



GC Rated Number One

in the World for Sustainability
in DJSI's Chemicals Sector for
the Second Consecutive Year,
recognizing its Commitment
to Drive Sustainability
throughout the Supply Chain

MEMBER OF
**Dow Jones
Sustainability Indices**
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28th Annual CITIC CLSA
Flagship Investors' Forum 2021

14 September 2021

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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Vision and Mission



VISION

To be a Leading Global Chemical
Company for Better Living

MISSION

SHAREHOLDER

We deliver the best business performance through trustworthiness to create fair and sustainable value for shareholders

BUSINESS PARTNER

We provide superior solutions from innovative products and services to be the best choice for business partners

SOCIETY

We engage and integrate social and environment to our business with responsibility and care for sustainable development

EMPLOYEE

We create a learning organization and a happy workplace to cultivate proficient workforces with profound engagement and commitment to professional excellence

The global recognized sustainable company



The 1st company in Thailand recognized in

LEAD LEVEL

Among 41 global lead participants

MEMBER OF
Dow Jones Sustainability Indices
In Collaboration with RobecoSAM

Sustainability Award
Gold Class 2021
S&P Global



The only company in chemicals sector ranked
No.1 FOR 2 CONSECUTIVE YEARS

The only company in chemicals sector of Asia awarded
GOLD CLASS MEDAL

The 1st and only Thai-own conglomerate to achieve
A LIST: CLIMATE CHANGE & WATER SECURITY



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Appendix

1H/2021: 3-Steps Strategy executions



Step Change



Step Out



Step Up



- Increase competitiveness by feedstock usage flexibility, Operation excellence
- Re-optimize investment portfolio
- Extend Downstream Value chain
- High Value Business (HVB) via M&A
- Enhance Sustainability

Organization & Digital Transformation
People / Organization / Digital / Culture



ORP (COD Jun'21)

Olefins capacity +25% with additional 500kta Ethylene +250kta Propylene

Restart PTA Line #1 (COD Apr'21)

Capacity +48% (970kta → 1,440kta)

PET Debottlenecking (COD Jun'21)

Capacity +36% (147kta → 200kta)

Portfolio management



Tender offer for VNT delisting

IN PROGRESS

- Expanding Ethylene Derivatives
- Increasing product coverage



GPSC share disposal

COMPLETED

- Focus on Chemical Business
- Maintain 10% of shares to retain policy and strategic governance objectives



100% share acquisition of a No.1 industrial coating resins company



allnex acquisition



The allnex acquisition is in-line with GC's corporate strategies



Why allnex?

✓ Global Leader

No 1. in Industrial Coating Resins

✓ Resilience

Strong recovery from COVID-19 and even stronger

✓ Portfolio

Broad portfolio serving diversified end-markets and geographies

✓ Stable Profit

Stable business performance with high profitability

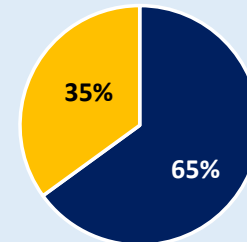
✓ Megatrend

Serve high growth sectors fit well with Megatrend

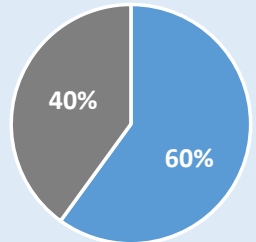
✓ Sustainability

Leading in Green Technology

2030 Target



Performance Chemicals
Basic Chemicals,
Derivatives & Green



Domestic
International

allnex acquisition will enhance the contribution from 10% to approximately 16%



allnex Integration Plan



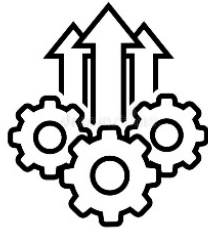
GC will dispatch resources from relevant functions to work alongside counterparts in allnex to plan and implement these initiatives

Key Success Factors for Post Deal Integration

- ▶ Value and preserve allnex strengths
- ▶ Maintain business continuity, allnex talent and leadership roles
- ▶ Collaborate to sustain and enhance growth and business performance
- ▶ Build partnership and learning across allnex and GC Group



1. Supply Chain Synergies



2. Operation Excellence



3. Asia Growth / M&A



4. Innovation



5. Sustainability Collaboration

3 phases Integration Plan

SPA Signing



Day-1 Closing

Day-100

Phase 1

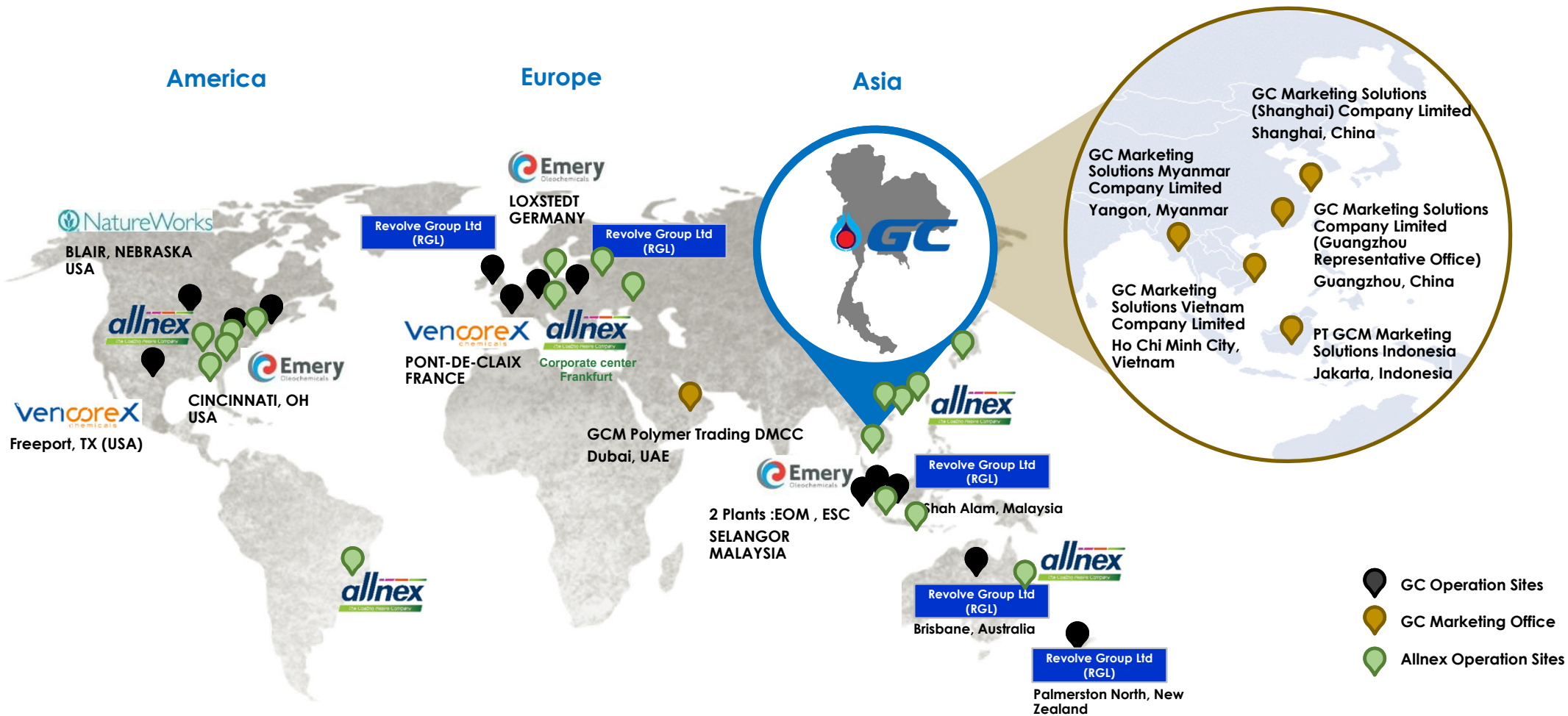
Integration planning / preparation

Phase 2

Phase 3

Ongoing collaboration

allnex joining GC's extended global footprint



GC's International Investments



Investment benefits delivered...

- **Growing PLA Leadership position in high value applications**
- **Strong financial performance to GC** through steady Equity income and Dividend received
- **Strong HDI position is key contributor to GC's Performance Materials and Chemicals business**
- Resilience to Covid and market situation with **earnings uptrend trajectory realized in Q2'21**
- **Strength in Specialty Oleochemicals** has contributed **consistent EBITDA**
- Specialty oleochemicals growth driver **especially in the North America and Europe.**

...are foundation for growth under "Step Out" and "Step Up" Strategies



- **Capacity Expansion** (PLA plant 2 in Thailand and Blair expansion).
- **Focusing on high value application**



- **Maintain its strong position** by capacity expansion and products development



- Explore the **collaboration opportunities with allnex**



- **Adopt to changes in Market conditions**
- **Revisit Basic Oleochemicals platform**

NatureWorks Plant 2



Announcement of NatureWorks Plant 2 by Cargill, GC, and NatureWorks



NatureWorks

100%

Plant2



Lactic Acid



Lactide



Polylactic acid (PLA) 75 KTA



- **Location:** Nakhon Sawan Biocomplex, Thailand
- **Raw materials:** sugar from local supply of Sugarcane
- **COD:** 2024



