

# ANALYST MEETING

1Q21 Operating Results

17 May 2021

**Sustainability Award**  
Gold Class 2021  
**S&P Global**

Member of  
**Dow Jones**  
**Sustainability Indices**  
Powered by the S&P Global CSA



# AGENDA



**1Q21 Key Highlight**



**IRPC Strategy**



**Industry Outlook**



**Operation & Financial**



# 1Q21 Key Highlight



## \$ 13.68/bbl MKT GIM

- Improved MKT GIM by \$ 2.67/bbl QoQ
- Driven by growing Petrochemical demand, gasoline demand and tight lube base oil supply



## \$ 9.83/bbl Net Stock Gain

- Increased \$ 7.39/bbl QoQ
- Oil price soared as OPEC+ agree to keep production cuts and severe winter storm that hit Texas



## 86% Refinery utilization rate

- Decreased by 6% QoQ as planned shutdown of ADU1 unit
- Resumed operation 2 days sooner than planned

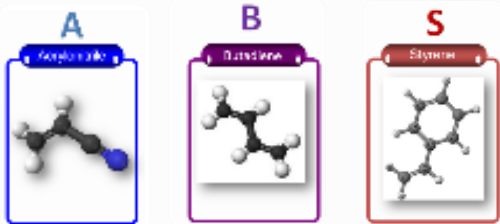


# ABS Expansion: Increasing ABS specialty by 6,000 MTA

## ABS Expansion

### PROJECT OBJECTIVE :

- 🎯 Increase 6,000 MTA of Specialty ABS Powder
  - 🎯 Recovery Vapor Butadiene 278 MTA from Flare
- CAPEX : ~ 430 MB**



### Acrylonitrile (ACN)

- Chemical resistance
- Heat stability
- Tensile strength
- Aging resistance

### ABS

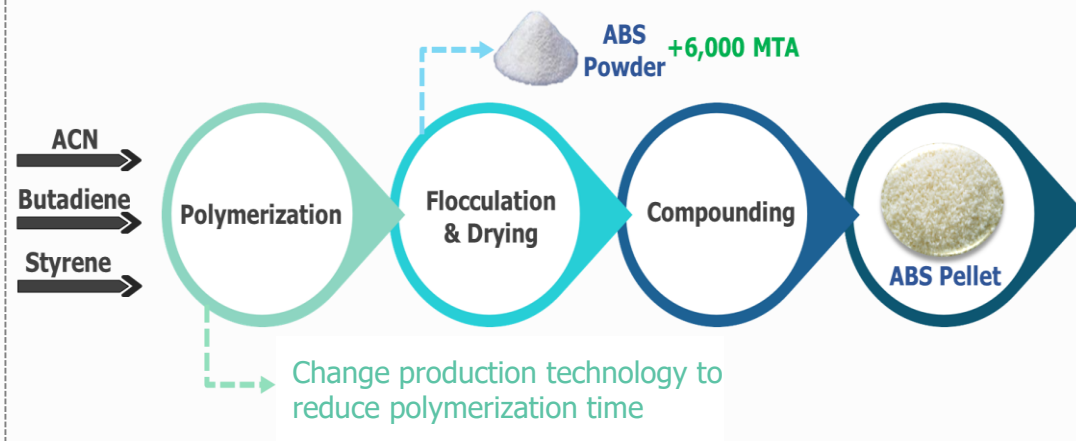
- Toughness
- Impact strength
- Low temperature properties

- Gloss
- Processibility
- Rigidity

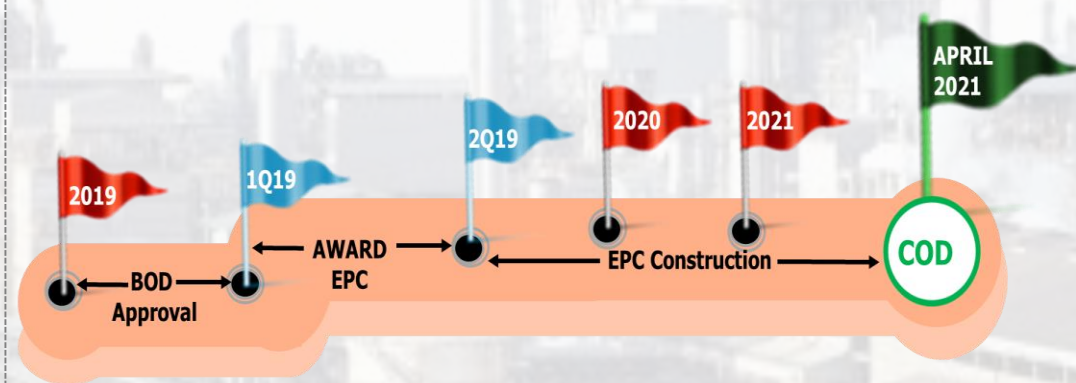
### Butadiene

### Styrene

## Flow Diagram



## Project Timeline



## End Market



# Establish "Innoplymed" as PTT Group Flagship for Medical Consumables

## Shareholders Structure



## INNOPOLYMED

### Business Scope / Objective

- Medical Consumable and Non-woven Fabric Businesses

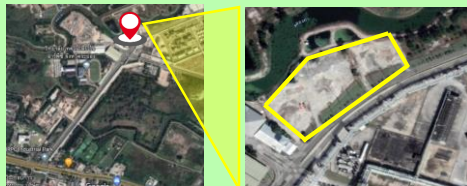
### Benefits

- ✓ Enter to new S-Curve business
- ✓ Capture Net Import volume (TH)
- ✓ Value Chain Expansion
- ✓ PTT Group Synergy

### Location

#### IRPC Land

- IRPC Industrial Estate, Rayong Thailand



## Value Chain

### PP Melt Blown Resin



- Laboratory-Scale Testing in 3Q21

### Melt Blown Converter



**Capacity: 2.1 KTA**



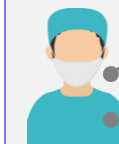
- Melt blown fabric production
- Plan to COD by 4Q21

### Non-Woven Fabric



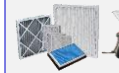
- Sale and Marketing
- Domestic
- Export

### Application



**Mask**  
e.g. Surgical, N95, N99

**Gown**



**Filter**  
e.g. Water, Air and Coffee

**Other**

e.g. Battery Separator/  
PPE/ Hygiene

## Timeline

**11 Jan 2021 - IRPC and PTT signed MOU to explore opportunity in Life Science Business**



100% Thailand Mask made by IRPC Certified Materials

1 NON-WOVEN FABRIC  
2 MELT BLOWN FABRIC  
3 NON-WOVEN FABRIC

EPC

# Awards and Achievement in 1Q21



**PTT and IRPC to Join Hands on Developing Materials for Medical Appliances to Upgrade Thais' Quality of Life**

Melt blown Fabric and NBL will be launched in 2022 and 2025, respectively



**IRPC Jointed with Navamindradhiraj University to Found Thailand's First Medical Appliances Examining Laboratory**

The laboratory construction is expected to complete in 2021



**IRPC and Innobic (Asia) Founded "Innoplymed", A Joint Venture for Medical Appliance Business**



**IRPC received the Gold Class S&P Global Sustainability Award 2021 in the Oil & Gas Refining and Marketing Industry Leader**

Continued to be Dow Jones Sustainability Indices (DJSI) Member for the 7th Consecutive Year



## Sustainability Journey

DJSI CSA & RobecoSAM Year Book Result



# COVID-19 Infection Risk-Free-Zone

## Employee Care

- ❖ Work from home mode
- ❖ Utmost personal hygiene wherever whenever
- ❖ Update with authorities and regulations
- ❖ Daily check-in required
- ❖ IRPC's COVID-19 war room

## Working Process Efficiency

- ❖ Restricted production unit area
- ❖ BCM plan from feed and procurement to product delivery



## Community Protection

- ❖ Donate medical equipment to governmental units and hospitals



medical innovation to fight with Covid-19.

# AGENDA



**1Q21 Key Highlight**



**IRPC Strategy**



**Industry Outlook**



**Operation & Financial**





# IRPC Policy



## SAFETY

- PROCESS SAFETY MANAGEMENT
- SAFETY EXCELLENCE
- SAFETY CULTURE
- FIT FOR DUTY (Fit 2 Work)

## SMOOTH

- STRENGTHEN
- GOAL ZERO ABC
- COMPLIANCE & BRANDING
- CSR STRATEGY

## SMART

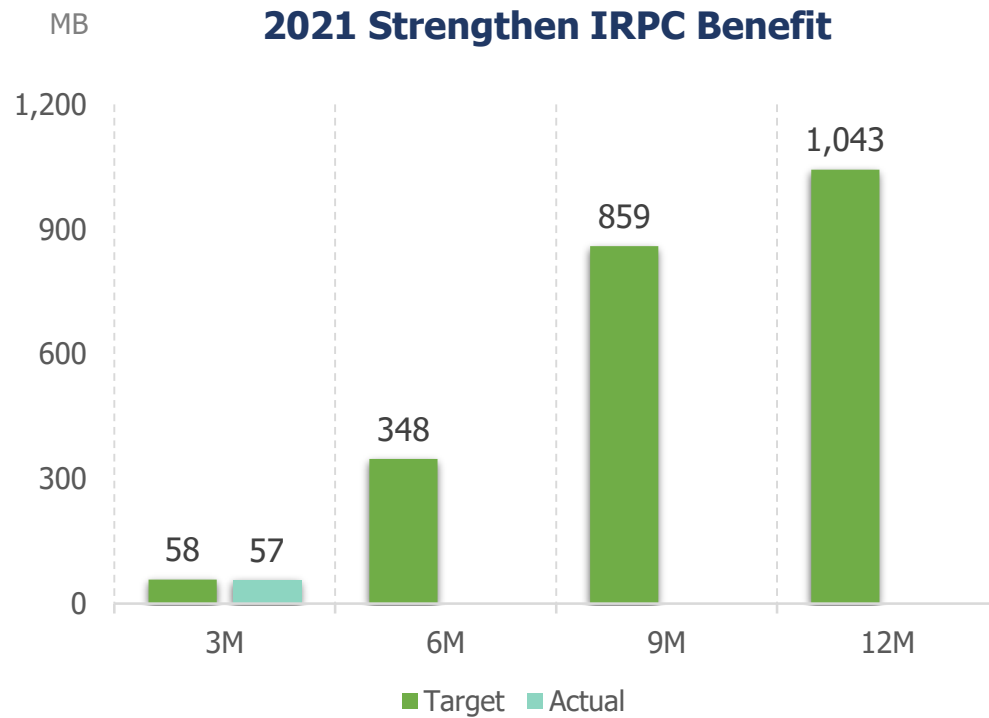
- NOAH
- IRPC4.0
- UCF
- ANT/ SPECIALTY
- GALAXY (M&A)







