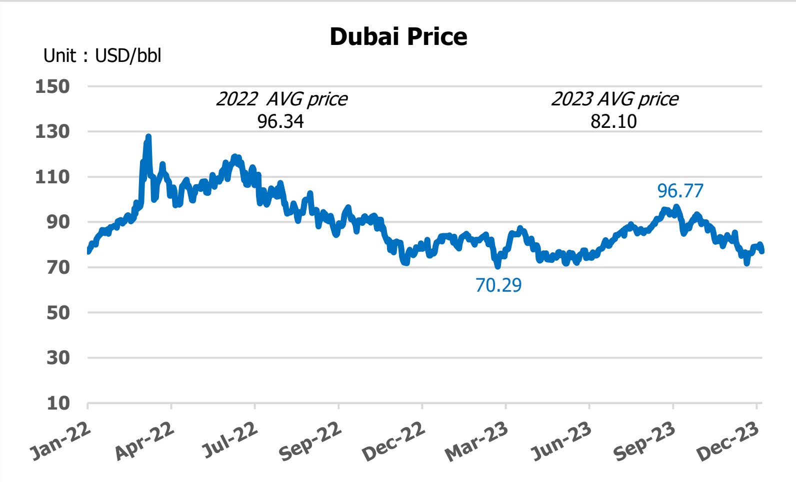
Operating Performance

1. Operating Performance by Business Units

1.1 Petroleum business unit

1.1.1 Petroleum Market Overview

Crude oil situation in 2023: The global oil consumption was 102.3 million barrels per day rising by 1.8 million barrels per day from 2022 oil consumption of 100.5 million barrels per day. The Dubai price in 2023 moved between USD 70.29 per barrel and USD 96.77 per barrel, with an average of USD 82.10 per barrel decreasing by USD 14.24 per barrel from USD 96.34 per barrel in 2022. The crude oil price in early-2023 was supported by market expectation that China reopening would recover the overall economy as well as oil demand. Still, the market situation did not progress as expected due to China's property crisis, along with bank collapses in the U.S, Europe and China that stirred concerns whether the collapses aggregate the impacts and evolve to an economic crisis. In addition, the high U.S. inflation rate led the Federal Reserve (FED) to increase the policy interest rate pressuring the economy and commodity prices. The FED increased the policy interest rate for 4 times in 2023, hence the rate of 5.25 – 5.50% at the end of the year. The aforementioned threats drove OPEC and allies to cut the crude oil production in order to uphold the price, with Saudi Arabia's additional voluntary cut of 1 million barrels per day starting July 2023. Meanwhile, there was a conflict between Israel and Hamas in early-October 2023 soaring the crude oil price in a short period. Despite not elevating, the conflict built a supply risk amongst the market.



Crude oil situation in the fourth quarter of 2023 (4Q23): The global oil consumption was 103.0 million barrels per day dropping by 0.6 million barrels per day from 3Q23 oil consumption of 103.6 million barrels per day. The Dubai price in 4Q23 moved between USD 71.64 per barrel and USD 93.45 per barrel, with an average of USD 83.55 per barrel decreasing by USD 3.19 per barrel from USD 86.74 per barrel in 3Q23. This was mainly owing to the U.S.' crude oil production of around 13 million barrels per day, the highest production level since COVID-19 outbreak began, in spite of OPEC and allies' continued production cuts and Saudi Arabia's extended voluntary cut of 1 million barrels per day to 1Q24. In the meantime, the Israel-Hamas conflict occurring in early-October 2023 did not significantly interfere the production. Such circumstances entailed an oversupply condition that constrained the crude oil price.

1.1.2 Crude Intake and Capacity

Petroleum	Quarter			% Change		Year		YoY
	4Q23	3Q23	4Q22	QoQ	YoY	2023	2022	
Crude Intake								
Million barrels	17.65	17.17	10.97	3%	61%	70.11	63.86	10%
KBD	192	187	119	3%	61%	192	175	10%
Utilization Rate								
Refinery	89%	87%	55%	2%	34%	89%	81%	8%
RDCC	109%	101%	48%	8%	61%	109%	92%	17%
Lube Base Oil	79%	83%	54%	(4%)	25%	87%	77%	10%

Remark: Crude intake capacity is 215,000 barrels per day

In 2023, crude intake was 70.11 million barrels or 192,000 barrels per day. Refinery utilization rate was 89%.

In 2023, crude intake was 70.11 million barrels or 192,000 barrels per day (192 KBD). Refinery utilization rate was 89% rising by 8% from that last year. This was because the Company arranged a major turnaround during October – November 2022 taking 37 days in average. The refinery can perform efficiently after the major turnaround was completed. In 4Q23, crude intake was 17.65 million barrels or 192,000 barrels per day (192 KBD). Refinery utilization rate was 89% increasing by 2% from that last quarter and by 34% from that in 4Q22 owing to the major turnaround in 4Q22.

The utilization rate of RDCC plant in 2023 was 109% improving by 17% from that last year of 92%. In 4Q23, the utilization rate of RDCC plant was 109% enhancing by 8%, QoQ, and by 61%, YoY, as the RDCC plant reduced its utilization rate in 4Q22 to align with the major turnaround.

The utilization rate of Lube Base Oil plant in 2023 was 87% increasing by 10% from that in 2022. In 4Q23, the utilization rate of Lube Base Oil plant was 79% dropping by 4%, QoQ, while rising by 25%, YoY, due to Lube Base Oil plant's decreased utilization rate aligning with the major turnaround.

1.1.3 Petroleum Sales

Products	Sales Volume (Million Barrel)					Sales Value (Million Baht)				
	Quarter			Year		Quarter			Year	
	4Q23	3Q23	4Q22	2023	2022	4Q23	3Q23	4Q22	2023	2022
Refinery	15.05	14.87	9.28	61.81	50.46	55,126	57,403	36,768	216,330	219,105
Lube Base Oil	1.60	1.73	1.15	7.22	6.27	5,589	5,755	4,584	25,125	24,848
Total	**16.65**	**16.60**	**10.43**	**69.03**	**56.73**	**60,715**	**63,158**	**41,352**	**241,455**	**243,953**

In 2023, net sales of petroleum businesses was down by 1% from that last year owing to a 23% decline in average selling prices following the crude oil price trend versus a 22% increase in sales volume.

In 2023, net sales of petroleum businesses were Baht 241,455 million being down by Baht 2,498 million or by 1%, mainly owing to a 23% decline in average selling prices following the crude oil price trend versus a 22% increase in sales volume, from 56.73 million barrels to 69.03 million barrels. Most of the increase was contributed from Diesel, Naphtha and Gasoline. The proportion of domestic and export of petroleum products in 2023 was 65% and 35%, respectively and most of the exported products were shipped to Singapore, Cambodia and Laos.

In 4Q23, net sales of petroleum businesses were Baht 60,715 million dropping by Baht 2,443 million or by 4% from that in 3Q23. This was mainly due to a 4% decrease in average selling prices following the crude oil price trend versus a 0.3% increase in sales volume, from 16.60 million barrels to 16.65 million barrels. Most of the rise was contributed from Diesel.

By comparing YoY, the net sales of petroleum businesses improved by Baht 19,363 million or by 47%, mainly from a 60% growth in sales volume versus a 13% contraction in average selling prices following the crude oil price trend. Most of the sales volume improvement were from Diesel and Gasoline.

The proportion of domestic and export of petroleum products in 4Q23 was 67% and 33%, respectively and most of the exported products were shipped to Singapore, Laos and Cambodia.

1.1.4 Crude Price and Petroleum Products Spread

	Quarter			% Change		Year		YoY
	4Q23	3Q23	4Q22	QoQ	YoY	2023	2022	
Dubai Crude Oil (USD/bbl)	83.55	86.74	84.85	(4%)	(2%)	82.10	96.34	(15%)
Petroleum (USD/bbl)								
Naphtha – Dubai	(12.9)	(17.9)	(14.6)	28%	12%	(13.0)	(13.2)	2%
ULG95 – Dubai	12.6	18.9	9.4	(33%)	34%	16.7	18.8	(11%)
Gas Oil 0.05%S - Dubai	21.1	26.9	39.3	(22%)	(46%)	21.9	34.3	(36%)
FO 180 3.5%S - Dubai	(11.0)	(5.3)	(22.5)	(108%)	51%	(10.3)	(14.1)	27%
Lube Base Oil (USD/MT)								
500SN - FO 180 3.5%S	521	442	780	18%	(33%)	547	678	(19%)
150BS - FO 180 3.5%S	729	575	891	27%	(18%)	745	837	(11%)
Asphalt - FO 180 3.5%S	8	(63)	146	113%	(95%)	16	16	0%

The spread between petroleum products and raw material price

The spread between petroleum products and Dubai crude oil price

- **Naphtha Spread - Higher:** Naphtha - Dubai spread in 2023 was USD -13.0 per barrel increasing by 2% from USD -13.2 per barrel in 2022. This was because Naphtha crackers reduced their utilization rates to align with sluggish petrochemical market being stemmed from unrecovered Chinese economy. The situation was gloomed by China's property crisis, hence curbed sales of electrical appliances chaining to petrochemical product demand.

