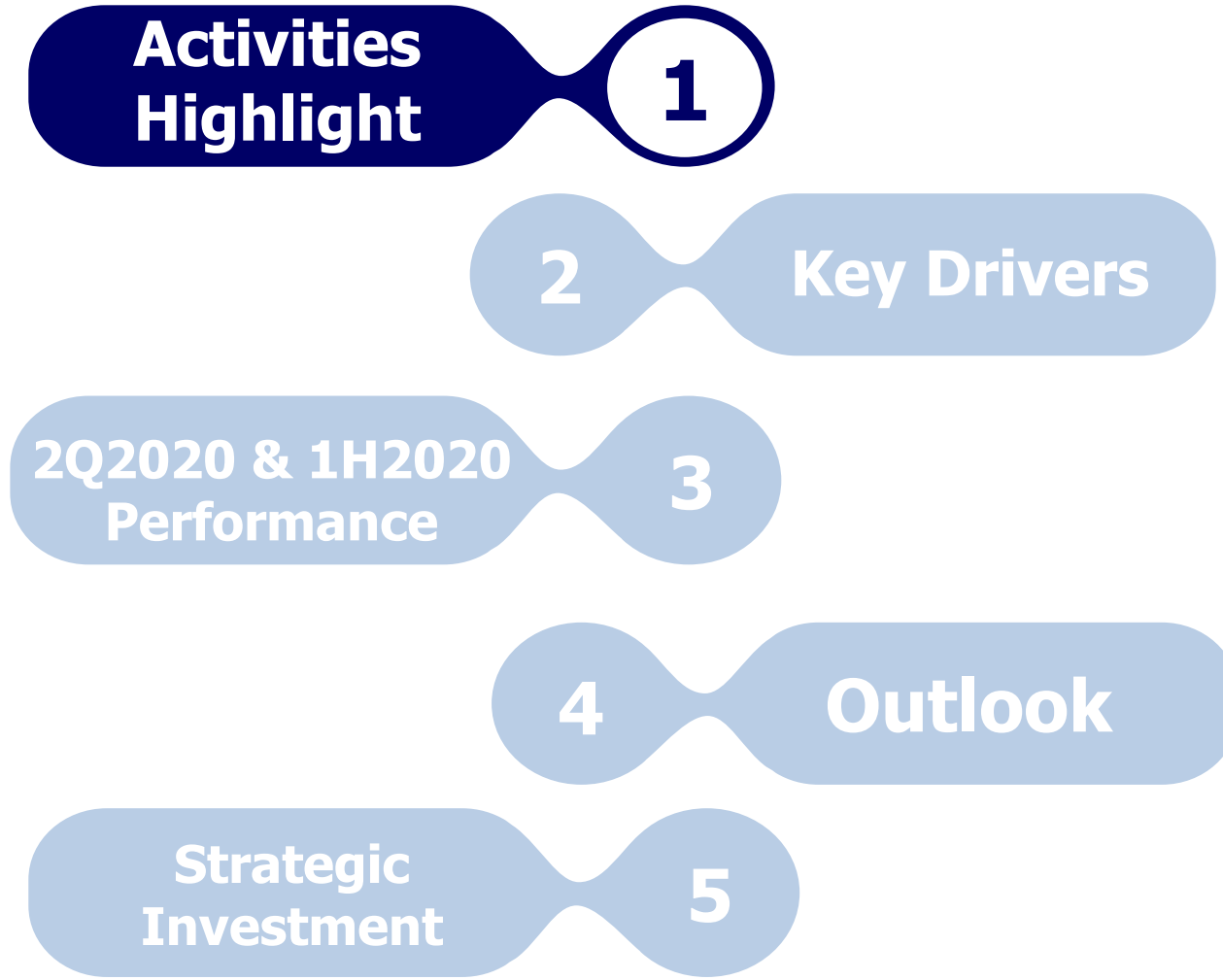




Analyst Meeting 2Q2020 & 1H2020

18 August 2020



Update in 2Q2020



PTT-EGAT signed 10 years Gas Sales Agreement



Set up 2 new charging stations for electric cars



New Bond Issuance (Jul):

- Baht Bond : THB 35 bn Incl. Green Bond THB 2 bn
- USD Bond : USD 700 mn



OPEX saving in 2020

- Target THB 6,500 mn
- Progress ~THB 3,000 mn (46%)

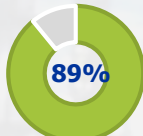


Projects' Progress

As of 30 June 2020



RA#6 :
Ratchaburi - Wangnoi
COD: 2021



5th Pipeline
COD: 2021



LNG Terminal#2
COD: 2022



Planned SD & TD

- GSP#1** : Shutdown 46 days and 50% Turndown 38 days
- GSP#5** : 50% Turndown 45 days and Shutdown 10 days

Subsidy during COVID-19



Public: reduce 3 baht/kg. (Apr.-Jul.)

Actual ~THB 300 mn vs Plan THB 400 mn



Low-income household for 6 months (Apr.-Sept.)

Estimate ~ THB 0.5 mn/month vs Plan subsidy of THB 10 mn till Sept.



PTTEP: Signed senior debt financing agreements of USD 14.9 bn to advance the first two-train LNG development



PTTEP set up new JV "ATI Technologies" to develop drone and smart farming technologies to enhance the agricultural sector in Thailand



PTT Group Refining Synergy amid COVID-19

- Rebalance JET & middle distillate during COVID-19
- Synergy group value chain optimization
- PTT group refineries U-rate
2Q20 : 95%
1Q20 : 101%

PTT Group's Bond issuance



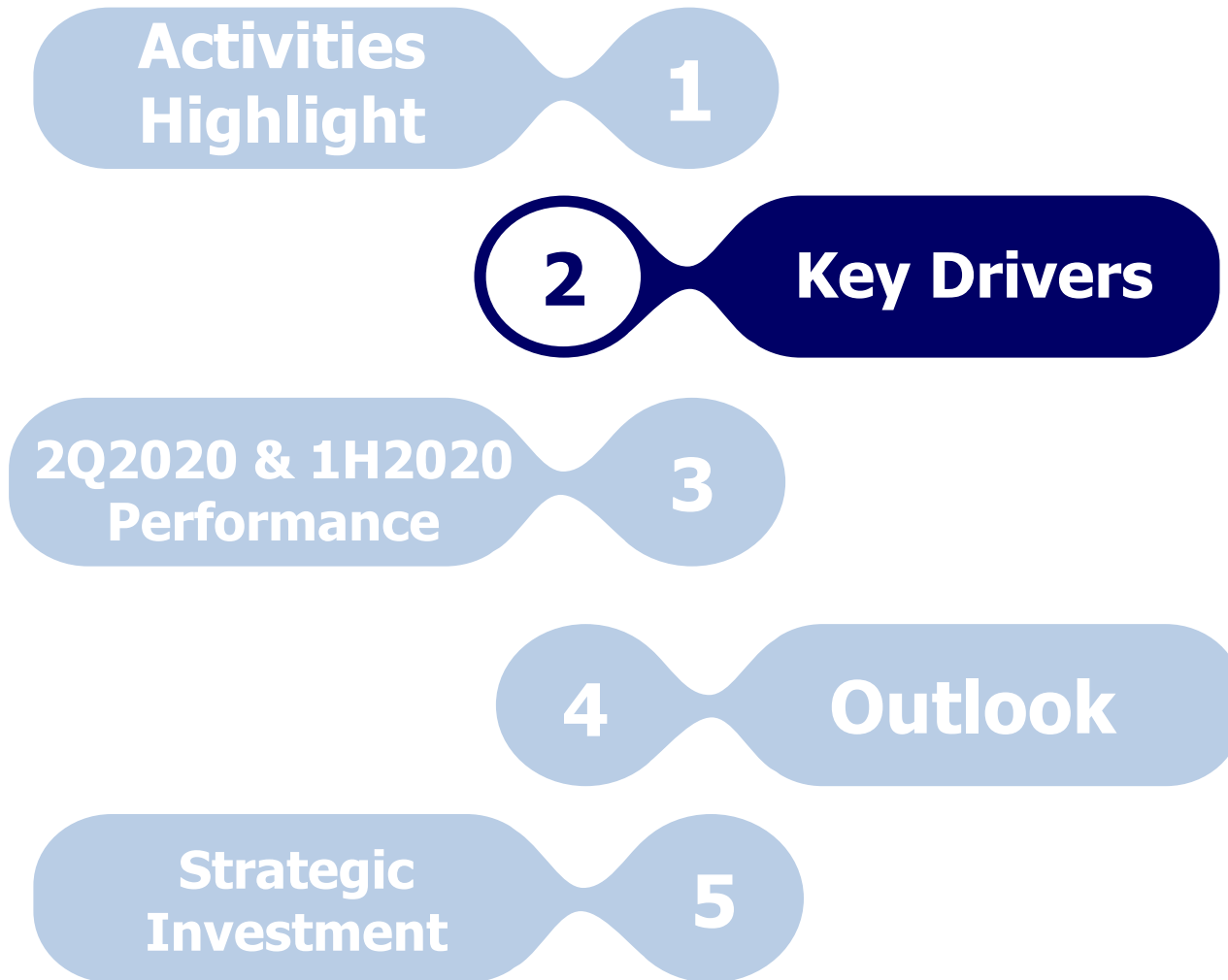
THB 15 bn



USD 500 mn



USD 1,000 mn

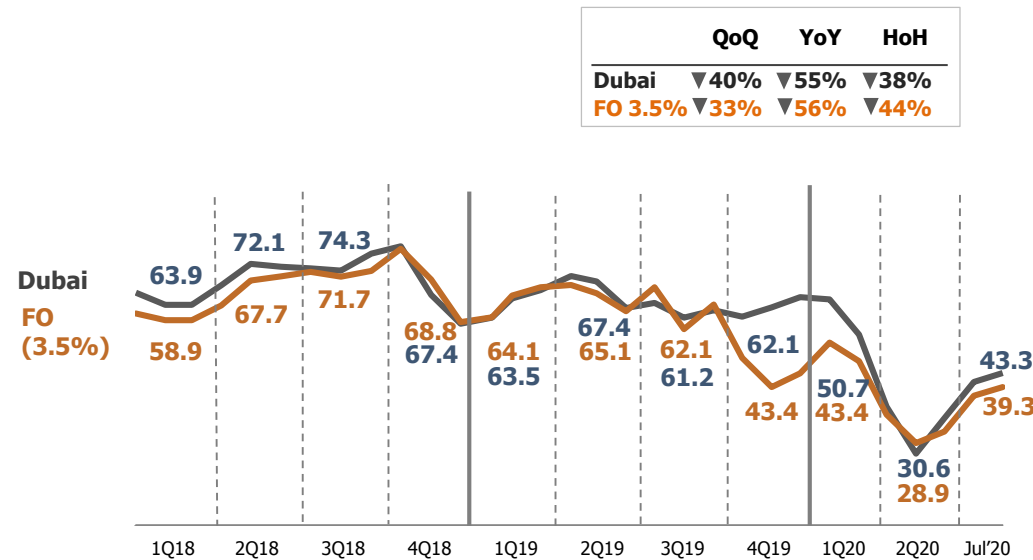


Key Business Drivers:

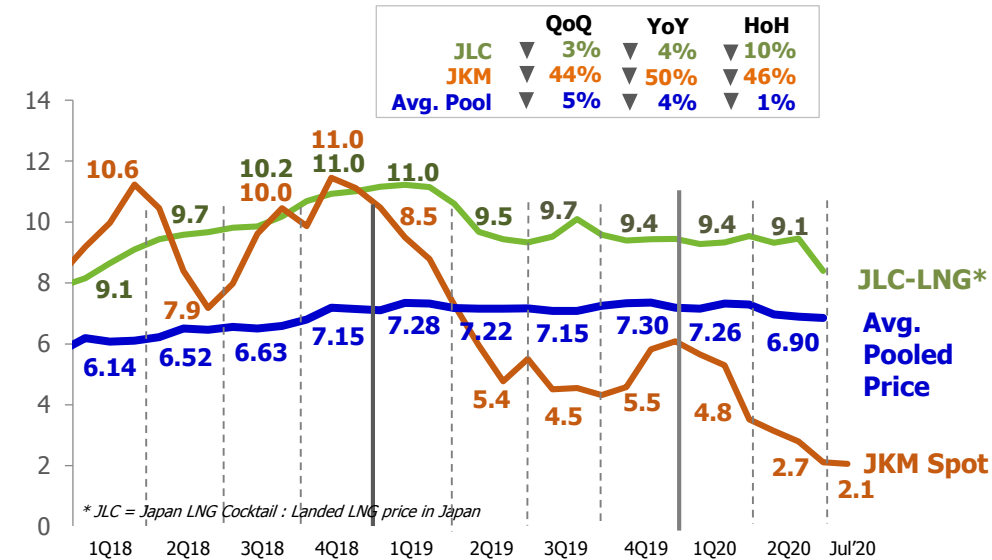
QoQ: Oil prices bottomed out in April and started to recover while gas pooled prices tend to decline

HoH: During COVID-19 pandemic and oil price war, most of petroleum and petrochemical prices dropped

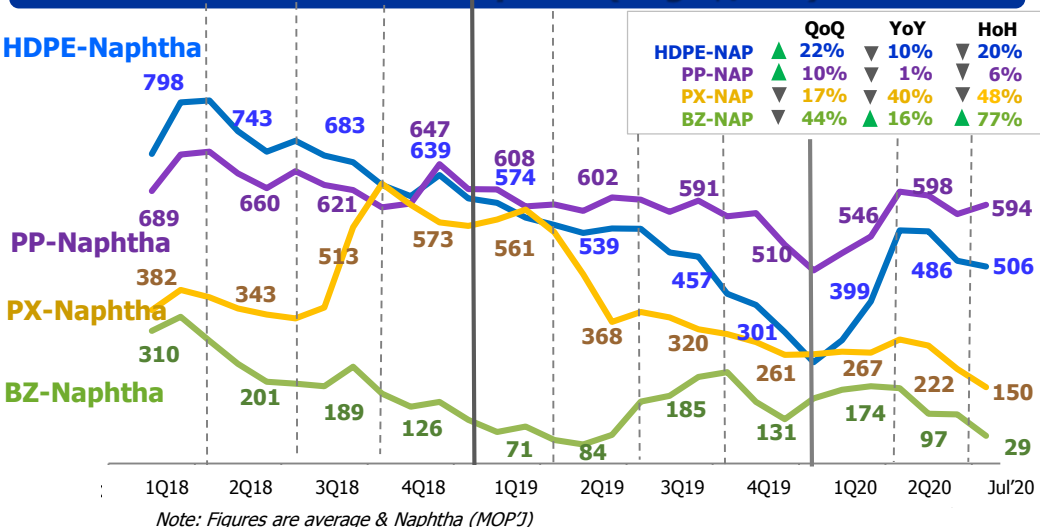
AVG. Petroleum Prices (\$/bbl)



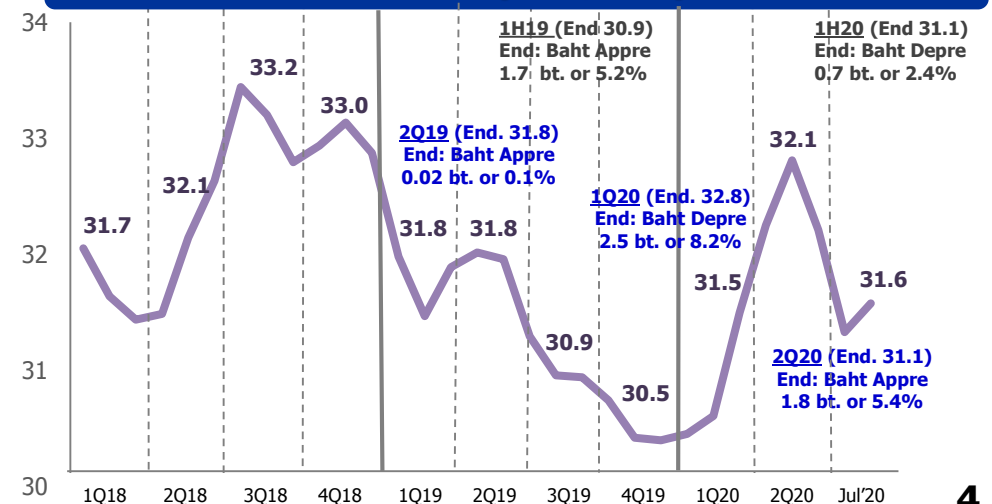
Avg. NG Prices (\$/MMBTU)



