



# Analyst Meeting 4Q2020 & YE 2020

23 February 2021





# Key Activities in 4Q2020 & Subsequent Events

## Key Activities in 4Q20

### Acquisition of GRP's shares

Expanding renewable energy internationally focus on solar wind



### New Business

Establishment of Innobic Asia /Innobic LLC

- Pharmaceutical business
- Nutrition business
- Medical device business

### Coal Business



Dissolve 3 coal subsidiaries In 4Q2020

PTT's strategy :  
To divest coal business by 2021

## Subsequent Events



### PTT's Dividend in 2020

- Baht 1.0 per share: 1H20 Bt 0.18 , 2H20 Bt 0.82
- 76% payout ratio
- BOD approval : 18 Feb. 2021
- AGM date : 9 Apr. 2021
- Payment Date : 30 Apr. 2021



**1st TRADING DAY**  
on 11 Feb. 2021

Market Cap.> 200,000 MB  
IPO at Baht 18 per share



## Strong Credit rating

Moody's

S&P Global  
Ratings

FitchRatings

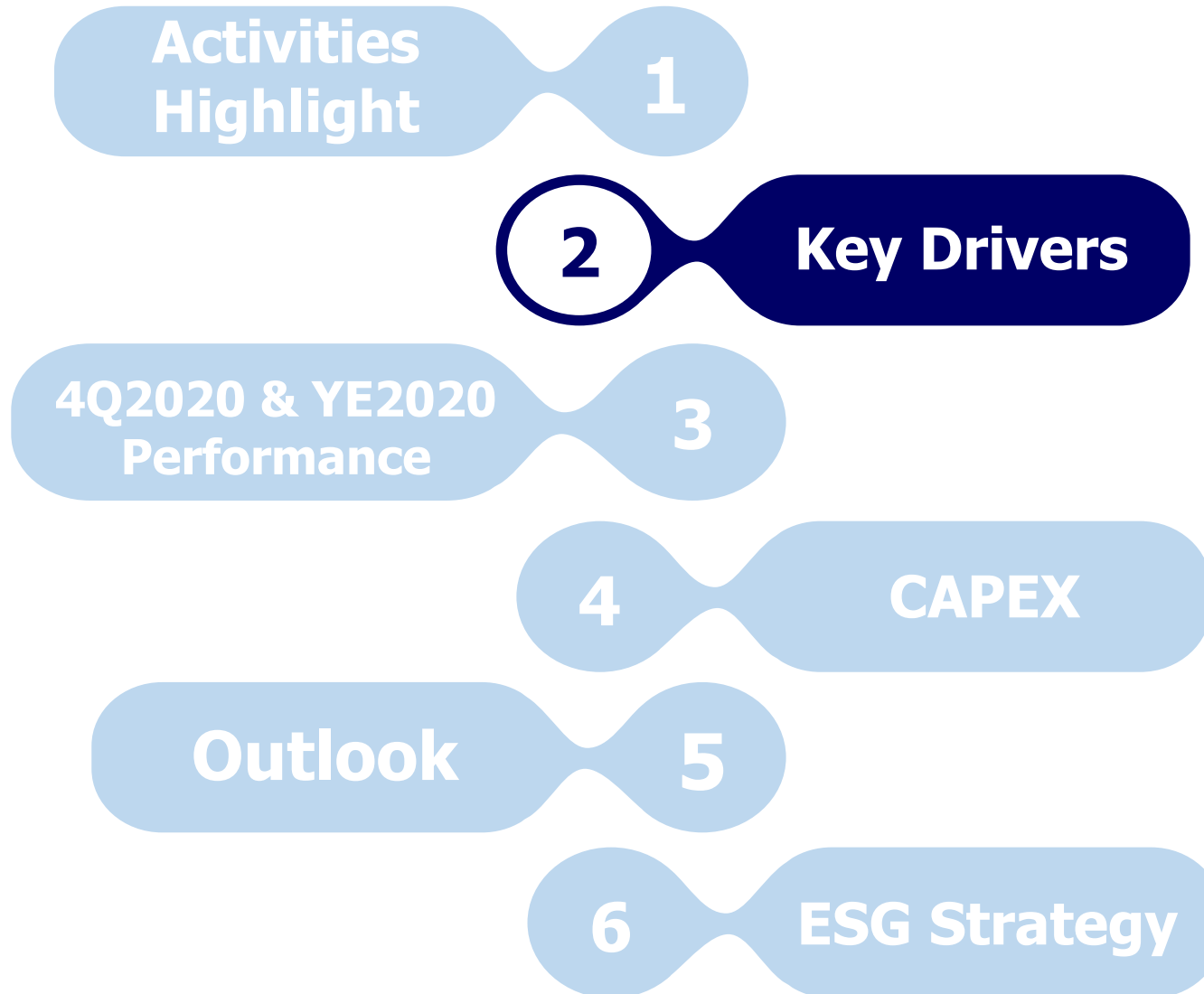
Baa1	BBB+	BBB+
Baa1	BBB+	BBB+
Baa2	BBB+→ BBB	-
Baa2	BBB+→ BBB	-

## Awards



Best Investor Relations  
2nd Consecutive years

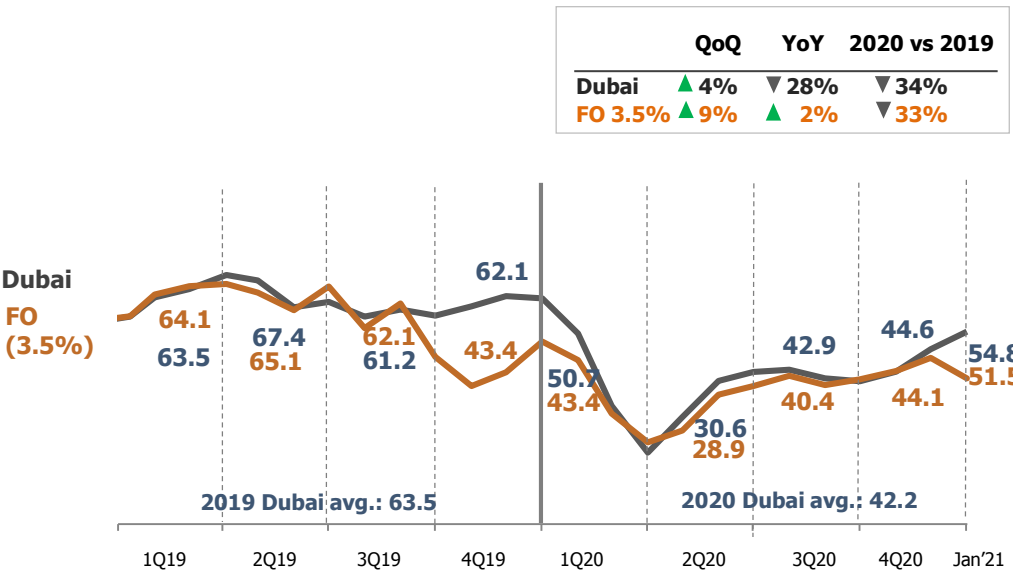




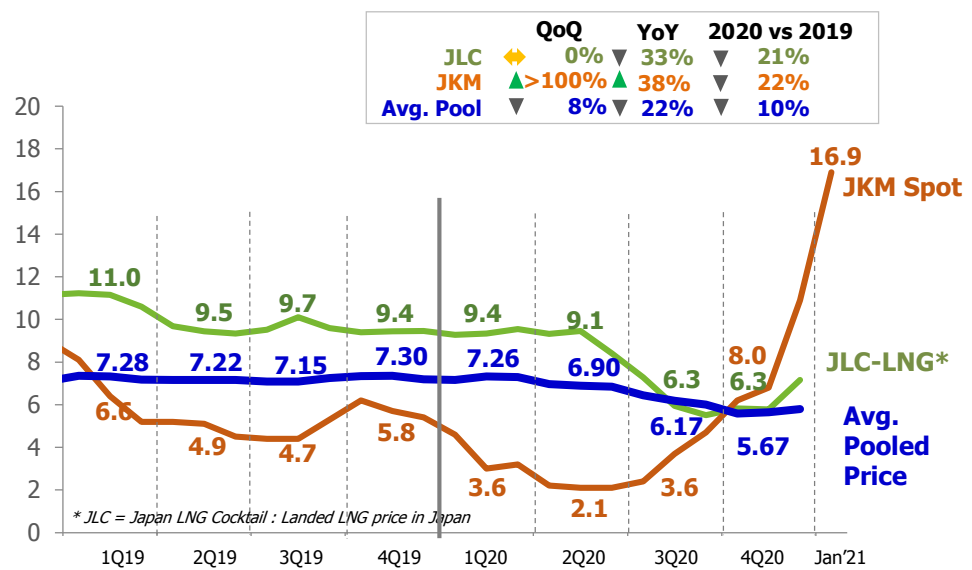
# Key Business Drivers:

QoQ: Increased in petroleum prices & petchem spreads due to demand recovery and limited supply from OPEC+ cut agreement  
 2020 vs 2019: Pressured petroleum and petrochemical prices from impact of COVID-19 and price war

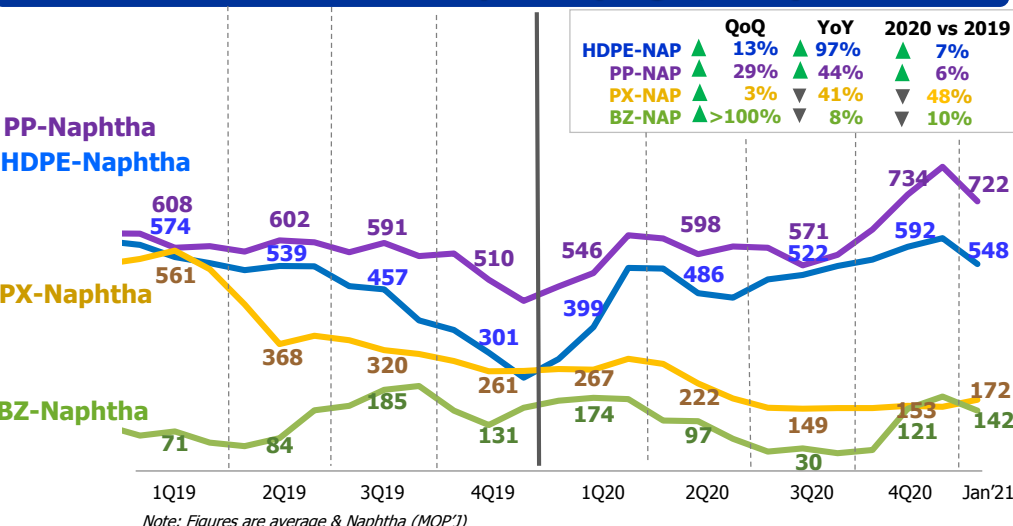
## AVG. Petroleum Prices (\$/bbl)



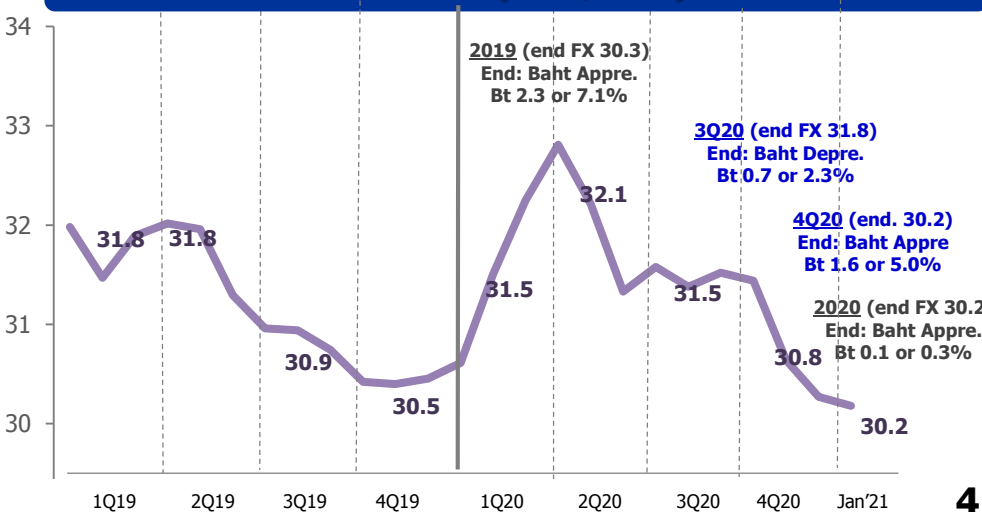
## Avg. NG Prices (\$/MMBTU)



## Petrochemical Spread (Avg. \$/ton)



## AVG. FX (THB/USD)





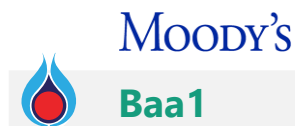
## Ensure Sufficient Liquidity During Volatility

- ❑ Prefund THB&USD Bond Issuance of THB 56 Bn. (THB 35 Bn. and USD 700 MM)
  - Issuance of 50-yrs USD 700 MM with 3.70% coupon rate  
*The 1<sup>st</sup> Asia 50-yrs US dollar corporate bond offering & the longest corporate bond from Asia ex-Japan since 1997*
  - Issuance of Green Bond THB 2,000 MM. (included in THB 35 Bn. Bond)  
*The world's first bond awarded for Forest Conservation Project certification by Climate Bonds Initiative (CBI)*

## Financial Cost Optimization for Competitiveness

- Capture opportunity during low interest rate situation
- Reduce Cost of Fund from 5.19% (as of June 2020) to 4.51% (as of Dec 2020)

## Maintain Financial Strength During Industry Downturn



S&P Global  
Ratings

BBB+

FitchRatings

BBB+

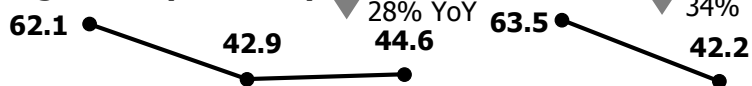


# PTT Consolidated Performance: 4Q20 & 2020

QoQ: Softer performance due to higher impairment, despite improved operating performance

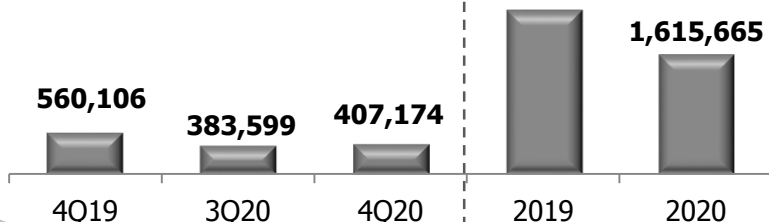
2020 vs 2019: NI pressured mainly from Oil price war & COVID-19 impacts in line with global trend

Avg. Dubai (USD/BBL) ▲ 4% QoQ



## Revenue

▲ 6% QoQ  
▼ 27% YoY



## Revenue ▲ 6% QoQ

+ **Most businesses** due to higher petroleum & petrochemical prices & Vol. from recovery in oil price & economic activities

- **GAS**: Decreased NG prices & vol. from lower electricity demand

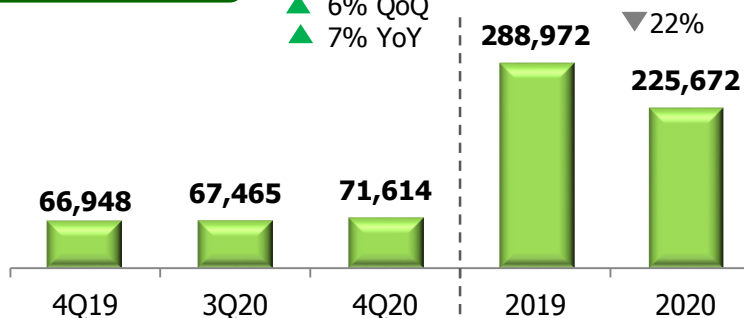
▼ **27% 2020 vs 2019**

- **Most businesses**: Declined from lower selling prices and volumes due to COVID-19 impact and oil price war

