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GC บริษัทที่ยืนระดับโลก
ด้วยคะแนน Top1%
สูงสุดในกลุ่มเคมีภัณฑ์
จาก S&P Global

GC Chemistry for Better Living



SET Digital Roadshow FY2024

4 March 2025

Disclaimer

This presentation includes forward-looking statements that are subject to risks and uncertainties, including those pertaining to the anticipated benefits to be realized from the proposals described herein. This presentation contains a number of forward-looking statements including, in particular, statements about future events, future financial performance, plans, strategies, expectations, prospects, competitive environment, regulation and supply and demand.

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The global recognized sustainable company



The 1st company in
Thailand recognized in

LEAD LEVEL

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The only company in chemicals sector ranked

▶ 2019-2024: **No.1** for 6 consecutive years
and Top 1% S&P Global ESG Scores

The 1st and only Thai-own conglomerate to achieve

▶ 2022-2024: **A LIST Water Security for 5 consecutive years**

The top 5 % of companies assessed by EcoVadis awarded

▶ 2024: **Gold** Sustainability Medal



(ESG Rating BBB)



FTSE4Good
(Top 5)



SUSTAINALYTICS

Top 4th percentile
In Chemical Industry
(Low Risk)



SET Sustainability Awards of Honor
7 consecutive years



SET ESG Ratings AAA
Thailand Sustainability Investment
10 consecutive years

Agenda

1

Business Overview

2

Strategic execution

3

Market outlook



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Market Outlook



Leading Integrated Chemical Player with Global Reach



14
MTA

Petrochemical
Capacity



49

Local Sites

43

Global
Operation Sites

24

JV companies

Competitiveness

1st **Thailand**
Largest Ethane
Cracker & Petroleum
Refining Capacity

#1 **FOR 6 CONSECUTIVE YEARS**
The only Thai company in chemicals sector

11 **CONSECUTIVE YEARS**

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A LIST: WATER SECURITY



Rating BBB

MSCI

**Diversification of
performance
chemicals
portfolio** with allnex
acquisition



Refining capacity of 280 KBD / Petrochemical Production Capacity of 14 MTA

	Upstream	Intermediates	Polymers & Chemicals	Bio & Circularity	Performance Chemicals
Products	 <p>Diesel , LSFO PX , BZ Olefins</p>	 <p>EO , EG Phenol , Acetone , BPA PTA PO</p>	 <p>PE , PP , PS , PET , PVC Compound Ethanalamine Polyols</p>	 <p>Oleochemicals Bioplastics Post Consumer Recycled (PCR)</p>	 <p><u>Coating & Additives</u></p> <ul style="list-style-type: none"> ▪ Liquid Resins & Additives (LRA) ▪ Power Coating Resins (PCR) ▪ Radcured Resins (RAD) ▪ Crosslinkers (XLR) ▪ IPDI, HDI, HDI Derivatives <p><u>Engineering Plastic</u></p> <ul style="list-style-type: none"> ▪ PA9T, HSBC
End used					

To be a Leading Global Chemical Company for Better Living

Agenda

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Market Outlook



GC's priorities is assuring short-term targets, while keeping pace on the long-terms goals

Portfolio transformation

Short-term

- Progress on Vencorex and PTTAC
- **To realize tangible benefits in 2025** (THB 4.6 bn NI uplift)

Long-term

- **Ensure long-term competitiveness of portfolio** and evaluate non-performing assets

Competitiveness

Short-term

- **Concluded ethane price adjustment with PTT**, maintained Olefins chain EBITDA margins at 7% in 2024
- **Ethane flow expected to increase 20%** in 2025

Long-term

- **Ethane import** marginal load to increase Ethane volume intake
- **Ensure ethane feedstock security** in long term

Enhancing HVB and Low carbon

Short-term

- **Allnex:** Drive performance by strategic growth and optimization programs
- **SAF:** 1st bio-refinery in Thailand
- **Natureworks Plant 2:** Expected COD in Q4/2025

Long-term

- **MTP Specialty hub**
 1. Leverage MTP's infrastructure to attract partnerships for specialty cluster
 2. Expand allnex SEA business and utilize allnex as part of MTP Specialty hub
- **Unleash Allnex full potential**

Efficiency and Cost optimization

Short-term

- **2025 Aggregate performance enhancements:** THB 4.5 bn
- **2025 Capex savings target:** THB 4 bn
- Secure liquidity with revolving bank facility

Long-term

- **Holistic optimization** target set and developing initiatives: Target of 300 MUSD by 2030
- **Asset-light strategy**
- **Deleveraging plan**



GC's resiliency through downcycle driven by our competitive advantage



Refinery

- **Complex refinery** (upgrading units and quality improvement units for max. production value)
- **Feedstock provider for petrochemical** through integration with petrochemical
- **1st bio-refinery in Thailand** with SAF production started in Jan'25

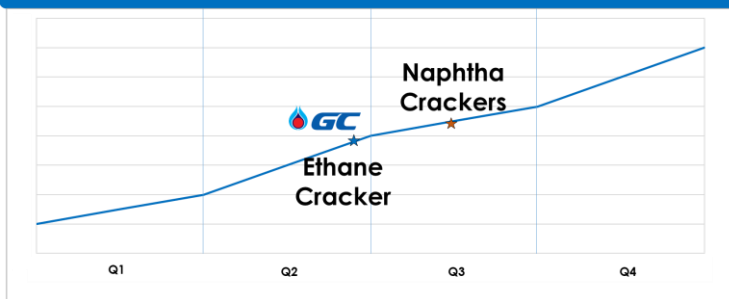
Aromatics

- **Highly integrated** structure with refinery and within the petrochemical complex
- **Downstream integrated outlet** with Phenol and PTA/PET chain

Olefins

Cost curve

Base : Global Ethylene Cash Cost 2024



Gas-based feedstock position GC above other crackers in the region

PE

Cost competitiveness driven by ethane feedstock and market-focused products

MEG

Integrated outlet for Olefins chain providing optimization flexibility

PVC

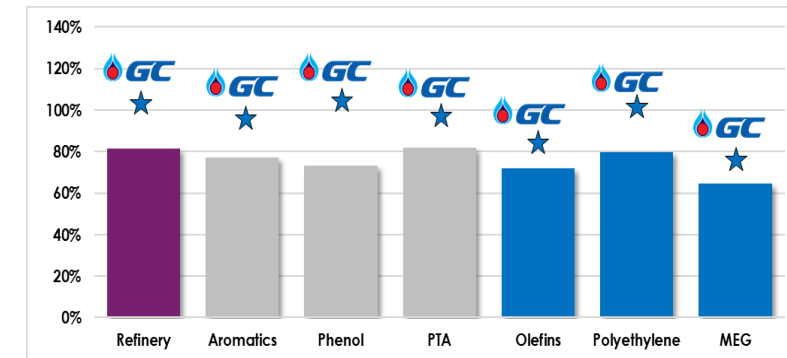
AVT's expansion to COD in 2025, expanding market share in CLMVT driven by infrastructure growth

PP

HMC's leading position as specialty PP producer

GC's operating rate above industry across the value chain (2024)

★ GC's operating rate



Global industry operating rate

- Refinery
- Aromatics chain
- Olefins chain

Petrochemical

1

Portfolio Transformation

Healthy Portfolio

- Classification
- Carving & Enhancement
- Strategic Partnership Encompass

2

Competitiveness Reinforcement

Holistic Optimization

- Global Feedstock Optimization & Group Collaboration Enhancement
- Market-focused Business Transformation
- Operational Excellence, Advanced & Digital Technology

3

Enhance position in High Value & Low Carbon Business

MTP Specialty Hub



- Transform MTP into Southeast Asia Specialty Hub

4

Accelerate allnex to Finish Line and Grow Further

High Value Business

- allnex Full Potential



5

Balance Business with Sustainability

Sustainable Portfolio

- Seeding Bio & Circularity Business for Future
- Decarbonization Scenarios



6

Enablers for Transformation



Innovation & CVC



Organization Transformation



Value-based Financial Management



- **2024 key progresses on** Vencorex and PTT Asahi restructuring, all provisions have been booked in 2024
- **Tangible benefits expected in 2025 through uplift to EBITDA of THB 2.1 bn and NI of THB 4.6 bn** from discontinuing loss contribution from both companies (YoY uplift from 2024 loss net of 2025 impact)
- In light of market conditions, portfolio transformation will continue be **part of GC's strategy going forward**

Vencorex

2024

- 10 Sep: Reorganization accepted by French court

2024:
Impairment: THB 7.9 bn
Provisions: THB 2.1 bn

H1/2025

- **Reorganization process expected to be completed by Q1/2025** to provide time for plant cleaning to ensure safety of unsold assets
- **Business continues to operate until completion of reorganization** with external HDI monomer sourcing
- **US and TH assets sales currently in final stage of bidders selection and expected closing by H1/2025**

PTT Asahi

2024-2025

- **Business contract termination and target completion by Q1/2025**

2024:
Impairment: THB 8.9 bn
Provisions: THB 2.8 bn

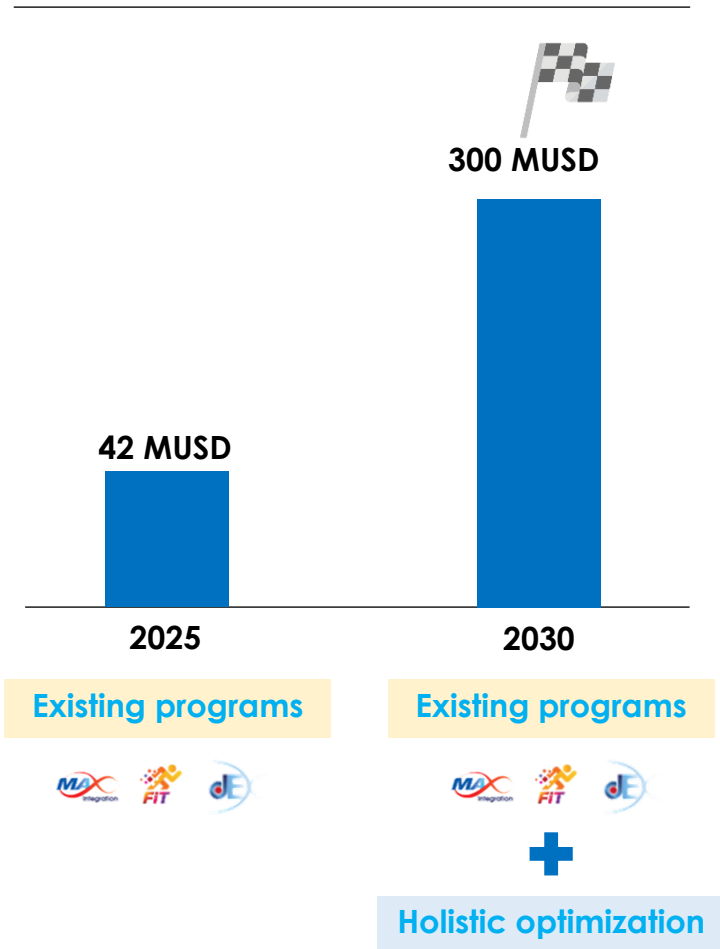
2025-2028

- **Isolation and deconstruction Process**
- **Completion of Business Withdrawal Process: Target by 2028**

Holistic Optimization to Reinforce Competitiveness

Combining existing business improvement programs with holistic optimization, we aim to improve EBITDA by 300 MUSD in 2030

EBITDA Uplift benefit



“Holistic optimization” in actions

Enhanced global feedstock Optimization

- Crude sourcing with PTT group
- Olefins feedstock security (US Ethane import): COD in 2029

Add Values & Solution for Domestic & Strategic Market Customers

- Accelerate new application product development (NAPD)
 - Level up technical service
- Defend domestic and strategic market

Enhanced Supply Chain & Operation Optimization

- Adopt technology to optimize plant condition across MTP (Plant-Wide Optimization)
- Optimize logistics management cost

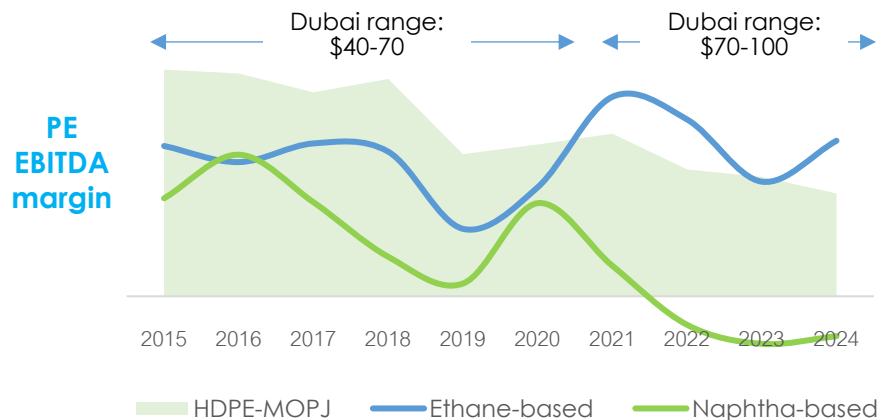
Enhance Efficiency & Performance and Roll out for allnex's full potential

- Roll out OpEx and best practices
- Enhance GC HVB from allnex knowledge and practice

US Ethane Landscape

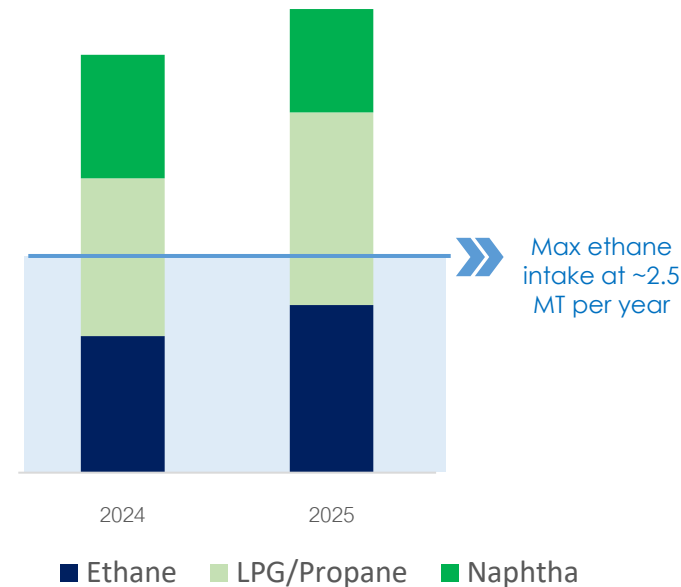
- **US is a major ethane exporter** to destinations in China, India, and Europe (total existing and potential export volume of **15 MTA**)
- **US has a sophisticated natural gas infrastructure with plans for expanding exporting facilities**
- **GC established a base in US since 2018**, and started exploring feedstock sourcing from US

Ethane is more competitive than Naphtha throughout all scenarios



GC's advantage as ethane-based producer

GC's Feedstock intake



Ethane-based

OLE 3

Gas-based with
ethane, propane,
and LPG flexibility

OLE 1

OLE 2/2

Liquid-based with
naphtha, propane
and LPG flexibility

OLE 2/1

OLE 4

- Feedstock flexibility between ethane and liquid
- Olefins total capacity 3,729 KT
- Readily capable for additional ethane intake with no modification

- **Additional reliable ethane availability will provide GC's added feedstock flexibility and competitiveness**