World's First Integrated PLA facility

Bio
Circular
Green

Support Thailand's BCGs economy model



Add value to Thai agricultural raw materials

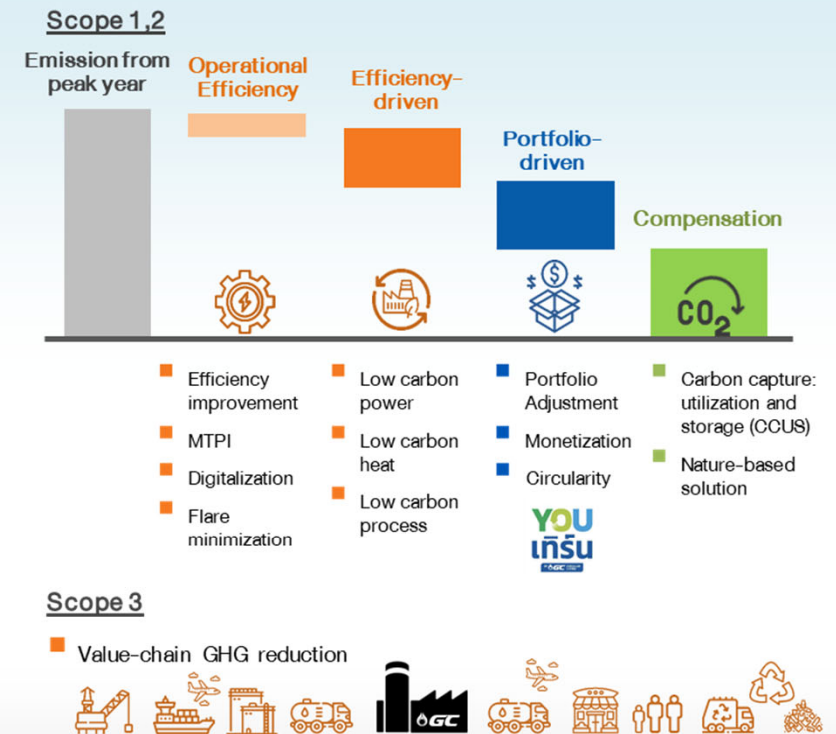
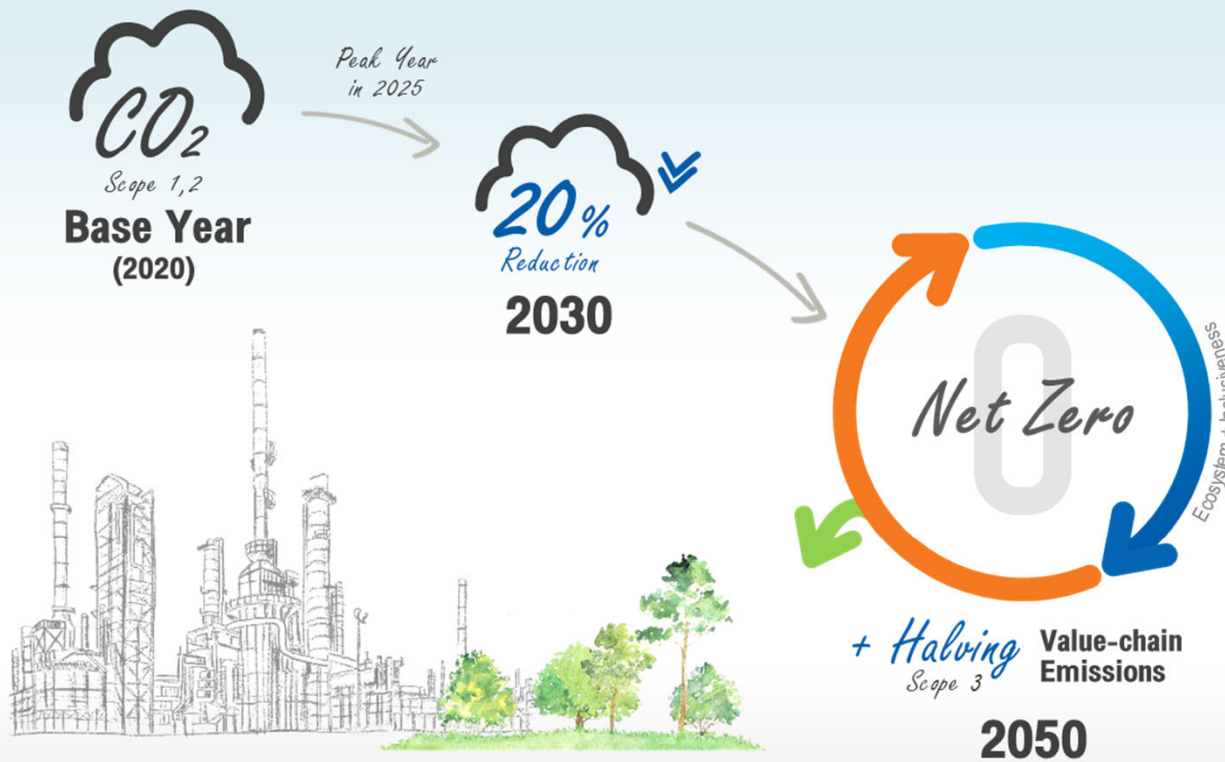


World's Most Advanced biopolymer technology



Ingeo™ PLA supports variety of market demand for sustainable and low carbon materials

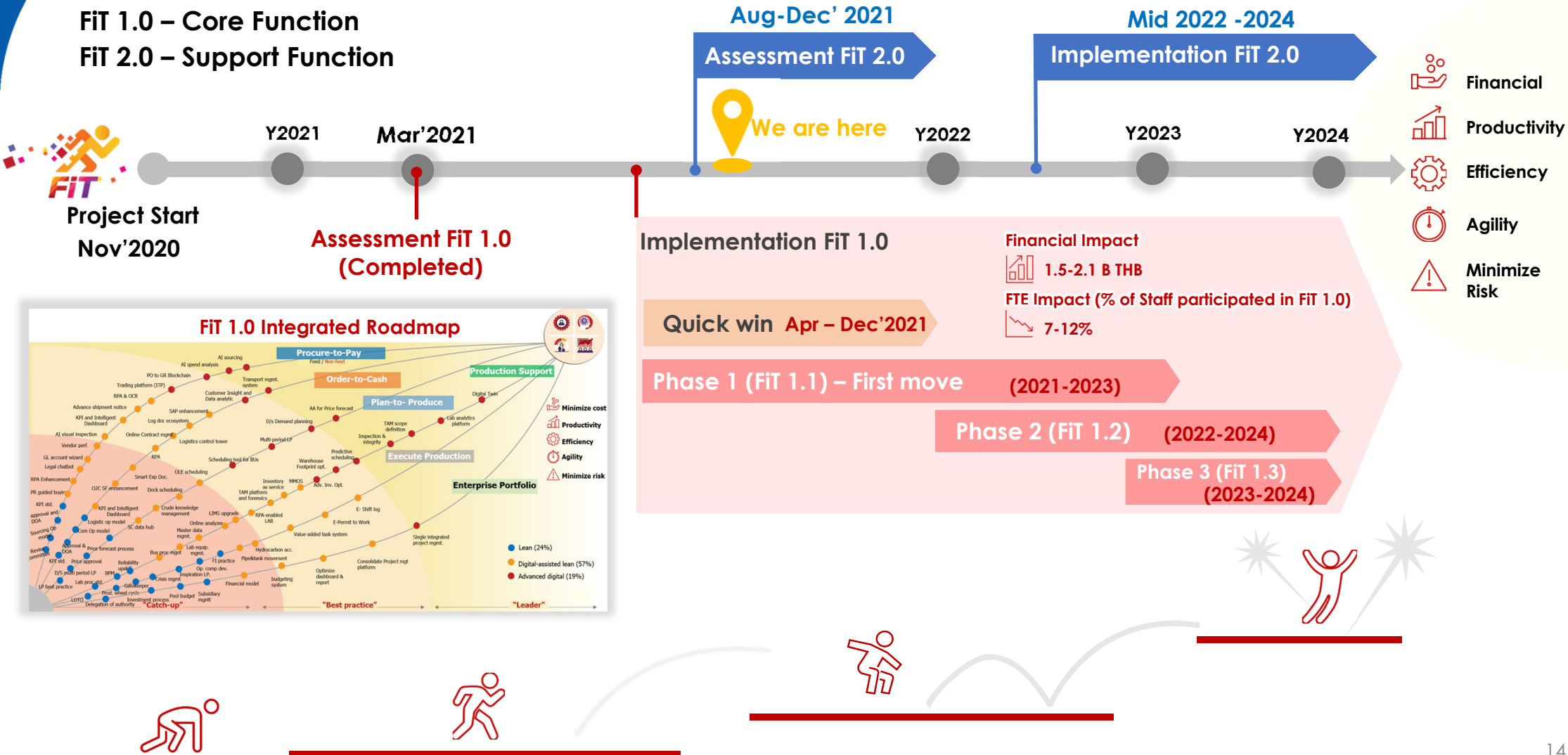
Step Up On-Going Climate Actions



Project FiT : Our Journey to Lean and Process Redesign



A Phased approach combining works of
 FiT 1.0 – Core Function
 FiT 2.0 – Support Function



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Market Outlook

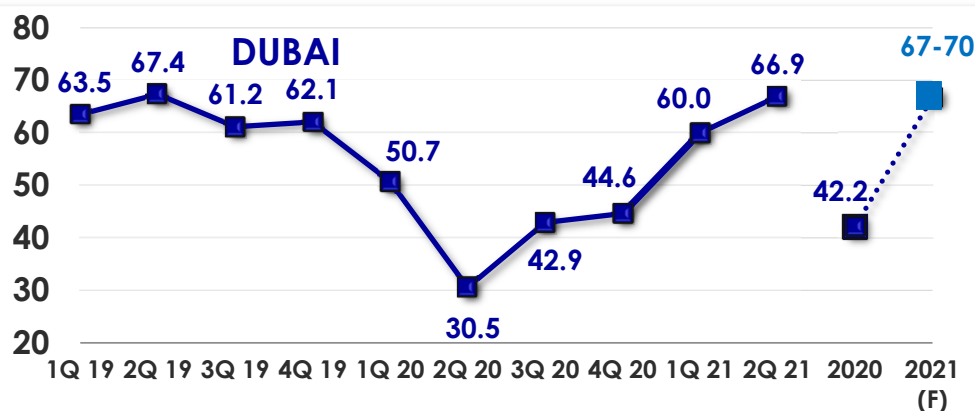
03

Appendix

Though challenges from Delta variant coupled with increased OPEC+ supplies in August, strong fundamentals from the West support oil price with oil demand growth in 2H/21 back to almost pre-covid level



Crude Price, \$/bbl

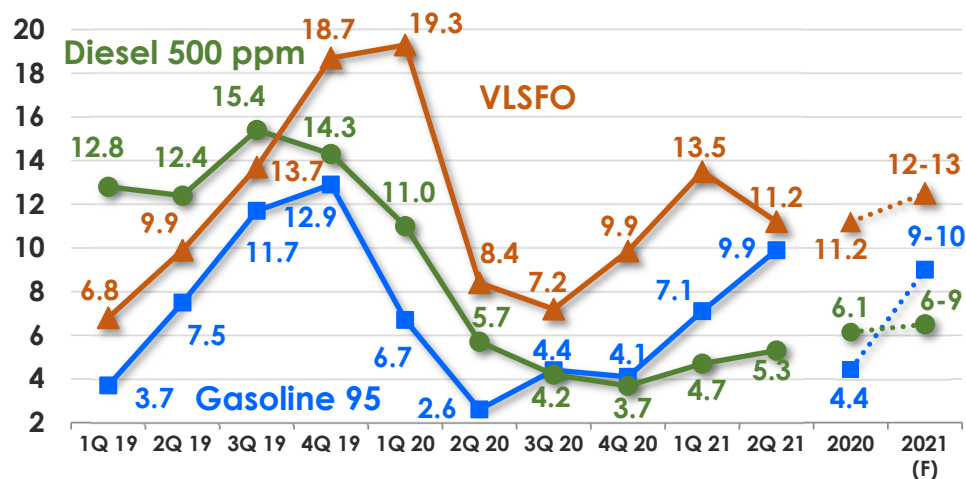


Market Commentary : Crude & Refinery

Crude

- EU & US expect vaccine progress 75% in Q3/21 with easing lockdown restrictions while Delta variant outbreaks in Asia limit demand recovery
- OPEC+ supplies increase from Aug 2021-Sep 2022 bringing back ~10 MBD production cut from May 2020 when oil demand & prices crashed as Covid lockdowns hit last year
- U.S. production resume slowly; expects to see high increase in Q4/21, while return of Iran crude supply is delayed

