



## PTT Global Chemical Public Company Limited

### Management Discussion and Analysis Q3/2023

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## 1. Executive Summary

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In Q3/2023, PTT Global Chemical Public Company Limited (“the Company”) had total sales revenue of Baht 160,392 million, increased by 9% from Q2/2023 but decreased by 12% when compared to the same period last year. The total revenue has increased mainly due to Upstream business especially in Refinery sector as petrochemical prices increased following the rebound in crude oil prices. The overall sales volume increased, particularly the Olefins and Polymers businesses, increased along with increased in sales volume and utilization rate during this quarter, even though there was a scheduled maintenance shutdown of Aromatic Unit 2 during the quarter. Additionally, against the current high oil prices environment, the Company has started to operate Olefins 2 Modification Project (“OMP”) which allows the Company to increase propane usage as feedstock and support our strategy to enhance feedstock flexibility and long-term competitiveness.

The Company had Adjusted EBITDA of Baht 12,307 million in this quarter, increased by 80% from Q2/2023, mainly driven by the sharp increase in GRM. The gross refining margins (GRM) recorded at 12.6 USD/barrel in Q3/2023. While Aromatics business has a softened performance mainly due to a scheduled maintenance shutdown during the quarter. Polymers & Chemicals business performance increased from increased sales volume of around 10% while the average Polyethylene prices slightly decreased from previous quarter due to the slower demand recovery and oversupply. Intermediates business performance slightly improved mainly from Monoethylene Glycol (MEG) plant resumed normal operation after the planned maintenance shutdown. In addition, Performance Chemicals business performance increased following a rebound in revenue growth across the Asia Pacific region. However, overall petrochemical market remained soft, with demand across most value chains capped by recession fears and new petrochemical capacity from China. The Company had share of loss from investments at Baht 179 million, improved from previous quarter due to the increase in performance of petrochemical joint ventures and associate companies. The Company had Net Operating Profit<sup>1</sup> Recurring of Baht 1,614 million<sup>2</sup>. The Company recorded extraordinary items from stock gain net NRV of Baht 3,674 million, loss from commodity hedging of Baht 2,729 million, net loss from foreign exchange loss and financial derivatives gain of Baht 1,146 million. Moreover, in Q3/2023, the Company recorded extraordinary items of Baht 625 million, mainly from loss from disposal of assets due to technical incident in the warehouse construction project. As a result, the Company recorded net profit in Q3/2023 at Baht 1,427 million (Baht 0.32/share).

<sup>1</sup> Net Operating Profit/Loss excludes stock gain/loss net NRV, gain/loss from foreign exchange and financial derivative, gain/loss from commodity hedging, and extraordinary items

<sup>2</sup> The operating loss in Q2/23 was retroactively adjusted by excluding gain from bond buy back which treated as extraordinary item. Hence, the revised operating loss in Q2/23 would be 2,871 MB

Table 1 : Performance Summary

(Unit: Million Baht)	Q3/2022 <sup>1</sup>	Q2/2023	Q3/2023	YoY % +/-	QoQ % +/-	9M/2022 <sup>1</sup>	9M/2023	YoY % +/-
Sales Revenue	181,536	146,731	160,392	-12%	9%	553,487	454,371	-18%
EBITDA	159	4,996	13,753	>200%	175%	20,347	27,864	37%
EBITDA Margin (%)	0.1%	3%	9%	9%	6%	4%	6%	2%
Share of profit /(loss) of investments in JV and Associates	306	(405)	(179)	-158%	56%	3,289	(735)	-122%
Net Profit/(Loss)	(13,404)	(5,591)	1,427	111%	126%	(9,430)	(4,082)	57%
EPS (Baht/Share)	(2.97)	(1.24)	0.32	111%	126%	(2.09)	(0.91)	57%
Adjusted EBITDA <sup>2</sup>	10,378	6,835	12,307	19%	80%	43,900	28,672	-35%
Adjusted EBITDA Margin (%)	6%	5%	8%	2%	3%	8%	6%	-2%

Note:

1) There was a restatement of financial statement for the period of three months and nine months ended September 30, 2022 since the measurements of net assets acquired from acquisition of Allnex Holding GmbH were completed by an independent appraiser in the fourth quarter of the year 2022. The Company has adjusted the fair values of assets and liabilities acquired to reflect the final fair value determination in accordance with the accounting adjustment condition for business acquisition. The adjustment has no effect to the financial statement for the period of twelve months of fiscal year 2022 as previously reported.

2) Adjusted EBITDA refers to EBITDA excluding Stock gain/(loss), NRV, Gain/(loss) from commodity hedging, and Extra item.

In Q3/2023, overall performance of the Company has improved. Upstream business has a significant increase in performance as the Market GRM increased significantly from 5.7 USD/barrel to 12.6 USD/barrel, mainly due to higher diesel spreads as China's appetite for fuels and other oil-derived products has recovered remarkably well. The crude premium remained steady in this quarter. Refinery production level was fully utilized. Aromatics performance slightly decreased due to planned maintenance shutdown. Even though there was a drop in product spreads of paraxylene and benzene, By-products spreads increased. Olefins performance slightly decreased, effect by the decrease in spreads of Ethylene over Naphtha. According to the current market trend, naphtha prices increased more compared to the increase in crude oil prices. The OMP plant started commercial operation in this quarter, which enabled the Company to use more propane as feedstock, which was a more competitive feedstock than Naphtha.

Intermediates business performance improved compared to previous quarter due to monoethylene glycol (MEG) plant resumed normal operation after the planned maintenance shutdown during the first half year, resulting to the overall sale volume increased significantly. Phenol business slightly improved driven by phenol prices increased more than feedstock cost increase due to less supply pressure, maintenance shutdown, as well as the postponement of some new producers to next quarter.

For Polymers & Chemicals business, the performance recovered from the previous quarter due to sales volume increase of around 10% while the average polyethylene prices slightly decreased from previous quarter due to the slower demand recovery and oversupply. In addition, demand remained to be weaker than expected demand after China's reopening.

Bio & Circularity Business performance decreased compared to the previous quarter due to the decline in demand from the Fatty Alcohol downstream industries. Performance Chemicals business recovered from the previous quarter supported by the sale volume of Allnex Holding GmbH ("allnex") increased particular in the Asia-Pacific region includes China, Indonesia, and Malaysia, together with cost control effort to sustain lean cost structure.

