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Sustainability Award  
Gold Class 2020



# Thai Oil Public Company Limited

## Q4 & FY/20

### Opportunity Day

### 23 February 2021

Time : 15:15 - 16:00 hrs.  
Channel : Microsoft Team



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# Presentation Agenda (Q4/20)

**FY/20 KEY HIGHLIGHTS**

**Q4/20 & FY/20 PERFORMANCE ANALYSIS**

**2021 OUTLOOK**

**FINAL REMARKS**



# FY/20 KEY HIGHLIGHTS

# 2020 – A Dreadful Year

## Key Highlights

## Performance

## Outlook

## Final Remarks

### 2020 – A Dreadful Year

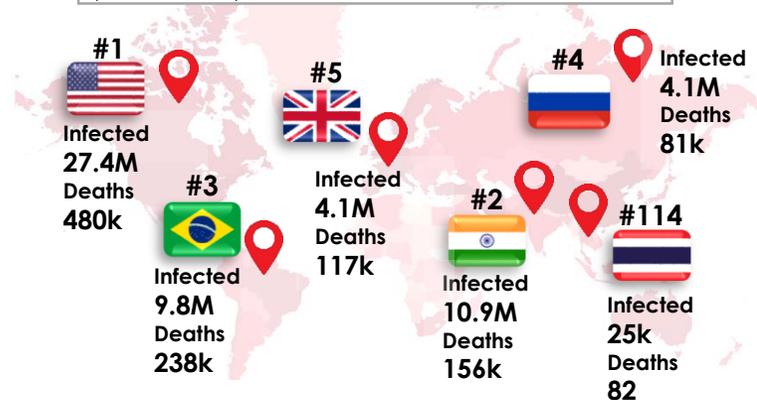
### Extraordinary Effort

### ESG

### Awards & Recognitions

## COVID-19 Pandemic

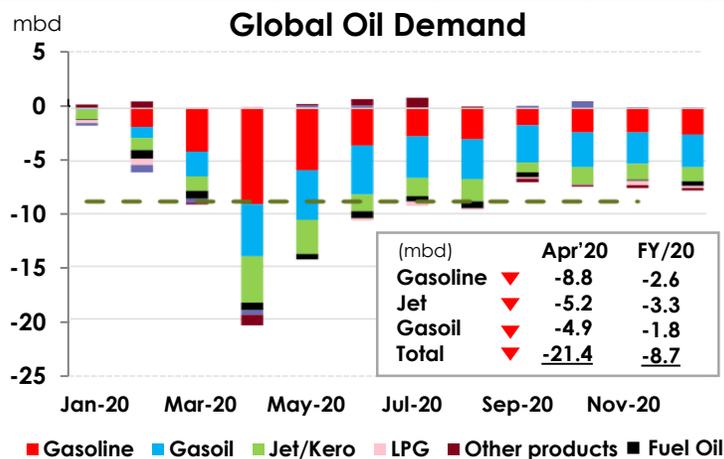
	Total Cases	Deaths
End Q4/20	81,485,119	1,798,154
Today (As of 15 Feb 21)	108,693,809 ▲	2,396,408 ▲



Source : WHO (Feb'21)

- **More than 2 million deaths** and **over 100 million infections** by the coronavirus worldwide.
- **Countries around the world implemented lockdown measures** to slow the spread of the coronavirus.
- **Global economy collapsed 3.5%** in 2020 due to restrictions on the economic activities.
- **Global capital market in turmoil** due to rising fears and global economic shutdown
- **Successful COVID-19 vaccine development** to supercharge global growth in 2021

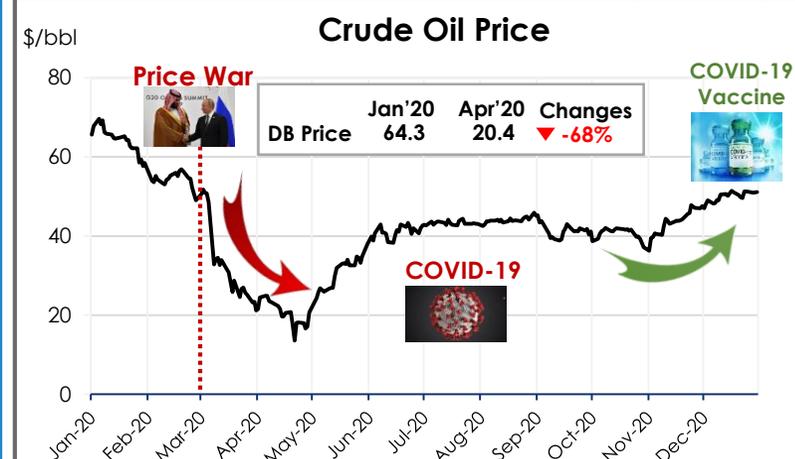
## Unprecedented Global Oil Demand Loss



Source: Platts, EIA and Energy Aspect (Feb'21)

- **Global oil demand significantly dropped by a record 21.4 mbd** during the peak period in Apr'20 in response to rising COVID-19 infections, initiating global lockdown.
- **Global oil demand began to recover in 2H20. However, the upsurge of COVID-19 cases limited oil demand recovery** in major economies including in the United States, Europe and China.
- **Market expects global oil demand rebound to accelerate in 2H/21.** However, in 2021, jet fuel market remains under pressure by limited international flight movement.

## Crude Oil Price Plunged to Multi-Year Lows



Source: Reuters (Dec'20)

- **Crude oil price plunged to multi-year lows** after OPEC deal failure sparked oil price war in Mar'20.
- **In Q2-Q3/20, oil price recovered and was range-bound between \$40 and \$45 a barrel** as rising coronavirus cases stoked demand concerns.
- **In Nov'20, oil prices rose to 9-month high** on hopes that a rollout of coronavirus vaccines will lift global fuel demand.
- **Quick supply/demand rebalance** brought oil prices back to \$50 a barrel in Dec'20.
- **Steep OSP crude discounts** helped support Asian GRM

# Refining, the Hardest Hit



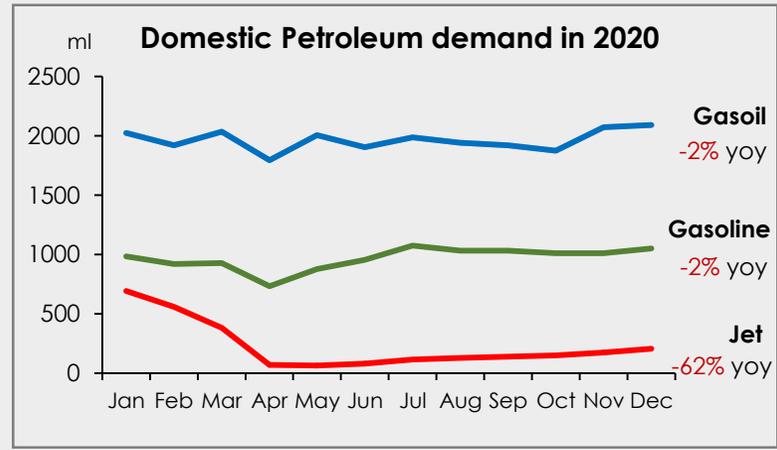
## Huge Stock Losses

- Huge stock loss Q1/20 in particular, from sharp oil price drop due to price war



## Total Petroleum Demand Collapsed

- Domestic petroleum demand significantly dropped especially jet fuel
- Gasoil & gasoline demand fully recovered to pre-COVID-19 level, except jet

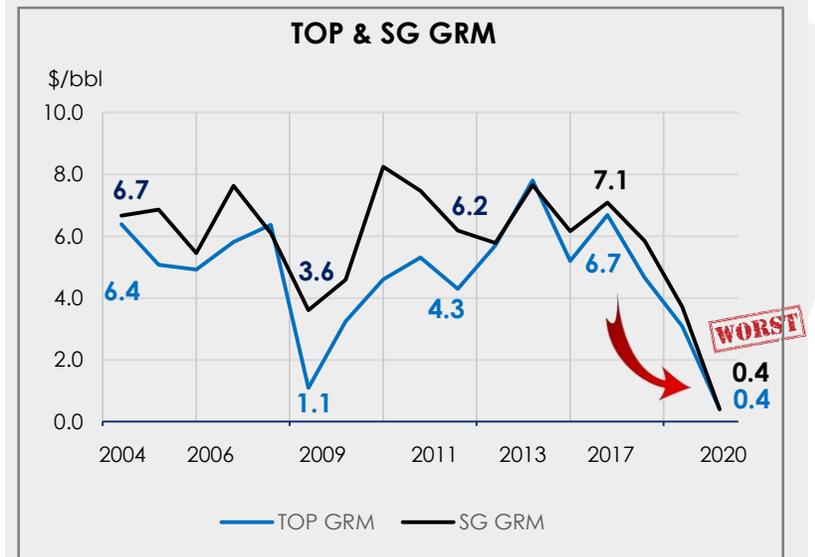


- Thaiol is the largest jet producer & market share in Thailand



## Worst GRM Ever

- Lowest MKT GRM in 2020 esp in Q3/20 \$-1.1/bbl due to weak product spreads and higher crude cost

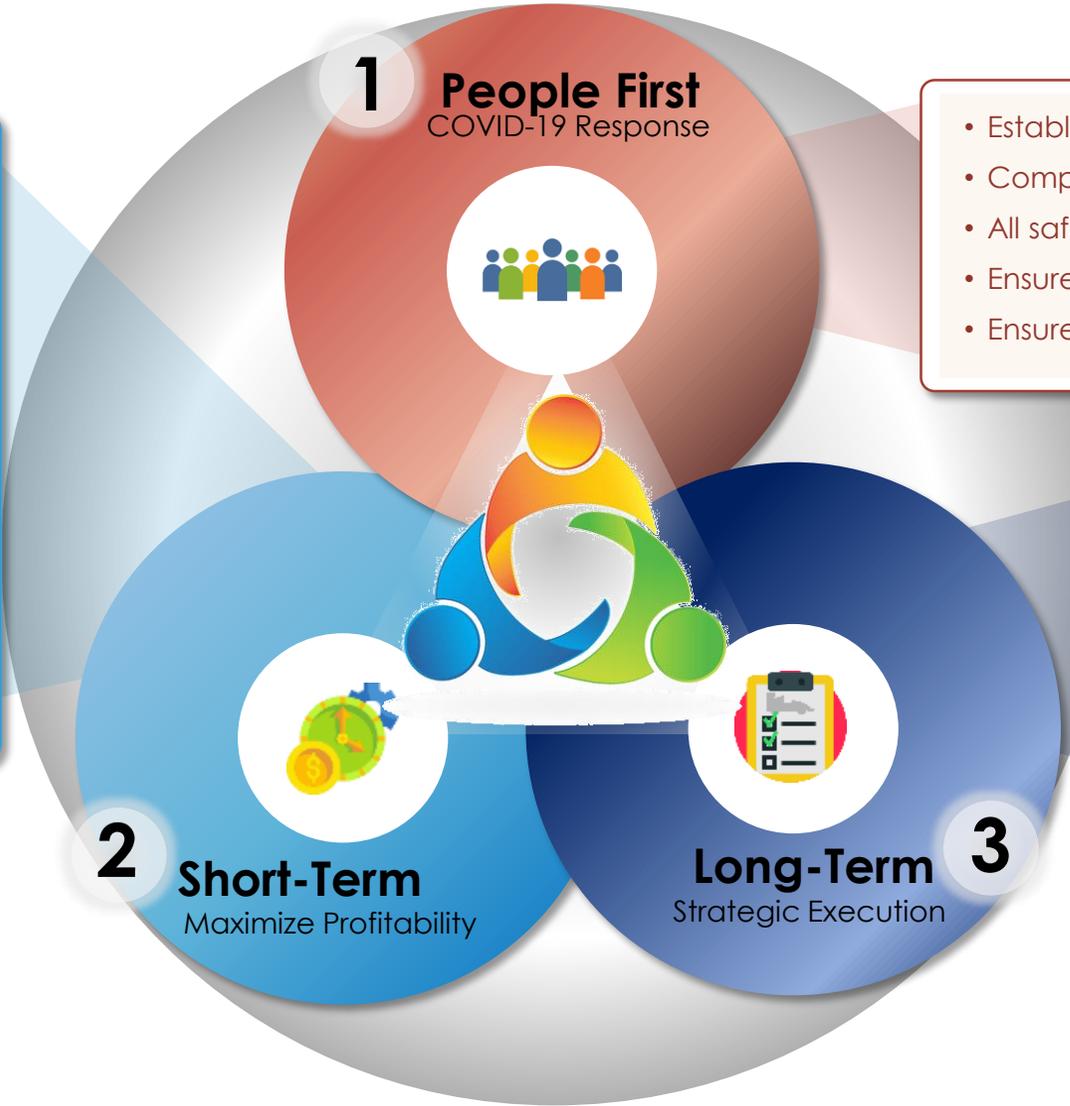


# Thaioil – The Last Man Standing



## Thaioil's Extraordinary Efforts

- Optimum operation & commercial across our full value chain
- Procurement & risk management
- Successful LABIX MTA
- Optimise utilization across group company
- Maximize sales profits
- Increased sale volume of high value product (HVP)
- Productivity improvement & cost management
- Proactive credit rating management & pre funding



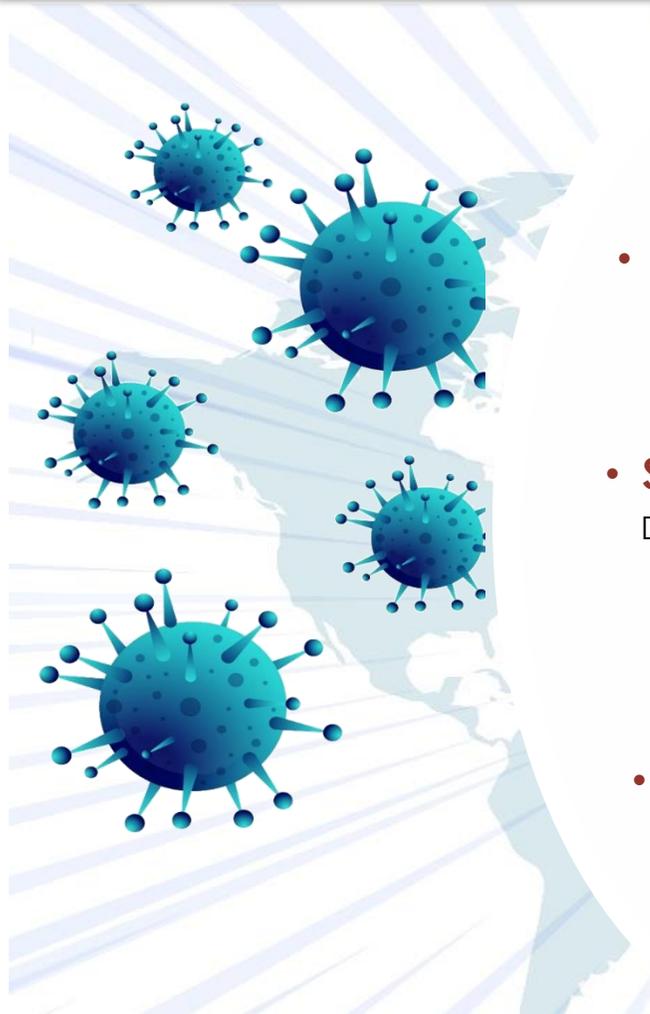
- Established I-COVID center & measures
- Comprehensive preventive & protective measures
- All safe and clear from COVID-19
- Ensure BCM & smooth operations
- Ensure safety & reliability on greenfield & brownfield

- Managed CFP project amidst COVID crisis
- Accelerate the reform
  - Rationalize existing businesses
  - Pursue new strategic growth paths
- Organization & people preparedness

# 1. People First



## People First COVID-19 Response



- **Established I-COVID center & measures**  
Recognized among the first & proactive corporate initiatives
- **Comprehensive preventive & protective measures**  
Including WFH using extensive digital platform, workforce segregation & Business Continuity Management (BCM)
- **Situation under control : No internal infection**  
During a huge number of manpower on site (CFP & Normal operation)
  - Zero staff infection
  - **100% swap test non-detectable**
  - **Rapid test before working**
- **Ensure BCM & smooth operations**
- **Ensure safety & reliability on greenfield & brownfield**



# 2. ST Profitability Improvement



## Short Term Profitability Improvement

Maximize Profitability



### Operation

- Optimized overall value-chain utilization & production, boosting LAB and lube production to capture strong demand

U-Rate %	Q3/20	Q4/20	FY/19	FY/20
Refinery	93%	101%	107%	101%
Aromatics	56%	70%	70%	71%
LAB	70%	115%	113%	103%
Base Oil	89%	93%	83%	88%

(1) LABIX MTA during mid-July to end-August

- Stretched operational boundaries, including minimum jet production



- Successful LABIX MTA, ahead of schedule with desired outcome



### Commercial

- Crude & feedstock optimization
  - Spare variety crude to maintain flexibility
  - Capture low oil price opportunity to enhance crude cost
- Maximized domestic & Indochina sales in total 97%

	Q3/20	Q4/20	FY/19	FY/20
Local	89%	90%	88%	87%
Indochina	10%	10%	9%	10%
Other exports	1%	0%	3%	3%

- Increased sale volume of high value product (HVP) including TLB specialties



### Financial

- Excellent productivity improvement & cost management
  - Continuously enhanced productivity improvement
  - Reduced operating expense by 25% (VS target)
  - Postponed CAPEX spending in 2020 to 2021
- Proactive financial liabilities management & FX management
- Proactively procure competitive pre-funding (bond & bank facilities)
  - Tremendously successful \$1,000 mn USD bond issuance – with lowest-ever 10-Yr coupon in Thai corporate
  - Successfully secured 15,000 MB long-term bank facilities to enhance liquidity

# 3. LT Strategy Execution



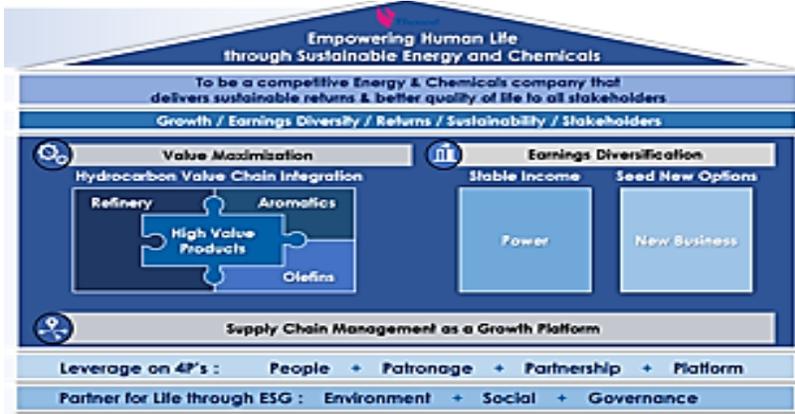
## Long Term Strategy Execution

Preparation for beyond COVID-19



### Managed CFP Project

- **Boost up productivity** amidst COVID-19 constraints including limited workforce mobilization and migrant workers from lockdown measure in major EPC countries – Italy, UAE and South Korea



### Accelerate the Reform

- **Rationalize existing businesses (Power & Marine)**
  - Successfully transferred direct shareholding of GPSC 8.9% to PTT and received cash 16,757 MB, and completed EBT process in Feb'21
  - Restructuring of the marine transport business
- **Pursue new strategic growth paths**
  - Olefins investment
  - Startups



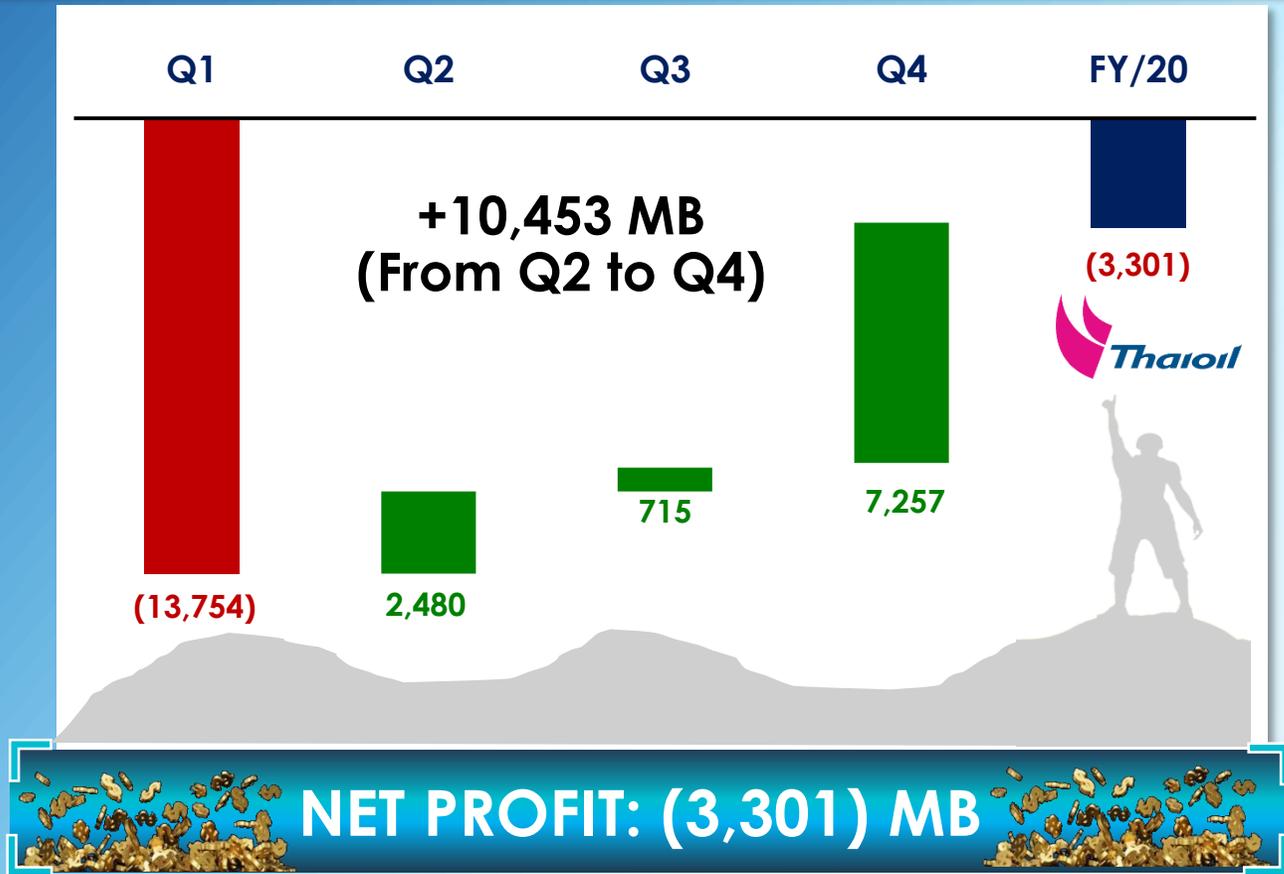
### Restructure Organization & People Preparedness

- **Ensure organizational readiness** to support business growth

# Extraordinary Achievement - Biggest Profit Turnaround



## Extra Achievement 2020



- **Biggest net profit comeback + 10,453 MB**  
from net loss of ~ THB 14bn in Q1/20)
- **Optimization Flexibility; Minimize jet production**
- **Crude optimization**
- **Operation & Commercial optimization**
- **Stringent cost reduction**
- **Power business restructuring**
- **Proactive pre-funding (USD 1bn)**

# ESG/Sustainability Highlights 2020



## Environmental Toward Green Economy

### Greenhouse Gases (GHGs)

- Reduced 4% direct GHG emission from BAU by 2022
- Participated in low emission supporting scheme: LESS and Thailand voluntary mission reduction program: T-VER



### Circular Economy

#### • Water and Waste Management

- Water Saving: Study pilot projects of "Reverse Osmosis" for seawater and for recycling wastewater



- 3Rs in process: Zero waste to landfill

#### • Energy Efficiency

- 19 Energy efficiency projects solar cell at engineering building center

#### • Green Label Focus

- Green procurement: ISO 20400

## Social Toward Better Quality of Life

### Communities

- Thairoil CSR program supported medical staffs and communities with hygiene equipment including protective suits PAPR, cloth masks, face shields, and alcohol gel hand sanitizer



### Health care

#### • Sustainable energy for health care

Installed solar roof for 3 hospitals, Leam-Chabang, Panusnikom, Banbueang hospital



## Governance Toward Transparency

### Structure & Oversight

#### • Continue GRC roadmap

- Strengthen ESG practices and performance in supply chain through ISO 20400 : "Sustainable Procurement"
- 100% of strategic supplier signed acknowledge on "Thairoil Group Supplier Code of Conduct"



### Transparency

#### • ZERO case non-compliance & fraud incidents

- Operated without corruption cases
- Operated without cases of non compliance with business ethics



**Zero** case of non-compliance & fraud incidents through GRC roadmap

# Awards & Recognitions in 2020 & 2021



## 2020

### Operation 4 Awards

- PTT Group OpEx Award 2020**
  - Silver award: TOP Green tracking
  - 6 Complex: Zero unplanned shutdown
- Oil Logistic Performance: Terminal Cost in PTT GLM**
- SAKC : Award for excellent governance, environment and safety of the year 2019** for the 4<sup>th</sup> consecutive year from the Industrial Estate Authority of Thailand




### Management 2 Awards

- Human Rights Awards 2020**
- Certificate of Sustainable Procurement Guidelines ISO 20400: 2017** from the ISO Certification Institute Foundation Industry Development




### Finance/ Investor 4 Awards

- Asian Excellence Award 2020** from Corporate Governance Asia Magazine
  - Asia's Best CEO (IR) 4 consecutive years
  - Asia's best CFO (IR) 2 consecutive years
  - Best IR by company 7 consecutive years
- Thailand Sustainability Investment (THSI)** for the 6<sup>th</sup> consecutive year in THSI list (2015 – 2020)




### Sustainability 6 Awards

- DJSI Industry Leader** for the 8<sup>th</sup> consecutive years selected as member & for the 6<sup>th</sup> year as leader
- SAM "Gold Class" in Oil & Gas Refining and Marketing** for the 6<sup>th</sup> year
- Certificate of Greenhouse Gas Reduction Model**
- CSR-DIW Continuous Award** (Corporate Social Responsibility) for the 11<sup>th</sup> consecutive year
- The Prime Minister's Industry Award**
- Platinum Award from The Asset ESG Corporate**






## 2021

### The Sustainability Yearbook 2021 "Gold Class" Oil & Gas Refining & Marketing for the 7th year

(Gold Class : 2014 – 2018 & 2020 - 2021, Silver Class : 2019)



One of 11 Thai companies considered the highest number globally. The selection is based on sustainability assessment of over 7,000 companies across 40 countries.