Petrochemical Spread (Avg. \$/ton)



AVG. FX (THB/USD)



**Activities
Highlight**

1

2

Key Drivers

**2Q2020 & 1H2020
Performance**

3

4

Outlook

**Strategic
Investment**

5

PTT Consolidated Performance: 2Q20 & 1H20

QoQ: Improved NI from lower stock loss despite weaken demand & prices

HoH: NI dropped from the impacts of Covid-19 pandemic and oil price war

Avg. Dubai (USD/BBL) ▼ 40% QoQ
▼ 55% YoY



▼ 38% HoH

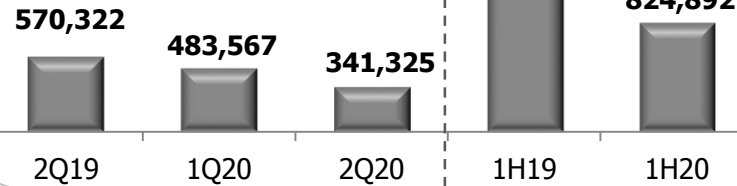


Unit : MMTHB

Revenue

▼ 29% QoQ
▼ 40% YoY

▼ 26%



Revenue ▼ 29% QoQ

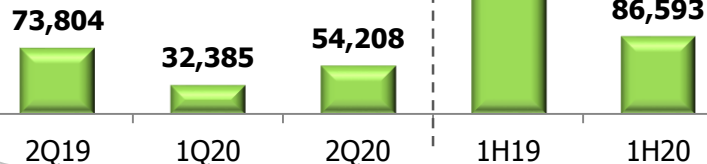
- **Lower from all businesses** due to lower petroleum & petrochemical prices from oil price war and weaken demand caused by COVID-19

▼ 26% HoH

- **Most businesses**: Declined from lower selling prices and volumes due to Covid-19 impact
- + **Power** : Increased from GLOW's revenue

EBITDA ▲ 67% QoQ

▼ 44%



- + **P&R**: Increased from stock gain in 2Q20 (stock loss in 1Q20) and improved Mkt GRM and most of petrochemical spreads
- **EP** : Soften from lower sales vol.& prices
- **GAS** : Weaken from GSP's turnaround and lower demand
- **Oil** : Declined from weaken demand and products' spread

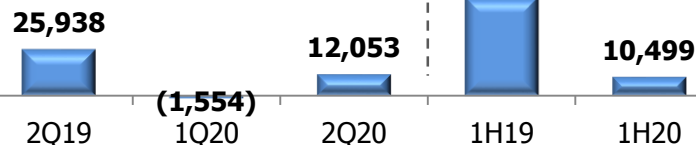
▼ 44% HoH

- **P&R** : Declined from stock loss and lower GRM & Olefins spreads
- **GAS** : Lower from GSP's weaken selling prices & vol.
- **EP** : lower due to avg. selling prices aligned with crude price
- **Oil** : Lower mainly from weaken Jet fuel demand
- + **Power** : Increased from GLOW's contribution

Net Income

▲ >100% QoQ
▼ 54% YoY

▼ 81%



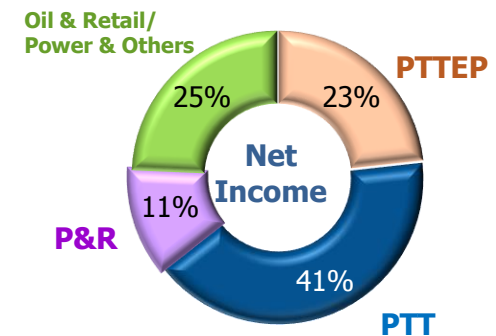
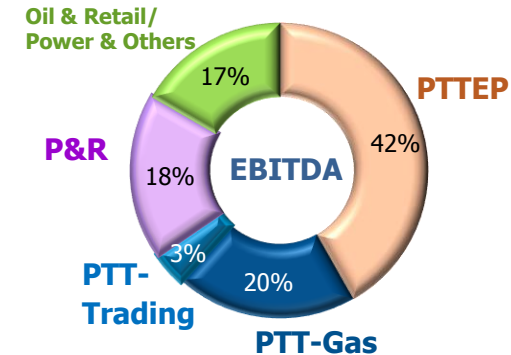
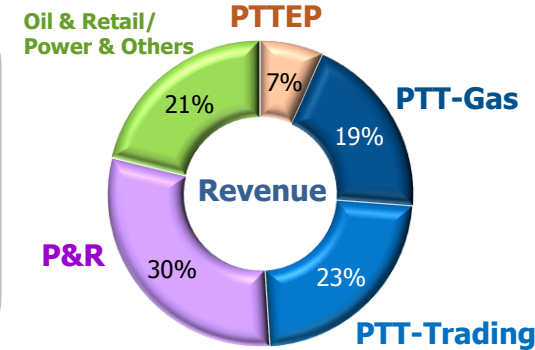
NI ▲ >100% QoQ

- + Higher NI from better EBITDA
- + Higher FX gain from THB appreciation in 2Q20
- + Lower Tax expenses mainly from PTTEP
- Higher hedging loss on derivatives
- Impairment from PTTEP's Mariana Oil Sands project

▼ 81% HoH

- Weaken EBTIDA
- Higher DD&A from EP and power businesses from acquisition
- + Lower tax expenses from lower performances
- + Higher gain on derivatives offset with FX loss

2Q20

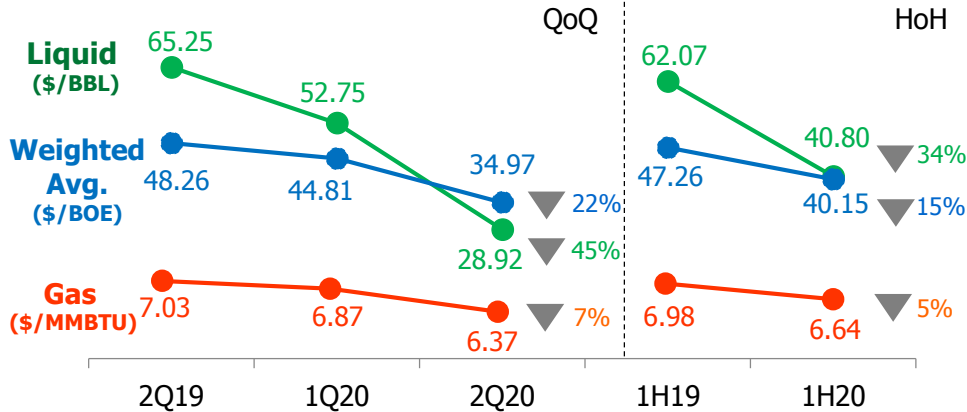


E&P : Prices & Volume and NI

QoQ: Softer performance due to lower selling prices and volume

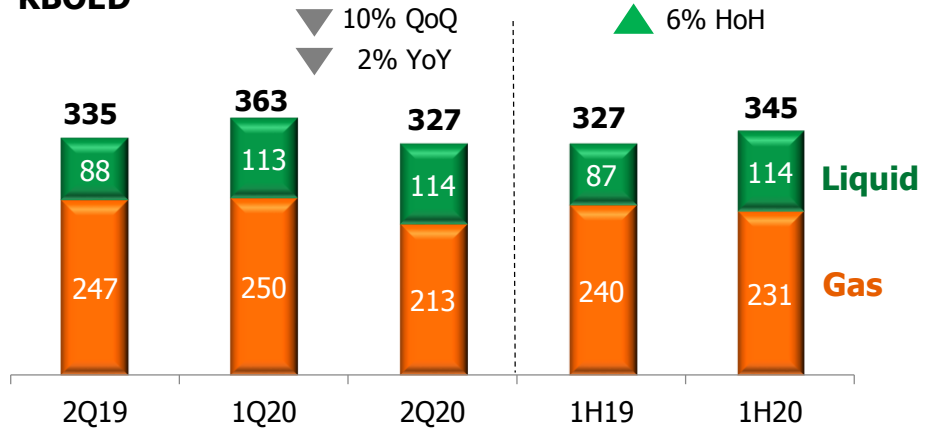
HoH: NI dropped from lower selling prices despite higher sales volume from acquisition

Product Prices



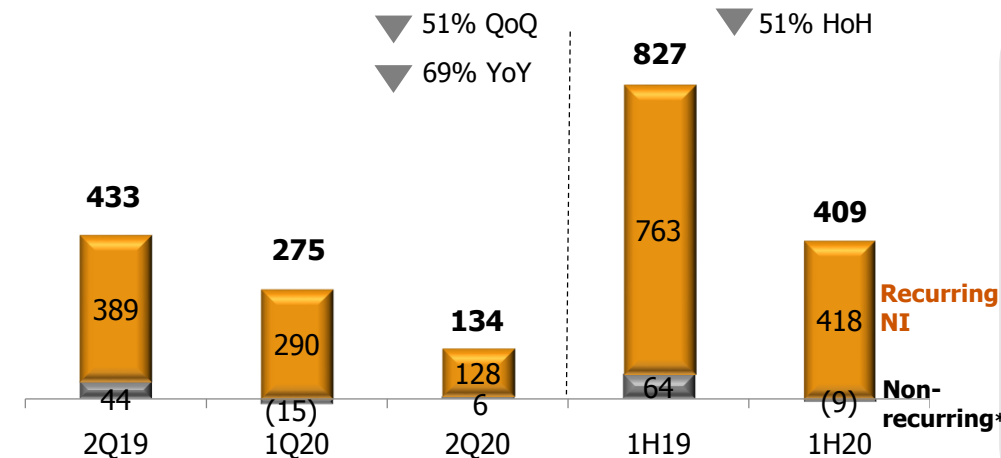
Sales Volume

KBOED



Net Income (100%)

MMUSD



Key Highlights

QoQ

- **Avg. Selling Price:** decreased 22% according to lower crude oil price
- **Volume:** decreased 10% mainly from lower gas nomination in Bongkot & Contract 4 projects
- **NI:** dropped 51% as lower avg. selling prices & sales vol., hedging loss and impairment in Mariana Oil sand project

HoH

- **Avg. Selling Price:** decreased 15% as drop in crude oil price
- + **Volume:** increased 6% from acquisition of Malaysia project & Partex Group despite lower sales vol. of Contract 4 project
- **NI** dropped 51% due to lower margin and higher DD&A, tax expenses, and impairment loss despite gain on derivatives

* Includes Gain/(Loss) on FX, Deferred tax from Functional currency, Current Tax from FX Revaluation, Gain/(Loss) from Financial Instruments, Impairment loss on assets and etc.

PTT EBITDA Breakdown by Business

(Unit: MMTHB)

Business Unit	2Q19	1Q20	2Q20	QoQ	YOY	1H19	1H20	HoH
Gas- EBITDA	19,850	14,433	11,028	↓ 24%	↓ 44%	37,798	25,461	↓ 33%
• S&M	4,438	1,924	1,356	↓ 30%	↓ 69%	7,941	3,280	↓ 59%
• TM	8,520	9,079	8,960	↓ 1%	↑ 5%	17,153	18,039	↑ 5%
• GSP	5,059	1,803	(475)	↓ <(100)%	↓ <(100)%	9,311	1,328	↓ 86%
• NGV	(1,015)	(580)	(684)	↓ 18%	↑ 33%	(2,163)	(1,264)	↑ 42%
• Others ^{1/}	2,848	2,207	1,871	↓ 15%	↓ 34%	5,556	4,078	↓ 27%
Trading^{2/} EBITDA	363	907	1,251	↑ 38%	↑ >100%	976	2,158	↑ >100%
Total	20,213	15,340	12,279	↓ 20%	↓ 39%	38,774	27,619	↓ 29%

^{1/} Others include PTTLNG, PTTNGD, and PTTGL

^{2/} For MIS and include PTTT and PTTT LDN

Note Since July 2018 Oil business has been transferred to subsidiaries (OR), see more details in Oil business performance

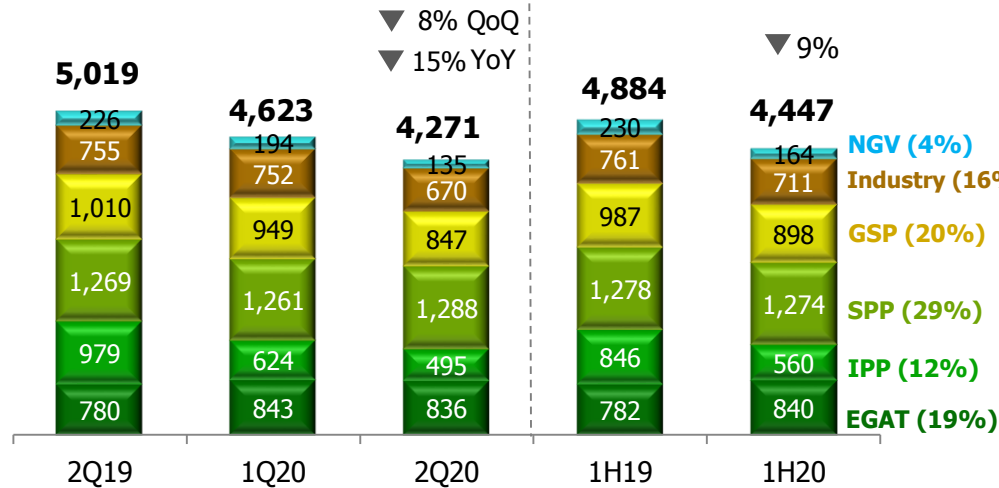
Gas Business : Prices & Sales Vol.

QoQ : Lower NG vol. from Power, GSP, and Industrial owing to COVID-19's weak demand

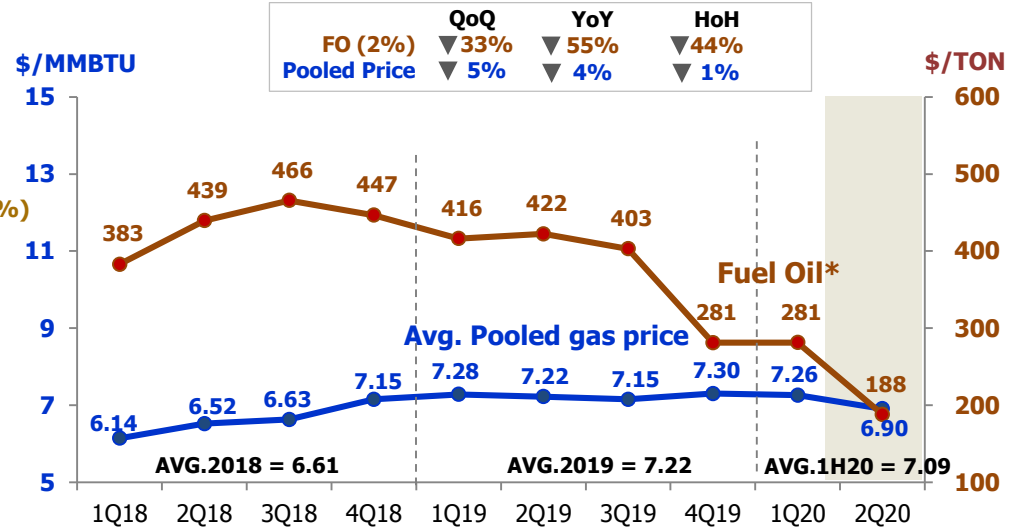
HoH : Decreased in NG vol. of all customers esp. Power due to COVID-19 pandemic

NG Customer Breakdown

Unit: MMSCFD



NG Price VS FO



NGV Price/Sales Volume

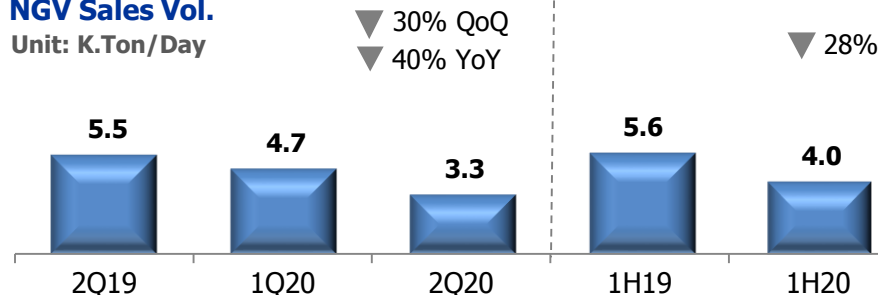
NGV Avg. price

Unit: THB/KG



NGV Sales Vol.