Table 2 : Adjusted EBITDA by Business Unit

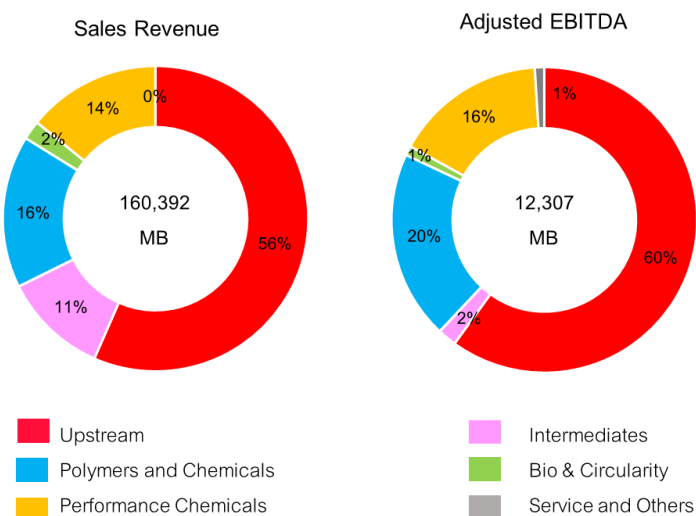
Adjusted EBITDA <sup>1</sup> Margin by Business Unit	Q3/2022 <sup>2</sup>	Q2/2023	Q3/2023	YoY		9M/2022 <sup>2</sup>	9M/2023	YoY	
				% +/-	% +/-			% +/-	% +/-
<b>Adjusted EBITDA (Million Baht)</b>									
Upstream	3,559	3,835	7,349	106%	92%	19,958	17,817	-11%	
Intermediates	707	189	237	-66%	25%	4,953	-551	-111%	
Polymers & Chemicals	2,769	780	2,513	-9%	>200%	7,527	4,997	-34%	
Bio & Circularity	238	119	100	-58%	-17%	1,575	488	-69%	
Performance Chemicals	2,334	1,599	1,964	-16%	23%	8,426	5,223	-38%	
Service and Others	770	312	143	-81%	-54%	1,460	698	-52%	
<b>Total</b>	<b>10,378</b>	<b>6,835</b>	<b>12,307</b>	<b>19%</b>	<b>80%</b>	<b>43,900</b>	<b>28,672</b>	<b>-35%</b>	
<b>Adjusted EBITDA margin (%)</b>									
Upstream	4	5	8	4	3	7	7	-	
Intermediates	3	1	1	(2)	-	7	(1)	(8)	
Polymers & Chemicals	10	3	10	-	7	9	7	(2)	
Bio & Circularity	5	3	3	(2)	-	9	4	(5)	
Performance Chemicals	8	7	8	-	1	9	7	(2)	
<b>Average</b>	<b>6</b>	<b>5</b>	<b>8</b>	<b>2</b>	<b>3</b>	<b>8</b>	<b>6</b>	<b>(2)</b>	

Note

1) There was a restatement of financial statement for the period of three months and nine months ended September 30, 2022 since the measurements of net assets acquired from acquisition of Allnex Holding GmbH were completed by an independent appraiser in the fourth quarter of the year 2022. The Company has adjusted the fair values of assets and liabilities acquired to reflect the final fair value determination in accordance with the accounting adjustment condition for business acquisition. The adjustment has no effect to the financial statement for the period of twelve months of fiscal year 2022 as previously reported.

2) Adjusted EBITDA refers to EBITDA excluding Stock gain/(loss), NRV, Gain/(loss) from commodity hedging, and Extra item.

Q3/2023



## 2. Performance Analysis by Business Unit

### 2.1 Upstream

Table 3: Price, Product Spreads and performance of Upstream

	Q3/2022	Q2/2023	Q3/2023	YoY % +/-	QoQ % +/-	9M/2022	9M/2023	YoY % +/-
Dubai Crude Oil (\$/bbl)	96.9	77.8	86.7	-10%	12%	100.2	81.6	-19%
Diesel-Dubai (\$/bbl)	35.2	14.6	26.9	-24%	85%	32.6	22.2	-32%
LSFO-Dubai (\$/bbl)	21.1	10.7	8.9	-58%	-18%	25.1	10.7	-58%
Gasoline-Dubai (\$/bbl)	13.2	16.6	18.9	43%	14%	22.0	18.0	-18%
Jet-Dubai (\$/bbl)	32.4	14.0	26.1	-20%	86%	29.3	22.2	-24%
<b>Market GRM (\$/bbl)</b>	<b>9.8</b>	<b>5.7</b>	<b>12.6</b>	<b>29%</b>	<b>122%</b>	<b>12.8</b>	<b>9.6</b>	<b>-26%</b>
Condensate (\$/ton)	820	636	716	-13%	12%	863	677	-22%
Paraxylene (FECP)-Condensate (\$/ton)	276	395	357	29%	-10%	284	369	30%
Benzene-Condensate (\$/ton)	158	236	183	16%	-22%	234	224	-4%
<b>BTX P2F (\$/ton)</b>	<b>78</b>	<b>165</b>	<b>164</b>	<b>109%</b>	<b>-1%</b>	<b>81</b>	<b>192</b>	<b>137%</b>
Naphtha (MOPJ) (\$/ton)	714	601	648	-9%	8%	822	646	-21%
Ethylene (SEA) (\$/ton)	942	874	822	-13%	-6%	1,104	873	-21%
Propylene (SEA) (\$/ton)	895	844	822	-8%	-3%	1,051	875	-17%
Hedging Gain/(Loss) (MB)	(2,111)	327	(2,729)	-29%	<-200%	(23,422)	(1,459)	94%
Stock Gain/(Loss) และ NRV (MB)	(8,025)	(2,279)	3,793	147%	>200%	1,394	9	-99%
<b>Adjusted EBITDA* (MB)</b>	<b>3,559</b>	<b>3,835</b>	<b>7,349</b>	<b>106%</b>	<b>92%</b>	<b>19,958</b>	<b>17,817</b>	<b>-11%</b>
<b>Adjusted EBITDA (%)</b>	<b>4%</b>	<b>5%</b>	<b>8%</b>	<b>4%</b>	<b>3%</b>	<b>7%</b>	<b>7%</b>	<b>-</b>
Petroleum Product Sales Volume (million bbl )	15.3	15.6	16.2	6%	4%	43.1	46.6	8%
Petrochemical Product Sales Volume (million ton )	1.3	1.3	1.3	1%	2%	3.9	3.8	-2%

Note: \* Adjusted EBITDA refers to EBITDA excluding Stock gain/(loss),NRV, Gain/(loss) from commodity hedging, and Extra item

In Q3/2023, Upstream business had Adjusted EBITDA of Baht 7,349 million, increased by 92% from the previous quarter, and Adjusted EBITDA Margin of 8%. Overall sales volume increased from Q2/2023. Petroleum product sales volume was 16.2 million barrels, increased by 4% from the previous quarter and the Petrochemical product sales volume was 1.3 million tons. The factors supported increase in the performance are as follows:

1. Refinery performance increased from the previous quarter resulting from crude oil price increase following tight supply due to production cuts in Saudi Arabia, while production in the United States was lower than expected. Petroleum product spreads were supported by demand recovery in China due to the government policies and driving season in the United States. Diesel spreads increased due to lower export from China and Korea and lower inventory in Europe. Low Sulfur Fuel Oil spread decreased as more supply from higher export from Kuwait, despite the lower export from America and Europe due to turnaround season. Gasoline spreads increased due to the driving season in the United States that

supported the market demand. The Company's Market GRM increased to 12.6 USD/barrel and Crude premium was stable. The increase in crude oil price resulted to Stock Gain Net NRV in this period.