### Asean CG Scorecard (ACGS)

- ASEAN Top 20 PLCs
- Country Top 3 PLCs (Thailand)
- ASEAN Asset Class PLCs





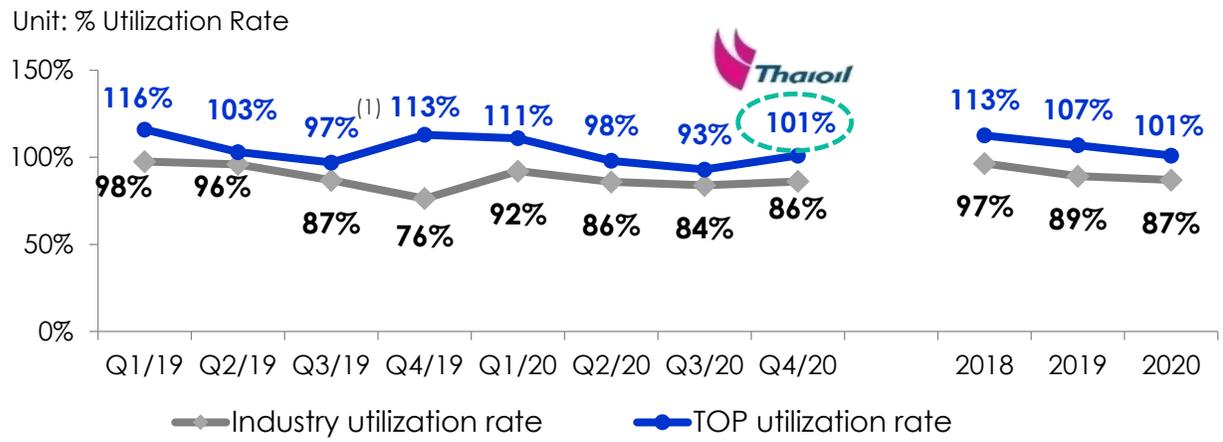



# Q4/20 & FY/20 PERFORMANCE ANALYSIS

# Refinery: Higher Utilization Rate as Improving Product Demand

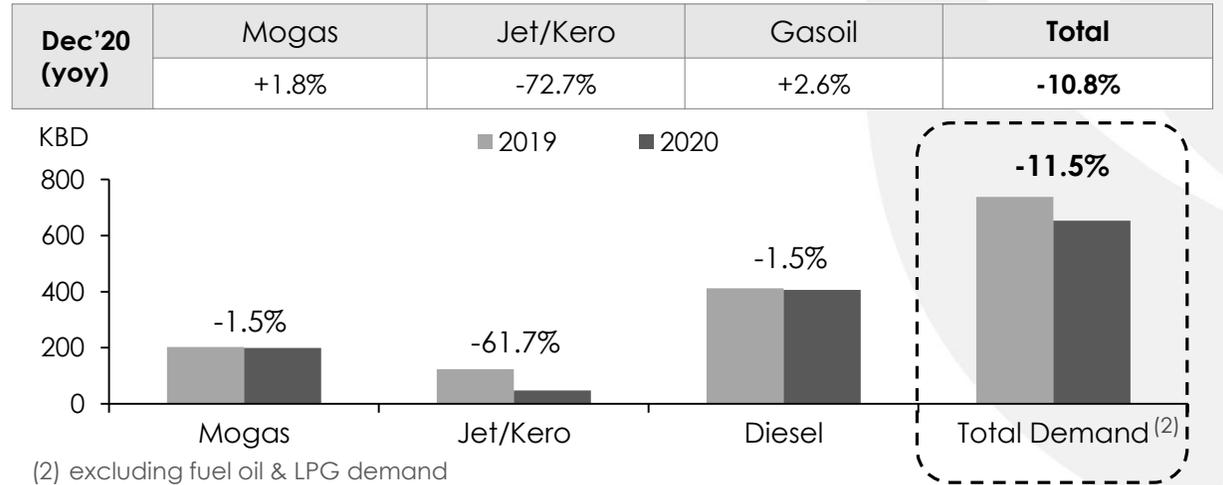


## TOP/ Domestic Refinery Utilization Rate

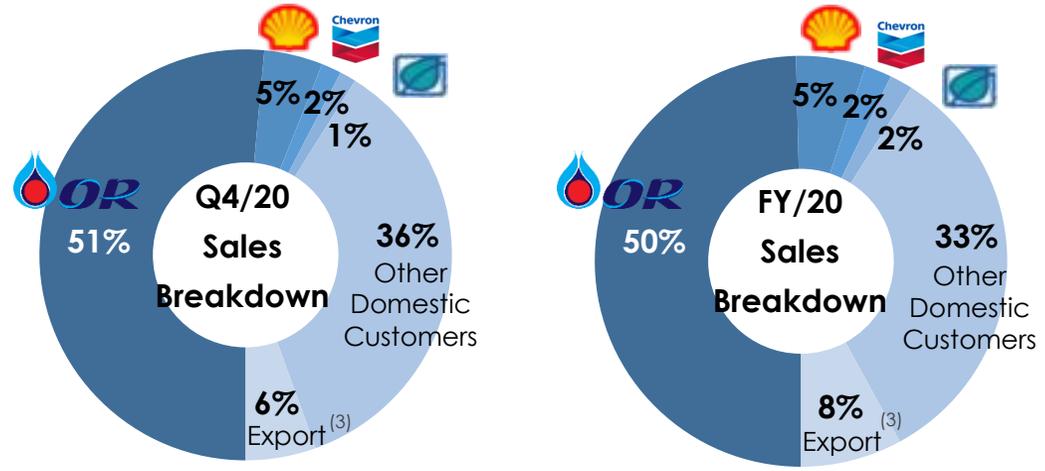


(1) TOP's CDU-3 MTA (Mid June – July 2019)

## Domestic Oil Demand



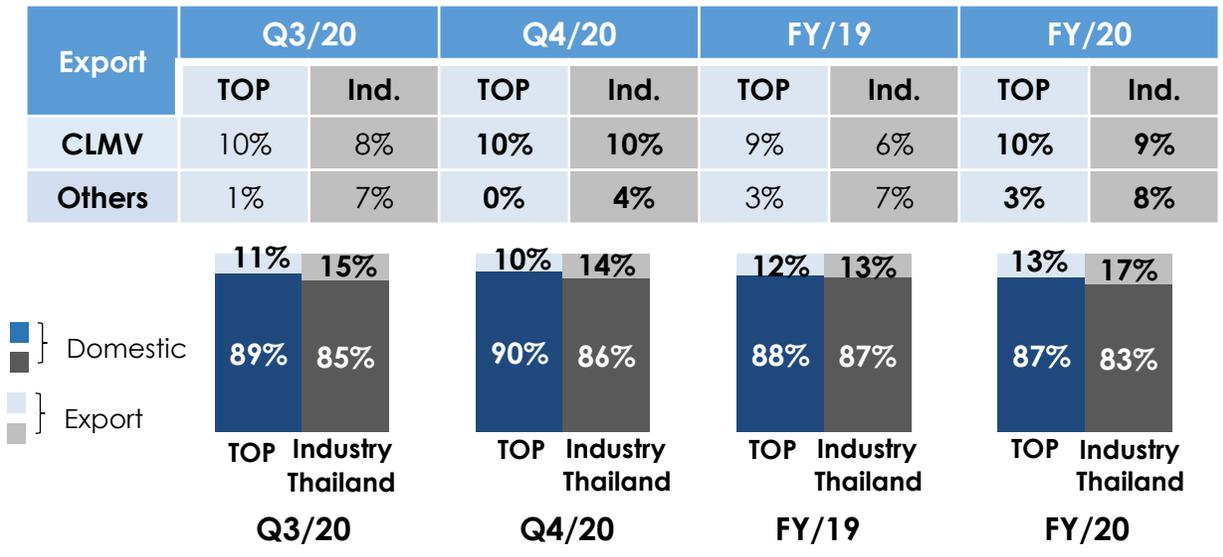
## Sales Breakdown by Customers



(3) Excluding export sale through PTT

(4) Source: Department of Energy Business, Ministry of Energy

## TOP's Domestic Sales vs Industry

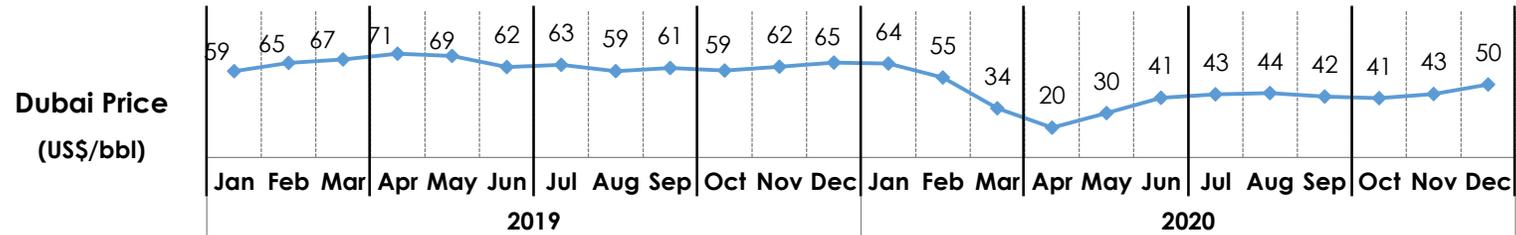


# Refinery: Improving Mkt GRM Supported by Lower Crude Cost



Dubai Crude Price & Key Petroleum Product Spreads										
	2019				2020				2019	
\$/bbl	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	FY20	FY19
DUBAI (DB)	63.5	67.4	61.1	62.1	50.9	30.6	42.9	44.6 ↑	42.2	63.5
ULG95 - DB	3.7	7.5	11.7	12.9	6.7	2.6	4.4	4.1 ↓	4.5	9.0
JET - DB	13.0	12.2	15.7	13.9	8.6	(0.1)	(0.7)	2.4 ↑	2.5	13.7
GO - DB	12.8	12.4	15.3	14.3	11.1	5.7	4.2	3.7 ↓	6.2	13.7
VLSFO - DB	0.1	3.7	7.8	12.3	13.8	5.3	3.2	5.5 ↑	7.0	6.0
HSFO - DB	0.6	(2.3)	0.9	(18.7)	(7.5)	(1.6)	(2.5)	(0.6) ↑	(3.0)	(4.9)

Refinery Utilization			
Q3/20	Q4/20	FY/19	FY/20
93%	101%	107%	101%
% MB Intake/OSP			
28%/1.2	22%/(0.4)	28%/3.1	23%/(0.4)
% AXL intake/OSP			
11%/0.7	6%/(0.7)	11%/2.3	8%/(0.3)
Middle East crude intake			
67%	61%	68%	57%



Gross Refinery Margins - GRM										
	2019				2020				2019	
\$/bbl	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	FY20	FY19
Market GRM	3.0	2.6	4.1	2.7	0.1	1.4	(1.1)	1.2	0.4	3.1
Stock G/(L)	2.7	(0.2)	(1.8)	0.7	(12.3)	(1.8)	4.0	2.3	(2.3)	0.5
Accounting GRM	5.7	2.4	2.3	3.4	(12.2)	(0.4)	2.9	3.4	(1.9)	3.6

## Q4/20 Market GRM

- + **Lower crude cost** from OSP crude discount
- + **Improving Jet/Kerosene spread** due to boosting heating demand during winter
- + **Improving Fuel oil spread** due to higher bunker fuel demand and limited supply as many refiners reduced their production
- **Weak Gasoil spread** due to lower demand from the 2<sup>nd</sup> wave of COVID-19 especially in Europe

## Q4/20 Performance

- + **Higher refinery run rate to 101%** due to improving domestic oil demand

# Aromatic: Higher Contribution Supported by BZ Spread



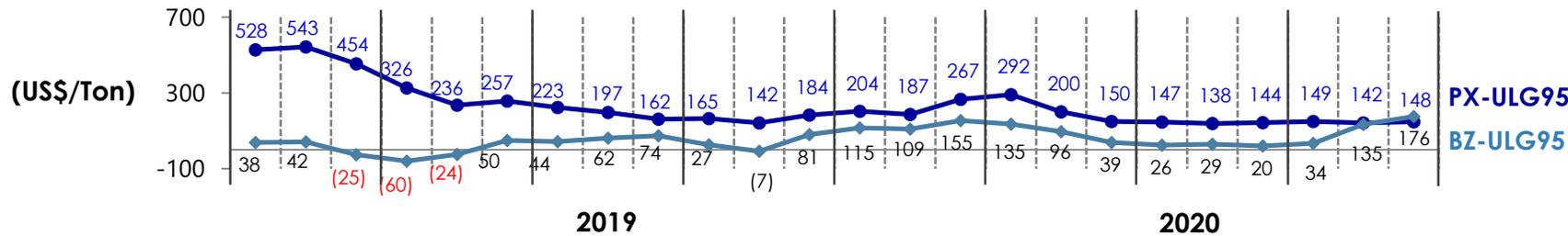
## Aromatic Spreads and Margins

	2019				2020				2019	
\$/ton	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	FY20	FY19
PX-ULG95	508	273	194	163	218	214	143	146 ↑	180	285
BZ-ULG95	18	(12)	60	33	126	90	25	115 ↑	89	25

Aromatics Production			
Q3/20	Q4/20	FY/19	FY/20
56%	70%	70%	71%

## Q4/20 Market

- + **Improving BZ margin** due to higher BZ demand for plastic packaging and new SM plant start-up
- + **Slightly improved PX margin** due to higher demand from increasing economic activities and new PTA plant start-up
- + **Robust LAB contribution** due to growing demand while limited supply from planned MTA in the region



## Aromatic's Sales (excluding by product) & Product-To-Feed Margin (P2F)

(Unit : KTon)



## Q4/20 Performance

- + **Higher utilization rate at 70%**
- + **Higher LAB utilization rate at 115%** due to LAB plant resumed operations after planned maintenance in mid-July to end-August

	2019				2020				2019	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	FY20	FY19
P2F -\$/ton	143	76	42	52	85	77	68	76	77	81
P2F -\$/bbl	18.8	9.9	5.5	6.8	11.1	10.0	8.9	9.9	10.0	10.6
GIM -\$/bbl <sup>(1)</sup>	2.0	1.0	0.5	0.8	1.5	1.6	1.2	1.6	1.5	1.1

(1) Including LAB contribution

# Base Oil: Stable Contribution Supported by Lube Spread

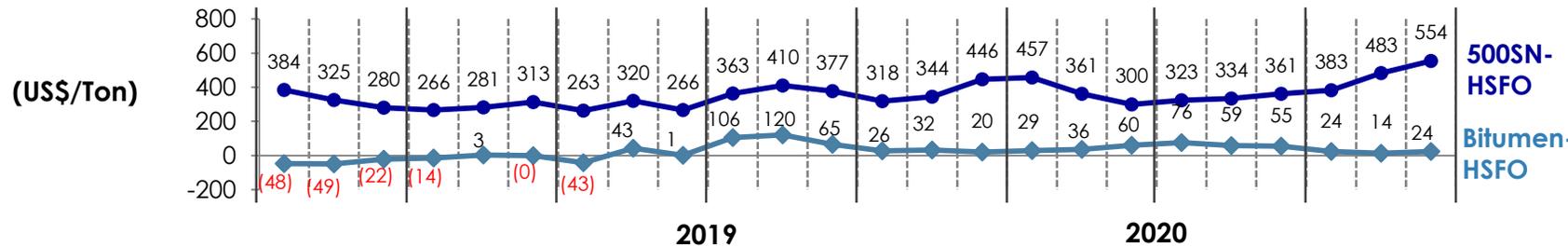


Base Oil & Bitumen Spreads & Margins										
	2019				2020					2019
\$/ton	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	FY20	FY19
500SN-HSFO	330	287	283	384	369	372	340	474 ↑	389	321
BITUMEN-HSFO	(40)	(4)	1	97	26	42	63	21 ↓	38	14

Base oil Production			
Q3/20	Q4/20	FY/19	FY/20
89%	93%	83%	88%

## Q4/20 Market

- + **Improving Base oil demand** due to limited regional supply from decreasing feedstock from refineries
- **Lower Bitumen demand** due to limited budgets for road repair and construction



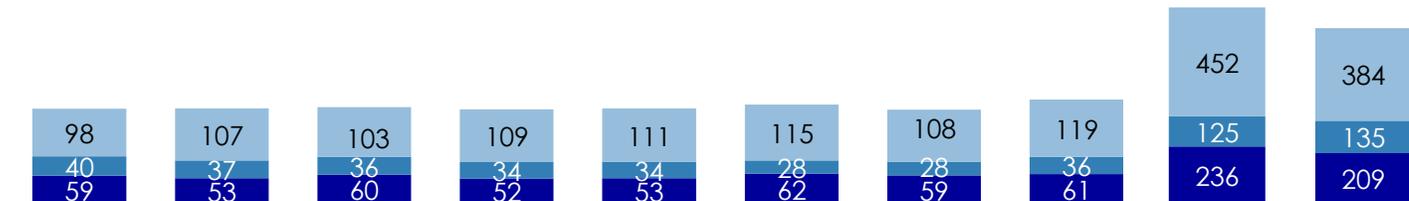
## Q4/20 Performance

- + **Higher utilization rate at 93%**

## TLB's Sales (excluding by product) & Product-To-Feed Margin (P2F)

(Unit : KTon)

- Bitumen
- Specialty
- Base Oil

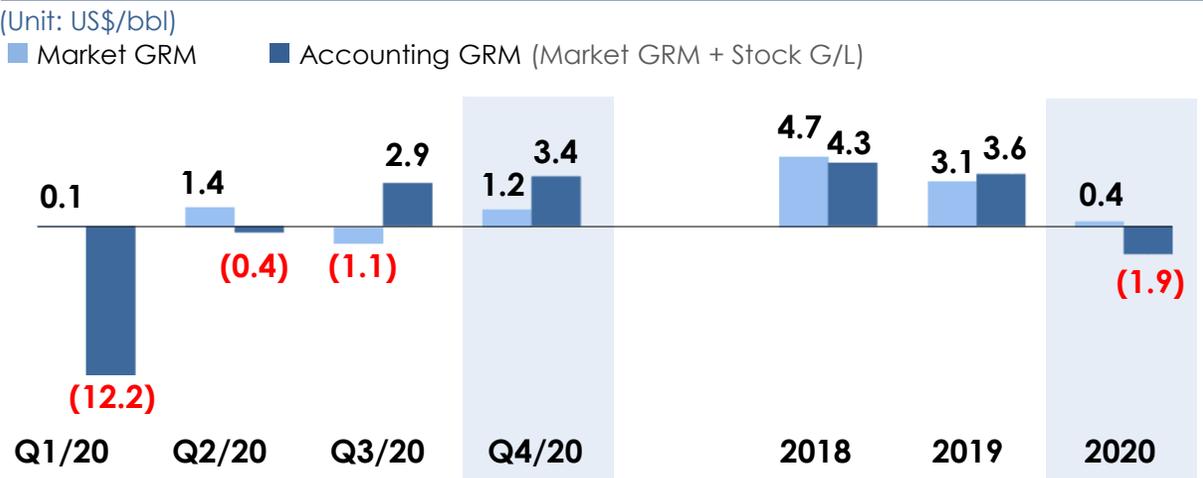


	2019				2020					2019
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	FY20	FY19
P2F -\$/ton	59	94	83	119	86	24	100	105	79	89
P2F -\$/bbl	9.0	14.3	12.6	18.1	13.1	3.6	15.1	15.9	11.9	13.5
GIM -\$/bbl	0.2	0.7	0.5	0.9	0.6	0.0	0.8	0.8	0.5	0.6

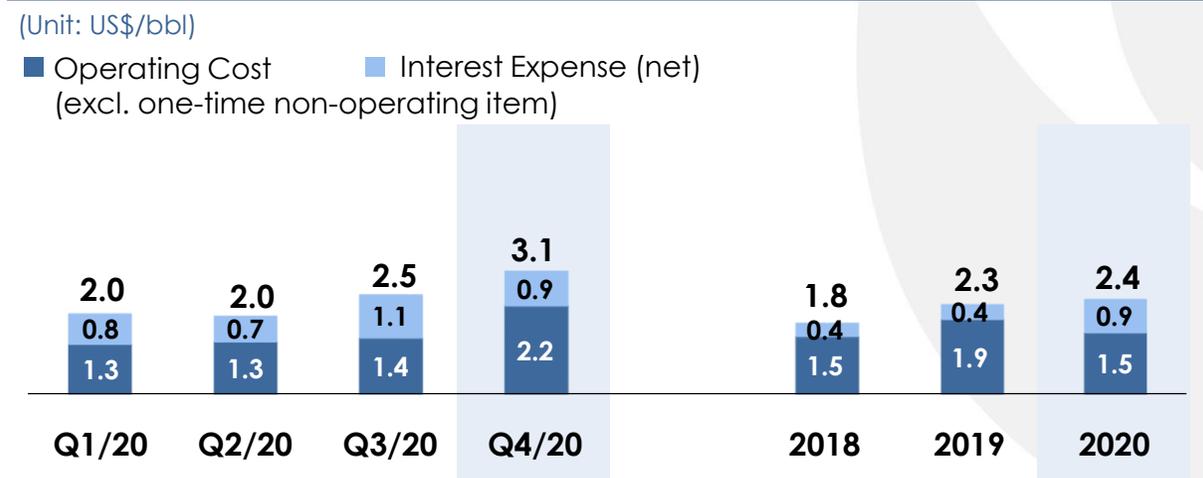
# Integrated Margin & Competitive Cash Cost