+ **Power**: Fully recognition of Glow's performance

## EBITDA

▲ 6% QoQ  
▲ 7% YoY



## EBITDA ▲ 6% QoQ

+ **P&R**: Increased from petrochemical spreads together with higher Mkt GRM, despite lower stock gain

+ **Gas**: Better from GSP's lower feed cost, higher selling prices and higher margin from S&M

- **EP**: Lower avg. selling prices due to declined gas price

- **Oil**: Squeezed margin despite higher vol. and non-oil expansion

▼ **22% 2020 vs 2019**

- **EP**: Softer avg. selling prices despite vol. increased

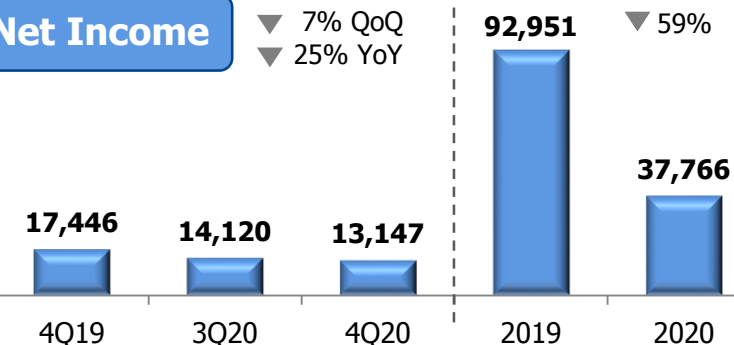
- **P&R**: Huge stock loss, lower GRM, and petchem spreads

- **GAS**: Weaken GSP's selling prices & vol., and S&M's margin

+ **Power**: Increased from GLOW's contribution

## Net Income

▼ 7% QoQ  
▼ 25% YoY



## NI ▼ 7% QoQ

- Higher impairment from coal mining asset & EP's asset

- Higher loss on derivatives from oil price hedging

- Higher tax expenses from better performances

+ FX gain from THB appreciation in 4Q20 while FX loss in 3Q20

▼ **59% 2020 vs 2019**

- Weaken EBITDA

- Impairment of Coal and EP assets

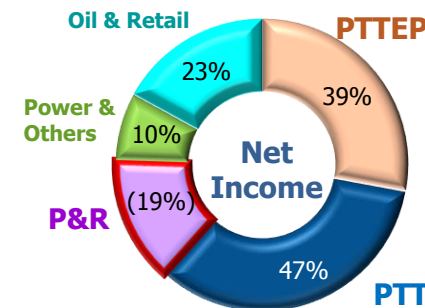
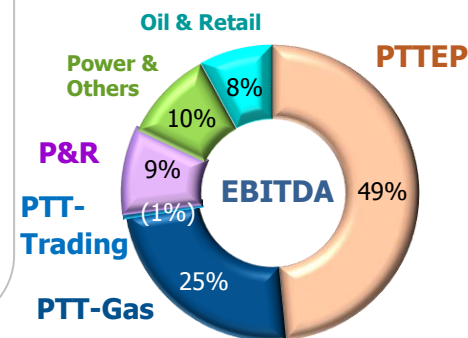
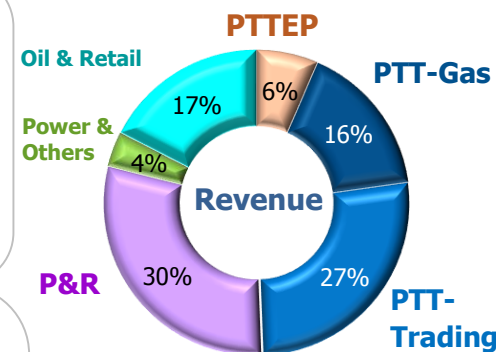
- Higher DD&A from EP and power business from acquisition

- Lower gain on FX despite Higher derivatives gain

+ Lower tax expenses from declined performances

Unit : MMTHB

2020



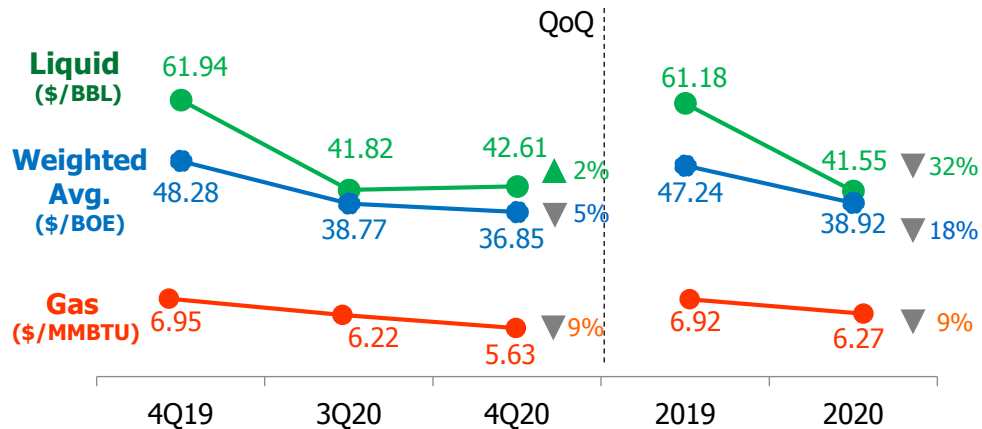


# E&P : Prices & Volume and NI

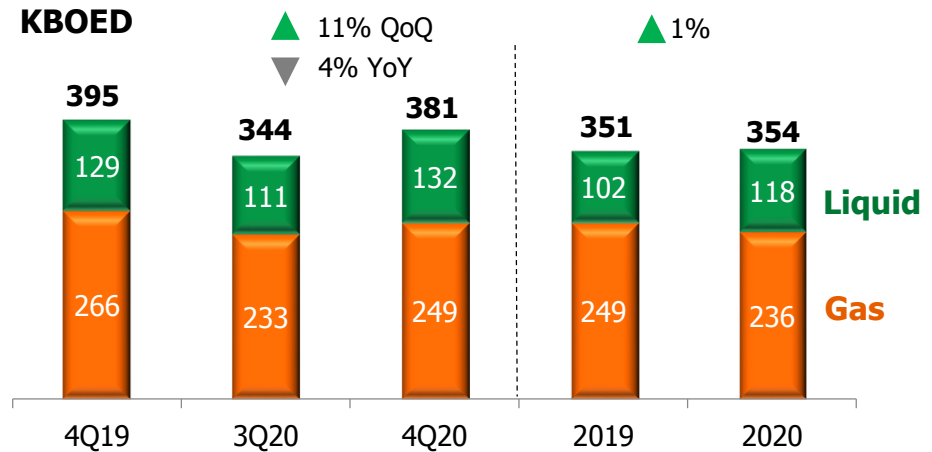
QoQ: Softer performance due to lower selling prices & recognition of impairment

2020 vs 2019: Softer performance from lower selling prices and impairment loss despite increased sales vol.

## Product Prices

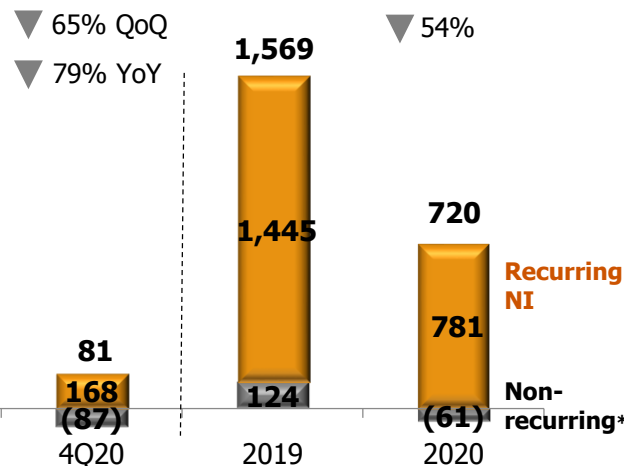


## Sales Volume



## Net Income (100%)

MMUSD



## Key Highlights

### QoQ

- **Avg. Selling Price:** decreased 5% from lower gas prices
- + **Volume:** increased 11% mainly from Contract 4 project, Partex Group and Malaysia Project
- **NI:** declined 65% from lower avg. selling prices, hedging loss on FX and oil prices, higher DD&A and operating expenses, and Yetagun impairment

### 2020 vs 2019

- **Avg. Selling Price:** decreased 18% from lower crude oil prices
- + **Volume:** increased 1% from full year recognition of Malaysia project & Partex group
- **NI** dropped 54% due to lower selling prices, higher DD&A and operating expenses, and impairment loss on Mariana Oil Sands and Yetagun

\* 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	4Q19	3Q20	4Q20	QoQ	YoY	2019	2020	2020 vs 2019
<b>Gas</b>	<b>15,509</b>	<b>13,279</b>	<b>16,202</b>	↑ 22%	↑ 4%	<b>71,407</b>	<b>54,942</b>	↓ 23%
• S&M	3,487	2,044	2,796	↑ 37%	↓ 20%	15,148	8,120	↓ 46%
• TM	8,473	8,727	8,084	↓ 7%	↓ 5%	34,037	34,850	↑ 2%
• GSP	2,581	582	2,969	↑ >100%	↑ 15%	16,017	4,879	↓ 70%
• NGV	(982)	(413)	(159)	↑ 62%	↑ 84%	(4,177)	(1,836)	↑ 56%
• Others <sup>1/</sup>	1,950	2,339	2,512	↑ 7%	↑ 29%	10,382	8,929	↓ 14%
<b>Trading<sup>2/</sup></b>	<b>508</b>	<b>601</b>	<b>265</b>	↓ 56%	↓ 48%	<b>2,130</b>	<b>3,024</b>	↑ 42%
<b>Total</b>	<b>16,017</b>	<b>13,880</b>	<b>16,467</b>	↑ 19%	↑ 3%	<b>73,537</b>	<b>57,966</b>	↓ 21%

<sup>1/</sup> Others include PTTLNG, PTTNGD, and PTTGL

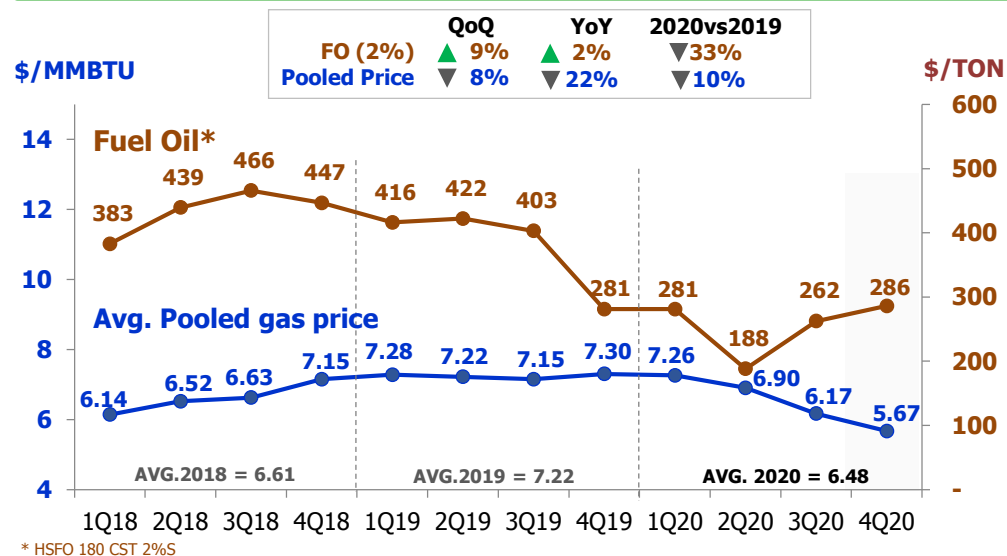
<sup>2/</sup> For MIS and include PTTT, PTTT LDN and PTTT USA

# Gas Business : Prices & Sales Vol.

QoQ : Declined gas cost while NG vol. dropped due to lower electricity consumption

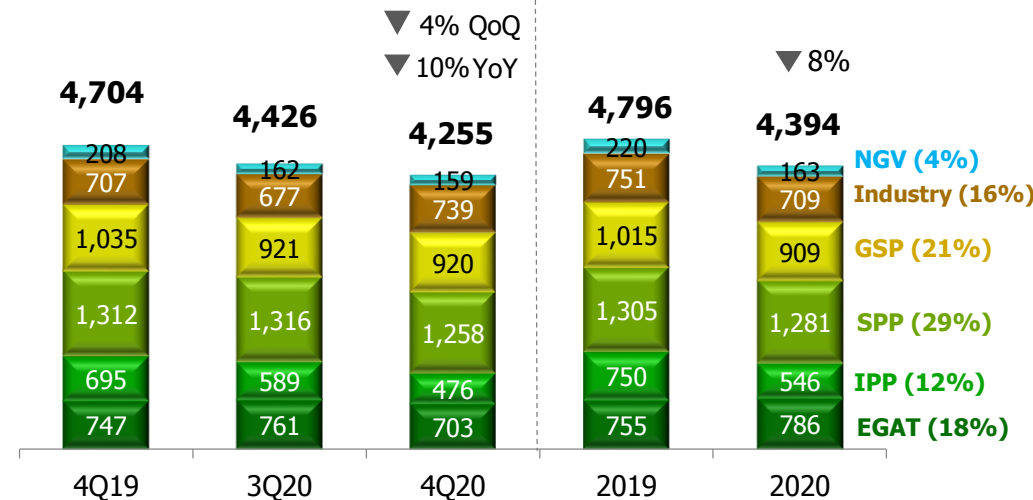
2020 vs 2019 : Decreased in NG vol. from all customers due to COVID-19 impact regardless of lower gas cost

## NG Price VS FO



## NG Customer Breakdown

Unit: MMSCFD



## NGV Price & Sales Volume

NGV Avg. price

Unit: THB/KG

▼ 5% QoQ

▼ 8% YoY

▼ 2%



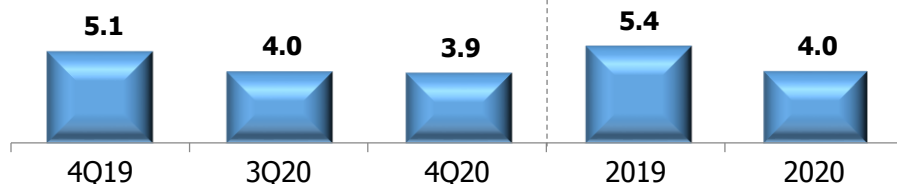
NGV Sales Vol.