2. Aromatics performance decreased from the previous quarter as the planned maintenance shutdown of the Aromatics unit 2 in Q3/2023. Paraxylene and Benzene over Condensate spread slightly decreased caused by the increase in Paraxylene supply in the market after the turnaround season ended, and a decline in the shift to gasoline blending towards the end of the quarter. Also, the Benzene downstream demand remained weak. The demand of Styrene monomer was still impacted by the economic recession. However, By-products spread increased in Q3/2023, especially the increase of Condensate Residue spread. These multiple factors resulted in Market P2F of this quarter being stable at 164 USD/ton.
3. Olefins performance decreased from the previous quarter. Olefins product spread decreased due to the increase in naphtha price from the previous quarter in line with the increase in crude oil price, while ethylene price increased slower as the downstream market remained weak. In this quarter, Olefins Unit 2/2 had increased production as a start of the commercial operation of Olefins 2 Modification Project resulting in the Company increased propane usage as feedstock, which align with the Company's strategy to enhance feedstock flexibility and long-term competitiveness.

## 2.2 Intermediates

Table 4: Price, Product Spreads and and performance of Intermediates

(Unit : USD per ton)	Q3/2022	Q2/2023	Q3/2023	YoY % +/-	QoQ % +/-	9M/2022	9M/2023	YoY % +/-
Mono-ethylene glycol (MEG -ACP)	897	877	845	-6%	-4%	926	861	-7%
MEG - 0.65 Ethylene	284	309	310	9%	1%	208	293	41%
Phenol	1,211	952	988	-18%	4%	1,381	986	-29%
Phenol spread*	301	246	295	-2%	20%	358	238	-34%
Bisphenol A (BPA)	1,580	1,251	1,258	-20%	1%	1,993	1,269	-36%
BPA spread*	381	235	200	-48%	-15%	620	226	-64%
Propylene Oxide (PO)	1,098	1,133	984	-10%	-13%	1,289	1,089	-15%
Purified Terephthalic Acid (PTA)	845	797	791	-6%	-1%	875	788	-10%
PTA - 0.67PX	111	106	72	-34%	-32%	106	87	-18%
Acrylonitrile (AN)	1,539	1,332	1,170	-24%	-12%	1,754	1,335	-24%
AN - Propylene	644	488	348	-46%	-29%	703	460	-35%
Methyl Methacrylate (MMA)	1,814	1,580	1,576	-13%	0%	1,968	1,562	-21%
MMA - Naphtha	1,100	979	928	-16%	-5%	1,146	916	-20%
<b>Adjusted EBITDA (MB)</b>	<b>707</b>	<b>189</b>	<b>237</b>	<b>-66%</b>	<b>25%</b>	<b>4,953</b>	<b>(551)</b>	<b>-111%</b>
<b>Adjusted EBITDA (%)</b>	<b>3%</b>	<b>1%</b>	<b>1%</b>	<b>-2%</b>	<b>-</b>	<b>7%</b>	<b>-1%</b>	<b>-8%</b>
Sales Volume (Kton )	709	615	699	-1%	14%	2,202	1,926	-13%
Share of gain/(loss) from investment (MB)	(214)	(250)	(182)	15%	27%	(256)	(741)	-190%

Note : Phenol spread derives from Phenol-0.878 BZ-0.474Propylene+0.616 Acetone and BPA spread derives from BPA-0.853 Phenol-0.273 Acetone

In Q3/2023, Intermediates business had Adjusted EBITDA of Baht 237 million, increased by 25% from the previous quarter, and Adjusted EBITDA Margin of 1%. Overall sales volume was approximately 699,000 tons, increased by 14% compared with the previous quarter mainly due to the full utilization of Monoethylene glycol (MEG) plant after the completion of the scheduled maintenance shutdown in the first half year and Phenol sales volume increased from Q2/2023 from fully utilized after the completion of the scheduled maintenance shutdown in the previous quarter.

In this quarter, the performance increased from the previous quarter resulting from the full utilization of Monoethylene glycol (MEG) plant after the completion of the scheduled maintenance shutdown in Q2/2023. For the Phenol products, the price of Phenol has increased more than feedstock prices as less supply pressure due to the turnaround season, production control, and postponement of the new production capacities to Q4/2023. However, global economic recession still impacted to downstream demand of Phenol, BPA, and PTA. Textile industry (Filament and Staple Fiber), construction industry, and Electrical and Electronics (E&E) industry has weaker than expected recovery in the key markets such as China.



## 2.3 Polymers & Chemicals

Table 5: Price, Product Spreads and and performance of Polymers & Chemicals

(Unit : USD per ton)	Q3/2022	Q2/2023	Q3/2023	YoY % +/-	QoQ % +/-	9M/2022	9M/2023	YoY % +/-
Average Polyethylene(PE)	1,168	1,029	1,005	-14%	-2%	1,355	1,043	-23%
High-Density Polyethylene (HDPE)	1,104	1,036	1,032	-7%	0%	1,258	1,051	-16%
HDPE-Ethylene	162	162	210	29%	30%	154	178	16%
Linear Low-Density Polyethylene (LLDPE)	1,100	1,014	990	-10%	-2%	1,276	1,026	-20%
LLDPE-Ethylene	158	140	168	6%	20%	171	153	-11%
Low-Density Polyethylen (LDPE)	1,300	1,036	993	-24%	-4%	1,532	1,053	-31%
LDPE-Ethylene	358	162	171	-52%	5%	428	180	-58%
Polyethylene Terephthalate (PET)	1,096	955	893	-19%	-7%	1,158	940	-19%
Polypropylene (PP)	1,088	996	969	-11%	-3%	1,276	1,020	-20%
PP- Naphtha	374	395	321	-14%	-19%	454	374	-18%
Polyvinyl chloride (PVC)	918	791	823	-10%	4%	1,213	833	-31%
PVC-0.5Ethylene	447	354	412	-8%	16%	661	396	-40%
Polyols	1,407	1,456	1,323	-6%	-9%	1,741	1,403	-19%
Polyols-0.92PO	397	414	418	5%	1%	556	401	-28%
<b>Adjusted EBITDA (MB)</b>	<b>2,769</b>	<b>780</b>	<b>2,513</b>	<b>-9%</b>	<b>&gt;200%</b>	<b>7,527</b>	<b>4,997</b>	<b>-34%</b>
<b>Adjusted EBITDA (%)</b>	<b>10%</b>	<b>3%</b>	<b>10%</b>	<b>-</b>	<b>7%</b>	<b>9%</b>	<b>7%</b>	<b>-2%</b>
Sales Volume ( Kton )	515	574	632	23%	10%	1,658	1,741	5%
Share of gain/(loss) from investment (MB)	203	(161)	(27)	-113%	84%	1,752	(351)	-120%

In Q3/2023, Polymers and Chemicals Business had Adjusted EBITDA of Baht 2,513 million, which increased by more than 200% from the previous quarter, resulting in Adjusted EBITDA Margin of 10%. Overall, the total sales volume of Polymers and Chemicals Products was approximately 632,000 tons, increased by 10% compared to the previous quarter.