# 2021 Strengthen IRPC

## "Strengthen IRPC" program

- Turnaround the Low Performer assets by RTS

**Benefit Target**  
**+4,552 MB**  
2020-2024



Business Unit	3M21 (Target)	3M21 (Actual)
<b>Petrochemical</b>  Strengthen Petrochemical Business	7	6
<b>Refinery</b>  Strengthen Refinery Business	6	6
<b>Infrastructure</b>  Strengthen whole Infrastructure Business	35	35
<b>Engineering &amp; Maintenance</b>  Strengthen whole Engineering & Maintenance Business	0	0
<b>Account and Finance</b>  Strengthen whole Account and Finance Business	0	0
<b>Integrated Supply Chain</b>  Strengthen whole Integrated Supply Chain Business	9	9
<b>Total (MB)</b>	<b>58</b>	<b>57</b>

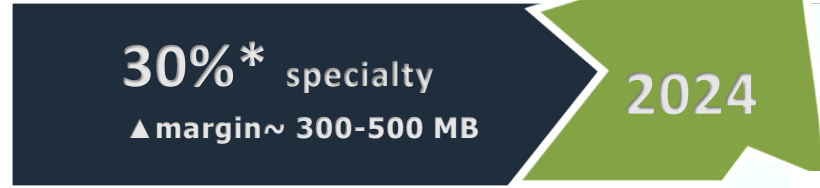
# How to escalate specialty portion

Expedite Specialty Product in focusing area from 17%\* in 2020 to 30%\* in 2024

## Key Focus

- ❑ Added Value to Existing products platform
- ❑ Go to trendy and friendly market
- ❑ Stretch to Mobility
- ❑ Focus on Growth Sector and Specific Chain e.g. Medical & Hygiene, Automotive, E&E, Construction and HVA Packaging
- ❑ Drive through Strategic Partner
- ❑ Forward Integrate to serve end-customer needs

## Strategic Partners:



Lithium Battery Separator (LiBS)



Remark: \* % of total polymer sales volume

# NOAH: New Organization with Agile Human

## Further enhance business strategies after digital transformation

**New Organization with Agile Human (NOAH) is the implementation phase to "Transform Organization Capability-to-Perform"**



**Choices of Life Through Package**

- MSP** ( Lump sum retirement pay)
- ASP** ( Monthly retirement pay)