- **Ethane import to GC as marginal feedstock** on top to our existing feedstock options, without modification requirements to our crackers
- **Collaboration with partners minimizes investment**
 - **Capex:** 133 MUSD (included Initial working capital of 52 MUSD mainly from cost of the initial ethane shipments)
 - **Expected benefits:** ~40 MUSD/year
 - **COD** in 2029
 - **ROU:** THB 34 - 39 bn related to lease agreements to be recognized after COD

Seamless collaboration between GC and key partners utilizing unique expertise of each party



Ethane supply

- Long-term 15-year supply agreement signed with Enterprise Products Partners
- Ethane import volume: **400 KTA**
- Ethane price linked to Mont Belvieu Ethane price



Transportation

- 15-year VLECs Agreement with PTT, who will provide expertise and global networking for ship chartering
- Chartered vessel from MISC Berhad dedicated to import of ethane to GC



Terminal & Facilities

- Partnership via long-term 15-year lease agreement with Thai Tank Terminal (GC's JV company) for tank and terminal facilities to support import of ethane

Build MTP to become a Specialty Hub focusing on HVB and Low carbon business



Map Ta Phut Specialty Hub

As a magnet to attract various partners



Fully integrated infrastructure in Map Tha Phut

Specialty expansion



Polyurethane Bio-based Polyester Others
with various partners



MOU Signing in 2024 with Toray **'TORAY'**
Upscaling Bio-muconic Acid & its Derivatives

allnex SEA HUB in Rayong

Planned capacity expansion of existing manufacturing facility

- **SEA Hub phase 1 under study, expected to FID in 2025 - Q1'26**
- Focusing on waterborne among other technologies including special coating resins



2024 highlights

+4%

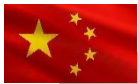
Sales volume
growth YoY

29 €M

Improvement
actions

272 €M

Adj. EBITDA
(10% YoY)



China Hub (Dushan Port), Zhejiang, China

- 2024 China sales volume increase 15% YoY outpacing China growth
- Aims to complete phase 2 and get to full scale by 2030



Mahad, India

- Commenced construction of Mahad expansion phase 1, COD in Q4/2025
- Sales volume has been increasing 8% YoY

2025 Developments

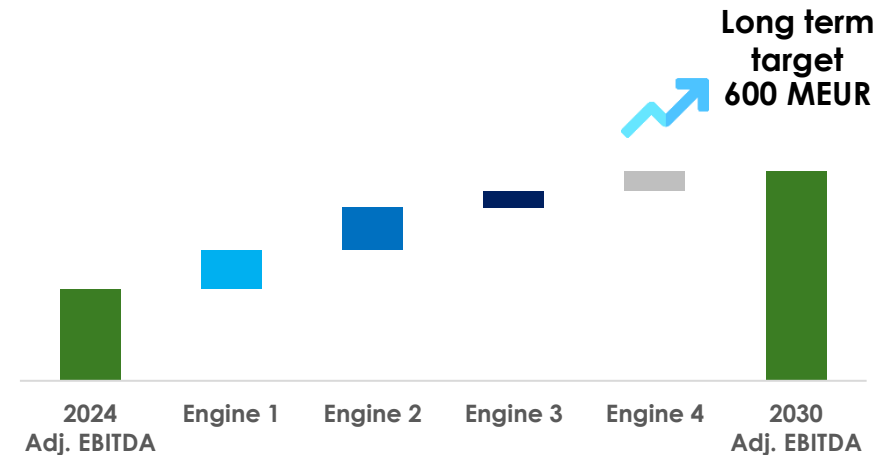
Mid-single digit

Sales volume growth
(YoY %)

>30 €M

Incremental
improvement actions

Long-term EBITDA uplift from 4 Engines



GC's support to
enable the 4 engines



4 Engines

Support from GC operation
excellence team

GC innovation collaboration

GC M&A networks to connect
more M&A targets

Engine 1

Profitable growth through
capacity expansion

Engine 2

Operational Excellence

Engine 3

Innovation & Sustainability

Engine 4

Adjacencies and M&A

ESG Recognition in 2024

From both international & national raters

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No.1 in **DJSI chemicals sector** for
6 consecutive years



Gold medal from **EcoVadis Sustainability**



AAA from **SET ESG Rating**
Thailand sustainability investment for 10
consecutive years



Sustainability Award of Honor
from **SET Awards** for 7 consecutive years

Sustainable Finance (SF)

Loan interest rate discount as sustainability KPI achievement

SF KPI Performance: verified 2023 results

✓ **GHG Reduction: 9%**

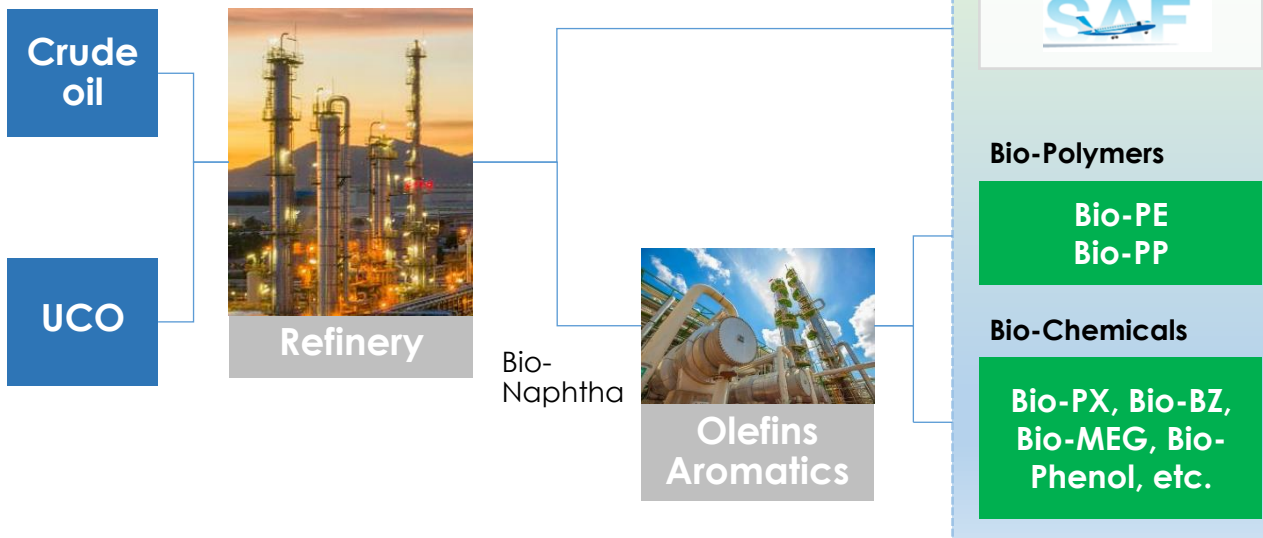
✓ **DJSI Rating: No.1**



Sustainable Aviation Fuel (SAF)

1st Thailand's Biorefinery

✓ **1st Phase: COD** on 15 Jan 2025 (6 MMI/y SAF)



Key objectives in early stage of SAF

- **Driving adoption** of SAF and Bio products by customers
- **Develop the value chain** (raw materials sourcing, products certification, customers adoption)



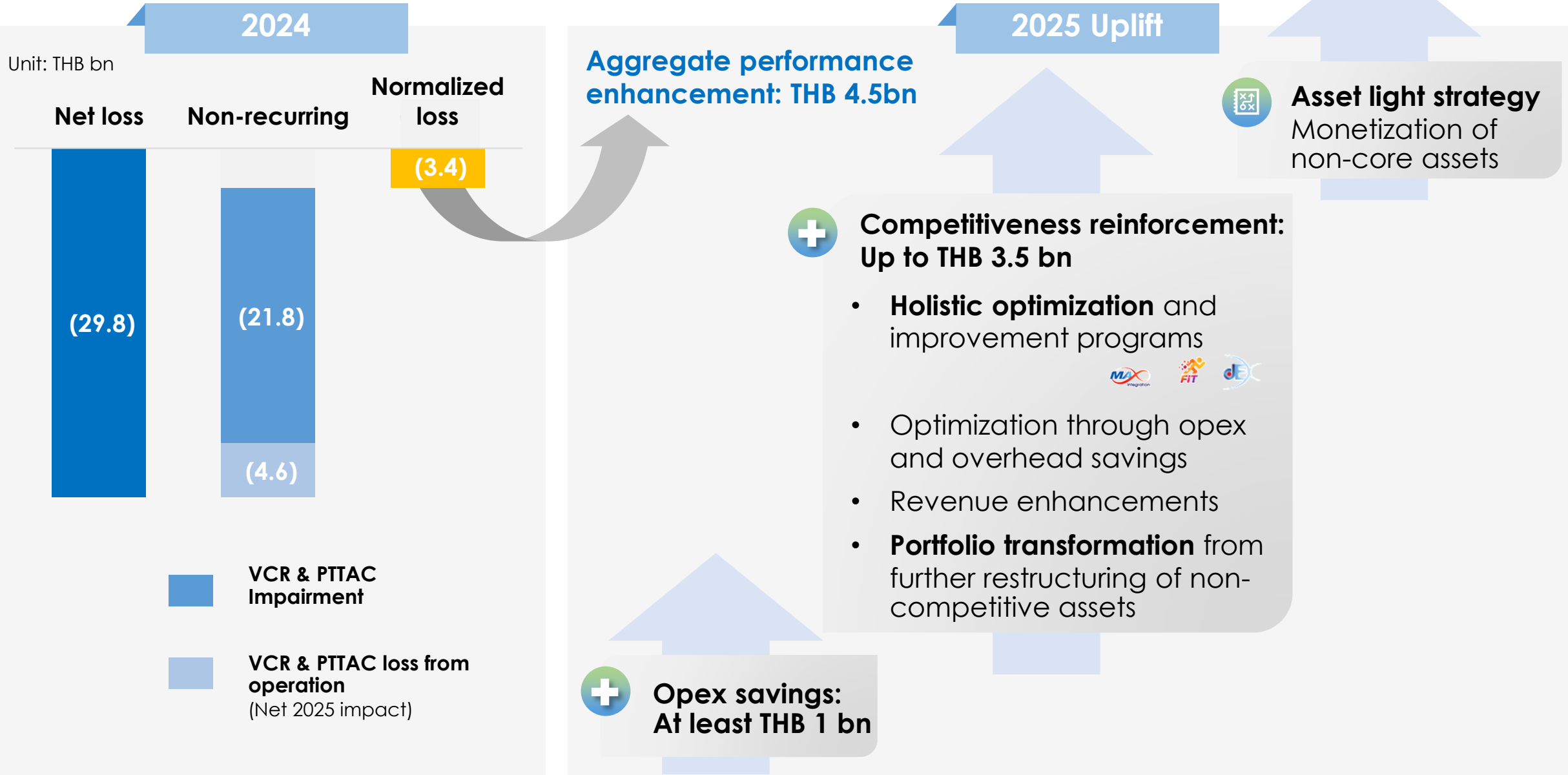
MOU with OR and Thai Airways to drive **SAF utilization** in aviation industry



Plan for potential expansion to 24 MMI/y

* MMI/y: million liters per year

Aggregate performance enhancement targets for improving performance



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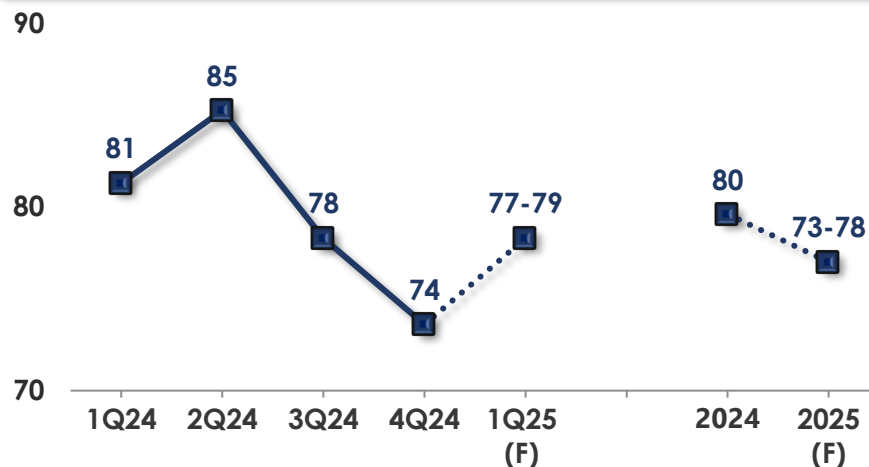
Market Outlook



Increased production and Trump's policies shift dominate Oil movement



Crude Dubai (\$/bbl)



Bullish



More U.S. sanction on Iran and de-escalation of geopolitics tension as Trump focus on both political, and commercial.



China will roll out further stimulus packages to counter economic challenges, maintain GDP target at 5%.

Bearish



More OPEC+ production from unwinding voluntary cuts (2.2 mb/d) likely to occur in Q3'25