Refined Products Price, \$/bbl



Diesel & Gasoline

- More vaccinations around the world, relaxing lockdown policy help stimulate transportation demands. However, closely monitor COVID new variants impact
- Product imbalance after low international commercial flight demand; Jet is dumped into Diesel pool
- New Asia integrated refinery start up in 2021, with combined capacity 0.8 MBD, pressure product cracks

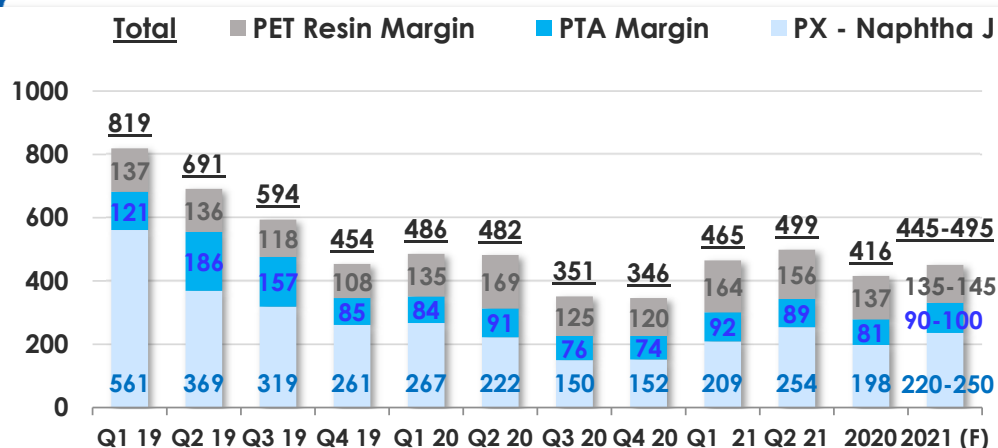
VLSFO

- Recover shipping activities to Pre-COVID level due to limited air freight transportation during restriction policy
- Low China import due to new tax rebate policy

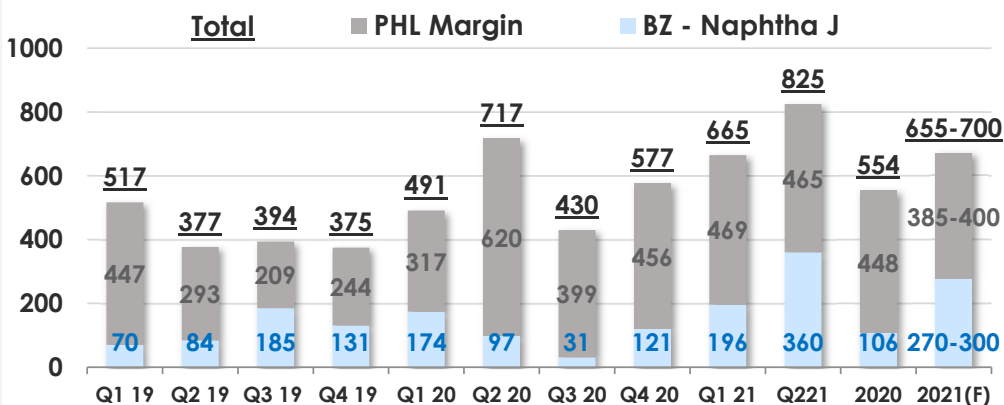
- Supply loss from several plants unplanned S/D, new capacity delay start up [Zhejiang] support Q2/21
- New capacities addition in 2H/21 will pressure Aromatics market



Paraxylene Value Chain Spreads, \$/T



Benzene Value Chain Spreads, \$/T



Market Commentary : Aromatics

PX

- Supply loss from several plants unplanned S/D & new capacity delay start up [Zhejiang] support Q2/21 PX market
- PX new capacities 5 MMT in 2H/21 will pressure PX market

PTA

- 2021 PTA new capacities in China ~10 MMT (mostly non-integrate to PX) will support PX demand in short term but pressure PTA margins

PET

- PET Resins still have support from hygienic single-use, food/healthcare packaging, and water bottle sectors

BZ

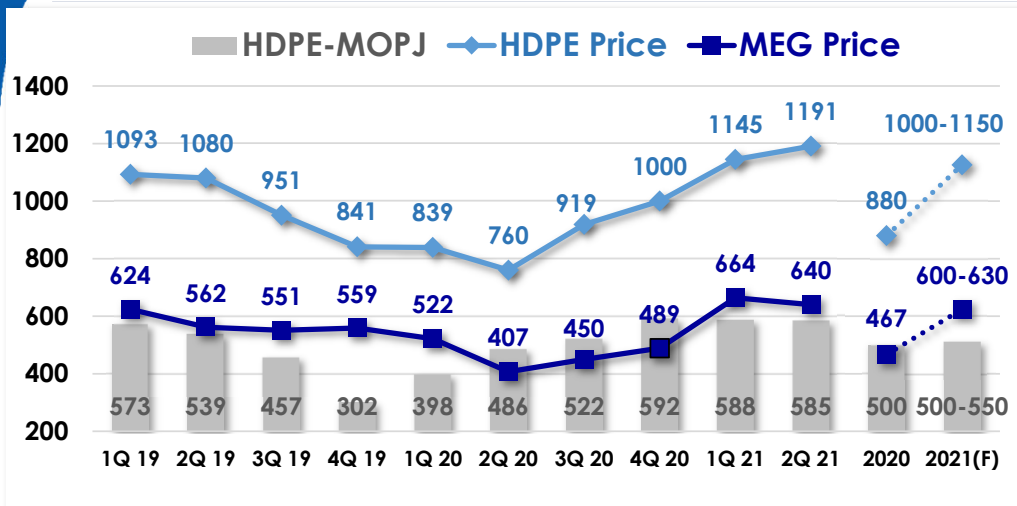
- Supply loss from several plants unplanned S/D, new capacity delay start up [Zhejiang] & low China inventory support Q2/21 BZ market
- 2021 SM new capacities in China ~2.3 MMT (mostly non-integrate to BZ) will support BZ demand in short term but pressure SM margins
- Work from home, learn online & COVID concern still support food packing, electronics appliance & medical sectors

Phenol

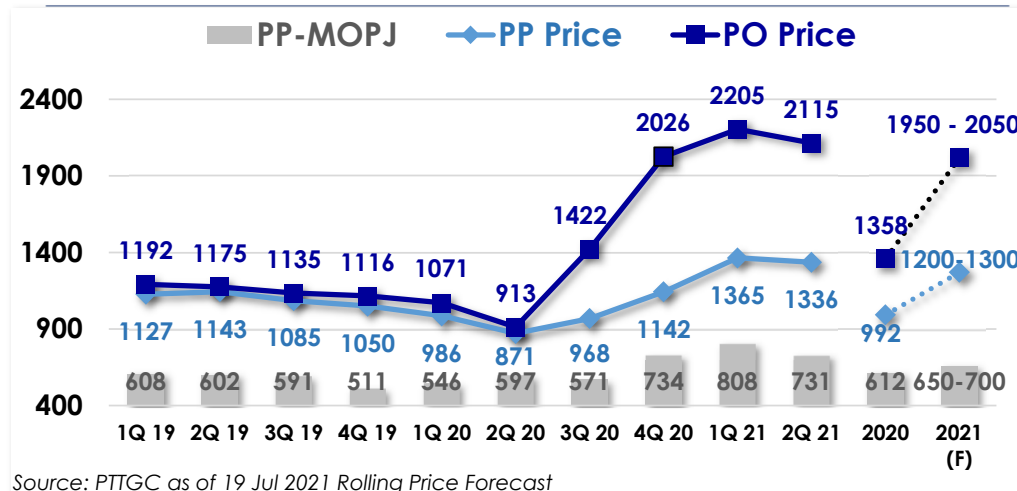
- Supply loss in NEA, US & turnaround season support Q2/21 Phenol market with good end products demand in construction & household
- Phenol new capacities in China ~0.5 MMT hanging from 2020 still effect phenol margins in 2021

- High feedstock costs push up price in Olefins market with pressure
- Upcoming of new capacities and pandemic situation lead to a challenge in Olefins market

Ethylene & Derivatives Price, \$/T



Propylene & Derivatives Price, \$/T



Market Commentary : Olefins

PE

- **Firmer upstream prices** leading to support the market in 2H2021
- **Additional supply in Asia** ~6 MTA or 5% of global capacity from cracker capacity expansions will pressure in 2H2021
- **Risen freight cost & container shortages issue still exist through 2H2021** putting pressure on PE producers and finished goods exporters

MEG

- **MEG demand** supported by **high summer seasonality of Polyester** in 2Q2021
- **Recovery in US supply & new large scale MEG capacities** ~2 MTA pressure market sentiment in 2Q2021
- **MEG additional capacities** ~2 MTA or 4% of global capacity target to come on stream in 2H2021

PP

- ~3.5 MTA of capacity addition **will start up in 2H2021**; 3% of global capacity
- **The resurgence of COVID in SEA** dampen market sentiment in 3Q2021
- **Demand may get a boost from home appliances & packaging in 2H2021** amid the global vaccine rollout

PO

- **Global PO demand recovery** from **end products demand** in **household/automotive cushions, construction insulation, cold shield fridge & coating packaging** but pressure by challenged Polyols margin due to high new capacity this year
- 2H2021 **upcoming new PO & Polyols capacity** ~350 KTA & ~135 KTA; 3% & 1% of global capacity. However, **some plants may delay to early 2022**



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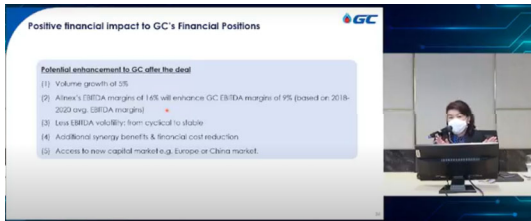
1H/2021 Key Financial Highlights

Achieving “step out” with allnex



- Growth platform into Industrial Coating Resins
- GC EBITDA margins enhancement
- Less EBITDA volatility: from cyclical to stable
- Additional synergy benefits & financial cost reduction
- Expand portfolio
- Refinancing allnex to minimize investment requirement

allnex communication



Maintaining Attractive Credit Ratings

**STANDARD
& POOR'S**

**BBB
(Stable)**

MOODY'S

**Baa2
(Stable)**

Fitch Ratings

**AA+ (th)
(Negative)**

WFH, productive and connected reaching customers and key stakeholders

Virtual conference activities

- Quarterly Analyst meeting
- SET opp. Day
- Roadshow
- AGM

1H/2021 performance highlights: Maintain a good momentum



Revenue	Adjusted EBITDA	Sharing from JVs&Asso.	Operating Profit	Net Income
213,657 MB	29,472 MB	4,225 MB	19,228 MB	34,730 MB
(+32% QoQ)	(+130% QoQ)	(+>200% QoQ)	(+>200% QoQ)	(+>200% QoQ)



Revenue growth from higher chemicals price



ARO, PC

Stronger Aromatics, Performance Materials and Chemicals (PC)



OLE

Continual strong of Olefins & Derivatives



Increasing contribution from JVs & Asso.