Unit: K.Ton/Day



Key Highlights

QoQ

- **NG sales vol.** declined 8% mainly from Power, GSP, and industrial customers due to COVID-19
- **GSP vol.** decreased 11% as more planned SD and TD 50% of GSP1's & GSP5's in 2Q20 according to seasonal drought and COVID-19's lower demand
- + **Avg. pooled gas price** (cost) dropped 5% from Myanmar gas and imported LNG
- **NGV:** selling prices of public car decreased 3 baht/kg. despite the lower sales vol. from COVID-19 effect

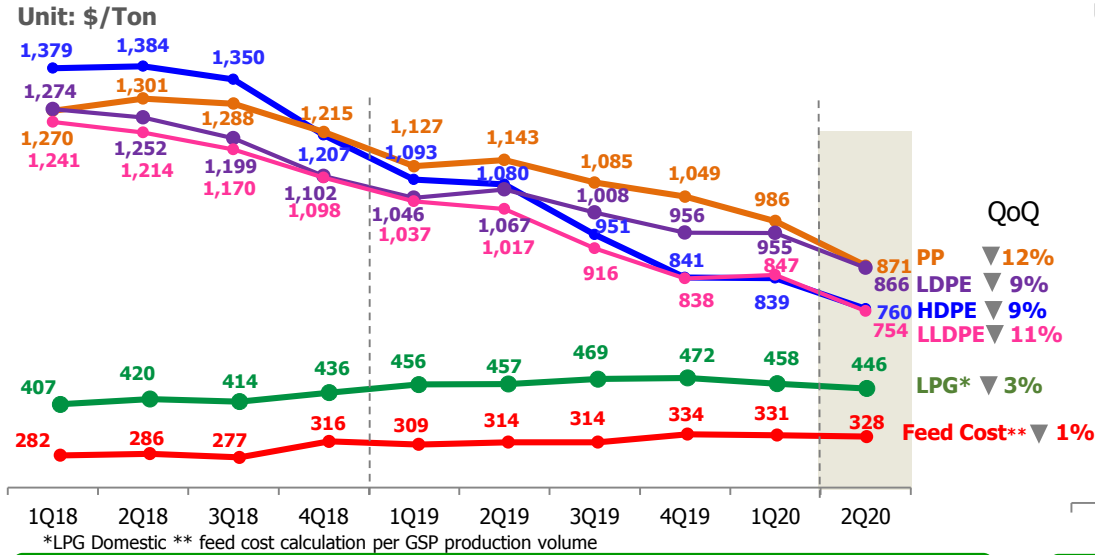
HoH

- **NG sales vol.** soften 9% from power, GSP, and industrial customers
- Power vol. dropped 8% mainly from COVID-19 pandemic
- GSP vol. decreased 9% from more SD & TD due to lower petrochemical demand
- **Price:** Industrial selling prices decreased according to dropped FO price due to IMO effect
- **Avg. pooled gas price** (cost) dropped 1% from Myanmar gas and imported LNG
- + **NGV sales vol.** dropped from lockdown policy and lower of alternative fuel prices

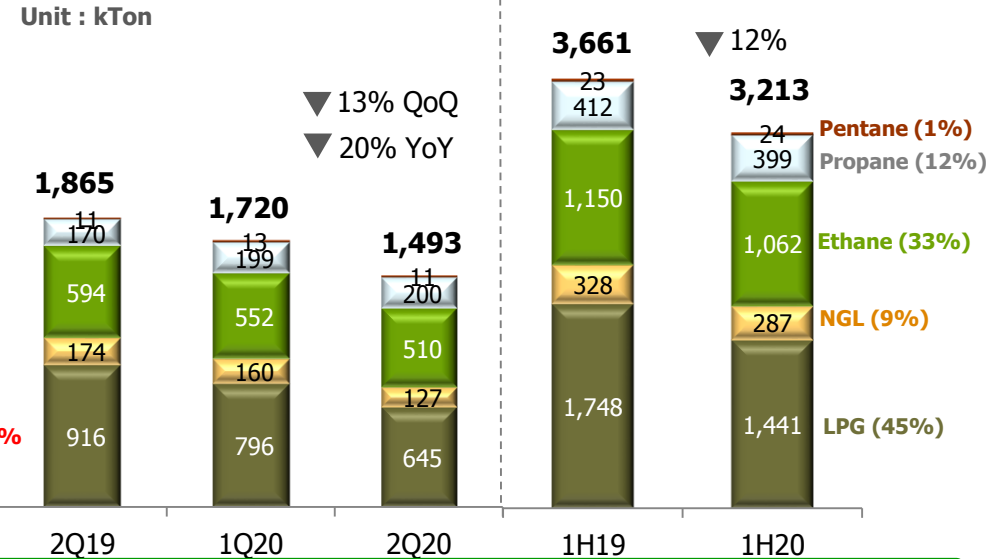
Gas Business Performance

QoQ: Lower EBITDA due to overall gas sales volume dropped esp. GSP from more planned SD & TD
HoH: Lower EBITDA mainly from GSP and S&M while TM & LNG Terminal EBITDA sustained

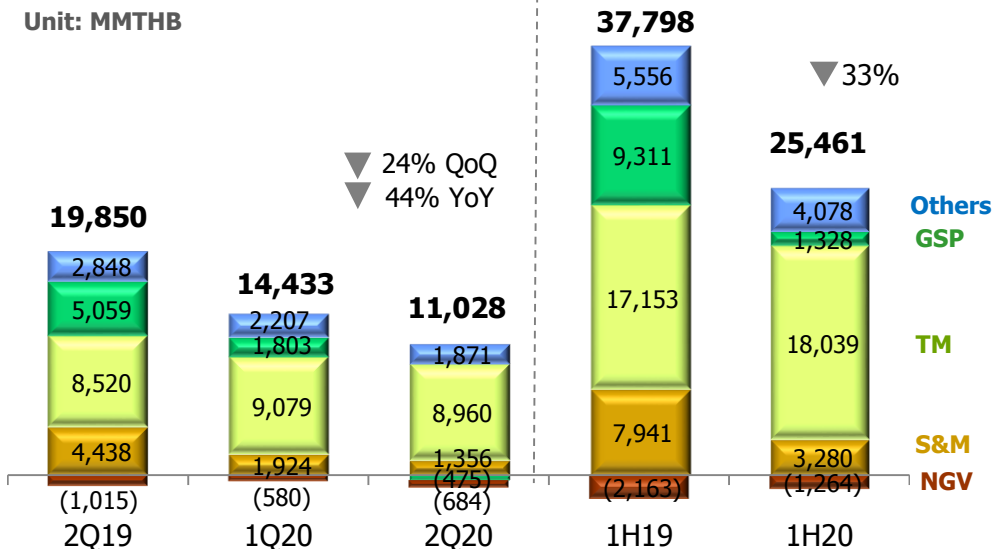
GSP Feed Cost vs Petchem. price



GSP Sales Volume



Gas - EBITDA



Gas EBITDA Highlights

QoQ

- **GSP** performance declined due to lower sales vol. from GSP's SD & TD in 2Q20 more than in 1Q20 and lower average selling prices
- **S&M** decreased from 8% lower gas sales vol. due to soften domestic power demand and GSP's SD and TD
- **NGV** higher loss from lower public selling prices but lower vol. from lock down
- **TM & LNG terminal** still contributed stable performances

HoH

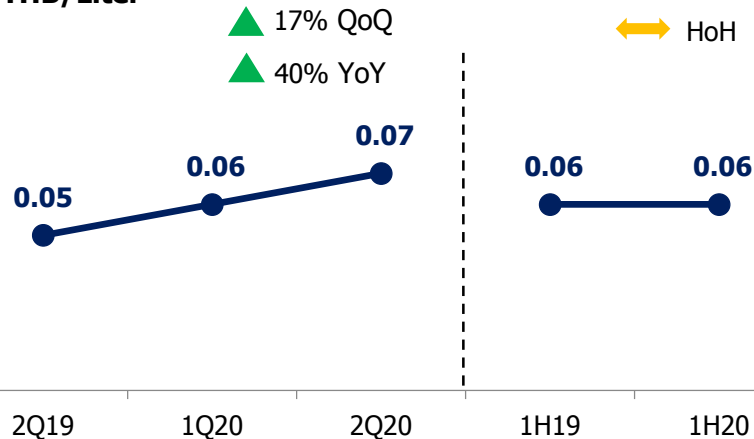
- **GSP** dropped significantly due to
 - Lower average selling prices from the lower global referenced petchem prices
 - Lower sales vol. from planned SD and lower demand due to COVID-19 impact
 - higher feed cost
- **S&M** decreased due to lower industrial selling prices linked to FO prices & drop of sales vol. mainly from COVID-19 impact caused lower NG demand
- + **NGV** lower loss from lower sales volume
- **TM & LNG Terminal** contributed stable performances

Trading Business:

QoQ & HoH: Higher EBITDA due to enhanced gross margin from arbitrage opportunity despite lower sales vol. owing to Covid-19 impact

Gross Margin¹

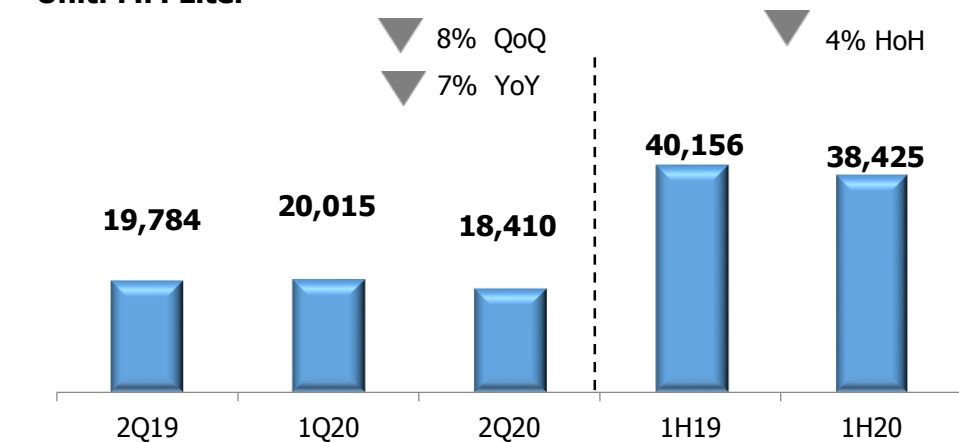
Unit: THB/Liter



¹ PTT Trading BU + trading subsidiaries: FX Adjusted + gain/loss on derivatives

Sales Volume²

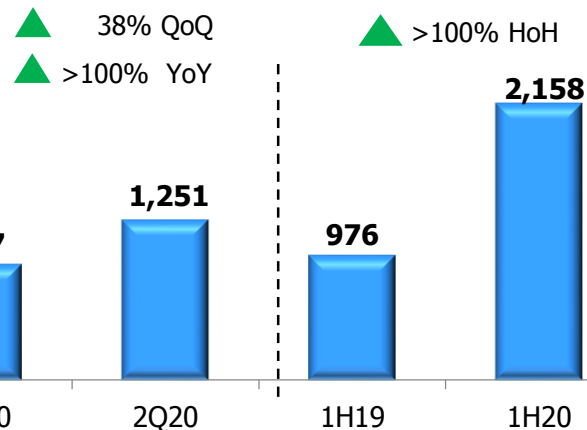
Unit: MM Liter



² PTT Trading BU + trading subsidiaries

Trading – EBITDA³

Unit: MMTHB



³ PTT Trading BU + trading subsidiaries: FX Adjusted + gain/loss on derivatives

Key Highlights

QoQ

- + **Margin** increased 17% from lower domestic condensate discount
- **Volume** decreased 8% mainly from out-out transaction of crude oil & petroleum products from impact of COVID-19
- + **EBITDA** increased from higher GM from capturing arbitrage opportunity

HoH

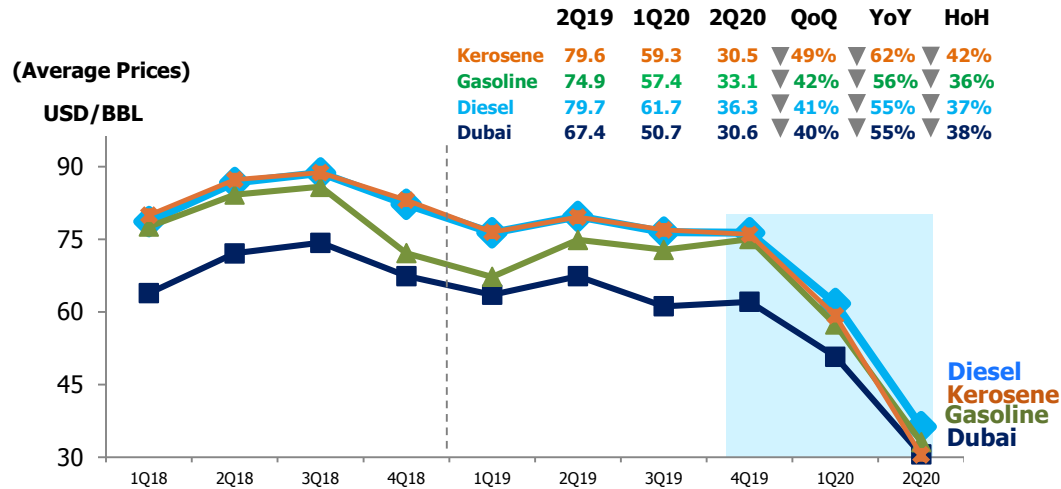
- **Volume** decreased 4% due to lower out-out transaction of crude oil & petroleum products from impact of COVID-19
- + **EBITDA** increased from other income and capturing arbitrage opportunity