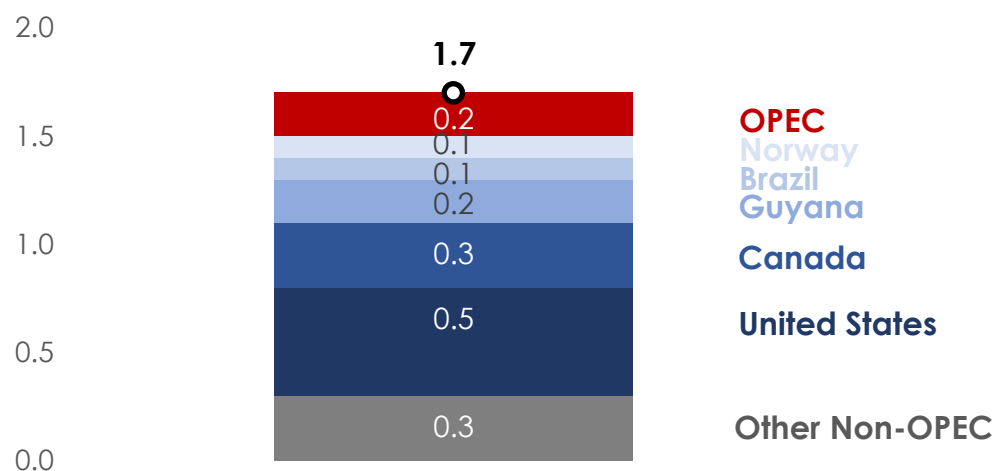


Supply growth outpaces demand growth led by **Non-OPEC supply growth**

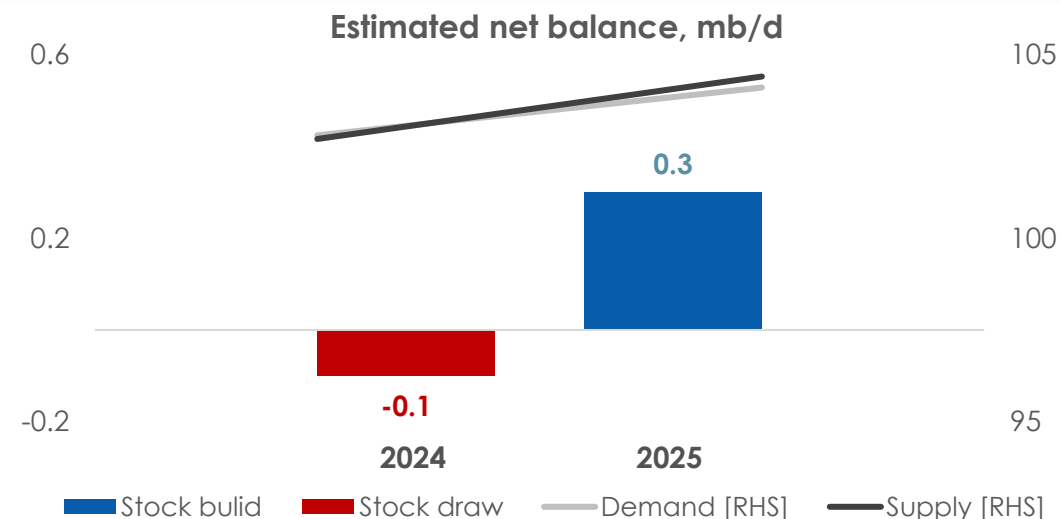


Risk in geometry of global trade under **Trump 2.0**

2025 Supply growth by key countries (mb/d)

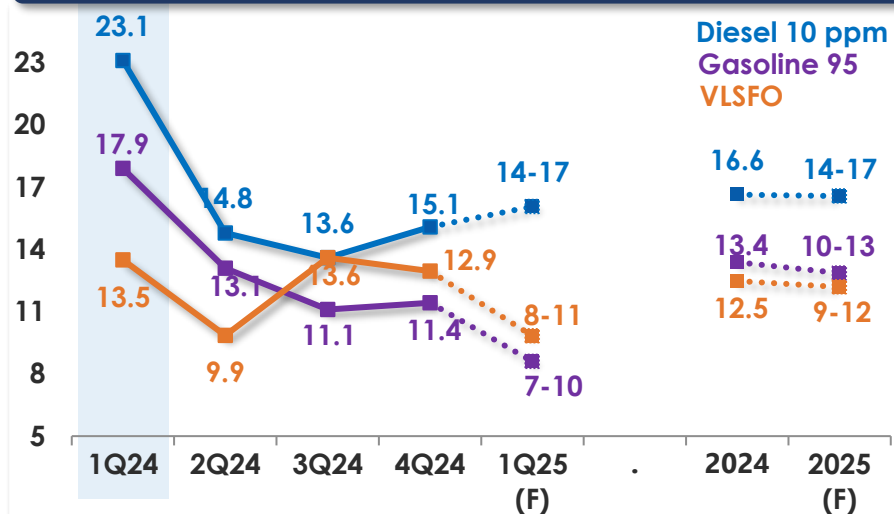


Crude Oil Balance (mb/d)



The limited downside of refinery margins due to further refinery rationalization in 2025

Refinery crack spread (\$/bbl)



Bullish



Increasing of refinery closures in 2025: China independence refinery (-575 KBD), EU (-406 KBD) and U.S. (-216 KBD)



China's stimulus to boost the economy in 2024 and continue into 2025



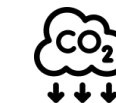
Easing of Red Sea tensions, presents an opportunity for increased Middle Distillates flows from Asia to Europe

Source: EIA (version Feb'25), GC

Bearish



Ramping-up of Nigeria, China and Bahrain refineries (1.3 MBD in total) will add more supply in 2025



Energy transition (EV, bio, LNG, etc.) continues to disrupt fossil fuel demand in 2025, especially China



Weak global economic concerns in 2025 from Trade war escalation

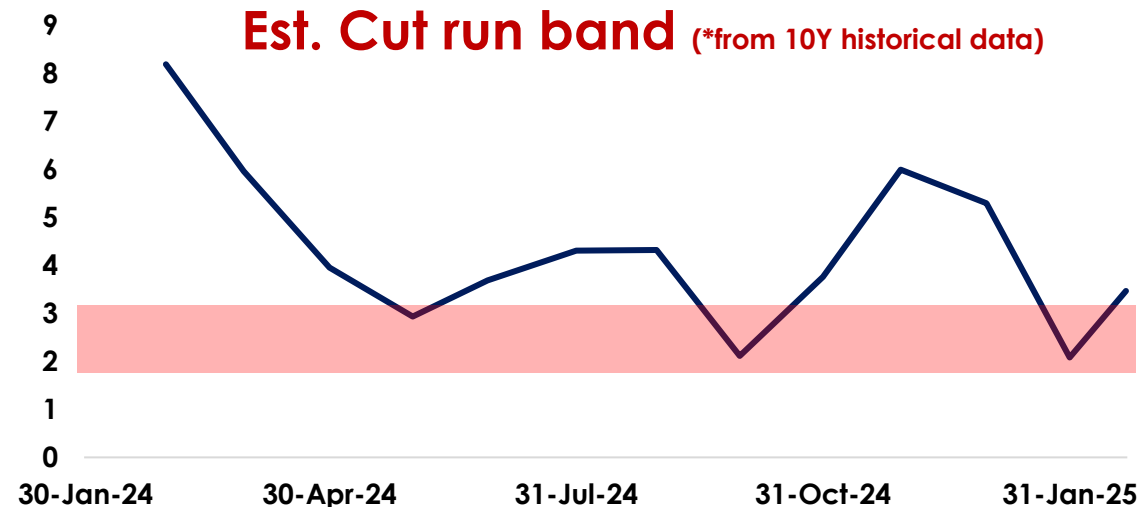
Global refinery closure – likely to pick up pace in 2025F

2024 VS 2025



Weak Singapore GRM (\$/bbl) led to refinery cut run

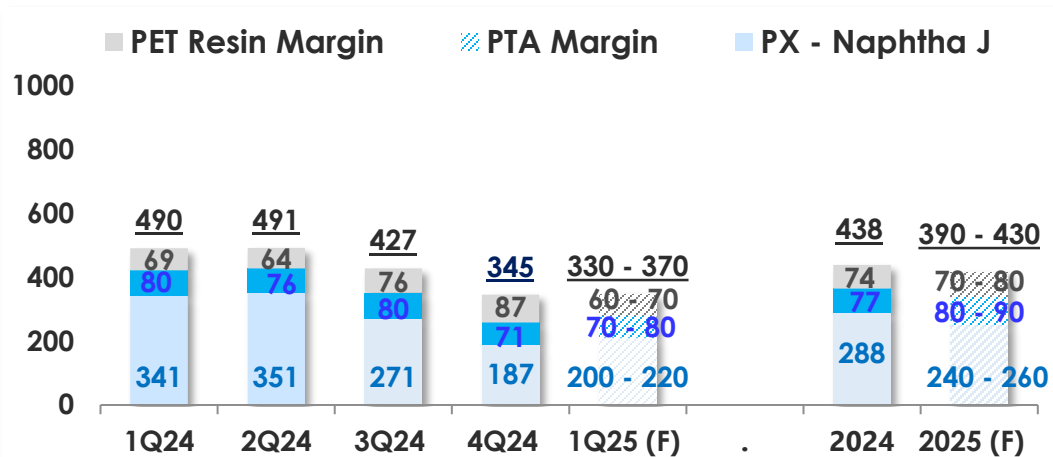
Est. Cut run band (*from 10Y historical data)



Rationalization, control Supply amid less new capacities support PX margins



Paraxylene Chain, \$/T



Bullish



PX Producers in S.Korea, Taiwan, China and Indonesia cut production $\approx$ 10-15% due to economic issues



Expected PTA & PET margins will improve on producers control supply and non-economics plants closed

Bearish



Global economic concerns limit consumer spending pressure PX chain demand and margins in Yr.2024 persist to 2025

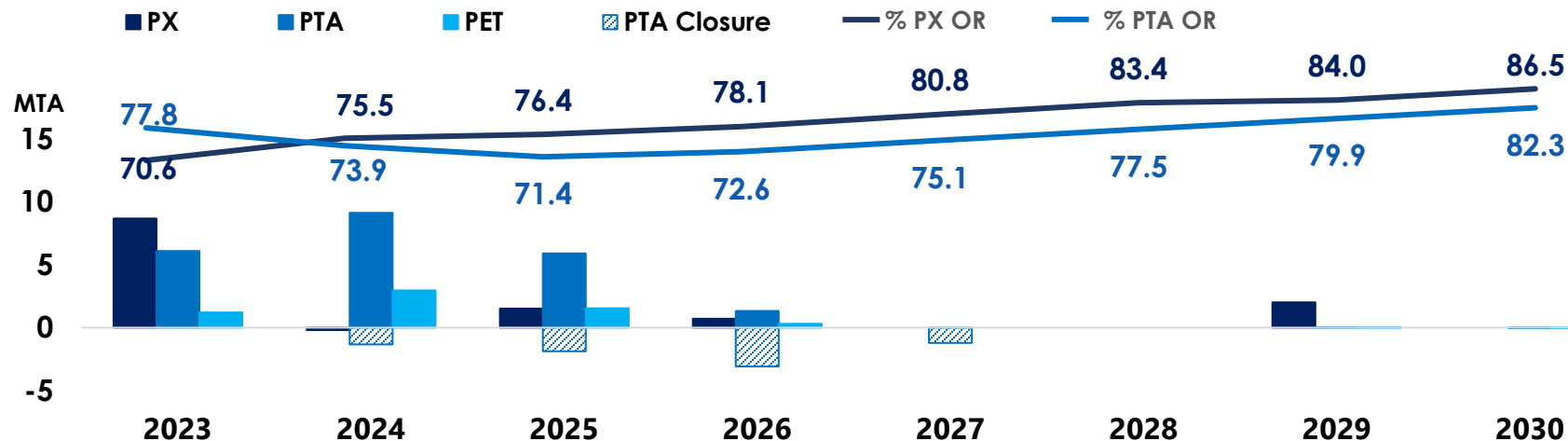


Less Gasoline Cost Push



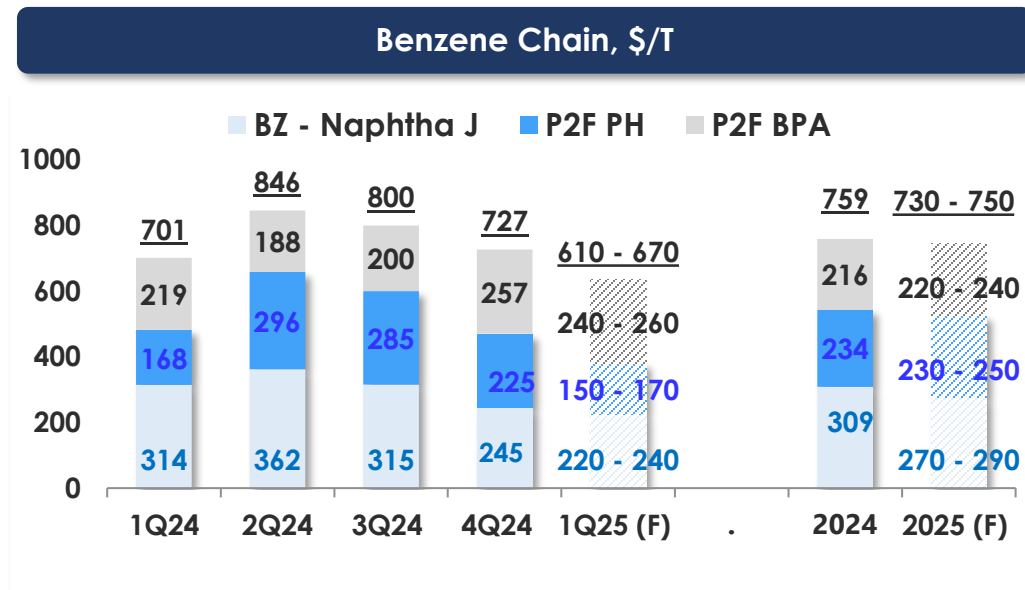
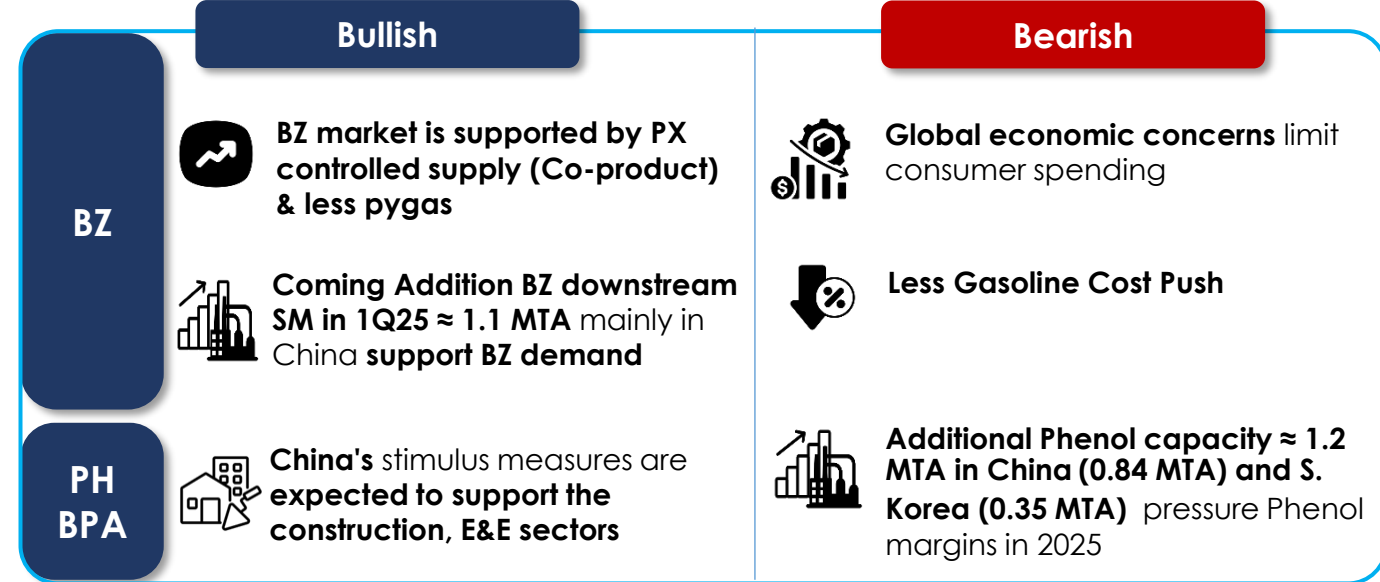
Additional PTA & PET capacities in 2025 $\approx$ 10 MTA (8% of world cap) and 3 MTA (8 % of world cap) respectively pressure PTA, PET margins