U-rate maximization

REF 101% ARO 100% OLE 98% (+ORP) POL 105%



Extra items

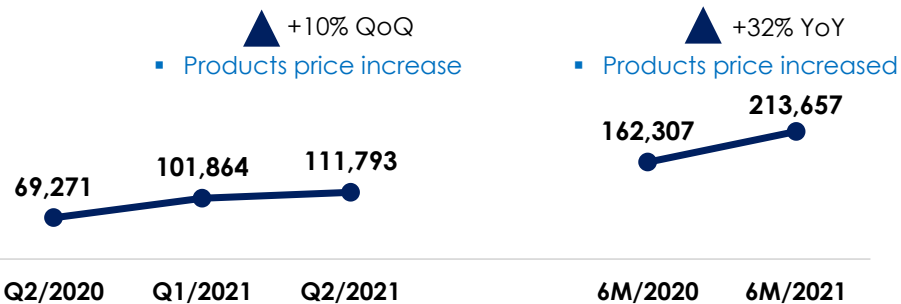
- Gain from Restructuring in Power Business (GPSC)
- Loss from impairment of investment (Emery)

Olefins and Performance Materials and Chemicals remained strong



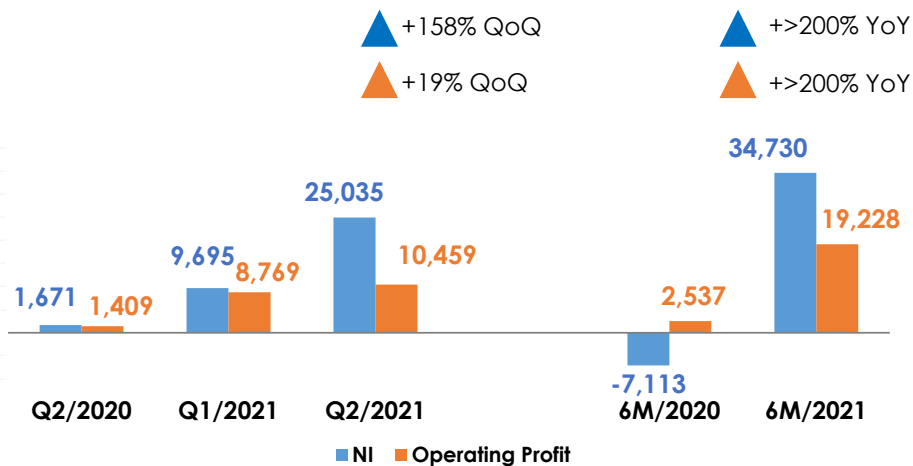
Revenue

Unit: MB



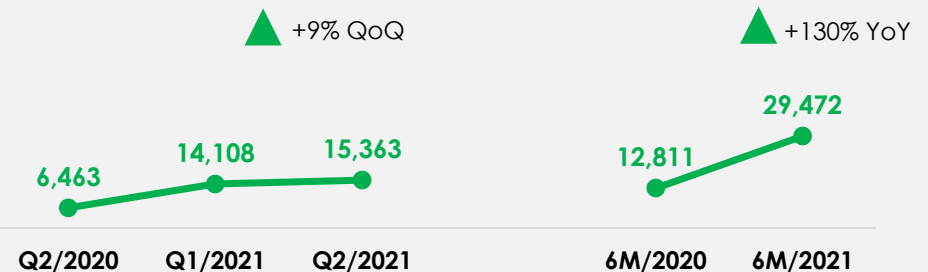
Operating Profit and NI

Unit: MB



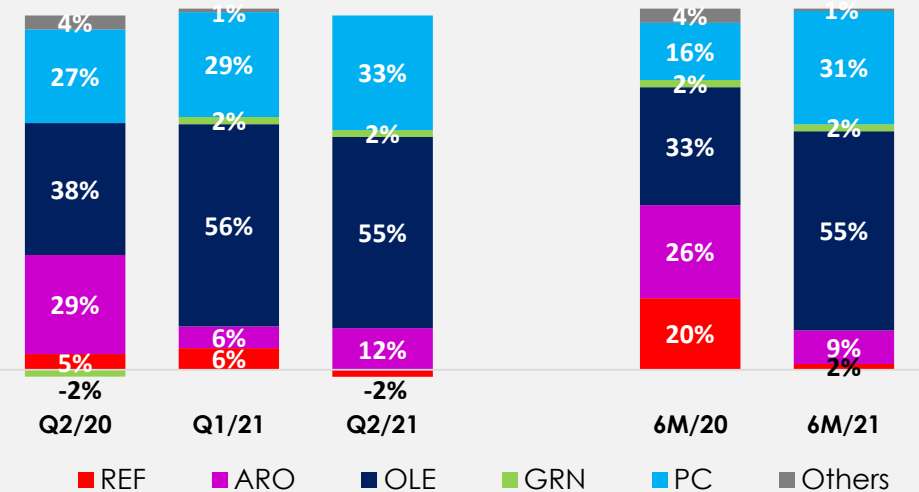
Adjusted EBITDA*

Unit: MB



Note: Adjusted EBITDA refers EBITDA excluding stock gain/(loss), NRV and Extra item

Adjusted EBITDA contribution by Business units

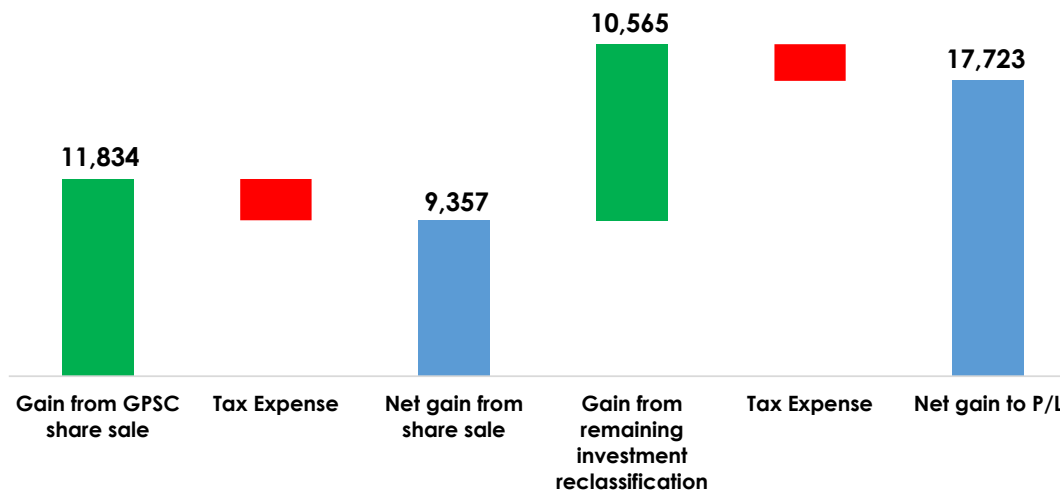


Extra Items

1

Gain from Restructuring in Power Business

(Unit: MB)



Subsequence:

- The **remaining 10%** shareholding will be treated as "Investment in financial asset" and **marked-to-market in OCI** every period-end
- Change accounting method from "share of profit" to "dividend income"

2

Impairment in Oleochemicals Business

- Emery's impairment of 3,021 MB related to change in business outlook of Oleochemical business in Asia Pacific was impacted by Indonesia's policy change in tax for export of palm oil announced in 2021
- Value after impairment reflect Emery's focus on Specialty oleochemical business, which is Emery's strength

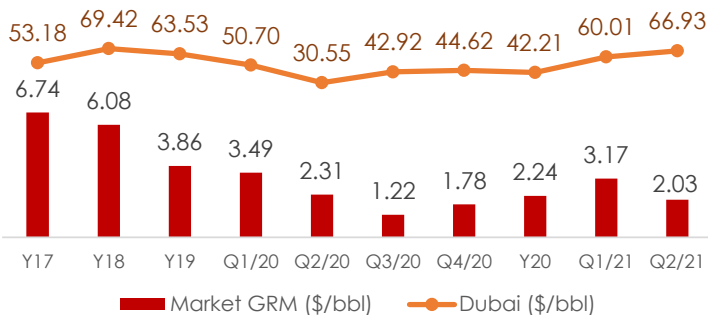
Overview of business unit performance



Refinery

- ↓ **YoY** : Adjusted EBITDA declined mainly due to lower GRM and higher crude premium.
- ↓ **QoQ** : The market gain support from the re-opening society in the US and Europe and the strictly control of supply from OPEC+. However, Adj EBITDA declined mainly due to lower GRM affected by higher crude premium.