In Q3/2023, the Polyethylene price remained stable with a slight decrease compared to the previous quarter. The demand for Polyethylene products remained sluggish due to fluctuations in raw material prices with an upward trend in this quarter. In term of supply, the market was pressured by the expected addition of new capacities in Vietnam by the end of this year. Although the packaging industry has improved and the market sentiment has changed to restocking in the late of third quarter following the China's national holidays, the average price of Polyethylene remained stable.

## 2.4 Bio & Circularity

Table 6: Price, Product Spreads and and performance of Bio & Circularity

(Unit : USD per ton)	Q3/2022	Q2/2023	Q3/2023	YoY % +/-	QoQ % +/-	9M/2022	9M/2023	YoY % +/-
Methyl Ester (ME) P2F (THB per Kilogram)	3.1	4.3	4.3	38%	0%	3.1	4.3	38%
Fatty Alcohol (FA) P2F	641	443	358	-44%	-19%	487	448	-8%
<b>Adjusted EBITDA (MB)</b>	<b>238</b>	<b>119</b>	<b>100</b>	<b>-58%</b>	<b>-17%</b>	<b>1,575</b>	<b>488</b>	<b>-69%</b>
<b>Adjusted EBITDA (%)</b>	<b>5%</b>	<b>3%</b>	<b>3%</b>	<b>-2%</b>	<b>-</b>	<b>9%</b>	<b>4%</b>	<b>-5%</b>
ME Sales Volume ( Kton )	74	91	69	-6%	-24%	217	247	14%
FA Sales Volume ( Kton )	28	22	24	-12%	13%	76	68	-10%
Share of gain/(loss) from investment (MB)	206	(90)	(170)	-183%	-90%	1,287	(133)	-110%

In Q3/2023, Bio and Circularity business had Adjusted EBITDA of Baht 100 million, decreased by 17% from the previous quarter, and Adjusted EBITDA Margin of 3%. Methyl Ester (ME) sales Volume decreased from the previous quarter in line with the Crude Palm Oil (CPO) prices due to higher supply from increased inventory following the favorable climate for production, while demand for ME weakened due to the monsoon season in Thailand. However, the market was supported by government policies such as the limit on the high-speed diesel prices and policy promoting tourism. Additionally, Thai government has announced maintain B7 biodiesel mandate. Fatty Alcohol (FA) sales volume increased from the previous quarter. Nevertheless, FA price decreased mainly due to increase in the stockpiling of Crude Palm Kernel Oil (CPKO) during harvest season, while demand for FA was stable due to economic uncertainty. However, some buyers in markets have started their restocking activities after previously destocking.

## 2.5 Performance Chemicals

Table 7: Performance of Performance Chemicals

	Q3/2022 <sup>1</sup>	Q2/2023	Q3/2023	YoY % +/-	QoQ % +/-	9M/2022 <sup>1</sup>	9M/2023	YoY % +/-
<b>Adjusted EBITDA (MB)</b>	<b>2,334</b>	<b>1,599</b>	<b>1,964</b>	<b>-16%</b>	<b>23%</b>	<b>8,426</b>	<b>5,223</b>	<b>-38%</b>
<b>Adjusted EBITDA (%)</b>	<b>8%</b>	<b>7%</b>	<b>8%</b>	<b>1%</b>	<b>2%</b>	<b>10%</b>	<b>7%</b>	<b>-3%</b>
Sales Volume ( Kton )	205	199	201	-2%	1%	653	599	-8%
Share of gain/(loss) from investment (MB)	(2)	(51)	(38)	<-200%	25%	(5)	(130)	<-200%

1) There was a restatement of financial statement for the period of three months and nine months ended September 30, 2022 since the measurements of net assets acquired from acquisition of Allnex Holding GmbH have were completed by an independent appraiser in the fourth quarter of the year 2022. The Company has adjusted the fair values of assets and liabilities acquired to reflect the final fair value determination in accordance with the accounting adjustment condition for business acquisition. The adjustment has no effect to the financial statement for the period of twelve months of fiscal year 2022 as previously reported.

In Q3/2023, Performance Chemicals business had Adjusted EBITDA of Baht 1,964 million, which increased by 23% from the previous quarter. This increase was primarily driven by the sales volume of allnex, which saw significant growth in the Asia Pacific region, especially in China, as well as in other Southeast Asian countries, such as Indonesia and Malaysia. However, the sales volumes in the Americas region and EMEA region decreased, which partly impacted by the seasonal plant maintenance during summer in the region. Operating expenses declined due to reduced transportation costs and the undergoing cost reductions by allnex. This resulted in an improved Adjusted

EBITDA. Meanwhile, the business performance of Vencorex, a manufacturer of HDI derivatives, continued to be affected by tepid demand during the economic downturn.

### 3. Operating Performance

Unit : MB		Q3/2022 <sup>1</sup>	Q2/2023	Q3/2023	YoY % + /(-)	QoQ % + /(-)	9M/2022 <sup>1</sup>	9M/2023	YoY % + /(-)
1	Sales Revenue	181,536	146,731	160,392	-12%	9%	553,487	454,371	-18%
2	Feedstock cost	(143,018)	(114,021)	(123,230)	-14%	8%	(428,708)	(349,768)	-18%
3	Product to Feed Margin	38,518	32,710	37,162	-4%	14%	124,779	104,603	-16%
4	Variable Cost	(13,854)	(13,065)	(12,008)	-13%	-8%	(38,096)	(37,427)	-2%
5	Fixed OH	(8,338)	(7,936)	(8,408)	1%	6%	(24,371)	(24,012)	-1%
6	Stock Gain/(Loss) and NRV	(8,108)	(2,659)	3,674	145%	>200%	(140)	(343)	-145%
7	Gain/(Loss) on Commodity Hedging	(2,111)	327	(2,729)	-29%	<-200%	(23,413)	(1,458)	94%
8	Other Revenue <sup>2</sup>	1,875	2,274	2,434	30%	7%	4,993	6,090	22%
9	SG&A Expenses	(7,823)	(6,656)	(6,372)	-19%	-4%	(23,405)	(19,589)	-16%
10	EBITDA <sup>2</sup>	159	4,996	13,753	>200%	175%	20,347	27,864	37%
11	Depreciation & Amortization	(7,074)	(6,786)	(7,225)	2%	6%	(20,284)	(20,972)	3%
12	Extra items	(851)	(8)	(625)	-27%	>200%	(851)	(633)	-26%
13	EBIT	(7,766)	(1,798)	5,903	176%	>200%	(788)	6,259	>200%
14	Net financial expense	(2,474)	(2,628)	(2,714)	10%	3%	(6,766)	(8,025)	19%
15	FX Gain(Loss)	(3,298)	(1,047)	(1,146)	65%	-9%	(4,303)	(1,497)	65%
16	Share of gain/(loss) from investment	306	(405)	(179)	-158%	56%	3,289	(735)	-122%
17	Corporate Income Tax	28	271	(467)	<-200%	<-200%	245	(153)	-162%
18	Net Profit/(Loss) after Tax	(13,204)	(5,607)	1,397	111%	125%	(8,323)	(4,151)	50%
	Profit/(loss) attributable to:								
19	Non-controlling interests	200	(16)	(30)	-115%	-88%	1,107	-69	-106%
20	Owners of the Company	(13,404)	(5,591)	1,427	111%	126%	(9,430)	(4,082)	57%
21	Adjusted EBITDA <sup>3</sup>	10,378	6,835	12,307	19%	80%	43,900	28,672	-35%