Less PX new capacities amid gradually demand recovery support PX margins

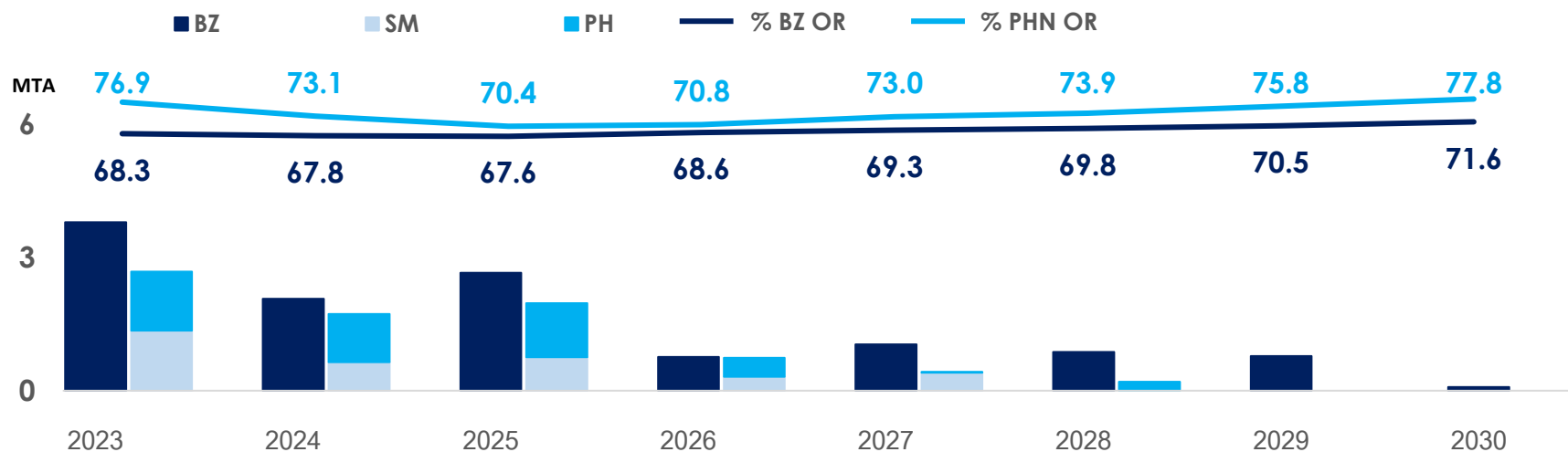


- Additional PX, PTA and PET capacity building will continue until 2026
- Old PTA technology has potentially closed mainly in China market (expected 2 MTA net PX equivalent)

Control supply and new BZ downstream capacities support BZ margins



New Benzene Downstream Capacities Support BZ Margins

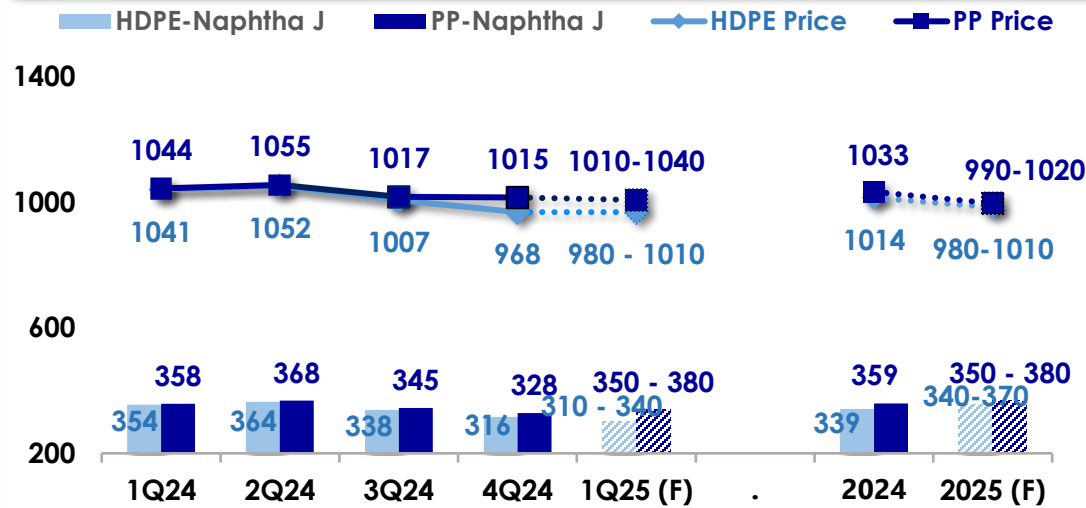


- Additional BZ capacity has increased until 2029 mainly to extraction from pygas route
- Additional PH and SM capacities will continue until 2028 mainly to China Market
- China Stimulus mainly to E&E and EV car support BZ Value Chain demand

New capacities, majorities are in China remains pressure Olefins chain



HDPE & PP, \$/T



PE
&
PP

Bullish



Supply decreased from commercial production cut in **S.Korea, Taiwan, Japan, Malaysia, Vietnam and Philippines** due to extended periods of low margins



More stimulus policies in China are expected to release in 2025 to boost local demand and its economy

Bearish

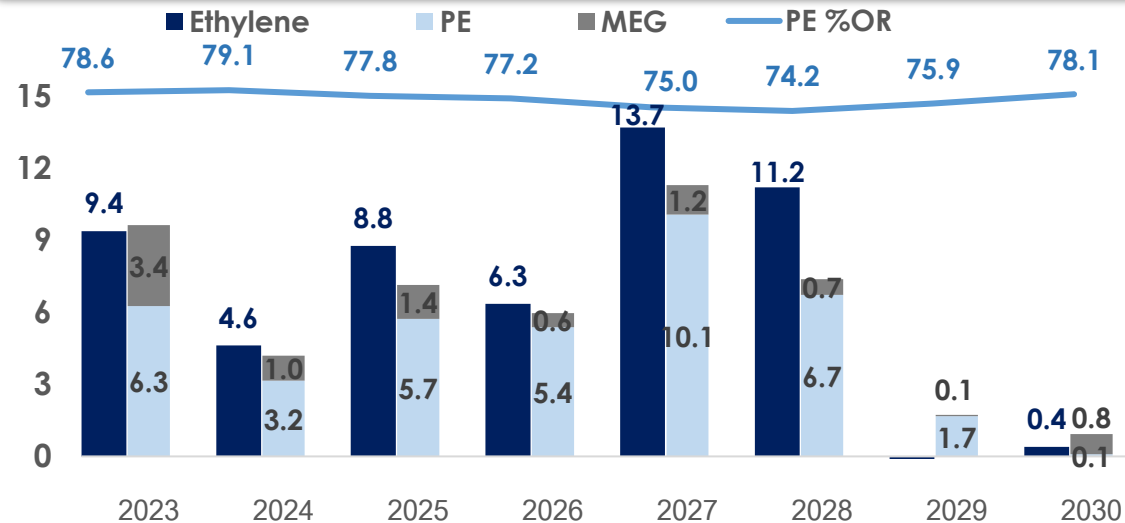


Around 6 MTA of additional PE & PP capacity in 2025 mainly in China could add more pressure to the market

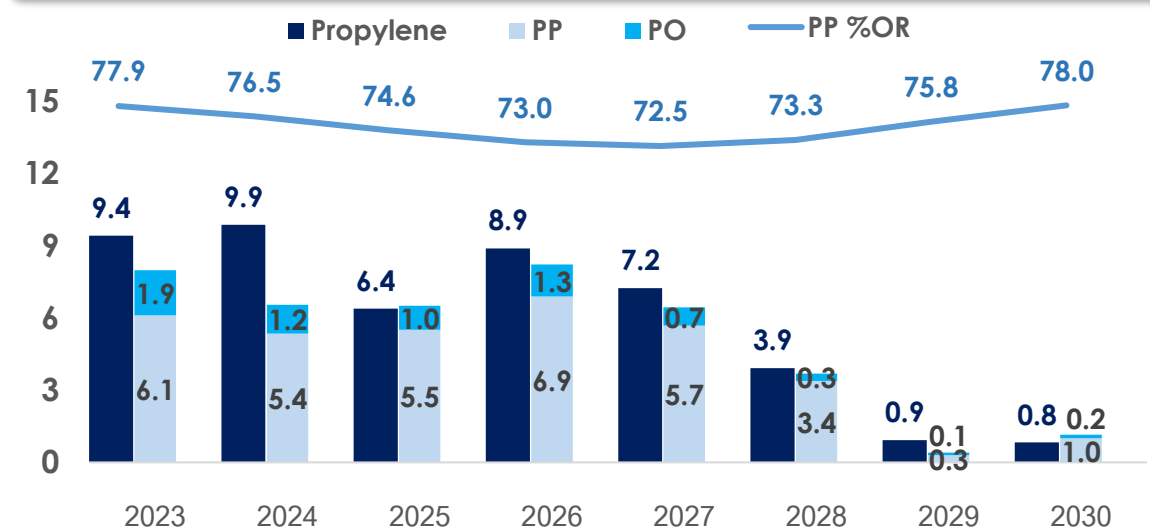


Trump's aggressive tariff policies look likely to cause trade flow change

Ethylene Chain Additional Capacity [MTA]



Propylene Chain Additional Capacity [MTA]



Q&A

Thank You

PTT Global Chemical Public Company Limited
555/1 Energy Complex, Building A, 18th Floor,
Vibhavadi Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900 Thailand
Tel: +66(0) 2265-8400 Fax: +66(0) 2265-8500
www.pttgcgroup.com



Pornsook Limsatit
Paween Chiasakul
Tanuntorn Karunyatorn
Sanjira Chotipintu
Supanan Sethakorn

VP - Corporate Finance & IR
Division Manager – IR
IR Analyst
IR Analyst
IR Analyst

Pornsook.l@pttgcgroup.com
Paween.c@pttgcgroup.com
Tanuntorn.k@pttgcgroup.com
Sanjira.c@pttgcgroup.com
Supanan.S@pttgcgroup.com

T. 662-265-8670
T. 662-265-8665
T. 662-265-8533
T. 662-265-8534

GC Chemistry for Better Living

Appendix

GC's Q4/24 EBITDA significantly declined due to drop in petrochemicals spread and allnex's seasonality, and fully recorded provisions regarding PTAC and VCR

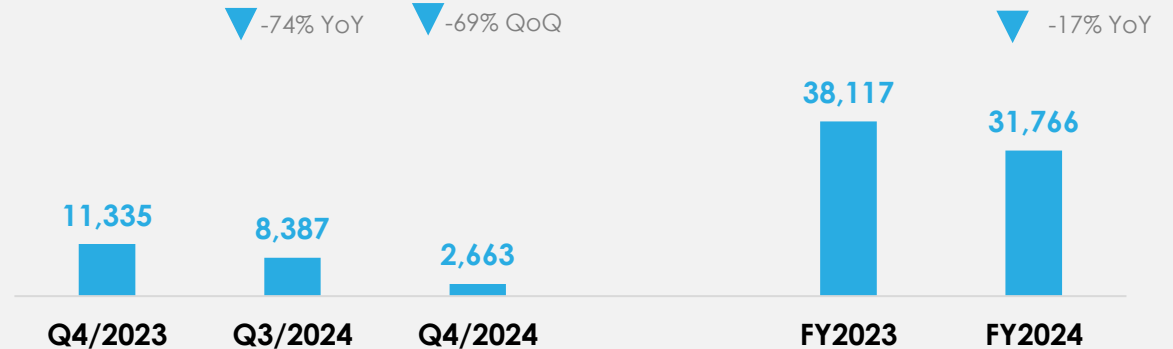
Revenue

Unit: MB



Adjusted EBITDA*

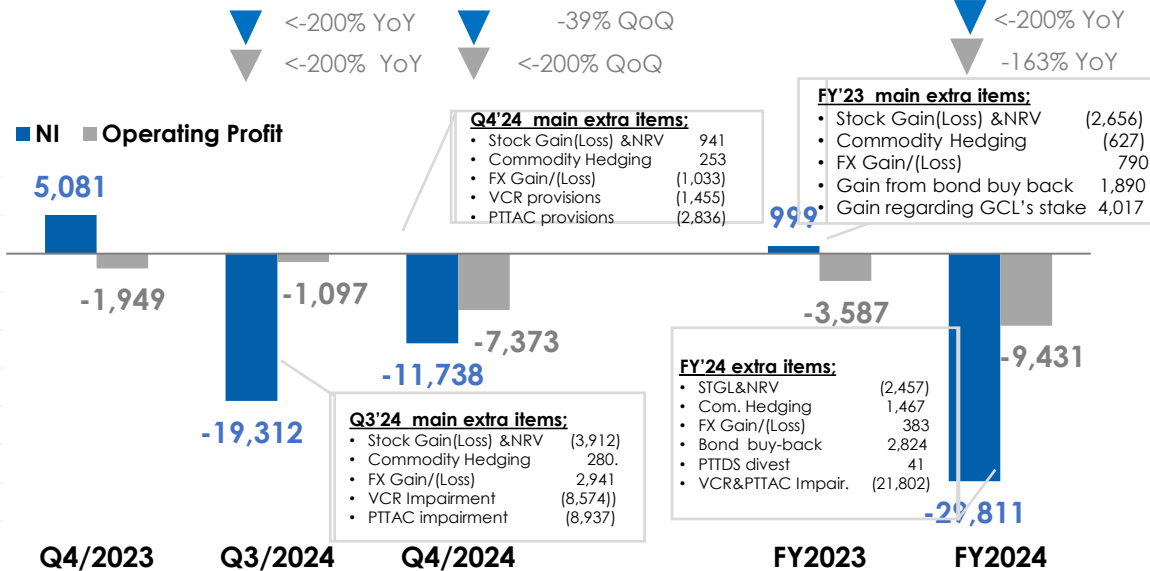
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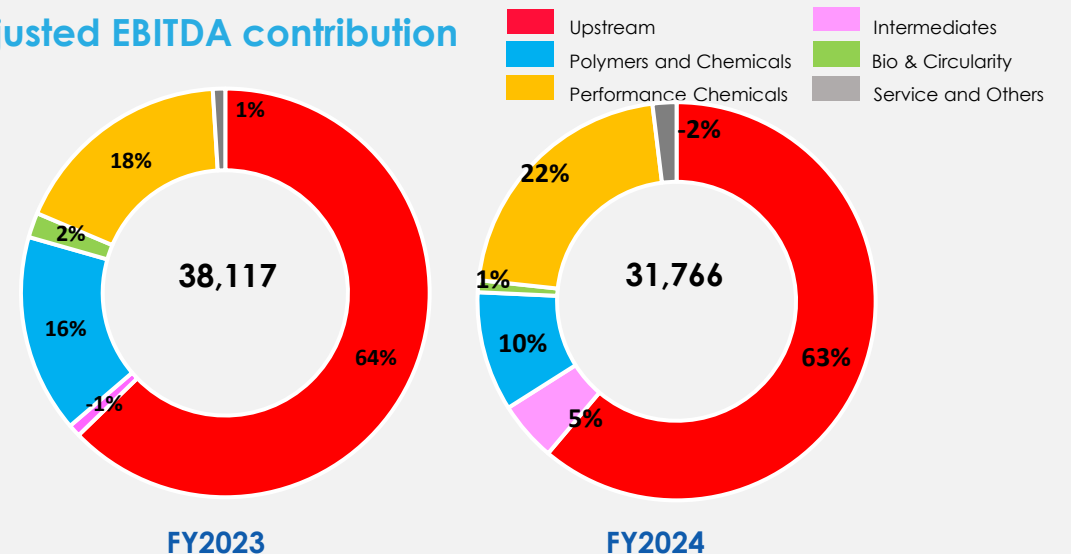
Note: * Adjusted EBITDA refers to EBITDA excluding Stock gain/(loss), NRV, Gain/(loss) from commodity hedging, and Extra item