Oil Business : OR Group

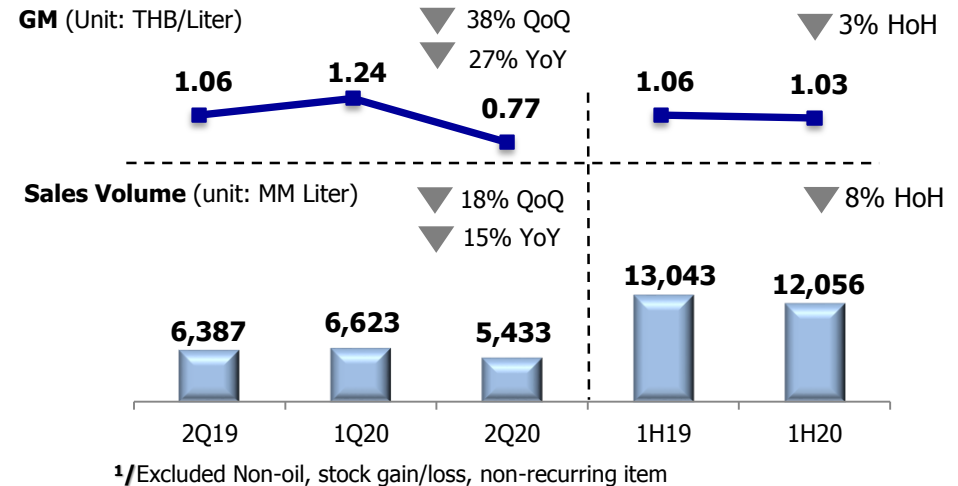
QoQ: lower EBITDA from lower margin and sales volume during lockdown

HoH : lower EBITDA from decreased sales volume from COVID-19 impact and higher stock loss

Petroleum Prices



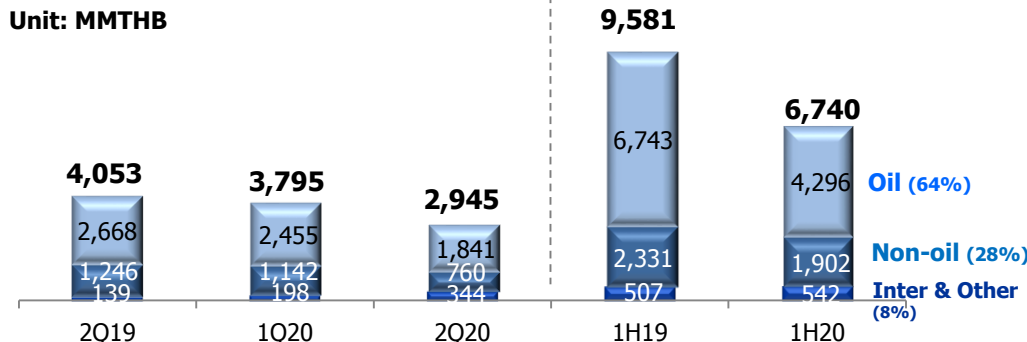
Gross margin¹/Sales volume



OR Group – EBITDA

	QoQ	YoY	HoH
Oil	▼ 25%	▼ 31%	▼ 36%
Non-oil	▼ 33%	▼ 39%	▼ 18%
Inter & Other	▲ 74%	▲ >100%	▲ 7%
Total	▼ 22%	▼ 27%	▼ 30%

Unit: MMTHB



Key Highlights

QoQ

- **Margin** was lower mainly from Jet A-1 (lower margin amid 2Q20 oil price uptrend as "month -1" selling price structure)
- **Volume** dropped 18% in all products from COVID-19 pandemic and lockdowns mainly jet fuel
- **EBITDA** decreased 22% due to lower oil's margin & volume and non-oil EBITDA amid COVID-19's lockdown

HoH

- **Margin** decreased mainly from Diesel and Gasoline as well as higher stock loss
- **Volume** dropped 8% in all products from COVID-19 Pandemic and lockdowns mainly Jet fuel
- **EBITDA** decreased 30% due to oil's lower margin & volume and non-oil EBITDA due to COVID-19 impact

P&R Businesses

QoQ: Improved performance thanks to oil demand recovery

HoH: Soften performance in line with global trend

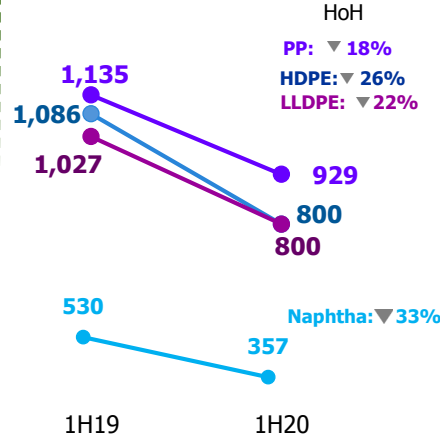
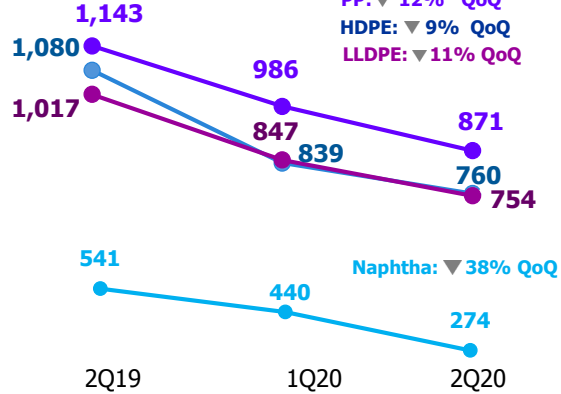
Olefins

Olefins U-Rate
(PE Plant)

101% 89% 102%

100% 95%

Avg. Price: \$/Ton



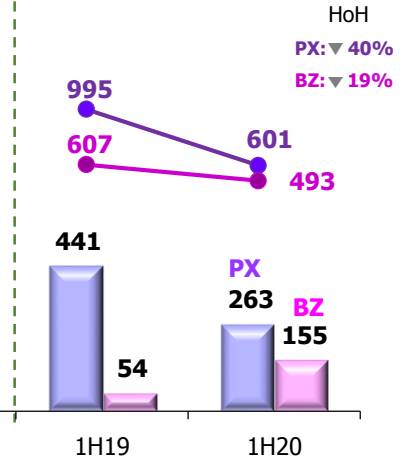
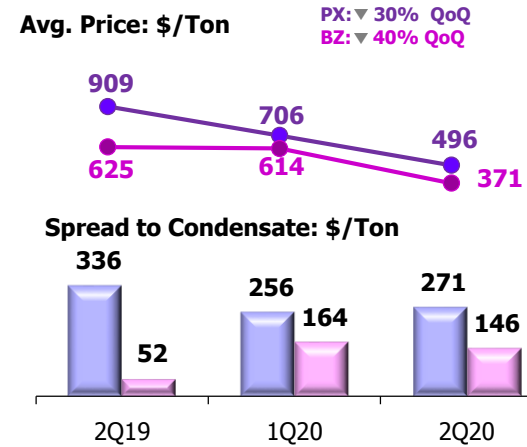
Aromatics

BTX U-Rate
(GC's plant)

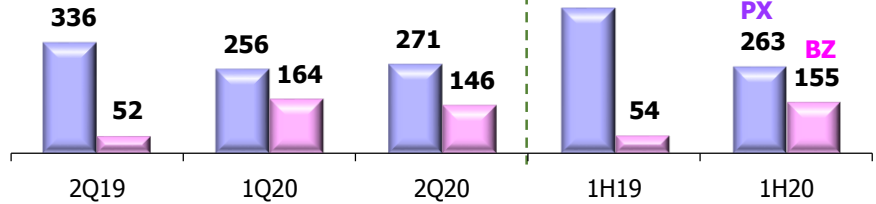
72% 97% 99%

83% 98%

Avg. Price: \$/Ton



Spread to Condensate: \$/Ton



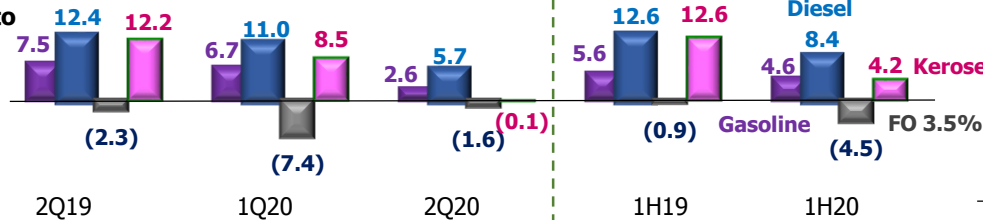
Refinery

Refinery U-Rate
Dubai

101% 101% 95%

102% 98%

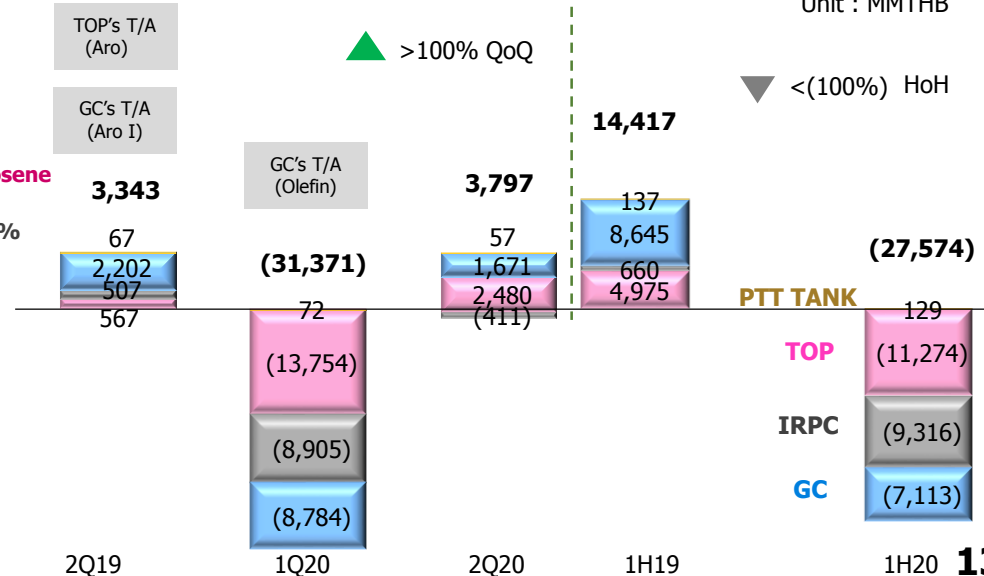
Spread to Dubai: \$/bbl



Unit: \$/BBL	2Q19	1Q20	2Q20	1H19	1H20
Mkt GRM	2.44	0.83	1.60	2.44	1.22
Stock G/L excl. NRV	0.02	-9.00	-3.33	0.83	-6.44
Hedging G/L	0.36	0.79	0.17	0.14	0.50
A/C GRM	2.82	-7.38	-1.56	3.41	-4.72

Net Income (100%)

Unit: MMTHB

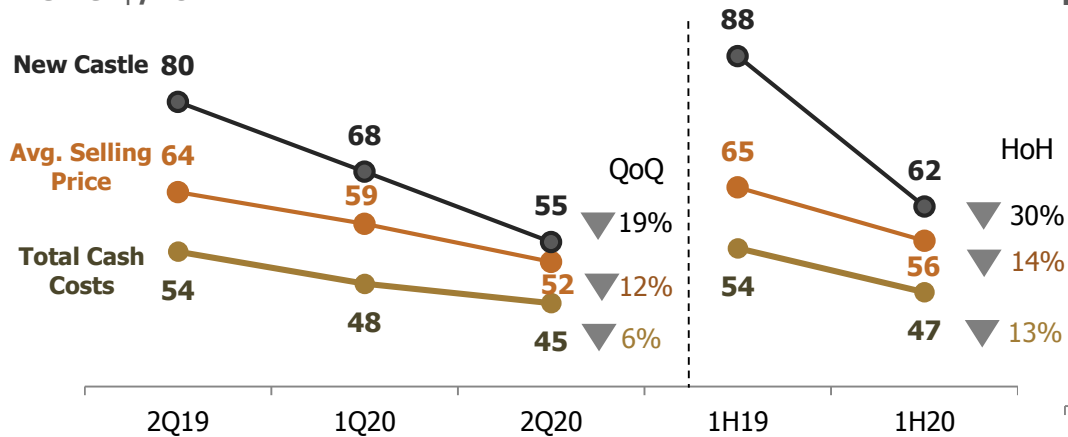


Other Businesses : Coal Business (SAR)

QoQ & HoH : NI dropped due to lower other income from tax lawsuit case and lower selling prices & volume

Avg. Selling Price^{1/} & Cash cost^{1/}

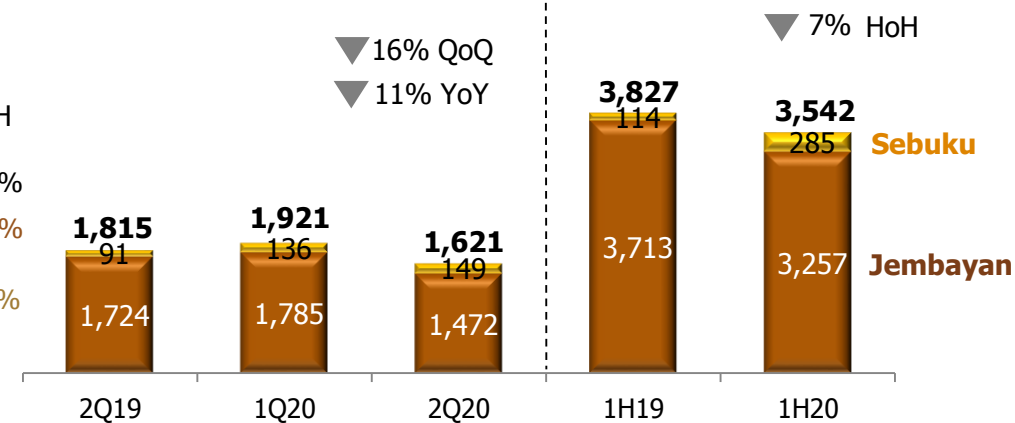
Unit: \$/Ton



^{1/}Average Calorific value ~ 5,400 kcal/kg

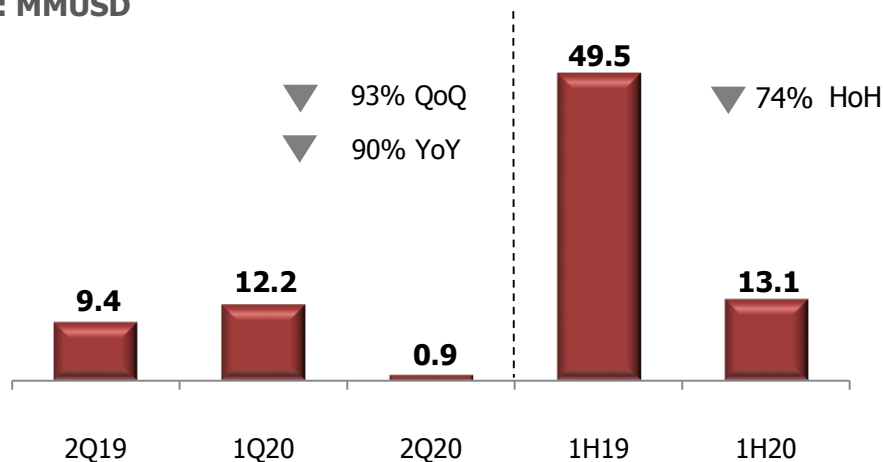
Sales Volume

kTon



Net income

Unit: MMUSD



Key Highlights

QoQ

- **Volume** dropped 16% from lower export from Jembayan
- **Avg. Selling Price:** lower 12% due to referenced New Castle Coal price
- + **Cash cost** was down 6% from lower gasoil price & New Castle Coal price
- **NI** decreased 93% from no payback on tax lawsuit case as in 1Q20

HoH

- **Volume** decreased 7% due to lower export from Jembayan
- **Avg. Selling Price:** down 14% due to lower referenced New Castle price
- + **Cash cost** was lower 13% according to gasoil price and New Castle price
- **NI** decreased from lower payback on tax lawsuit case