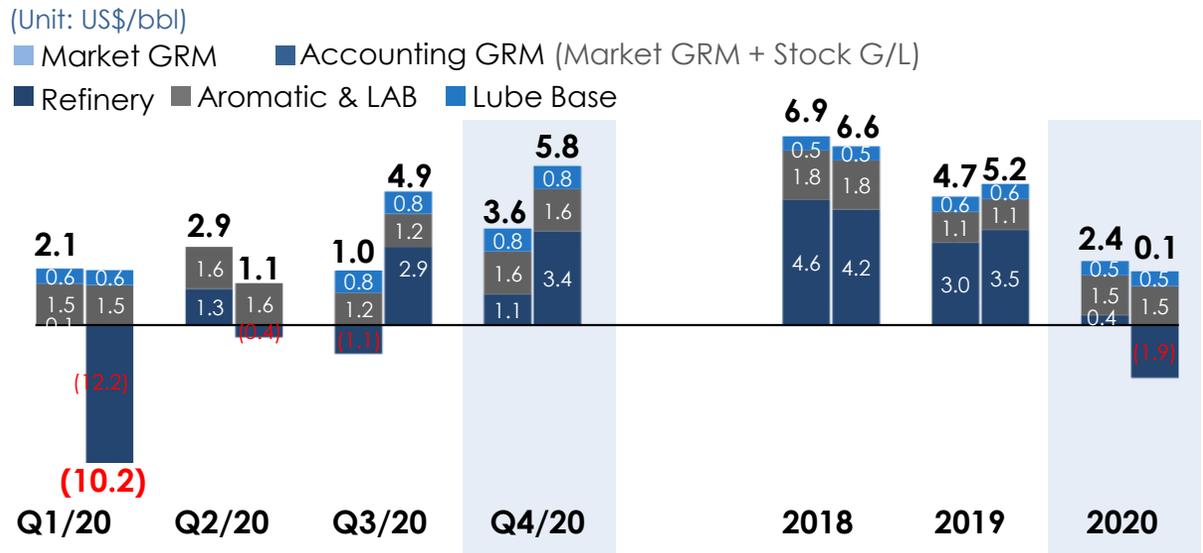
## Gross Refining Margin



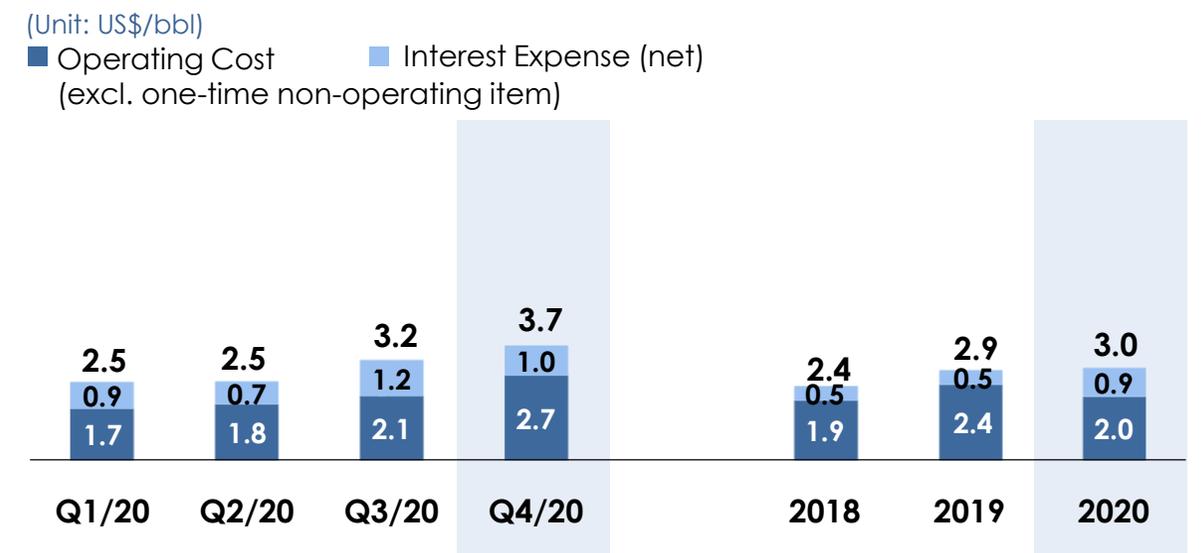
## Refinery's Cash Cost



## Gross Integrated Margin



## Group's Cash Cost



# Power Sector Performance...Growing Contribution to the Group



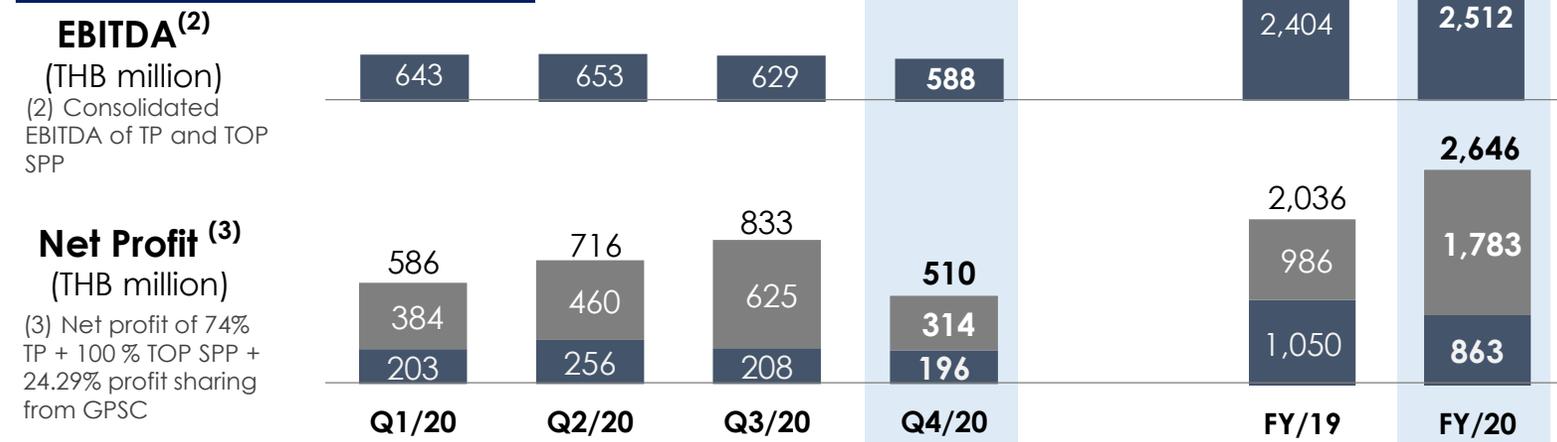
## Power Business Sector



### Power & Steam Sales



### EBITDA & Net Profit



(4) TOP shareholding 24.29% (8.91% via TOP and 20.79% via TP). GPSC is an associate company of TOP. Equity method is applied to recognize share of profit. (EBITDA calculation excludes profit sharing from GPSC)

### Q4/20 Performance Highlight

- **Lower power business contribution** due to lower electricity demand and lower contribution from GPSC due to lower revenue USD-linked AP as a result of Baht appreciation, and lower profit sharing from XPCL

### FY/20 Performance Highlight

+ **Higher power business contribution** mainly from higher contribution from GPSC

# Performance Breakdown

	Key Highlights		Performance				Outlook		Final Remarks	
	Refinery	Aromatic	Base Oil	GIM	Power	All business	F/S & others			
	Petroleum	Petrochemical & Lube Base <sup>(1)</sup>	Power <sup>(2)</sup>	Others & New Business <sup>(3)</sup>	Consolidated Net Profit (excl. Stock G/(L))	Stock Gain/ (Loss)	Consolidated Net Profit (incl. Stock G/(L))			
Q3/20	(715)	391	833	184	(2,271)	2,986	715			
Q4/20	8,628	936	510	209	5,466	1,791	7,257			
FY/19	2,161	1,978	2,036	62	4,696	1,581	6,277			
FY/20	(6,099)	2,445	2,646	717	4,098	(7,399)	(3,301)			

## Q4/20 Key Points

### Petroleum

- Higher utilization rate to 101%
- Higher market GRM (from -1.1 \$/bbl in Q3'20 to 1.2 \$/bbl in Q4'20)
- Gain on selling GPSC 5,801 MB

### Power

- Lower power business contribution due to TP's planned maintenance and lower electricity demand
- Lower contribution from GPSC due to lower revenue USD-linked AP as a result of Baht appreciation, and lower profit sharing from XPCL

### Petrochemical

- **Aromatics & LAB** : higher contribution supported by improving BZ spread and higher LAB contribution due to the resumption after MTA
- **Lube** : higher contribution due to improving lube spread from limited supply while demand recovery after lockdown easing

### Others & New Business

- **Solvent** : higher contribution due to increasing sale volume from strong demand after lockdown easing
- **Ethanol**: slightly lower contribution due to lower ethanol sale volume

Remark

(1) Includes 75% of LAB net profit Q3/20 (221) MB, Q4/20 138 MB, FY/19 (98) MB, FY/20 (74) MB

(2) Apply on an equity accounted basis in the consolidated financial statement.

(3) Consisting of Solvent, Marine, Ethanol and other business

# Q4/20 & FY/20 TOP Group Consolidated P&L

	Performance			Outlook			Final Remarks	
	Refinery	Aromatic	Base Oil	GIM	Power	All business	F/S & others	
(MB)	Q4/20	Q3/20	QoQ+/-	Q4/19	YoY+/-	2020	2019 Re-presented	YoY+/-
Sales Revenue	59,592	57,225	2,367 <sup>(A)</sup>	96,263	(36,671)	242,840	361,768	(118,928) <sup>(D)</sup>
Net Realized G/(L) on Financial Instrument	(254)	144	(398)	288	(542)	(174)	359	(533)
<b>EBITDA</b>	↓ <b>3,493</b>	<b>3,819</b>	<b>(326)</b> <sup>(B)</sup>	<b>3,927</b>	<b>(434)</b>	↓ <b>(2,055)</b>	<b>14,149</b>	<b>(16,204)</b> <sup>(E)</sup>
<b>EBITDA excl. Stk G/(L)&amp;NRV</b>	<b>1,619</b>	<b>455</b>	<b>1,164</b>	<b>2,993</b>	<b>(1,374)</b>	<b>5,893</b>	<b>11,909</b>	<b>(6,016)</b>
Net Loss on FV of Financial Instrument	(50)	33	(83)	-	(50)	(5)	-	(5)
FX G/(L) & CCS	2,531	(453)	2,984 <sup>(C)</sup>	226	2,305	1,784	1,778	6
Gain from sale investment in GPSC	5,801	-	5,801	-	5,801	5,801	-	5,801
Financial cost	(986)	(1,172)	186	144	(1,130)	(4,292)	(3,224)	(1,068) <sup>(F)</sup>
Tax Expense	(2,384)	(33)	(2,351)	(345)	(2,039)	647	(1,240)	1,887
<b>Net Profit</b>	↑ <b>7,257</b>	<b>715</b>	<b>6,542</b>	<b>1,984</b>	<b>5,273</b>	↓ <b>(3,301)</b>	<b>6,277</b>	<b>(9,578)</b>
EPS (THB/Share)	3.56	0.35	3.21	0.97	2.58	(1.62)	3.08	(4.70)
Stock G/(L) and NRV	1,874	3,364	(1,490)	934	940	(7,948)	2,240	(10,188)
<b>Net Profit excl. Stk G/(L)&amp; NRV</b>	<b>5,383</b>	<b>(2,649)</b>	<b>8,032</b>	<b>1,050</b>	<b>4,333</b>	<b>4,647</b>	<b>4,037</b>	<b>610</b>
THB/US\$ - average selling	30.79	31.49	(0.71)	30.46	0.33	31.46	31.22	0.25
THB/US\$ - ending	30.21	31.83	(1.62)	30.33	(0.12)	30.21	30.33	(0.12)

## Analysis

### QoQ

- (A) Higher petroleum sales volume due to domestic oil demand recovery and higher average selling price per unit
- (B) Lower stock gain compare to Q3/20 despite higher mkt GIM
- (C) Ending FX THB strengthen against USD

### YoY

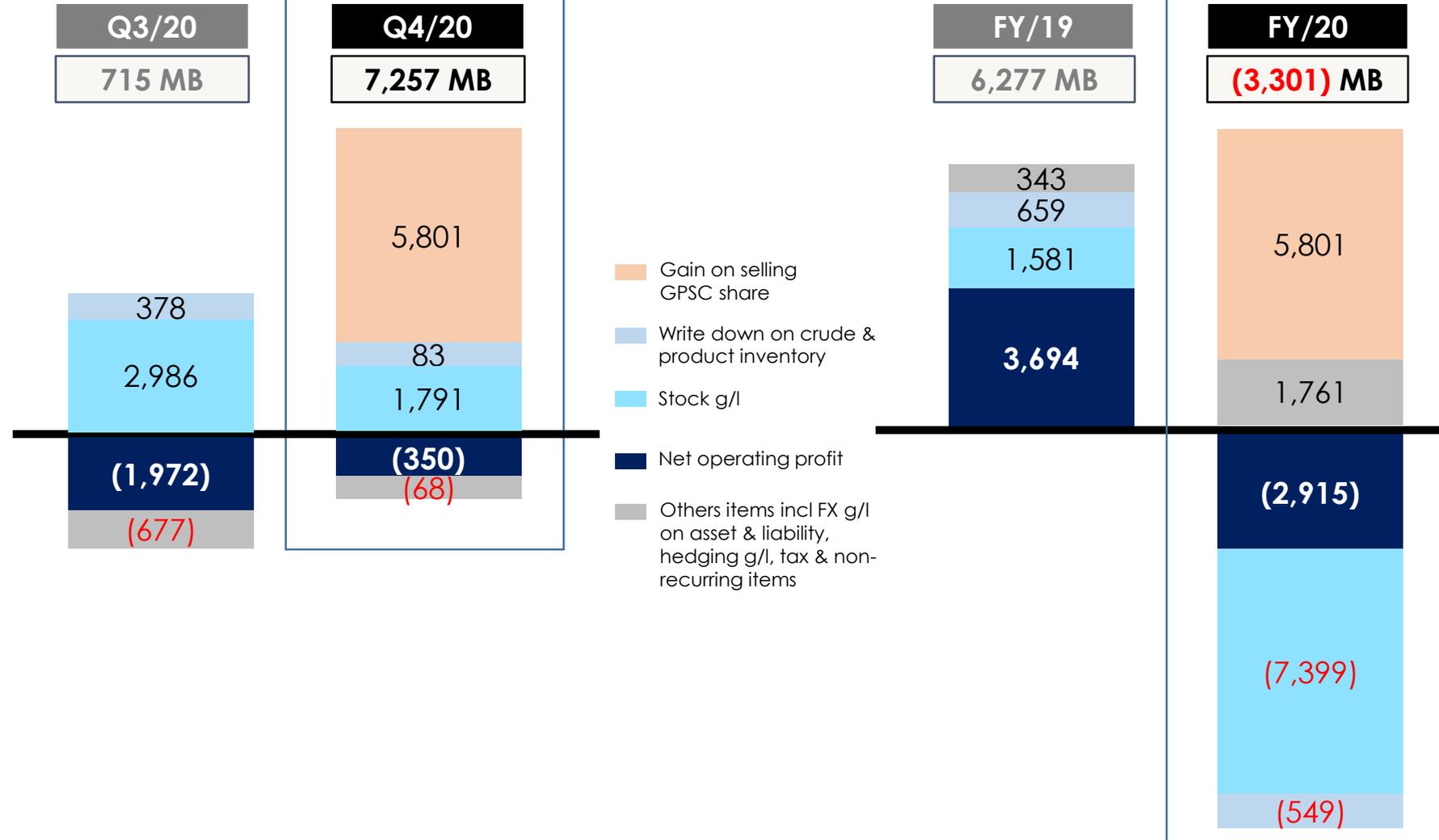
- (D) Lower sales volume and avg. selling price due to impact of COVID-19
- (E) Lower mkt GIM from lower overall product spreads and huge stock loss
- (F) Higher interest expense mainly from new bond amount of USD 1 bn. in Q2/20

# Q4/20 & FY/20 - Financial Performance



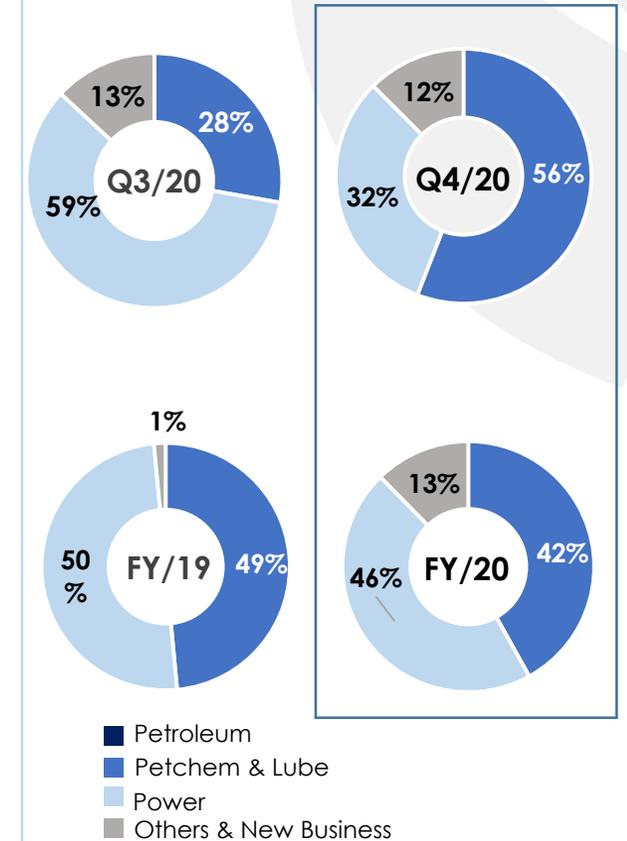
## TOP Group Net Profit

Unit :Million THB (MB)



## Net Profit Contributions

Excluding stock gain/(loss) & one-time items\*



\* Excluding stock gain/(loss), FX gain/(loss), and gain on selling GPSC share

# FY/20 Consolidated Cash Flow



(Unit: MB)

	2020	2019
<b>Operating Cash Flow (CFO)</b>	<b>2,435</b>	<b>13,087</b>
Net income	(2,595)	6,933
Depreciation & NRV	7,769	5,668
Other adj.	(7,261)	(724)
Change in working capital	4,522	1,211

	2020	2019
<b>Investments (CFI)</b>	<b>(47,490)</b>	<b>23,343</b>
Dividend income	1,281	763
ST investments	(17,221)	72,285
Sell / (Invest) in a associate	17,029	(21,972)
CAPEX (PP&E) & others	(48,578)	(27,733)

<b>Free Cash Flow (CFO +CFI)</b>	<b>(45,056)</b>	<b>36,431</b>
----------------------------------	-----------------	---------------

	2020	2019
<b>Financing (CFF)</b>	<b>20,575</b>	<b>8,129</b>
Loans proceeding	6,336	10,834
Loans repayment	(7,494)	(8,898)
Bond issue	30,997	13,982
Interest	(6,262)	(3,174)
Dividend& Lease	(3,001)	(4,614)

<b>Beginning 2020</b>					<b>Ending 2020</b>	
Cash	74,854	+	Increase / (Decrease)	2,870	=	Cash
			(24,480)			53,244
<b>Cash + S/T Investment</b>	<b>76,937</b>					<b>Cash + S/T Investment</b>
						71,681



# Q4/20 TOP Group Strong Financial Position & Financial Ratios



## Statements of Financial Position

(Unit: million THB)

	31 Dec 19	31 Dec 20	
Cash & ST investment	76,937	41,322	Trade Payable / Others
Current Assets	57,739	118,199	Interest Bearing Debt <sup>(1)</sup>
Non-Current Assets	148,768	123,924	Equities
	<b>283,445</b>	<b>306,188</b>	

	31 Dec 19	31 Dec 20
ROE <sup>(2)</sup>	3.2%	3.8 %
ROIC <sup>(2)</sup>	4.3 %	3.2 %

(1) Including current portion of Long-Term Debt  
 (2) Based on actual performance in the past 12 month and excluding stock g/l & NRV

## Consolidated Long-Term Debt as at 31 Dec 20

<b>Total IBD</b> 144,902 million THB <b>(US\$ 4,797 million equivalence)</b>	<b>Net Debt</b> 73,221 million THB <b>(US\$ 2,424 million equivalence)</b> As at 31 Dec 20 (30.21 THB/US\$)
--	--

**Currency Breakdown**

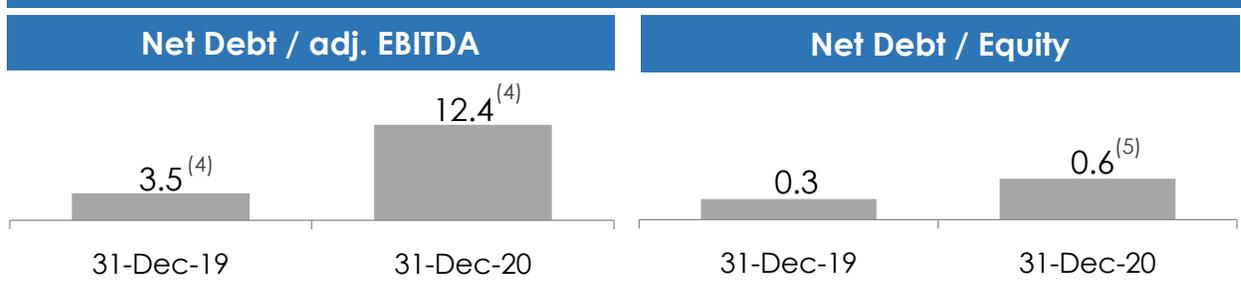
**Interest Rate Breakdown**

<b>Avg. Debt Life (yrs)</b>	<b>15.92 yrs</b>
<b>Cost of Debt (Net)</b>	<b>3.61% <sup>(3)</sup></b>
<b>(Gross)</b>	<b>4.16%</b>

(3) Due to yield enhancement

## Financial Ratios



(4) Based on actual performance in the past 12 month and excluding stock g/l & NRV  
 (5) As of 31 Dec 20 Net Debt 73,221 MB or 2,424 M\$

<b>MOODY'S</b>	<b>STANDARD &amp; POOR'S</b>	<b>FitchRatings</b>
<b>Final rating</b>	<b>Baa2</b>	<b>BBB</b>
	<b>Negative Outlook</b>	<b>Stable Outlook</b>
		<b>AA- (Tha)</b>
		<b>Negative Outlook</b>

# TOP Group Strategic Investment Plan

Key Highlights

Performance

Outlook

Final Remarks

Refinery

Aromatic

Base Oil

GIM

Power

All business

F/S &amp; others

## CAPEX Plan (Unit US\$ million)

Updated as of December 2020

Project

Actual  
2020Estimated Budgeting for  
Investment Plan  
2021 - 2024CFP project <sup>(1)</sup>

1,400

1,903

Total Ongoing CAPEX

89

200

Reliability, Efficiency and Flexibility Improvement

31

47

Infrastructure Improvement ( i.e. Jetty 7&amp;8, Office Relocation &amp; New Crude Tank, Site office preparation for fire water &amp; fire water improvement, New Bangphra Raw Water Line )

43

71

Other Investments ( i.e. Corporate Venture Capital - CVC , Digital Transformation )

15

82

TOP SPP Expansion

-

145

Total CAPEX

1,4892,248Cash & ST investment as of 31 Dec '20 <sup>(2)</sup>2,373

Notes: Excluding approximately 40 M\$/year for annual maintenance

(1) CAPEX of CFP Project including the disposal of asset to transfer ownership in the Energy Recovery Unit (ERU) which is a part of the CFP Project

(2) Including cash received from selling GPSC share 16,757 MB or 554M\$, and in Q1/21, there will be cash-out for EBT process approx. 11,000 MB or 364 M\$