Note:

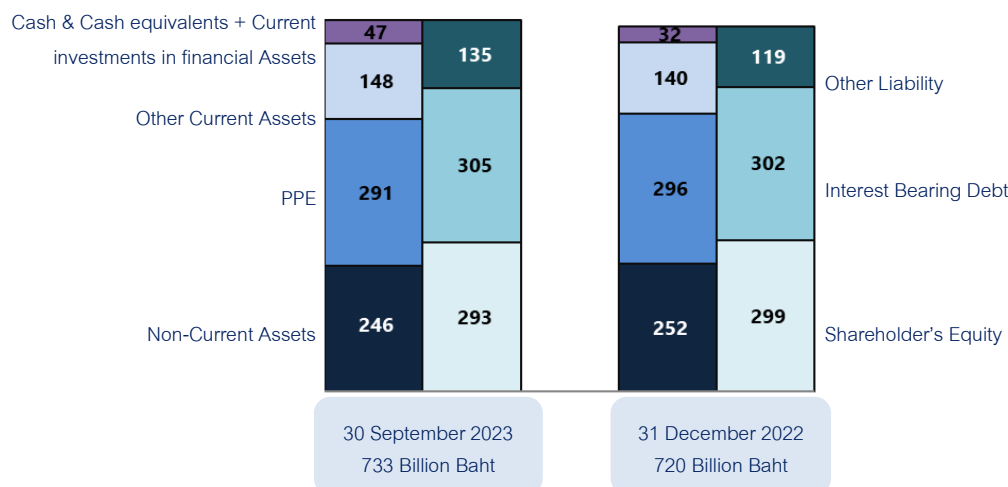
- 1) There was a restatement of financial statement for the period of three months and nine months ended September 30, 2022 since the measurements of net assets acquired from acquisition of Allnex Holding GmbH were completed by an independent appraiser in the fourth quarter of the year 2022. The Company has adjusted the fair values of assets and liabilities acquired to reflect the final fair value determination in accordance with the accounting adjustment condition for business acquisition. The adjustment has no effect to the financial statement for the period of twelve months of fiscal year 2022 as previously reported.
- 2) There was a reclassification of sales assets for allnex amounting to 493 MB in Q2/2023. This were originally categorized as Extra items, but the Company reclassified and treated as Other revenue.
- 3) Adjusted EBITDA refers to EBITDA excluding Stock gain/(loss),NRV, Gain/(loss) from commodity hedging, and Extra item.

- In Q3/2023, the Company recorded sales revenue of Baht 160,392 million, which increased by 9% from the previous quarter. This increase was primarily driven by the Upstream business, particularly in the Refinery business as the petroleum prices increased in line with the rising crude oil prices. Additionally, overall sales volume went up in line with the higher utilization rate of the Olefins and Polymers business. However, when compared to the same period in the previous year, sales revenue decreased by 12% due to a decline in product prices across all product groups, reflecting the ongoing economic challenges.
- Variable Costs in Q3/2023 decreased by 8% from the previous quarter, mainly due to a decrease in utility expenses.
- Fixed overhead and SG&A expenses in Q3/2023 increased slightly from the previous quarter. This increase was mainly attributable to higher maintenance expenses but offset by decreased transportation expenses.
- The Company recognized an insurance claim of Baht 500 million from the warehouse incident related to the product damage of polymers products as other income in Q3/2023.
- Depreciation and Amortization in Q3/2023 increased from the previous quarter by 3%, mainly as in the previous quarter, there was the reversal of provision related to product damage of polymers products during warehouse incident.
- Financial expenses increased from the previous quarter, aligned with the upward trend of market interest rates. The Company also repurchased additional USD bonds amounting to approximately USD 61 million in the Q3/2023, bringing the total to USD 141 million over the nine-month period of 2023.
- The Company had foreign exchange loss in Q3/2023 of Baht 1,146 million due to the depreciation in Baht currency against the US dollar compared with Q2/2023.
- The Company continued to incur share of loss from investments mainly driven by weak performance from the global economic recession, which resulted in softening product spread in the petrochemical sector.
- The Company recorded extraordinary items in Q3/2023 of Baht 625 million, mainly due to loss from the disposal of assets related to the warehouse incident.

## 4. Statements of Financial Position

### 4.1 Balance sheet

Unit: Billion Baht



#### Assets

As of September 30, 2023, the Company had total assets of Baht 732,906 million, increased by Baht 12,940 million from December 31, 2022 and variance of the assets are described as follows:

- Total current assets increased by Baht 23,696 million mainly due to increase in cash and cash equivalents, and current financial assets by Baht 15,404 million. There was an increase in account receivables by Baht 14,446 million due to the petroleum and petrochemical products price and sales volume increased. Inventories increased by Baht 60 million as higher petroleum feedstock. Other current assets decreased by Baht 6,213 million mainly due to a decrease in value-added tax receivable related to the importing of raw materials and a decrease in receivable from oil fuel fund.
- Property, plant and equipment decreased by Baht 5,549 million mainly due to the completion of projects and depreciation recorded.
- Non-current assets decreased by Baht 5,207 million from the fair value measurements on the investment in Global Power Synergy Public Company Limited (GPSC).

#### Liabilities

As of September 30, 2023, the Company had total liabilities of Baht 439,830 million, increased by Baht 18,693 million from December 31, 2022 and movements of liabilities were as follows:

- Interest-bearing debt (including Lease liabilities) increased by Baht 2,796 million due to the drawdown of long-term borrowings from financial institutions, offset with the repayment of short-term and long-term borrowings from financial institutions and USD bonds buy back of USD 141 million for 9 months.
- Trade accounts payable increased by Baht 19,559 million mainly due to higher crude purchased after the completion of planned maintenance shutdown of Refinery in Q4/2022
- Other liabilities decreased by Baht 3,662 million due to other payable decreased, such as a decline in payables to contractors due to the payment to contractors related to projects, and a decrease in derivatives liabilities related to commodity hedging.

## Shareholder's Equity

As of September 30, 2023, the Company had total shareholder's equity of Baht 293,075 million, which decreased by Baht 5,752 million from December 31, 2022.