Other Businesses : Power - GPSC

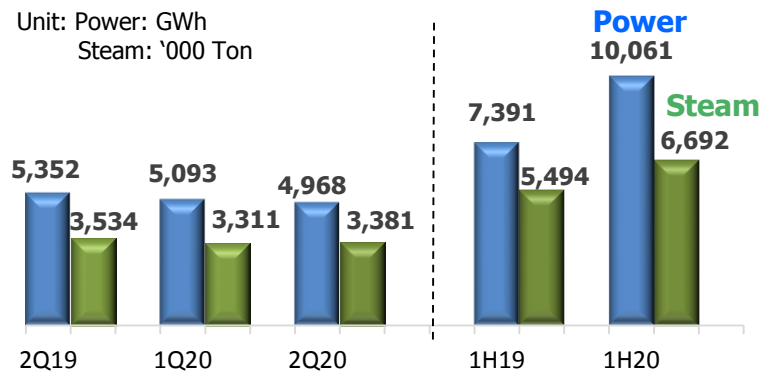
QoQ: NI increased from lower NG cost and higher contribution from affiliates

HoH: Higher performance from the full recognition of GLOW

Sales Volume

	QoQ	YoY	HoH
Power	▼ 2 %	▼ 7%	▲ 36%
Steam	▲ 2 %	▼ 4%	▲ 22%

Unit: Power: GWh
Steam: '000 Ton



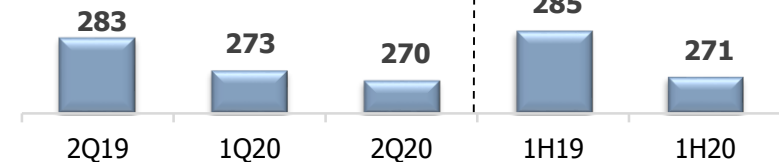
Key Drivers: Weighted Avg. Selling & NG Prices

	QoQ	YoY	HoH
SPP Avg. Selling Prices	▼ 1%	▼ 3%	▼ 3%
Avg. NG Cost	▼ 1 %	▼ 4%	▼ 5%

SPP Avg. Selling Prices (THB/kWh)



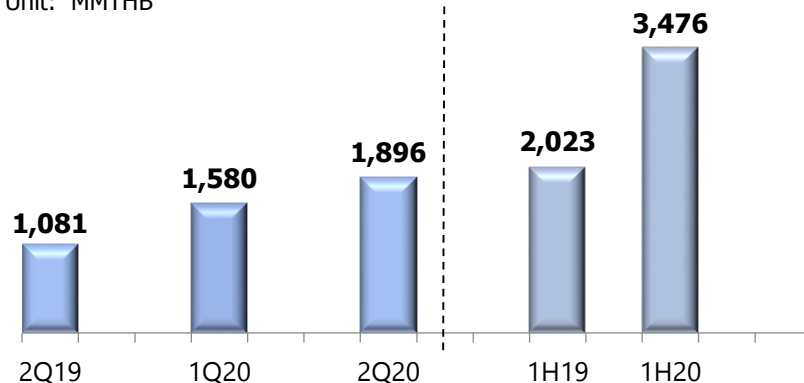
SPP Avg. NG Cost (THB/MMBTU)



Net Income

	QoQ	YoY	HoH
NI	▲ 20%	▲ 75%	▲ 72%

Unit: MMTHB



Key Highlights

QoQ

- **Sales vol.** decreased slightly due to lower dispatch vol. of Sriracha according to EGAT instruction while SPP and VSPP volume improved
- + **SPP Avg. NG Cost** decreased according to lower NG prices
- + **NI** increased mainly from lower NG and coal cost, and higher contribution from affiliates (XPCL, GRP solar power plants, ISP1)

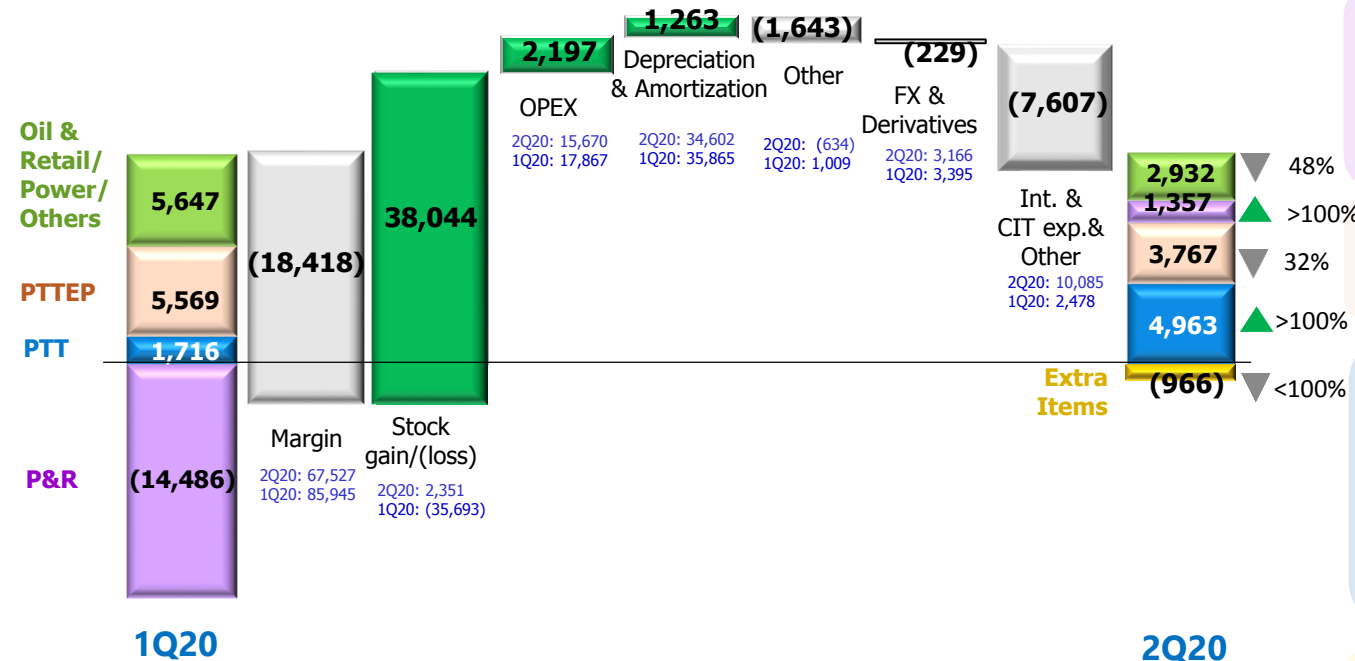
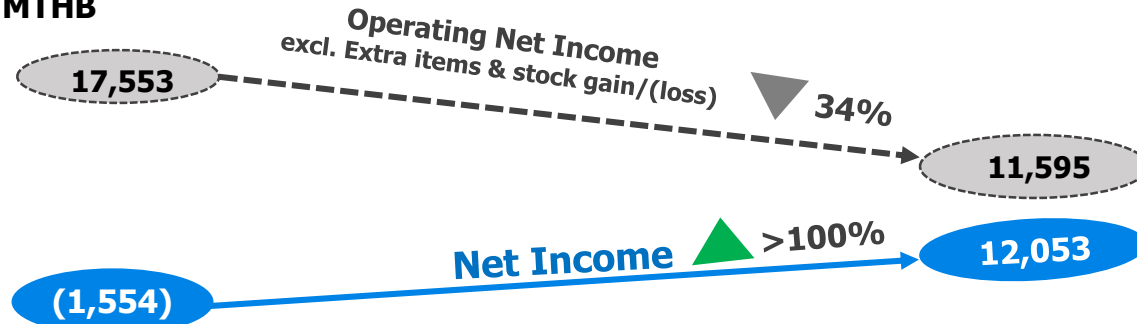
HoH

- + **Sales vol.** increased from the full recognition of GLOW in 1H20
- + **SPP Avg. NG Cost** decreased according to lower NG prices
- + **NI** increased from full recognition of GLOW in 1H20 despite lower Energy Payment from Sriracha

2Q20 vs 1Q20 PTT Consolidated Performance (QoQ):

Group performance rebounded due to lower stock loss over weakened demand & prices

MMTHB



Oil & retail/ Power/ Others ▼

Others ▼

- Coal : lower vol. & prices and other income (tax payback)

Oil & Retail ▼

- Margin decreased; Jet A-1 due to price structure
- Vol. decreased from impact of Covid-19 and lockdown

Power ▲

- + Higher GM from lower natural gas and coal cost
- + Higher contribution from affiliates

Petrochemical & Refining ▲

- + Stock gain in 2Q20 due to crude oil price recovery while stock loss in 1Q20
- + Higher GRM from lower crude premium
- + Aromatics: Higher PX spread as a sharp drop in feedstock price
- + Olefins: Better products' spread & Volume as no SD in 2Q20

PTTEP ▼

- Lower avg. selling prices due to decreased crude oil prices
- Lower sales vol. due to lower nomination from buyer

Gas ▼

- GSP: Soften demand from domestic fuel and petrochemical customers due to impact of COVID-19 & drought situation (GSP#1 & GSP#5: Shutdown & Turndown 50%)
- S&M : Lower NG sales vol. from Power, GSP and industrial sectors due to impact of COVID-19

Trading ▲

- + Capture arbitrage opportunity in a favorable market environment

Extra Items

1Q20 : No extra items

2Q20 : EP's asset impairment loss; Mariana Oil Sands project

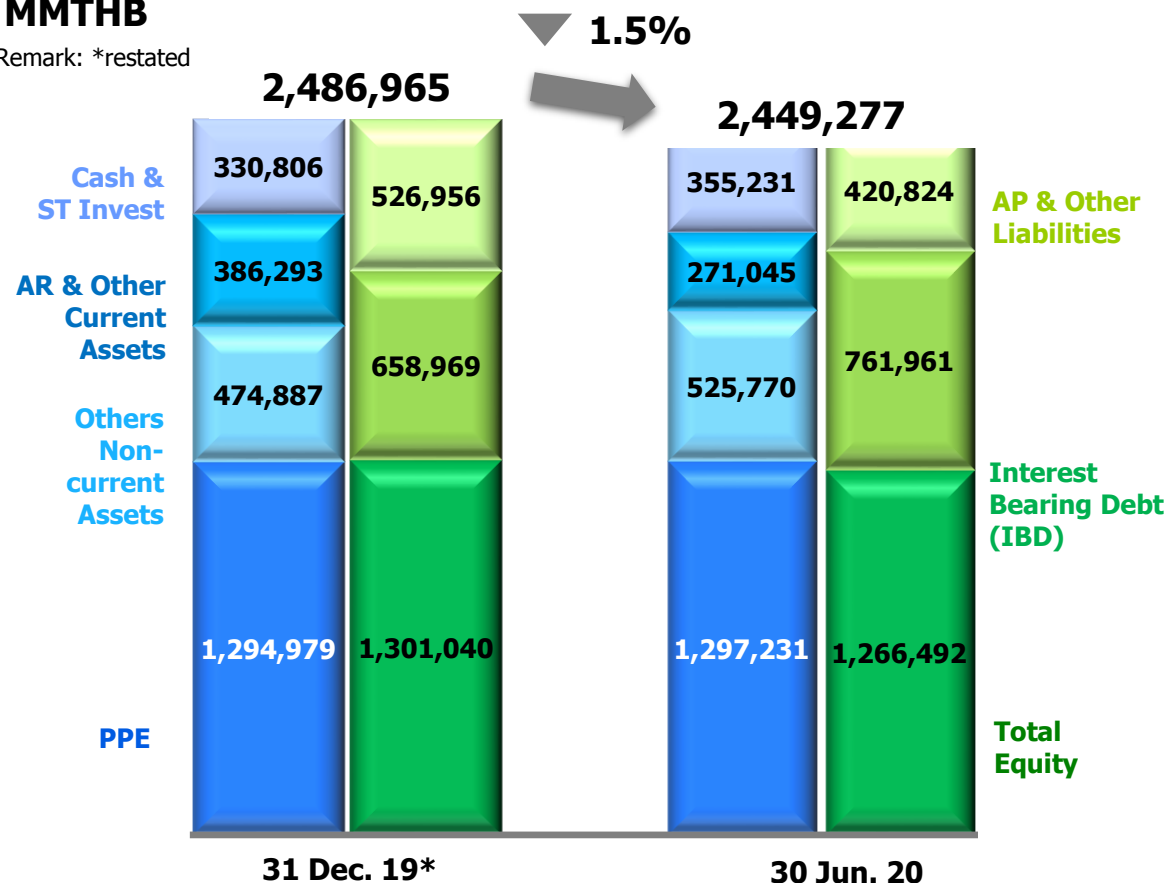
Statement of Financial Position

Strong Balance Sheets with BBB+ rating

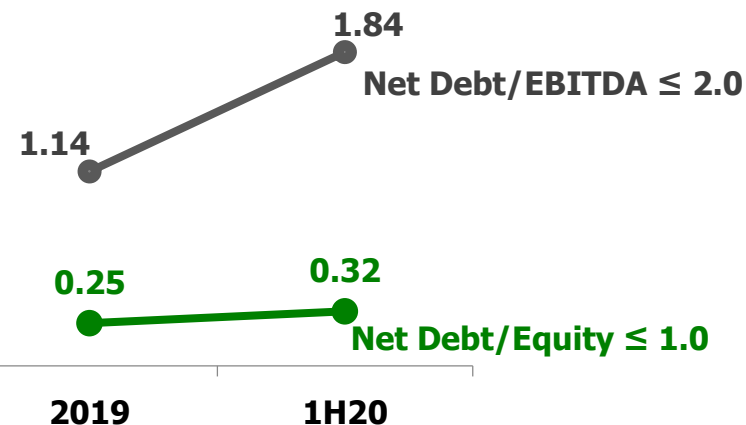
Consolidated Balance Sheets

MMTHB

Remark: *restated



Key Financial Ratio



PTT Ratings at Sovereign Level

- **Foreign Currency** : Moody's (Baa1), S&P (BBB+), FITCH (BBB+)
- **Local Currency** : Moody's (Baa1), S&P (A-), FITCH (BBB+)

Assets/Liabilities/ Equities:

- Decrease in accounts receivables and inventories: Impact from lower sales vol. and prices from COVID-19 & Price War
- Decrease in accounts payables: lower vol. and prices
- + Increase in right of use assets; asset reclassification according to TFRS 16 (Leases)
- + Higher Interest Bearing Debt (IBD) from increase in affiliated companies' long term borrowing (bond/loan)
- Lower equities due to dividend payment despite lower net profit in 1H20

Statements of Consolidated Cash Flows : 1H2020



Unit : MMTHB

Operating	99,440
Net Income	10,499
Changes in assets & liabilities	33,197
Non-Cash Adjustment	90,524
Income Tax	(34,780)

Investing	(130,894)
CAPEX (PP&E, Intangible asset)	(80,267)
Current investment	(63,524)
Investment (Sub. & Affiliates & others)	(2,399)
Others	10,077
Dividend/Interest Received	5,219

Free Cash flow
(31,454)



Financing	(5,885)
Loan/Bond repayment	(60,435)
Dividend Paid	(42,687)
Finance cost paid	(13,479)
Derivatives	(329)
Received from loans/Bonds	110,850
Ordinary share issuance of subsidiaries	195

Adjustment
2,655

Beginning Cash & Cash Equivalents
292,542
38,263
330,805



Cash In/(Out)
(34,684)
59,110
24,426



Ending Cash & Cash Equivalents	257,858
Current inv.	97,373
Ending cash incl. S/T investment	355,231

Cash & cash eqi
Current inv.