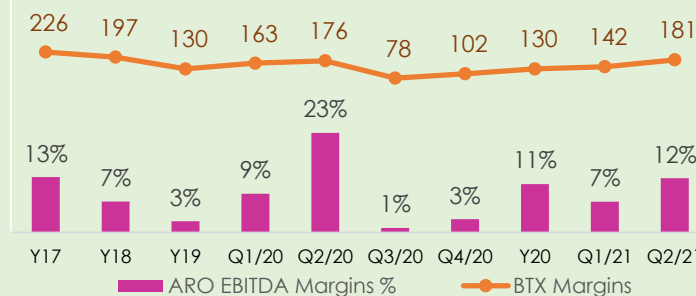
	Q2/20	Q1/21	Q2/21
Adj.EBITDA	291mb	841mb	-370mb
Dubai	\$30.55/bbl	\$60.01/bbl	\$66.93/bbl
Mkt GRM	\$2.31/bbl	\$3.17/bbl	\$2.03/bbl
Diesel-Dubai	\$5.73/bbl	\$4.74/bbl	\$5.25/bbl
LSFO-Dubai	\$8.42/bbl	\$13.45	\$11.24/bbl
U-rate	102%	102%	101%
Major T/A	-	-	-



Aromatics

- ↑ **YoY** : Adjusted EBITDA increased supported by healthy downstream demand in BZ chain eg. SM and PHN.
- ↑ **QoQ** : Adjusted EBITDA increased as PX was supported by a peak polyester seasonal, while BZ was supported by healthy downstream demand from SM, PHN chain, and remaining of low inventory in China.

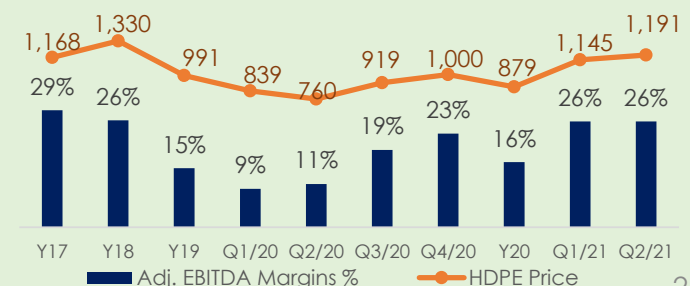
	Q2/20	Q1/21	Q2/21
Adj.EBITDA	1,846mb	859mb	1,885mb
P2F on BTX	\$176/t	\$142/t	\$181/t
PX spread	\$271/t	\$241/t	\$283/t
BZ spread	\$146/t	\$240/t	\$393/t
U-rate	99%	98%	102%
Major T/A	-	-	-



Olefins and Derivatives

- ↑ **YoY** : Adjusted EBITDA margin strongly improved as PE price gradually recovered, after declined to the bottom in Q2/21, supported by demand from packaging and Hygiene products.
- ↑ **QoQ** : Adjusted EBITDA margin remained strong at 26% as PE market was supported by higher crude oil price and tight supply in the region due to seasonal T/A.

	Q2/20	Q1/21	Q2/21
Adj.EBITDA	2,474mb	7,784mb	8,460mb
PE Price	\$793/t	\$1,275/t	\$1,305/t
EBITDA margin	11%	26%	26%
OLE U-rate	100%	104%	93%
POL U-rate	102%	105%	105%
OLE Major T/A	-	-	-
POL Major T/A	LL1	HD	LD



Overview of business unit performance (cont'd)



Green Chemical

- ↑ **YoY** : higher ME price & higher FA sales volume supported improving performance.
- ↓ **QoQ** : mainly due to lower ME sales volume as lower demand impacted from COVID-19, even FA performance improved.

	Q2/20	Q1/21	Q2/21
Adj.EBITDA	-129mb	334mb	236mb
ME P2F	B3.11/kg	B3.11/kg	B3.11/kg
FA P2F	\$332/t	\$265/t	\$274/t
U-rate ME	79%	69%	62%
U-rate FA	89%	53%	89%



Performance Material

- ↑ **YoY** : Adj EBITDA sharply increased due to solid performance of PHN chain supported by tight supply and downstream demand. With strong PO/PY performance help boost Adj EBITDA as well.
- ↑ **QoQ** : Adj EBITDA increased due to continuation strong performance in PHN chain and PO/PY. With stronger performance from higher contribution margin of VCR.

	Q2/20	Q1/21	Q2/21
Adj.EBITDA	1,717mb	4,130mb	5,110mb
PHN P2F	\$614/t	\$467/t	\$462/t
BPA P2F	\$298/t	\$1,428/t	\$1,934/t
U-rate	117%	119%	115%
Major T/A	-	-	-
PO	\$913/t	\$2,205/t	\$2,115/t
Polyols	\$1,229/t	\$2,608/t	\$2,544/t



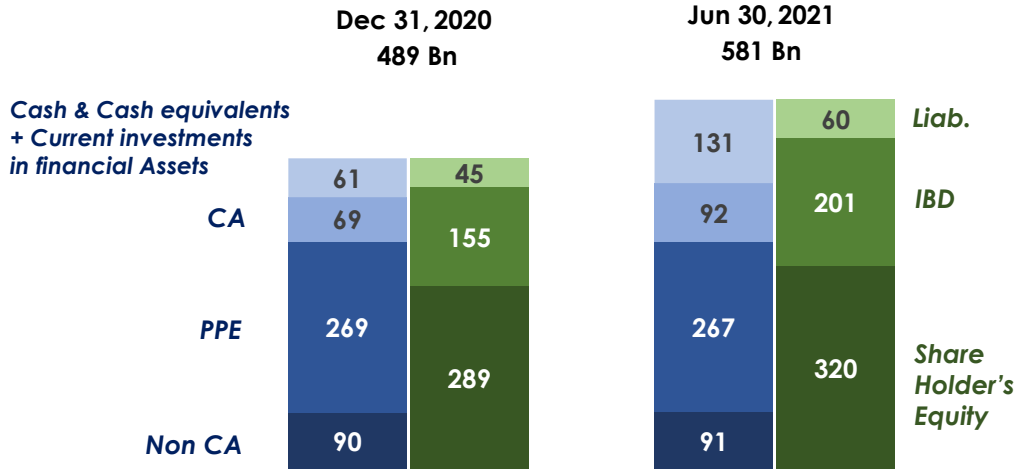
Other businesses

- ↑ **YoY** : NI contribution sharply increased mainly from Chemicals business (PP, PVC, AN, MMA), which supported by the progress of vaccination rollout, higher demand, and supply disruption.
- ↑ **QoQ** : NI contribution increased with the mentioned reason.

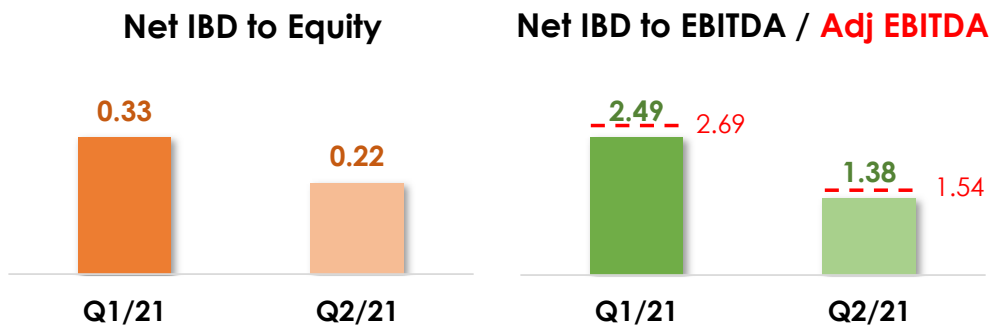
	NI (mb)	Q2/20	Q1/21	Q2/21
Chemicals		7	1,043	1,594
Power		424	449	317
Bio plastic		325	224	306
Others		51	184	108
Total JVs & Asso		807	1,900	2,325
AN - Propylene		\$308/t	\$1,122/t	\$1,471/t
PP - Propylene		\$227/t	\$379/t	\$327/t

Strong Financial Position

Statements of Financial Position

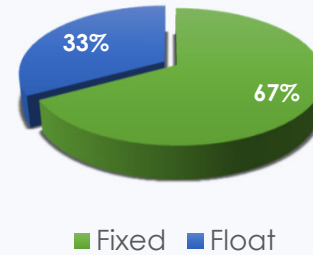


Statements of Financial Position

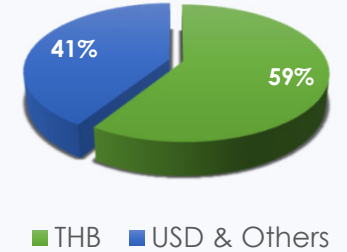


Long Term Debt Portfolio

Interest Breakdown



Currency Breakdown



Total Long Term Debt THB 191 Bn
As of 30-Jun-21

Avg. Loan Life	6.77 yrs
Cost of Debt	3.17 %

Affirmed Credit Rating after allnex acquisition

**STANDARD
& POOR'S**

BBB
(Stable)

MOODY'S

Baa2
(Stable)

FitchRatings

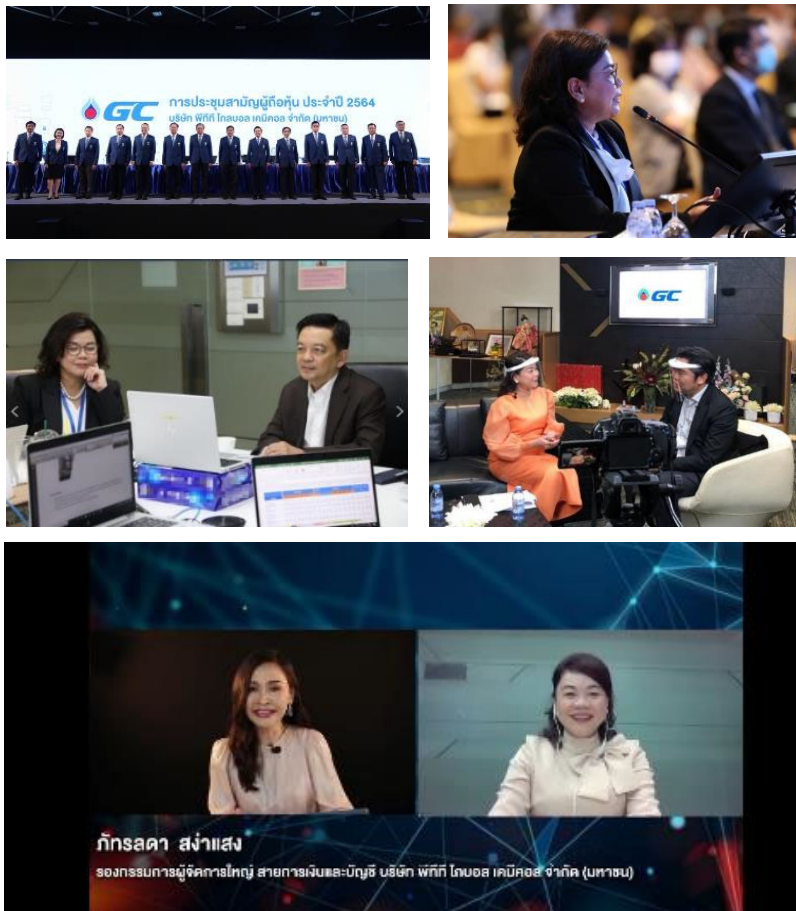
AA+ (th)
(Negative)