## 4.2 Cashflow statement

Cashflow (Unit: Million Baht)	For nine months Ended 30 September 2023
Net cash flows provided by operating activities	38,825
Net cash flows used in investing activities	(8,960)
Net cash flows provided by financing activities	(16,879)
<b>Net increase (decrease) in cash and cash equivalents, before effect from foreign exchange rate</b>	<b>12,986</b>
Effects of exchange rates on cash and cash equivalents	1,102
<b>Net decrease in cash and cash equivalents during the period</b>	<b>14,088</b>
Cash and cash equivalents at the beginning of the period	25,940
<b>Cash and cash equivalents at the end of the period</b>	<b>40,028</b>
Current investments in financial assets at the end of the period	7,338
<b>Net cash and cash equivalent and investment at the end of the period</b>	<b>47,366</b>

For the period ended September 30, 2023, the Company had cash flow activities as follows:

- Cash flows received by operating activities of Baht 38,825 million.
- Cash flow used in investing activities of Baht 8,960 million. The Company had cash paid for property, plant, and equipment, and intangible assets amounting to Baht 14,315 million, mainly related to the Olefins 2 Modification Project (OMP). The Company had cash received from disposal of property, plant and equipment of Baht 3,120 million and dividends received by Baht 2,566 million.
- Cash flow provided by financing activities of Baht 16,879 million mainly due to the repayment of short-term and long-term borrowings from financial institutions of Baht 14,205 million, cash paid for finance costs of Baht 8,897 million, cash paid for bond repayment of Baht 4,355 million, and cash paid related to lease liabilities of Baht 2,234 million. Meanwhile, the Company had cash received from short-term and long-term borrowings from financial institutions by Baht 14,164 million.

As a result, as of September 30, 2023, the Company had total cash and cash Equivalents of Baht 40,028 million, along with current investments in financial assets of Baht 7,338 million. Hence, the Company had total cash and cash equivalent and investment of Baht 47,366 million. The Company had Net interest-bearing debt to equity at 0.88 times and Net interest-bearing debt to EBITDA at 8.59 times.

### 4.3 Key Financial Ratios

Financial Ratios	Q3/2022 (Restatement)	Q2/2023	Q3/2023
Current Ratio (Times)	1.60	1.58	1.52
EBITDA to Sales Revenue (%)	4.77%	2.64%	5.17%
Net Profits to Sales Revenues (%)	-0.89%	-3.04%	-0.59%
Return on Total Assets (%)	0.57%	-1.27%	0.80%
Return on Equity (%)	-2.05%	-6.16%	-1.18%
Interest Bearing Debt to Equity (Times)	0.96	1.03	1.04
Net Interest Bearing Debt to Equity (Times)	0.84	0.91	0.88
Interest Bearing Debt to EBITDA (Times)	8.72	19.05	10.18
Net Interest Bearing Debt to EBITDA (Times)	7.61	16.88	8.59

Remarks:

Current Ratio	=	Current Assets divided by Current Liabilities
EBITDA to Sales Revenue	=	EBITDA divided by Sales Revenue
Net Profit to Sales Revenue	=	Profits attributable to Owners of the Company to Sales Revenue
Return on Total Assets	=	Earnings before Interest and Tax divided by Average Total Assets
Return on Equity	=	Profits attributable to Owners of the Company divided by Average Equity attributable to Owners of the Company
Interest Bearing Debt to Equity	=	Interest Bearing Debt divided by Shareholder's Equity
Net Interest Bearing Debt to Equity	=	Interest Bearing Debt net Cash and Cash Equivalent and Current Investments in financial assets divided by Shareholder's Equity
Interest Bearing Debt to EBITA	=	Interest Bearing Debt net Cash and Cash Equivalent and Current Investments in financial assets divided by EBITDA
Net Interest Bearing Debt to EBITDA	=	Interest Bearing Debt net Cash and Cash Equivalent and Current Investments in financial assets divided by EBITDA

## 5. Projects Progress

In Q3/2023, the Olefins 2 Modification Project started commercial operation in July 2023 allowing the Company to increase propane usage as feedstock and align with the Company's strategy to enhance feedstock flexibility and long-term competitiveness. The project has increased the Company's ethylene and propylene capacity from 3,680,000 tons per year to 3,790,000 tons per year.

### Estimated Annual CAPEX of PTTGC Group for the next 5 years

CAPEX of PTTGC group	Total	Estimated Annual CAPEX (M.USD)				
	2024-2028	2024	2025	2026	2027	2028
1) PTTGC group excluding allnex	192	151	37	3	1	-
2) allnex expansion & growth Capex	474	111	114	95	91	63
<b>total</b>	<b>666</b>	<b>262</b>	<b>151</b>	<b>98</b>	<b>92</b>	<b>63</b>

Notes: 1. Group annual maintenance ~ 400 M.USD (including allnex Holding GmbH)

2. Other projects such as IT & digital, new office facility, operational excellence etc.

3. allnex expansion & growth Capex based on capex plan, including committed and uncommitted projects

4. FX assumption for USD/EURO is 1.01 for allnex CAPEX plan.



## 6. Market and Business Outlook in 2024

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Global economic growth in 2024 remains challenging, even though there have been efforts to recover from the COVID-19 crisis, conflicts in Ukraine, and energy crises. The global growth outlook continues to be weak both in the overall sentiment and on a country-by-country basis. This is attributable to the impact of interest rates hike that have persisted to the highest level in the past decade in key global economies, as well as economic challenges. Furthermore, geopolitical tensions remain a significant risk factor, including the ongoing conflicts in Russia and Ukraine, and the Israel-Hamas war. It is expected that global growth will slow down from 3.5% in 2023 to 3.0% in 2024 and 2.9% in 2025, according to the International Monetary Fund (IMF, October 2023). Nevertheless, the economic situation is expected to gradually improve in the latter half of the year after international economic stimulus measures, leading to a slowly improving overall economic outlook.

### Upstream business unit

The Company anticipates that the trend of Dubai crude oil prices in 2024 will average between 75-85 USD/barrel. However, there are several factors contributing to the challenge in crude oil market. These factors include ongoing inflationary pressures, persistently high-interest rates from previous years, and uncertainties related to the economic recovery in China, which can dampen oil demand. In terms of supply, OPEC and its allies (OPEC plus), expect a continuous control over production levels to maintain market stability. On the other hand, the supply shortage can be supported by increased production from non-OPEC countries, such as the United States, Brazil, or Iran.

For petroleum products, the Company anticipates that the price and products spread in 2024 will be softened compared to 2023. This is due to economic pressure factors, high-interest rate policy effects, and uncertainties in the global economy. Additionally, changes in consumer behavior and market uncertainties contribute to the expected weakening of demand. As a result, Diesel over Dubai spread is expected to be 15-19 USD/barrel, while Low Sulfur Fuel Oil (LSFO) over Dubai spread will be in the range of 9-13 USD/barrel. The expected Gasoline over Dubai spread is around 12-16 USD/barrel. The Company continues to manage its production and sales strategies to align with the evolving market conditions. This includes optimizing by closely monitoring the market situation for crude oil supply and product spread. The Company expects that the Refinery's utilization rate to be at 101% in 2024.