Unit: K.Ton/Day

▼ 3% QoQ

▼ 24% YoY

▼ 26%



## Key Highlights

### QoQ

- **NG sales vol.** dropped 4% esp. from power producers due to reduced electricity consumption during lower temperature in 4Q20

+ **NGV: sales vol.** dropped from NGV's user continue switching to diesel and gasoline

+ **Avg. pooled gas price (cost)** dropped 8% from gulf gas & Myanmar gas

### 2020 vs 2019

- **NG sales vol.** softened 8% from all customers due to COVID-19 impact

- Power vol. dropped 7% from low demand and more hydro import

- GSP vol. decreased 10% due to lower petrochemical demand & drought situation (more Shutdown & Turndown)

- **Price:** Industrial selling prices referenced to FO dropped

+ **Avg. pooled gas price (cost)** dropped 10% from all sources

+ **NGV sales vol.** dropped from lockdown policy and switching to alternative fuel

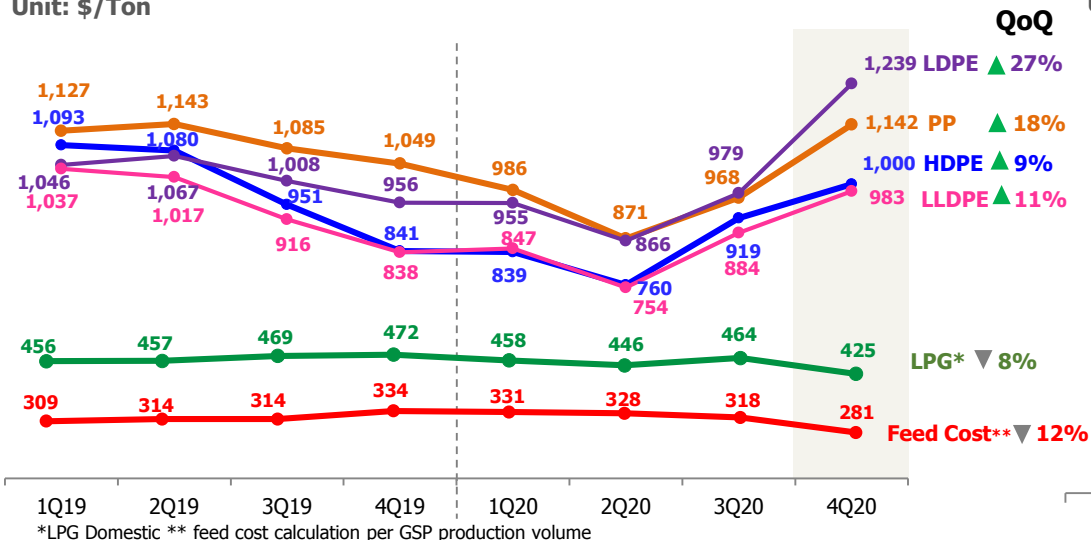
# Gas Business Performance

QoQ : Improved EBITDA from GSP and Industrial customers with lower gas cost

2020 vs 2019 : Lower EBITDA mainly from GSP and S&M while TM & LNG EBITDA sustained

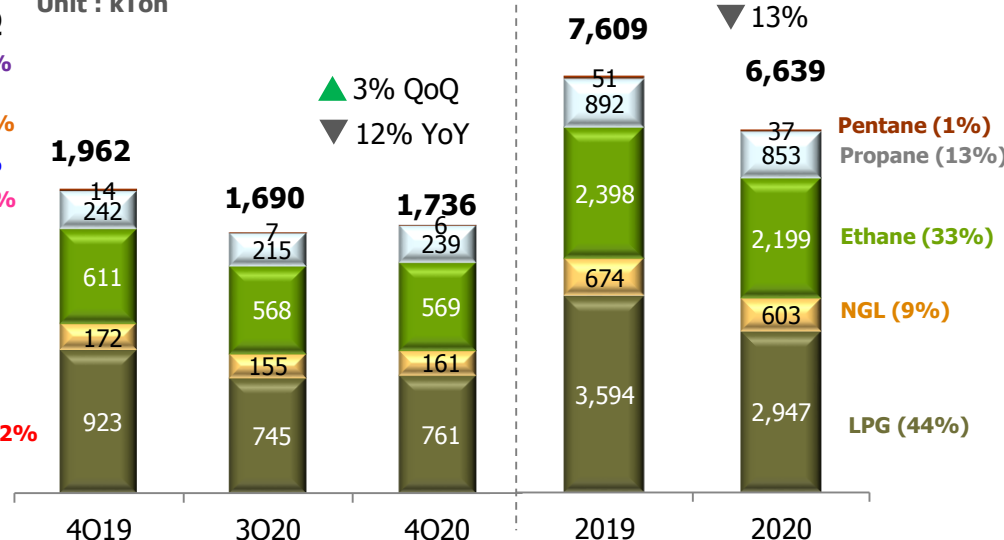
## GSP Feed Cost vs Petchem. Price

Unit: \$/Ton



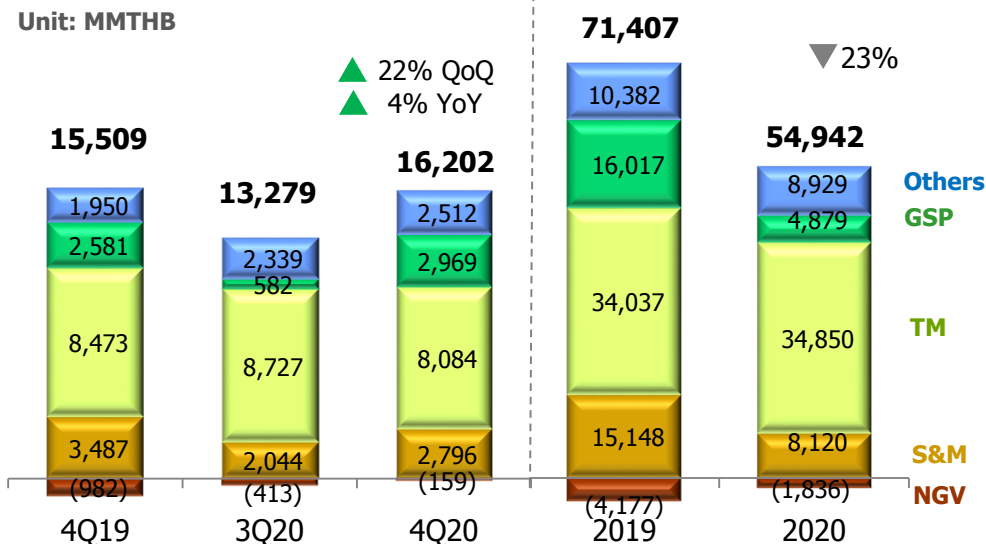
## GSP Sales Volume

Unit : kTon



## Gas - EBITDA

Unit: MMTHB



## Gas EBITDA Highlights

### QoQ

- + **GSP** improved due to lower feed cost and higher avg. selling prices and vol.
- + **S&M** increased due to lower NG cost, plus higher FO referenced industrial selling prices
- + **NGV** lower loss from lower NG cost & decreasing sales volume
- **TM** higher expenses from right to use state properties and maintenances
- **LNG terminal** still contributed stable performances

### 2020 vs 2019

- **GSP** dropped significantly due to
  - Lower average selling prices from the declined referenced petchem prices
  - Lower sales vol. from more planned SD and TD due to COVID-19 impact & drought situation
- **S&M** decreased due to lower gas sales vol. from COVID-19 impact & lower industrial selling prices linked to FO prices
- + **NGV** lower loss from lower sales volume and NG cost
- **TM & LNG Terminal** consistently contributed stable income

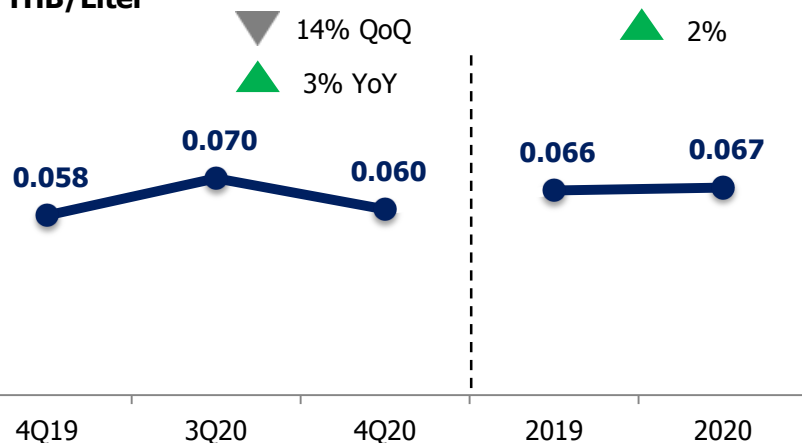
# Trading BU:

QoQ: Soften performance due to lower gross margin with higher SG&A, despite increased vol.

2020 vs 2019: EBITDA improved from capturing arbitrage opportunities and lower SG&A despite reduced vol.

## Gross Margin<sup>1</sup>

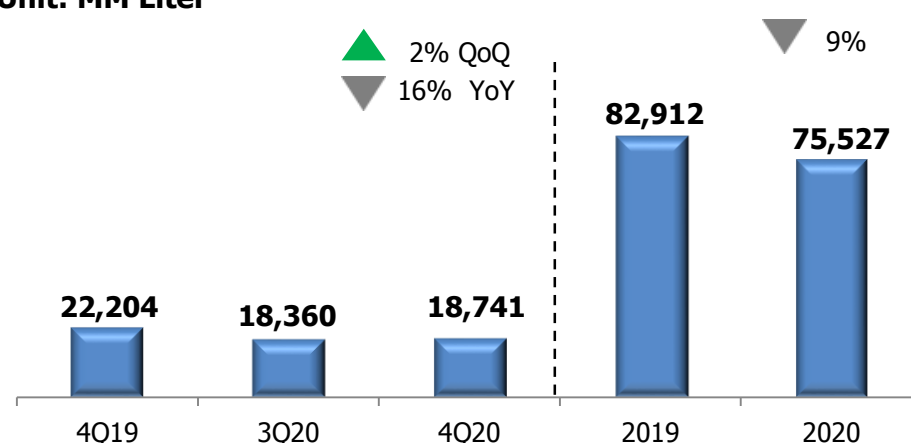
Unit: THB/Liter



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

## Sales Volume<sup>2</sup>

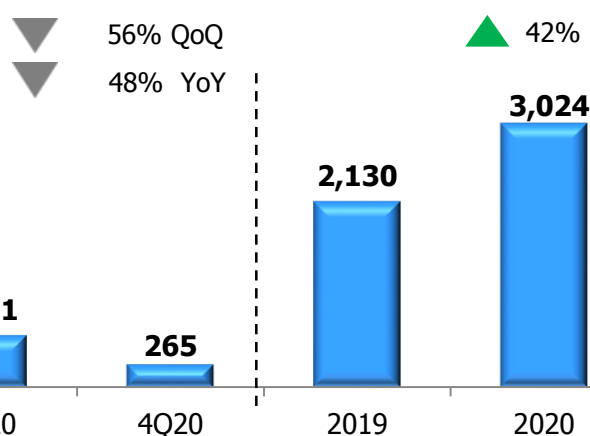
Unit: MM Liter



<sup>2</sup> PTT Trading BU + trading subsidiaries

## Trading – EBITDA<sup>3</sup>

Unit: MMTHB



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

## Key Highlights

### QoQ

- **Margin** decreased due to loss on Mark to market with higher condensate discount.
- + **Volume** increased due to higher condensate (out-in) & refined product (out-out) after easing Covid-19 situation
- **EBITDA** declined according to lower gross margin and higher SG&A

### 2020 vs 2019

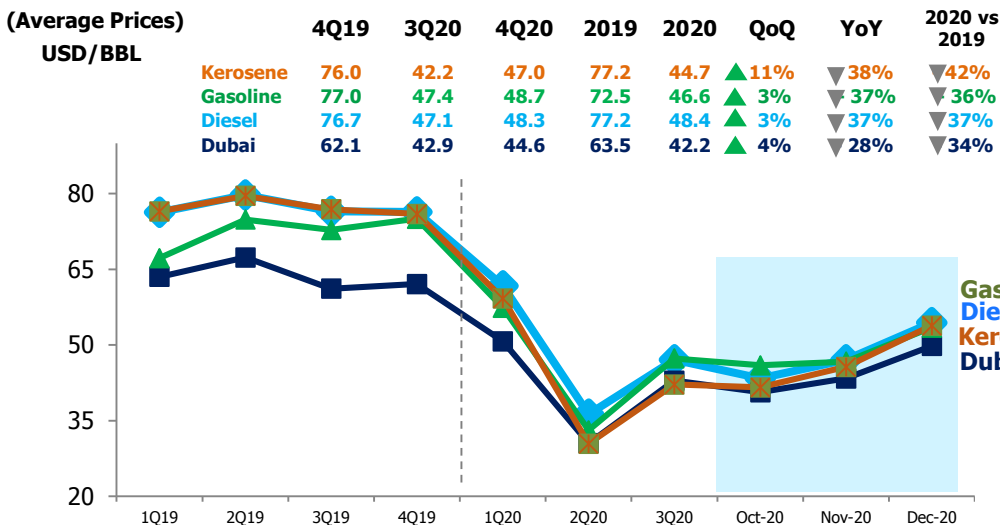
- + **Margin** increased due to lower condensate discount and higher JV profit sharing
- **Volume** decreased due to lower out-in & out-out transactions of crude oil from severe global oil demand impacted by Covid-19
- + **EBITDA** increased from capturing arbitrage opportunities with excellent risk management with lower SG&A

# Oil Business : OR Group

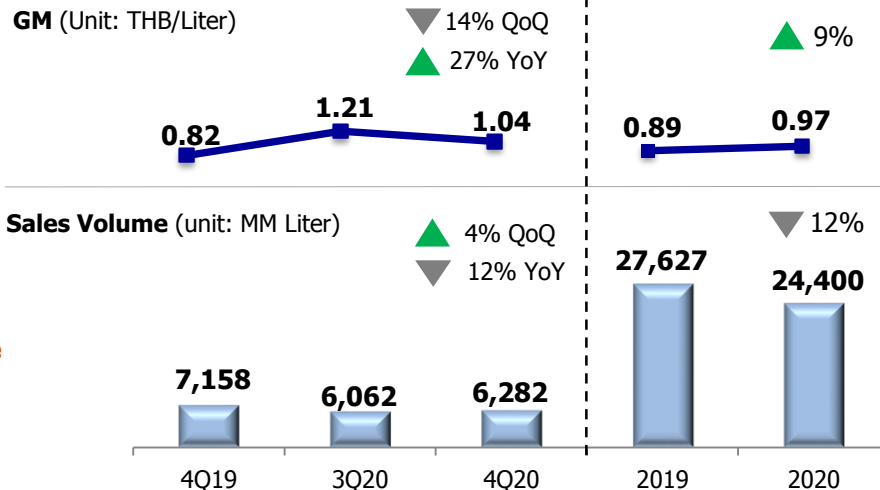


**QoQ: Higher sales volume from government's stimulus measures in traveling boosted up 2020 vs 2019 : Improved EBITDA from higher gross margin and strong non-oil performance**

## Petroleum Prices



## Oil : Gross margin<sup>1</sup>/Sales volume

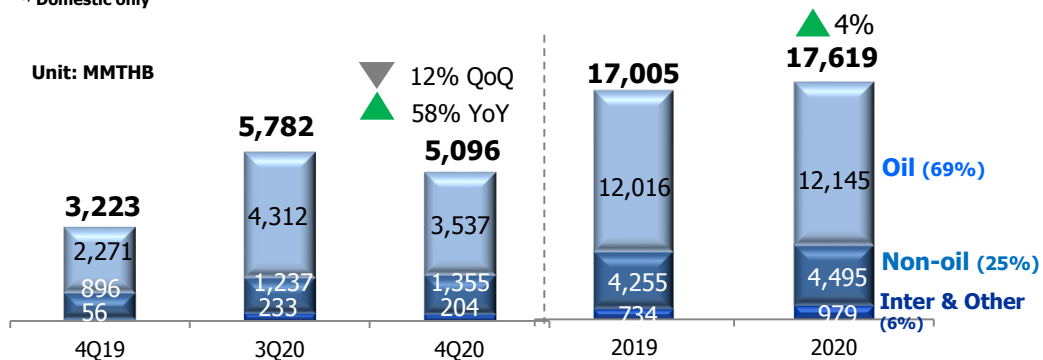


<sup>1</sup>/Included stock gain/loss but excluded non-oil margin

## OR Group – EBITDA

Non-oil	3Q20	4Q19/2019	4Q20/ 2020
Café Amazon : Non-oil <sup>1</sup>	3,188	2,930	3,310
Café Amazon: Inter <sup>2</sup>	252	220	265
C-Stores <sup>3</sup> (7/11 & Jiffy)	1,960	1,880	1,977