## 2021 OUTLOOK

- Crude Oil
- Refinery
- Aromatic
- Base Oil & Bitumen

# Improving Demand in 2H amid Limited Crude Supply to Support Oil Market

Key Highlights

Performance

Outlook

Final Remarks

Crude

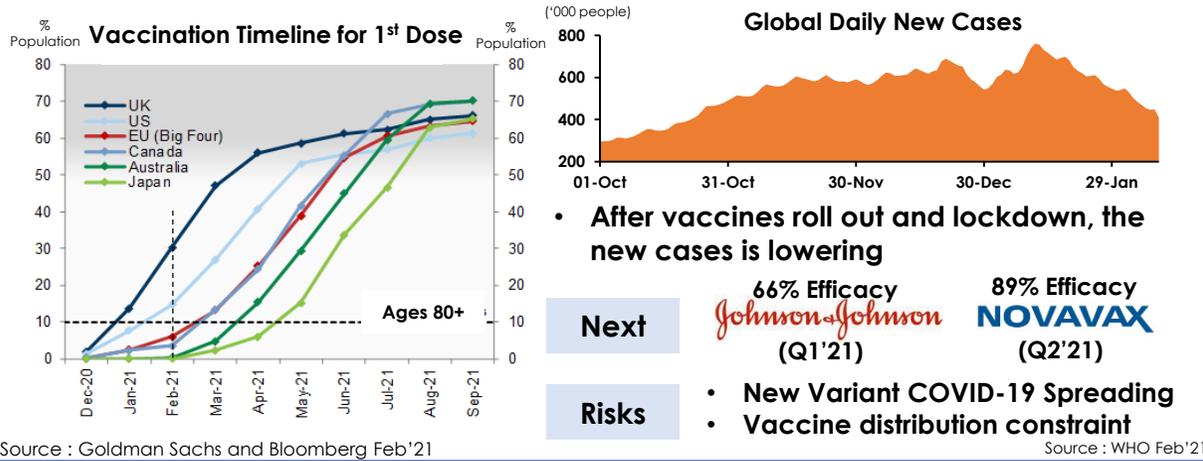
Refinery

Aromatic

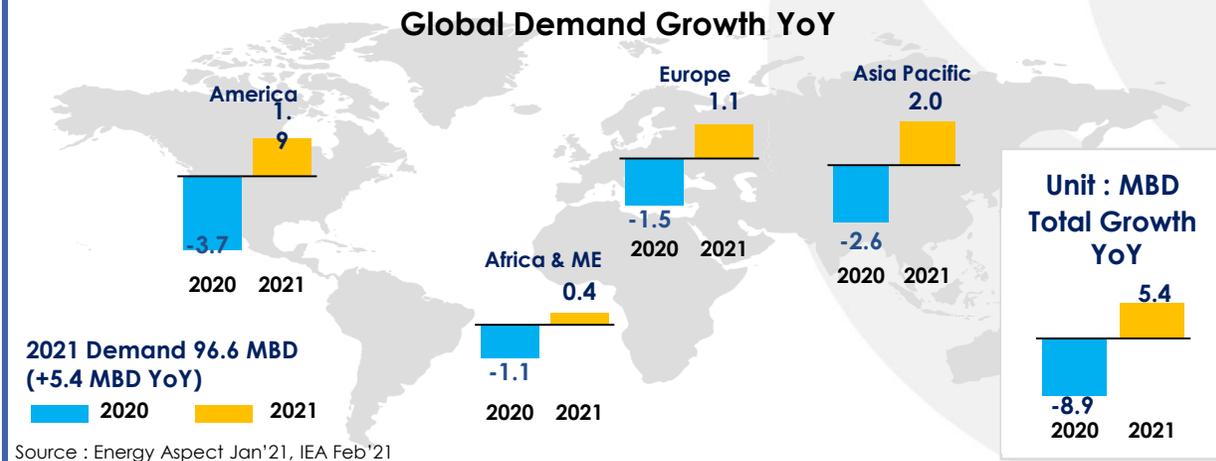
Lube&Bitumen

Conclusion

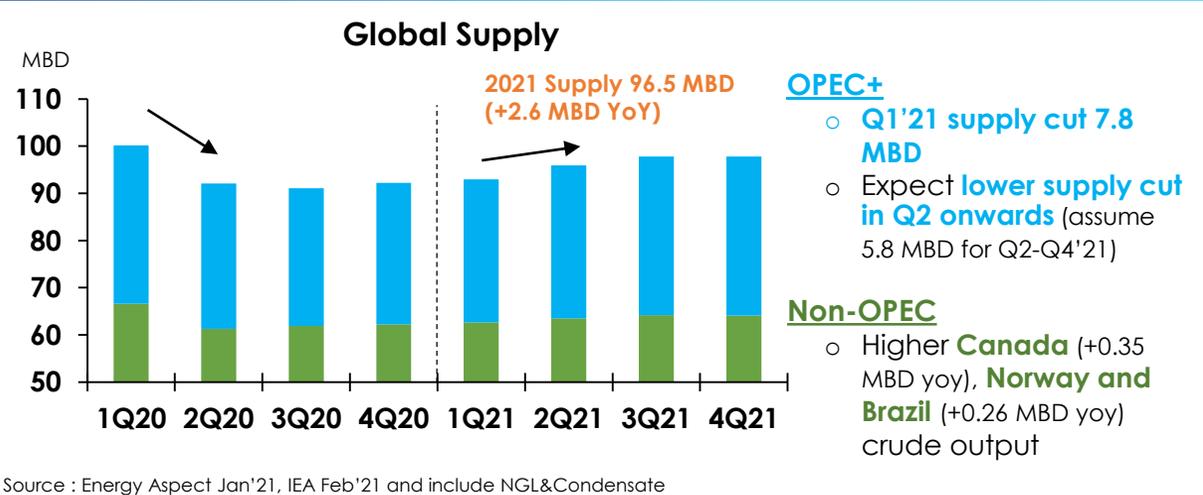
## A Hopes on Vaccine Injections to Limit COVID-19 Spreading



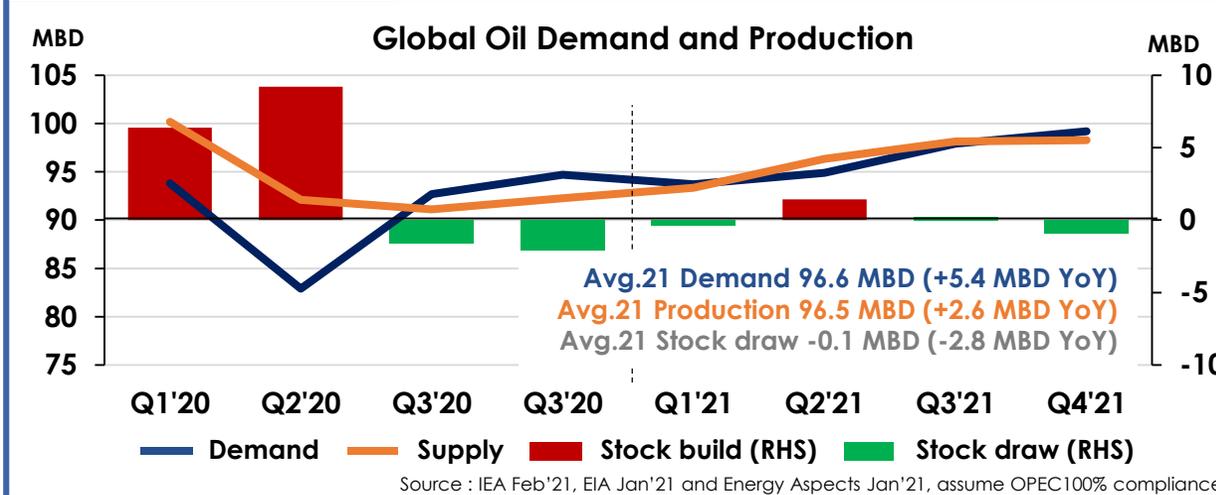
## B Oil Demand Recovery in 2021



## C Remaining Low Supply with Slightly Higher OPEC+ Production



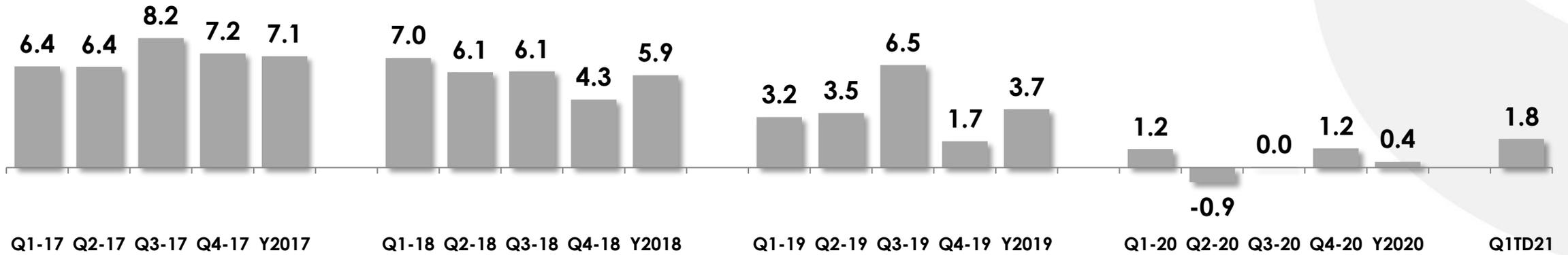
## D Expected Balanced Crude Oil Market in 2021



# Recovering Refinery Margin on Improving Demand and Easing Stock Levels



## Singapore Cracking GRM (\$/BBL)



Source : Reuters Feb'21, Exclude Fuel and Loss

Remark : QTD as of 12 Feb'21

### 2021 Key Highlights: GRM to Recover on Resuming Petroleum Product Demand

- 1 Better Gasoline Demand Driven by Asia while Jet Remains Pressure from Limited International Flight**
- 2 Improving Gasoil Demand on Economic Recovery and Firmer Fuel Oil Demand amid Higher Supply**

# Better Gasoline Demand Driven by Asia while Jet Remains Under Pressure from Limited International Flight

Key Highlights

Performance

Outlook

Final Remarks

Crude

Refinery

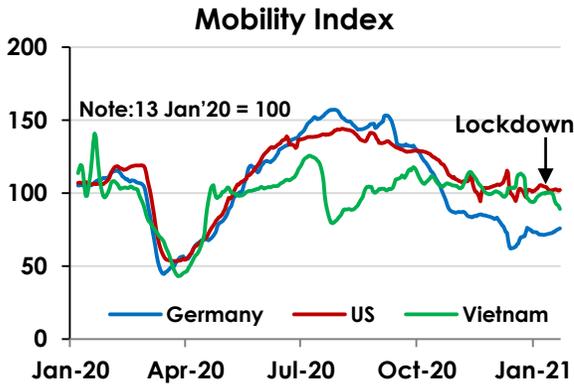
Aromatic

Lube&Bitumen

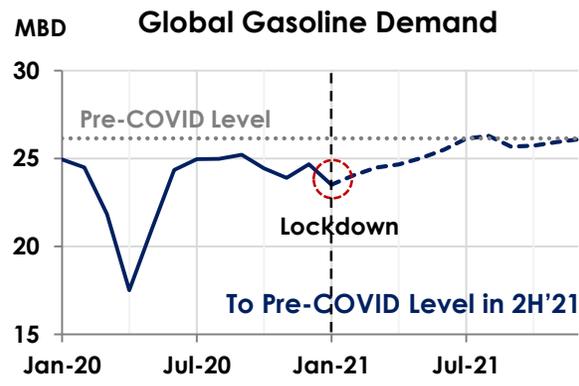
Conclusion

## Better Gasoline Demand in 2H'21 Driven by Asia

### A Extended Lockdown to limit Demand Recovery in 1H'21

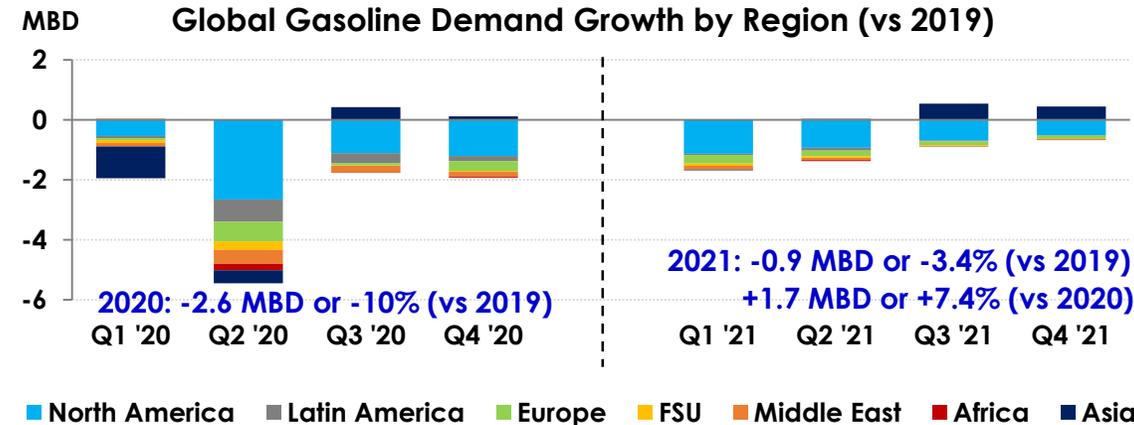


Source: Apple Mobility (Feb'21)



Source: Energy Aspects (Jan'21)

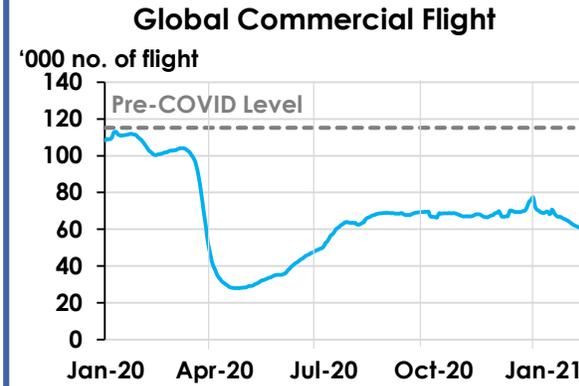
### B Global Gasoline Demand Mainly Boosted by Asia



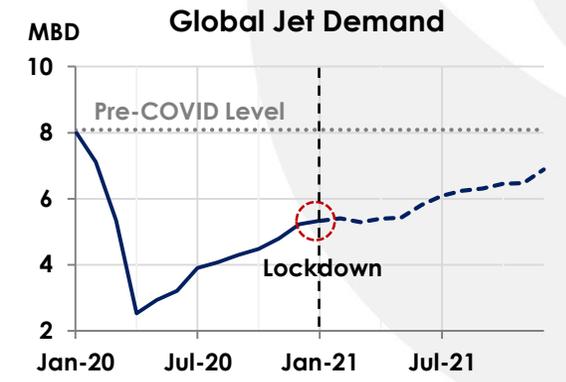
Source: Energy Aspects (Jan'21)

## Jet Remains Under Pressure from Limited International Flight

### A Limited Flight Movement on Lockdown to Remain Pressure Market

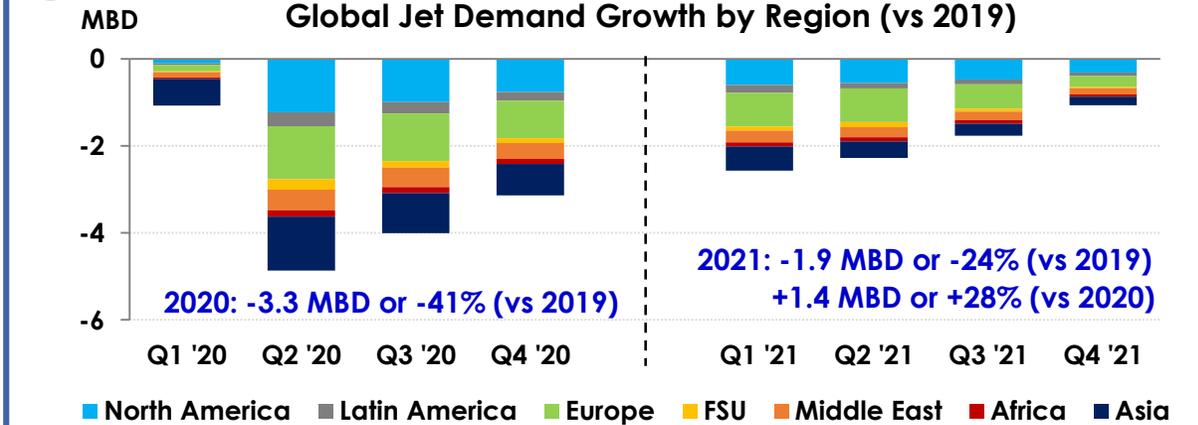


Source: Flightradar24 (Feb'21)



Source: Energy Aspects and FGE (Jan'21)

### B Slowly recovering Jet Demand amid Inter-Flight Restriction



Source: Energy Aspects (Jan'21)

# Improving Gasoil Demand on Economic Recovery

## Firmer Fuel Oil Demand amid Higher Supply on Higher Run Rate



### Improving Gasoil Demand on Economic Recovery

**A Lockdown in Some Countries to Limit Demand in 1H'21**

**Manufacturing Purchasing Managers' Index (PMI)**

**Global Gasoil Demand**

Source: Markit economics (Jan'21)      Source: Energy Aspects (Jan'21)

**B Rising Demand Supported by Improving Economic Activity**

**Global Gasoil Demand Growth by Region (vs 2019)**

2020: -1.8 MBD or -6% (vs 2019)  
2021: +1.2 MBD or +4.6% (vs 2020)

Legend: North America (blue), Latin America (grey), Europe (green), FSU (yellow), Middle East (orange), Africa (red), Asia (dark blue)

Source: Energy Aspects (Jan'21)

### Firm Fuel Oil Demand amid Higher Supply on Higher Run Rate

**A Rising Fuel Oil Demand on Economic Recovery**

**Asian Fuel Oil Demand**

2020: +0.07 MBD or +3% (vs 2019)  
2021: +0.1 MBD or +4% (vs 2020)

Legend: 5yr-range (grey shaded), Avg. 16-20 (dotted), 2019 (grey line), 2020 (blue line), 2021 (green line)

Source: FGE (Jan'21)

**B Refinery Run Rate to Increase but Still Under Pre-COVID Level**

**Global Refinery Run Rate**

2018: 82%  
2019: 82%  
2020: 74%  
2021: 77%

Legend: 2018 (dark blue), 2019 (grey), 2020 (blue), 2021 (dashed green)

Source: FGE (Jan'21)

# Recovering Domestic Demand Following Economic Improvement

Key Highlights

Performance

Outlook

Final Remarks

Crude

Refinery

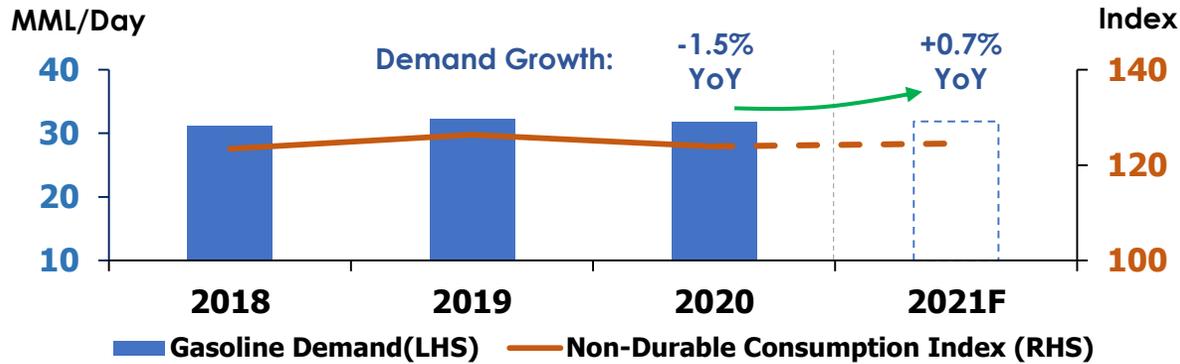
Aromatic

Lube&Bitumen

Conclusion

## A Increasing Gasoline Demand on Higher Consumer's Spending on Goods

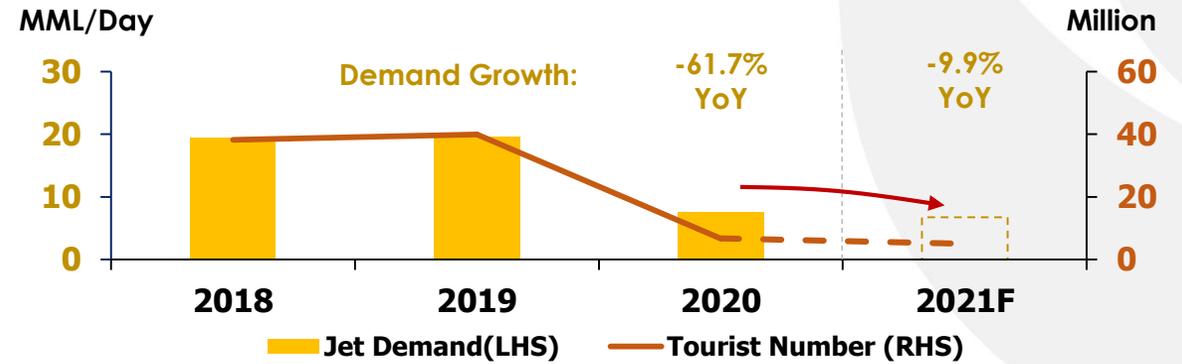
Gasoline Demand vs. Non-Durable Goods Index\*



\*Non-durable Index is the index that measure of national spending on consumer goods, which implies to traveling activity  
 Source : NESDC, DOEB (Feb'21) and PTI (Sep'20) \*Based Year 2010

## B Decreasing Jet Demand on Lower Tourist Number

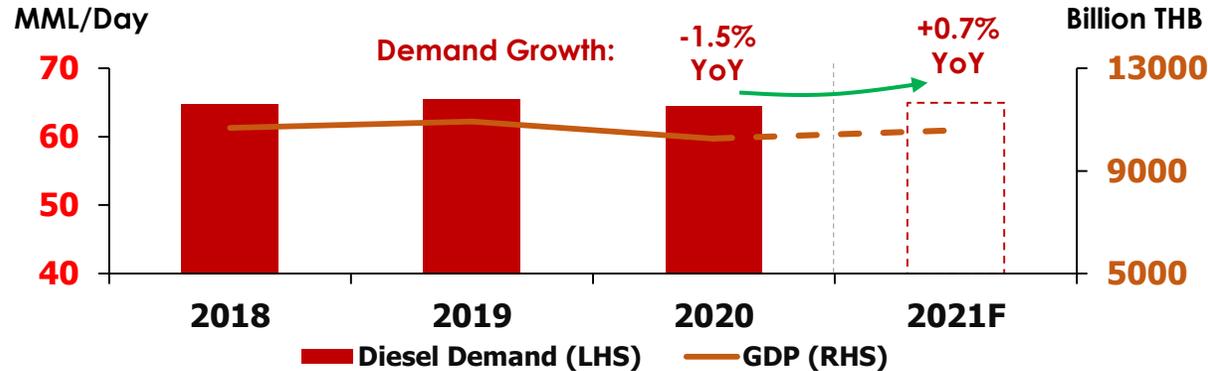
Jet Demand vs. Tourist Number



Source : NESDC, DOEB (Feb'21) and PTI (Sep'20)

## C Increasing Diesel Demand on a Economic Recovery

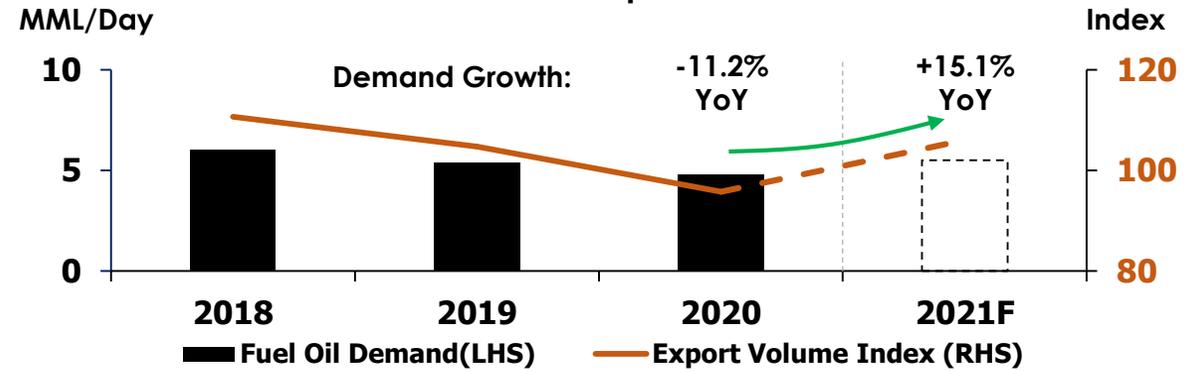
Diesel Demand vs. GDP



Source : BOT, DOEB (Feb'21) and PTI (Sep'20)

## D Recovering Fuel Oil Demand on Higher Global Trade

Fuel Oil Demand vs. Export Volume Index\*



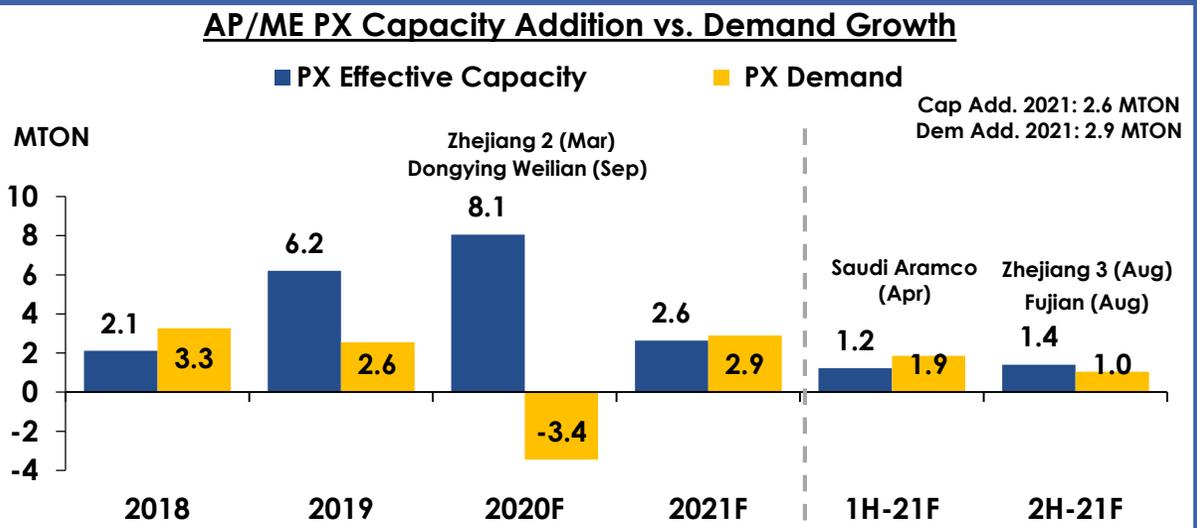
Source : BOT, DOEB (Feb'21) and PTI (Sep'20)