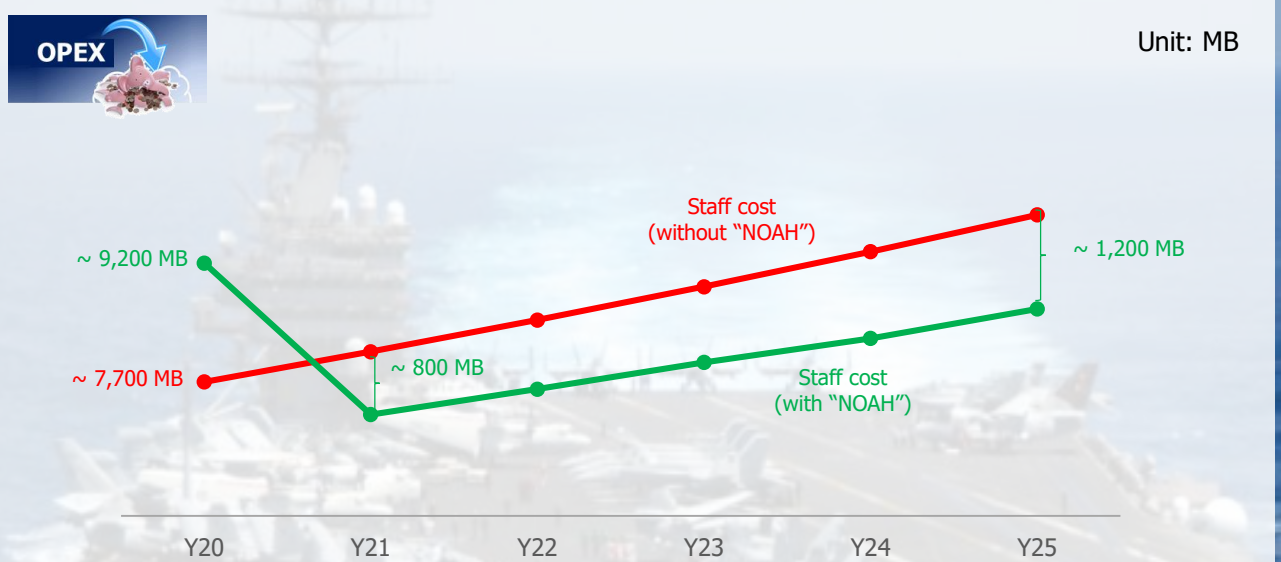
### Financial Benefit

1. HR cost reduction

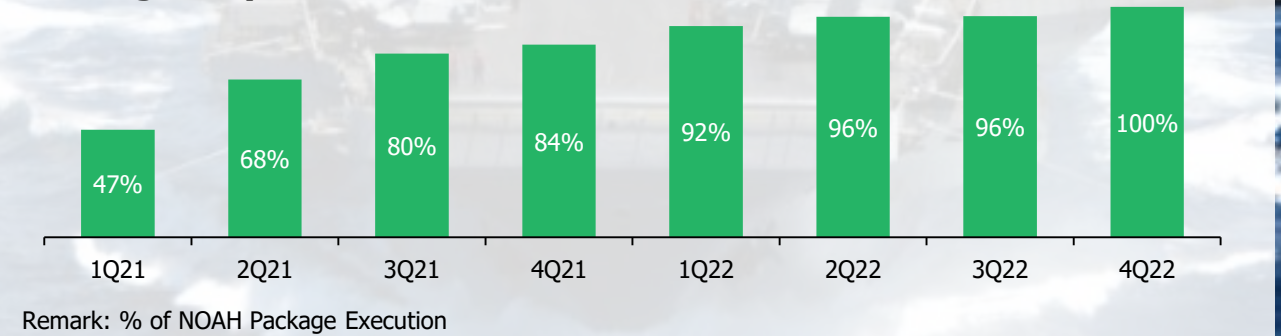
### Non-financial Benefit

1. Optimized Employee Demographic
2. Replacement with Outsource
3. Room for new talent

### E Benefit: Cost saving



### Package Implementation



# AGENDA



**1Q21 Key Highlight**



**IRPC Strategy**



**Industry Outlook**

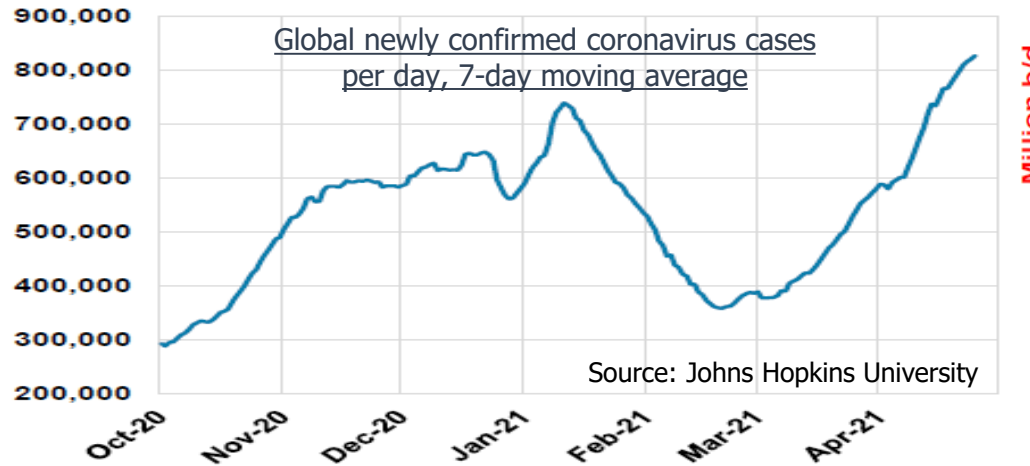


**Operation & Financial**

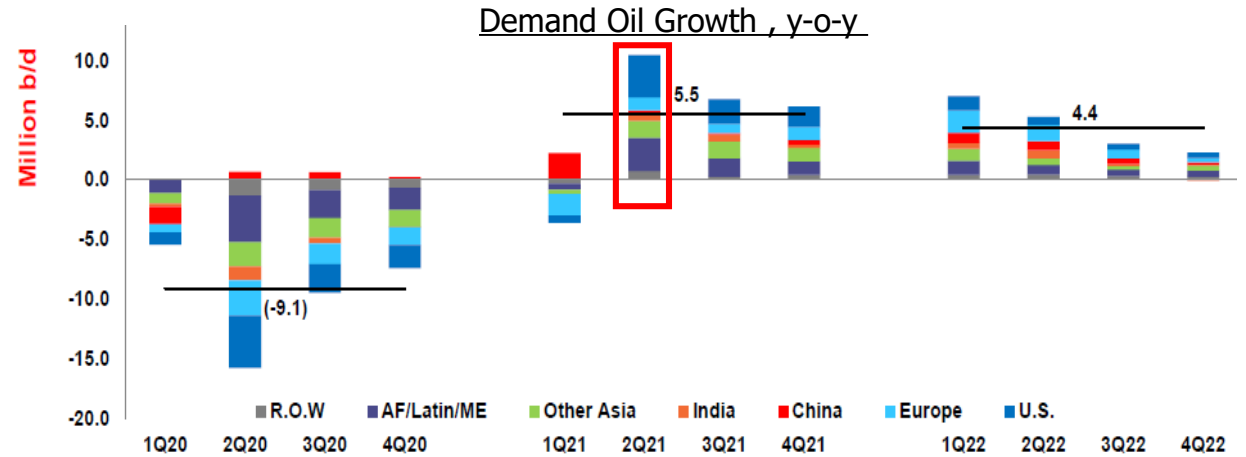


# Oil Demand Outlook

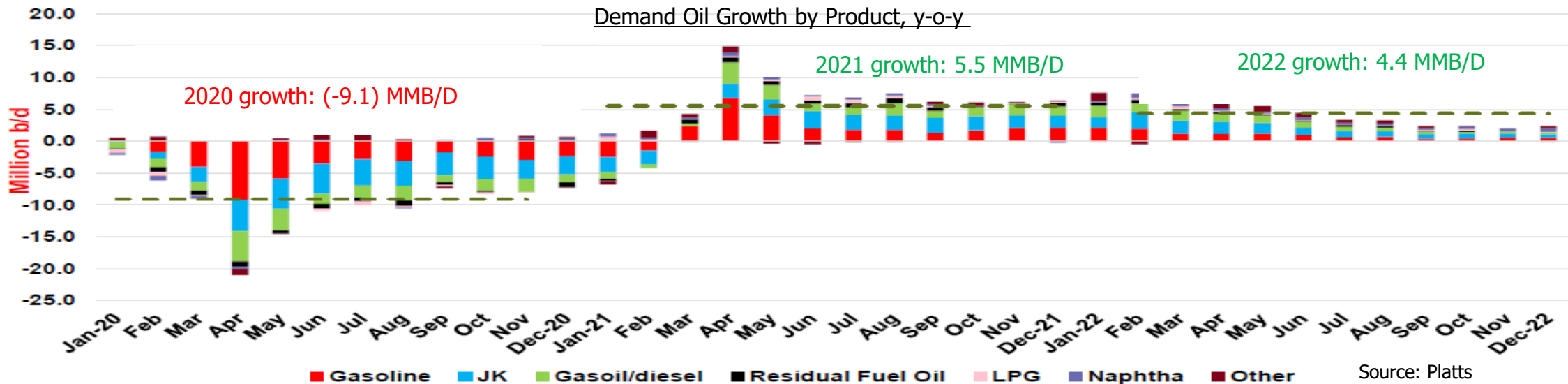
## Coronavirus still spreading fast



## Global oil demand to grow 10 million b/d in Q2



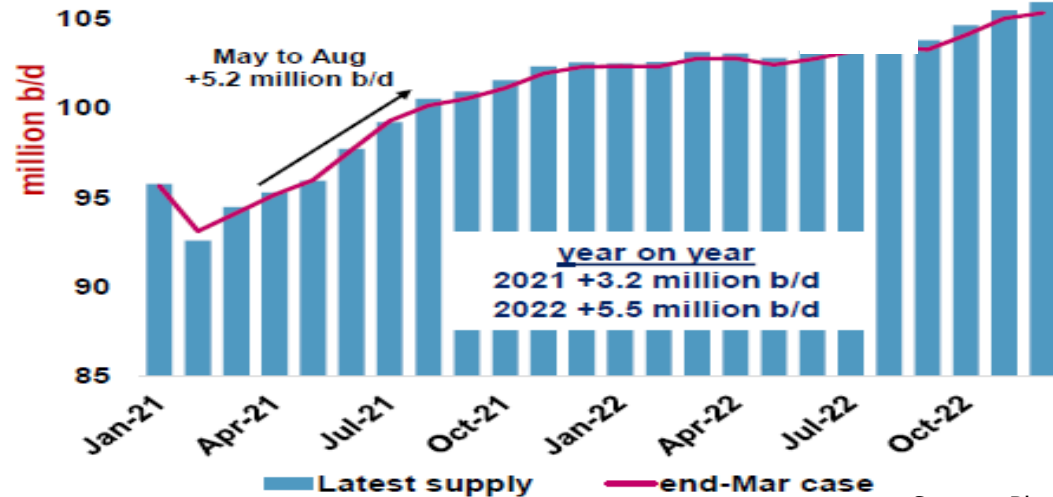
## Global oil demand to grow 5.5 million b/d in 2021



# Oil Supply Outlook

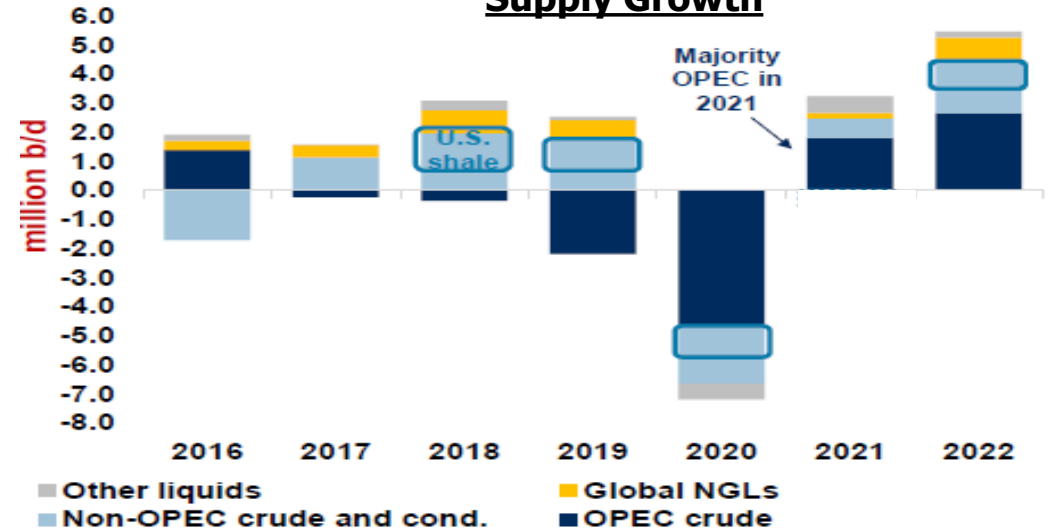
## Global oil supply driven by OPEC+ and deal US&Iran

### Global Supply Forecast\*



\*Includes non-crude liquids (NGL, ethanol, biodiesel, refinery gain, etc.) Source: Platts

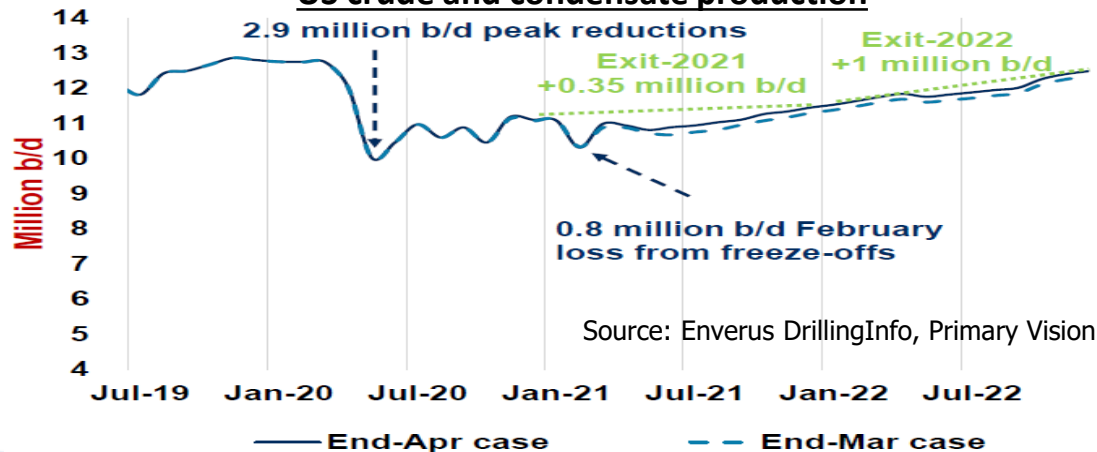
### Supply Growth



S

## US crude production growth in 2021 and 2022

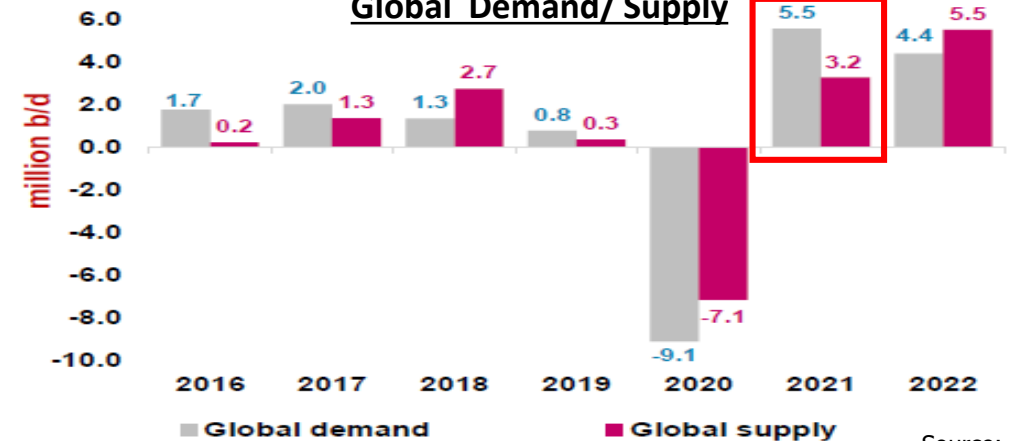
### US crude and condensate production



Source: Enverus DrillingInfo, Primary Vision

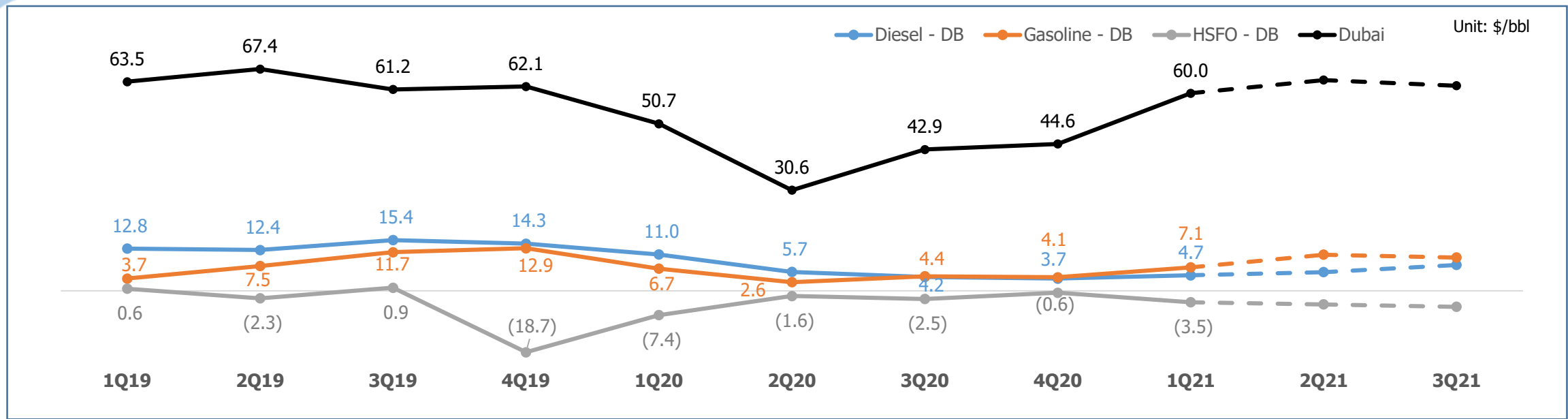
## Supply to follow demand in 2021

### Global Demand/Supply



Source: Platts

# 2Q21 & 3Q21 Petroleum Market Outlook



## Diesel

- ▲ Rising global demand on improving economic activities
- ▼ International flights remain under pre-COVID 19 level
- ▼ Re-Lockdown leading to a decline of European gasoil demand