For Aromatics products, the Company anticipates that the product spread for paraxylene and naphtha in 2024 will decrease to a range of 370-390 USD/ton, down from 2023. Economic challenges in the global economy and changing consumer behavior contribute to the expected decrease. The spreads for benzene and naphtha are expected to be around 240-260 USD/ton, which is similar to 2023. The economic outlook is expected to gradually improve in the latter half of 2024, driven by continued economic stimulus package by the Chinese government, which can positively drive up the benzene market. The production capacity utilization rate for the aromatics is expected to be at 94% in 2024.

The outlook for Olefins products, the Company anticipates that Ethylene products price will be at 900-950 USD/ton and Propylene price is expected to be 875-925 USD/ton. Both will increase from 2023. Economic conditions are expected to slowly improve in the second half of 2024, which can support the overall market for ethylene and propylene. The Company expects Olefins utilization rate to be around 92% in 2024.

### Intermediates business unit

For Phenol market trend in 2024, the Company expects that Phenol P2F spread will be in the range of 220-240 USD/ton. This reflects a decrease from 2023 and is impacted by ongoing economic challenges in the first half of the year, with a gradual improvement expected in the latter half of 2024. The economic stimulus package in

China is anticipated to support this improvement. However, the continuous growth of new capacities entered in China will exert pressure on Phenol products.

Regarding MEG (Monoethylene Glycol) market trends, the company expects the price of MEG to be around 540-560 USD/ton with an upward trend. There is an expectation of a gradual recovery in the second half of 2024 as economic pressures will start to ease. This will support the demand for MEG products. For PTA (Purified Terephthalic Acid) products, the Company anticipates that the product spread for PTA will gradually improve in 2024 as various economic activities worldwide, including trading and tourism, return to more normal levels.

#### Polymers & Chemicals Business unit

The Company anticipates that the average Polyethylene price in 2024 is expected to be 1,080-1,130 USD/ton, with a slight increase from 2024. The demand for plastic resins is expected to be supported by economic stimulus package and recovery measures implemented by countries worldwide. However, there are factors that may exert pressure, such as economic setbacks and global central bank policies to manage inflation rates. Additionally, there is still some uncertainty related to geopolitical factors in the European and Middle East region. In terms of suppliers, the Company anticipates that there will be additional capacities coming from countries such as China, India, and the United States. The Company expects the Polyethylene plants utilization rate to be around 104% in 2024.

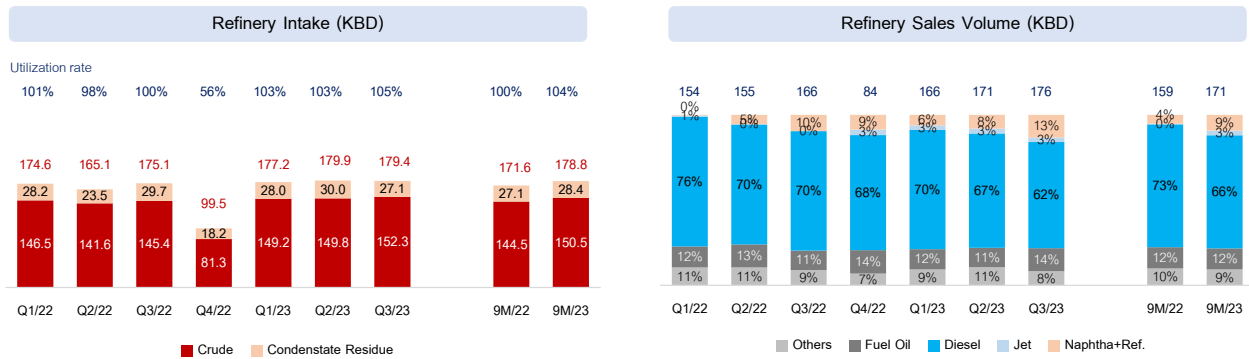
#### Performance Chemicals Business unit

The economic slowdown is expected to continue to have a prolonged impact on the demand for industrial Coating Resin products. However, it is anticipated that the growth in demand for products in this business unit will outpace the overall GDP growth. This is due to several factors that underscore the importance of quality control and surface protection in various industries that utilize coating resins, particularly in industries such as automotive.

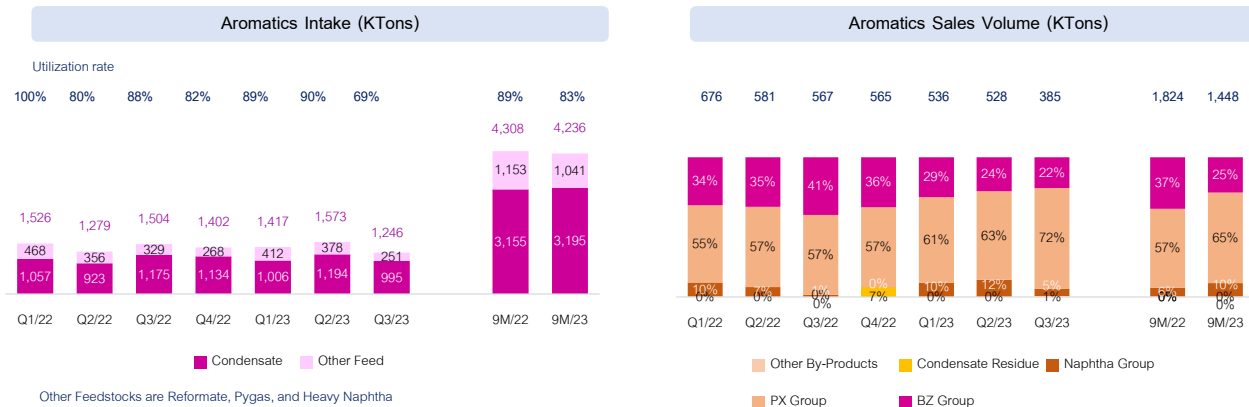
## 7. Appendix

### 7.1 Production and Sales

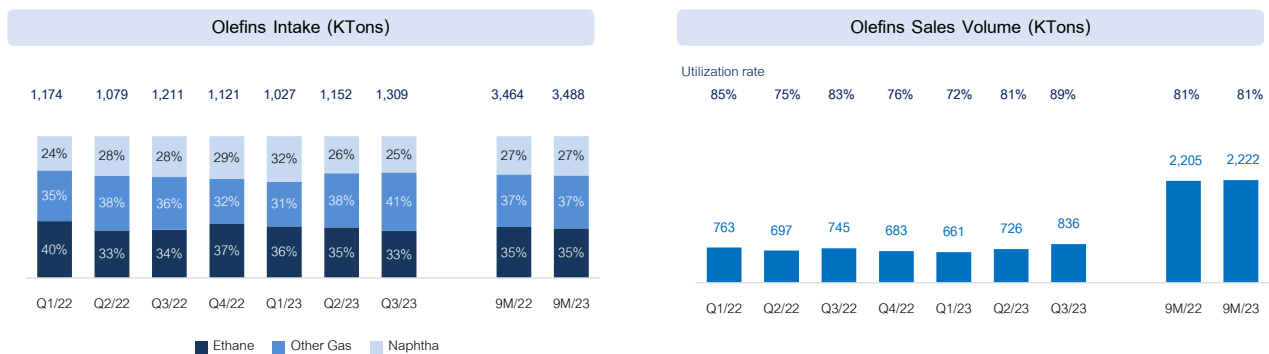
Graph 1: Refinery Intake and Sales Volume