Operating Profit and NI

Unit: MB



Adjusted EBITDA contribution

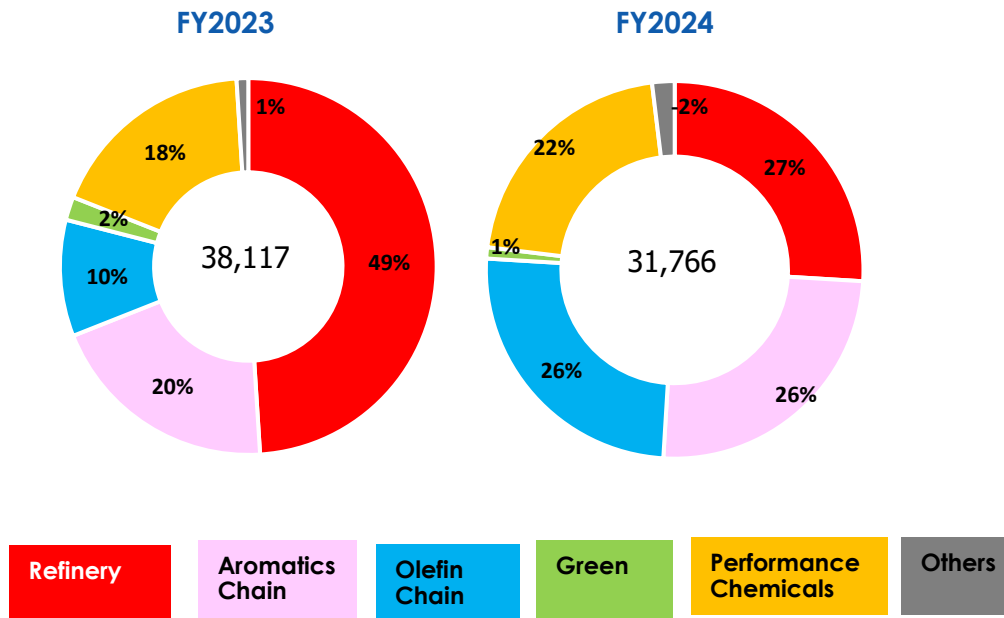


Contribution by market chains



Adjusted EBITDA contribution by market chains

Unit: MB

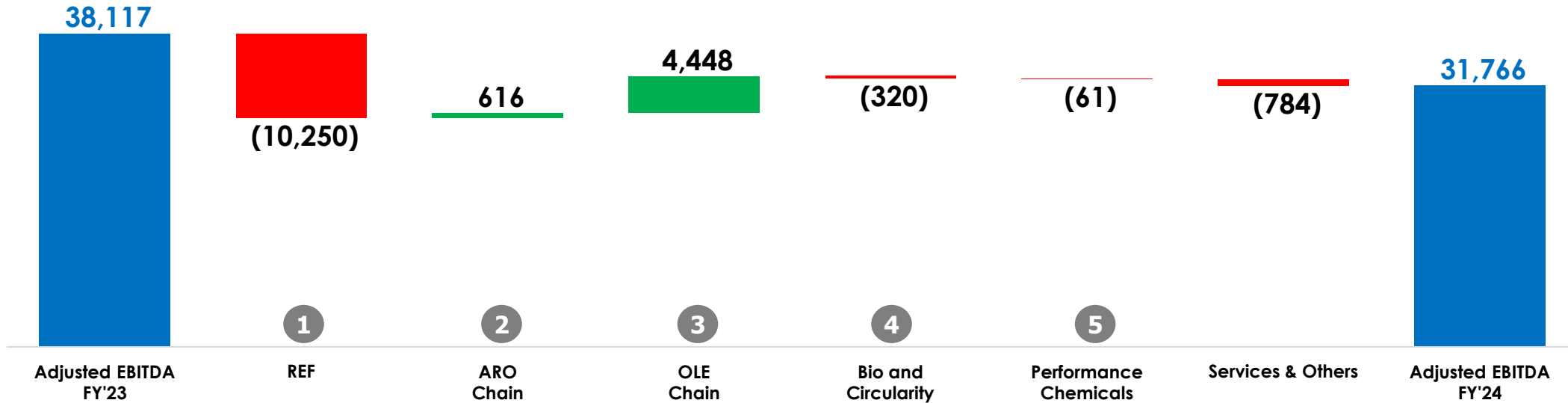


Market Prices/Spread (\$/ton)

		FY23	FY24
Refinery	GRM (\$/bbl)	9.4	4.7
Aromatics Chain	PX Spread	359	304
	BZ Spread	218	324
	Phenol Spread	252	233
	PTA Spread	83	76
Olefin Chain	HDPE	1,044	1,014
	HDPE-Naphtha	394	339
	MEG Spread	18	29

Adjusted EBITDA YE/24 vs YE/23

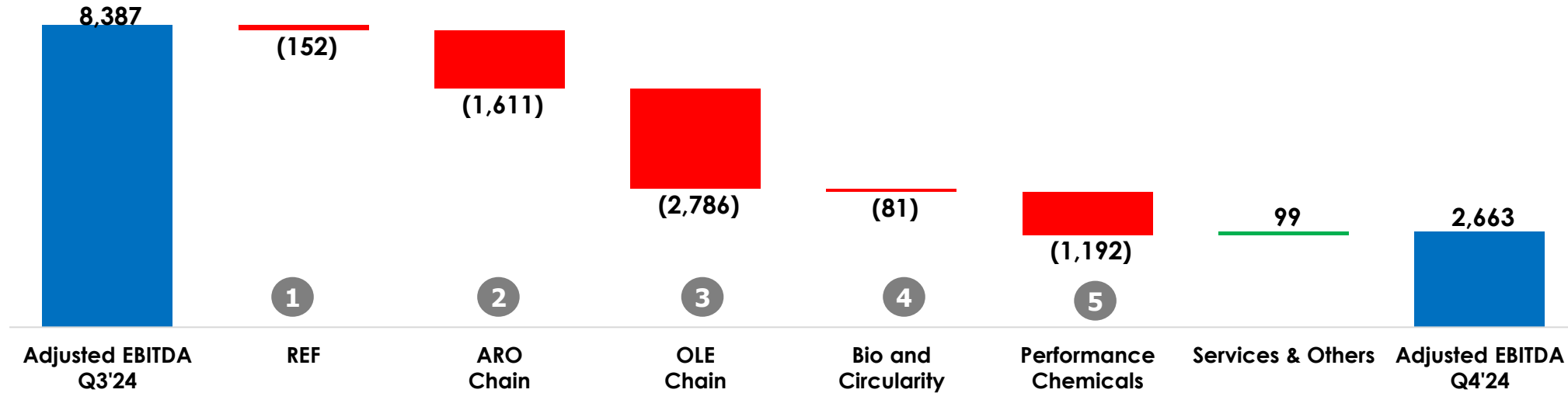
Unit: MB



- | | | | |
|---|-----------------------|----|---|
| 1 | Refinery | ▼▼ | GRM significant dropped from 9.4 \$/BBL in 2023 to 4.7\$/BBL in 2024, as the unusual spread in 2023 was due to the Russia/Ukraine conflict |
| 2 | Aromatics chain | ▲ | 1. Aromatics : BTX P2F decreased from 259\$/ton to 239\$/ton, partly offset with the increase in sales volume
2. Phenol and PTA: Improved by sale volume, partly offset with the lower spread amid the supply addition in Asia |
| 3 | Olefins chain | ▲▲ | 1. VC decrease due to the optimization production and utility price per unit
2. PE over Naphtha spread decreased from 394 \$/ton to 339 \$/ton , party offset by the increase in BD price
Extra items : one time 3% Ethane cost retroactive charge in 2024 and Off-spec sold in 2023 from IDC SW warehouse incident |
| 4 | Bio & Circularity | ▼ | FA spread declined from 434\$/ton in 2023 to 341\$/ton in 2024 as the feedstock price of CPKO increased |
| 5 | Performance Chemicals | ▼ | allnex : strong allnex sales volume growth of 4% with stable margin, mainly driven by APAC (I.e. China and India) and volume recovery in Europe
Vencorex : continued weak sales volume as global demand subdued |

Adjusted EBITDA Q4/24 vs Q3/24

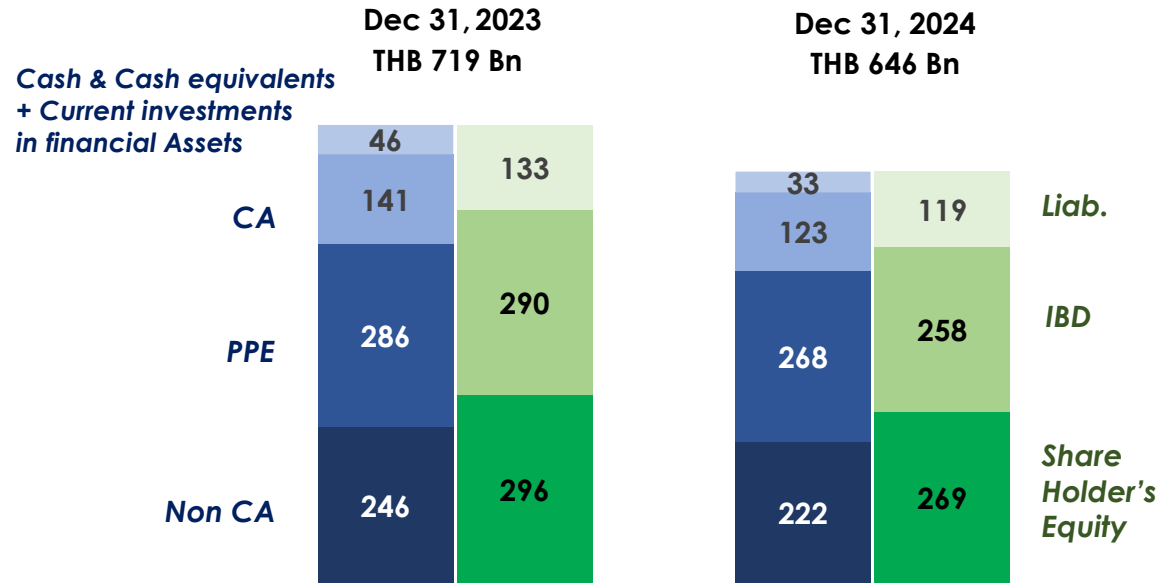
Unit: MB



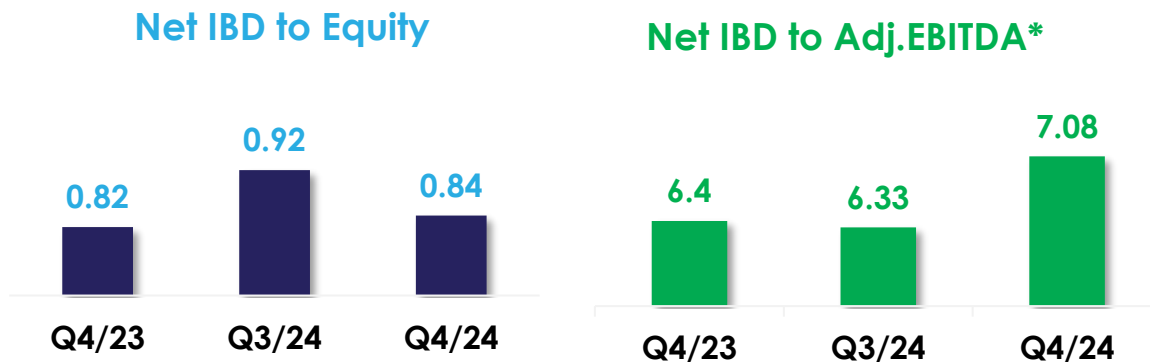
- | | |
|---|--|
| <div style="display: flex; align-items: center;"> <div style="border: 1px solid gray; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin-right: 10px;">1</div> <div> Refinery <div style="display: flex; align-items: center; margin-left: 10px;"> <div style="width: 10px; height: 10px; background-color: blue; margin-right: 5px;"></div> <div style="width: 10px; height: 10px; background-color: blue; margin-right: 5px;"></div> </div> </div> </div> | <p>GRM slightly increased from 3.5 \$/BBL in Q3/24 to 3.7\$/BBL in Q4/24. The utilization rate dropped by 9% as a preventive shutdowns in upgrading unit in Q4/24.</p> |
| <div style="display: flex; align-items: center;"> <div style="border: 1px solid gray; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin-right: 10px;">2</div> <div> Aromatics chain <div style="display: flex; align-items: center; margin-left: 10px;"> <div style="width: 10px; height: 10px; background-color: red; margin-right: 5px;"></div> </div> </div> </div> | <p>1. Aromatics : BTX P2F decreased from 241\$/ton to 186\$/ton, mainly due to the lower PX and Benzene spread
2. Phenol : Lower Phenol spread mainly attributed by the new supply additions</p> |
| <div style="display: flex; align-items: center;"> <div style="border: 1px solid gray; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin-right: 10px;">3</div> <div> Olefins chain <div style="display: flex; align-items: center; margin-left: 10px;"> <div style="width: 10px; height: 10px; background-color: red; margin-right: 5px;"></div> </div> </div> </div> | <p>1. PE price decreased due to the weak demand during the Chinese National holiday and lower PE price premium compared to the previous quarter from lagging effect of downtrend price
2. Olefins had extra items of 3% Ethane cost retroactive charge in Q4/2024 (based on the volume of 2024), partly offset with the higher ethane volume QoQ</p> |
| <div style="display: flex; align-items: center;"> <div style="border: 1px solid gray; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin-right: 10px;">4</div> <div> Bio & Circularity <div style="display: flex; align-items: center; margin-left: 10px;"> <div style="width: 10px; height: 10px; background-color: blue; margin-right: 5px;"></div> <div style="width: 10px; height: 10px; background-color: blue; margin-right: 5px;"></div> </div> </div> </div> | <p>Slowdown in demand for Methyl Ester (ME) ,partly offset with the increase in Fatty Alcohol P2F</p> |
| <div style="display: flex; align-items: center;"> <div style="border: 1px solid gray; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin-right: 10px;">5</div> <div> Performance Chemicals <div style="display: flex; align-items: center; margin-left: 10px;"> <div style="width: 10px; height: 10px; background-color: red; margin-right: 5px;"></div> </div> </div> </div> | <p>allnex : Sale volumes were dropped by 6%, largely driven by the business seasonality
Vencorex : continued weak sales volume as global demand subdued</p> |

Strong Financial Position

Statements of Financial Position

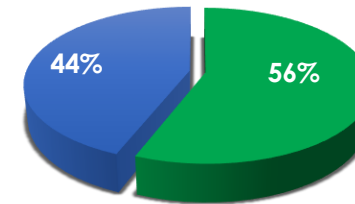


Key financial Ratios



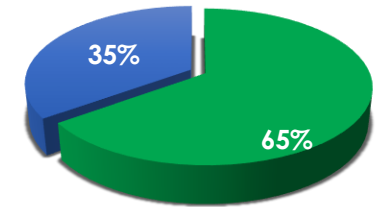
Long Term Debt Portfolio

Interest Breakdown



■ Fixed ■ Float

Currency Breakdown



■ THB ■ USD & Others

Total Long Term Debt THB 229 Bn
As of 31 Dec 24

Avg. Loan Life **5.96 yrs**

Avg. Cost of Debts **3.89 %**

Avg. Cost of Debts (after CCS) **3.82%**

Commit to maintain "Investment-grade Credit Rating"

S&P Global
Ratings

MOODY'S
RATINGS

FitchRatings

International Ratings

BBB
(Stable)

Baa3
(Negative)

BBB
(Stable)

National Ratings

AA (TH)
(Stable)