## Gasoline

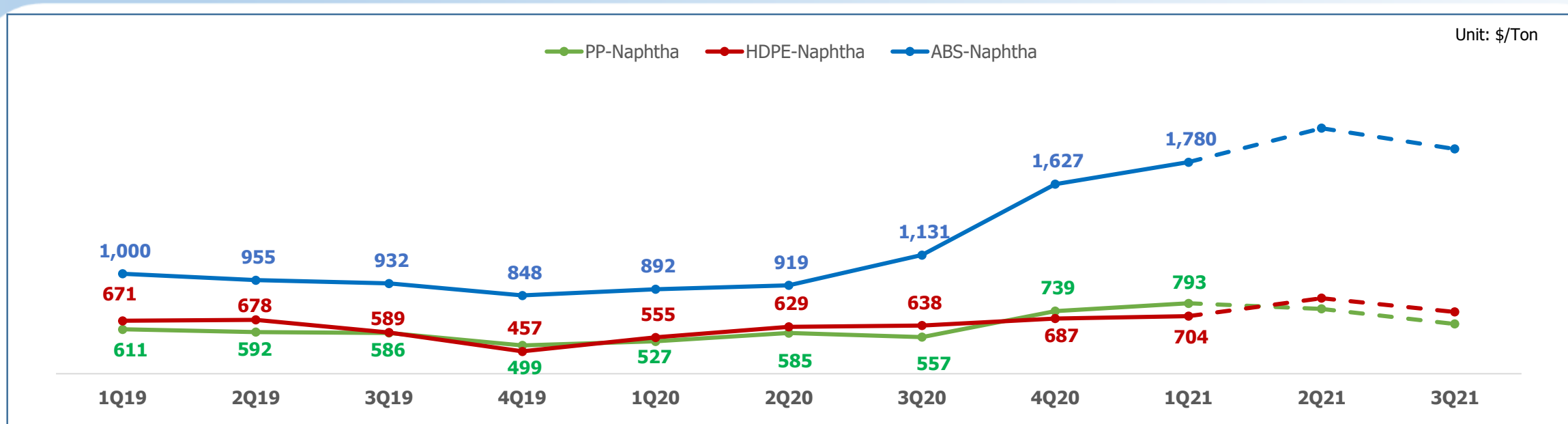
- ▲ Low gasoline stock in U.S. before U.S. driving season
- ▲ Shutdown of Indonesian refinery since end of Mar21
- ▲ Higher demand from Ramadan
- ▼ Asian refineries resume production

## HSFO

- ▲ Higher HSFO demand for power generation during summer in the Middle East
- ▲ Strong asphalt demand may support HSFO.
- ▼ Commissioning of new refineries in China could increase some fuel oil supply



# 2Q21 & 3Q21 Petrochemical Market Outlook



## PP

- ▲ Europe / US supply tightness and demand remains firm amid high manufacturing activities in China
- ▲ Increasing demand after Ramadan period in Muslim Countries
- ▲ Demand for Medical Application such as Mask and PPE Suite boost up consumption in Asia Regions
- ▼ New Additional PP Capacity from China >2,000 KTA

## HDPE

- ▲ Positive China demand outlook for gas pipe market as weather warms
- ▲ Supply will remain tight because of cutbacks and shutdown plans in North America
- ▼ Buying resistance amid the recent increases in prices
- ▼ New Capacity in China and ASEAN in May-June

## ABS

- ▲ ABS Plant in Japan (Asahi) will permanently close that results in price push up for ABS in NEA region
- ▲ Demand remains stable as strong from Medical equipment and Home appliances
- ▼ Additional ABS Capacity from Malaysia and Indonesia led to price pressure in SEA region

# AGENDA



**1Q21 Key Highlight**



**IRPC Strategy**



**Industry Outlook**

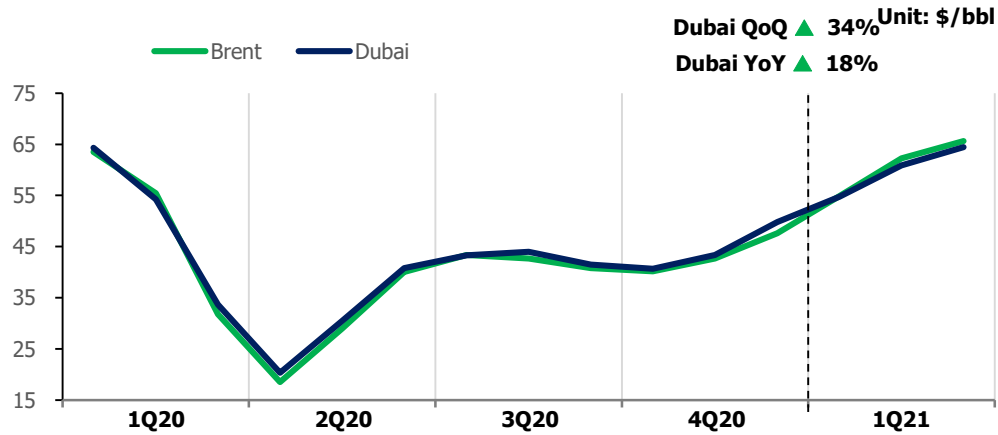


**Operation & Financial**



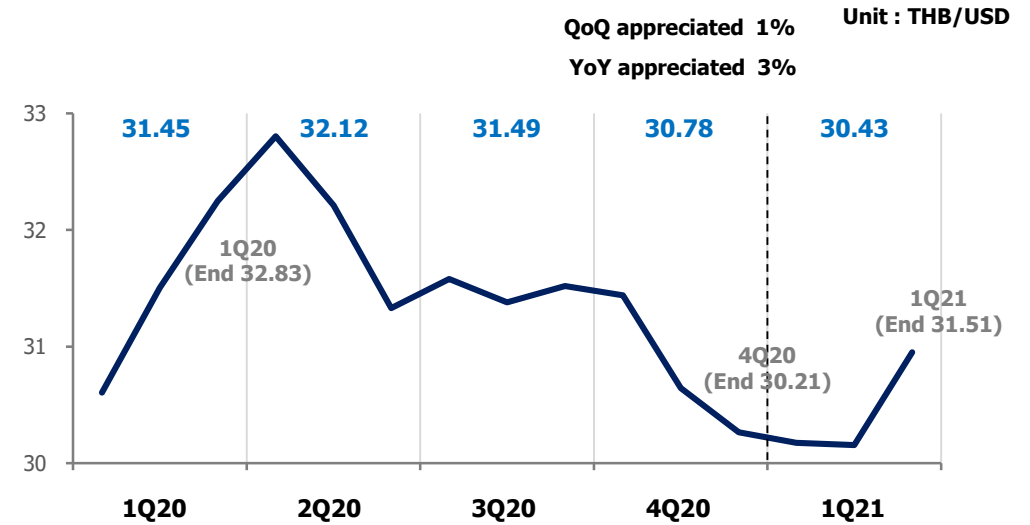
# Key Drivers

## Crude Oil Price (average)

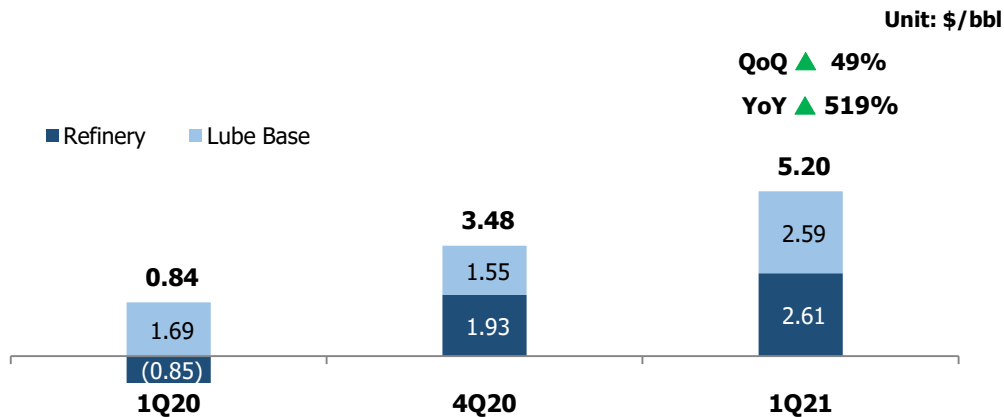


	1Q20	2Q20	3Q20	4Q20	1Q21
Brent	50.26	29.20	43.00	44.23	60.90
Dubai	50.74	30.55	42.92	44.62	60.01

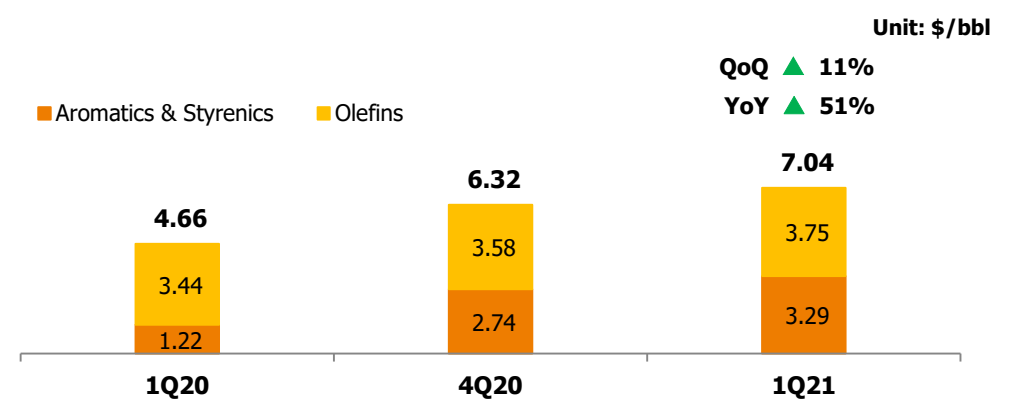
## Foreign Exchange (average)



## Gross Refining Margin (GRM)



## Product to Feed Margin (PTF)



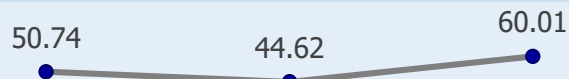
# Financial Highlight: 1Q21 performance

Notable performance thanks to favorable market conditions & high stock gain

## Overview of Business

### Dubai (Avg.)

Unit: \$/bbl



### Crude run KBD



### Net Sales

(net excise tax)

Unit: MB



QoQ ▲ 19%  
YoY ▲ 11%

### Market GIM (\$/bbl)



### Net Stock G/(L)(\$/bbl)

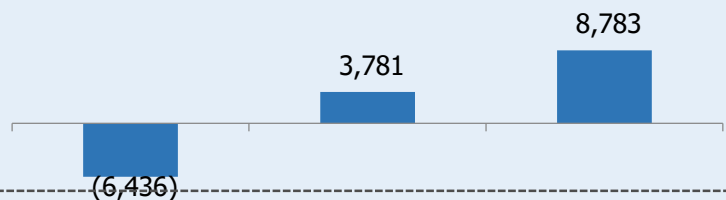


### Acct. GIM (\$/bbl)



### EBITDA

Unit: MB

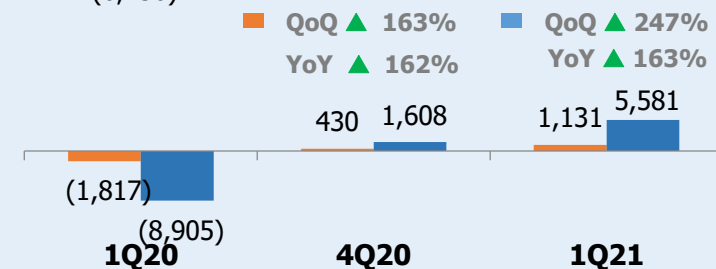


QoQ ▲ 132%  
YoY ▲ 236%

### Net Income

Unit: MB

Net Income  
Operating NI



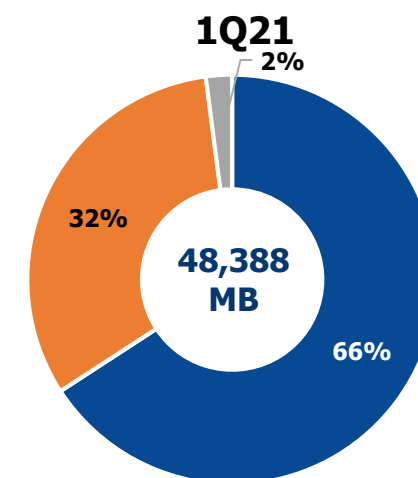
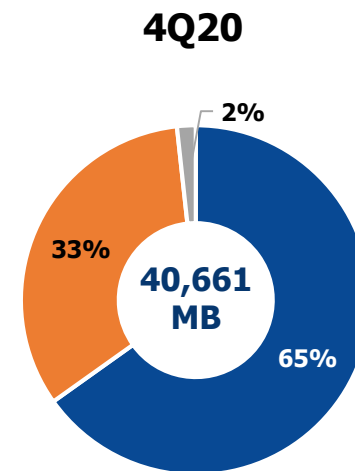
QoQ ▲ 163%  
YoY ▲ 162%