Reopening from the Great Lockdown – Uneven and Uncertain Recovery

IMF Forecast – 2020 GDP Growth



World: -4.9%



US: -8.0%



Euro area: -10.2%



China: 1.0%



Japan: -5.8%



India: -4.5%



Thailand: -7.7%

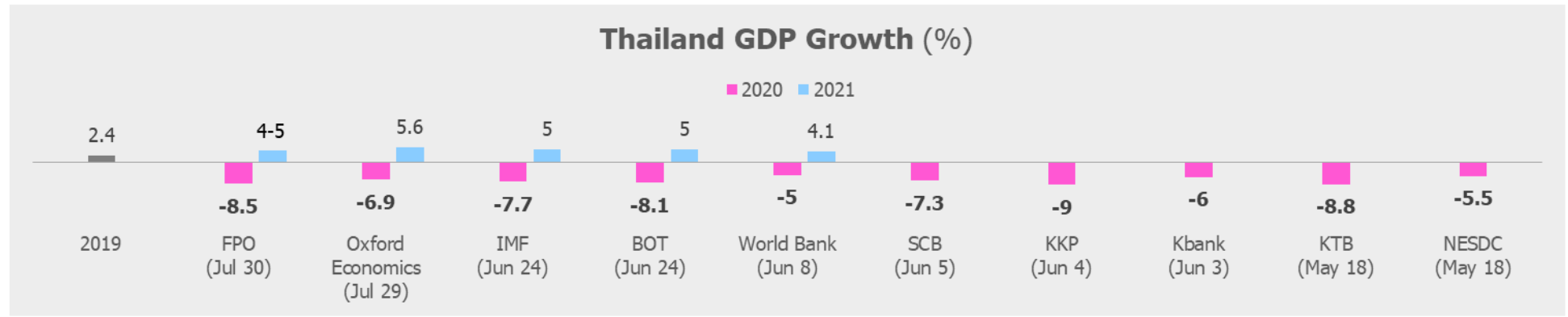


- + Over 75% of countries so far reopening from lockdowns
- + In economies with declining infection rates, recovery underway (led by China); but on a slow path, partly reflecting persistent social distancing into 2H2020
- + Pent-up demand leading to a surge in spending in some sectors like retail; while contact-intensive services sectors like hospitality, travel, and tourism remaining depressed
- + Exceptional policy support, particularly in advanced economies, and to a lesser extent in emerging market and developing economies



- For economies struggling to control infection rates (e.g. US, India, Brazil, Mexico, Spain, France, Japan), a lengthier lockdown or scaling back of reopening plans threatening recovery
- In the absence of a medical solution to COVID-19, the strength of the recovery highly uncertain and uneven impact on sectors and countries
- Geopolitical and trade tensions

Gradual Recovery Underway – Economy Believed to Have Bottomed Out



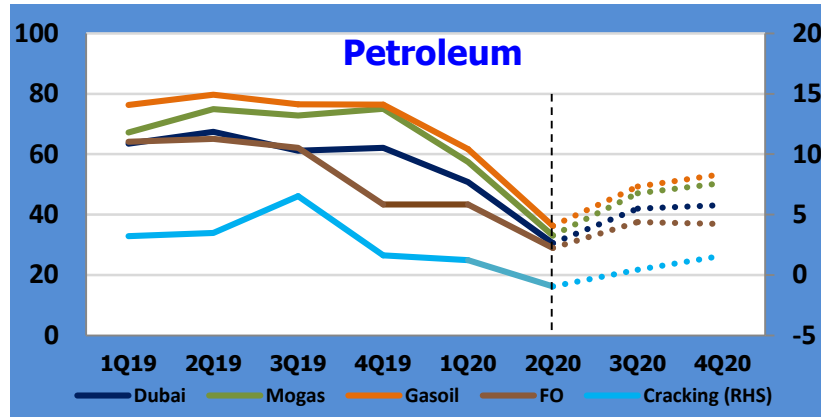
- + Domestic consumption showing signs of recovery, amid easing of lockdown measures
- + Exports of farm and food products posting strong expansion, as a result of COVID-19 and global supply chain shakeup
- + COVID-19 relief measures, and fiscal and monetary stimulus



- Remaining international travel restrictions to continue to impact the economy
- Exports of industrial products still largely in negative growth territory (led by cars and parts), despite some improvements after the gradual easing of lockdowns overseas
- Scarring from COVID-19, i.e. firm closures, unemployed workers, and changed behavior
- Divisive political environment

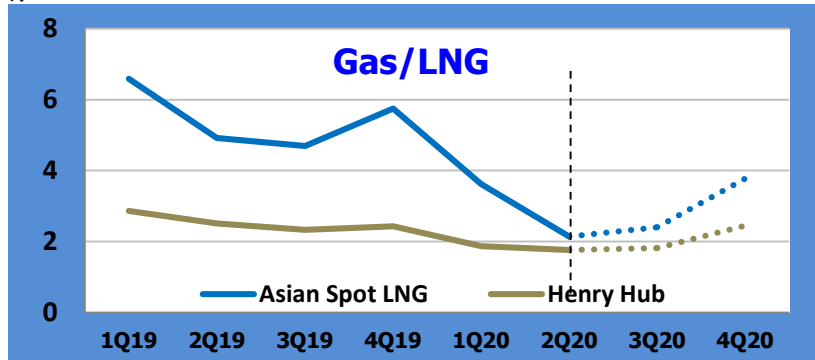
2H2020 Petroleum and Gas Outlook

\$/bbl



Price	1Q20	2Q20	1H19	1H20	Y19	Y20(E)
Dubai	50.7	30.6	65.4	40.6	63.5	40-45
Mogas	57.4	33.1	71.1	45.3	72.5	45-50
Gasoil	61.7	36.3	78.0	49.0	77.2	48-53
FO (3.5%)	43.4	28.9	64.6	36.2	58.7	35-39
Singapore GRM	1.2	(0.9)	3.3	0.2	3.7	0.5-1.5

\$/MMBTU



Price	1Q20	2Q20	1H19	1H20	Y19	Y20(E)
Asian Spot LNG	3.6	2.1	5.8	2.9	6.0	2.7 – 3.3
Henry Hub (HH)	1.9	1.8	2.7	1.8	2.5	1.8 – 2.4

Dubai ▲

- + **Global economy and oil demand recover** after lockdown eased. However, market remains concern about the second wave of COVID-19.
- + **OPEC+ cut oil output** 7.7 MMBD from Aug. to Dec.'20, non-OPEC supply in 2020 is expected to decrease by 3 MMBD YoY (IEA).
- + **Geopolitical Risk**; U.S. conflicts with Iran, and Venezuela, plus unrest in other oil producing countries such as Libya, Nigeria.
- **U.S. - China trade tensions**, including political standpoints may weigh on market sentiment.

Mogas ▲

- + **Gradual demand returns** from lifting lockdown restrictions, reopening economic activity, driving season in US, despite the resurgence of COVID-19 infections.
- **High regional supply remains** due to ramping up in refinery runs and strong Chinese gasoline exports.

Gasoil ▲

- + **An uptick in industrial activities** will support demand
- The increase exports from India and China and the pullback in refinery runs would create **supply overhang**

Fuel Oil ▲

- + **Bunker demand slowly improve** following the recovery in trade activities
- **Expected ease of supply due to** lower level of OPEC+ production cuts
- **Demand from power generation will be faded** after summer

Singapore GRM ▲

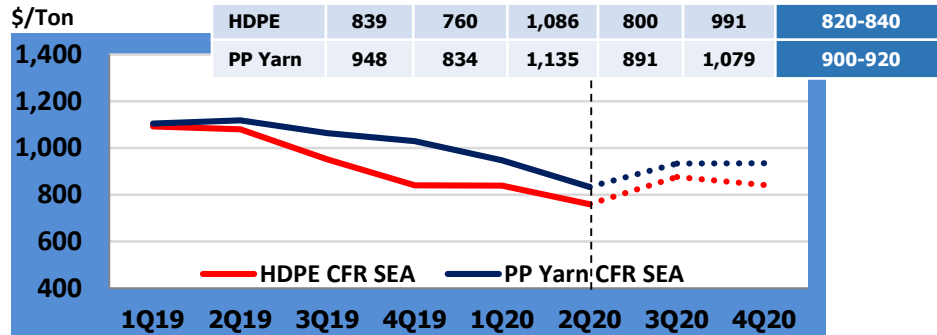
- + **Firmer crack margins** affected by the recovery in demand

Gas/LNG ▲

- **Asian Spot LNG:**
 - + Higher demand as the region enters winter
 - Record high inventory levels pressured demand growth
- **Henry Hub:**
 - Reduction in economic activities result in lower prices

2H2020 Petrochemical Outlook

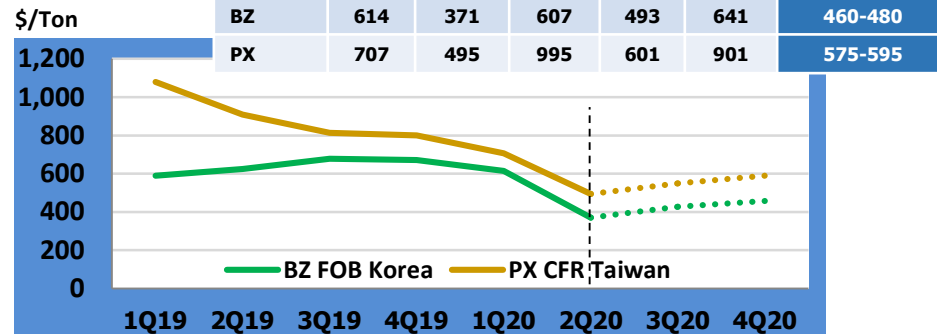
Olefins



▲ Olefins

- + **Downstream demand recover** after the easing of the COVID-19 restriction amid concern on the 2nd wave of COVID-19.
- + **High demand from single-use** applications, such as food packaging and medical products, will continue throughout this year.
- **New supply from Malaysia and China in 2H20**

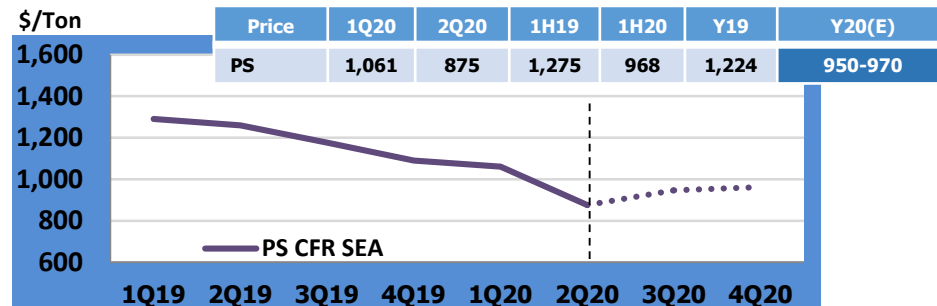
Aromatics



▼ Aromatics

- **PX downstream demand expect to be stable-to-soft**, especially in textile and clothing industries, due to slow growth of global macroeconomics.
- **Incoming Chinese PX supply** to startup at the end of this year
- **Benzene downstream demand**, especially automotive and appliance, gradually recover after the easing of the COVID-19 restriction but **expect to slow toward the end of year**

Polystyrene



↔ Polystyrene (PS)

- + **Two major PS producers in Asia discontinued production** due to bearish long-term outlook.
- + **Healthy PS demand for food packaging and medical application** as ongoing COVID-19 pandemic.
- Demand from **appliance, automotive and construction** are not expected to show significant recovery in 2020 as global economic slowdown.



Guidance 2020



Gas Business

- **Pooled gas price**  
2H20  15-20% Soften avg. pooled gas price VS. 1H20



- **Sales Volume**
2020  6-11% compared to 2019



- **GSP : U-rate**

3Q20 : U-rate ~ 87-91%
4Q20 : U-rate ~ 90-94%

- **GSP : Planned Shutdown**

3Q20: GSP#1 planned TA (46 days)
4Q20: GSP#5 TD 50% (43 days)
3Q20 & 4Q20 GSP#6 TD 10% change equipment (69 days)

PTT Group's Maintenance Schedule



3Q20: Planned TA (LDPE, LLDPE II, Aro II, PS)




3Q20: Planned Major TA (LAB)



Upcoming Projects in 2020



- **On-scheduled projects**

 3Q20: ABS expansion (+6,000 MTA)
 3Q20: NNEG Expansion Project (+60 MW)
 4Q20: COD of MTP Retrofit (750 KTA)
& PO/Polyols (330 KTA)

PTT Group Resilience



2020 OPEX Cut Target
~THB 21,000 mn

PTT Group GRM

3Q20 : 0.6-1.0 \$/bbl

4Q20 : 2.5-2.9 \$/bbl



- **Strong Cash Position**



PTT Group Strategic Move for Growth

Reimagination :

Initiate business action both existing businesses and new growth for the next normal

REIMAGINE **upstream**

“Strategic move in LNG Business aiming to be LNG Portfolio Player”

- Expand LNG Business overseas
- Globally Investment in upstream related businesses



REINFORCE **downstream**

“Enhance more synergy for group value to create sustainable long-term competitiveness”

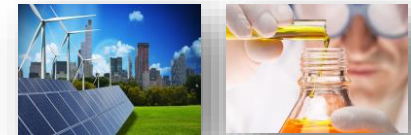
- Strengthen collaboration and trust to maximize value along value chain
- Reduce redundant investment



REIGNITE **new business** at SCALE

“Drive strategic enablers to speed up execution”

- Invest in renewables-related businesses, e.g. Storage/Grid network, EV, Smart energy platform
- Explore & Expand into New Business (Life Sciences, Advanced Materials, Mobility & Life Style, Logistics)



Focus on

Productivity Improvement & Operational Efficiency

Thank you



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PTT Group's Strategic Framework

POWERING THAILAND'S TRANSFORMATION

By **P**ARTNERSHIP & PLATFORM **T**ECHNOLOGY FOR ALL **T**RANSparency & SUSTAINABILITY

CORE STRENGTHENING

FOUNDATION FOR GROWTH



Resilience

Ensure resiliency

- Spend Smarter /Secure liquidity
- Optimize group value chain
- Ensure business continuity
- Safeguard customers & employees



Restart

Enhance competitiveness

- Synergize operation
- Maintain financial strength
- Build efficient & agile workforce
- Engage and retain customers