Committed Capex to support GC's sustainable growth

Projects	Total 2021-2025	Estimated Annual CAPEX (M.USD)				
		2021	2022	2023	2024	2025
1) Key projects						
- Recycled Plant: ENVICCO	25	25				
- Super Engineering Plastic: KGC	30	28	2			
- OMP	157	47	91	19		
2) Other projects	429	204	110	89	24	2
Total	641	304	203	107	24	2
3) allnex acquisition	4,802	4,802				
4) Tender offer for VNT delisting	238	238				
GC group Grand total	5,681	5,344	203	107	24	2
5) JV Own Investment: NTR	600					
<u>Funding plan</u>						
i) Internal cash						
ii) PTT DLC (credit term extension)						
iii) PTT shareholder loan						
iv) Bridge financing from banks						

- Notes:
1. Group annual maintenance ~ 250-300 M.USD
 2. Other projects such as IT & digital, new office facility, etc.
 3. FX → 31.5 THB : USD / 1 Eur : 1.2 USD

1H/2021 PTTGC's key announcements



- 1 Olefins 2 Modification Project (OMP) FID (Jan'21)
- 2 Issuance of US\$ 1,250 Million Debentures (Mar'21)
- 3 Tender offer for VNT delisting plan (Mar'21)
- 4 Annual General Meeting (Apr'21)
- 5 Treasury Stock share resale approval (May'21)
- 6 GPSC share disposal completion (Jun'21)
- 7 allnex acquisition (Jul'21)
- 8 NatureWorks PLA plant#2 FID (Aug'21)

Maintenance Shutdown Schedule 2021 (reflected T/A postponement plan from COVID-19)

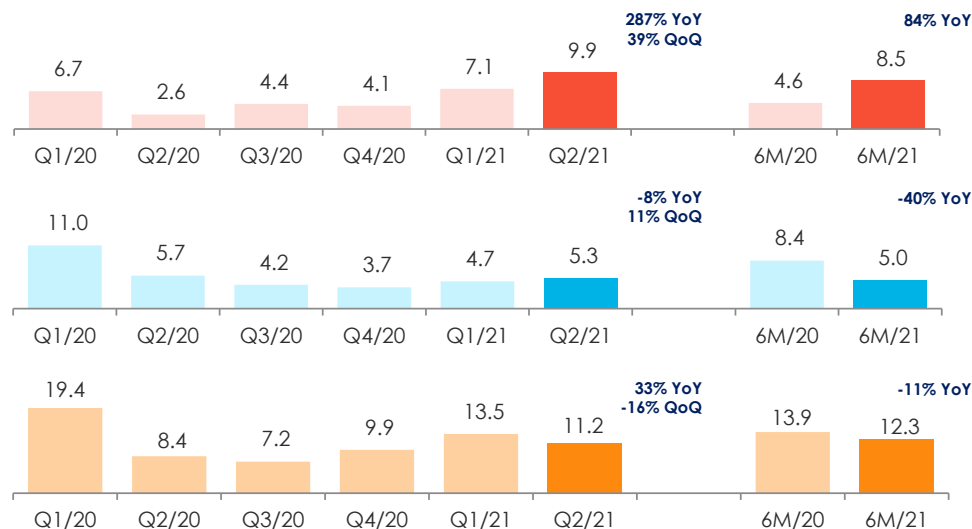


Plant		2021												2022
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
OLE	Cracker										39			39
	Oleflex								37		37			
POL	HDPE			15 BPE1				14 BPE2		38	HDPE2			
	LDPE					12					24			
											15			
	LLDPE I										20		20	
	LLDPE II													
	PS									12				
EOB	TOCGC													
	EA													
PHN	Phenol I							32				30		
	Phenol II													
	BPA			15										
REF	Refinery									13				
ARO1	Aromatics I													
ARO2	Aromatics II													

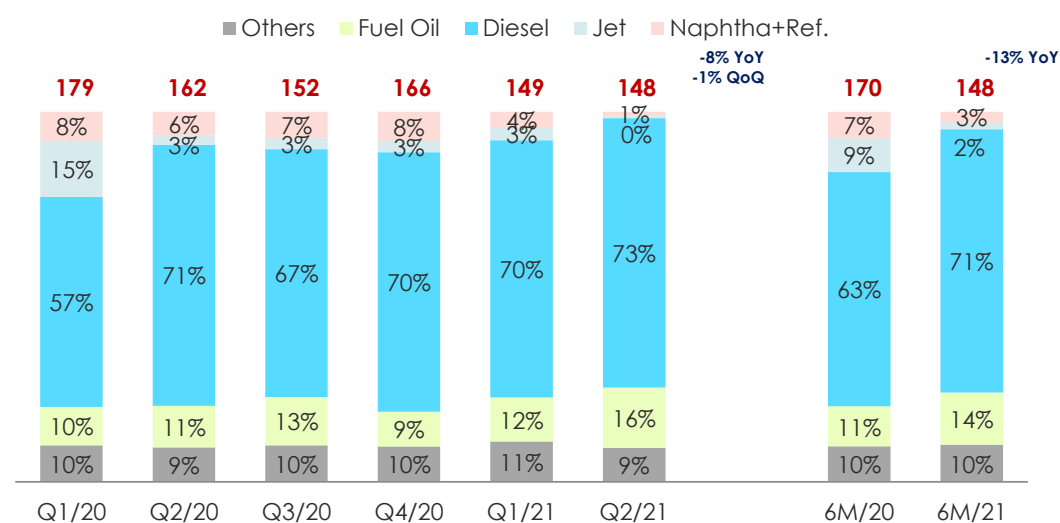
Refinery Performance



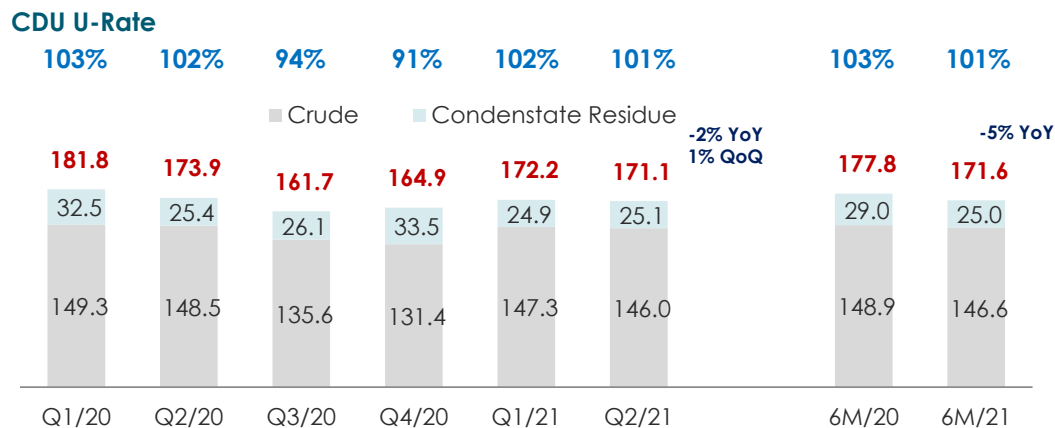
Petroleum Products - Dubai Spread (USD/BBL)



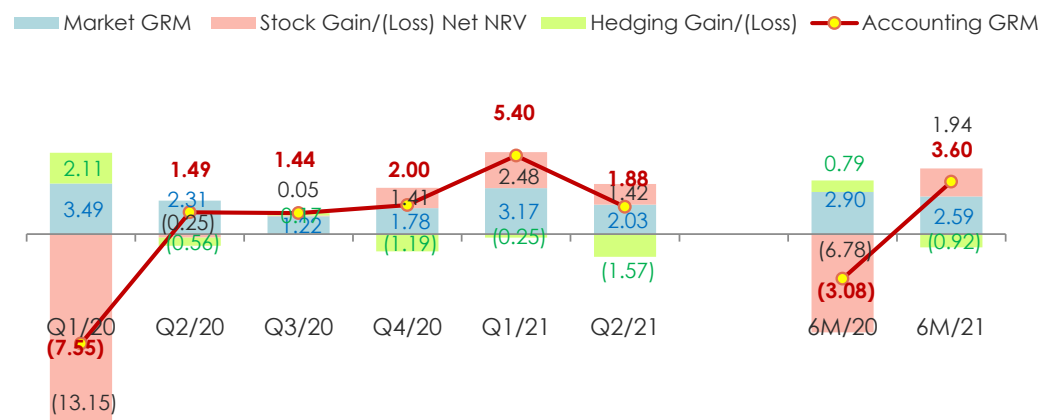
Refinery Sales Volume (KBD)



Refinery Intake (KBD)



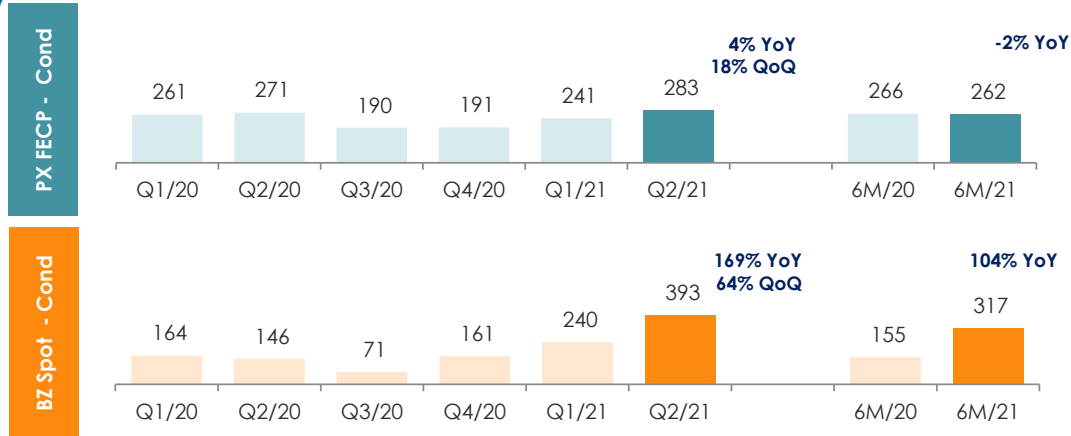
Gross Refinery Margin (USD/BBL)