QoQ ▲ 247%  
YoY ▲ 163%

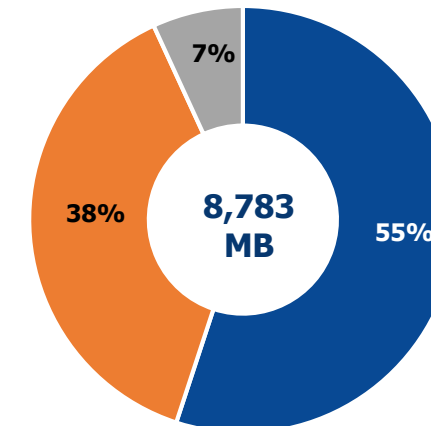
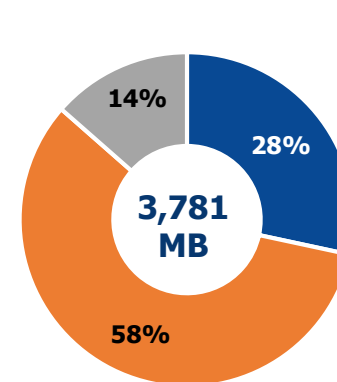
## Performance by Business

### Net Sales

(net excise tax)



### EBITDA



Petroleum Petrochemical Utilities and Others

# Production & Performance by Business

Improving MKT GIM owing to higher product spreads versus higher crude premium

## Crude Intake/Utilization Rate

Petroleum			Petrochemical		
1Q20	4Q20	1Q21	1Q20	4Q20	1Q21
<b>Refinery (Unit: KBD,%)</b>			<b>Olefins</b>		
188	197	186	95%	97%	90%
87%	92%	86%	<b>Aromatics &amp; Styrenics</b>		
<b>Lube</b>			94%	103%	102%
79%	92%	82%			

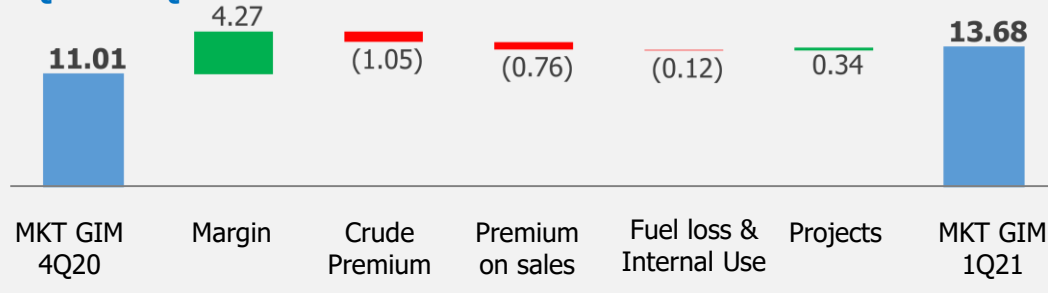
## Production Volume & Sales Volume

Petroleum			Petrochemical		
1Q20	4Q20	1Q21	1Q20	4Q20	1Q21
<b>Production (M.bbl)</b>			<b>Production (KMT)</b>		
13.55	14.26	12.94	450	447	447
<b>Sales Volume (M.bbl)</b>			<b>Sales Volume (KMT)</b>		
15.16	15.71	14.54	429	440	444

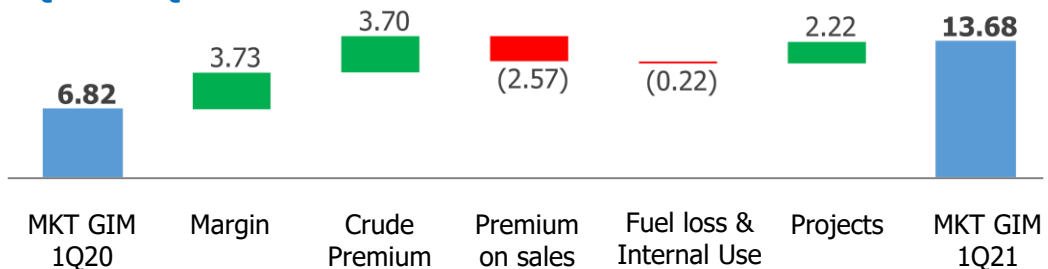
## MKT GIM

Unit: \$/bbl

### 1Q21 VS 4Q20

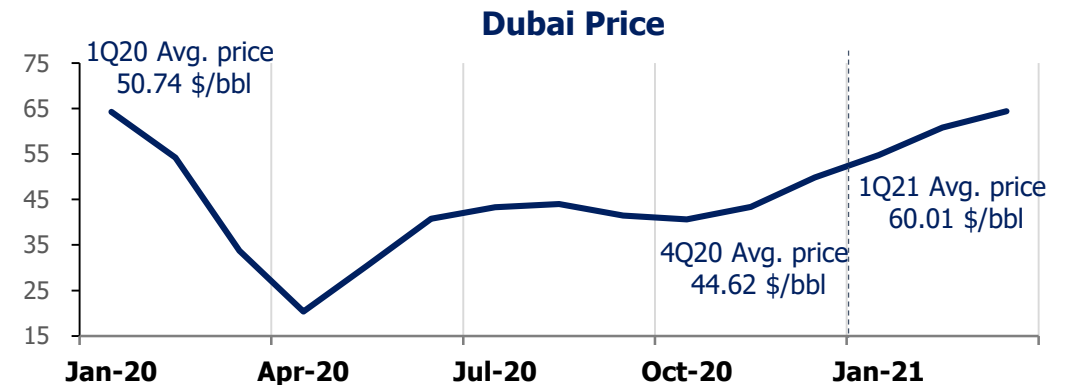


### 1Q21 VS 1Q20



## Net Stock Gain/(Loss)

Unit: \$/bbl



1Q21 VS 4Q20: ↑ 7.39 \$/bbl

1Q21 vs 1Q20: ↑ 22.49 \$/bbl

**1Q21 Net stock gain = 9.83 \$/bbl**

➢ Stock Gain & LCM = 9.79 \$/bbl

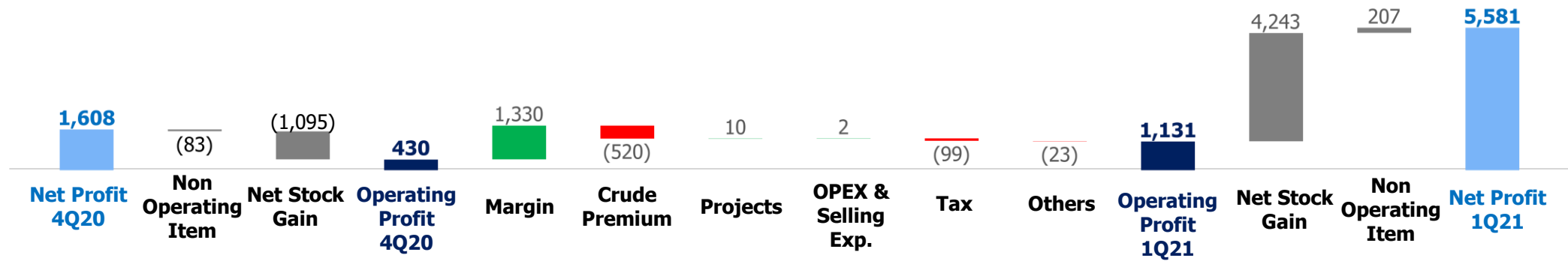
➢ Realized Oil Hedging = 0.04 \$/bbl

# Financial Statement

Unit: MB

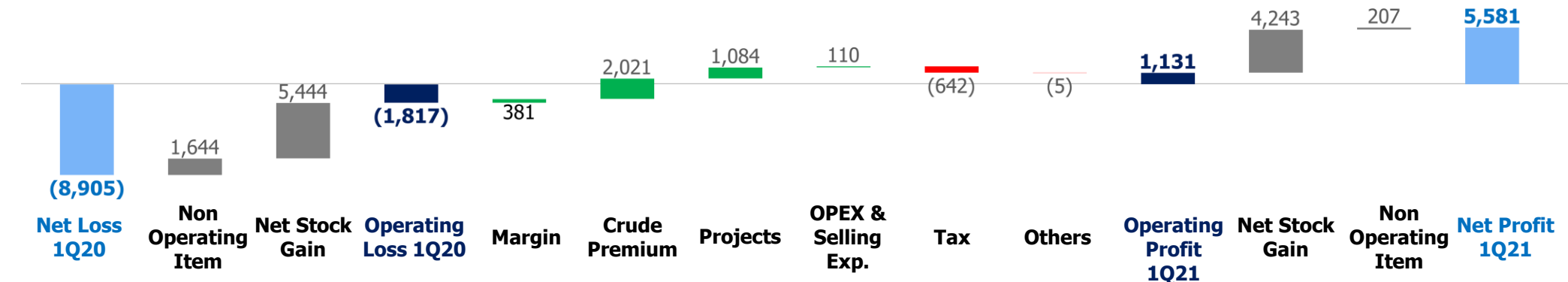
## 1Q21 VS 4Q20: Better margin led to improving Operating Profit