<sup>1</sup>/ Thailand, Japan, Oman, Myanmar, Malaysia    <sup>2</sup>/ Philippine, Cambodia, Laos, Singapore, China  
<sup>3</sup>/ Domestic only



## Key Highlights

### QoQ

- + **Volume** increased 4% in diesel, aviation, and LPG deriving from tourism and transportation sectors
- **Margin** dropped 14% from all products mainly from diesel and Jet (selling pricing structure (M-1)); despite higher stock gain in 4Q20
- **EBITDA** decreased 12% due to lower oil business margin, despite improved non-oil EBITDA from Café Amazon's expansion

### 2020 vs 2019

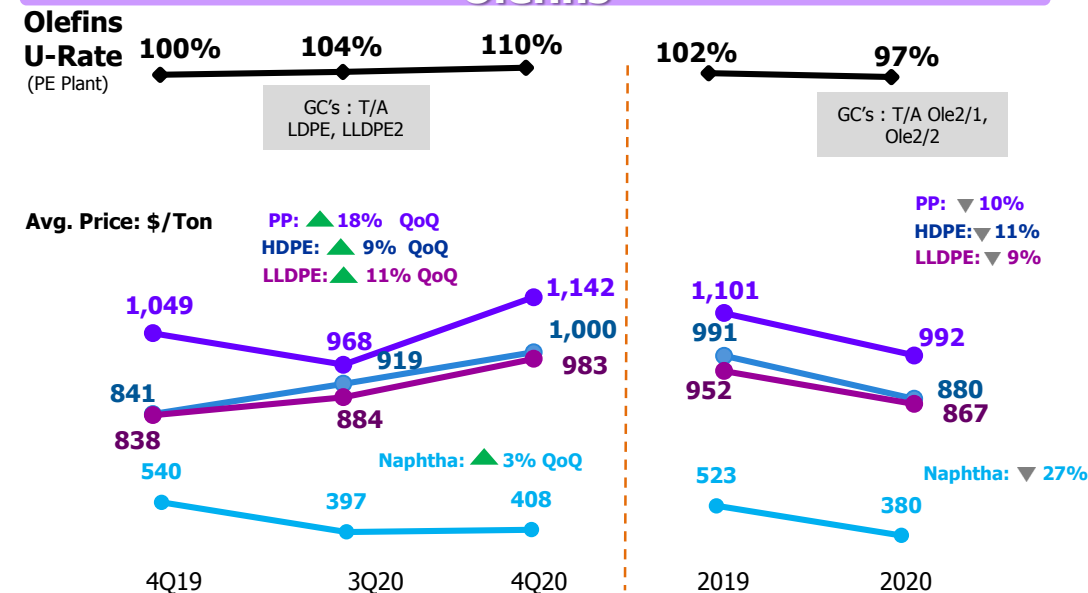
- + **Margin** increased 9% from stock gain in 2020 vs. stock loss in 2019, while lower oil margin in diesel and gasoline
- **Volume** dropped 12% mainly from Jet A-1 due to COVID-19 Pandemic and lockdowns while diesel and gasoline still growing with station expansion
- + **EBITDA** rose 4% due to improved oil margin, non-oil expansion, and lower SG&A



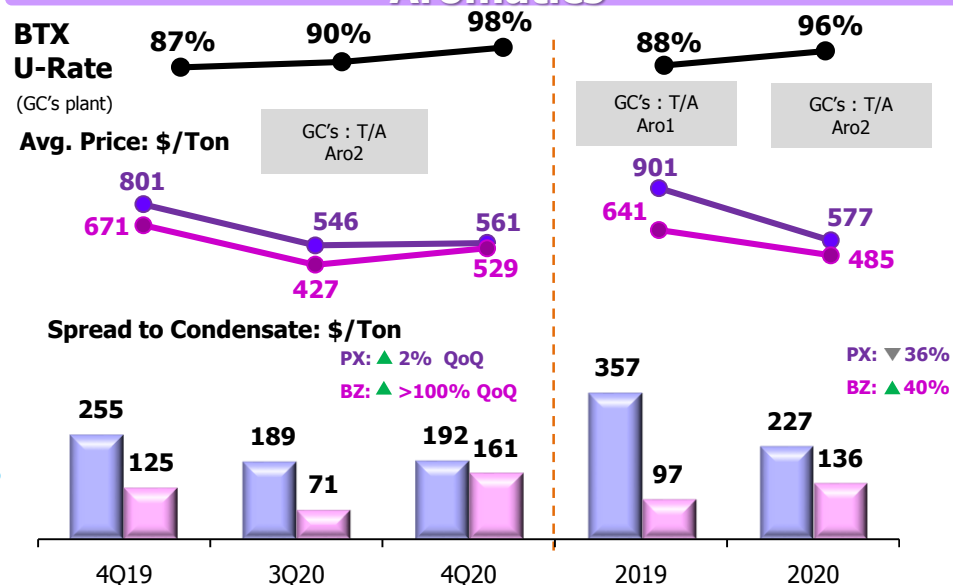
QoQ: NI improved from oil demand recovery and petrochemical prices rebounded

2020 vs 2019: COVID-19 & price war dampened oil prices resulted in stock loss and softer performances

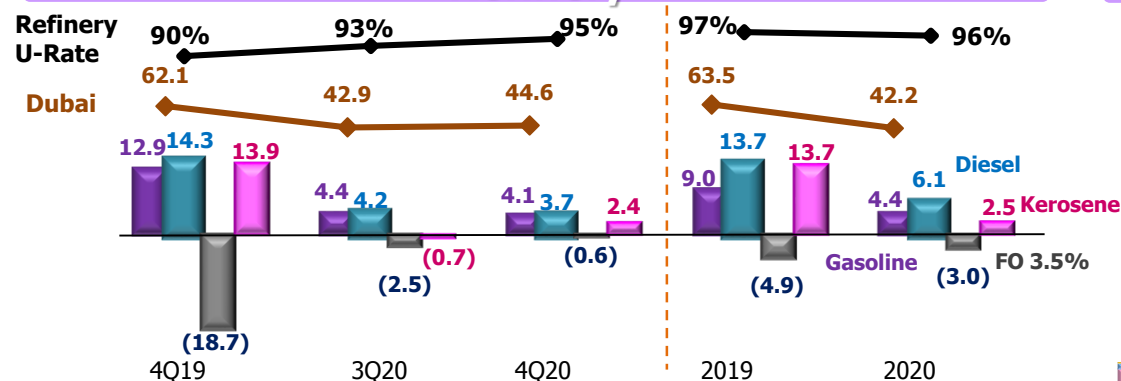
## Olefins



## Aromatics

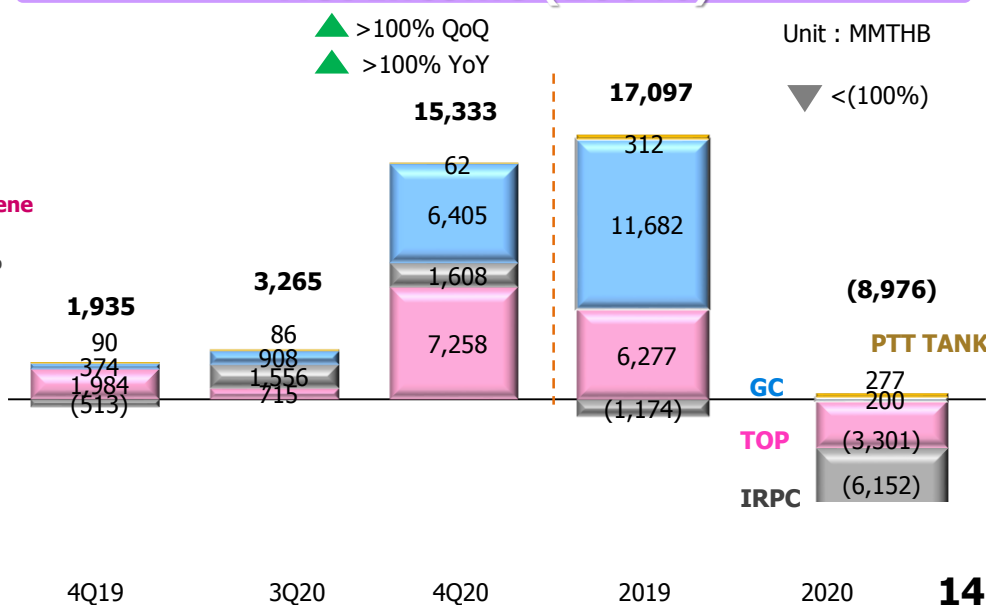


## Refinery



Unit: \$/BBL	4Q19	3Q20	4Q20	2019	2020
Mkt GRM	2.19	(0.42)	1.20	2.67	0.78
Stock G/L excl. NRV	0.89	4.02	1.90	0.21	(1.76)
Hedging G/L	0.44	0.63	(0.64)	0.13	0.23
A/C GRM	3.52	4.23	2.46	3.01	(0.75)

## Net Income (100%)



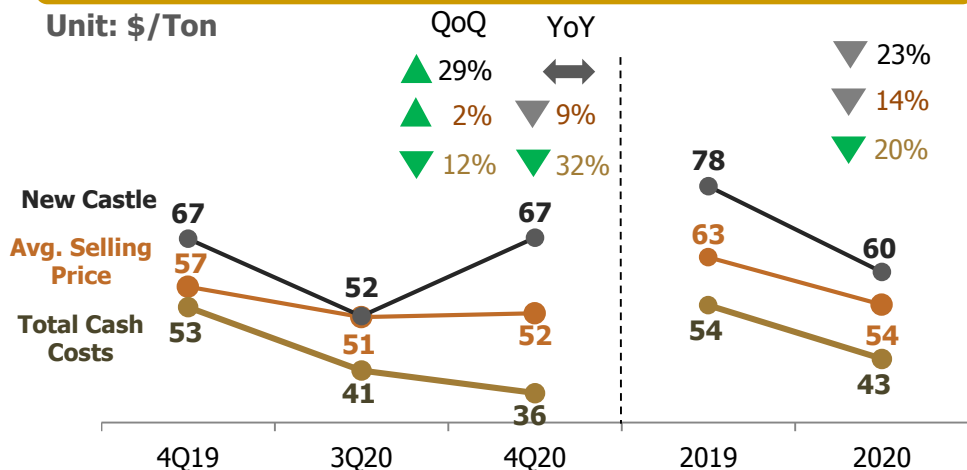
# Other Businesses : Coal business (SAR)

QoQ: NI decreased from the impairment; despite improved in operating performance

2020 vs 2019: NI declined due to the impairment loss and COVID-19 impact

## Avg. Selling Price<sup>1/</sup> & Cash cost<sup>1/</sup>

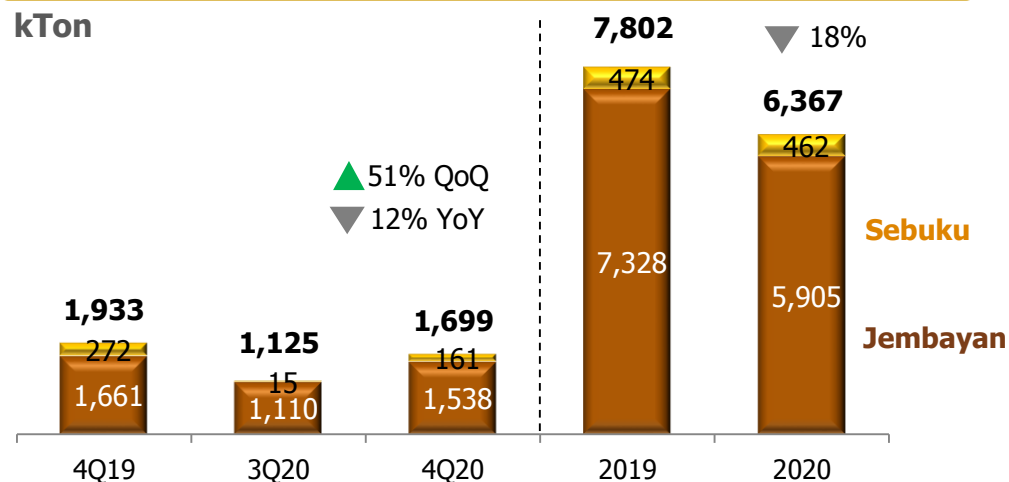
Unit: \$/Ton



<sup>1/</sup> Average Calorific value ~ 5,400 kcal/kg

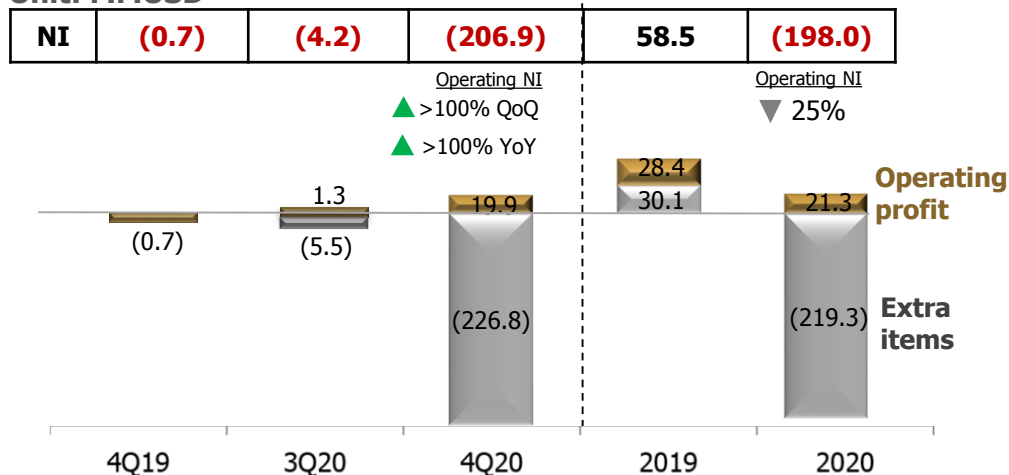
## Sales Volume

kTon



## Net Income

Unit: MMUSD



## Key Highlights

### QoQ

- + **Volume** increased 51% from winter demand
- + **Price:** 2% higher owing to higher referenced New Castle price but upside limit to L-T fixed selling price contracts
- + **Cash cost** 12% down from lower mining cost
- **NI** decreased >100%; impairment 227 MMUSD from lower reserves

### 2020 vs 2019

- **Volume** decreased 18% due to lower production and sales plan
- **Price** dropped 14% due to referenced New Castle price dropped
- + **Cash cost** lower 20% from reduced mining cost and gas oil price
- **NI** dropped >100% mainly from impairment of 227 MMUSD due to lower reserves and Covid-19 impact on prices and demand

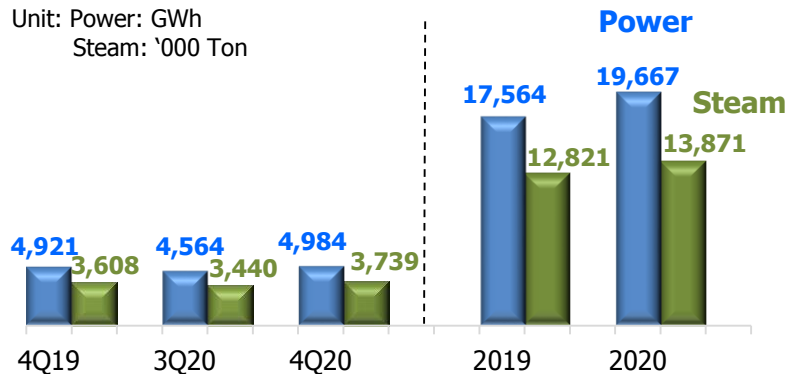
# Other Businesses : Power - GPSC

QoQ: NI dropped from lower gross profit from IPP and SPP and share of profit from Xayaburi  
2020 vs 2019: Better performance from full year recognition of GLOW and lower finance cost