Initiatives support GC's free cash flows for deleveraging and liquidity



Operating cash flows

Unit: THB bn

33.1

Capex

-15.9

Other Investing

3.4

From dividends,
interests received, &
assets monetization

FCF

20.6

**Strong FCF conversion
through operation efficiency
and capex discipline**

2024

Opex savings through 2024

- ✓ THB 2.4bn opex savings

Capex

- ✓ Capex reduction by 23% YoY

Non-core assets monetization

- ✓ **PTT Digital** shares sales in Jun'24

Deleveraging

- ✓ **750 MUSD Bonds buy back** by tender offer
- ✓ **THB 17 bn perpetual bonds** issued in Dec'24
 - Largest ever Thai Baht perpetual bonds issued by Thai corporates
 - 50% Equity credit from rating agencies

2025
targets

2025 target for opex savings

- At least THB 1 bn target

Extended trade credit (ETC)

- PTT agreed to increase ETC facility from THB 30 bn **to THB 40 bn from Jan'25 onwards**

2025 target for capex savings

- THB 4 bn target

2025 scheduled repayment of THB ~21 bn with funding in already in place

- 1) THB 10 bn existing term loan facility
- 2) THB 13 bn revolving committed facility

Deleveraging through assets monetization and other initiatives

Continue to ensure liquidity

- Enhanced by facility from financial institutions

Maintenance Shutdown Schedule 2025

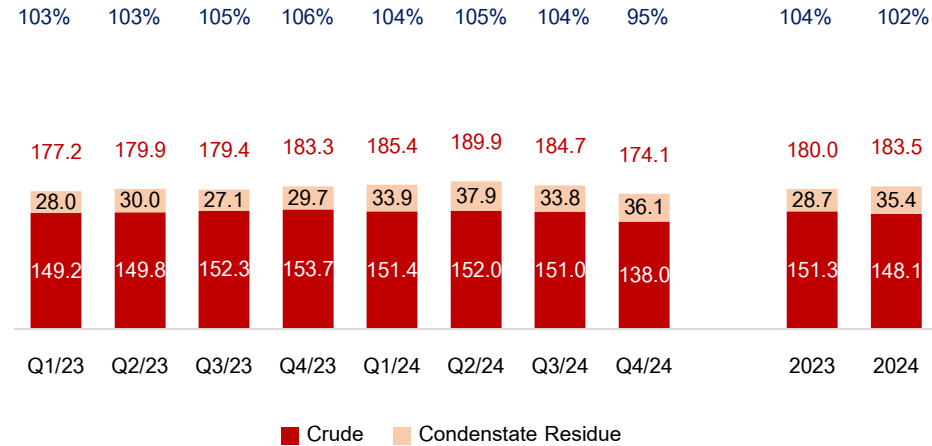


Plant		2025											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
OLE	Cracker					44	OLE2/1						
	Oleflex												
POL	HDPE				15	HDPE 1	15	HDPE 2					
	LDPE					12							
	LLDPE I												
	LLDPE II								20				
	PS										33		
MEG	MEG				72								
	EA				74								
PHN	Phenol I								13				
	Phenol II		10										
	BPA				18								
REF	Refinery										50		
ARO	Aromatics I												
	Aromatics II										53		
GCO	PO												

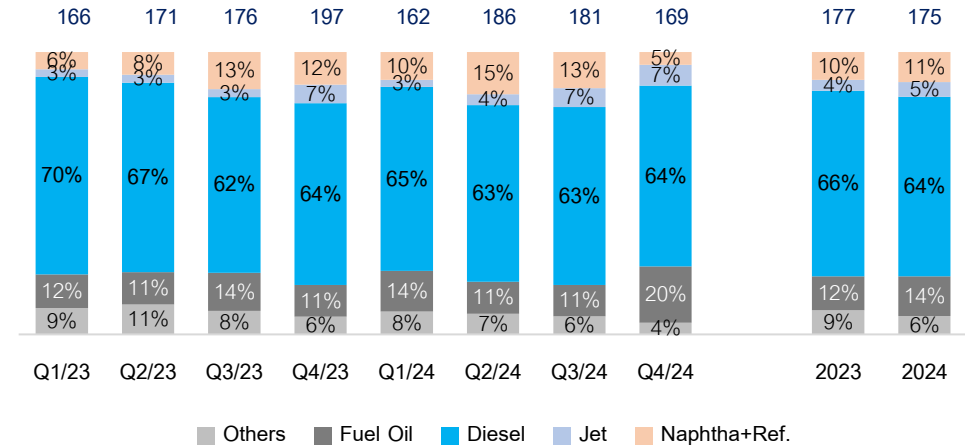
Upstream - Refinery

Refinery Intake (KBD)

Utilization rate



Refinery Sales Volume (KBD)



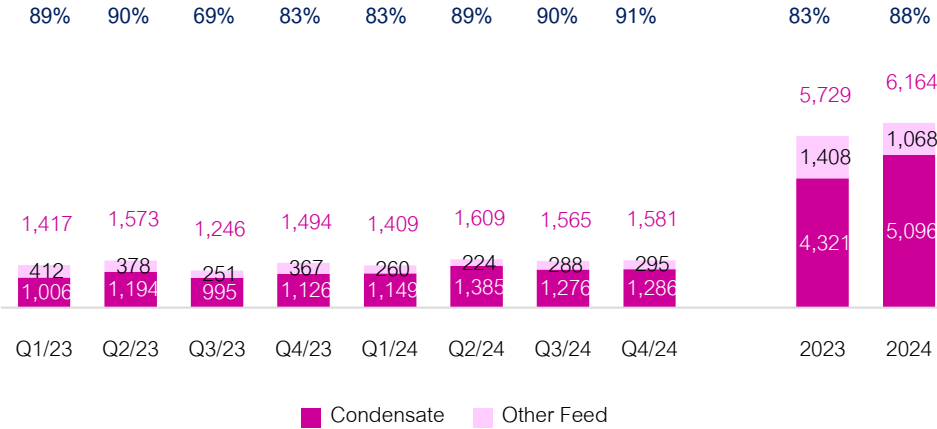
Gross Refinery Margin

\$/BBL	Q1/23	Q2/23	Q3/23	Q4/23	Q1/24	Q2/24	Q3/24	Q4/24	FY23	FY24
Market GRM	10.3	5.7	12.6	9.0	8.3	3.2	3.5	3.7	9.4	4.7
Stock Gain (Loss) net NRV	(2.6)	(2.8)	3.6	(3.3)	(0.07)	0.4	(4.6)	1.1	(1.2)	(0.8)
Hedging Gain (Loss)	1.3	0.9	(4.2)	1.2	0.2	1.3	.05	0.2	(0.2)	0.6
Accounting GRM	9.0	3.8	12.1	6.9	8.5	5.0	(0.7)	5.0	8.0	4.5

Upstream - Aromatics

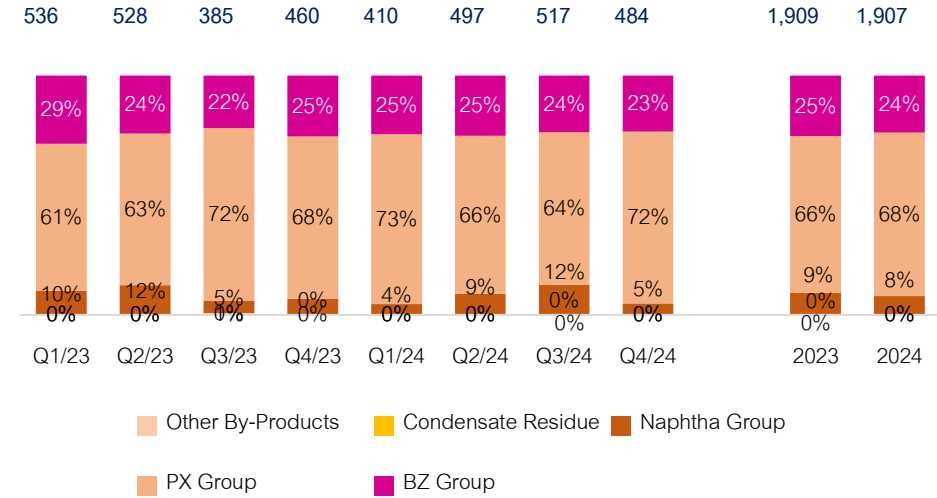
Aromatics Intake (KTons)

Utilization rate



Other Feedstocks are Reformate, Pygas, and Heavy Naphtha

Aromatics Sales Volume (KTons)

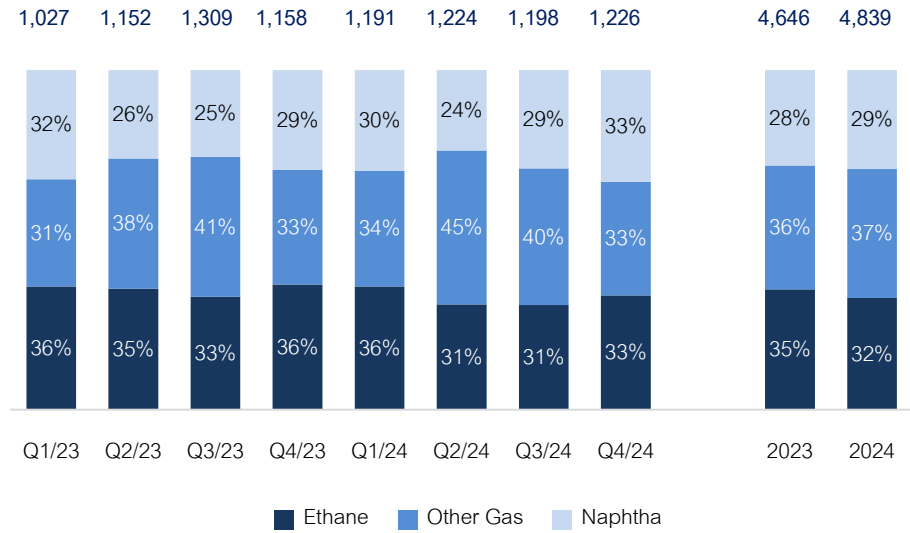


Aromatics BTX P2F

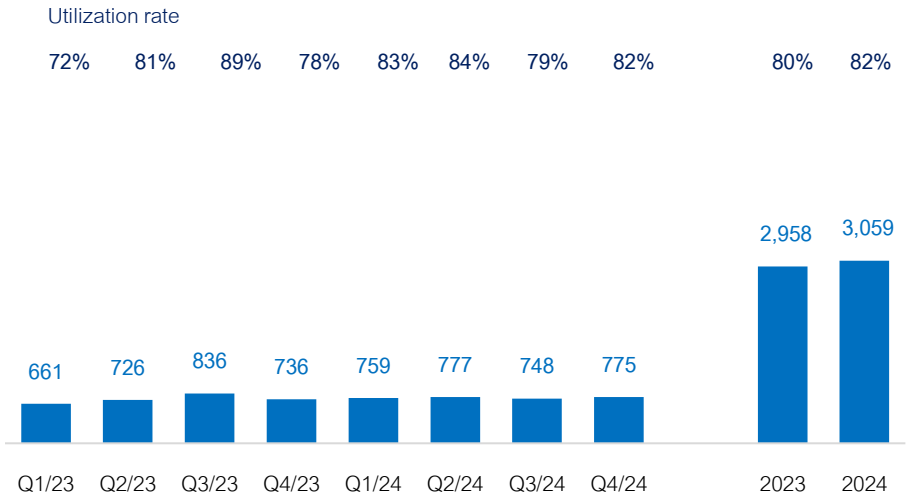
\$/ton	Q1/23	Q2/23	Q3/23	Q4/23	Q1/24	Q2/24	Q3/24	Q4/24	2023	2024
BTX P2F	321	243	217	253	311	220	241	186	259	234
Stock Gain (Loss) net NRV	(19)	(32)	96	(30)	16	3	(38)	(16)	1	(9)
Hedging Gain (Loss)	14	(9)	(18)	7	(2)	(1)	-	8	(1)	1
Accounting P2F	316	202	295	230	325	222	202	178	259	226



Olefins Intake (KTons)

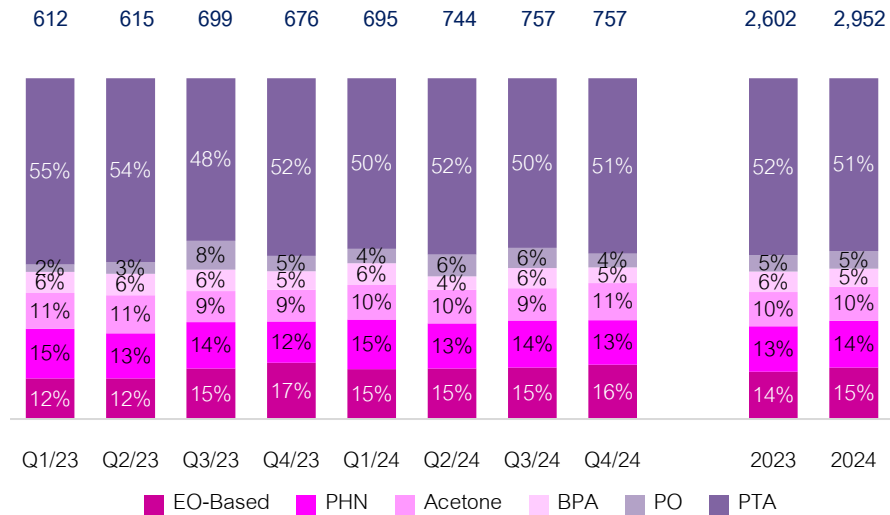


Olefins Sales Volume (KTons)



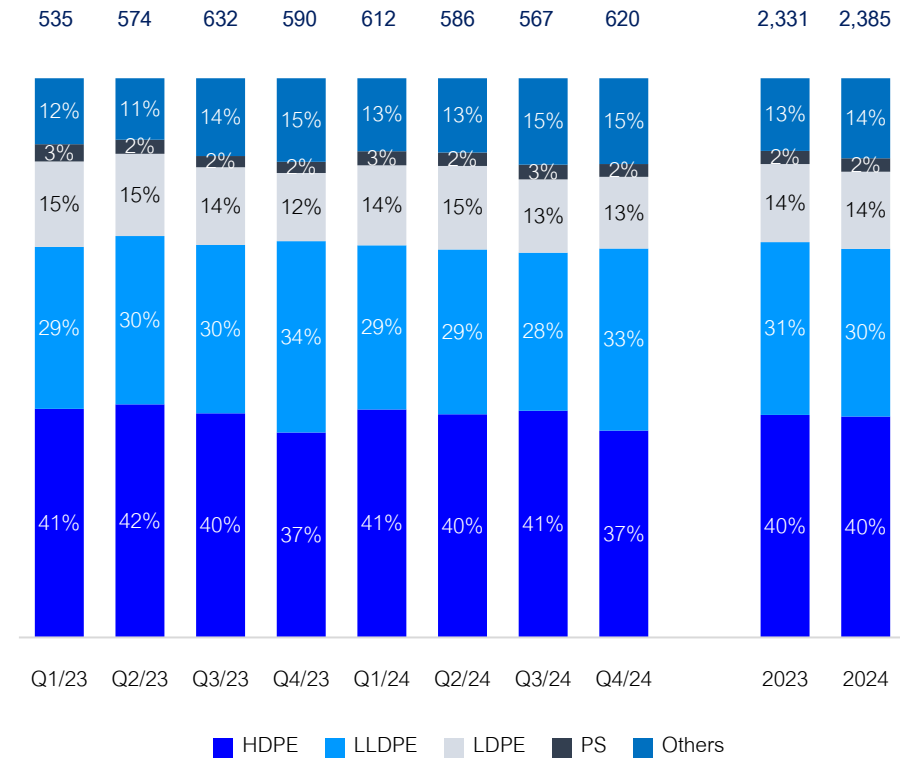
Intermediates

Intermediates Sales Volume (KTons)