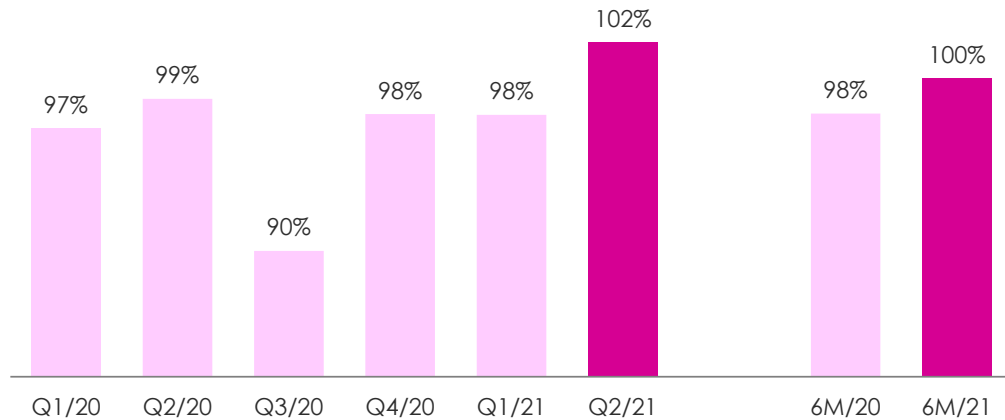
Aromatics Performance



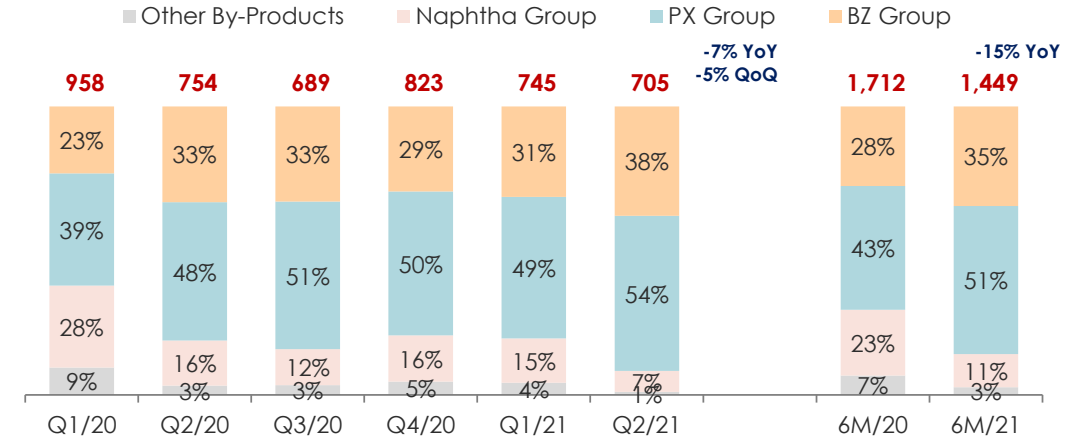
Aromatics Products Prices and Spread (USD/Ton)



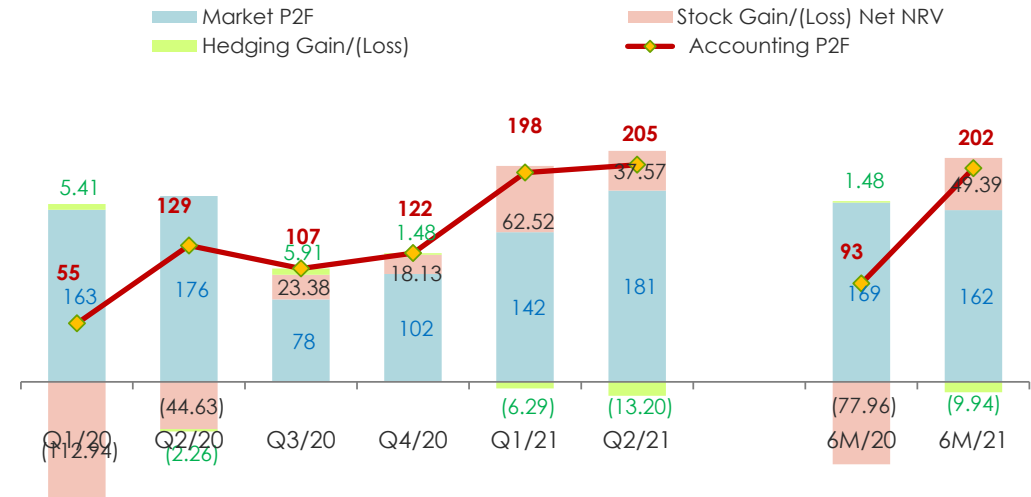
BTX U-Rate (%)



Aromatics Sales Volume (Ktons)



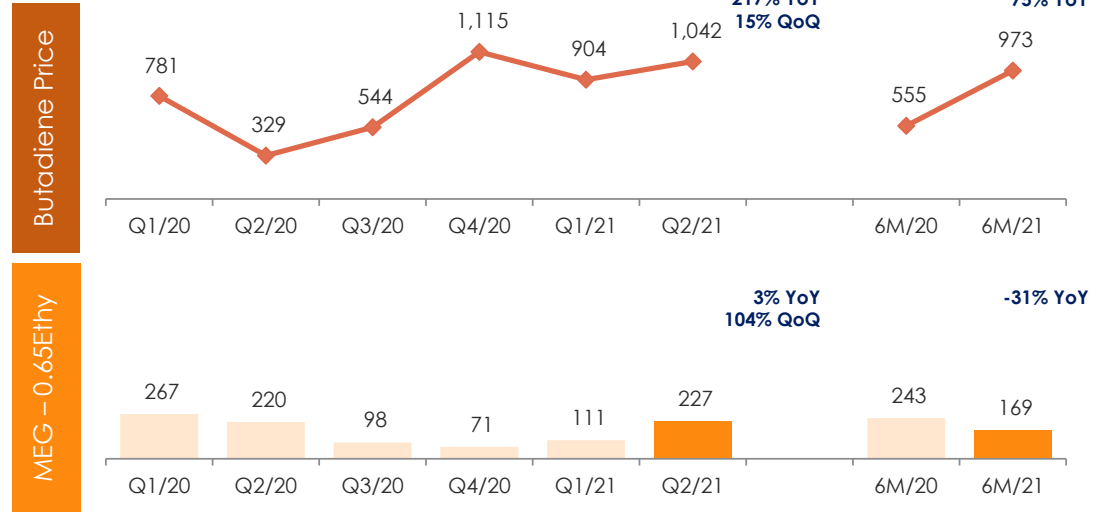
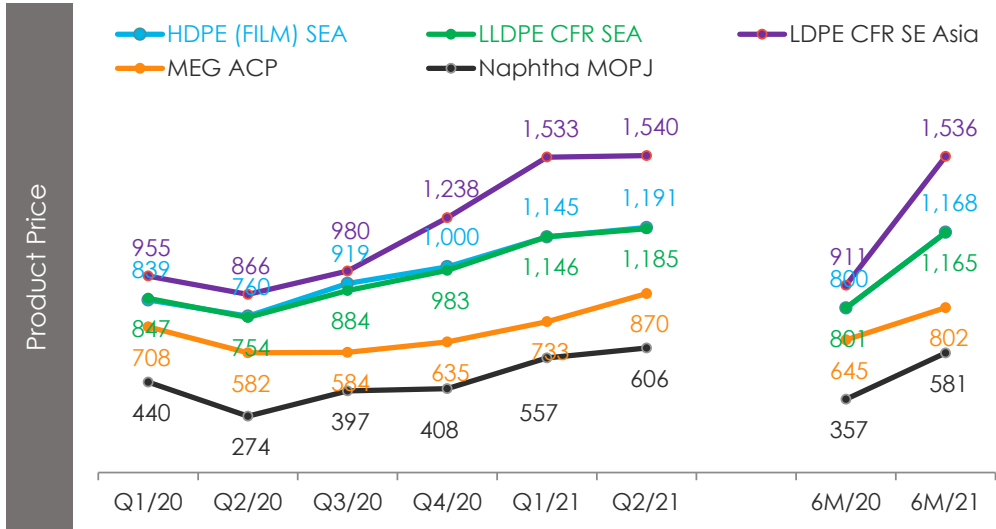
Products to Feed Margin (USD/Ton BTX)



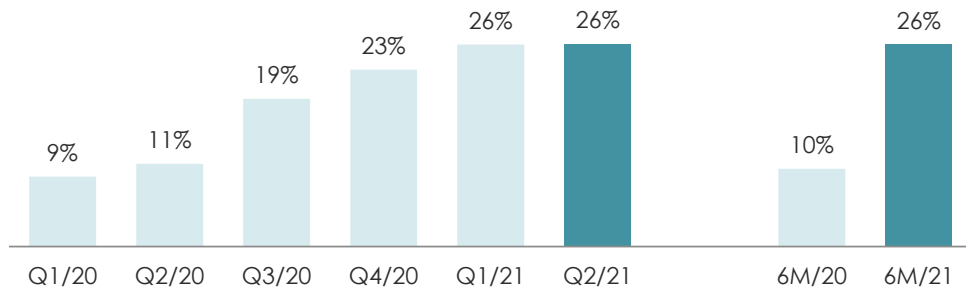
Olefins and Derivatives Performance



Olefins Prices and Spread (USD/Ton)



Olefins Adjusted EBITDA Margin*



Olefins U-Rate (%)

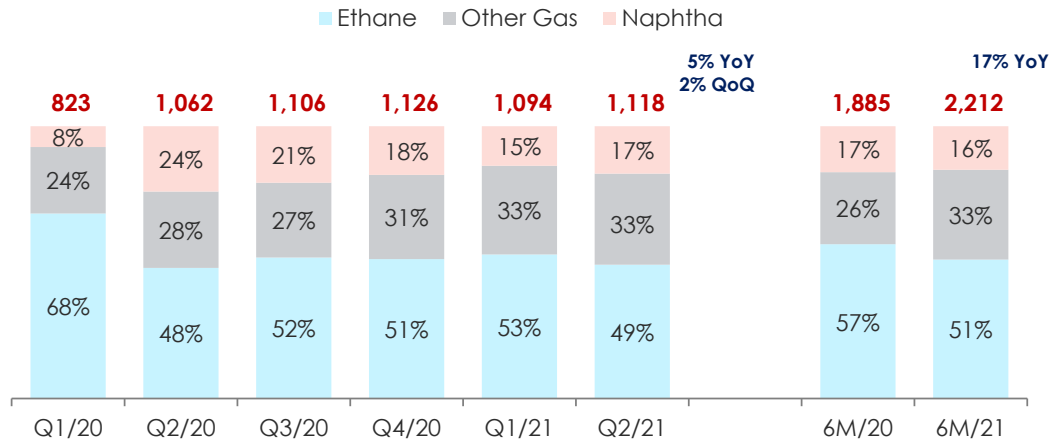
	Q1/20	Q2/20	Q3/20	Q4/20	Q1/21	Q2/21	6M/20	6M/21
Olefins	81%	100%	103%	104%	104%	93%	91%	98%
HDPE	97%	103%	111%	110%	107%	107%	100%	107%
LLDPE	88%	92%	94%	113%	96%	106%	90%	101%
LDPE	69%	122%	110%	102%	123%	100%	95%	111%
Total PE	89%	102%	104%	110%	105%	105%	95%	105%
MEG	97%	97%	96%	91%	105%	104%	97%	104%