## Sales Volume

	QoQ	YoY	2020 vs 2019
Power	▲ 9%	▲ 1%	▲ 12%
Steam	▲ 9%	▲ 4%	▲ 8%

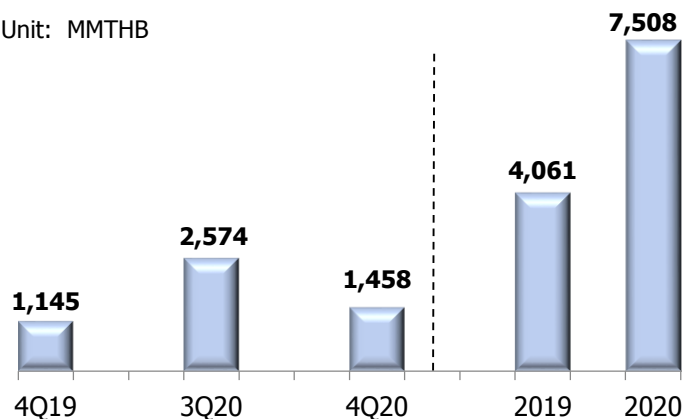
Unit: Power: GWh  
Steam: '000 Ton



## Net Income

	QoQ	YoY	2020 vs 2019
NI	▼ 43%	▲ 27%	▲ 85%

Unit: MMTHB



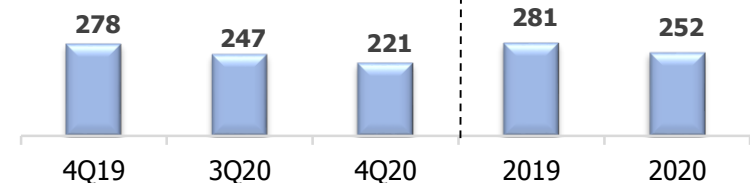
## Key Drivers: Weighted Avg. Selling & NG Prices

	QoQ	YoY	2020 vs 2019
SPP Avg. Selling Prices	▼ 5%	▼ 6%	▼ 3%
SPP Avg. NG Cost	▼ 11 %	▼ 21%	▼ 10%

### SPP Avg. Selling Prices (THB/kWh)



### SPP Avg. NG Cost (THB/MMBTU)



## Key Highlights

### QoQ

- + **Sales vol.** increased from higher dispatch vol. of IPP (Sriracha) and SPP
- + **SPP Avg. NG Cost** decreased according to lower NG prices
- **NI** decreased due to lower AP from GLOW IPP, higher maintenance cost, lower share of profit from Xayaburi and dividend from RPCL

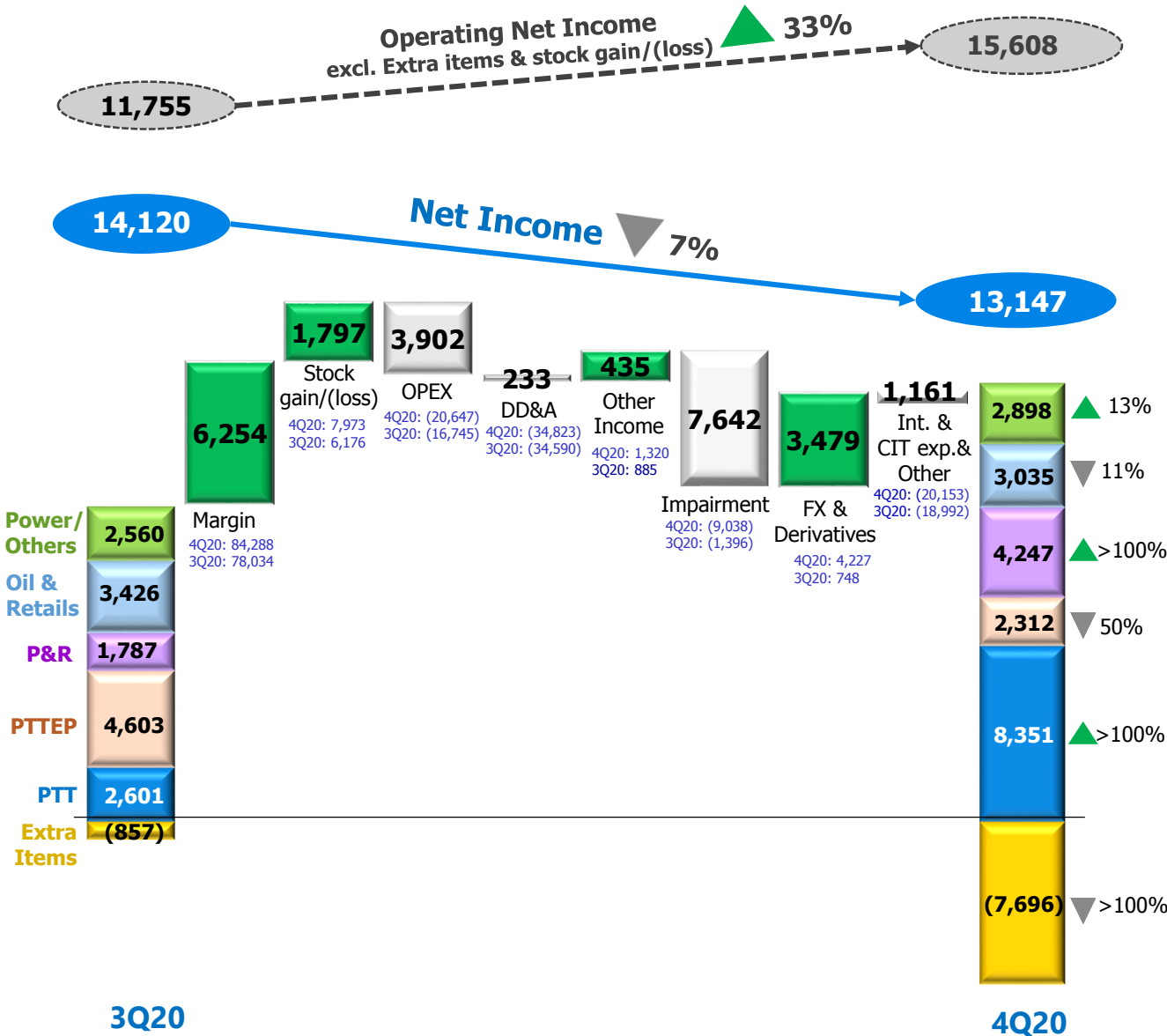
### 2020 vs 2019

- + **Sales vol.** increased from full year recognition of GLOW's performance
- + **SPP Avg. NG Cost** decreased according to lower NG prices in 2020
- + **NI** increased from fully recognized of GLOW, increased margin from lower coal and natural gas prices, lower finance cost, and increased dividend from RPCL, despite higher DD&A and FX loss.

# 4Q20 vs 3Q20 PTT Consolidated Performance (QoQ):

Enhanced Operational Performance despite Impairment Loss

MMTHB



## Power/ Others ▲

### Others ▲

- + **Coal** : Increased vol. & prices in line with referenced prices
- **Power** Higher maintenance cost & Lower contribution from Xayaburi
- **PTT LNG**: Stable revenue, despite higher loss on derivatives
- **PTTNGD**: Higher loss on derivatives, despite improved margin

## Oil & Retail ▼

- Lower margin, despite higher vol. (esp. Diesel & Jet A-1) and non-oil contribution

## Petrochemical & Refining ▲

### Petrochemical ▲

- + **Olefins**: Improved product prices from demand recovery
- + **Aromatics**: Increase in BZ & PX spreads and sales volume

### Refinery ▼

- Lower Stock gain in 4Q20
- + Higher Mkt GRM due to lower crude premium

## PTTEP ▼

- **Lower** avg. selling prices according to gas price decreased
- + **Higher** sales vol. from Contract 4, Malaysia, and Partex

## Gas ▲

- + **GSP**:
  - + Lower feed gas cost and higher avg. selling prices & vol.
- + **S&M**:
  - + Higher industrial margin due to rising FO price linked and lower gas cost
  - Lower NG sales vol. mainly from Power sectors

## Trading ▼

- Soften margin from mark to market loss and higher condensate discount
- + Increased sales vol. from condensate & refined products

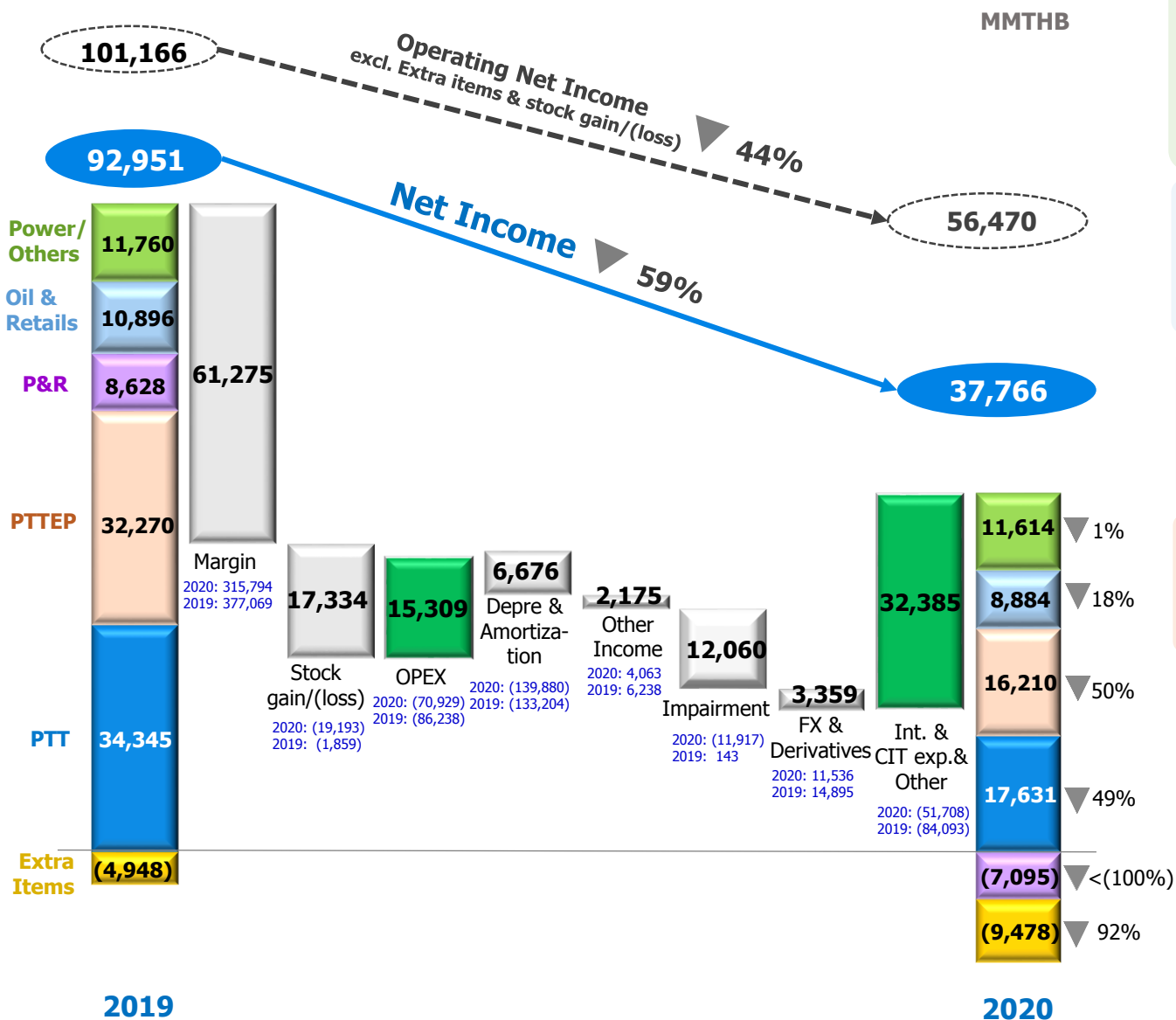
## Extra Items ▼

- 3Q20** : Coal mining: asset impairment loss of 857\* MB (MCM)
- 4Q20** : Coal mining: asset impairment loss of 6,800\* MB (SAR)
- EP's impairment loss of 689 MB; mainly Yetagun

(\*PTT's portion net tax amount)

# 2020 vs 2019 PTT Consolidated Performance:

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



### Power/ Others

#### Others ▼

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

#### Power ▲

- + Increasing vol. from full recognition of GLOW
- + Lower gas cost & lower finance cost from repayment of ST loan

### Oil & Retails ▼

- Vol. decreased esp. Jet, LPG from COVID-19
- Lower Margin mainly from diesel and gasoline
- + Stock gain in 2020; while stock loss in 2019
- + Higher non-oil contribution

### Petrochemical & Refining ▼

- Huge stock loss in 2020 as crude price sharply dropped in 1Q20
- Lower GRM from reduced in most products' spread
- Olefins: lower vol. as GC's major T/A & olefin spreads dropped
- Aromatics: PX spreads dropped; despite higher vol. (lower T/A)

### PTTEP ▼

- Lower ASP following crude oil prices decreased
- + Higher vol. from Malaysia Project & Partex acquisition; despite lower domestic demand

### Gas ▼

- GSP: declined petchem prices & vol. from GSP longer S/D
- S&M: Lower vol. due to soften power demand & industrial selling price linked to lower FO price
- + NGV's business improved due to lower vol. & NG cost

### Trading ▲

- + Improves margin from capturing arbitrage and lower condensate discount together with lower SG&A
- Lower vol. of crude import and out - out activities from pressured global demand

### Extra Items ▼

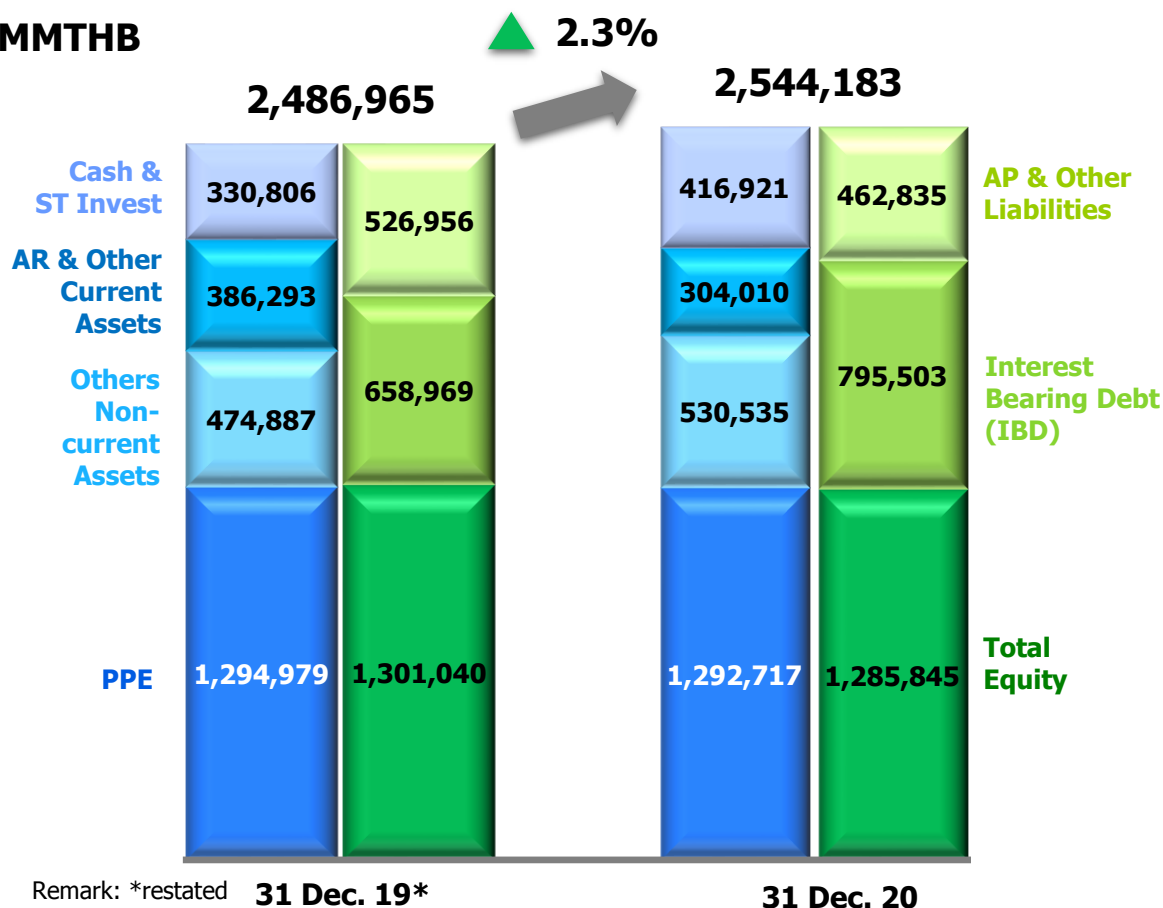
- 2020** : Impairment\* loss on PTTEP's assets (1,614 MB), PTTGM's coal mining (7,657 MB), IRPC's MARs projects (175 MB) (\*PTT's portion net tax amount)
- 2019** : -PTT Group: Additional Employee Compensation (2,841 MB)  
 -PTT's payment on damage from court's judgment (NACAP 2,105 MB)  
 & pipeline allowance for high speed train project (498 MB)  
 +IRPC: Claim from UHV project (130) & reverse impairment (366 MB)