Polymers & Chemicals

Polymers & Chemicals Sales Volume (KTons)



Utilization rate



Utilization rate	Q1/23	Q2/23	Q3/23	Q4/23	Q1/24	Q2/24	Q3/24	Q4/24	2023	2024
Upstream										
- Refinery	103%	103%	105%	106%	104%	105%	104%	95%	104%	102%
- Aromatics	89%	90%	69%	83%	83%	89%	90%	91%	83%	88%
- Olefins	72%	81%	89%	78%	83%	84%	79%	82%	80%	82%
Intermediates										
- MEG	13%	4%	90%	78%	46%	78%	92%	92%	47%	78%
- Phenol	104%	98%	102%	91%	108%	107%	111%	112%	99%	110%
- BPA	98%	103%	103%	95%	118%	79%	120%	95%	100%	103%
- PO	26%	46%	106%	61%	50%	90%	76%	58%	60%	69%
Polymers & Chemicals										
HDPE	106%	110%	110%	97%	115%	111%	98%	101%	106%	106%
LLDPE	93%	93%	105%	98%	103%	85%	89%	109%	97%	96%
LDPE	96%	119%	115%	93%	111%	117%	114%	102%	106%	111%
Total PE	99%	104%	109%	97%	109%	101%	97%	104%	102%	103%

Market Prices



Product	Unit	Y. 2022 [Actual]	Y. 2023 [Actual]	Y. 2024 [Actual]	Y. 2025 [Forecast]	Change Y. 25 - 24
Crude : Dubai	\$/bbl	96.3	82.1	79.6	73 - 78	↓
Petroleum Product :						
▪ Diesel 10 PPM - Dubai	\$/bbl	39	24.3	16.6	14 - 17	↓
▪ VLSFO - Dubai	\$/bbl	22.5	11.5	12.5	9 - 12	↓
Aromatics Chain :						
▪ PX – Naphtha	\$/Ton	319	389	288	240 – 260	↓
▪ PTA Margin	\$/Ton	106	85	77	80 – 90	↔
▪ PET Margin	\$/Ton	175	89	74	70 – 80	↓
▪ BZ – Naphtha	\$/Ton	244	248	309	270 – 290	↓
▪ Phenol Margin	\$/Ton	357	252	234	230 - 250	↓
Olefins Chain :						
▪ HDPE	\$/Ton	1203	1044	1014	980 - 1010	↓
▪ HDPE – Naphtha	\$/Ton	418	394	339	340 - 370	↑

Highlight Y. 25
<ul style="list-style-type: none"> ▪ Uncertainty from U.S. sanction [+] ▪ Risk in geometry of global trade [-]
<ul style="list-style-type: none"> ▪ Risk in geometry of global trade [-] ▪ New Refinery capacity [-] ▪ Low freight cost to West [+]
<ul style="list-style-type: none"> ▪ Control supply [+] ▪ China Stimulus [+] ▪ New Capacity [-] ▪ Risk in geometry of global trade [-]

Operating Performance analysis - Upstream



 Diesel, LSFO, PX, BZ,

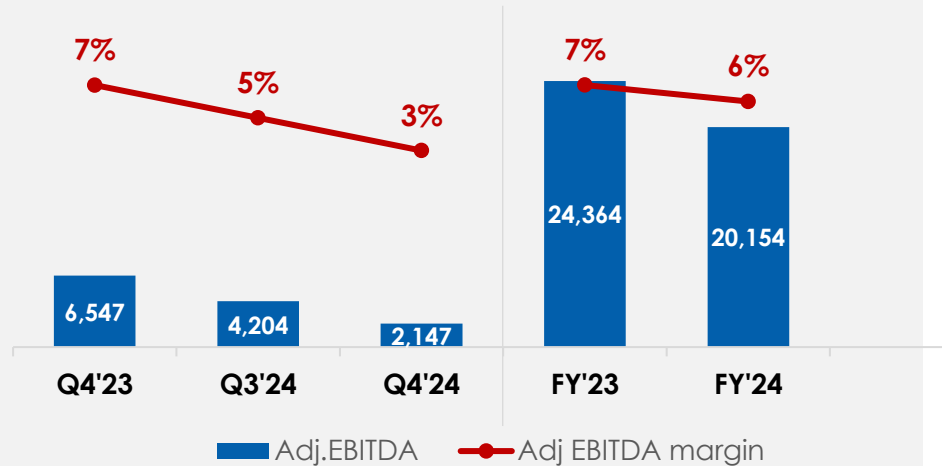
 Ethylene, Propylene



Upstream

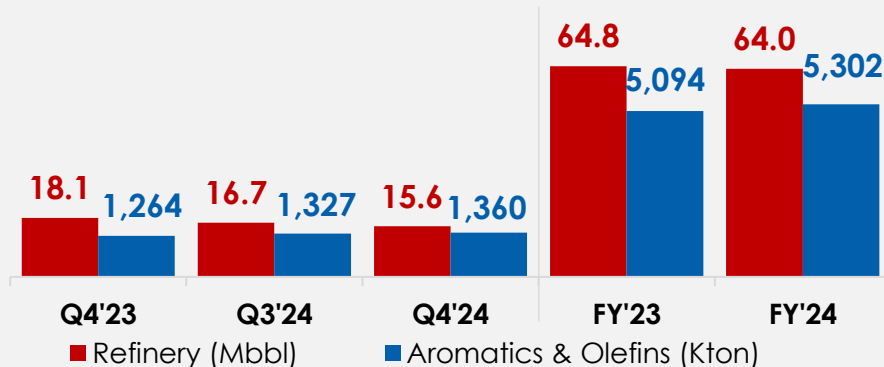
Adjusted EBITDA

Unit : MB



Sales volume

Unit : Mbbl & Kton



Key products/spread	Q4/23	Q3/24	Q4/24	FY2023	FY2024
Dubai (\$/bbl)	83.6	78.3	73.6	82.1	79.6
Diesel - Dubai (\$/bbl)	24.4	13.6*	15.1	24.3	16.7
(500 ppm in 2023 and 10 ppm in 2024)					
LSFO-Dubai (\$/bbl)	14.1	13.6	12.9	11.5	12.5
Crude premium (\$/bbl)	7	7	6	7	7
Market GRM (\$/bbl)	9.0	3.5	3.7	9.4	4.7
PX spread (\$/ton)	330	294	228	359	304
BZ spread (\$/ton)	201	336	283	218	324
BTX P2F (\$/ton)**	253	241	186	259	239
Naphtha (\$/ton)	659	672	652	649	674
Ethylene price (\$/ton)	937	962	936	889	963
Propylene price (\$/ton)	807	875	839	858	864
Hedging gain/(loss) (mb)	831	280	253	(626)	1,467
Stock gain/(loss) net NRV (mb)	(2,592)	(3,635)	268	(2,584)	(2,624)

*Referred to Diesel 10 ppm since 2024, EURO5 has been stipulated in Thailand

**There was a reclassification of natural gas expenses, which are fuel costs in the refinery business segment and the aromatics business segment, from feedstock costs to variable costs. This led to a retrospective adjustment of BTX P2F for comparative analysis purposes, but it did not affect the Market GRM and Adjusted EBITDA as reported by the company.

Market highlights QoQ:

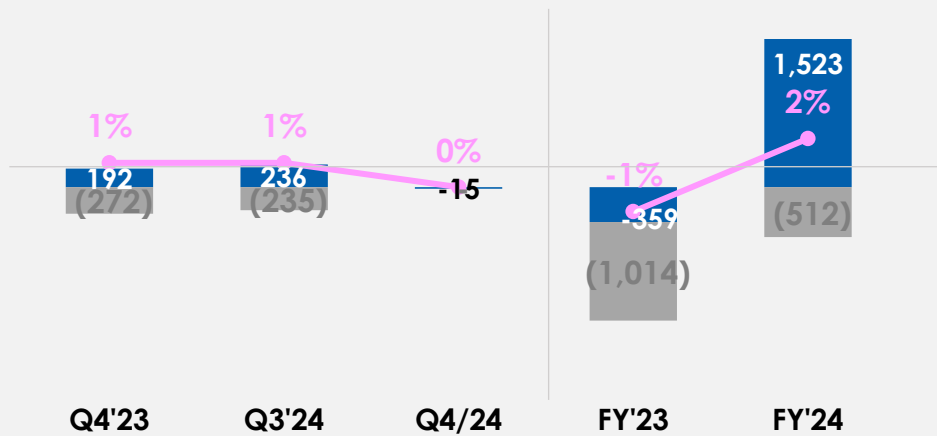
- The key refined products spread is primarily supported by reduced tax rebate in China, which reduced supply, coupled with increased winter demand. However, LSFO spread declined as higher export from the Middle East. Also, the Refinery u-rate dropped due to preventive shutdowns in some units.
- The PX spread decreased due to economics concern and sluggish in downstream market. Also, the BZ spread decreased as the slow demand recovery and the completion of turnarounds by BZ producers in Korea.
- Slightly drop in Ethylene spread following the weak demand during the Chinese National holiday in the fourth quarter
- GC was retroactively charged by increasing 3% of Ethane cost since the beginning of 2024.

Intermediates

Adjusted EBITDA & equity incomes

Unit : MB

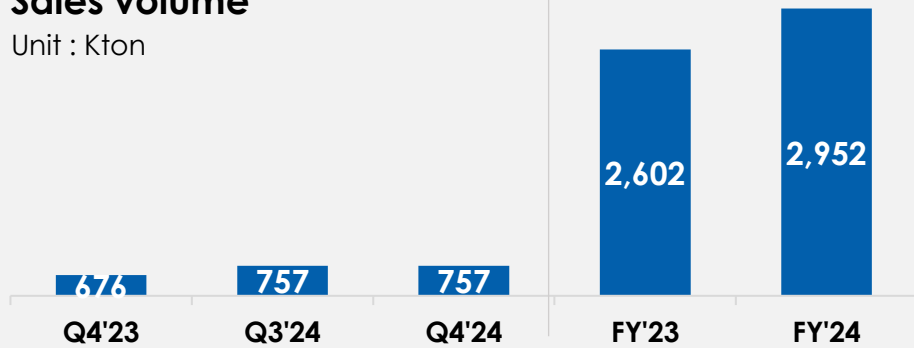
Adj.EBITDA Profit sharings from JVs Adj EBITDA margin



Note : JV companies represented profit sharing from PTTAC which was fully impaired in Q3/2024

Sales volume

Unit : Kton



Note: excludes sales volume of JV's companies

Key products/spread	Q4/23	Q3/24	Q4/24	2023	2024
PHN spread (\$/ton)	293	285	186	252	233
BPA spread (\$/ton)	243	200	257	230	216
MEG ASP spread (\$/ton)	-18	35	55	18	29
PTA spread (\$/ton)	72	79	71	83	76
PO spread (\$/ton)	139	140	132	195	137

Phenol spread = Phenol-0.878 BZ-0.474 Propylene+0.616 Acetone
BPA spread = BPA-0.853 Phenol-0.273 Acetone
MEG spread = MEG ASP - 0.5285Ethylene
PTA spread = PTA-0.67PX
PO spread = PO-Propylene
AN spread = AN-Propylene
MMA spread = MMA- Naphtha

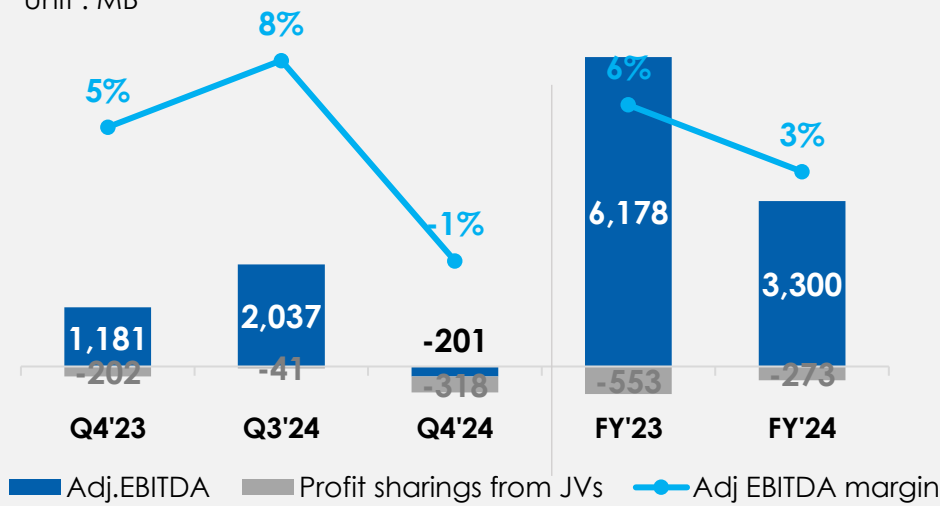
Market highlights QoQ:

- Lower Phenol spread mainly attributed by the new supply addition in Q4/24 amid subdued demand , partly offset with BPA spread followed by the more decrease in feedstock price of Phenol
- Higher MEG spread resulting from the shortage of MEG due to the low inventory level in China during Q4/24

Polymers & Chemicals

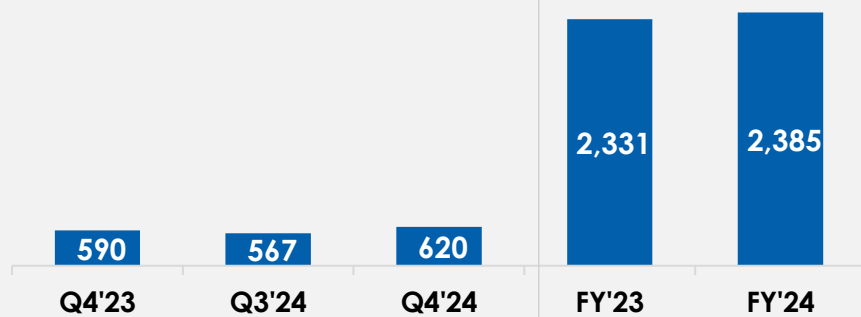
Adjusted EBITDA & equity incomes

Unit : MB



Sales volume

Unit : Kton



Note: excludes sales volume of JV's companies

Note: JV companies include HMC, AVT, RGL, and DynaChisso

Key products/spread	Q4/23	Q3/24	Q4/24	FY2023	FY2024
PE price (\$/ton)	1,001	1,084	1,056	1,033	1,074
HDPE-Ethylene (\$/ton)	86	33	32	155	51
PP price (\$/ton)	968	1,017	1,015	1,008	1,033
PET price (\$/ton)	880	873	817	925	877
Polyols price (\$/ton)	1,257	1,277	1,235	1,366	1,276

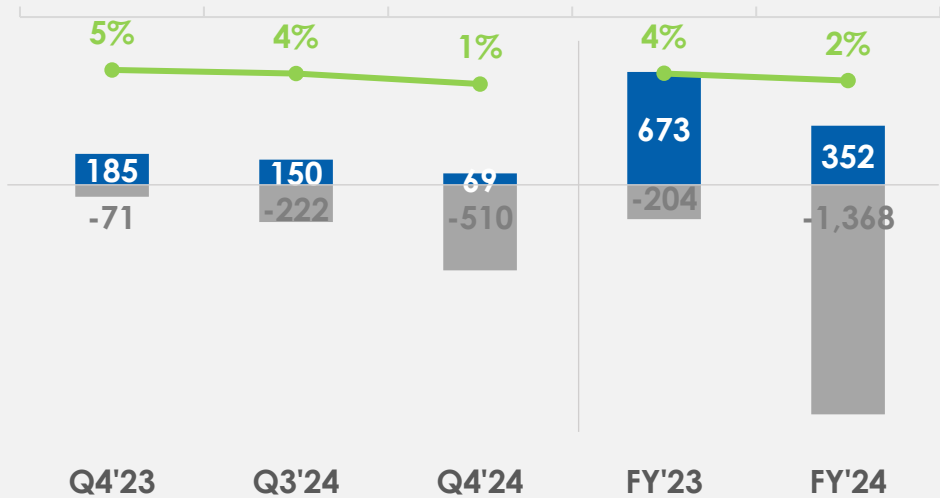
Market highlights QoQ:

- PE price decreased due to the weak demand during the Chinese National holiday, despite the announcement of a stimulus package
- Higher ethylene price in the previous quarter led to the higher inventory cost
- Lower PE price premium compared with the previous quarter, attributed to a lagging effect of order-received time
- New supply of PE in Vietnam, Interest rate hike, and economic recession concerns still put the pressure on Polymers demand and price.