\*Based Year 2015

# Improved Aromatics Market on Less Additional Capacity and Demand Recovery



## A Less Capacity Addition amid Partial Recovered Demand

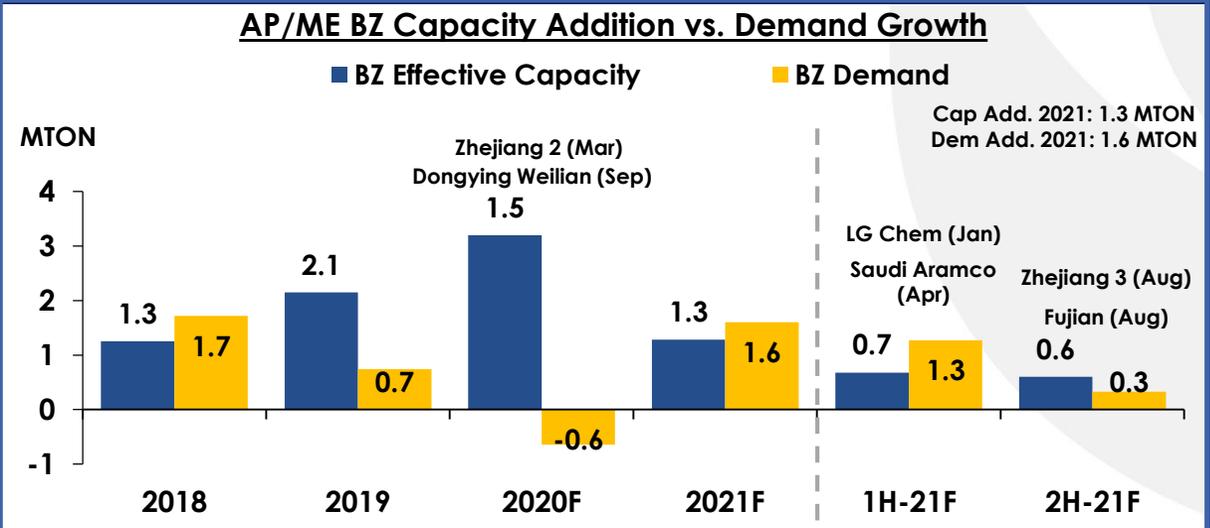


### PTA Plant Start-up Help Consuming PX Supply in 2021

Year	Month	Company	Country	Capacity (KTA)
2021	Jan	Zhejiang Yisheng Petrochemical	China	100
2021	Feb	Fujian Baihong (Billion) #1	China	2,500
2021	Apr	Jiangsu Honggang Petrochemical	China	2,400
2021	May	Yisheng New Material	China	3,000

Source: WM Chemicals (Dec-20), IHS Fall 2020 and TOP's Estimate

## B Less Capacity Addition amid Partial Recovered Demand



### SM Plant Start-up Help Consuming BZ Supply in 2021

Year	Month	Company	Country	Capacity (KTA)
2021	Jan	Huatai Shengfu	China	300
2021	Jan	Citic Guoan	China	200
2021	May	LG Chem	Korea	70

Source: WM Chemicals (Dec-20), IHS Fall 2020 and TOP's Estimate

# Firm Base Oil Market on Remain Low New Capacity

## Key Highlights

## Performance

## Outlook

## Final Remarks

### Crude

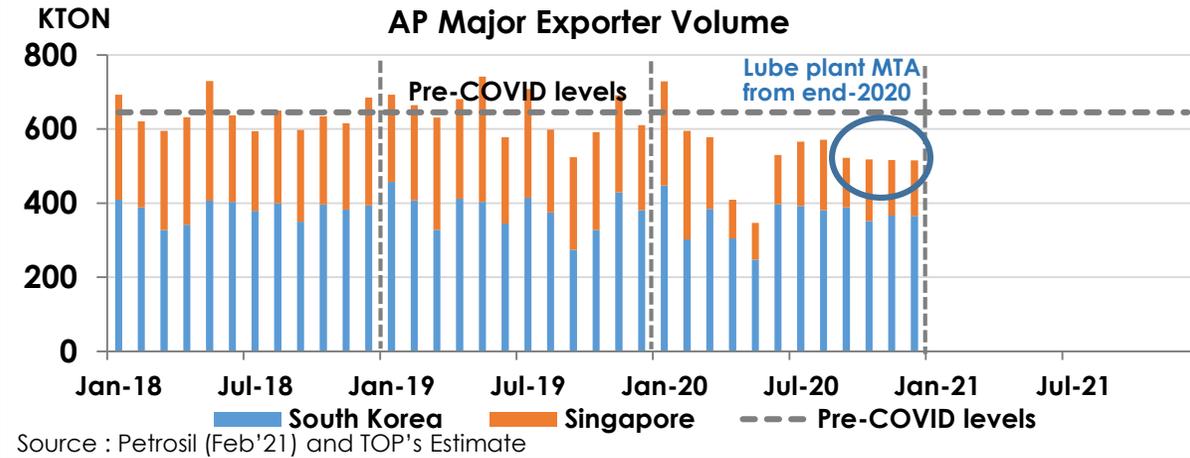
### Refinery

### Aromatic

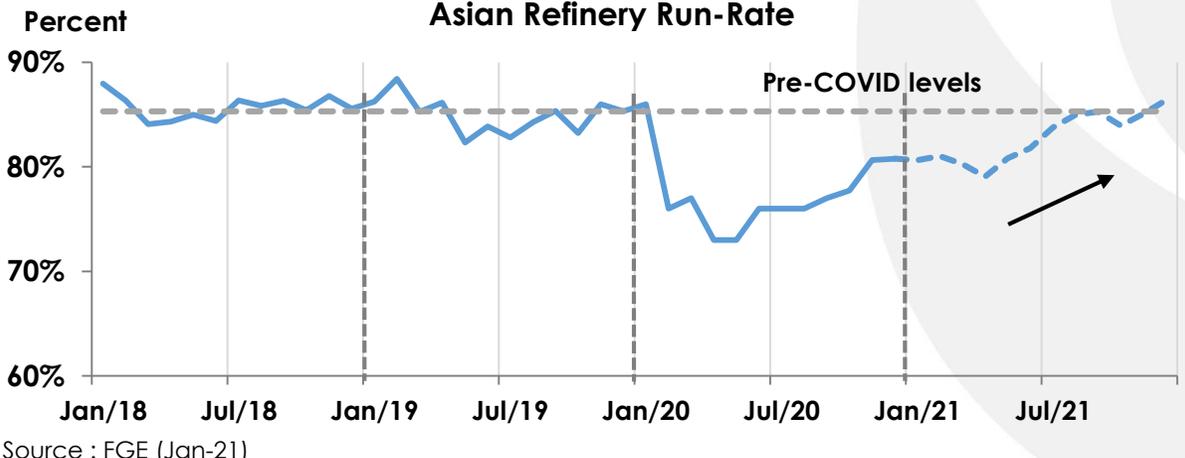
### Lube&Bitumen

### Conclusion

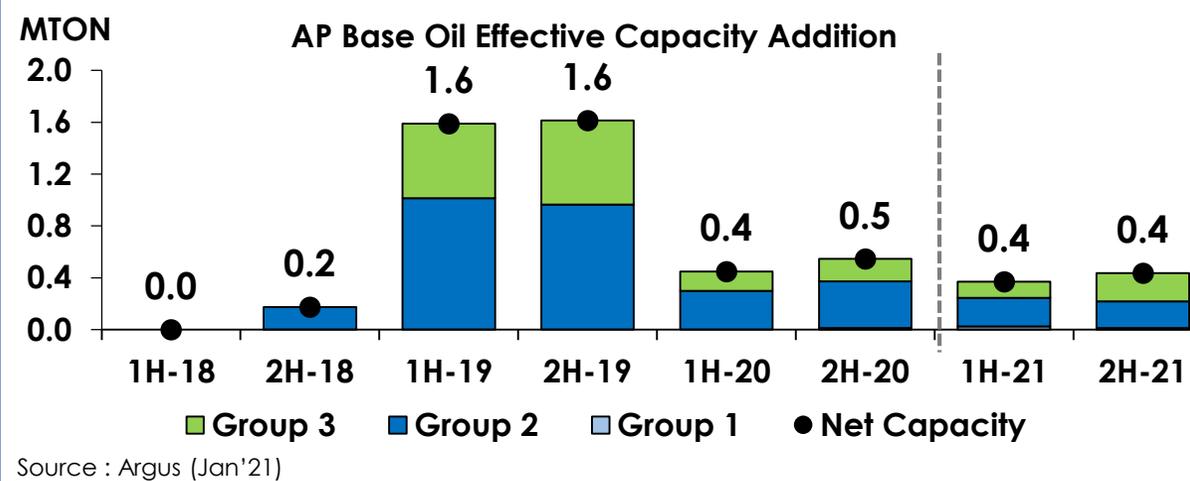
### A Lower Base Oil Supply from Limited Feedstock on Run-Cut



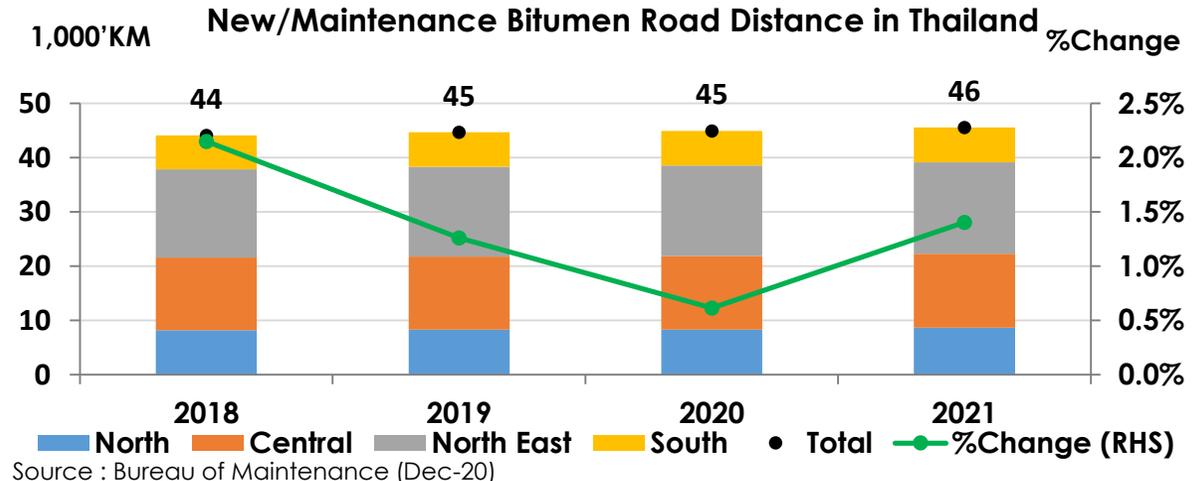
### B Easing Tight Supply on Higher Run-Rates with Recovered Demand



### C Remaining Low New Base Oil Plant Start-up in 2021



### D Higher Roadwork Plans to be Support Domestic Consumption



# 2021 Outlook Conclusion

(vs. 2020)

Key Highlights

Performance

Outlook

Final Remarks

Crude

Refinery

Aromatic

Lube&Bitumen

Conclusion



## Crude Oil

Improving Oil Demand on Widely Vaccine Roll Out amid Limited Surplus Supply



## Refinery

Recovering Refinery Margin on Improving Demand after COVID-19 Relief



## Aromatic

Improved Aromatics Market on Demand Recovery and Less Additional Capacity



## Lube Base

Firm Base Oil Market on Remain Low New Capacity



# FINAL REMARKS

# 2021 – A Better Year For Our Continuous Journey

Key Highlights

Performance

Outlook

Final Remarks

## Business & Industry



### “Things are looking up”

- **The mass COVID-19 vaccination programs worldwide** will boost economic activity to rebound. With successful pandemic control and a faster vaccination process, global growth could accelerate to nearly 5%.
- **Volatile oil price** on recovering oil demand after COVID-19 vaccines rollout amid uncertainties on US energy policy under the new president.
- **Improving refinery margins** as the rebound in global oil demand in 2H/21 after vaccines are more widely distributed.

## TOP's Mission



- **Our “Accelerate the Reform” is underway**
  - New strategic growth paths : Olefins & startups
- **Managed CFP project amidst COVID-19 constraints**
- **Innovative financial management to ensure funding readiness**
- **Continuous stringent cost management**

# Thank You

Any queries, please contact:



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Tel: 662-797-2999 / 662-797-2961

Fax: 662-797-2976

## APPENDIX

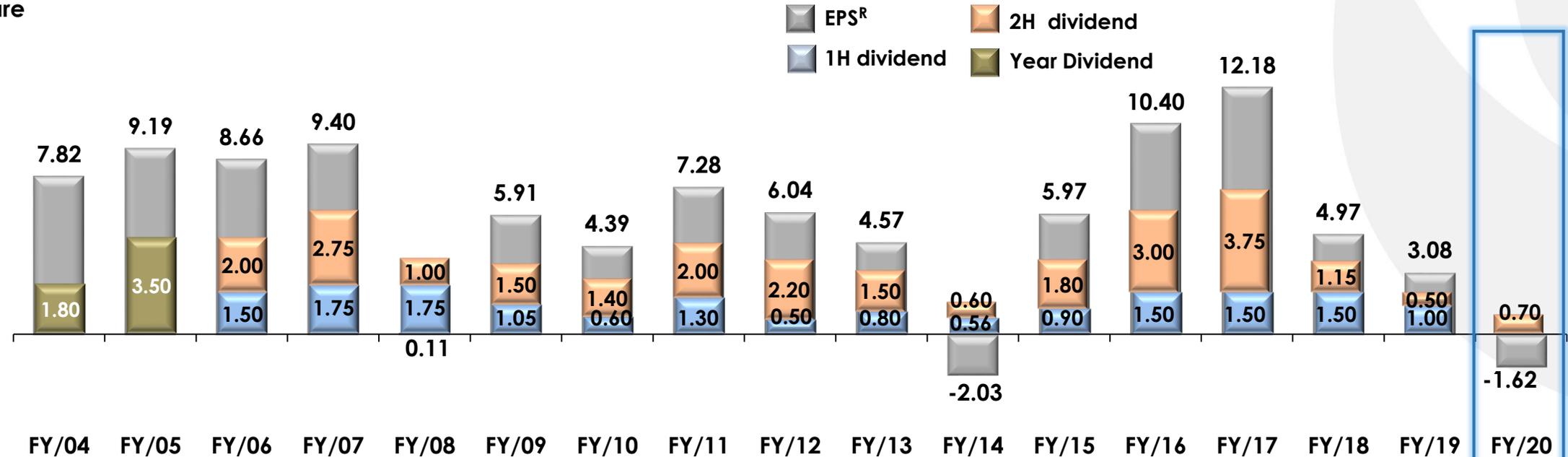
- Dividend Payment
- Financial Performance
- Optimised & Flexible Operations...Superior Performance
- CDU Addition VS Additional Demand – AP & ME
- World GRM / Inventories
- Thailand petroleum demand by products

# Dividend Payment

## Dividend Policy :

Not less than 25% of consolidated net profit after deducting reserves, subject to cash flow and investment plan

Unit : THB/Share



	FY/04	FY/05	FY/06	FY/07	FY/08	FY/09	FY/10	FY/11	FY/12	FY/13	FY/14	FY/15	FY/16	FY/17	FY/18	FY/19	FY/20
Annual DPS (Baht/share)	1.80	3.50	3.50	4.50	2.75	2.55	2.00	3.30	2.70	2.30	1.16	2.70	4.50	5.25	2.65	1.50	0.70
Dividend Payout	23%**	38%	40%**	48%	N/A	43%	45%	45%	45%	50%**	N/A	45%	43%	43%	53%	49%	N/A
Dividend Yield*	4.0%	5.6%	5.6%	6.2%	5.2%	7.1%	4.0%	4.7%	4.2%	3.6%	2.3%	5.0%	6.7%	6.2%	3.1%	2.2%	1.6%
Avg TOP price	44.7	63.0	62.7	72.7	53.3	35.9	49.9	69.8	65.1	64.6	50.4	53.5	66.7	84.2	86.9	68.3	44.0

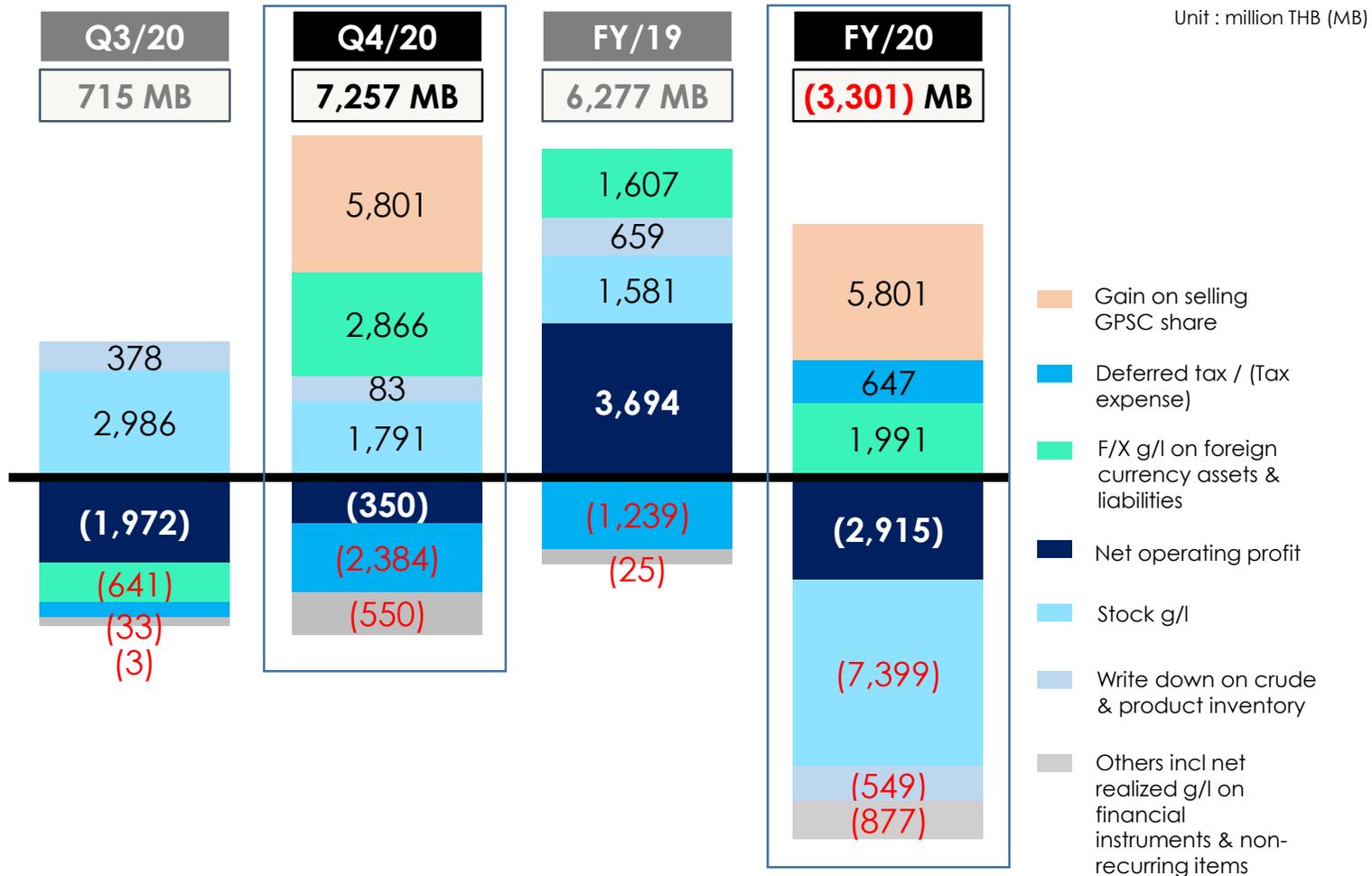
<sup>R</sup> Based on restated financial statement

\* Based on average TOP share price in each year

\*\* Dividend payout before restated ; 2004 = 25% , 2006 = 43% , 2013 = 45%

# Q4/20 & FY/20 - Financial Performance

## TOP Group Net Profit



## Gross Refining Margin - GRM

\$/bbl	Q3/20	Q4/20	FY/19	FY/20
Market GRM	(1.1)	1.2	3.1	0.4
Stock Gain/(Loss)	4.0	2.3	0.5	(2.3)
Accounting GRM	2.9	3.4	3.6	(1.9)

## Gross Integrated Margin - GIM

Aromatics & LAB	1.2	1.6	1.1	1.5
Lube base	0.8	0.8	0.6	0.5
Market GIM	1.0	3.6	4.7	2.4
Accounting GIM	4.9	5.8	5.2	0.1

## Utilization / Production Rate

Refinery	93%	101%	107%	101%
Aromatics	56%	70%	70%	71%
LAB	70%	115%	113%	103%
Base Oil	89%	93%	83%	88%

### Remark

- Stock gain/(loss) : Q3/20 2,986 MB, Q4/20 1,791 MB, FY/19 1,581 MB, FY/20 (7,399) MB
- Reversal/ (write-down) on crude and petroleum product inventory : Q3/20 378 MB, Q4/20 83 MB, FY/19 659 MB, FY/20 (549) MB
- F/X gain/(loss) on gain on foreign currency assets & liabilities : Q3/20 (641) MB, Q4/20 2,866 MB, FY/19 1,607 MB, FY/20 1,991 MB
- (Tax expense)/Reversal of Tax expense : Q3/20 (33) MB, Q4/20 (2,384) MB, FY/19 (1,239) MB, FY/20 647 MB
- Net realized gain/(loss) on financial instruments : Q3/20 144 MB, Q4/20 (254) MB, FY/19 359 MB, FY/20 (174) MB
- Non-recurring item: Impact of TFRS-9 : Q3/20 33 MB, Q4/20 (50) MB, FY/20 (5) MB, Impact of TFRS-16 : Q3/20 (180) MB, Q4/20 (246) MB, FY/20 (698) MB, Severance payment : FY/19 (384) MB

# Optimized & Flexible Operations...Superior Performance

Thai Oil is able to diversify its type of crude intake and product outputs to maximize demand and margin

## Crude Assays based on TOP configuration\*



## Sources of Crude

## Product output

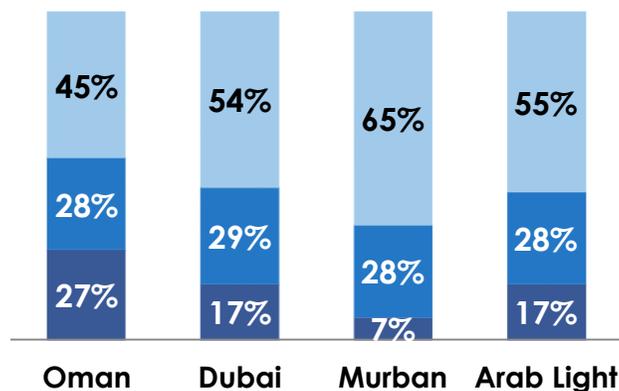
## Reference Price



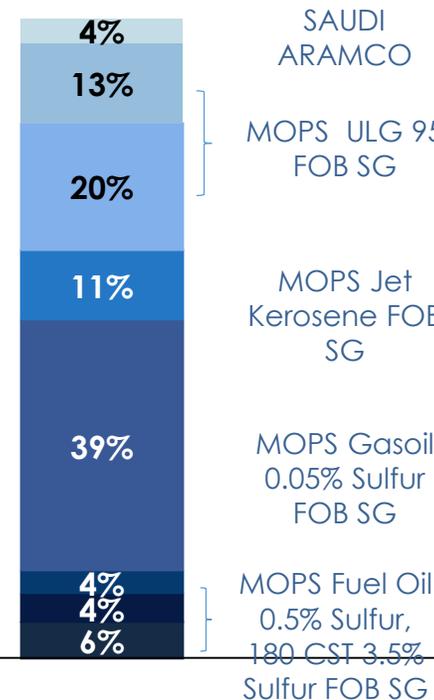
## Domestic demand for petroleum products\*\*

% S = 1.43 API = 32.0	% S = 2.52 API = 31.2	% S = 0.78 API = 39.4	% S = 1.97 API = 32.8
--------------------------	--------------------------	--------------------------	--------------------------