Net Income ▲ 247%  
Operating Income ▲ 163%



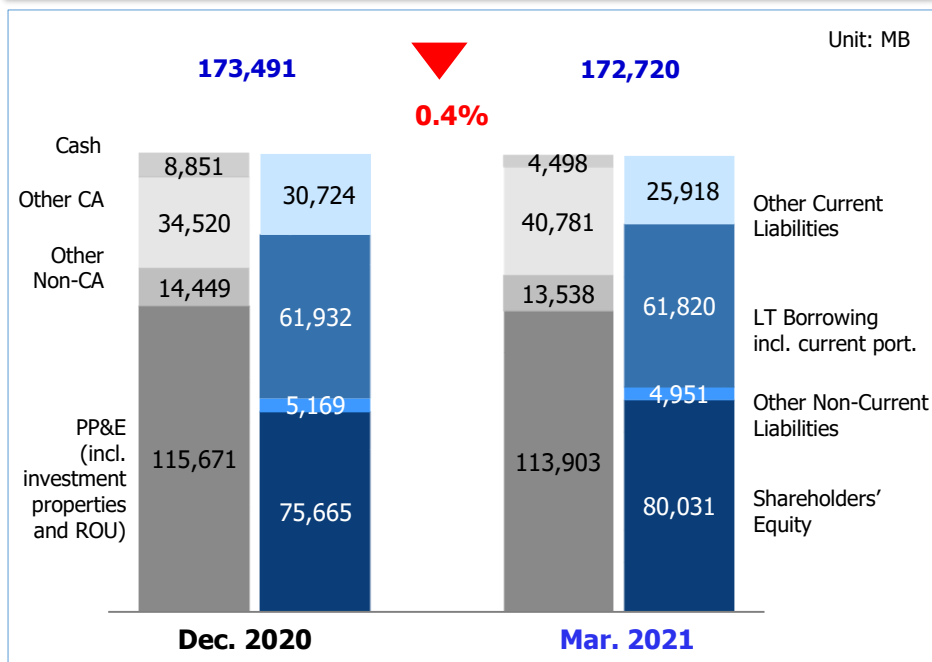
## 1Q21 VS 1Q20: Improving Operating Profit supported by crude premium & projects

Net Income ▲ 163%  
Operating Income ▲ 162%

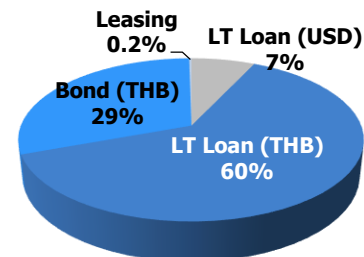


# Financial Position

## Statements of Financial Position



## Debt Profile



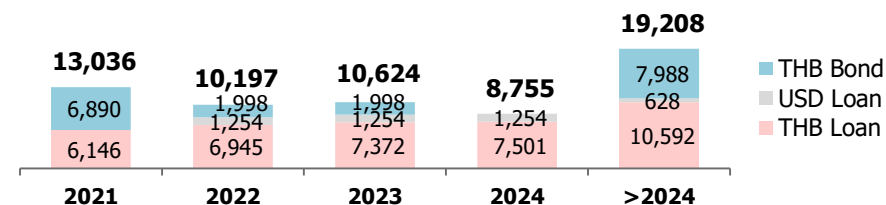
Interest Rate		Currency	
Float	64%	THB	88%
Fixed	36%	USD	12%

Ex. Rate = 31.51 Baht/\$

Net Debt = 59,681 MB

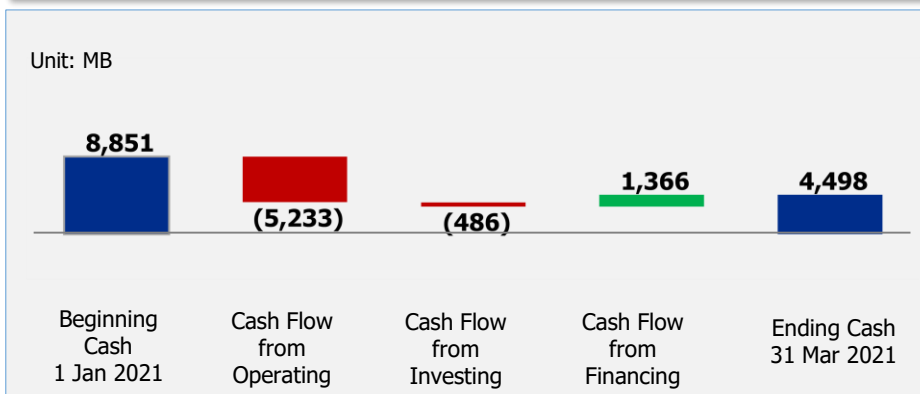
### Maturity of LT Debt

Unit: MB



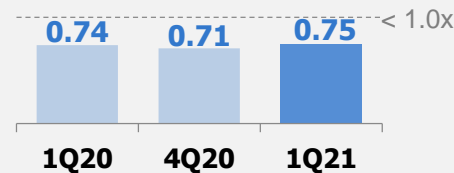
Remark: Long-term debt as at 31 Mar 2021

## Cash Flow

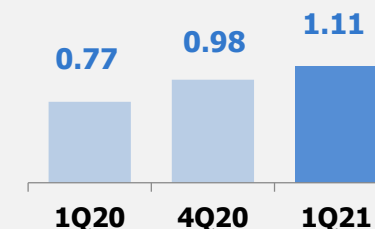


## Financial Ratios

### Net IBD/Equity



### CA/CL



# Thank You

Please complete our 1Q21 satisfaction survey  
via QR CODE or link: <https://forms.gle/umc2HTorF7jif7gs8>

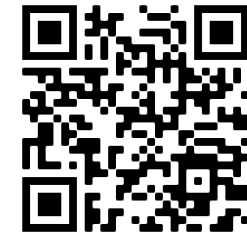
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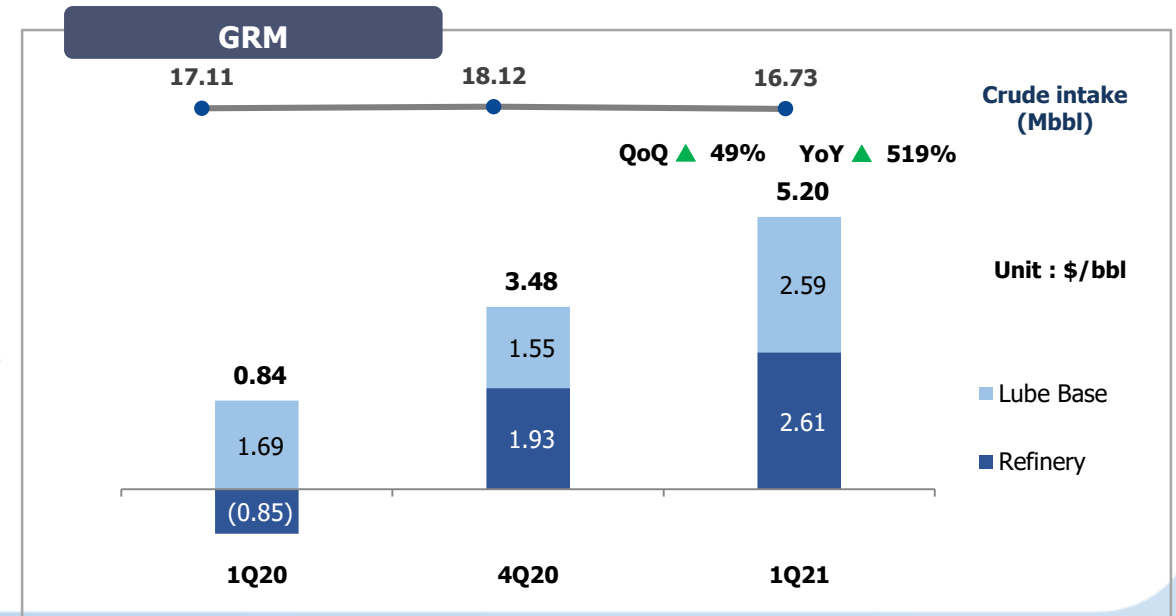
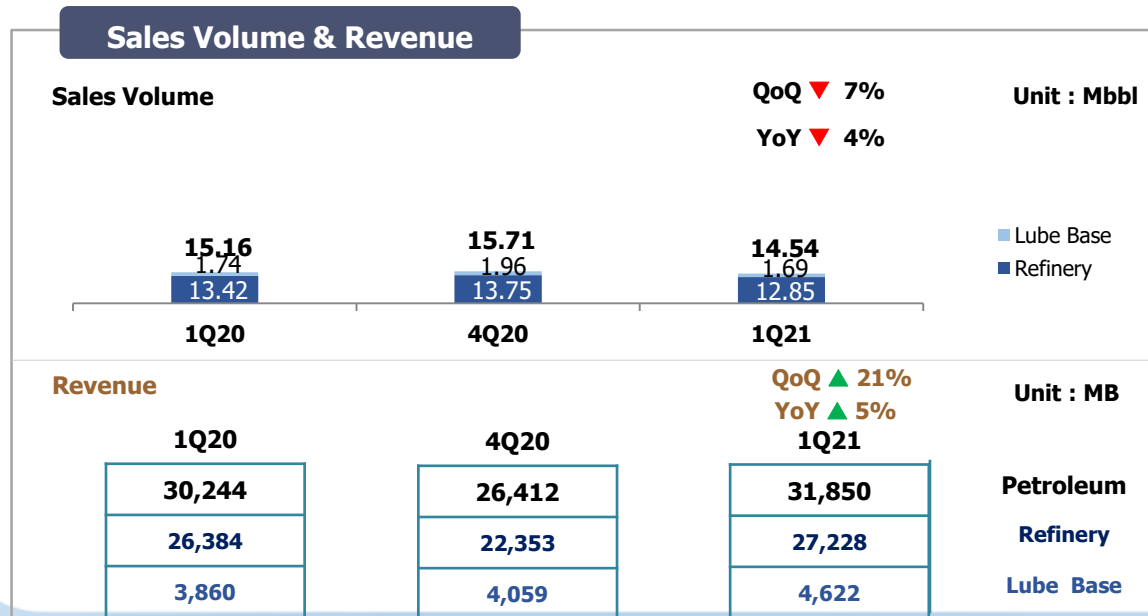
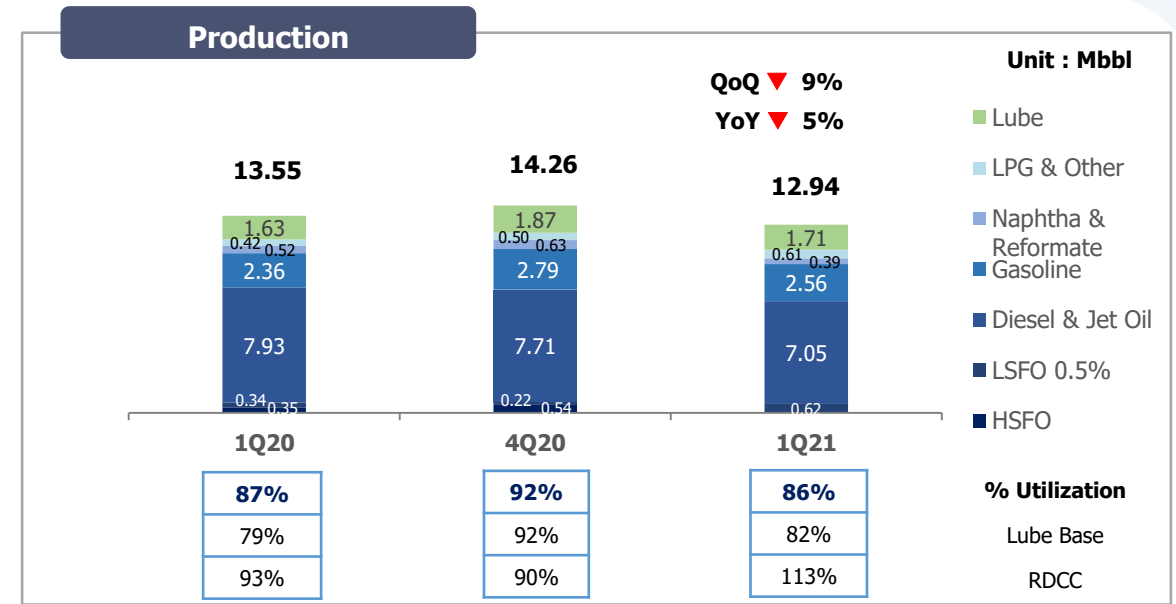
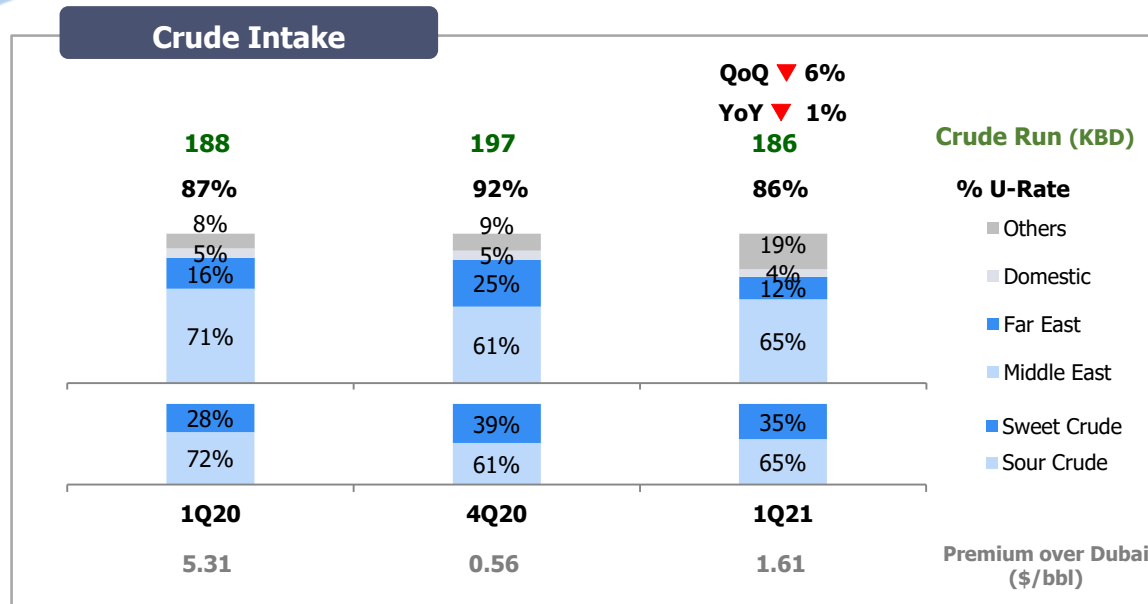
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# Appendix