Naphtha - Dubai spread in 4Q23 was USD -12.9 per barrel escalating by 28% from USD -17.9 per barrel in 3Q23. This was because Naphtha export from Black Sea faced climate-related limitations. Also, Naphtha export via Panama Canal experienced some obstructions due to drought. Meanwhile, Naphtha crackers in Asia still reduced their utilization rates in order to align with market situations. By comparing with 4Q22 of USD -14.6 per barrel, the spread climbed by 12%.

- **ULG95 Spread - Lower:** ULG95 - Dubai spread in 2023 was USD 16.7 per barrel decelerating by 11% from USD 18.8 per barrel in 2022. There were demand supports from China reopening and Lunar New Year in early-2023. However, China announced petroleum product export quotas after that, which reflected not-fully recovered demand for logistics and transportation in China. Gasoline demand in the U.S. during the driving season was also curbed to be lower than initially expected owing to inflation.

ULG95 - Dubai spread in 4Q23 was USD 12.6 per barrel dropping by 33% from USD 18.9 per barrel in 3Q23 as China announced the third batch of petroleum product export quota for 2023 in September, hence higher Gasoline supply in 4Q23, while the demand softened seasonally. By comparing with 4Q22 of USD 9.4 per barrel, the spread increased by 34%.

- **Gas Oil Spread - Lower**: Gas Oil - Dubai spread in 2023 was USD 21.9 per barrel softening by 36% from USD 34.3 per barrel in 2022. In 1H23, Diesel spread was pressured by warmer-than-normal climate and relieved concerns over Russia-Ukraine conflict from that in 2022. Still, Diesel spread in 3Q23 boosted owing to protests in France affecting refinery operations, along with China's third batch of petroleum product export quota of 2023 being announced in September, which delayed from initially scheduled in July. In addition, Russia announced a ban on petroleum product export in late-3Q23, which was lifted in early-October, thus relieved concerns over Diesel supply during winter and declined Diesel spread respectively.

Gas Oil - Dubai spread in 4Q23 was USD 21.1 per barrel dropping by 22% from USD 26.9 per barrel in 3Q23 as Russia lifted the petroleum product export ban in early-October. Also, LNG price was at a low level showing adequate supply, thus relieved concerns over heating fuel supply during winter. By comparing with 4Q22 of USD 39.3 per barrel, the spread dropped by 46%.

- **Fuel Oil Spread - Higher:** High Sulphur Fuel Oil (HSFO) - Dubai spread in 2023 was USD -10.3 per barrel developing by 27% from USD -14.1 per barrel in 2022. The spread shot up in mid-2023 thanks to demand for power generation in the Middle East. Limited Fuel Oil supply following OPEC and allies' crude oil production cut and Saudi Arabia's voluntary cut also helped upsurge the spread.

HSFO - Dubai spread in 4Q23 was USD -11.0 per barrel falling by 108% from USD -5.3 per barrel in 3Q23 as the demand for power generation in South Asia waned seasonally. Still, Fuel Oil supply was constrained as one of refineries in Kuwait temporary paused the production due to operation issues. By comparing with 4Q22 of USD -22.5 per barrel, the spread improved by 51%.

The spread between Lube Base Oil products and Fuel Oil price

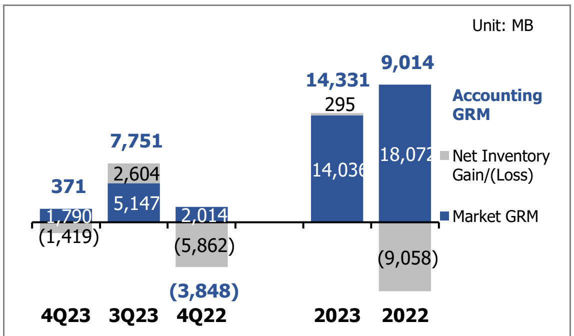
- **500SN Spread - Lower:** 500SN - Fuel Oil spread in 2023 was USD 547 per ton reducing by 19% from USD 678 per ton in 2022 owing to stagnant economy constraining Lube Base Oil demand for industrial purposes. Meanwhile, Fuel Oil price was backed by limited supply.

500SN - Fuel Oil spread in 4Q23 was USD 521 per ton being up by 18% from USD 442 per ton in 3Q23 as Lube Base Oil demand increased following concerns over the Israel-Hamas conflict. Plus, Fuel Oil prices declined rapidly following the crude oil price trend. By comparing with 4Q22 of USD 780 per ton, the spread dropped by 33%.

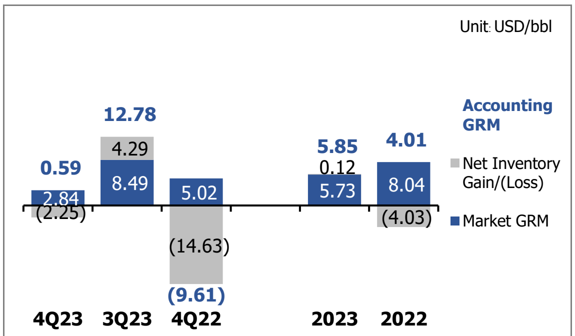
- **Asphalt Spread - Unchanged:** Asphalt - Fuel Oil spread in 2023 was USD 16 per ton, which unchanged from that in 2022. Meanwhile, Asphalt demand in 2023 obtained some threats, mainly from limited construction budget following sluggish economic conditions.

Asphalt - Fuel Oil spread in 4Q23 was USD 8 per ton rising by 113% from USD -63 per ton in 3Q23 because of decelerated Fuel Oil price. Still, overall Asphalt demand was stable at a low level, mainly due to economic conditions of China, a major Asphalt purchaser. China allocated the budget to urgent purposes, hence curbed construction budget. By comparing with 4Q22 of USD 146 per ton, the spread slumped by 95%.

1.1.5 Gross Refining Margin



4Q23	3Q23	4Q22	2023	2022	
1,146	4,910	1,201	9,855	15,916	Refinery
644	237	813	4,181	2,156	Lube Base Oil
1,790	**5,147**	**2,014**	**14,036**	**18,072**	**Market GRM**



4Q23	3Q23	4Q22	2023	2022	
1.82	8.10	2.99	4.02	7.08	Refinery
1.02	0.39	2.03	1.71	0.96	Lube Base Oil
2.84	**8.49**	**5.02**	**5.73**	**8.04**	**Market GRM**

In 2023, Market GRM was Baht 14,036 million or USD 5.73 per barrel dropping by Baht 4,036 million or USD 2.31 per barrel from that last year, mainly owing to softened Diesel and Gasoline spreads.

The Gross Refining Margin (Market GRM) in 2023 was Baht 14,036 million or USD 5.73 per barrel dropping by Baht 4,036 million or USD 2.31 per barrel from that last year, mainly owing to softened Diesel and Gasoline spreads compared to Dubai crude oil price. The Company obtained a net inventory gain of Baht 295 million or USD 0.12 per barrel comprising of a reversal on Net Realizable Value (NRV) of Baht 904 million and a gain on realized oil hedging of Baht 339 million versus a stock loss of Baht 948 million. Thus, the Company obtained the Accounting Gross Refining Margin (Accounting GRM) equaling Baht 14,331 million or USD 5.85 per barrel improving by Baht 5,317 million or USD 1.84 per barrel from that last year.

In 4Q23, the Market GRM was Baht 1,790 million or USD 2.84 per barrel slumping by Baht 3,357 million or USD 5.65 per barrel, QoQ, mainly owing to decreases of most refinery product spreads compared to Dubai crude oil price, especially Diesel and Gasoline spreads because of alleviated concerns over Diesel supply during winter following Russia's cancellation of Diesel export ban, along with the waned driving season in the U.S. In addition, by comparing YoY, the Market GRM was down by Baht 224 million or USD 2.18 per barrel, mainly from the decreased Diesel spread. In the meantime, the cost of crude premium fell significantly.

In 4Q23, there was a net inventory loss equaling Baht 1,419 million or USD 2.25 per barrel comprising of a stock loss of Baht 1,455 million and an NRV of Baht 584 million, while a gain on realized oil hedging equaling Baht 619 million. This entailed the Accounting GRM of Baht 371 million or USD 0.59 per barrel declining by Baht 7,380 million or USD 12.19 per barrel, QoQ, while compared to the Accounting GRM loss of Baht 3,848 million or USD 9.61 per barrel in 4Q22.