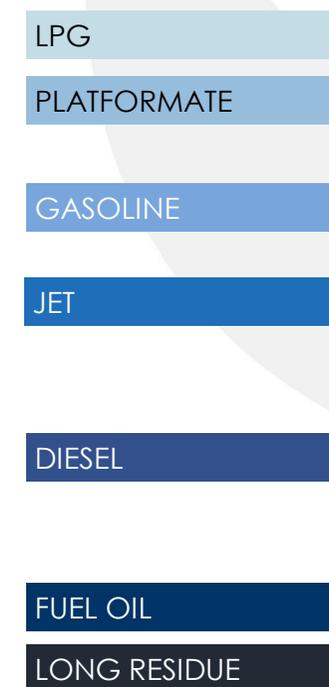
■ Short Residue ■ Waxy ■ Gasoline/Distillates



FY/20



FY/20



\*Crude yield as per assay in Spiral as of Feb 2016

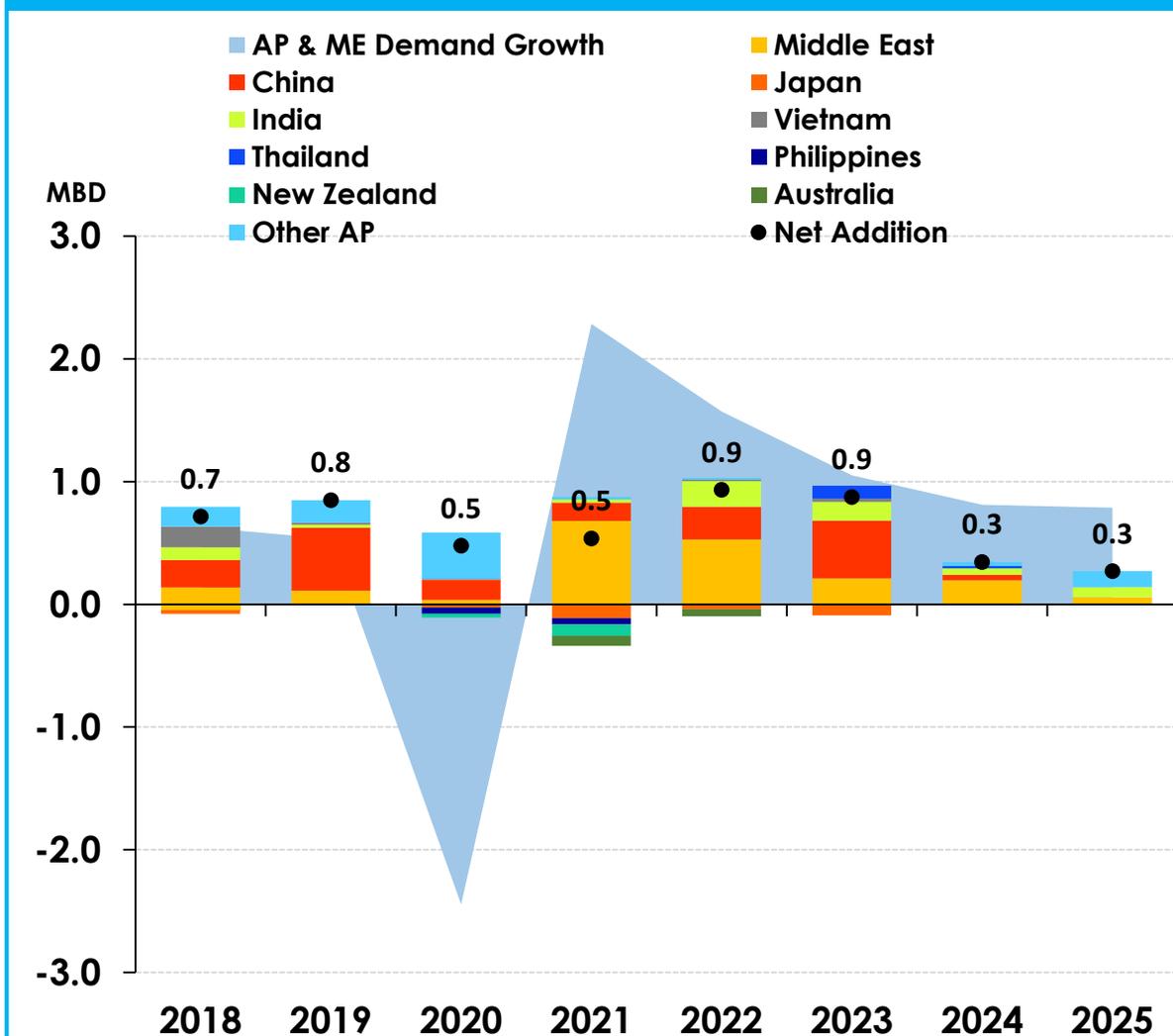
\*\* Source: Energy Policy and Planning Office, Ministry of Energy Thailand

\*\*\* Including Nigeria, Russia and others

- Flexibility in crude intake allows diversification of crude types to source cheaper crude
- Flexibility in product outputs by maximizing middle distillates (jet and diesel) by adjusting production mode to capture domestic demand and price premium
- Maximize Platformate production to capture higher margin on aromatics
- Minimize fuel oil output to avoid lower margin products

# Medium-Term Demand Growth to Balance with Refinery Addition

Asia Pacific and Middle East Effective CDU Addition VS Additional Demand



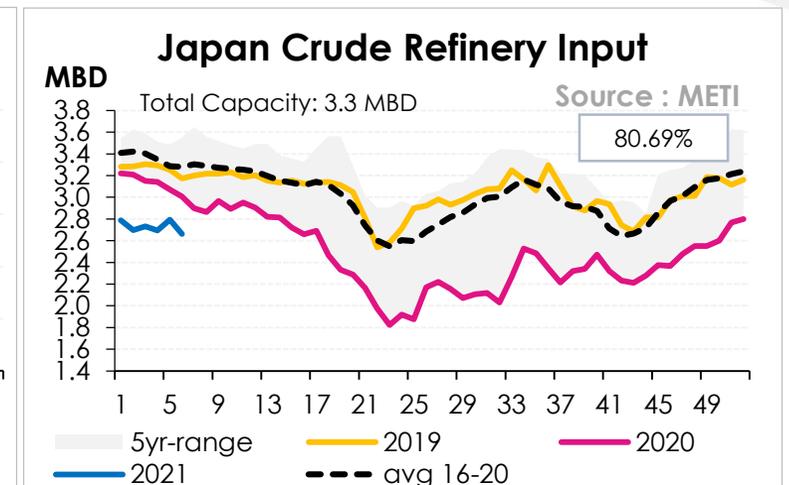
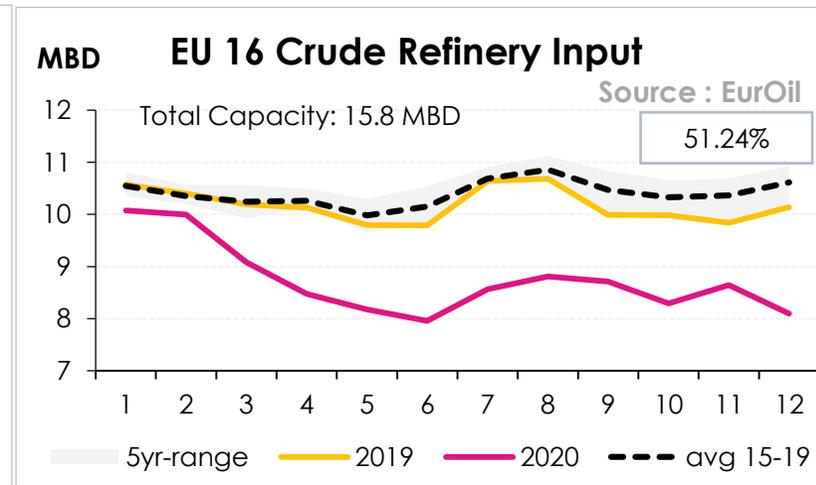
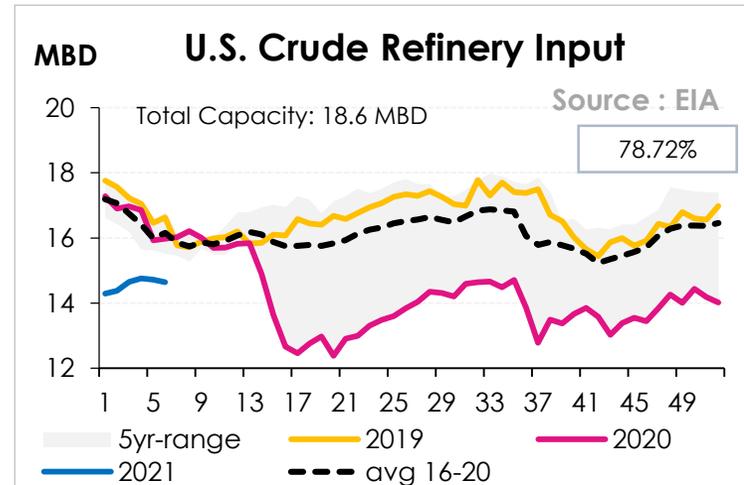
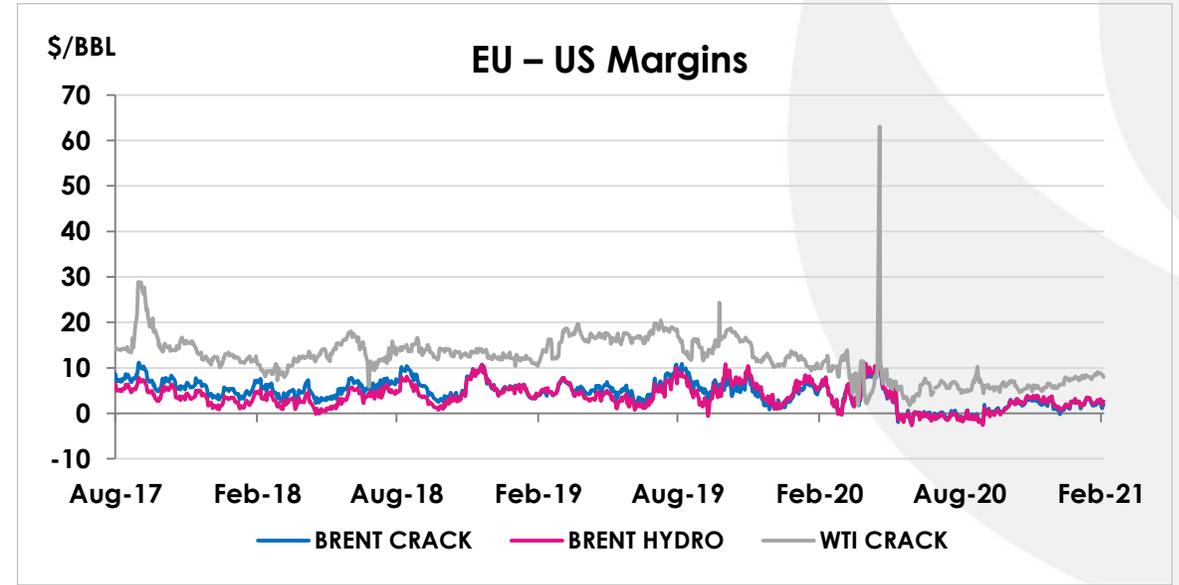
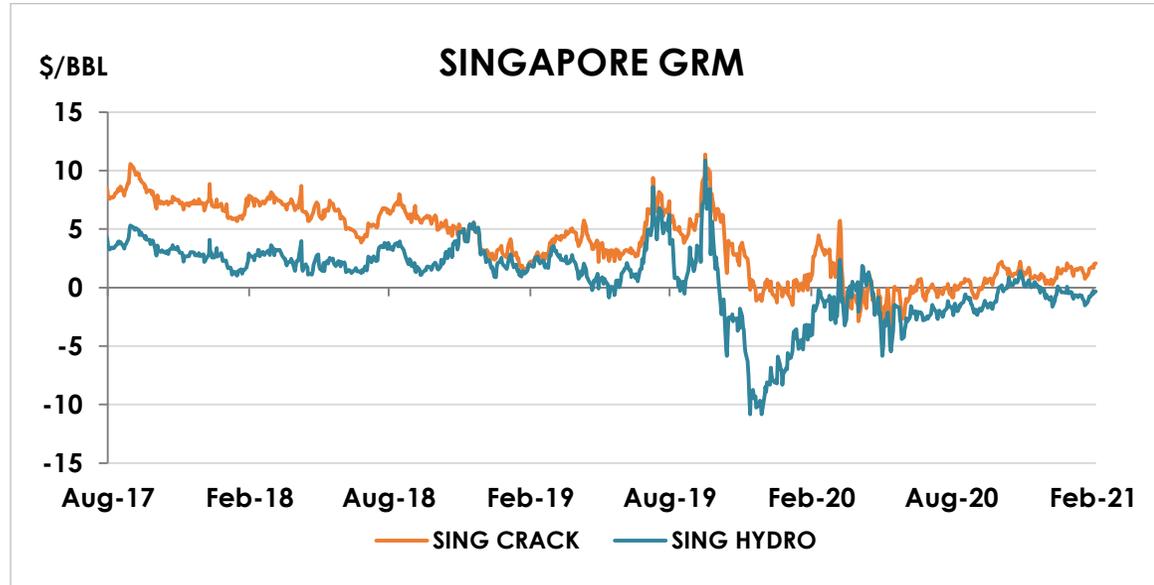
## Key Projects :

Country	Company	CDU (KBD)	Start-up
China	Sinopec Zhanjiang	200	Q2'20
Kuwait	KPC	171	Q2'20
China	Rongsheng II	200	Q1'21
Saudi Arabia	Jizan	400	Q2'21
Kuwait	Al Zour (GR)	615	Q2'21
China	Rongsheng II	200	Q1'22
India	Hindustan Petroleum	125	Q2'22
China	Local Shenghong Petrochemical	320	Q2'22
Thailand	Thai Oil	125	Q1'23
China	CNPC/PDVSA	400	Q1'23
Oman	Al-Duqm (GR)	230	Q2'23

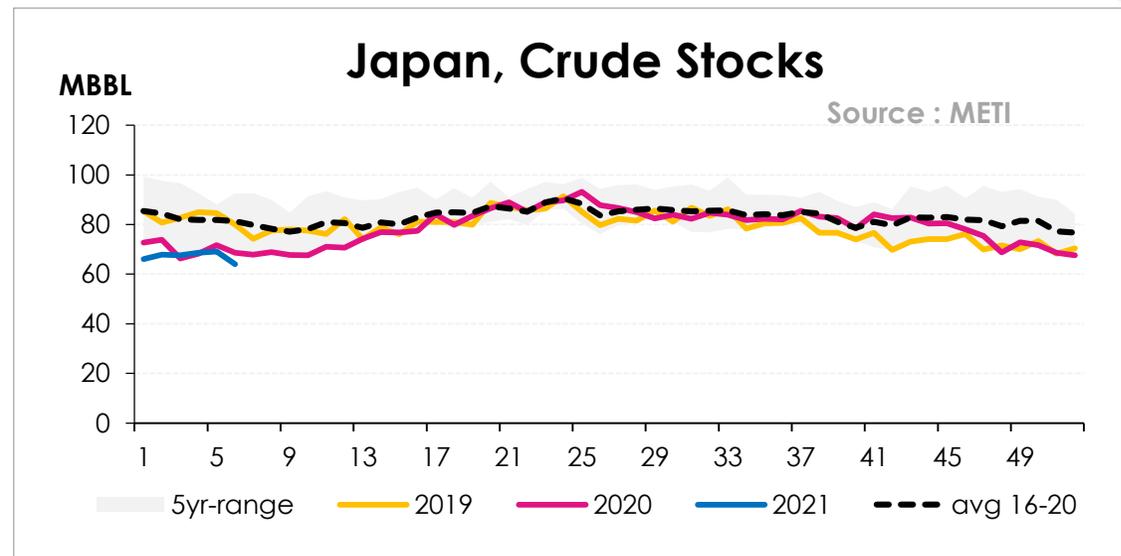
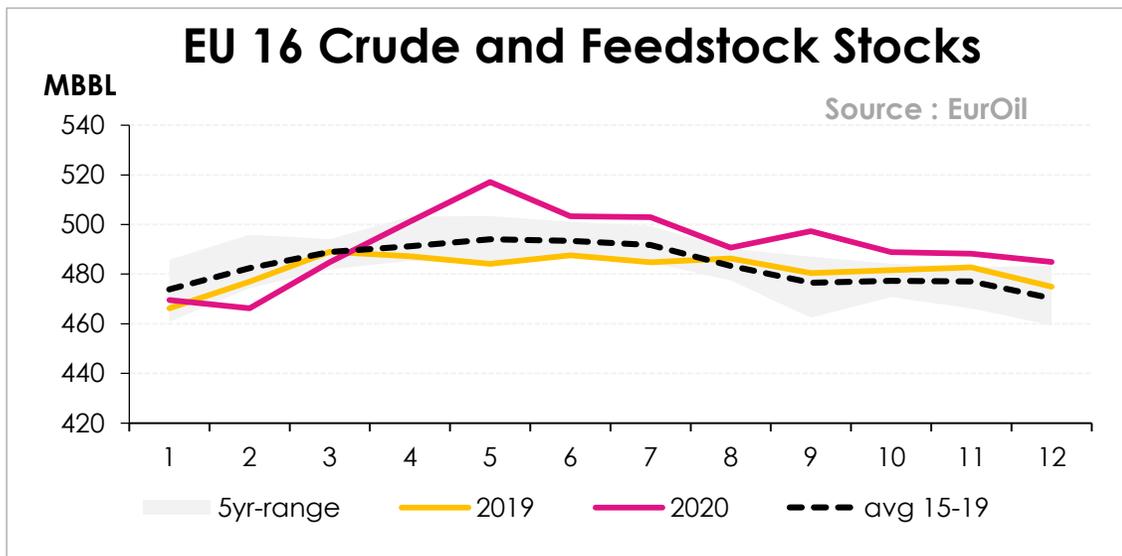
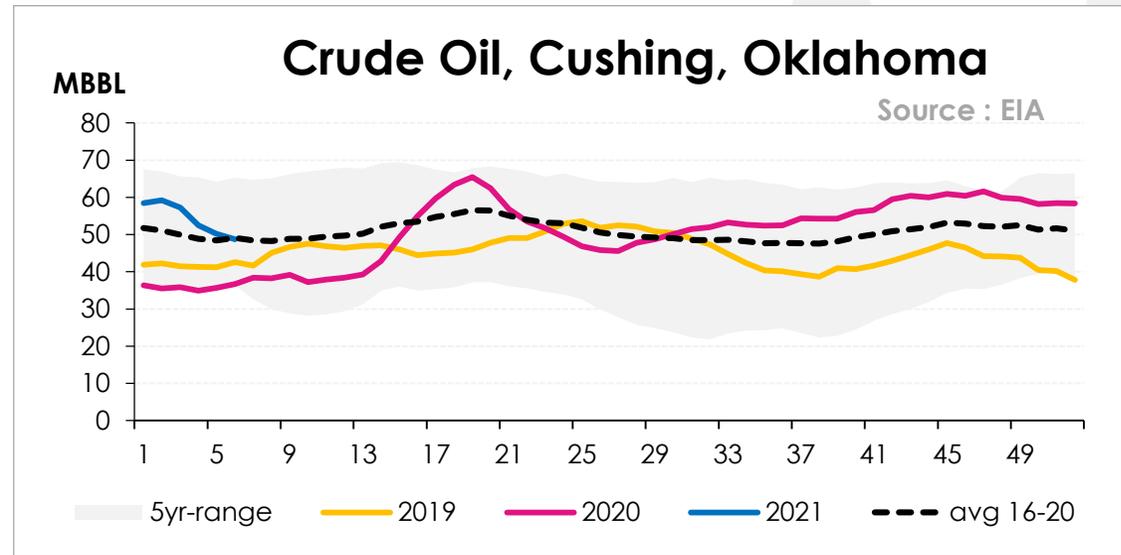
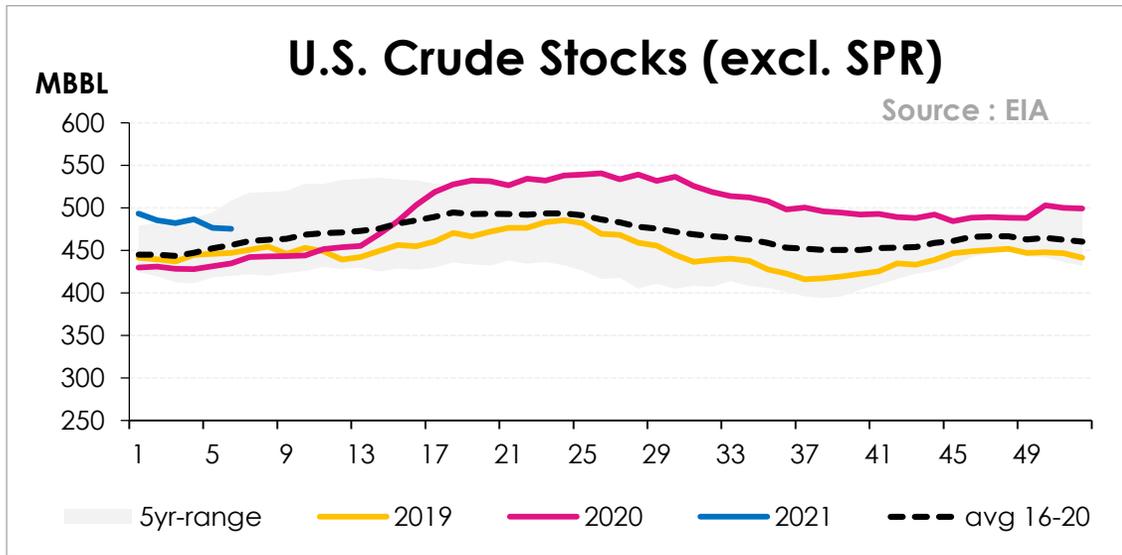
Shift from Q4'23 to Q1'21  
 Delay from Q2'20 to Q2'21  
 Shift from Q2'22 to Q2'21  
 Shift from Q4'23 to Q1'22  
 Delay from Q4'20 to Q2'22  
 Shift from Q3'23 to Q2'22

Note: Adjusted capacity based on start-up period (effective additional capacity)