Reimagination

Initiate business action for the next normal

- Reimagine Upstream
- Reinforce Downstream
- Reignite new business at scale



Reform

Reform to enhance readiness

- Transform organization & structure for regulatory and environment shift

Group Synergy - People - Finance - Communication

Mindset: Outside in + Inside out

Values: **S P I R I T**

Sustainability Framework is incorporated in PTT Strategic Direction

 **E** **ENVIRONMENT**
Sustainable Production and Consumption

 **G** **GOVERNANCE & ECONOMICS**
Good Governance and Performance Excellence



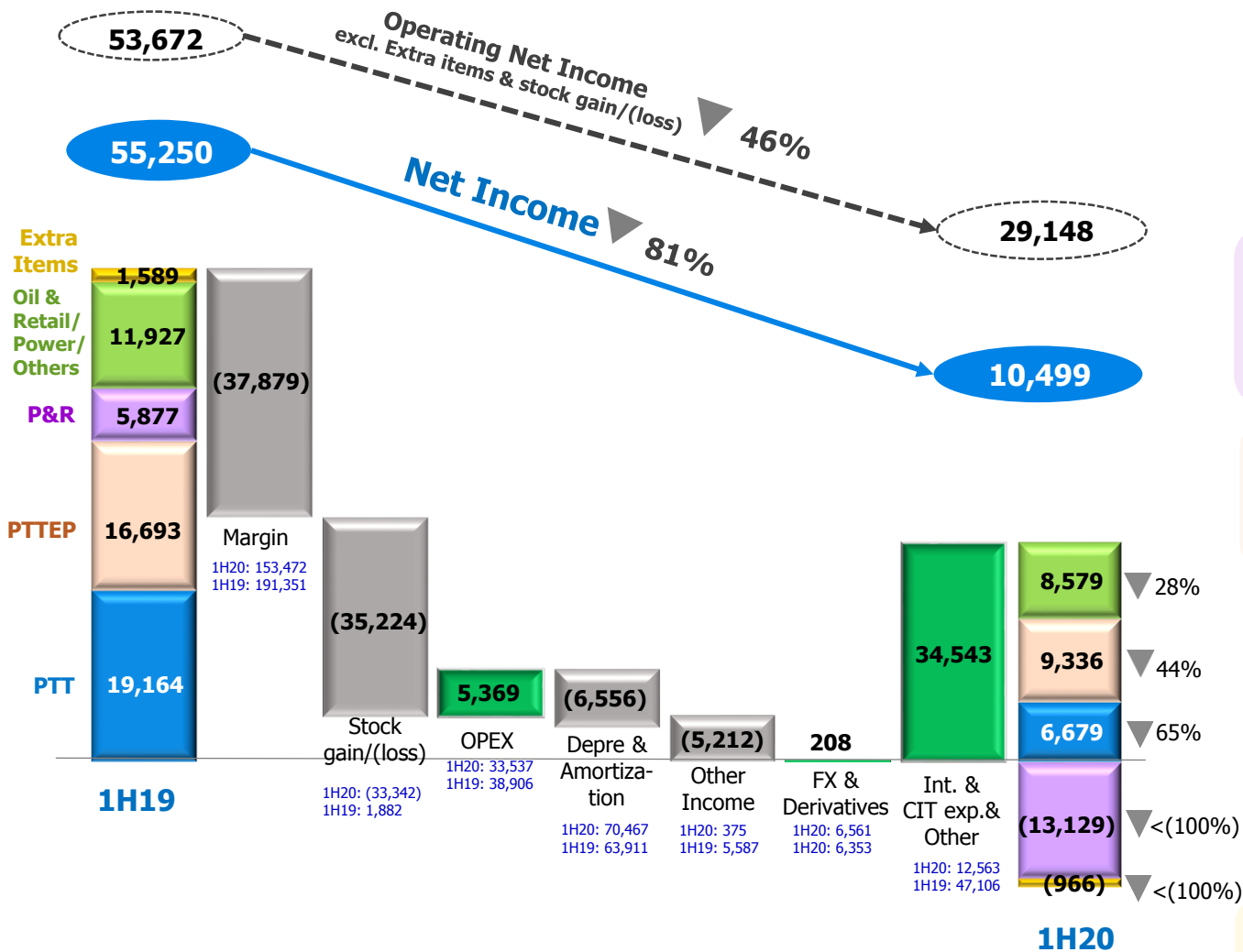
Sustainability Value
"Sustainable Growth for All"

 **S** **SOCIAL**
People Well-being

1H20 vs 1H19 PTT Consolidated Performance (HoH):

Soften performance caused by COVID-19 pandemic & Oil price war

MMTHB



Oil & retail/ Power/ Others ▼

Others ▼

- PTT NGD: lower selling prices ref. FO
- Coal: lower vol. and prices from weak global demand
- + PTTLNG: stable rev. and gain on derivatives

Oil & Retail ▼

- Higher stock loss following crude oil prices
- Vol. decreased esp. Jet from COVID-19's lockdown
- Margin slightly declined mainly from Diesel and Gasoline

Power ▲

- + Increasing vol. from full recognition of GLOW in 1H20

Petrochemical & Refining ▼

- Huge stock loss in 1H20 as crude price sharply dropped in 1Q20
- Lower GRM from reduced all products' spread
- Olefins: lower vol. as GC's major T/A & olefin spreads dropped
- Aromatics: PX spreads dropped; despite higher vol.

PTTEP ▼

- Lower ASP following crude oil prices decreased
- + Higher vol. from Malaysia Project & Partex acquisition; despite lower demand due to COVID-19 impact

Gas ▼

- GSP: declined petchem prices & vol. from GSP S/D
- S&M: declined selling price of industrial customers due to lower FO price linked & softer power demand
- + Lower loss on NGV's business due to lower vol. & price uplift

Trading ▲

- + Capture arbitrage opportunity in a favorable market environment
- Lower vol. from global demand

Extra Items ▼

- 1H20** : PTTEP's impairment loss 47 MMUSD (Marina oil sand)
- 1H19** : - PTT Group: Additional Employee Compensation + IRPC: Claim from UHV project

Statements of Cash Flows (PTT Only) : 1H2020

Operating	16,681
Net Income	28,030
Non-Cash Adjustment	(5,594)
Income Tax	(3,642)
Changes in assets & liabilities	(2,113)

Investing	13,946
Dividend/Interest Received	20,241
Others	11,156
Investment (Sub. & Affiliates & others)	1,493
Current investment	(9,632)
CAPEX (PP&E, Intangible asset)	(9,312)

Free Cash flow
30,627



Financing	(35,812)
Dividend Paid	(31,416)
Finance cost paid	(2,716)
Loan/Bond repayment	(1,725)
Others	45

Adjustment
(544)

Beginning Cash and Cash Equivalents
46,481
15,002
61,483



Cash In/(Out)
(5,729)
6,451
722



Ending Cash & Cash Equivalents	40,752
Current inv.	21,453
Ending cash incl. S/T investment	62,205

Cash & cash eqi
Current inv.

PTT Group Performance : 2Q2020 (QoQ)



Unit : MMTHB

	Performance 100%					% PTT holding	Equity Method % PTT				
	2019	1Q20	2Q20	QoQ	YoY		2019	1Q20	2Q20	QoQ	YoY
PTT Net operating Income	10,748	1,716	4,963	>100%	(54%)		10,748	1,716	4,963	>100%	(54%)
E&P - PTTEP	13,684	8,613	4,322	(50%)	(68%)	64.88%	8,934	5,569	2,801	(50%)	(69%)
Petrochemical	2,269	(8,712)	1,728	>100%	(24%)		1,173	(4,015)	837	>100%	(29%)
- PTTGC	2,202	(8,784)	1,671	>100%	(24%)	47.92%	1,106	(4,088)	780	>100%	(29%)
- Other	67	72	57	(21%)	(15%)		67	73	57	(22%)	(15%)
Refining	1,074	(22,659)	2,069	>100%	93%		753	(10,471)	520	>100%	(31%)
- TOP	567	(13,754)	2,480	>100%	>100%	47.12%	540	(6,255)	690	>100%	28%
- IRPC	507	(8,905)	(411)	95%	<(100%)	47.55%	213	(4,216)	(170)	96%	<(100%)
Others Business	6,009	5,559	6,096	10%	1%		4,643	6,049	2,944	(51%)	(37%)
Inter - PTTER/PTTGM	303	(2,007)	1,218	>100%	>100%	100%	308	154	82	(47%)	(73%)
Gas - PTTLNG/PTTNGD/PTTGL/TTM(T)/TTM(M)	2,094	2,353	1,465	(38%)	(30%)		1,862	2,386	1,337	(44%)	(28%)
Utilities - GPSC/TP/DCAP/PTTME/PTTES/PTTDIGITAL/ENCO	1,526	2,234	2,568	15%	68%		382	564	641	14%	68%
Oil & Oth. - PTTT/PTTOR/THAPPLINE/Others^{1/}	2,086	2,979	845	(72%)	(59%)		2,091	2,945	884	(70%)	(58%)
Shared of Net Income from Affiliates	23,036	(17,199)	14,215	>100%	(38%)		15,503	(2,868)	7,102	>100%	(54%)
Tax adjustment for gain on disposal of investment and asset	(313)	(402)	(12)	97%	96%		(313)	(402)	(12)	97%	96%
PTT Conso. Net Income	33,471	(15,885)	19,166	>100%	(43%)		25,938	(1,554)	12,053	>100%	(54%)

1/ Including BSA, PTT TCC, and RTC

PTT Group Performance : 1H20 vs 1H19 (HoH)

Unit : MMTHB	Performance 100%			% PTT holding	Equity Method % PTT		
	<u>1H19</u>	<u>1H20</u>	<u>HoH</u>		<u>1H19</u>	<u>1H20</u>	<u>HoH</u>
PTT Net operating Income	19,164	6,679	(65%)		19,164	6,679	(65%)
<u>E&P</u> - PTTEP	26,163	12,935	(51%)	64.88%	17,081	8,370	(51%)
<u>Petrochemical</u>	8,782	(6,984)	<(100%)		4,177	(3,178)	<(100%)
- PTTGC	8,645	(7,113)	<(100%)	47.92%	4,040	(3,308)	<(100%)
- Other	137	129	(6%)		137	130	(5%)
<u>Refining</u>	5,635	(20,590)	<(100%)		2,592	(9,951)	<(100%)
- TOP	4,975	(11,274)	<(100%)	47.12%	2,289	(5,565)	<(100%)
- IRPC	660	(9,316)	<(100%)	47.55%	303	(4,386)	<(100%)
<u>Others Business</u>	15,365	11,655	(24%)		12,549	8,993	(28%)
<u>Inter</u> - PTTER/PTTGM	1,553	(789)	<(100%)	100%	1,563	236	(85%)
<u>Gas</u> - PTTLNG/PTTNGD/PTTGL/TTM(T)/TTM(M)	4,305	3,818	(11%)		3,755	3,723	(1%)
<u>Utilities</u> - GPSC/TP/DCAP/PTTME/PTTES/PTTDIGITAL/ENCO	3,050	4,802	57%		769	1,205	57%
<u>Oil & Oth.</u> - PTTT/PTTOR/THAPPLINE/Others^{1/}	6,457	3,824	(41%)		6,462	3,829	(41%)
Shared of Net Income from Affiliates	55,945	(2,984)	<(100%)		36,399	4,234	(88%)
Tax adjustment for gain on disposal of investment and asset	(313)	390	>100%		(313)	(414)	32%
PTT Conso. Net Income	74,796	4,085	(95%)		55,250	10,499	(81%)

1/ Including BSA, PTT TCC, and RTC

PTT Group Accounting Structure

Data as of 30 Jun 2020

E&P and Gas Business Group			Oil Business Group			Petrochemicals & Refining Business Group		
Subsidiaries PTT Exploration & Production Plc. PTTEP 64.79% PTT Natural Gas Distribution Co., Ltd. PTTNGD 58.00% PTT LNG Co., Ltd. PTTLNG 100.00% PTT Global LNG Co., Ltd. PTTGL 50.00% Joint Ventures Trans Thai-Malaysia (Thailand) Co., Ltd. TTM (T) 50.00% Trans Thai-Malaysia (Malaysia) Sdn. Bhd. TTM (M) 50.00% Map Ta Phut Air Products Company Limited MAP 49.00%			Subsidiaries PTT Oil & Retail Business Co., Ltd. OR 100.00% Others PetroAsia (Maoming) Co., Ltd. PA(Maoming) 20.00% PetroAsia (Sanshui) Co., Ltd. PA(Sanshui) 25.00%			Petrochemical Subsidiaries PTT Global Chemical Plc.* GC 47.92% PTT Tank Terminal Co., Ltd. PTTTANK 100.00% Refining Subsidiaries Thai Oil Plc.* TOP 47.03% IRPC Plc.* IRPC 47.55%		
						International Trading Business Group		
						Subsidiaries PTT International Trading Pte. PTTT 100.00% PTT International Trading London Ltd PTTT LDN 100.00% PTT International Trading USA Inc. PTTT USA 100.00%		
Technology and Engineering Business Group			International Investment					
Subsidiaries Global Power Synergy Co., Ltd* GPSC 22.81% Thai Oil Power Co., Ltd.* TP 26.00% PTT Digital Solutions Co., Ltd.* PTT DIGITAL 20.00% PTT Energy Solutions Co., Ltd.* PTES 40.00% Energy Complex Co., Ltd. EnCo 50.00% Joint Ventures District Cooling System and Power Plant DCAP 35.00% Others Baania (Thailand) Company Ltd. Baania 2.89% HG Robotics Plc. HG Robotics 9.49% Innospace (Thailand) Innospace 19.42%			Subsidiaries PTT Energy Resources Co., Ltd. PTTER 100.00% PTT Green Energy Pte. Ltd. PTTGE 100.00% PTT Global Management Co., Ltd. PTTGM 100.00%			Others		
						Subsidiaries Business Service Alliance Co., Ltd.* BSA 25.00% PTT Regional Treasury Center Pte. Ltd. PTTRTC 100.00% PTT Treasury Center Co. Ltd. PTT TCC 100.00% Others Sarn Palung Social Enterprise Company Ltd. SPSE 20.00% Dhipaya Insurance Plc. TIP 13.33%		

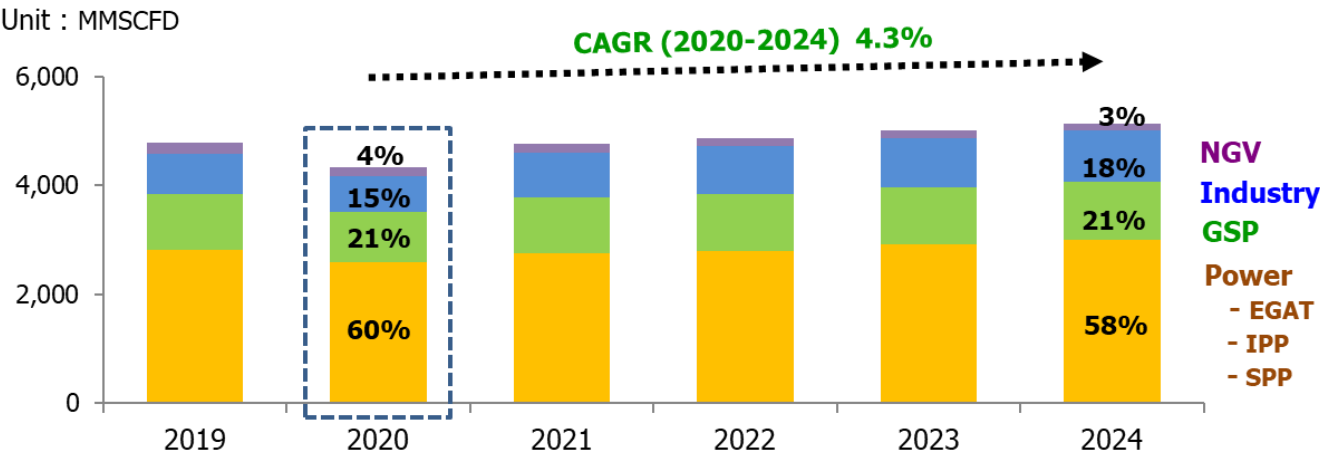
Remark : * Subsidiaries that PTT holds less than 50% but being consolidated because PTT has the power to control the financial and operating policies.