1.2 Petrochemical business unit

1.2.1 Petrochemical Market Overview

Petrochemical market situation in 2023: The demand for petrochemical products continued to be sluggish being affected by several factors. These included the protracted conflict between Russia-Ukraine, along with significant global economic slowdown due to persistent high inflation leading to continuous interest rate hikes by central banks worldwide. China's economy was obviously seen not recovered as anticipated following intensification of the property crisis. Even though Chinese government issued various economic stimulus measures, the demand remained unrecovered due to lack of purchasing confidence resulting in more cautious spending, especially those in durable goods sector that led to slowdowns in production and export. Nevertheless, with travel restriction eases by several countries, tourism industry continued to recover boosting demand in certain industries such as food packaging as well as health and medical equipment. On the supply side, there was a pressure from new production capacity, especially those in China, Vietnam, and Indonesia entailing excess supply in the region and pulling plastic pellet prices down. Consequently, some producers decided to reduce their utilization to maintain profit margins and market equilibrium.

Petrochemical market situation in the fourth quarter of 2023 (4Q23): The demand for petrochemical products remained sluggish, even though the demand typically reaches a peak during late-3Q to mid-4Q due to a production season for many downstream industries supporting product sales during the year-end festive season. However, economic uncertainties including the ongoing impacts of Russia-Ukraine war, Israel-Hamas conflict, tensions in the Red Sea, persistently high interest rates and property crisis in China, navigated downstream product manufacturers to slow their purchasing and manage their inventory cautiously. The supply side noticed a continuous upward trend, especially from new production capacity in China, hence a supply pressure on the regional market. Meanwhile, according to sluggish demand, some producers announced a reduction in their operating rates to balance the market, although the demand in Indonesia's market increased towards the end of the year owing to Indonesian government's announcement to implement import quotas for plastic pellets being expected to start in March 2024. This led to concerns amongst Indonesian domestic importers that the domestic supply may become tighter and prices may rise after the regulations are enforced.

1.2.2 Petrochemical Capacity

Products	Quarter			% Change		Year		YoY
	4Q23	3Q23	4Q22	QoQ	YoY	2023	2022	
Utilization Rate								
Olefins Group	78%	82%	74%	(4%)	4%	73%	86%	(13%)
Aromatics and Styrenics Group	73%	69%	54%	4%	19%	74%	86%	(12%)

In 2023, the utilization rate of Olefins group was 73% declining by 13% from that in 2022 of 86%. In addition, the utilization rate of Aromatics and Styrenics group was 74% being down by 12% from that last year due to production adjustment aligning with market conditions.

In 4Q23, the utilization rate of Olefins group was 78% decreasing by 4%, QoQ, due to production adjustment aligning with market conditions, while increasing by 4%, YoY, because of the Company's major turnaround in 4Q22. The utilization rate of Aromatics and Styrenics group in 4Q23 was 73% increasing by 4%, QoQ, and by 19%, YoY, because of the Company's major turnaround in 4Q22.

1.2.3 Petrochemical Sales

Products	Sales Volume (KMT)					Sales Value (MB)				
	Quarter			Year		Quarter			Year	
	4Q23	3Q23	4Q22	2023	2022	4Q23	3Q23	4Q22	2023	2022
Olefins Group	230	237	223	864	1,001	8,320	7,986	8,635	31,228	42,448
Aromatics and Styrenics Group	139	135	87	572	600	5,351	5,267	4,113	22,148	27,954
Total	**369**	**372**	**310**	**1,436**	**1,601**	**13,671**	**13,253**	**12,748**	**53,376**	**70,402**

Remark : Included sales of Trading business (iPolymer) and New S-Curve business (Rakpasak)

Net sales of petrochemical businesses in 2023 was down by 24% from that last year as sales volume decreased by 10% and average selling prices decreased by 14%.

Net sales of petrochemical businesses in 2023 were Baht 53,376 million being down by Baht 17,026 million or by 24% from that last year. This was mainly because sales volume decreased by 165,000 tons or by 10% and average selling prices decreased by 14%. The lower sales volume was mainly from PP in Olefins group. The proportion of domestic and export of petrochemical products in 2023 was 65% and 35%, respectively and most of the exported products were shipped to Singapore, Hong Kong and India.

In 4Q23, the net sales of petrochemical businesses amounted to Baht 13,671 million rising by Baht 418 million or by 3%, QoQ. This was mainly due to a 4% increase in average selling prices while a 1% drop in sales volume equaling 3,000 tons. The declined sales volume was mainly from PP in Olefins group and PS in Styrenics group. By comparing YoY, the net sales of petrochemical businesses increased by Baht 923 million or by 7% due to a 19% increase in sales volume equaling 59,000 tons while a 12% reduction in average selling prices. The increased sales volume was mainly from Mixed Xylene and Toluene in Aromatics group.

The proportion of domestic and export of petrochemical products in 4Q23 was 64% and 36%, respectively and most of the exported products were shipped to Singapore, Hong Kong and India.

1.2.4 The spread between key petrochemical products and raw material price

Average price (USD/MT)	Quarter			% Change		Year		YoY
	4Q23	3Q23	4Q22	QoQ	YoY	2023	2022	
Naphtha	659	648	673	2%	(2%)	649	785	(17%)
Olefins								
HDPE - Naphtha	428	457	442	(6%)	(3%)	474	457	4%
PP - Naphtha	312	323	322	(3%)	(3%)	366	407	(10%)
Aromatics								
BZ - Naphtha	230	253	152	(9%)	51%	249	246	1%
TOL - Naphtha	194	306	188	(37%)	3%	238	175	36%
MX - Naphtha	222	339	241	(35%)	(8%)	286	239	20%
Styrenics								
ABS - Naphtha	568	608	695	(7%)	(18%)	634	901	(30%)
PS (GPPS) - Naphtha	549	529	607	4%	(10%)	570	731	(22%)

The spread between petrochemical products and raw material price

The spread between Polyolefins group and Naphtha price

- **HDPE Spread - Higher:** HDPE - Naphtha spread in 2023 was USD 474 per ton increasing by 4% from that in 2022 of USD 457 per ton as in 2Q23, HDPE supply tightened amid annual maintenance shutdowns, mainly from Middle East producers. However, the demand for downstream pipe sectors lagged due to global economic downturn and high interest rates. Additionally, China's property crisis dampened the construction industry.

HDPE - Naphtha spread in 4Q23 was USD 428 per ton decreasing by 6% when compared to USD 457 per ton in 3Q23. This was because demand for downstream pipes remained sluggish due to the construction industry's slowdown being impacted by China's property crisis and high interest rates. Moreover, the demand was seasonally impacted as winter is typically a low-demand season. When compared with 4Q22 of USD 442 per ton, the spread decreased by 3%

- **PP Spread - Lower:** PP - Naphtha spread in 2023 was USD 366 per ton decreasing by 10% from that in 2022 of USD 407 per ton owing to the ongoing sluggish demand, partly due to economic uncertainty caused by Russia-Ukraine war, a conflict between Israel-Hamas and persistently high interest rates. Meanwhile, the supply in the market, especially in China, represented a continuous increase, although some producers reduced their production capacity to align with the demand.

PP - Naphtha spread in 4Q23 was USD 312 per ton decreasing by 3% when compared to USD 323 per ton in 3Q23.This was owing to the modest rebound in destination goods demand compared to the sluggish global economy. There was only a slight increase in demand adjustment with a shorter-than-usual timeframe. Meanwhile, concerns about the global economy and geopolitical conflicts, such as Israel-Hamas conflict, continued to unsettle the market causing end-product manufacturers to delay purchases and manage stocks cautiously. Additionally, excess supply from China exerted downward pressure on market prices in the region. When compared with 4Q22 of USD 322 per ton, the spread decreased by 3%.

The spread between Aromatics group and Naphtha price

- **TOL and MX Spread - Higher:** In 2023, Toluene - Naphtha spread and Mixed Xylene - Naphtha spread were USD 238 per ton and USD 286 per ton respectively rising by 36% and 20% accordingly when compared with those in 2022. This was mainly caused by improving PX market sentiments, which resulted in the increasing demand for Toluene and Mixed Xylene, the major raw materials being used in PX production.

In 4Q23, Toluene - Naphtha spread and Mixed Xylene - Naphtha spread were USD 194 per ton and USD 222 per ton respectively, down by 37% and 35% accordingly when compared with those in 3Q23 as the prices continued to fluctuate depending on the crude oil price trend and subdued market demand in the region. The softened crude oil price resulted in lower Gasoline and PX prices, hence decreased demand for gasoline blending and PX production. The waned driving season also pulled the demand down. When compared with 4Q22, Toluene - Naphtha spread increased by 3%, while Mixed Xylene - Naphtha spread decreased by 8%.