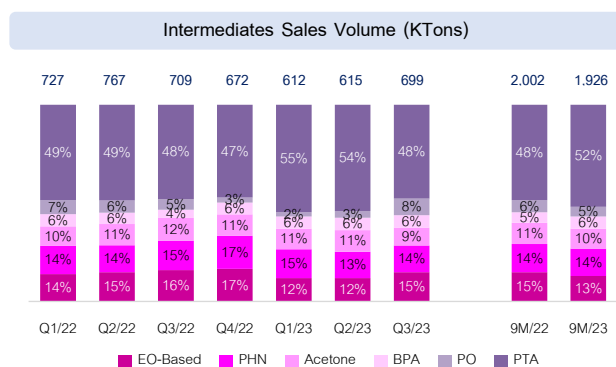
Graph 2: Aromatics Intake and Sales Volume (BTX)



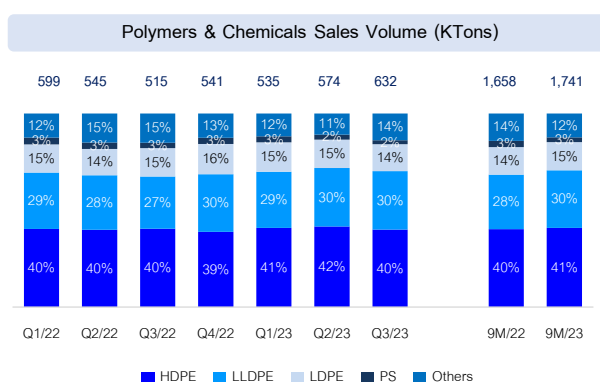
Graph 3: Olefins Intake and Olefins and Derivatives Sales Volume



Graph 4: Intermediates products sales Volume



Graph 5: Polymers & Chemicals products sales Volume



Graph 6: Utilization rate

Utilization rate	Q1/22	Q2/22	Q3/22	Q4/22	Q1/23	Q2/23	Q3/23	9M/22	9M/23
<b>Upstream</b>									
- Refinery	101%	98%	100%	56%	103%	103%	105%	100%	104%
- Aromatics	100%	80%	88%	82%	89%	90%	69%	89%	83%
- Olefins	85%	75%	83%	76%	72%	81%	89%	81%	81%
<b>Intermediates</b>									
- MEG	66%	88%	84%	79%	13%	4%	90%	79%	36%
- Phenol	119%	118%	116%	107%	104%	98%	102%	118%	102%
- BPA	119%	112%	71%	107%	98%	103%	103%	100%	102%
- PO	104%	81%	69%	22%	26%	46%	106%	84%	60%
<b>Polymers &amp; Chemicals</b>									
HDPE	111%	102%	95%	92%	106%	110%	110%	103%	109%
LLDPE	92%	80%	97%	88%	93%	93%	105%	90%	97%
LDPE	128%	85%	128%	121%	96%	119%	115%	114%	110%
Total PE	106%	90%	101%	95%	99%	104%	109%	99%	104%

## 7.2 Detail of Adjusted EBITDA by Business Unit

Adjusted EBITDA <sup>1</sup> Margin by Business Unit	Q3/2022 <sup>2</sup>	Q2/2023	Q3/2023	YoY	QoQ	9M/2022 <sup>2</sup>	9M/2023	YoY
				% +/-	% +/-			% +/-
<b>Adjusted EBITDA (Million Baht)</b>								
Upstream	3,559	3,835	7,349	106%	92%	19,958	17,817	22,826
Refinery	4,958	2,581	6,463	30%	150%	18,596	13,943	-25%
Aromatics	(8)	1,291	1,113	>200%	-14%	-441	4,845	>200%
Olefins	(1,391)	(37)	(227)	84%	<-200%	1,803	-972	-154%
Intermediates	707	189	237	-66%	25%	4,953	-551	-111%
Polymers & Chemicals	2,769	780	2,513	-9%	>200%	7,527	4,997	-34%
Bio & Circularity	238	119	100	-58%	-17%	1,575	488	-69%
Performance Chemicals	2,334	1,599	1,964	-16%	23%	8,426	5,223	-38%
Service and Others	770	312	143	-81%	-54%	1,460	698	-52%
<b>Total</b>	<b>10,378</b>	<b>6,835</b>	<b>12,307</b>	<b>19%</b>	<b>80%</b>	<b>43,900</b>	<b>28,672</b>	<b>-35%</b>
<b>Adjusted EBITDA margin (%)</b>								
Upstream	4	5	8	4	3	7	7	-
Intermediates	3	1	1	(2)	-	7	(1)	(8)
Polymers & Chemicals	10	3	10	-	7	9	7	(2)
Bio & Circularity	5	3	3	(2)	-	9	4	(5)
Performance Chemicals	8	7	8	-	1	9	7	(2)
<b>Average</b>	<b>6</b>	<b>5</b>	<b>8</b>	<b>2</b>	<b>3</b>	<b>8</b>	<b>6</b>	<b>(2)</b>

Note:

1) Adjusted EBITDA refers to EBITDA excluding Stock gain/(loss), NRV, Gain/(loss) from commodity hedging, and Extra item

2) There was a restatement of financial statement for the period of three months and nine months ended September 30, 2022 since the measurements of net assets acquired from acquisition of Allnex Holding GmbH were completed by an independent appraiser in the fourth quarter of the year 2022. The Company has adjusted the fair values of assets and liabilities acquired to reflect the final fair value determination in accordance with the accounting adjustment condition for business acquisition. The adjustment has no effect to the financial statement for the period of twelve months of fiscal year 2022 as previously reported.

### 7.3 Planned Maintenance Shutdown Schedule 2024

Plant		2024											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
OLE	Cracker									19	OLE2/2		
	Oleflex												
POL	HDPE									15	HDPE2		
	LDPE							24					
	LLDPE I					34							
	LLDPE II												
	PS										33		
EOB	TOCGC			49									
	EA			55									
PHN	Phenol I												
	Phenol II												
	BPA					30							
REF	Refinery												
ARO1	Aromatics I												
ARO2	Aromatics II												
GCO	PO												