# Statement of Financial Position

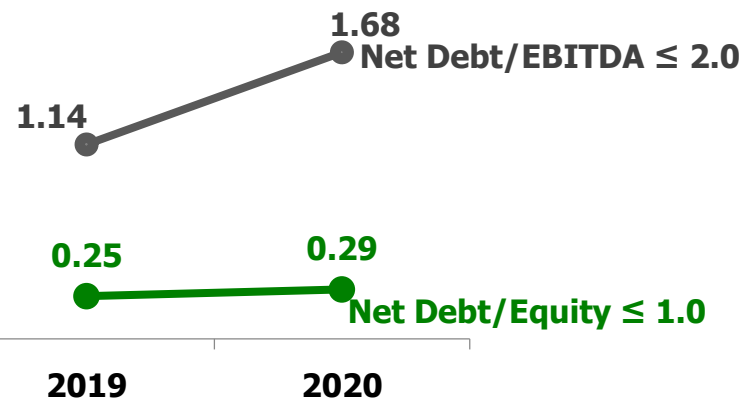
## Strong Balance Sheets maintained credit ratings

### Consolidated Balance Sheets

#### MMTHB



### Key Financial Ratios



#### PTT Ratings at Sovereign Level

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

#### Assets/Liabilities/ Equity:

- + Higher Interest Bearing Debt (IBD) from increase in PTT and affiliated companies' long term borrowing (bond/loan)
- + Increase in other non-current asset from right of use; asset reclassification according to TFRS 16 (Leases)
- Decrease in accounts receivables and inventories from effect of lower prices and sales vol.
- Lower equity due to dividend payment and lower net profit



# Statements of Consolidated Cash Flows : YE2020



Unit : MMTHB

Operating	218,592
Non-Cash Adjustment	205,523
Net Income	37,766
Changes in Assets & Liabilities	19,156
Income Tax	(43,853)

Investing	(188,584)
CAPEX (PP&E, Intangible Asset)	(150,084)
Current Investment	(53,765)
Investment (Sub. & Affiliates & Others)	(3,003)
Others*	10,121
Dividend/Interest Received	8,147

\*Investment in financial assets, Short/Long-term lending loans

Free Cash Flow
30,008



Financing	8,060
Received from loans/Bonds	210,693
Ordinary share issuance of subsidiaries	268
Loan/Bond repayment	(123,857)
Dividend Paid	(51,624)
Finance cost paid	(26,939)
Derivatives	(481)

Adjustment
1,538

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



Cash In/(Out)
39,606
46,626
86,232

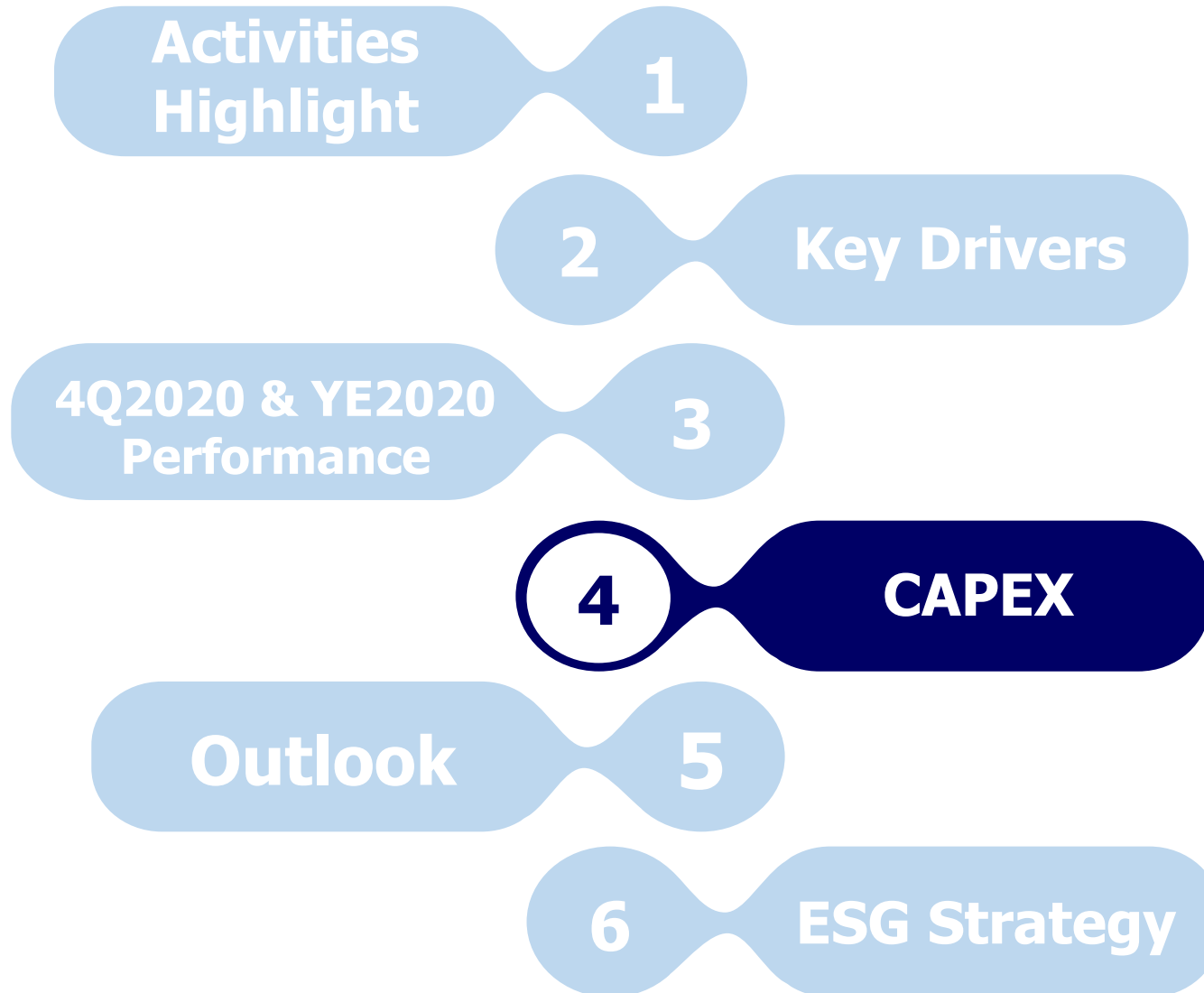


Classified as assets held for sales
(116)



Ending Cash & Cash Equivalents	332,032
S/T inv.	84,889
<b>Ending Cash incl. S/T investments</b>	<b>416,921</b>

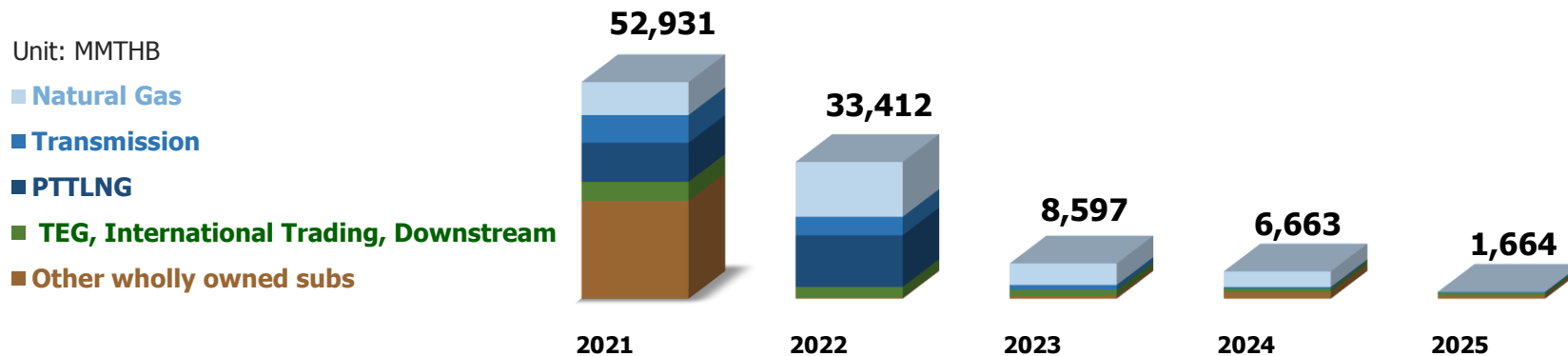
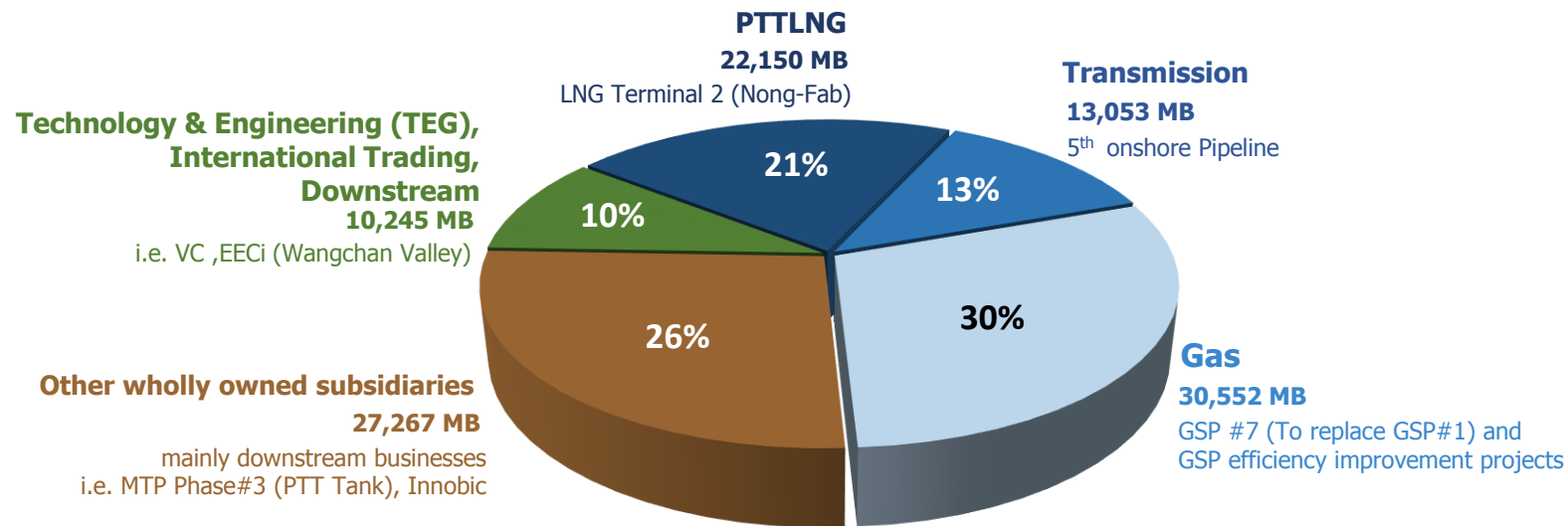
Cash & cash eqi  
S/T inv.



# PTT: Committed CAPEX (PTT and Wholly Owned Subsidiaries)



PTT 5-Years (2021-2025) Committed CAPEX Plan totaling Baht 103,267 million or ~ USD 3.3 bn



The Provisional CAPEX ~Bt 332 bn which mainly focus on LNG Value Chain, Southern LNG terminal and pipelines according to PDP 2018, Gas-to-power project, and New Businesses (including Renewable energy, Life sciences, Electricity value chain etc.)

Note: 2021-2025 CAPEX plan approved by BOD on 17 Dec 20

# Committed CAPEX: PTT Group



Total committed CAPEX during 2021-2025\* : ~Bt 851 bn or USD 27 bn

Unit: MMTHB

## Power Business

### Key Projects

- SPP Replacement
- ERU
- Renewable Energy (Solar/Wind)

## PTT Business

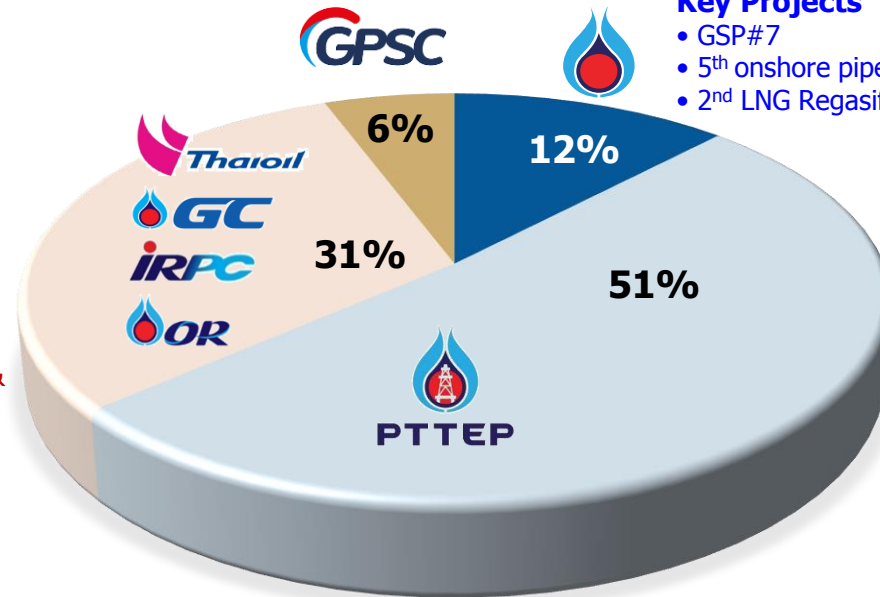
### Key Projects

- GSP#7
- 5<sup>th</sup> onshore pipeline
- 2<sup>nd</sup> LNG Regasification Terminal

## Downstream Business

### Key Projects

- **TOP:** Clean Fuel Project (CFP)
- **GC:** Efficiency improvement projects
- **IRPC:** Ultra Clean Fuel Project (UCF)
- **OR:** Oil & Retail Expansion in domestic & international