The spread between Polystyrenics group and Naphtha price

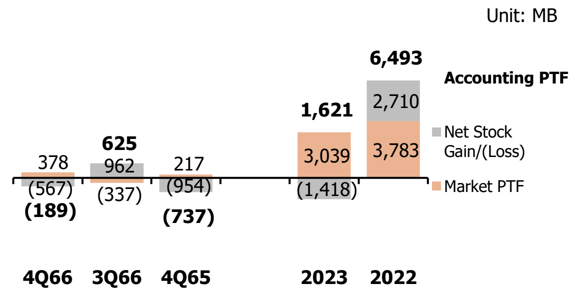
- **ABS Spread - Lower:** ABS - Naphtha spread in 2023 was USD 634 per ton decreasing by 30% when compared to USD 901 per ton in 2022. This was because demand slowed in accordance with global economic conditions, particularly in China, where the property crisis affected confidence of households and businesses. As a result, consumer spending was stagnant, such as those for electrical appliance products. Additionally, the new capacity obtain a significant impact to the market when compared to the demand.

ABS - Naphtha spread was USD 568 per ton in 4Q23, down by 7% when compared to USD 608 per ton in 3Q23. Demand for electrical appliances did not rebound seasonally as typical as consumer confidence was impacted by conflicts in the Middle East. Moreover, China's manufacturing Purchasing Managers Index (PMI) remained contracted keeping the demand weak. Additionally, China's new capacity continued to exert consistent pressure on regional markets. When compared with 4Q22 of USD 695 per ton, the spread decreased by 18%.

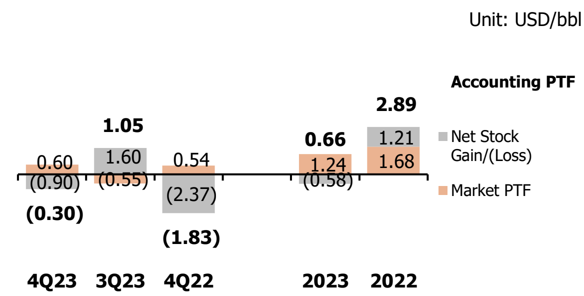
- **PS Spread - Lower:** PS - Naphtha spread in 2023 was USD 570 per ton decreasing by 22% when compared to USD 731 per ton in 2022 owing to the global economic slowdown, which did not show clear signs of recovery. Most end-product manufacturers purchased primarily based on necessity or upon receiving orders to avoid excessive stockpiling towards the year end.

PS – Naphtha spread in 4Q23 was USD 549 per ton increasing by 4% when compared to 3Q23 of USD 529 per ton. Although the demand for end products remained subdued due to the global economic situation, most manufacturers chose to maintain a balance between production rates and sales. Pricing strategies were also planned to improve profit margins. When compared with 4Q22 of USD 607 per ton, the spread decreased by 10%.

1.2.5 Product to Feed Margin (Product to Feed : PTF)*



460	(365)	162	2,103	1,834	Olefins Group
(82)	28	55	936	1,949	Aro & Styrenics
378	**(337)**	**217**	**3,039**	**3,783**	**Market PTF**



0.74	(0.60)	0.40	0.85	0.81	Olefins Group
(0.14)	0.05	0.14	0.39	0.87	Aro & Styrenics
0.60	**(0.55)**	**0.54**	**1.24**	**1.68**	**Market PTF**

Remark : * Included Trading business (iPolymer) and New S-Curve business (Rakpasak)

In 2023, the Market PTF was Baht 3,039 million being down by Baht 744 million, YoY, as Styrenics product spreads were down.

The Market Product to Feed Margin (Market PTF) in 2023 was Baht 3,039 million or USD 1.24 per barrel declining by Baht 744 million or USD 0.44 per barrel from that last year. This was mainly because Styrenics product spreads were down following global economic slowdown that curbed the demand for end products, particularly those in electrical and electronics appliances. The Company obtained a net inventory loss of Baht 1,418 million or USD 0.58 per barrel comprising of a stock loss of Baht 1,540 million against a reversal on NRV of Baht 122 million. The aforementioned figures led to the Accounting Product to Feed Margin (Accounting PTF) equaling Baht 1,621 million or USD 0.66 per barrel decreasing by Baht 4,872 million or USD 2.23 per barrel from that in the previous year.

In 4Q23, the Market PTF was Baht 378 million or USD 0.60 per barrel rising by Baht 715 million or USD 1.15 per barrel from that in the prior quarter, mainly from the increased product margin. Also, by comparing with 4Q22, the Market PTF increased by Baht 161 million or USD 0.06 per barrel.

In 4Q23, the Company recorded a net inventory loss of the petrochemical businesses equaling Baht 567 million or USD 0.90 per barrel comprising of a stock loss of Baht 9 million and an NRV of Baht 558 million. Hence, the Company obtained a loss on the Accounting PTF equaling Baht 189 million or USD 0.30 per barrel compared to the Accounting PTF of Baht 625 million or USD 1.05 per barrel in 3Q23 and a loss on the Accounting PTF of Baht 737 million or USD 1.83 per barrel in 4Q22.

1.3 Power Plant and Utility business units

Capacity and Sales

	Quarter			% Change		Year		YoY
	4Q23	3Q23	4Q22	QoQ	YoY	2023	2022	
Utilization Rate								
Electricity	58%	62%	47%	(4%)	11%	62%	62%	0%
Steam	59%	57%	45%	2%	14%	59%	57%	2%
Sales (Baht million)								
Electricity	474	523	575	(9%)	(18%)	2,410	2,208	9%
Steam	379	272	352	39%	8%	1,594	1,590	0.3%
Others	57	58	54	(2%)	6%	240	243	(1%)
Total	**910**	**853**	**981**	**7%**	**(7%)**	**4,244**	**4,041**	**5%**

Utilization rates of Electricity and Steam: In 2023, the utilization rate of Electricity was 62% being equal to that in 2022 whereas the utilization rate of Steam was 59% in 2023 increasing by 2% from that last year.

In 4Q23, the utilization rate of Electricity was 58% decelerating by 4%, QoQ, while the utilization rate of Steam was 59% in 4Q23 increasing by 2%, QoQ. When compared to 4Q22, the utilization rate of Electricity rose by 11% and the utilization rate of Steam increased by 14%, owing to utilization adjustment aligning with major turnaround in 4Q22.

The net sales of Power and Utility businesses: In 2023, the Company recorded the net sales of Power and Utility businesses equaling Baht 4,244 million, up by Baht 203 million or by 5% compared with that in 2022 of Baht 4,041 million thanks to improving average selling prices of Electricity.

In 4Q23, the net sales of Power and Utility businesses were Baht 910 million rising by 7%, QoQ, mainly from higher sales volumes of Electricity and Steam. On the contrary, by comparing YoY, the net sales declined by 7%, mainly from lower average selling prices of Electricity and Steam.

2. Total Operating Performance

Total Operating Performance of IRPC and its subsidiaries for Year 2023 and 4Q23 are as follows;