Bio & Circularity

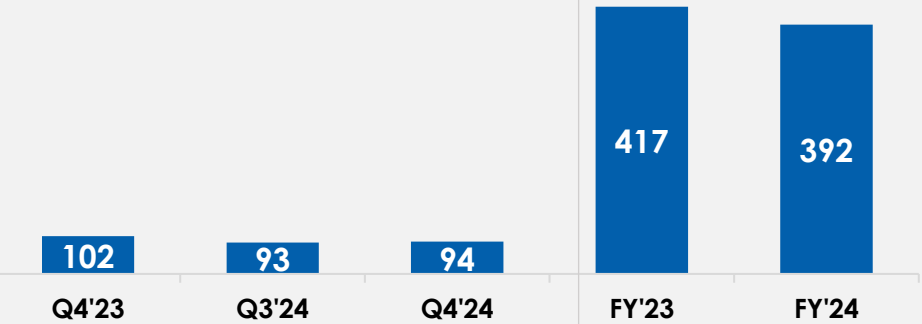
Adjusted EBITDA & equity incomes

Unit : MB



Sales volume

Unit : Kton



Note: excludes sales volume of JV's companies

Note: JV companies include EOUK, NatureWorks, PTMCC, TEX, GKBI

Key products/spread	Q4/23	Q3/24	Q4/24	2023	2024
ME spread (THB/kg)	4.3	4.3	4.3	4.3	4.3
FA spread (\$/ton)	394	365	379	434	341

ME spread = ME - 1.02(CPO)
FA spread = FA - 1.2(CPKO)

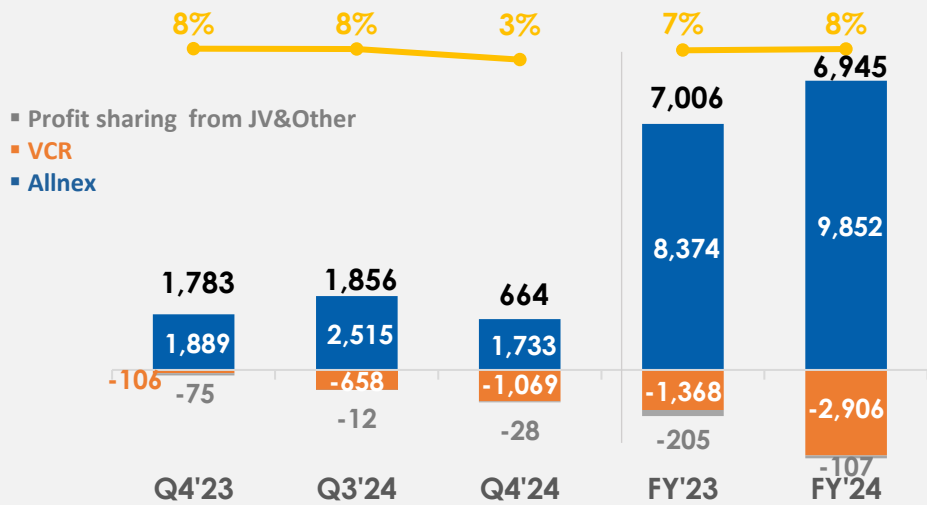
Market highlights:

- The slowdown in demand for Methyl Ester (ME) is driven by weaker demand due to the reduction in the biodiesel mandatory from B7 to B5 since 21 November 2024. However, the government has extended the Oil Fuel Fund Act B.E. 2562 (2019) to support biofuel prices and maintain the high-speed diesel price at 33 Baht per liter in Q4/2024.
- The Fatty Alcohol (FA) P2F increased in Q4/2024 driven by growing demand for long-chain fatty alcohols from cosmetic and skincare manufacturers during the winter season. Additionally, the demand for short-chain fatty alcohols rose as buyers restocked in response to a tight supply caused by production shutdowns among major producers in Indonesia, China, and Thailand.

Performance Chemicals

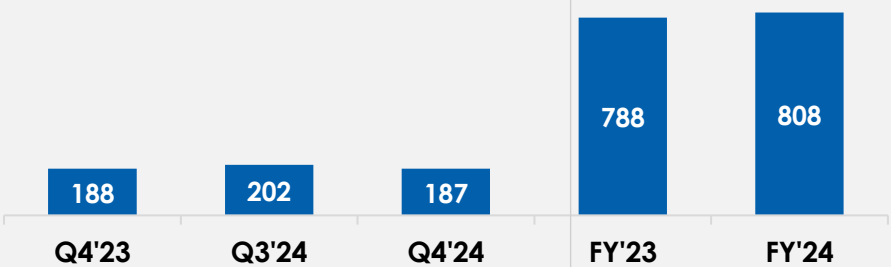
Adjusted EBITDA & equity incomes

Unit : MB



Sales volume (allnex & Vencorex)

Unit : Kton



Market highlights:

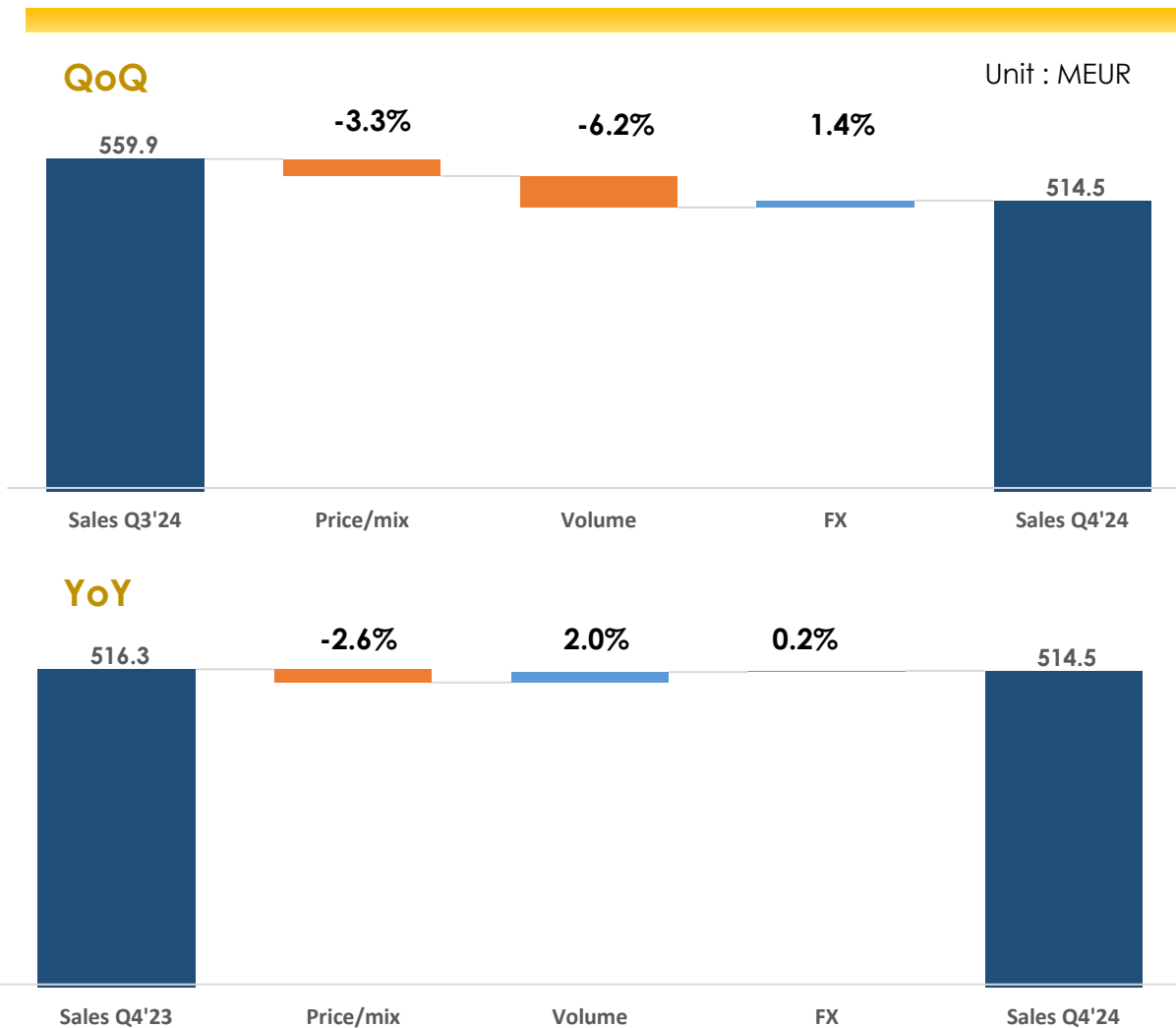
EBITDA contributed from Performance Chemicals decreased QoQ

- Vencorex : Continue operating loss from low HDI derivatives sales volume impacted by weak global demand.
- Allnex : Sales Volumes were dropped by 6%, largely driven by the business seasonality (i.e. EMEA, AMER, and Australia), as well as the normal destocking effects seen at year-end.

allnex performance					
	Q4/23	Q3/24	Q4/24	2023	2024
Adj.EBITDA (MEUR)	56	69	45	247	272
Adj.EBITDA margin	11%	12%	9%	11%	12%
Sales Vol. (Kton)	179	195	183	754	780

Note Adj.EBITDA reported by allnex (adjusted for non-recurring items)

Revenue Development



Revenue breakdown by segment

End-segment	Q4/23	Q3/24	Q4/24
Industrial Metal	16%	17%	17%
Infrastructure & Construction	32%	31%	30%
Mobility & Transportation	28%	28%	28%
Packaging & Consumer Goods	24%	24%	25%

Performance summary

<i>allnex</i> performance	Q4/23	Q3/24	Q4/24
Adj.EBITDA (MEUR)	56	69	45
Adj.EBITDA margin	11%	12%	9%
Sales Vol. (Kton)	179	195	183

Note Adj.EBITDA reported by allnex (adjusted for non-recurring items)

Consolidated Statement of Income – Q4/24

Unit : MB		Q4/2023 ¹	Q3/2024	Q4/2024	YoY % + /(-)	QoQ % + /(-)	2023 ¹	2024	YoY % + /(-)
1	Sales Revenue	162,264	149,431	132,372	-18%	-11%	616,635	604,045	-2%
2	Feedstock cost	(126,544)	(114,590)	(104,096)	18%	9%	(470,770)	(467,275)	1%
3	Product to Feed Margin	35,720	34,841	28,276	-21%	-19%	145,865	136,770	-6%
4	Variable Cost	(12,506)	(12,816)	(12,015)	4%	6%	(55,475)	(49,994)	10%
5	Fixed OH	(9,654)	(7,927)	(8,043)	17%	-1%	(33,666)	(32,591)	3%
6	Stock Gain/(Loss) and NRV	(2,413)	(3,912)	941	139%	124%	(2,756)	(2,457)	11%
7	Gain/(Loss) on Commodity Hedging	831	280	253	-70%	-10%	(627)	1,467	>200%
8	Other Revenue	7,841	1,492	1,574	-80%	5%	13,931	9,286	-33%
9	SG&A Expenses	(7,234)	(7,203)	(7,200)	0%	0%	(26,823)	(28,726)	-7%
10	EBITDA	12,585	4,755	3,786	-70%	-20%	40,449	33,755	-17%
11	Depreciation & Amortization	(6,533)	(7,598)	(7,971)	-22%	-5%	(27,504)	(30,995)	-13%
12	Extra items	547	-	-	-100%	-	(86)	-	100%
13	EBIT	6,599	(2,843)	(4,185)	-163%	-47%	12,859	2,760	-79%
14	Net financial expense	(2,683)	(2,814)	(2,680)	0%	5%	(10,707)	(10,863)	-1%
15	FX Gain(Loss)	2,288	2,941	(1,033)	-145%	-135%	790	383	-52%
16	Share of gain/(loss) from investment	11	(279)	(725)	<-200%	-160%	(725)	(1,462)	-102%
17	Corporate Income Tax	(1,199)	1,000	1,163	197%	16%	(1,352)	969	172%
18	Net Profit/(Loss) after Tax (exclude impairment/restructuring cost)	5,016	(1,995)	(7,460)	<-200%	<-200%	865	(8,213)	<-200%
19	Net Profit/(loss) attributable to: Non-controlling interests	(65)	(194)	(12)	81%	94%	-134	-204	-52%
20	Net Profit/(Loss) after Tax (exclude impairment/restructuring cost)	5,081	(1,801)	(7,448)	<-200%	<-200%	999	(8,009)	<-200%
21	Loss from impairment of assets (Vencorex)	-	(7,960)	62	100%	101%	-	(7,898)	-100%
22	Provision for business restructuring (Vencorex)	-	(614)	(1,516)	-100%	-147%	-	(2,130)	-100%
23	Share of loss from JV from impairment of assets (PTTAC)	-	(8,937)	-	-	100%	-	(8,937)	-100%
24	Provision for business restructuring (PTTAC)	-	-	(2,836)	-100%	-100%	-	(2,836)	-100%
25	Net Profit/(Loss) after Tax to Owners of the Company (include impairment/resturcuring cost)	5,081	(19,312)	(11,738)	<-200%	39%	999	(29,811)	<-200%
26	Adjusted EBITDA ²	9,912	8,387	2,663	-73%	-68%	38,117	31,766	-17%

Capex to support GC's sustainable growth

GC Group (Consolidated entities)



CAPEX of PTTGC group	Total	Estimated Annual CAPEX (M.USD)				
	2025-2029	2025	2026	2027	2028	2029
1) PTTGC group excluding allnex	183	163	20	-	-	-
2) allnex expansion & growth Capex	657	126	141	160	138	92
total	840	288	161	160	138	92

Notes:

1. Group annual maintenance ~ 400 M.USD (including allnex) and are excluded from the table
2. PTTGC group projects such as IT & digital, new office facility, upgrade/modify production unit etc
3. allnex expansion & growth Capex based on capex plan, including committed and uncommitted projects. Source of fund will be from allnex.
4. FX assumption for USD/EURO is 1.12 for allnex CAPEX plan