## Upstream Business

### Key Projects

- Onshore and Offshore Exploration and Production in Thailand (Bongkot, Erawan etc.)
- Algeria HBR
- Southwest Vietnam
- SK410B
- Mozambique LNG

PTT Group's Provisional CAPEX for 2021 - 2025 ~Bt 804 bn





### IMF Forecast – 2021 GDP Growth



World: 5.5%



US: 5.1%



Euro area: 4.2%



China: 8.1%



Japan: 3.1%



India: 11.5%



Thailand: 2.7%



- + Economic activity appearing to be adapting to subdued contact-intensive activity with the passage of time
- + Additional fiscal policy support announced at end-2020, notably in the US and Japan
- + Supportive financial conditions, with major central banks assumed to maintain ultra-expansionary monetary policy
- + Strengthening of activity later in the year, as vaccines and therapies become more readily available



- Surging infections in late 2020 (including from new variants) and partially renewed lockdowns softening momentum in early 2021
- Oil exporters and tourism-based economies to face particularly difficult prospects considering the expected slow normalization of cross-border travel and subdued oil price outlook



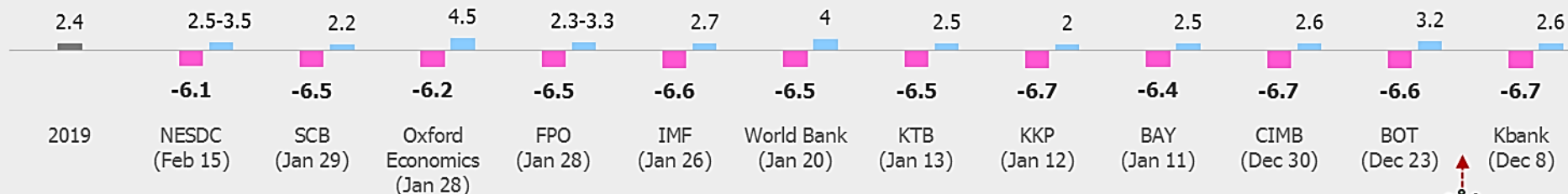
# Thailand Economic Outlook:

## Gradual Recovery amid Slow Vaccine Rollout and Subdued Cross-Border Travel

### Thailand GDP Growth (%)

■ 2020 ■ 2021

Ranger of forecasted 2021  
Thailand GDP Growth  
: 2% - 4.5%



Dec 19: New Outbreak  
Samut Sakhon



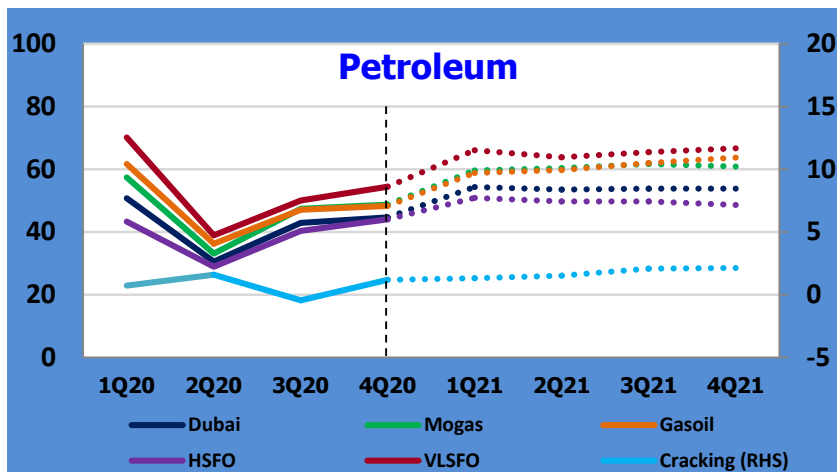
- + Broader recovery in global trade to help support merchandise exports of Thailand
- + Vaccine rollouts, though slower than elsewhere, to allow for contact-intensive activity to strengthen and therefore a firmer recovery in 2H2021
- + COVID-19 relief measures, and fiscal and monetary stimulus



- COVID-19 resurgence and partially reinstated restrictions posing near-term drag
- Cross-border tourism and related sectors to be the last to recover, as safe border reopening to foreign tourists could take some time
- Scarring from COVID-19, i.e. business closures, unemployed workers, and changed behavior

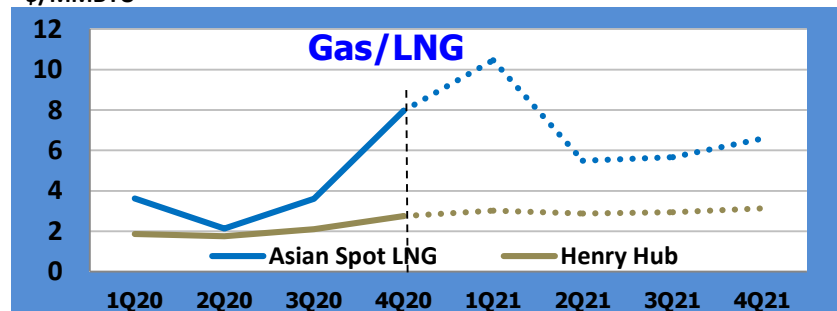
# 2021 Petroleum and Gas Outlook

\$/bbl



Price	Y2020	4Q2020	1Q2021(E)	Y2021(E)
Dubai	42.2	44.6	55-60	55 - 60
Mogas	46.6	48.7	60 – 65	62 – 67
Gasoil	48.4	48.3	59– 64	62 – 67
HSFO (3.5%S)	39.2	44.1	51 – 56	51 – 56
VLSFO (0.5%S)	53.4	54.5	67 – 72	67 – 72
Singapore GRM	0.4	1.2	1.2 – 2.2	1.5 – 2.5

\$/MMBTU



Price	Y2020	4Q2020	1Q2021(E)	Y2021(E)
Asian Spot LNG	4.3	8.0	10.5	6.0 – 8.0
Henry Hub (HH)	2.1	2.8	3.0	2.5 – 3.5

Source: PTT, PRISM Petroleum Rolling as of Jan 2021

## ▲ Dubai

- + **OPEC+ crude oil production cut and Saudi Arabia's additional voluntary cut**
- + **Bullish sentiment from vaccination and economic stimulus package**
- **Market sentiment** was pressured by 2<sup>nd</sup> wave of COVID-19

## ▲ Mogas

- + **Improved demand** on expectation of easing lockdown restrictions from end of 1Q21 onwards
- + **Singapore light distillate inventories** back to normal level
- **More supply** from the ramp-up in refinery runs followed demand recovery

## ▲ Gasoil

- + **Demand expected to recover** in 2H21 due to economic recovery. However, the resurgence of COVID-19 suppressed on industrial activity in the beginning of 2021
- + **Lower supply as refineries shifting gasoil yield to produce more Jet/kerosene** towards the end of the from Aviation sector recovered
- **Singapore middle distillate inventories also remained at high level**

## ▲ High Sulfur Fuel Oil

- + **Lower supply** amid reduced term lifting of medium-heavy sour crude from OPEC+ supports price

## ▲ Low Sulfur Fuel Oil

- + **Healthy bunker and power demand** followed the global trade recovery
- + **Lower supply** owing to crude production cuts by OPEC+

## ▲ Singapore GRM

- + **Improved crack margins** from the recovery of gasoline and gasoil demand

## ▲ Gas/LNG

### Asian Spot LNG:

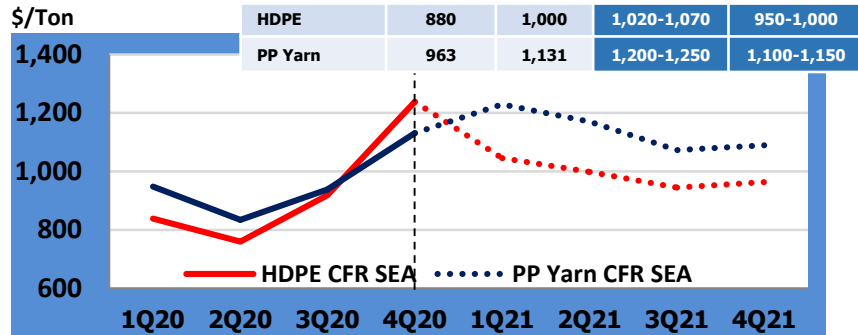
- + **Bullish winter weather and stock-building demand** from China in 1Q21
- **Downward price pressures** from new supply from 2Q21 onwards

### Henry Hub:

- + **Higher price** due to expectation of strong demand for LNG exports

# 2021 Petrochemical Outlook

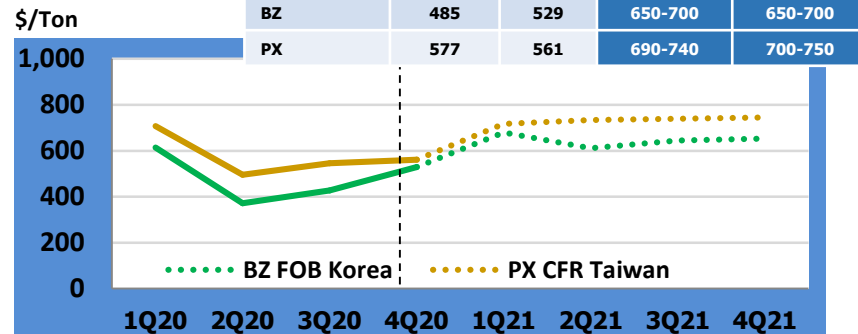
## Olefins



### ▲ Olefins

- + **PE/PP demand improve** relative to expectations of vaccine boosting economic activity and additional stimulus policy in many countries
- + **Strong demand for single-used plastic and medical application** amid ongoing COVID-19 pandemic
- **Incoming additional Asian capacities** from Southeast Asia and Northeast Asia will pressure the markets from 2Q21 onwards

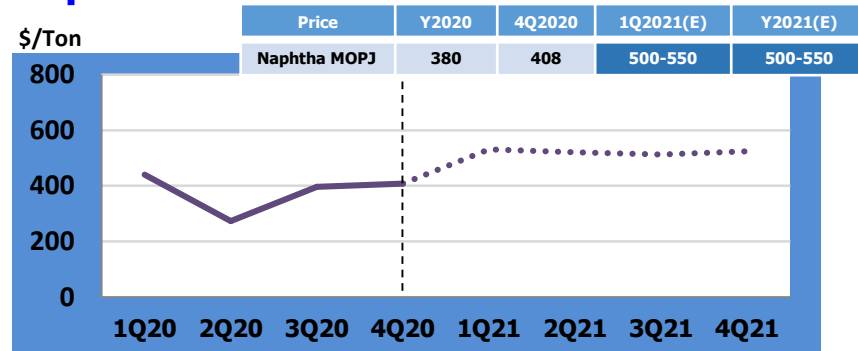
## Aromatics



### ▲ Aromatics

- + **PX/BZ market expected to be more balance** as demand improved after the economic recovery and additional demand from PTA/SM new capacities startup in 2Q21-3Q21
- **Elevated Chinese inventories** to suppress demand growth in 1H21
- **Additional PX/BZ capacities** from Saudi Aramco start-up in 2Q21 and China's Zhejiang PC start-up in 3Q21 will affect market sentiment

## Naphtha



### ▲ Naphtha

- + **New crackers start-up**, particularly in Northeast Asia, to boost demand
- **Eased supply as refinery runs will be higher** following the demand recovery

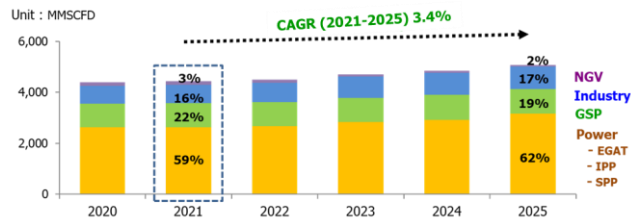
# PTT Group 2021 Guidance



**Lower Pooled gas cost:**  
↓ **5-7% VS 2020**



**Gas Volume Growth:**  
**CAGR 3.4 % during 2021 -2025**



**Improve GSP U-Rate**

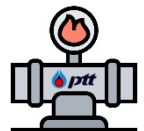
**GSP's U-Rate**  
**92-94% in 2021**



- E&P** : + Vol. ↑ ~12%  
+ Unit Cost ↓ ~5%
- OIL** : + Oil Stations ↑ 108 stations/year  
+ Café Amazon ↑ 418 outlets/year
- P&R** : + Refinery ↑ U-Rate ~97-99%  
+ ↑ GRM : SG GRM → \$1.5-2.5 per bbl  
+ ↑ Petrochemical spread
- HDPE \$440-490 per ton
  - PP \$590-640 per ton
  - PX \$185-235 per ton
  - BZ \$110-160 per ton
- Power** : + Power Consumption ↑ ~2%



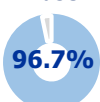
## Upcoming project in 2021



**RA#6 : Ratchaburi - Wangnoi**  
COD: 2Q2021

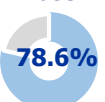
**5th Pipeline**  
With 3 phases

Phase I



COD: 2H2021

Phase II



Phase III

In the process of sourcing contractor  
: To COD in 2022

**1Q21**

**2Q21**

**3Q21**

**4Q21**

**MTP Retrofit : 750 KTA**  
COD: 1Q2021

**Rayong Waste to Energy**  
COD: 2Q2021

**High-quality Circular Plastic Resin Plant**  
: 45 KTA  
COD: 4Q2021



**Gas Separation Plants 2H21**

3Q: **GSP#6** Major TA : 26 days  
3Q-4Q: **GSP#3 & ESP** Major TA : 23 days  
ESP TD 60% : 15 days



**2H21: Planned Major TA : Ethane Crackers**

- Oleflex : ~ 1 month
- OLE3 : ~1 month





# PTT's Sustainability Management Performance

## TRANSPARENCY & SUSTAINABILITY



### SUSTAINABILITY as Business Goal

Sufficiency  
Economy

DJSI



ESG

SDGs

### — ∞ — PTT's Sustainability DNA

**Performance** เราต้องเลิศ  
**Good Governance and  
Performance Excellence**



Economic Drive  
by creating  
'Next Growth'



Operate with  
Integrity (GRC)

**โลกเราต้องรักษ์**  
**Sustainable Production  
and Consumption**



Low Carbon  
Society



Circular  
Economy

**สังคมไทยเราต้องอุ่นชู**  
**People Well-being**



Create Social  
Shared Value



Self  
sufficient



# PTT's Performance on Sustainability Management



## Environmental: Sustainable Production and Consumption

E



**GHG's Long-term 2030 target**  
: **27%** reduction target compared to business-as-usual scenarios.

In 2020, PTT Group's GHG emissions was 31.2 MtCO<sub>2</sub>e\* according to the target.



**"Internal Carbon Price (ICP)"**  
in PTT's Capital Expenditure Decision Process



Evaluated and analyzed following the Recommendation of **the Task Force on Climate-related Financial Disclosures**



**Green Products & Services;**  
**89 products**  
**274 service stations**



**Listed a member of the DJSI**

9th consecutive year in the World Index and the Emerging Market Index.

**Industry Leader**

of the Oil & Gas Upstream & Integrated Sector (OGX).