	Unit : Million Baht					Unit : USD per barrel				
	Quarter			Year		Quarter			Year	
	4Q23	3Q23	4Q22	2023	2022	4Q23	3Q23	4Q22	2023	2022
Average FX (THB/USD)	35.81	35.33	36.55	34.96	35.23					
Total Crude Intake (Mbbl)	17.65	17.17	10.97	70.11	63.86					
Average Crude (USD/bbl) [1]	88.29	90.62	90.40	86.52	104.67					
Sales [2]	79,059	81,642	57,007	319,047	324,800	125.08	134.59	142.18	130.17	144.37
Net Sales [3]	75,296	77,264	55,081	299,075	318,396	119.13	127.37	137.38	122.02	141.52
Variable Cost (Raw Material - Market Price)	(72,577)	(71,891)	(52,472)	(279,731)	(294,635)	(114.82)	(118.50)	(130.88)	(114.12)	(130.95)
Market GIM	**2,719**	**5,373**	**2,609**	**19,344**	**23,761**	**4.31**	**8.87**	**6.50**	**7.90**	**10.57**
Stock Gain (Loss)	(1,464)	3,807	(3,826)	(2,488)	4,384	(2.32)	6.28	(9.54)	(1.02)	1.95
Net Realizable Value (NRV)	(1,142)	132	(1,905)	1,026	(2,347)	(1.81)	0.22	(4.75)	0.42	(1.04)
Realized Gain (Loss) on Oil Hedging	620	(373)	(1,085)	339	(8,385)	0.98	(0.61)	(2.71)	0.14	(3.73)
Net Inventory Gain (Loss)	**(1,986)**	**3,566**	**(6,816)**	**(1,123)**	**(6,348)**	**(3.15)**	**5.89**	**(17.00)**	**(0.46)**	**(2.82)**
Accounting GIM	**733**	**8,939**	**(4,207)**	**18,221**	**17,413**	**1.16**	**14.76**	**(10.50)**	**7.44**	**7.75**
Other Incomes [4]	322	363	316	1,421	1,351	0.51	0.60	0.79	0.58	0.60
Selling Expenses	(340)	(363)	(352)	(1,405)	(1,964)	(0.54)	(0.60)	(0.88)	(0.57)	(0.87)
Accounting GIM and Other Incomes	**715**	**8,939**	**(4,243)**	**18,237**	**16,800**	**1.13**	**14.76**	**(10.59)**	**7.45**	**7.48**
OPEX	(2,971)	(3,059)	(3,593)	(12,483)	(12,813)	(4.70)	(5.04)	(8.96)	(5.09)	(5.70)
EBITDA	**(2,256)**	**5,880**	**(7,836)**	**5,754**	**3,987**	**(3.57)**	**9.72**	**(19.55)**	**2.36**	**1.78**
Depreciation	(2,229)	(2,175)	(2,022)	(8,666)	(8,059)	(3.53)	(3.59)	(5.04)	(3.54)	(3.58)
EBIT	**(4,485)**	**3,705**	**(9,858)**	**(2,912)**	**(4,072)**	**(7.10)**	**6.13**	**(24.59)**	**(1.18)**	**(1.80)**
Net Finance Cost	(488)	(538)	(515)	(2,021)	(1,836)	(0.77)	(0.89)	(1.28)	(0.82)	(0.82)
Gain (Loss) on Financial Derivatives	443	(106)	281	176	238	0.70	(0.17)	0.70	0.07	0.11
Gain (Loss) on Foreign Exchange from Borrowing	182	(75)	402	4	(171)	0.29	(0.12)	1.00	-	(0.08)
Unrealized Gain (Loss) on Oil Hedging	16	(29)	849	-	28	0.03	(0.05)	2.12	-	0.01
Gain (Loss) on Impairment and Disposal of Assets	(3)	-	21	822	20	-	-	0.05	0.34	0.01
Gain (Loss) on Investment	48	89	(86)	261	289	0.08	0.15	(0.21)	0.10	0.13
Other Expenses	15	(7)	3	(14)	2	0.02	(0.01)	0.01	(0.01)	0.00
Net Profit (Loss) before Income Tax	**(4,272)**	**3,039**	**(8,903)**	**(3,684)**	**(5,502)**	**(6.75)**	**5.04**	**(22.20)**	**(1.50)**	**(2.44)**
Income Tax	860	(598)	1,752	772	1,142	1.36	(0.99)	4.37	0.31	0.51
Gain (Loss) on non-controlling interests	(5)	(2)	2	(11)	(4)	(0.01)	-	-	-	-
Net Profit (Loss)	**(3,417)**	**2,439**	**(7,149)**	**(2,923)**	**(4,364)**	**(5.40)**	**4.05**	**(17.83)**	**(1.19)**	**(1.93)**
Earning per share (EPS) (Baht/Share)	**(0.17)**	**0.12**	**(0.35)**	**(0.14)**	**(0.21)**					

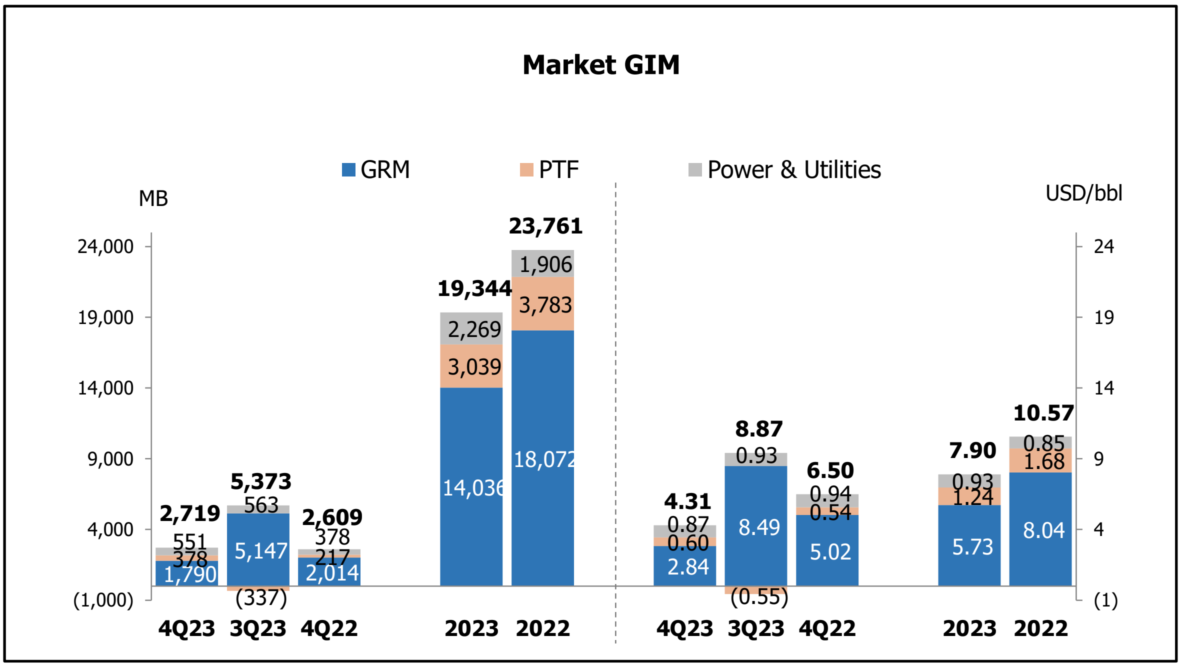
Note : [1] Average market prices of crude used in the production process

[2] Sales include (1) Petroleum Sales (2) Petrochemical Sales (3) Power and Utilities Sales (4) Sales of tank farm and port service, etc.

[3] Net Sales include (1) Petroleum Sales (excluding excise tax) (2) Petrochemical Sales (3) Power and Utilities Sales

[4] Other Incomes include land, tank farm and port service etc.

2.1 Market Gross Integrated Margin (Market GIM)

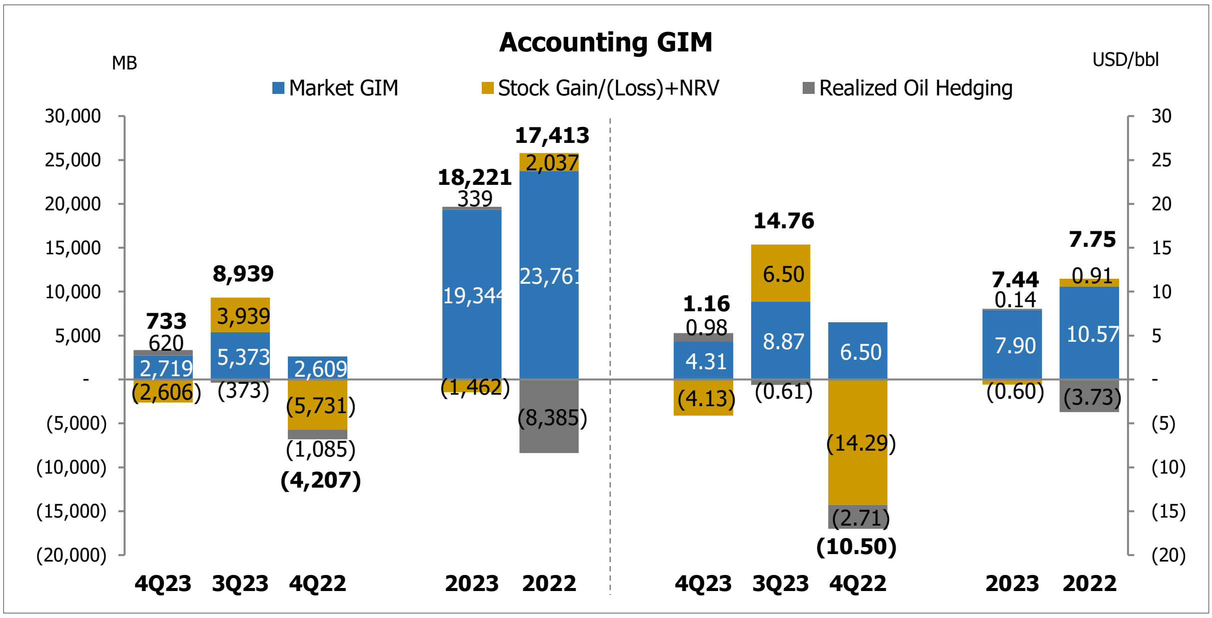


The Market Gross Integrated Margin (Market GIM) in 2023 was Baht 19,344 million or USD 7.90 per barrel moving down by Baht 4,417 million or USD 2.67 per barrel from that in 2022. This was mainly from the decrease spread between petroleum product spreads and Dubai crude oil price, especially Diesel spread, according to warmer-than-normal weather and the lessened effect from Russia – Ukraine conflict to Diesel supply when compared to that in 2022. Meanwhile, cost of crude premium dropped significantly. Moreover, the spread of petrochemical product and naphtha declined because of recession concerns, an increase in interest rate in order to control inflation and a property crisis in China.