Gas Business Roadmap

Short term Gas Demand growth be maintained



Thailand Gas Demand Outlook (Short Term – 5 year plan)



New Supply
Additional capacity (mmscfd)

Bongkot Erawan Mozambique
700 800

Major Project : COD

5th pipeline
RA#6 Pipeline

Cum. Pipeline Length (Km)

4,702

LNG new project
Cum. Capacity (MTA)

LNG Terminal 2
19.0

Newly Thailand Power Development Plan

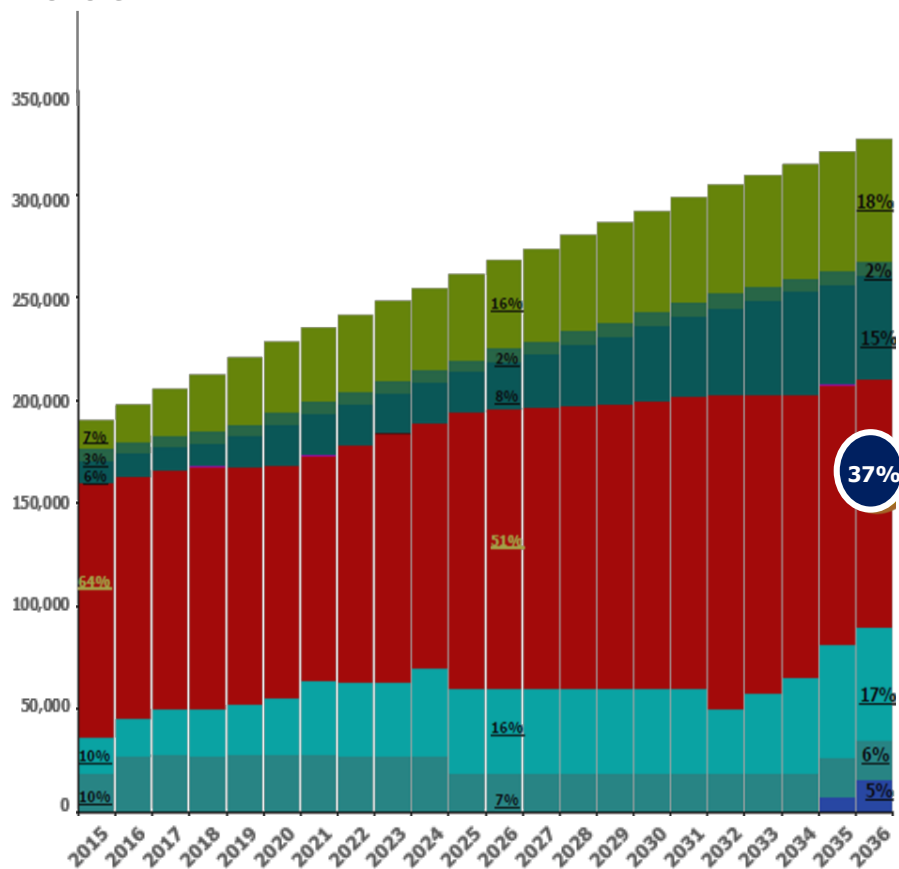
Stronger demand of NG for power plants



PDP 2015*

Natural Gas growth upon
Government fuel diversification policy
for power generation

Unit: GWh

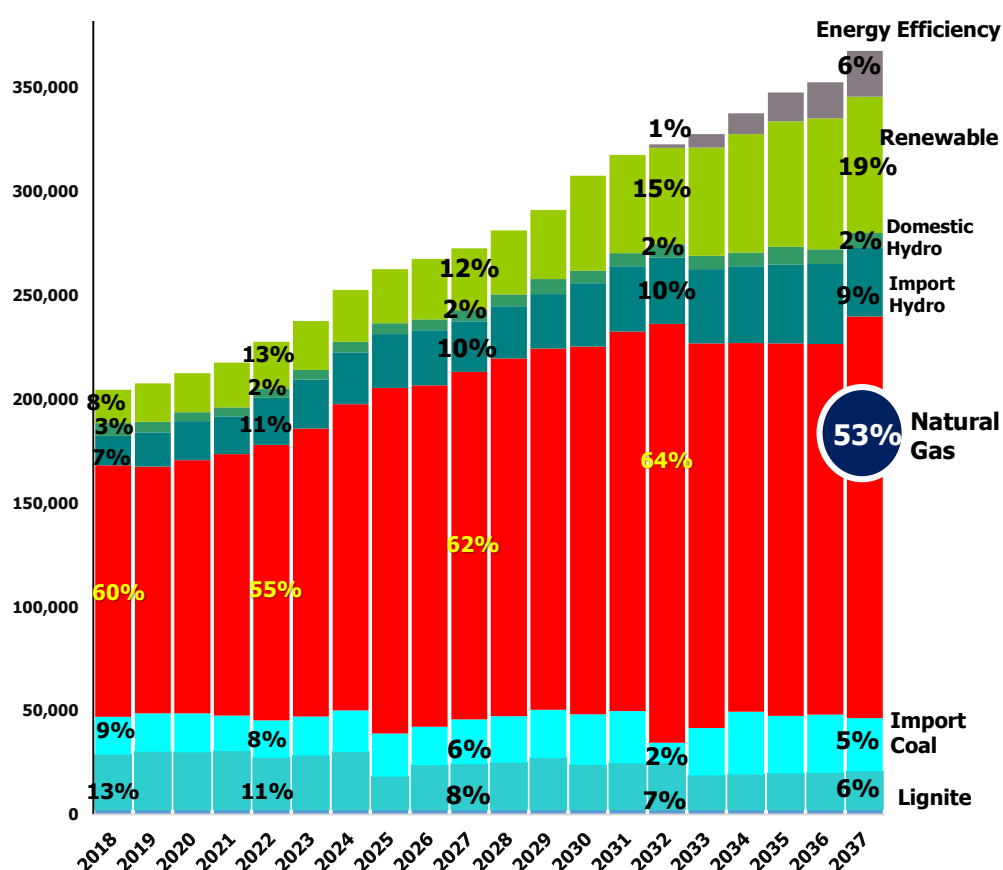


*Source: Ministry of Energy

PDP 2018 Rev.1

Natural Gas
be the most important source of energy
with highest portion among other fuels

Unit: GWh



** Source : EPPO (Public Hearing presentation)

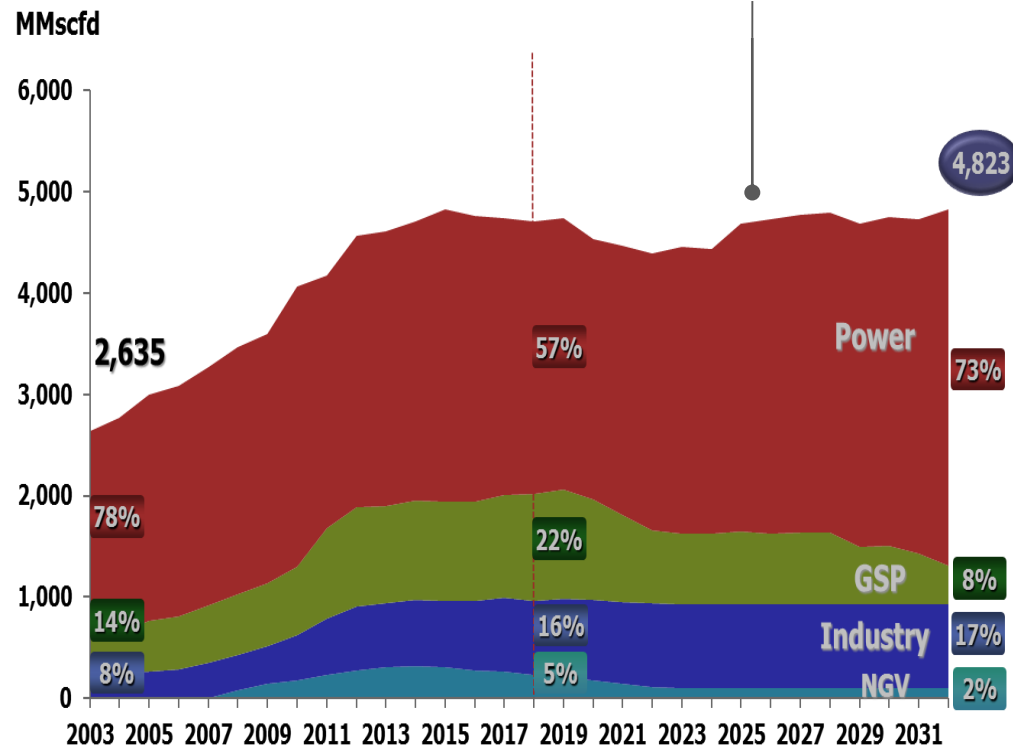
Natural Gas : Growth of natural gas upon Government fuel diversification policy for power generation

Old*

Thailand Gas demand forecast (CAGR during 2018-2032)

: Total	~	0.1%
: Power	~	2%
: GSP	~	-7%
: Industry	~	1%
: NGV	~	-6%

Thailand Gas Demand
Replace :
Coal ๓๕๐๐ (800 MW),
EE 30%

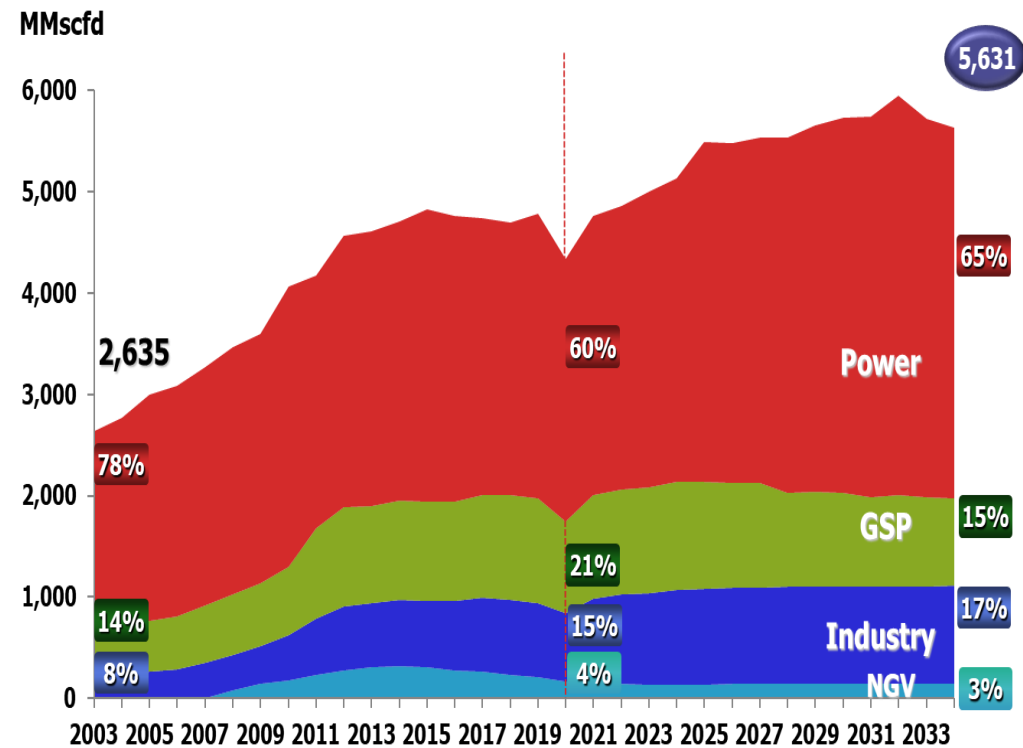


*Source: Ministry of Energy

NEW**

Thailand Gas demand forecast (CAGR during 2020-2034)

: Total	~	2%
: Power	~	2%
: GSP	~	0%
: Industry	~	3%
: NGV	~	-1%

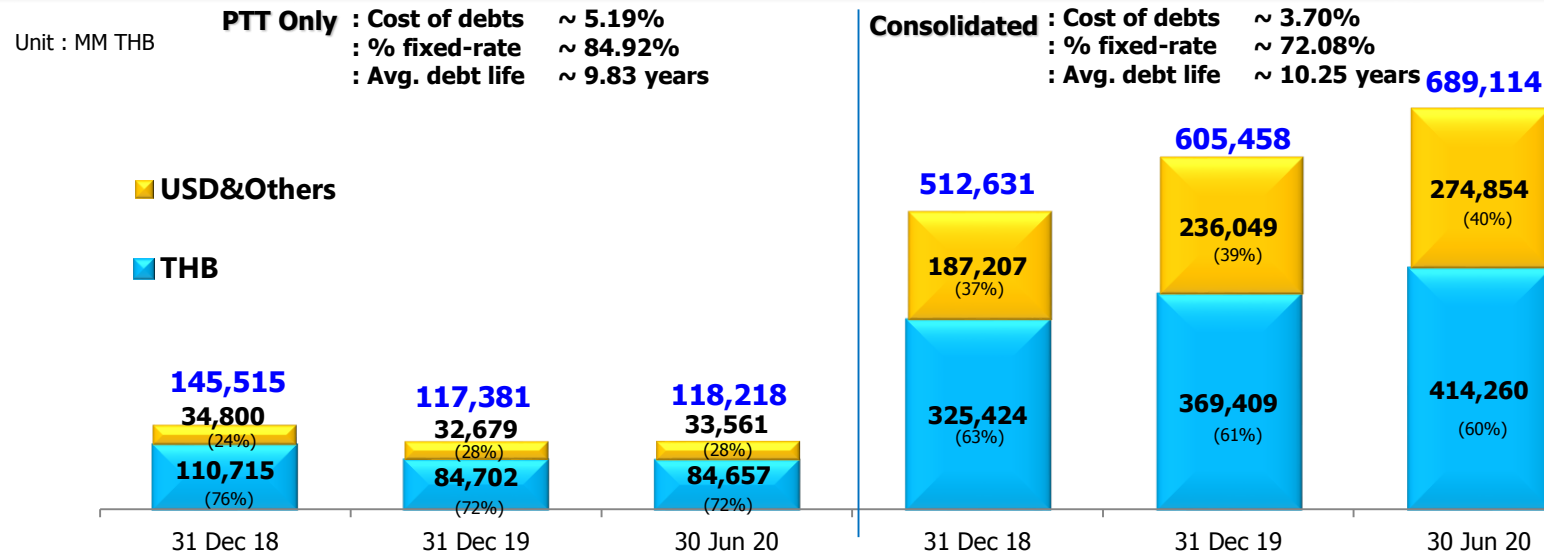


** Source : PTT Business plan 2020 approved by BOD on 16 Jan 2019

Debt Profile : Control Cost & Manage Risk

Managed debt according to financial risk and policy

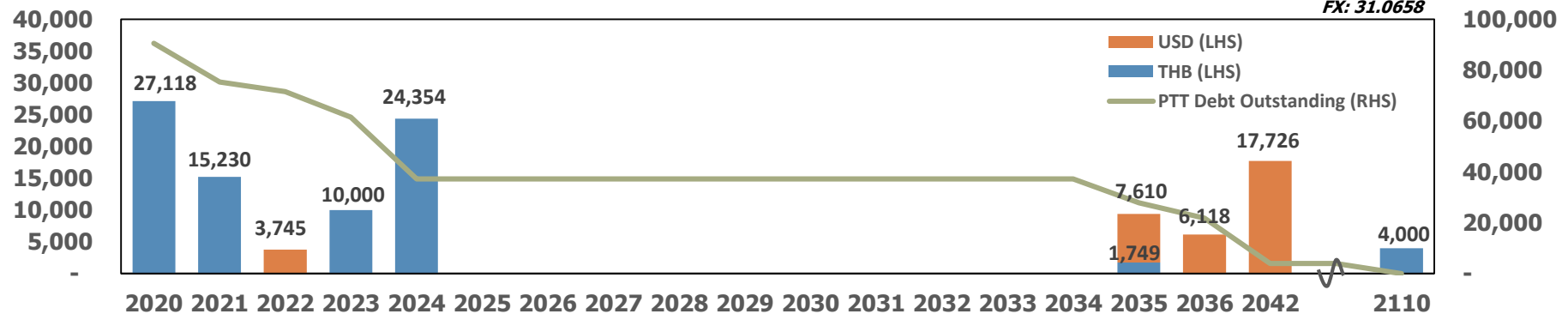
Debt Portfolio



Note : 1. PTT Data as of 30 Jun 20 (THB/USD = 31.0658 THB/JPY = 0.2906) excluding liabilities from finance leases.
 2. Debt Outstanding represents amount and portion before derivative swaps, and reconciled with accounting.
 3. Cost of debts, % fixed rate, and avg. debt life took into account the derivative transactions, including withholding tax (update as of 30 Jun 20).

Debt Outstanding and Repayment Profile

Unit : MM THB



Note: 1. Debt Outstanding for Repayment Profile represents financial data and portion after derivative swaps
 2. Bond repayment in 2022 is THB swaps to USD.

*PTTC10DA (Century Bonds) is due on 2 Dec 2110