# Petroleum Group

Rising crude oil price and higher petroleum spread supported increasing revenue and Mkt GIM

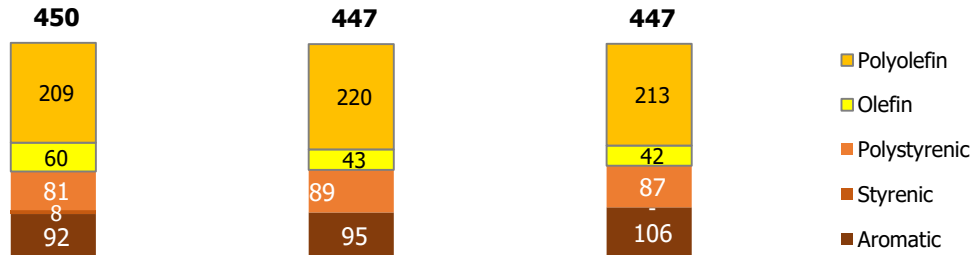


# Petrochemical Group

Increasing Mkt PTF thanks to higher products spread & improving revenue owing to selling price increase

## Production

Unit : KMT  
QoQ ▲ 0.2%  
YoY ▼ 0.4%

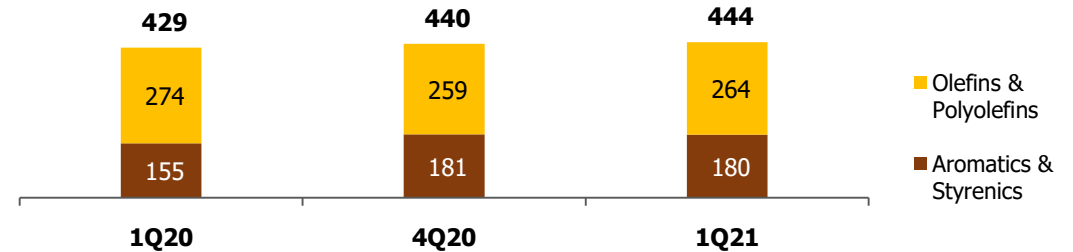


Quarter	% Utilization Polyolefins	% Utilization Olefins	% Utilization Polystyrenics	% Utilization Styrenics	% Utilization Aromatics
1Q20	95%	92%	99%	94%	88%
4Q20	97%	96%	99%	103%	102%
1Q21	90%	93%	86%	102%	94%

## Sales Volume and Revenue

### Sales Volume

Unit : KMT  
QoQ ▲ 1%  
YoY ▲ 3%



### Revenue

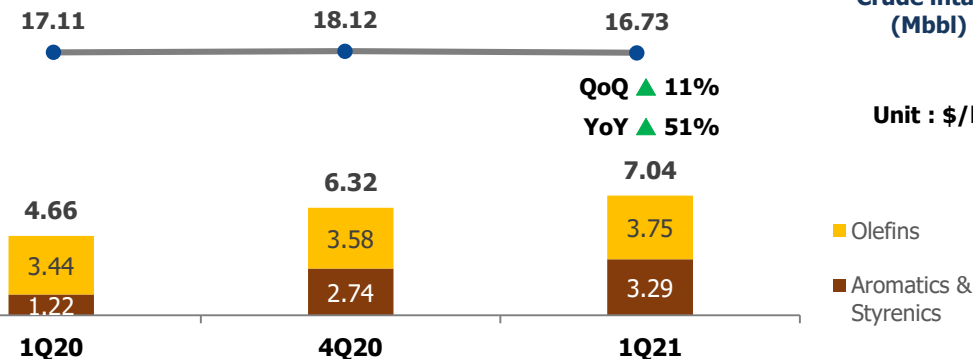
Unit : MB  
QoQ ▲ 15%  
YoY ▲ 24%

Quarter	Petrochem	Olefins	Aromatics & Styrenics
1Q20	12,497	8,090	4,407
4Q20	13,427	8,286	5,141
1Q21	15,486	9,528	5,958

## PTF

Crude intake (Mbbbl)

Unit : \$/bbl



### 1Q21 : Petrochemical revenue was Bt 15 bn

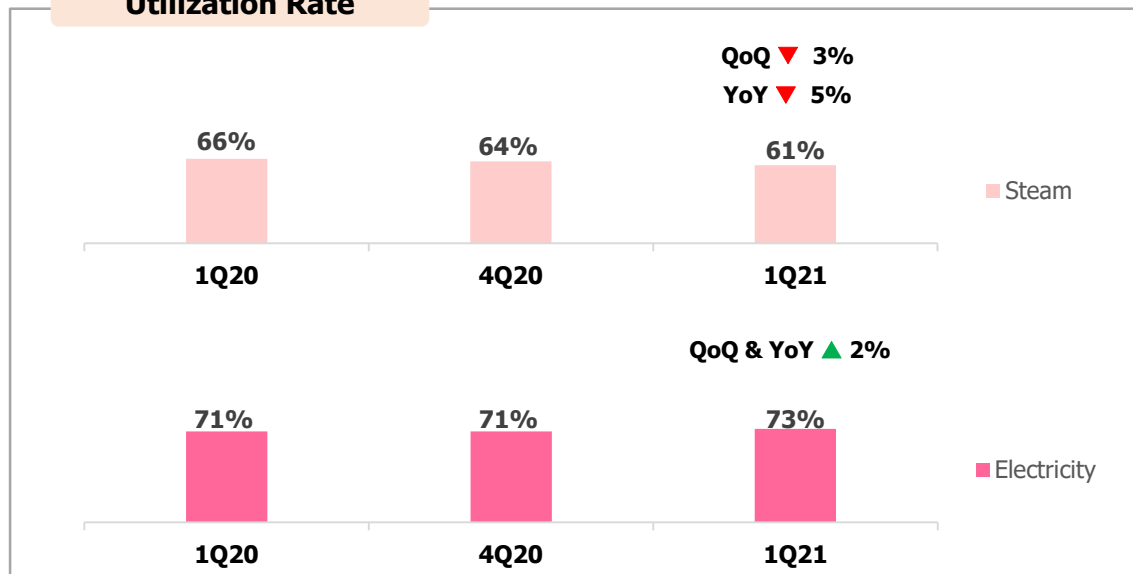
- QoQ : 15% increase from 14% price increase & 1% vol. increase
- YoY : 24% increase from 21% price increase & 3% vol. increase

### 1Q21 Market PTF was \$7.04/bbl

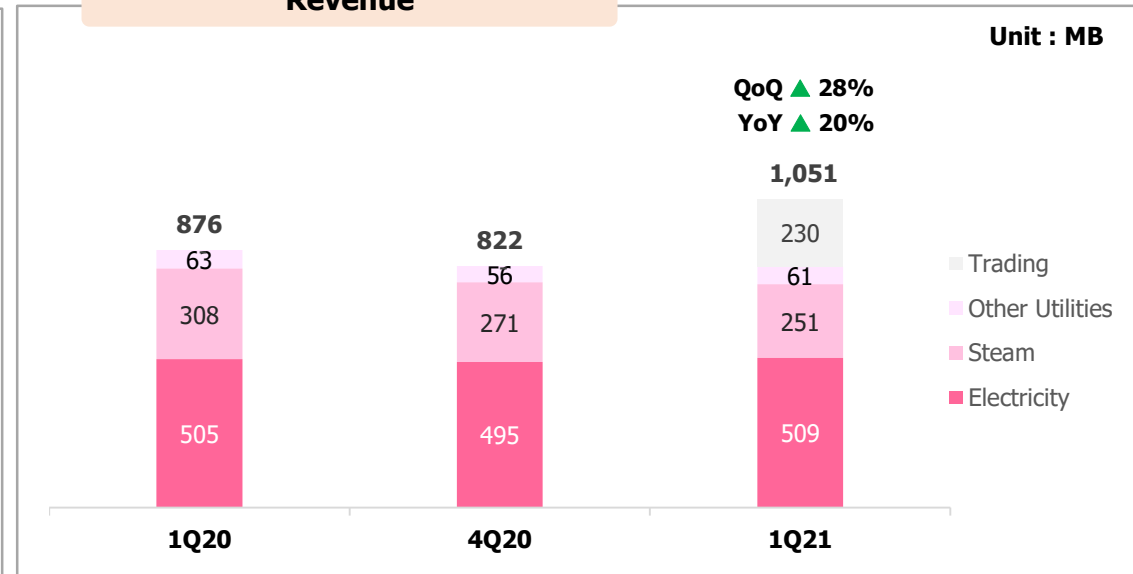
- QoQ : \$0.72/bbl increase
  - YoY : \$2.38/bbl increase
- as higher products spread