Note *Excluded effect of PTA and PET

Olefins and Derivatives Performance

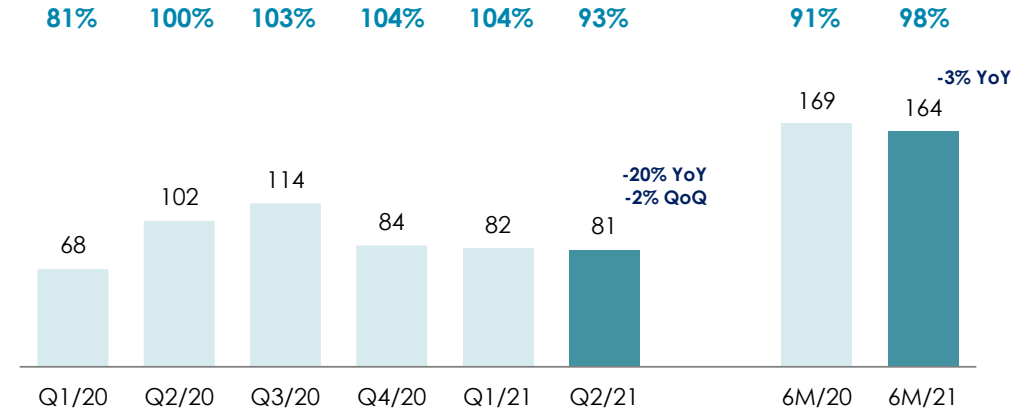


Olefins Intake (Ktons)



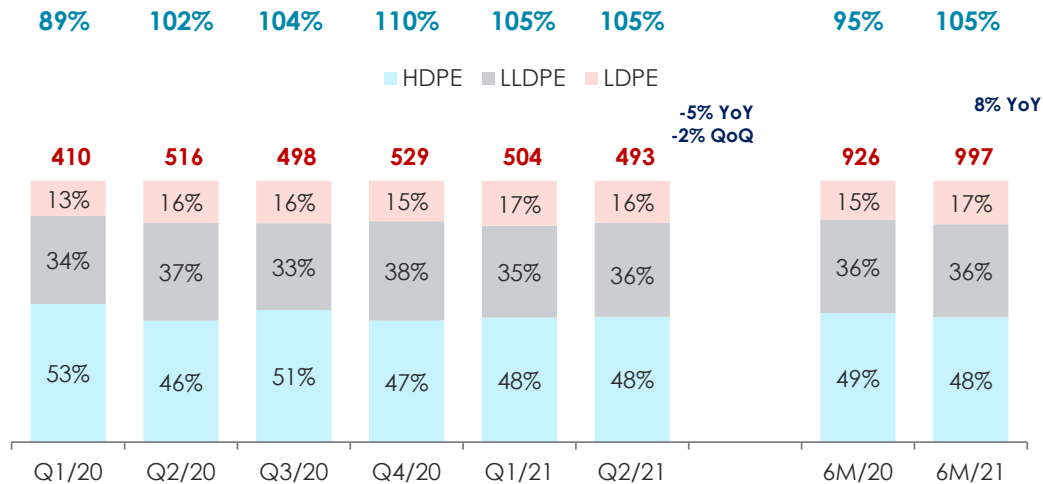
Olefins Sales Volume (Ktons)

Olefins U-Rate



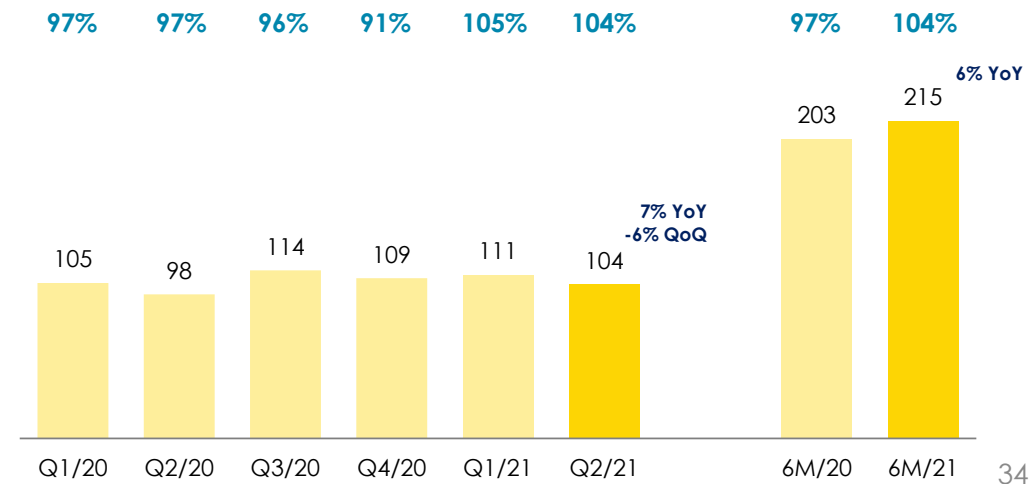
PE Sales Volume (Ktons)

PE U-Rate



MEG Sales Volume (Ktons)

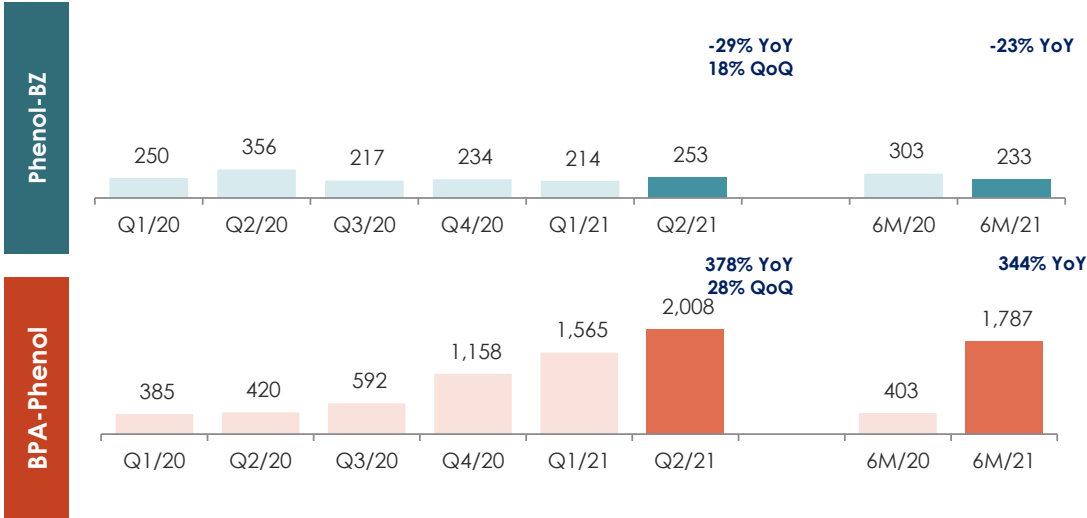
MEG U-Rate



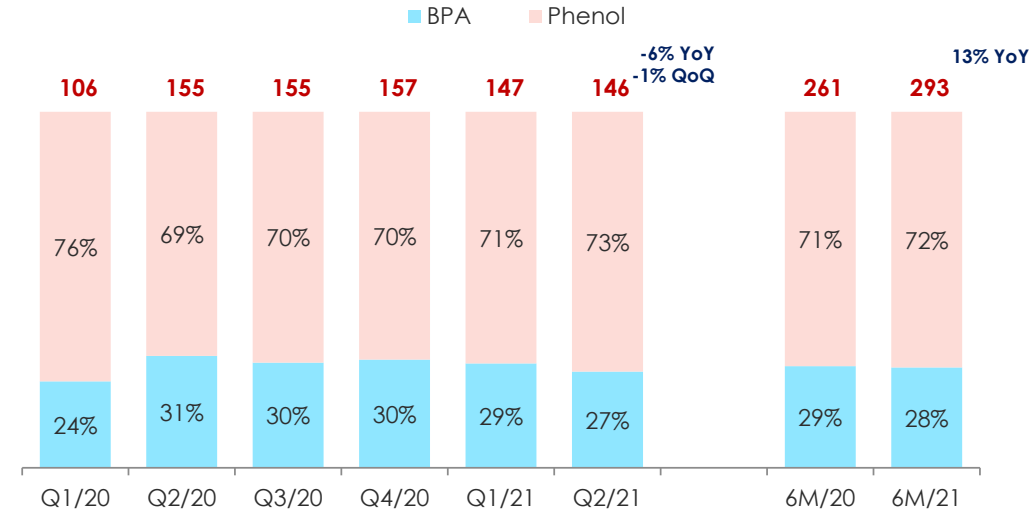
Phenol Performance



Phenol/ BPA Prices and Spread (USD/Ton)



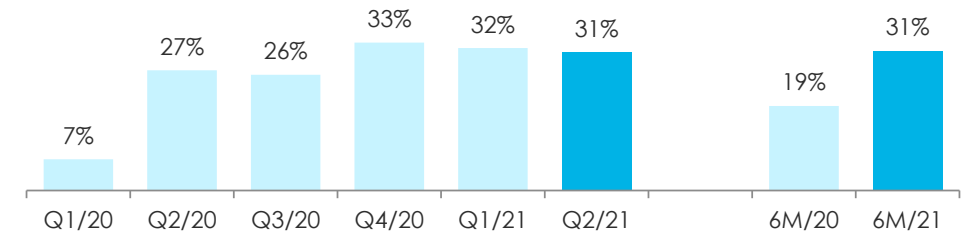
Phenol Sales Volume (KTons)



Phenol U-Rate

U-Rate	Q1/20	Q2/20	Q3/20	Q4/20	Q1/21	Q2/21	6M/20	6M/21
Phenol	83%	117%	119%	119%	119%	115%	100%	117%
BPA	83%	120%	116%	114%	114%	103%	101%	109%

Phenol Adjusted EBITDA Margin



Thank You

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