In 4Q23, the Market GIM was Baht 2,719 million or USD 4.31 per barrel declining by Baht 2,654 million or USD 4.56 per barrel from that in the prior quarter, mainly owing to the lower spreads between refinery products and Dubai crude oil price, especially Diesel and Gasoline spreads. This was due to relieved supply concerns as Russia decided to lift a petroleum product export ban. The waned driving season in the U.S. also made the spreads lessened.

By comparing with 4Q22 Market GIM of Baht 2,609 million or USD 6.50 per barrel, the Market GIM surged by Baht 110 million, mainly owing to drastically dropped cost of crude premium against a drop in Diesel spread compared to Dubai crude oil price.

2.2 Accounting Gross Integrated Margin (Accounting GIM)



Note : Net Inventory Gain (Loss) = Stock Gain (Loss) + NRV + Realized Oil Hedging

The Accounting Gross Integrated Margin (Accounting GIM) in 2023 was Baht 18,221 million or USD 7.44 per barrel improving by Baht 808 million from that in 2022. This was mainly because the Market GIM declined by Baht 4,417 million or USD 2.67 per barrel. However, the net inventory loss was less than that in 2022 by Baht 5,225 million or USD 2.36 per barrel. The net inventory loss in 2023 comprised of a stock loss of Baht 2,488 million or USD 1.02 per barrel versus an NRV reverse of Baht 1,026 million or USD 0.42 per barrel and a gain on realized oil hedging of Baht 339 million or USD 0.14 per barrel.

In 4Q23, the Accounting GIM was Baht 733 million or USD 1.16 per barrel decreasing by Baht 8,206 million or USD 13.60 per barrel from that in 3Q23. This was because the Market GIM moved down by Baht 2,654 million or USD 4.56 per barrel as well as the net inventory loss of Baht 1,986 million or USD 3.15 per barrel compared to the net inventory gain of Baht 3,566 million or USD 5.89 per barrel in 3Q23. The net inventory loss in 4Q23 comprised of a stock loss of Baht 1,464 million or USD 2.32 per barrel and an NRV of Baht 1,142 million or USD 1.81 per barrel versus a gain on realized oil hedging of Baht 620 million or USD 0.98 per barrel compared to the net inventory gain of Baht 3,566 million or USD 5.89 per barrel in 3Q23.

By comparing with the Accounting GIM loss of Baht 4,207 million or USD 10.50 per barrel in 4Q22, the Market GIM improved by Baht 110 million and net inventory loss was less than that in 4Q22 by Baht 5,225 million or USD 2.36 per barrel.

2.3 Other Incomes

Other incomes consist of port and tank farm services and other services. In 2023, the Company had other incomes of Baht 1,421 million rising by Baht 70 million from that last year, mainly owing to improved incomes from port and tank farm services. In 4Q23, the Company had other incomes of Baht 322 million decreasing by Baht 41 million, QoQ, while increasing by Baht 6 million, YoY.

2.4 Operating Expenses

In 2023, the Company recorded the operating expenses of Baht 12,483 million decreasing by Baht 330 million from that last year. In 4Q23, the Company had operating expenses of Baht 2,971 million decreasing by Baht 88 million from that in the prior quarter as well as falling by Baht 622 million from that in 4Q22. This was mainly from employee expenses.

The research and development (R&D) expenses for enhancing the Company's competitiveness in 2023 were Baht 325 million. Such expenses comprised of expenses for internal and external R&D, salaries of staffs in the R&D department and costs of utilities supporting R&D activities amounting to Baht 227 million along with expenses for R&D equipment amounting to Baht 98 million.

2.5 Depreciation expense

In 2023, the Company recorded the depreciation expense equaling Baht 8,666 million rising by Baht 607 million from that in 2022. In 4Q23, the depreciation expense was Baht 2,229 million increasing by Baht 54 million, QoQ and by Baht 207 million, YoY. This was mainly from increased asset value following the 4Q22 major turnaround.

2.6 Net Finance Cost

In 2023, the net finance cost was Baht 2,021 million rising by Baht 185 million from that last year, mainly due to increased interest rates following market situation. In 4Q23, the net finance cost was Baht 488 million decreasing by Baht 50 million, QoQ, and by Baht 27 million, YoY.

2.7 Gain (Loss) on Financial Derivatives

In 2023, there was a gain on financial derivatives equaling Baht 176 million, mainly from a gain on Cross Currency Swap (CCS), which decreased by Baht 62 million from that in the same period last year. In 4Q23, there was a gain on financial derivatives amounting to Baht 443 million, mainly from a gain on CCS due to Thai Baht appreciation compared with 3Q23 loss on financial derivatives of Baht 106 million. However, by comparing with 4Q22, the gain was up by Baht 162 million.

2.8 Gain (Loss) on Foreign Exchange from Borrowing

In 2023, the company had a gain on foreign exchange (FX) from U.S. dollar-borrowings of Baht 4 million compared to a loss on FX from U.S. dollar-borrowings of Baht 171 million in 2022 owing to Thai Baht appreciation. In 4Q23, the Company recorded a gain on FX from U.S. dollar-borrowings of Baht 182 million compared to a loss on FX from U.S. dollar-borrowings of Baht 75 million in 3Q23 owing to Thai Baht appreciation. When compared to 4Q22, the gain decreased by Baht 220 million due to less appreciated Thai baht.

2.9 Unrealized Gain (Loss) on Oil Hedging

In 2023, the Company had no unrealized gain (loss) on Oil Hedging compared to the same period last year which recorded an unrealized gain on oil hedging of Baht 28 million. In 4Q23, the Company recorded an unrealized gain on oil hedging of Baht 16 million compared to a loss of Baht 29 million in 3Q23; however, compared to 4Q22, the gain dropped by Baht 833 million.

2.10 Gain (Loss) on Impairment and Disposal of Assets

In 2023, the Company obtained a gain on impairment and disposal of assets of Baht 822 million rising by Baht 802 million compared to that last year, mainly owing to a reverse on spare part impairment in 1Q23 following adjustment of impairment principal, from time-based to condition-based. In 4Q23, the Company recorded a loss on impairment and disposal of assets of Baht 3 million, compared to a gain on impairment and disposal of assets of Baht 21 million in 4Q22.

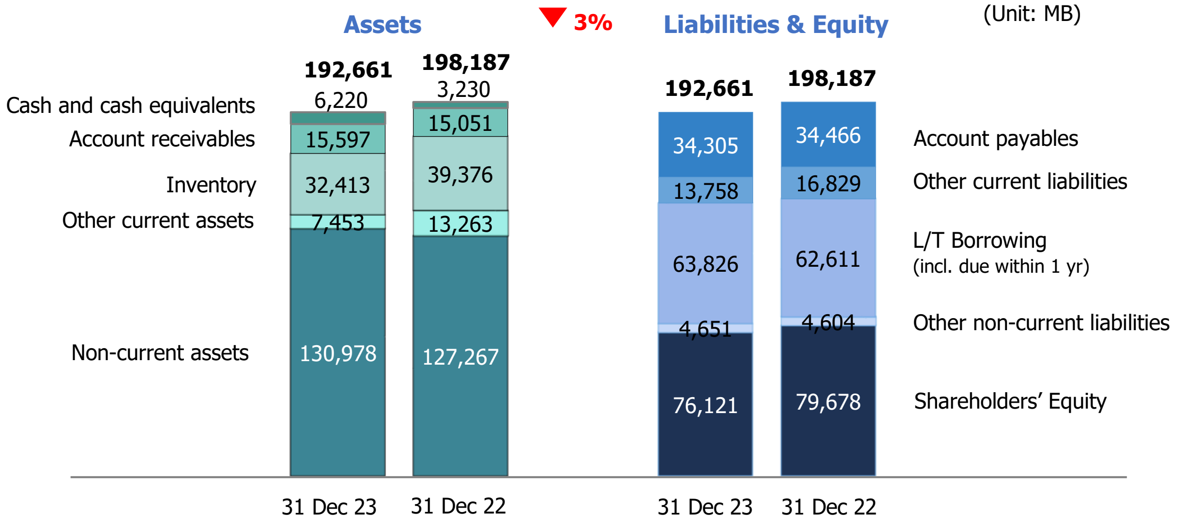
2.11 Gain (Loss) on Investments

In 2023, there was a gain on investments of Baht 261 million dropping by Baht 28 million from that last year. In 4Q23, the Company recorded a gain on investments of Baht 48 million decreasing by Baht 41 million, QoQ, mainly from lessened profit sharing from investments in associates and joint ventures, while compared to a loss on investments of Baht 86 million in 4Q22.

2.12 Corporate Income Tax

In 2023, the Company recorded a corporate income tax benefit of Baht 772 million moving down by Baht 370 million from that in the same period last year, mainly owing to improved performance. In 4Q23, the Company recorded a corporate income tax benefit of Baht 860 million compared to a corporate income tax of Baht 598 million in the prior quarter. However, when compared to 4Q22, the corporate income tax benefit decreased by Baht 892 million thanks to improved performance.