# Power, Utility and Trading

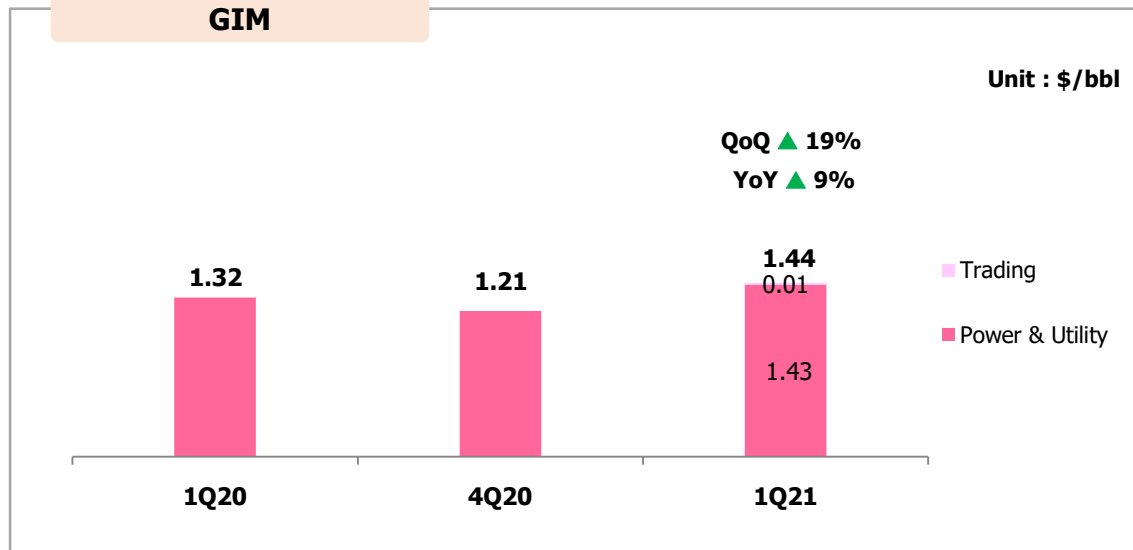
## Utilization Rate



## Revenue



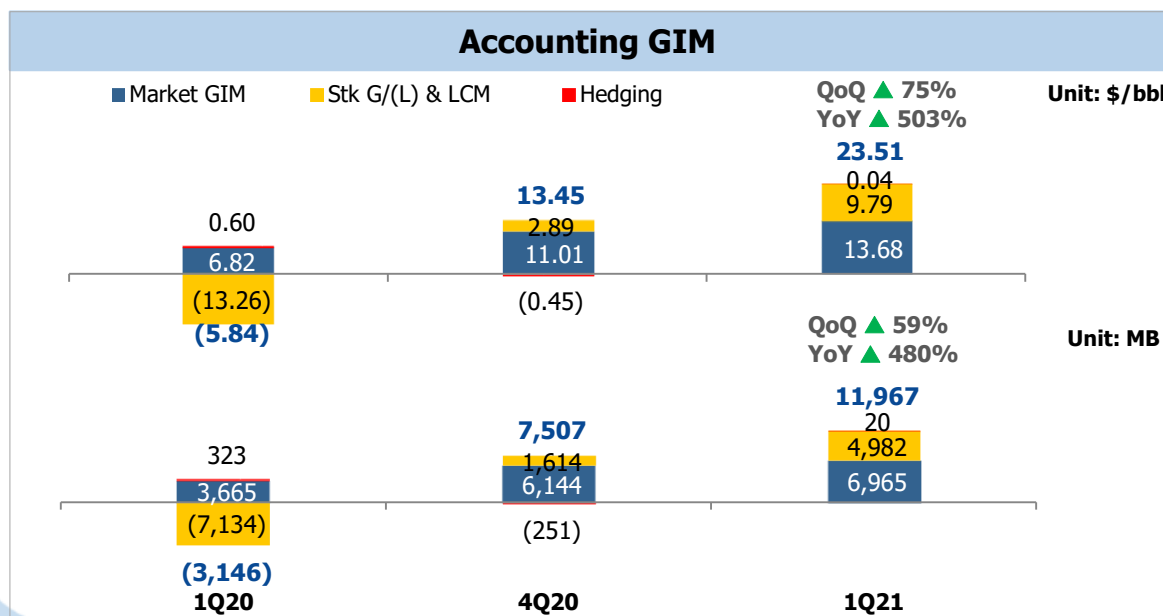
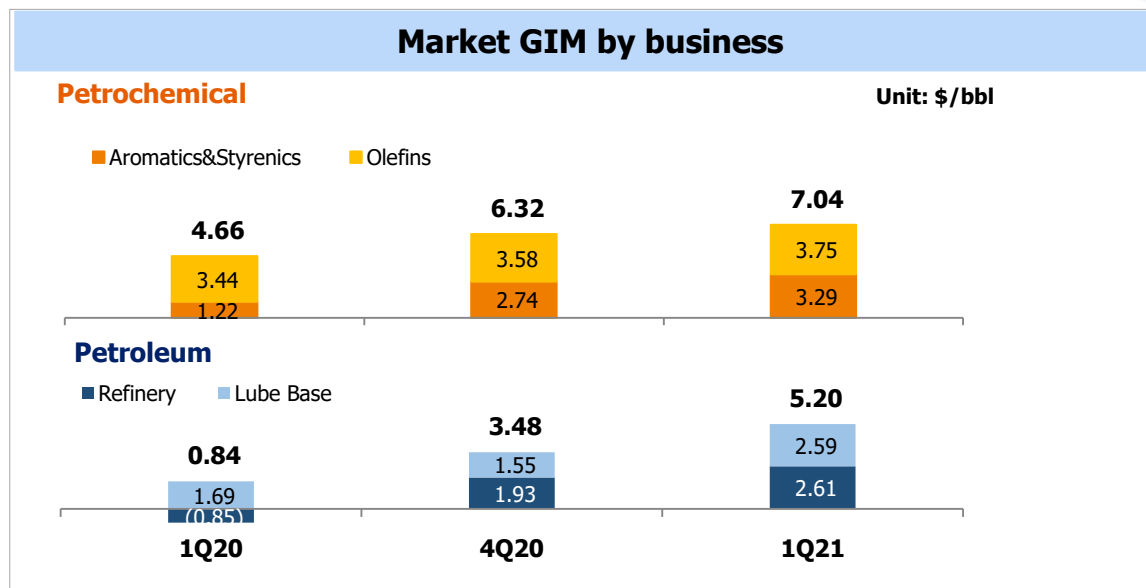
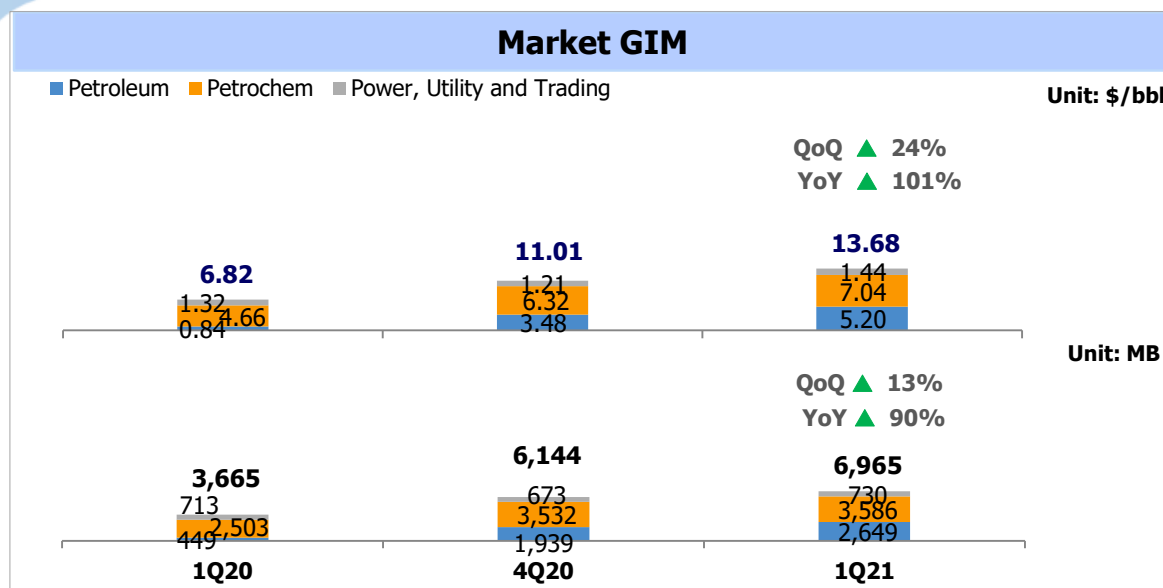
## GIM



- ❑ **1Q21 U-Rate of Steam was 61%;** ▼ 3% QoQ, ▼ 5% YoY
  - QoQ & YoY : decreased owing to industrial area customers' maintenance shutdown
- ❑ **1Q21 U-Rate of Electricity was 73%;** ▲ 2% QoQ and YoY
- ❑ **1Q21 : Power & Utility revenue was 821 MB;** stable QoQ, ▼ 6% YoY
  - YoY : lower selling price & sales volume of steam
- ❑ **1Q21 : Trading revenue was 230 MB**
  - Account reclassified from Other revenues
- ❑ **1Q21 : Trading GIM was \$0.01/bbl**

# Market & Accounting Gross Integrated Margin

Improved Mkt GIM owing to higher spreads and increased A/C GIM thanks to net stock gain increase



### Market GIM

□ 1Q21 Market GIM was \$13.68/bbl,

- QoQ: ↑ \$2.67/bbl from higher product spreads versus higher crude premium
- YoY: ↑ \$6.86/bbl from higher petroleum & petrochemical spreads & lower crude premium

### Accounting GIM

□ 1Q21 Acct GIM was \$23.51/bbl,

- QoQ: ↑ \$10.06/bbl due to \$7.39/bbl increase in net stock gain and \$2.67/bbl higher Market GIM
- YoY: ↑ \$29.35/bbl due to \$22.49/bbl net stock gain increased and \$6.86/bbl higher market GIM

# Maintenance Shutdown Plan 2021 (updated May 21)

Plant		2021											Total	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov		Dec
Petroleum	ADU1			● — 17 — ●										17
	ADU2													-
	Hyvahl							● — 38 — ●						38
	RDCC									20				20
	LUBE			● — 9 — ●										9
Petrochemical	EBSM						● — 45 — ●							45
	HDPE			6						6				12
	PP					● — 13 — ●								13
	ABS/SAN					● — 8 — ●								8
	PS						13							13