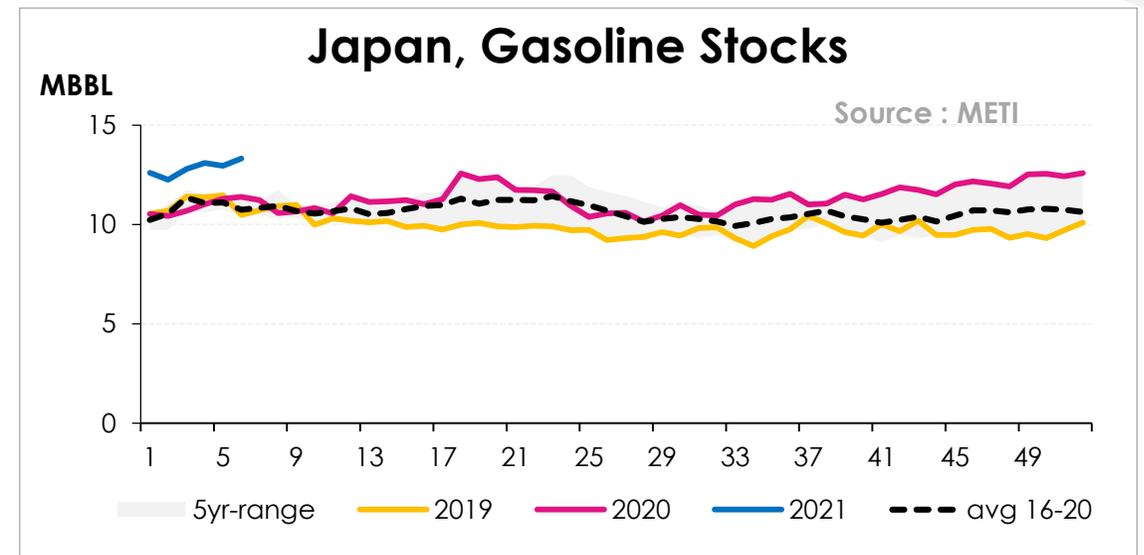
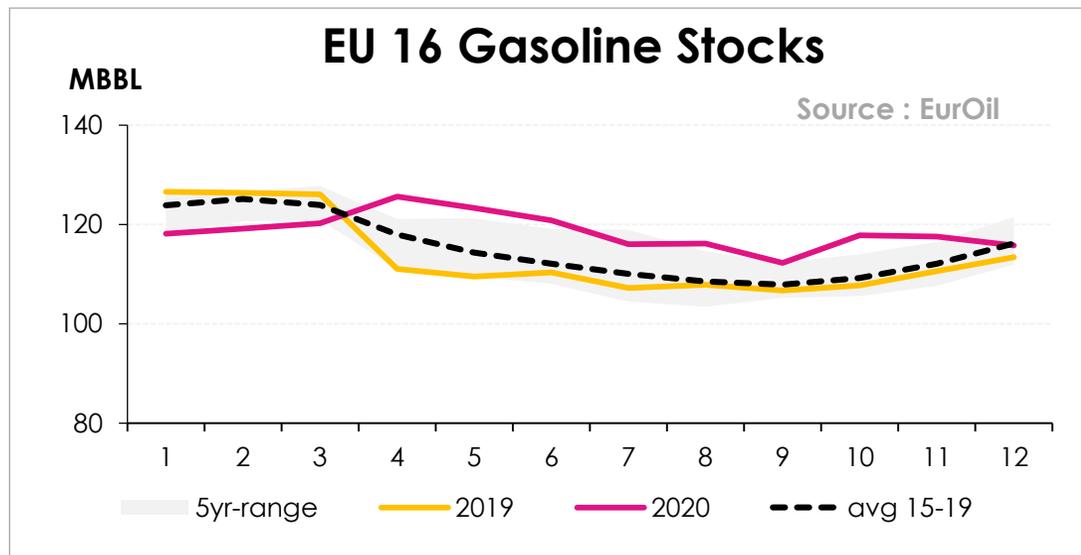
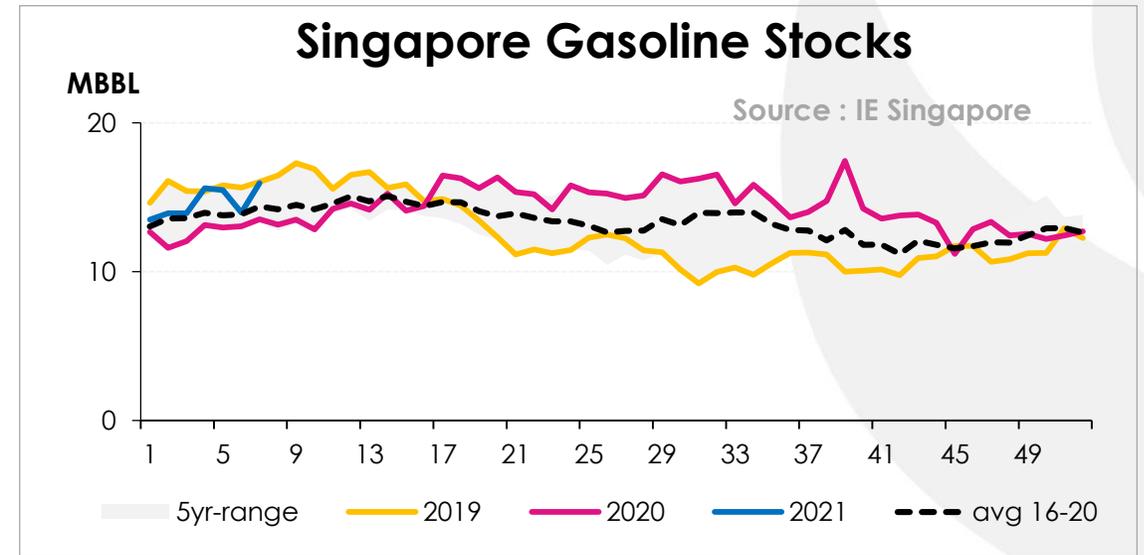
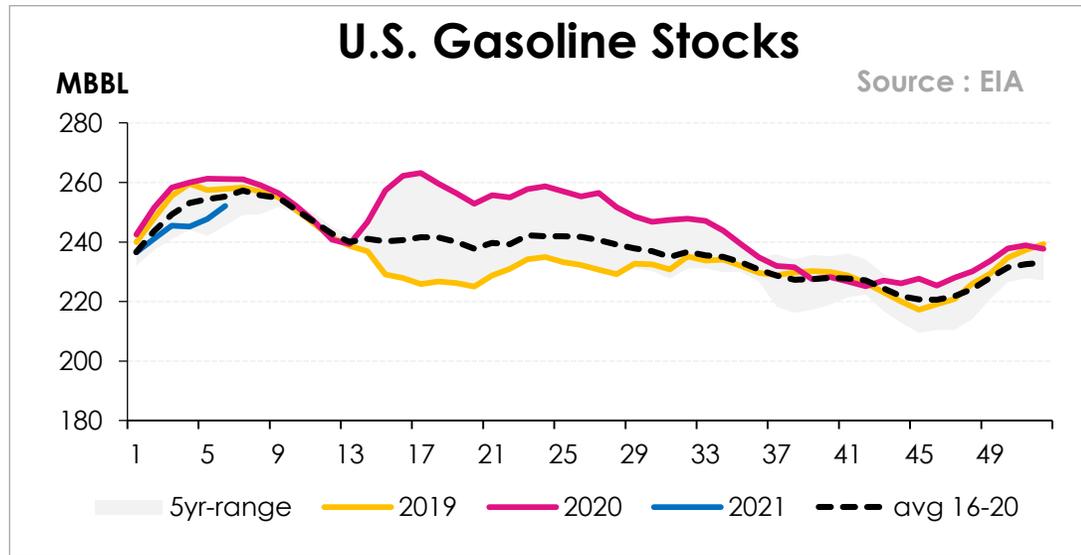
# Asian Margin Vs. US-EU margin



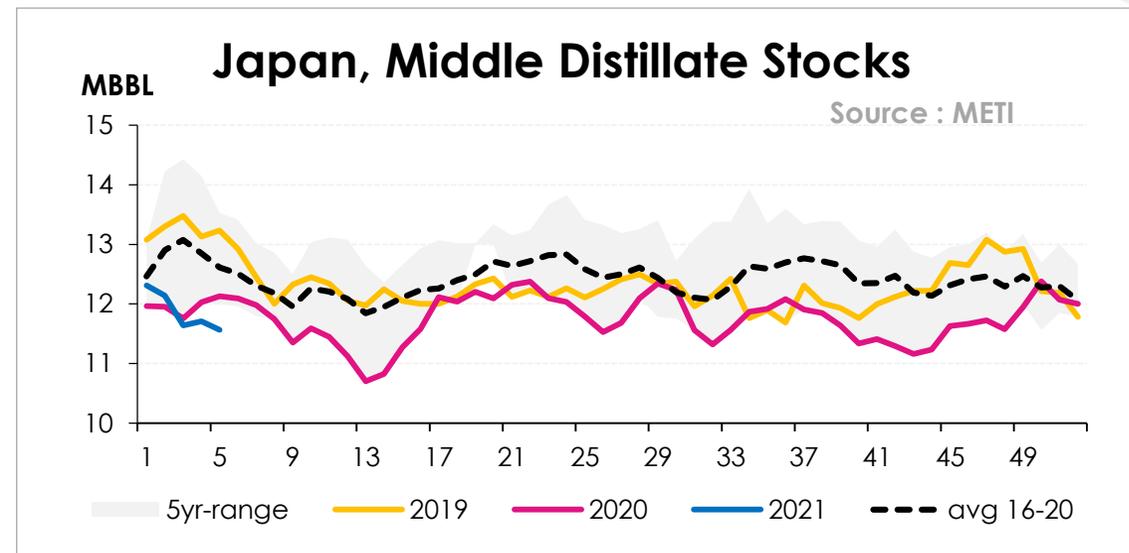
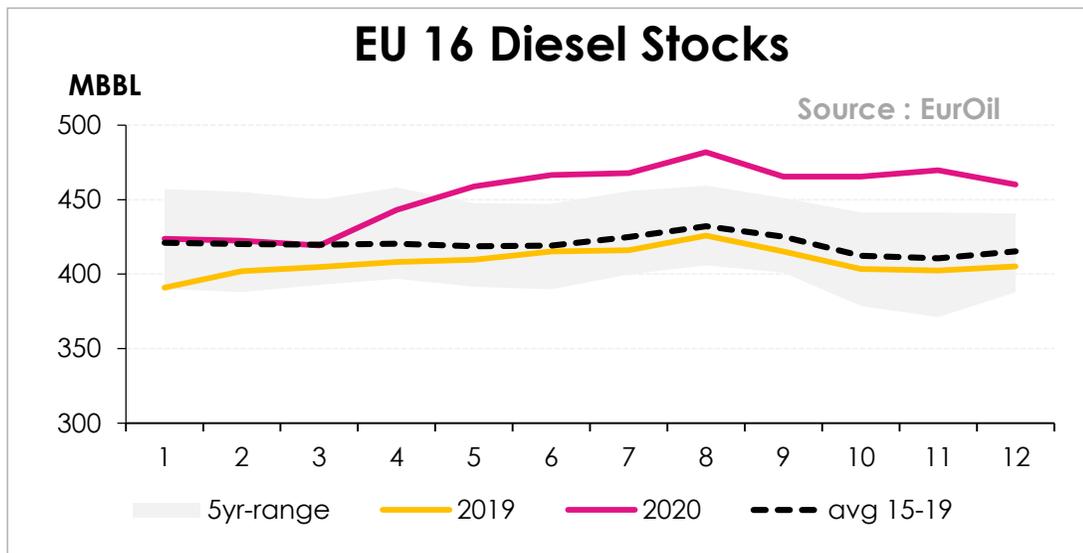
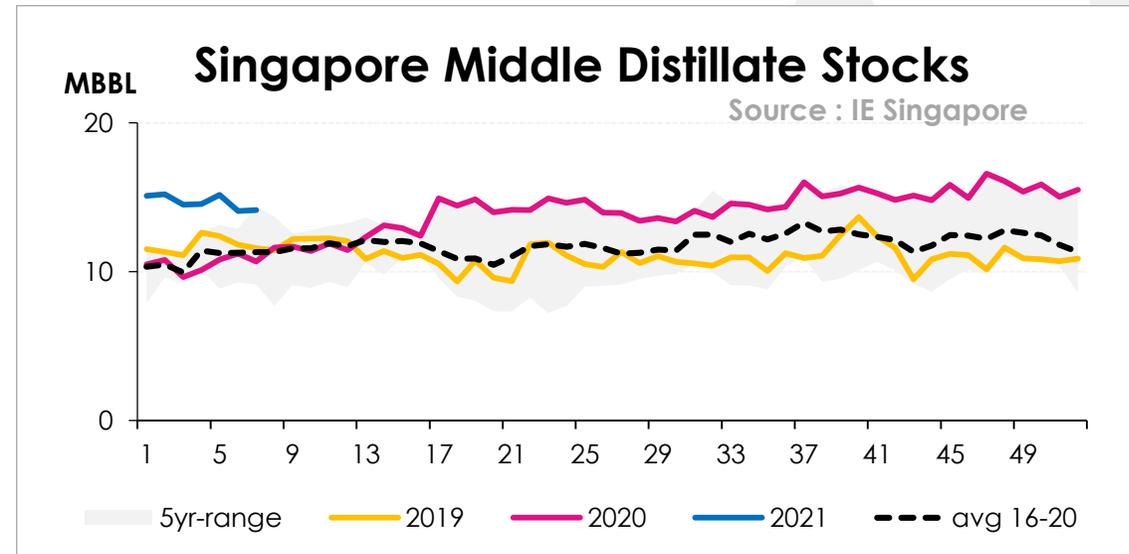
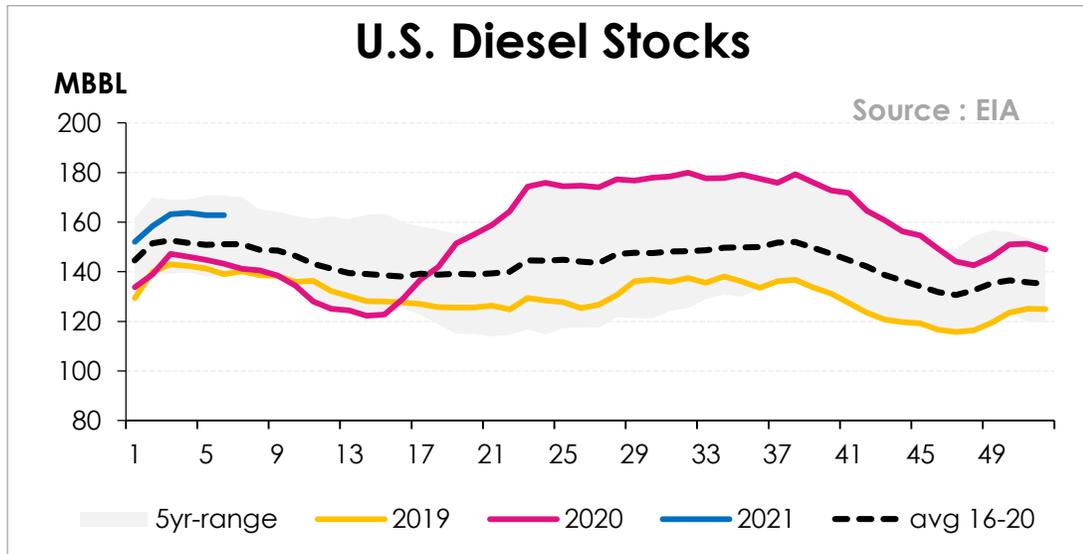
# Global Crude Oil Inventories



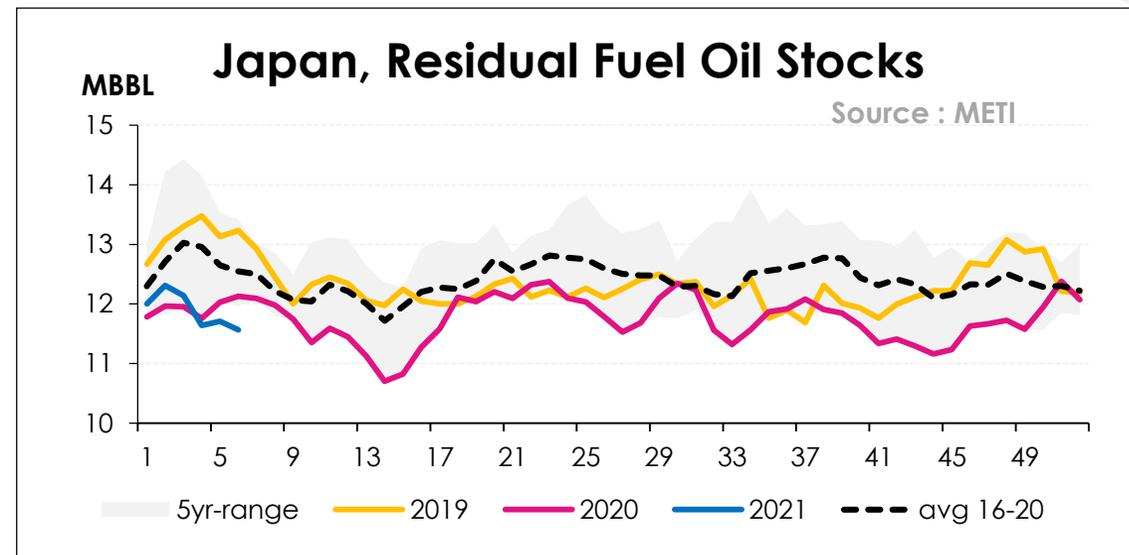
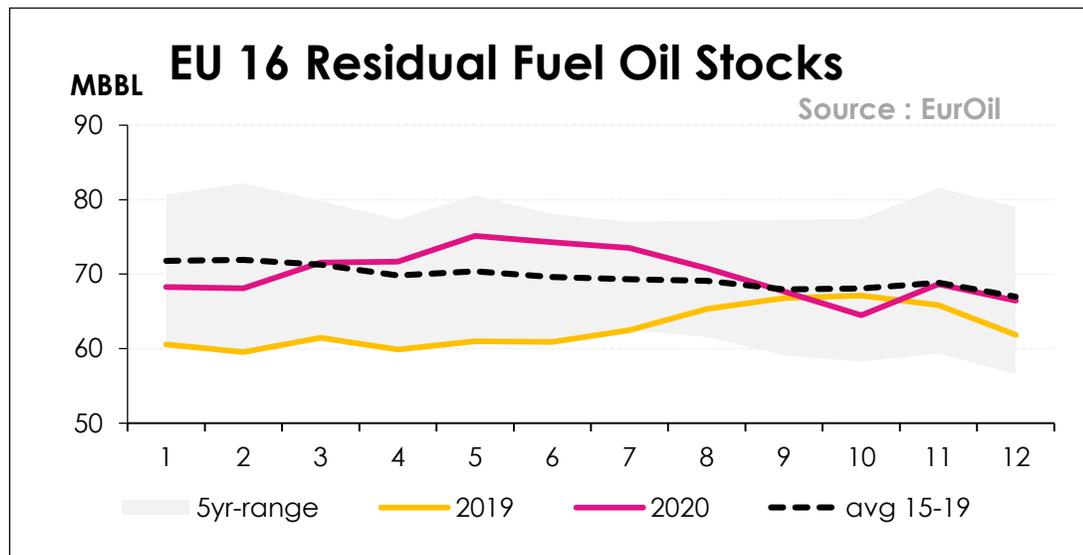
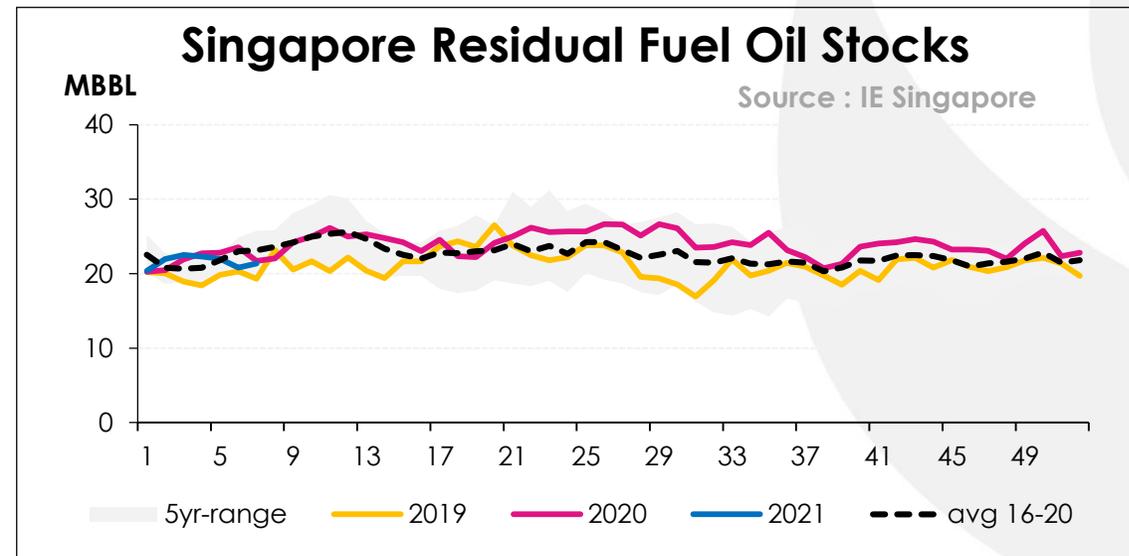
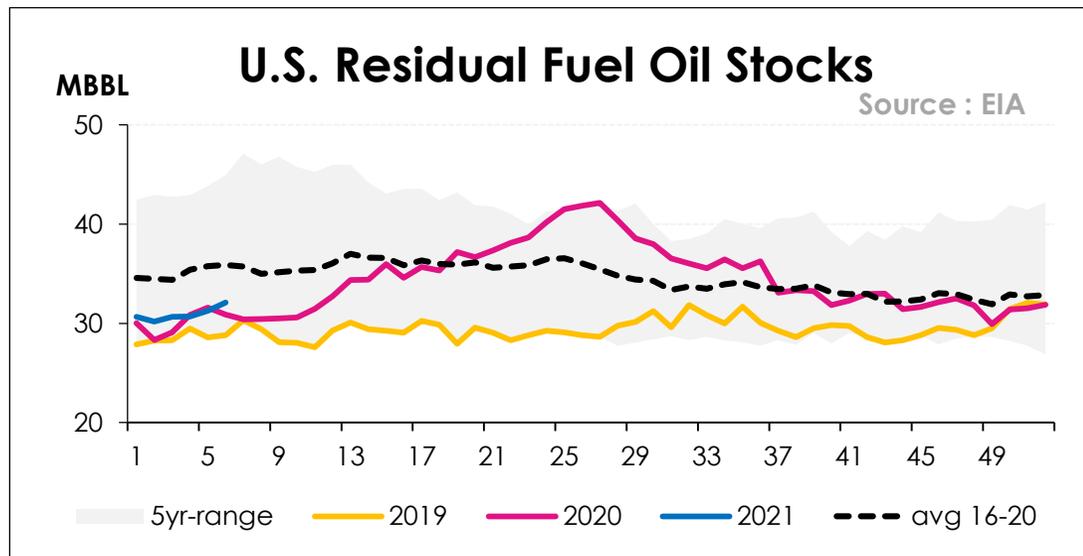
# Global Gasoline Inventories



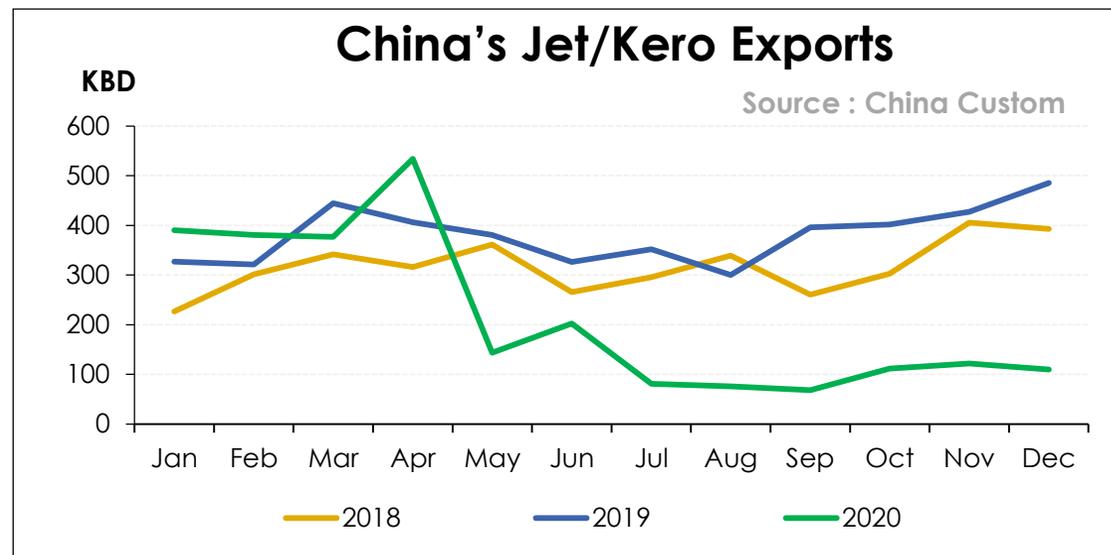
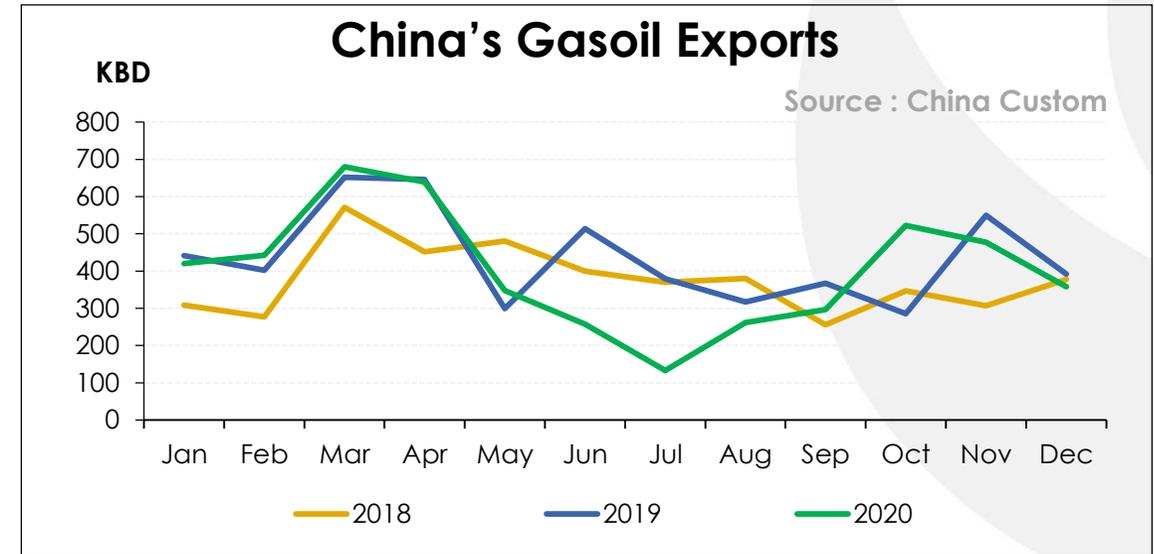
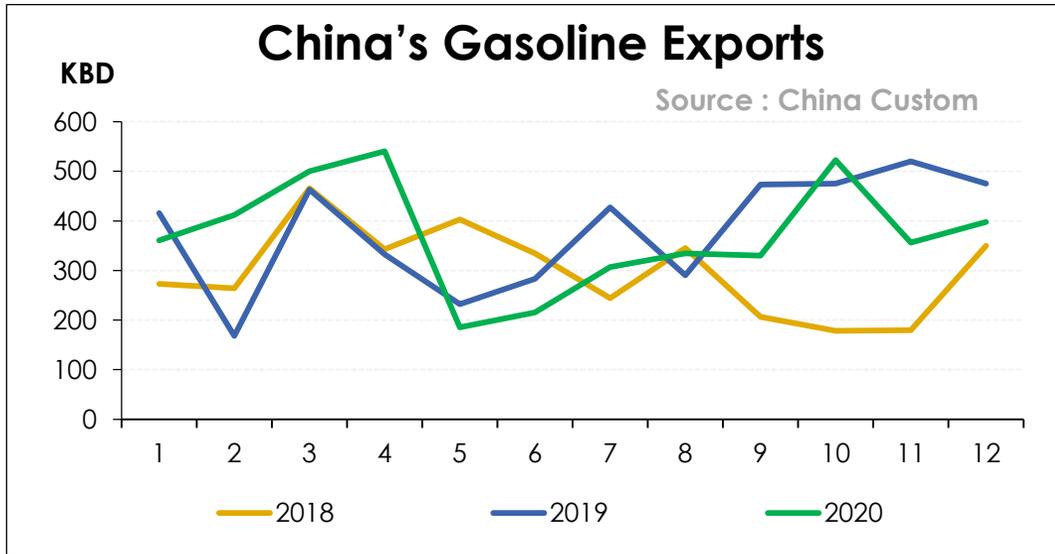
# Global Middle Distillate Inventories