Financial Positions as of 31 December 2023



Assets

As of December 31, 2023, the Company had total assets of Baht 192,661 million decreasing by Baht 5,526 million or by 3% from that on December 31, 2022. It was due to the following reasons:

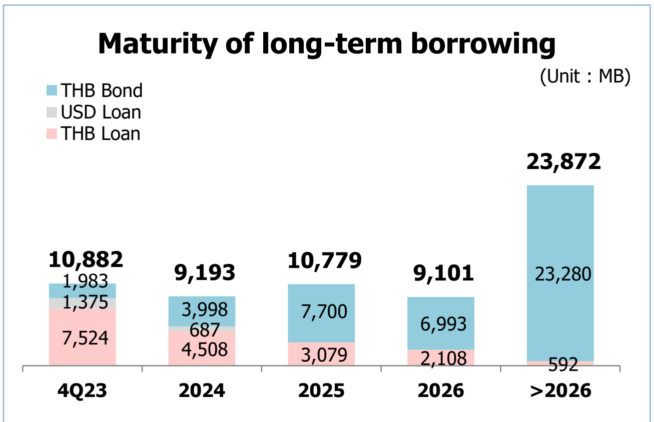
- **Cash and cash equivalents:** increased by Baht 2,990 million or by 93% from that at the end of 2022, mainly owing to the increase of net cash flow from operations after investment and loan repayment.
- **Trade receivables:** increased by Baht 546 million or by 4% from that at the end of 2022, mainly due to a rise in selling volume. The Company's credit term policy is about 7 - 120 days and most customers made payment on schedule. The average collection period was 18 days increasing by 2 days from that at the end of 2022.
- **Inventory:** decreased by Baht 6,963 million or by 18% from that at the end of 2022, mainly due to an 8% decrease in the crude oil price and products prices following market situations as well as a 16% decrease in inventory volume. The average inventory period was 42 days being similar to that at the end of 2022.
- **Other current assets:** decreased by Baht 5,810 million or by 44% from that at the end of 2022. This was mainly attributed to a decrease in other receivables by Baht 5,185 million, mainly from account receivables – Oil Fund.
- **Non-current assets:** increased by Baht 3,711 million or by 3% from that at the end of 2022, mainly due to a rise in investments in fixed assets by Baht 2,930 million and an increase in deferred tax assets by Baht 816 million.

Liabilities

As of December 31, 2023, the Company had total liabilities of Baht 116,540 million decreasing by Baht 1,969 million or by 2% from what was stated as of December 31, 2022. It was due to the following reasons:

- **Trade payables:** decreased by Baht 161 million or by 0.5% compared to that at the end of 2022. It was mainly due to a decrease in crude procurement payable amount. The average payment period was 40 days increasing by 3 days from that at the end of 2022.

- **Other current liabilities:** decreased by Baht 3,071 million or by 18% compared to that at the end of 2022, mainly due to the repayment of short – term borrowing from financial institutions by Baht 1,800 million and a decline in other payables by Baht 1,380 million, mainly from account payables - Ready Made Assets.



Note : Long-term borrowing as of December 31, 2023

- **Long-term borrowing including current portion within one year:** increased by Baht 1,215 million or by 2% compared to that at the end of 2022, mainly due to the issuance of debentures of Baht 12,000 million in May 2023 while the repayment of maturity borrowing of Baht 10,786 million.

The details of long-term borrowings are shown below;

(Unit: MB)

	Dec 31, 2023	Dec 31, 2022	Change
Thai Baht Bonds	43,954	33,963	9,991
USD Loan*	2,061	3,467	(1,404)
Thai Baht Loan	17,811	25,181	(7,370)
Total Long-term Borrowing	**63,826**	**62,611**	**1,215**
Less current portion of long-term borrowing	(10,881)	(10,762)	(119)
Net Outstanding Long-term Borrowing	**52,945**	**51,849**	**1,096**

Note : * The Company obtained USD loan of USD 100 million at the end of 2022 and USD 60 million as of December 31, 2023.

Shareholders' Equity

As of December 31, 2023, shareholders' equity amounted to Baht 76,121 million, which decreased from what was stated as of December 31, 2022 by Baht 3,556 million or by 4%. This was mainly from the net loss amounting to Baht 2,923 million in 2023 and a dividend payment amount of Baht 612 million.

Statement of Cash Flow

(Unit : MB)

	Jan – Dec 23	Jan – Dec 22
Net cash flows from (used in) operating activities	18,630	(3,712)
Net cash flows from (used in) investing activities	(12,022)	(8,931)
Net cash flows from (used in) financing activities	(3,618)	4,637
Net increase (decrease) in cash	**2,990**	**(8,006)**
Beginning cash	3,230	11,236
Ending cash	**6,220**	**3,230**

As of December 31, 2023, the ending cash was Baht 6,220 million. Net cash flow increased by Baht 2,990 million, which was mainly contributed from the following items:

- **Net cash inflow from operating activities:** of Baht 18,630 million. The cash inflow was mainly from EBITDA of Baht 5,754 million, a decrease in inventory of Baht 8,868 million and a decline in other receivables of Baht 5,184 million. Nevertheless, the cash outflow was mainly from an increase in trade receivables of Baht 677 million and a rise in other receivables amounts due from related parties of Baht 346 million.

- **Net cash outflow from investing activities:** of Baht 12,022 million, mainly from an investment in Ultra Clean Fuel (UCF) Project and the capitalized major turnaround expenses in late-2022.

- **Net cash outflow from financing activities:** of Baht 3,618 million, mainly from the repayment of long-term loans repayment of Baht 10,786 million, short-term borrowing from financial institutions of Baht 1,800 million, interest payment of Baht 2,441 million, and dividend payment of Baht 612 million. Nevertheless, the cash inflow mainly comprised of the issuance of debentures amounting to Baht 12,000 million.

Key Financial Ratios

	Unit	Quarter			Year	
		4Q23	3Q23	4Q22	2023	2022
Profitability Ratios						
EBITDA Margin	%	(2.85)	7.20	(13.75)	1.80	1.23
Net Profit Margin	%	(4.32)	2.99	(12.54)	(0.92)	(1.34)
Earnings per share	Baht/share	(0.17)	0.12	(0.35)	(0.14)	(0.21)
Return on Equity*	%	(3.76)	0.83	(5.23)	(3.76)	(5.23)
Liquidity Ratios						
Current Ratio	time	1.05	1.21	1.14	1.05	1.14
Quick Ratio	time	0.37	0.39	0.29	0.37	0.29
Financial Policy Ratios						
Net Interest Bearing Debt to Equity	time	0.86	0.87	0.86	0.86	0.86
Net Interest Bearing Debt to EBITDA*	time	11.62	6.44	14.89	11.62	14.89

Note: *Annualized

Liquidity and Capital Structure

In 2023, current ratio was 1.05 times decreasing by 0.16 times compared with that in 2022 of 1.14 times. This was mainly owing to a decrease in inventory. Thus, the Company has sufficient liquidity for its operations. At the end of 2022, net interest bearing debt to equity ratio was 0.86 times being similar to that in 2022. The Company could complete all payments on due date and comply with all of the Financial Covenants.

In 4Q23, current ratio was 1.05 times decreasing by 0.16 times from that in 3Q23 of 1.21 times. This was mainly owing to a drop in trade receivables and inventory. Thus, the Company has sufficient liquidity for its operations. At the end of 4Q23, net interest bearing debt to equity ratio was 0.86 times decreasing by 0.01 times from that in 3Q23 of 0.87 times. This was mainly due to a decrease in long-term loans and bond including current portion within one year, while a decrease in equity from less loss performance than 2022 obtained less impact than that of the former decrease. The Company could complete all payments on due date and comply with all of the Financial Covenants.

Note:

Account Receivable Turnover	=	Sales / Average Account Receivable before Doubtful Account [average]
Collection Period	=	365 / Account Receivable Turnover
Inventory Turnover	=	Cost of Goods Sold / Average Inventory [average]
Inventory Period	=	365 / Inventory Turnover
Account Payable Turnover	=	Cost of Goods Sold / Average Account Payable [average]
Payment Period	=	365 / Account Payable Turnover
EBITDA Margin	=	EBITDA / Revenue from Sales
Net Profit Margin	=	Net Profit (Owner of the Parent) / Revenue from Sales
Return on Equity	=	Net Profit (Owner of the Parent) / Average Shareholders' Equity (Owner of the Parent)
Current Ratio	=	Current Assets / Current Liabilities
Quick Ratio	=	(Cash + Marketable Securities + Account Receivable) / Current Liabilities
Net Interest Bearing Debt to Equity	=	(Interest Bearing Debt – Cash) / Total Equity
Net Interest Bearing Debt to EBITDA	=	(Interest Bearing Debt – Cash) [average] / EBITDA

Other Factors Influencing Financial Performance

2024 Business Outlook

1. Petroleum Business

2024 Crude oil outlook: The global oil demand forecast is approximately 104 million barrels per day improving by around 2 million barrels per day from 102 million barrels per day in 2023 thanks to the relieved COVID-19 situations. Nevertheless, petroleum business seems to face various challenges including China's property crisis being thought to still affect the overall oil demand, along with new production capacity in China and the Middle East that started up in late-2023 being expected to curb the Gross Refining Margin (GRM). Plus, the crude oil supply from countries outside OPEC and allies is at a high level, while OPEC and allies' spare capacity is seen to be above 6 million barrels per day, which is considered high, making OPEC and allies' crude oil production cut more difficult.