# Global Fuel Oil Inventories

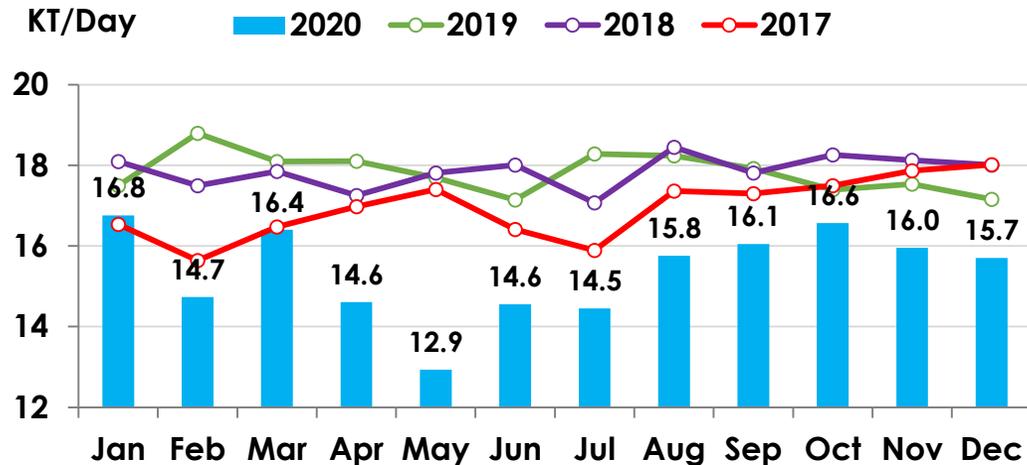


# China's Refined Product Exports



# Domestic LPG Demand

## Thailand LPG Demand

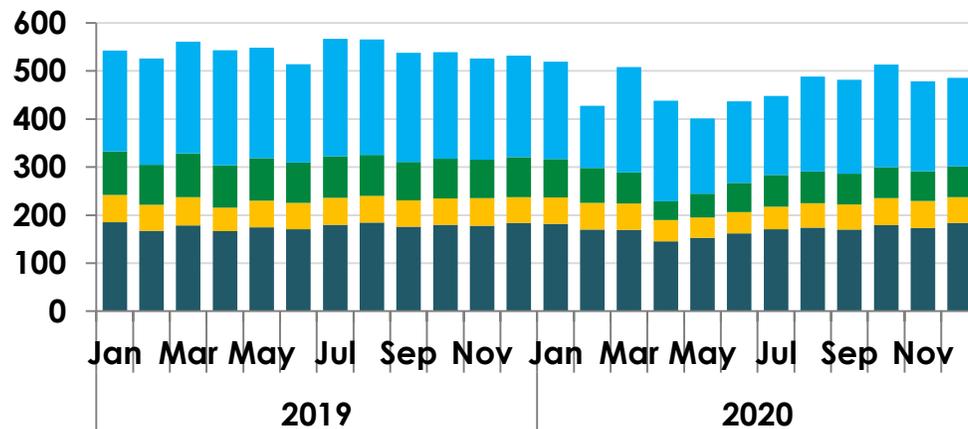


Remark : LPG demand includes Petrochemical consumption

## LPG Demand by Sector

KT/MTH

■ Cooking ■ Industry ■ Automobile ■ Petrochemical



## LPG Demand Highlight

- In 2020, LPG demand plunged by 13.7% YoY following the decrease in all sectors, especially in the automobile sector. LPG demand in the automobile sector decreased by 26.4% YoY as oil price, which is the substitute fuel, has become lower after it was hammered by COVID-19 pandemic. Moreover, LPG demand in cooking, industrial and petrochemical also decreased by 4.4%, 7.3% and 17.2% YoY, respectively as the price has been higher and become uncompetitive to other feeds.

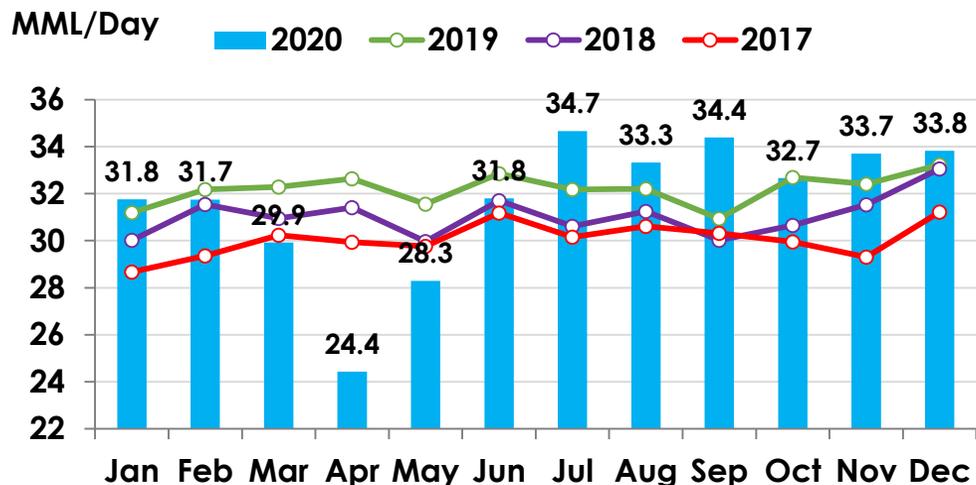
## Outlook for 2021

- In 2021, LPG demand is expected to increase by 1.5% YoY, mainly from the cooking sector. Cooking demand tends to increase by 12.1% YoY as the demand would recover from the effect of COVID-19 pandemic last year. However, lower gasoline prices could make LPG price uncompetitive and encourage users to switch to oil. Besides, most of the registered taxis powered by LPG are gradually expired since 2021 onwards leading to the decrease of 4.9% YoY demand in automobile sector. While The demand in the industrial sector tends to plunged by 16.5% as LPG price could become higher than other feedstocks.

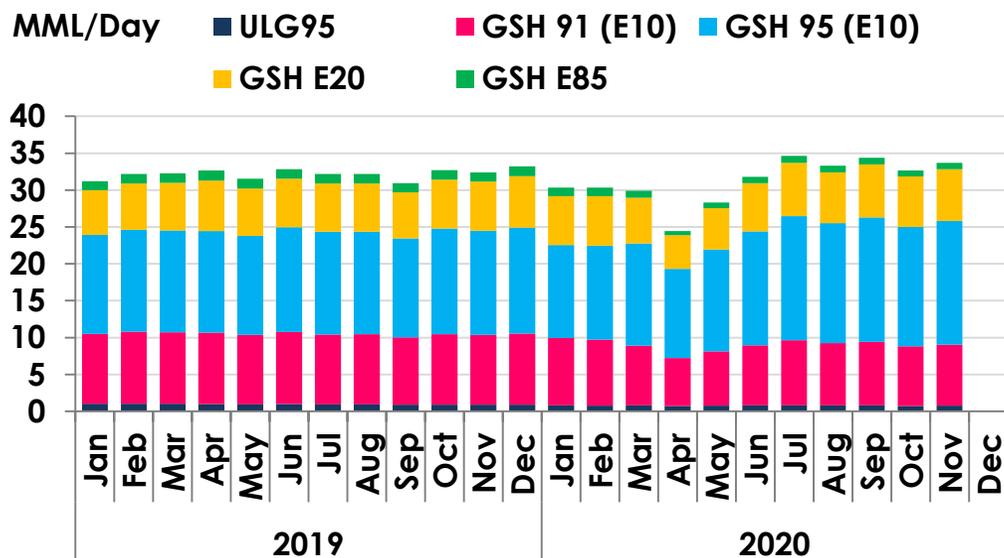
Source: EPPO, DOEB (As of Feb 2021)

# Domestic Gasoline/Gasohol Demand

## Thailand Gasoline/Gasohol Demand



## Gasoline/Gasohol Demand by Grade



### GASOLINE/GASOHOL Demand Highlight

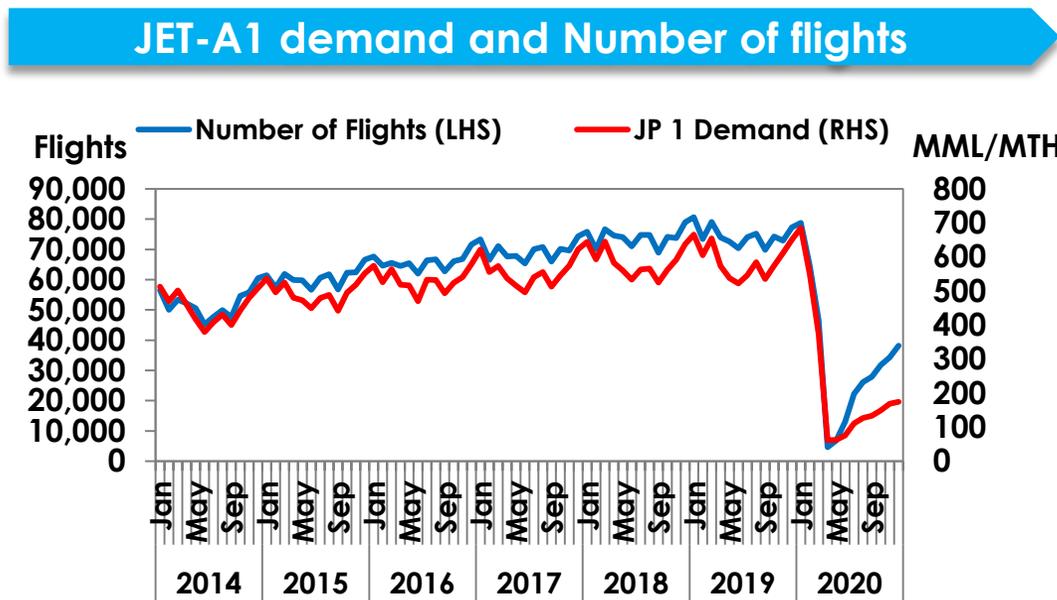
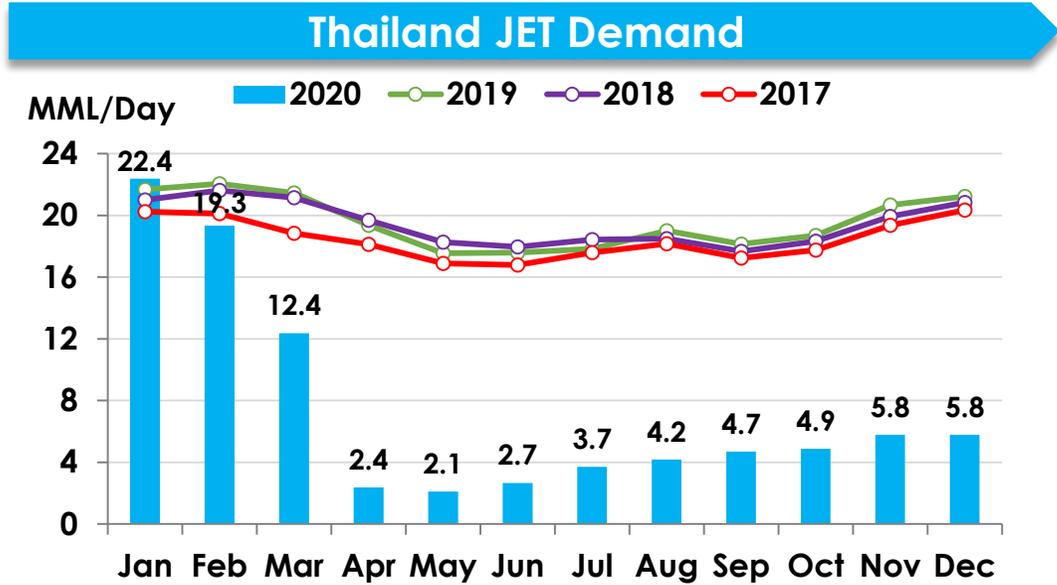
- In 2020, Gasoline demand was reduced by 1.5% YoY to an average of 31.7 MML/day while only Gasohol\* demand decreased by 1.0% YoY, settling at 30.7 MML/day. The demand was mainly pressured by the COVID-19 restriction plan which started in Q2'20, leading to lower transportation activities. Likewise, the pandemic has raised concerns about consumer's spending which was reflected in lower passenger car sales. However, the low COVID-19 infection rate and the economic stimulus plans still gave hope for faster recovery of the domestic demand, together with the end of lockdown plan which had lifted in the middle of Jun'20. In addition, an extra public holiday in lieu of the postponed Songkran festival has also been a great demand supporter in Jul'20 and Nov'20. Besides the effect of the pandemic, the narrowing of GSH95-GSH91 and E20-E85 price gap makes the GSH91 and E85 demand decreased drastically by 14.0% and 30.2% YoY, respectively. In contrast, GSH95 and E20 demand was still increased by 9.9% and 0.3% YoY compared to last year.

### Outlook for 2021

- Gasoline consumption is expected to increase by 0.7% YoY which are still mainly pressured by partial lockdown measures for halting the second wave of COVID-19 pandemic since Jan'21. Moreover, the stagnant economy would suppress people spending resulting in lower passenger car sales.

Source: DOEB (As of Feb 2021)

# Domestic Jet Demand



## JET Demand Highlight

- In 2020, Jet consumption decreased by 61.7% YoY, as the flight number dropped by 55.8% YoY from the suspension of domestic and international flights since the end of Mar'20 as well as the temporary ban on international flights to Thailand on concern over COVID-19 pandemic. As a result, Thailand experienced zero tourists in Apr-Sep'20. In order to stimulate the tourism sector, the Thai government started to allow foreigners who hold the Special Tourists Visa (STV) to visit Thailand since Oct'20 onwards. However, the number of foreign tourist arrivals from STV measures was still small, resulting in a 67.4% slump in the passenger number in 2020. Nonetheless, the demand started to recover in Jun'20 after airlines gradually resume the domestic flight.

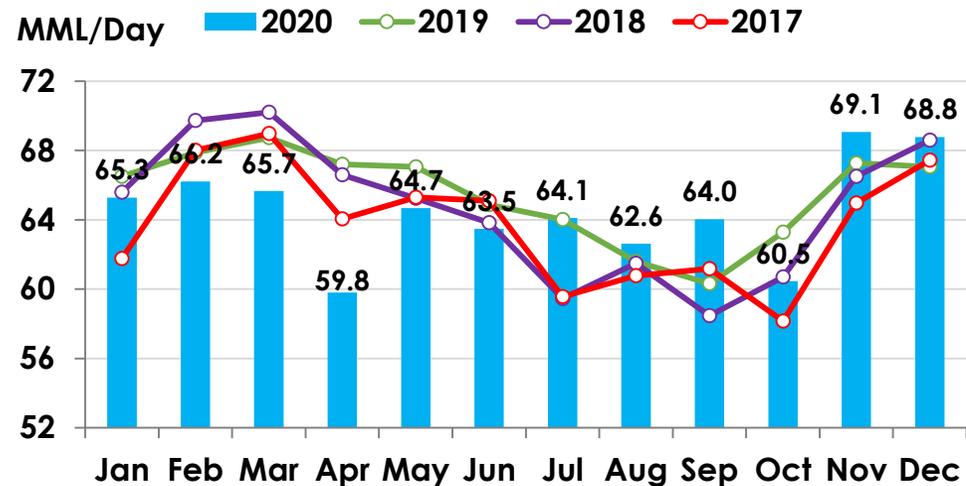
## Outlook for 2021

- Jet demand growth is expected to decline by 9.9% YoY, as the new wave of COVID-19 infections in Thailand will cause longer damage to tourism, especially in the domestic sector. Although the Special Tourists Visa (STV) scheme and mass vaccination may support the flight movements, low and long recovery of tourism will still pressure the demand.

Source: DOEB, AOT, Department of Tourism (As of Feb 2021)

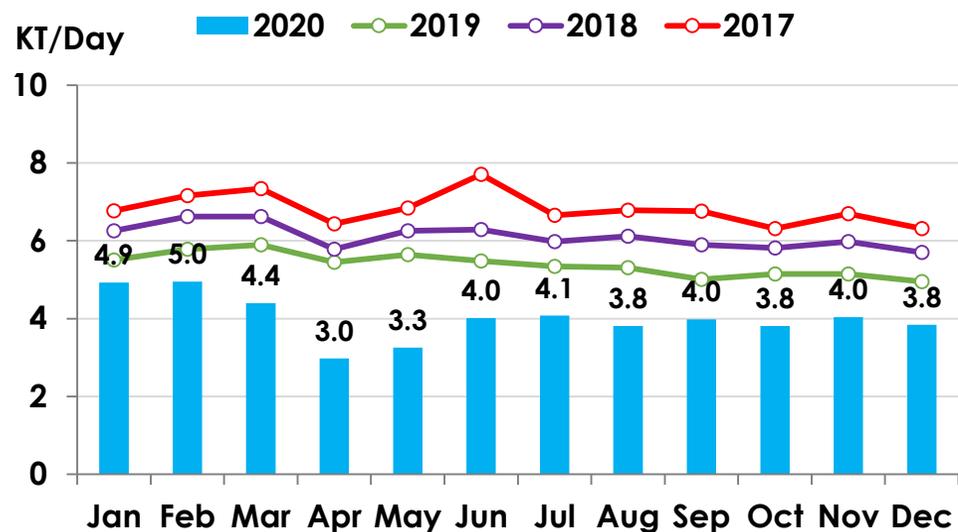
# Domestic Gasoil and NGV Demand

## Thailand Gasoil Demand



\*Exclude Marine Gasoil

## NGV Demand



### Gasoil Demand Highlight

- In 2020, Gasoil demand decreased by 1.5% YoY, as the logistic activities were limited by lower manufacturing and agricultural production from the economic slowdown, COVID-19 pandemic, and drought this year. Moreover, the demand was also pressured by lower logistic movements especially in Q2'20 after the Thai government declared an emergency decree and implement curfew measures to stop the spread of COVID-19.

### Outlook for 2021

- Gasoil demand is expected to rise by 0.7% YoY as the demand will be supported by the recovery of economic activities from the stimulus packages and other relief measures, as well as the vaccination plan. However, the new wave of COVID-19 infections will pressure Gasoil demand.

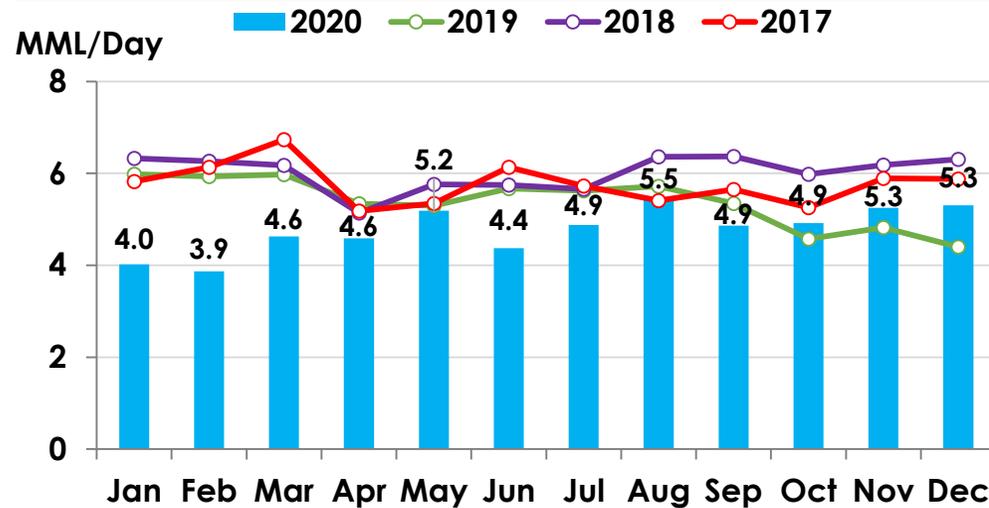
### NGV Demand Highlight

- In 2020, NGV demand fell significantly by 25.7% YoY, Apart from effect of COVID-19 pandemic, the retail prices have been raised to reflect the actual costs and become uncompetitive. As a result, NGV users have switched to use a substitute for NGV.

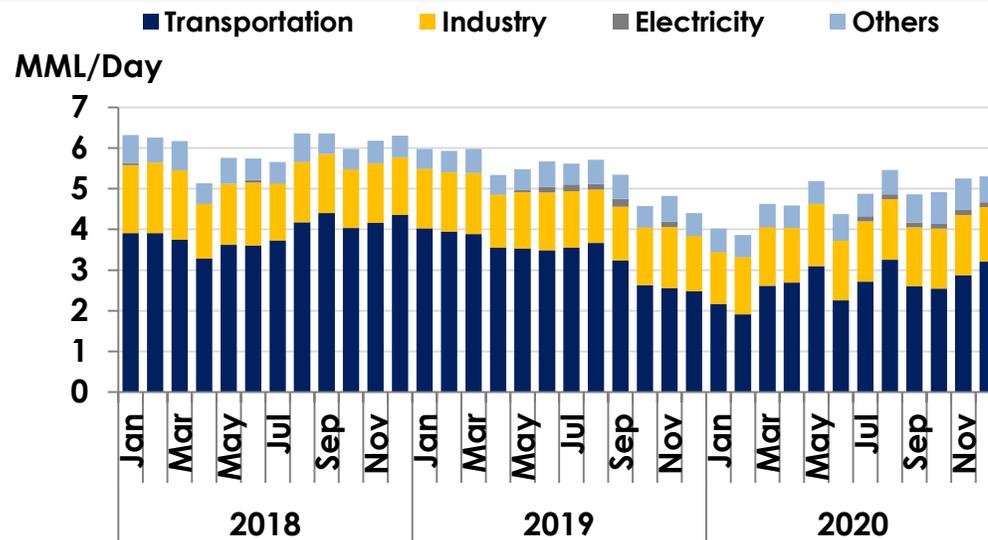
Source: DOEB (As of Feb 2021)

# Domestic Fuel Oil Demand

## Thailand Fuel Oil Demand



## Thailand Fuel Oil Demand by Sector



### Fuel Oil Demand Highlight

- In 2020, Fuel Oil consumption fell by 11.2% YoY, as the demand in the transportation sector, which accounted for 55.7% of total Fuel Oil demand, dropped by 21.2% YoY due to lower import and export volume following a stagnant economy from the COVID-19 pandemic. Moreover, demand in the electricity sector also decreased by 11.1% YoY due to higher usage of environmental-friendly fuels. However, demand in the industrial sector, which accounted for 29.9% of total Fuel Oil demand, increased by 2.0% YoY due to competitive prices compared to the other alternative fuels.

### Outlook for 2021

- Fuel Oil demand is expected to increase by 15.1% YoY, mainly due to the higher import and export activities following the global economic recovery. Besides, the abilities to procuring and distributing vaccines across the world is the key factor to support the demand.

Source: DOEB (As of Feb 2021)

# Thank You

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