The Dubai crude oil price in 2024 is foreseen to be in a range of USD 75-85 per barrel being close to the 2023 average price of about USD 82 per barrel. Key possible factors navigating the crude oil price are the policy interest rate, which can help grow the economy if decreased, while the U.S.' current crude oil production is at around 13 million barrels per day being considered high and may pressure the price. Moreover, the conflict in the Middle East seems to remain a risk for the crude oil supply.

2. Petrochemical Business

2024 Petrochemical outlook: The petrochemical industry is seen to continue facing ongoing challenges from the previous year including increasing new capacity in China. Meanwhile, market demand is expected to increase at a lower rate than that of the supply. Petrochemical product demand in 2024 is projected to increase by around 2-3% after experiencing a low base in 2023 indicating a gradual recovery. During 2H24, signs of recovery in demand may begin to emerge after inflation slows down probably leading central banks in several countries to gradually decrease interest rates, which tends to increase consumers' purchasing power. End-user industry demand is expected to gradually recover such as food and beverage packaging being benefitted from the continuously improving tourism sector. Also, the electrical appliances and electronics industries has shown signs of a demand upturn since late-2023. Moreover, exports of countries in ASEAN are expected to expand further aligning with the forecasted global trade recovery. However, increasing risks and pressures in the supply resulting from the increased new capacity in China will likely modify trade flows in the Asian region. Consequently, manufacturers exporting to China may need to explore additional markets. Furthermore, geopolitical conflicts like Russia-Ukraine and Israel-Hamas are prone to remain critical factors requiring close monitoring. If these situations escalate or spread to other countries, increasing volatility in energy prices and raw material costs tend to be noticed.

Petrochemical industry also needs to adapt itself for facing upcoming trade restrictions on climate change that many countries have to set targets to reduce emissions of carbon dioxide and other greenhouse gases from energy and industrial sectors. The U.S. and European Union will begin imposing restrictions on the import of high-emission products including petrochemical products and others in the production chain. This requires operators in the petrochemical industry to adjust their operations to comply with such requirements.

Investment Projects

1. Investment Project Progress

The Ultra Clean Fuel Project (UCF): The objective of the UCF Project is to increase refinery plant's efficiency and upgrade Diesel quality to meet the Euro 5 (Euro V) standard in accordance with the Ministry of Energy's policy determining that starting from 1 January 2024, Diesel distribution must meet Euro 5 standard. Under the Euro 5 standard, the permitted sulfur level will decline to 10 parts per million (PPM) from 50 PPM under Euro 4. The project will increase the Company's competitiveness through the rising demand for Low Sulfur Diesel in domestic market and ASEAN Economic Community (AEC). The UCF project is able to reinforce competitiveness of the Company involving Diesel as a main product; besides, the project is environmentally friendly and in line with the Company's Eco Factory policy. Currently, all equipment and machinery installation projects have been completed and it is under an inspection process. This project has been planned to commercial operate within 1Q24. Once the project is completed, the Company's capacity will be able to convert entire high-sulfur Diesel to low-sulfur Diesel following Euro 5 standards.

2. Investment Plan

The Board of Directors has approved the company's five-year (Year 2024 - 2028) investment plan in an aggregate amount of Baht 13,888 million. The details are as follows:

(Unit : Million Baht)

Investment Projects	2024	2025	2026	2027	2028	Total
(1) Ongoing Projects	4,626	-	-	2,140	1,078	**7,844**
(2) BAU Operations	1,379	1,082	1,210	1,122	1,251	**6,044**
Total	**6,005**	**1,082**	**1,210**	**3,262**	**2,329**	**13,888**

The investment plan as mentioned above is an investment project with an operational plan. The goal is to encourage business growth.

Sustainable Framework

Year 2023 is another year of the success in sustainability for the Company. IRPC has maintained a membership of the Dow Jones Sustainability Indices (DJSI), the world's most trusted index for success of sustainable organizations, for 10 consecutive years in the Oil & Gas Refining and Marketing industry. The Company was also awarded the SET Sustainability Awards of Honor for Year 2023 as IRPC is one of listed companies conducting businesses in accordance with sustainable development guidelines. Furthermore, the Company has been considered as one of sustainable listed companies in the Thailand Sustainability Investment (THSI) and has been the first large corporation receiving the Human Rights Awards for 5 consecutive years. These successes reflect IRPC's earnestness to drive a sustainable organization by adopting human centric principles in every dimension, not only for enhancing business and financial opportunities but also for contributing shared values to the low carbon society and reducing environmental impacts in all aspects. Plus, the human centric principles is able to support the United Nations' Sustainable Development Goals.

IRPC has uplifted the sustainable framework to one of key drivers supporting the Company's growth to ensure continuity and efficiency of sustainability management that is valued as a crucial foundation driving the Company to achieve its new vision and mission as well as to build trust amongst entire stakeholders. The Company's strategy includes strategic objectives being divided into 3 groups as follows:

C1: Climate Change Strategy The Company perceives risks and physical impacts of climate change-related regulation adjustments to both the Company and stakeholders. The Company has set a target of 20% greenhouse gas emissions reduction by 2030. Such target was set in consideration of the country and industrial intentions to reduce greenhouse gas emissions, technological potential and the ability to invest in greenhouse gas emissions reduction. In addition, the Company has also set the targets of Carbon Neutrality by 2050 as well as the Net Zero Emission by 2060 to be in line with the Company's business plan. To achieve the goal, the Company progresses through the ERA strategy comprising of:

1. **Eco - operation & technology** being about production adjustments to reduce energy consumption via energy consumption indicators, along with an adoption of solar energy being clean renewable energy. Besides, IRPC is studying about ways to utilize renewable energy through investments in Solar Rooftop project and Solar Farm project for further in-house utilization. In 2023, the Company reduced energy consumption by about 1.6 million gigajoules or 106,309 tons carbon dioxide equivalent.
2. **Reshape portfolio** being about seeking innovations supporting low-carbon, clean and renewable energy-related, and low carbon consumption businesses. In 2023, the Company signed a memorandum of understanding (MOU) with Boonrawd Brewery Co., Ltd. and PTT Public Co.,Ltd. to develop returnable equipment agreeing with circular economy. The equipment is planned to be built with efficient resources that are eco-friendly. The MOU helps

drive a pilot project relating to plastic recycling. The recycled specimens includes beverage crates, bottles made from recycled polyethylene terephthalate (rPET) and recycled high density polyethylene (rHDPE) and pallets made from rHDPE and malt residue.

3. Absorption and offset being about incorporating with PTT Group in 2 projects 1) a feasibility study to adopt carbon capture and storage (CCS) or CCS hub model project 2) forestation to compensate carbon dioxide emission. In 2023, the Company signed MOUs relating to a 2 million-rai forestation project. With this, PTT Group will contribute 1 million rais of forestation. The MOUs relate to developing areas for pampering botanical ecosystem with Royal Forest Department, developing areas for the aforementioned purpose with Department of National Parks, Wildlife and Plant Conservation, and preserving mangroves to earn benefits from carbon credit with Department of Marine and Coastal Resources. Moreover, the Company collaborates with Mae Fah Luang foundation to progress a project covering carbon credit management in the forest for sustainable development aiming to recover local forests and to provide careers to related populations in Chiang Rai, Chiang Mai, Amnat Charoen and Yasothon covering 20,000 rais in total.

C2: Circular Economy Strategy through innovation for the most efficient resource utilization involving turning waste into value. The Company has set a short-term target to maintain zero waste to landfill. Furthermore, the Company has also set a long-term target to create value from waste, both Post-Industrial Recycled (PIR) and Post-Consumer Recycled (PCR), by more than 95% by 2040.

C3: Creating Social Value Strategy This objective creates a positive impact on health and well-being of the society through hygiene-focused products being safe for consumers and environment. The main goals are to promote well-being of the community, ensure equal opportunity for everyone and promote lifelong learning opportunities. The Company has applied the "KPMG's True Value Assessment" to measure the social value being generated by the Company's activities. Furthermore, the Company conducted a Social Return Assessment (SROI) being used for decision making on implementation of future social projects in order to ensure that IRPC's ongoing projects can create value for the community and the society, along with sustainable business growth.