Awarded a **Gold Class** distinction from **the S&P Global Sustainability Award 2021** with the Oil & Gas Upstream & Integrated (OGX) industry's top-performing company's score

## Social: People Well-being

S

**PTT supports during the COVID-19 pandemic**



12,970 victims of drought, cold and floods rescued



**Clean energy**  
- 826 beneficiary households, Biogas system from pig farming project  
- 500 beneficiary households, Solar cell system



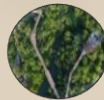
**Promoting Social Enterprises**  
- **Café Amazon for Chance:** 10 branches, increase income 7K baht/person/month  
- **Community Coffee Sourcing Project:** Increase income 10-20k baht/household/year,



- 212 Large hospitals  
- 4,941 district health support hospitals



139 schools participated in **skill development & learning approach**



**Planted and cared around 1.17 million rai of forest area**

## Governance: Good Governance and Performance Excellence

G

**Research and technology development, enhancing innovation to commercialization**



**Predictive maintenance (The Soothsayer)**



**Storage and regasification tanks for liquefied natural gas**



**Evolving Business Model**  
i.e. renewable energy business



**Integrity and Transparency Assessment (ITA)**  
Score 91.88  
Level A

## Sustainable Development Goals (SDGs)

PTT's operations fully support 17 SDGs



# Thank you



## PTT Public Company Limited – Investor Relations Department



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**Website: <http://www.pttplc.com>**

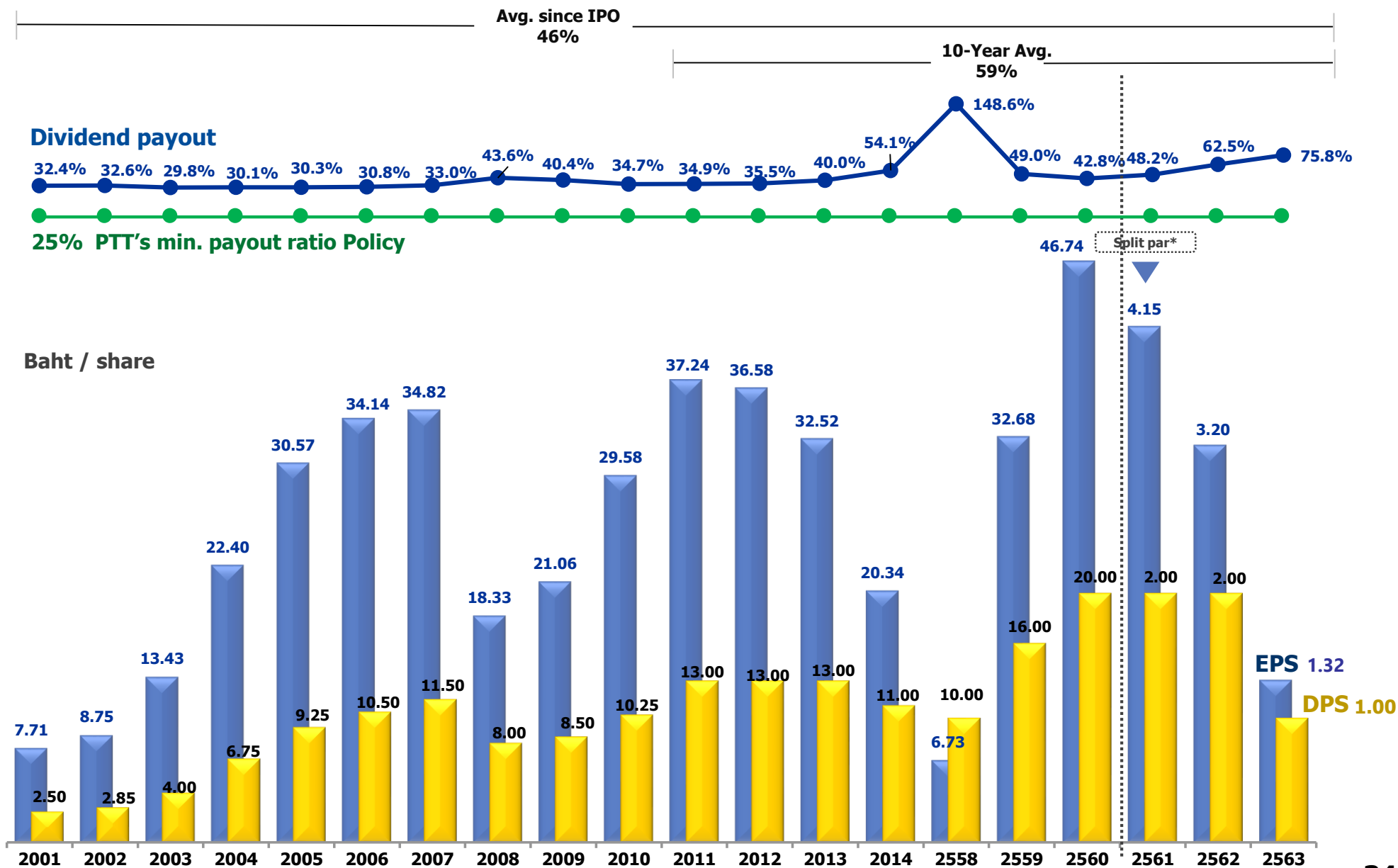
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The information contained in this presentation is subject to change without notice and PTT does not undertake any duty to update the forward-looking statements, and the estimates and assumptions associated with them, except to the extent required by applicable laws and regulations.

# Dividend Policy & Historical Payments

Y2020 Dividend payout at 75.8% and dividend yield at 2.4%



\* Split par value from 10 to 1 Baht/share since 24 April 2018

# Statements of PTT only Cash Flows : YE2020

Unit : MMTHB

Operating	44,317
Net Income	52,518
Changes in Assets & Liabilities	3,553
Income Tax	(6,204)
Non-Cash Adjustment	(5,550)

Investing	(19,639)
Current Investment	(35,849)
CAPEX (PP&E, Intangible Asset)	(15,665)
Investment (Sub. & Affiliates & Others)	(6,123)
Dividend/Interest Received	33,931
Others	4,067

\*Investment in financial assets, Short/Long-term lending loans

Free Cash Flow
24,678



Financing	(14,238)
Received from loans/Bonds	57,024
Dividend Paid	(36,558)
Loan/Bond repayment	(28,762)
Finance cost paid	(5,854)
Derivative	(88)

Adjustment
(579)

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



Cash In/(Out)
9,861
29,402
39,263



Ending Cash & Cash Equivalents	56,342
S/T inv.	44,404
<b>Ending Cash incl. S/T investments</b>	<b>100,746</b>

Cash & cash eqi  
S/T inv.

# PTT Group Performance : 4Q2020 (QoQ)



Unit : MMTHB

	Performance 100%					% PTT holding	Equity Method % PTT				
	4Q19	3Q20	4Q20	QoQ	YoY		4Q19	3Q20	4Q20	QoQ	YoY
PTT Net operating Income	4,635	2,601	8,351	>100%	80%		4,635	2,601	8,351	>100%	80%
<b>E&amp;P</b> - PTTEP	11,621	7,202	2,527	-65%	-78%	65.29%	7,607	4,603	1,623	-65%	-79%
<b>Petrochemical</b>	464	994	6,467	>100%	>100%		216	475	2,885	>100%	>100%
- GC	374	908	6,405	>100%	>100%	48.42%	126	389	2,824	>100%	>100%
- Other	90	86	62	-28%	-31%		90	86	61	-29%	-32%
<b>Refining</b>	1,471	2,271	8,866	>100%	>100%		917	1,312	1,187	-10%	29%
- TOP	1,984	715	7,258	>100%	>100%	48.03%	1,089	599	455	-24%	-58%
- IRPC	(513)	1,556	1,608	3%	>100%	48.05%	(172)	713	732	3%	>100%
<b>Others Business</b>	5,457	8,591	579	-93%	-89%		4,042	5,809	(916)	<-100%	<-100%
<b>Inter</b> - PTTER/PTTGM	(39)	(988)	(5,799)	<-100%	<-100%	100%	(25)	(878)	(6,010)	<-100%	<-100%
<b>Gas</b> - PTT LNG/PTTNGD/PTTGL/TTM(T)/TTM(M)	1,710	2,298	1,037	-55%	-39%		1,542	2,073	1,157	-44%	-25%
<b>Utilities</b> - GPSC/TP/DCAP/PTTME/PTTES/PTTDIGITAL/ENCO	1,725	3,517	2,104	-40%	22%		456	874	587	-33%	29%
<b>Oil &amp; Oth.</b> - PTTT/OR/Others <sup>1/</sup>	2,061	3,764	3,237	-14%	57%		2,069	3,740	3,350	-10%	62%
Shared of Net Income from Affiliates	19,013	19,058	18,439	-3%	-3%		12,782	12,199	4,779	-61%	-63%
Tax adjustment for gain on disposal of investment and asset	29	(680)	17	>100%	-41%		29	(680)	17	>100%	-41%
PTT Conso. Net Income	23,677	20,979	26,807	28%	13%		17,446	14,120	13,147	-7%	-25%

1/ Including BSA, PTT TCC, and RTC

# PTT Group Performance : 2020 vs 2019

Unit : MMTHB

	Performance 100%			% PTT holding	Equity Method % PTT		
	2019	2020	2020vs2019		2019	2020	2020vs2019
<b>PTT Net operating Income</b>	30,673	17,631	-43%		30,673	17,631	-43%
<b>E&amp;P - PTTEP</b>	48,803	22,664	-54%	65.29%	31,882	14,596	-54%
<b>Petrochemical</b>	11,994	477	-96%		5,767	182	-97%
- GC	11,682	200	-98%	48.42%	5,455	(95)	<-100%
- Other	312	277	-11%		312	277	-11%
<b>Refining</b>	5,103	(9,453)	<-100%		2,335	(7,452)	<-100%
- TOP	6,277	(3,301)	<-100%	48.03%	2,788	(4,511)	<-100%
- IRPC	(1,174)	(6,152)	<-100%	48.05%	(453)	(2,941)	<-100%
<b>Others Business</b>	28,121	22,083	-21%		22,546	13,886	-38%
<b>Inter - PTTER/PTTGM</b>	1,817	(6,318)	<-100%	100%	1,815	(6,652)	<-100%
<b>Gas - PTTLNG/PTTNGD/PTTGL/TTM(T)/TTM(M)</b>	8,477	7,153	-16%		7,456	6,953	-7%
<b>Utilities - GPSC/TP/DCAP/PTTME/PTTES/PTTDIGITAL/ENCO</b>	6,136	10,423	70%		1,574	2,666	69%
<b>Oil &amp; Oth. - PTTT/OR/Others<sup>1/</sup></b>	11,691	10,825	-7%		11,701	10,919	-7%
<b>Shared of Net Income from Affiliates</b>	94,021	35,771	-62%		62,530	21,212	-66%
<b>Tax adjustment for gain on disposal of investment and asset</b>	(252)	(1,077)	>100%		(252)	(1,077)	<-100%
<b>PTT Conso. Net Income</b>	124,442	52,325	-58%		92,951	37,766	-59%

1/ Including BSA, PTT TCC, and RTC

# PTT Group Accounting Structure



Data as of 31 Dec 2020

E&P and Gas Business Group			International Trading Business Group			Petrochemicals & Refining Business Group		
<b>Subsidiaries</b> PTT Exploration & Production Plc. PTTEP 65.29%** PTT Natural Gas Distribution Co., Ltd. PTTNGD 58.00% PTT LNG Co., Ltd. PTTLNG 100.00% PTT Global LNG Co., Ltd. PTTGL 50.00%  <b>Joint Ventures</b> 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%			<b>Subsidiaries</b> 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%  <b>Oil Business Group</b>  <b>Subsidiaries</b> PTT Oil & Retail Business Co., Ltd. OR 100.00%***			<b>Petrochemical Subsidiaries</b> PTT Global Chemical Plc.* GC 48.42%** PTT Tank Terminal Co., Ltd. PTTTANK 100.00%  <b>Refining Subsidiaries</b> Thai Oil Plc.* TOP 48.03%** IRPC Plc.* IRPC 48.05%**		
Technology and Engineering Business Group			International Investment Business Group			Others		
<b>Subsidiaries</b> Global Power Synergy Co., Ltd.* GPSC 31.72% Thai Oil Power Co., Ltd.* TP**** 26.00% PTT Digital Solutions Co., Ltd.* PTT DIGITAL 20.00% PTT Energy Solutions Co., Ltd.* PTTES 40.00% Energy Complex Co., Ltd. EnCo 50.00%  <b>Joint Ventures</b> District Cooling System and Power Plant DCAP 35.00%  <b>Others</b> Baania (Thailand) Company Ltd. Baania 2.89% HG Robotics Plc. HG Robotics 9.49% Innospace (Thailand) Innospace 15.75% Sunfolding, Inc. Sunfolding 5.24%			<b>Subsidiaries</b> PTT Energy Resources Co., Ltd. PTTER 100.00% PTT Green Energy Pte. Ltd. PTTGE 100.00% PTT Global Management Co., Ltd. PTTGM 100.00%			<b>Subsidiaries</b> 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%  <b>Joint Ventures</b> Suez Environmental Services Co.,Ltd. SES 40.00%  <b>Others</b> 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.

\*\*Holding portion of PTT Group (direct & indirect)

\*\*\* 75%-77.5% depend on exercise of over-allotment shares

\*\*\*\*Entire business transfer to TOP on 1 Feb. 2021



# Debt Profile : Control Cost & Manage Risk

Managed debt according to financial risk and policy



## Debt Portfolio

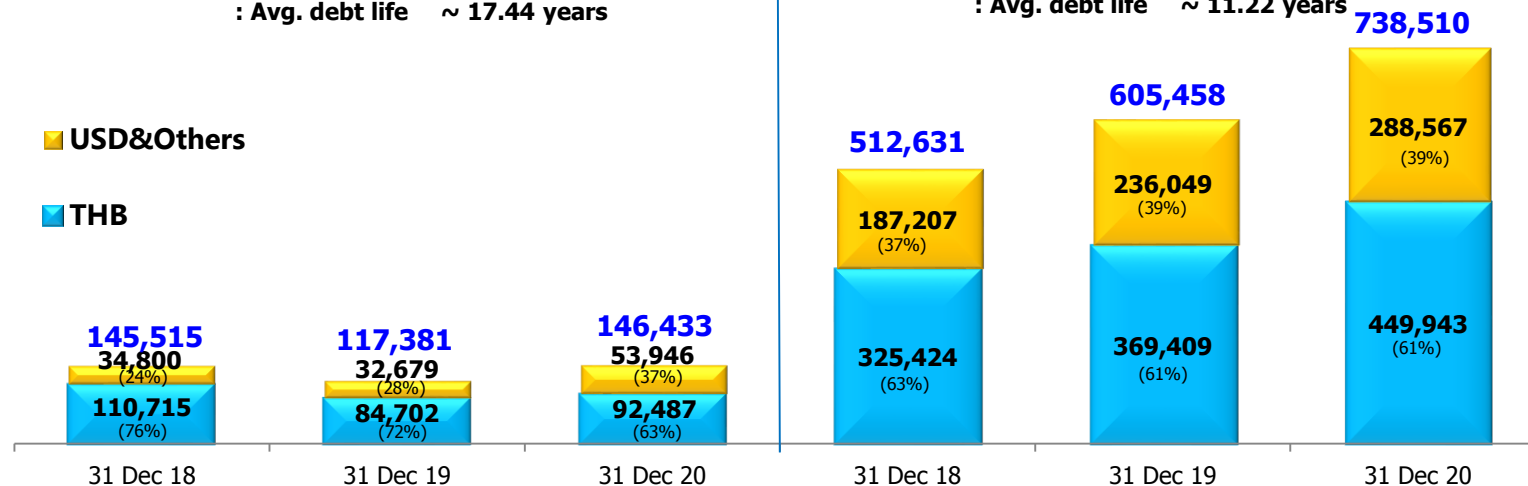
Unit : MM THB

**PTT Only** : Cost of debts ~ 4.51%  
: % fixed-rate ~ 81.89%  
: Avg. debt life ~ 17.44 years

**Consolidated** : Cost of debts ~ 3.54%  
: % fixed-rate ~ 71.68%  
: Avg. debt life ~ 11.22 years

■ USD&Others

■ THB



Note : 1. PTT Data as of 31 Dec 20 (THB/USD = 30.2068 THB/JPY = 0.2945) excluding liabilities from finance leases.

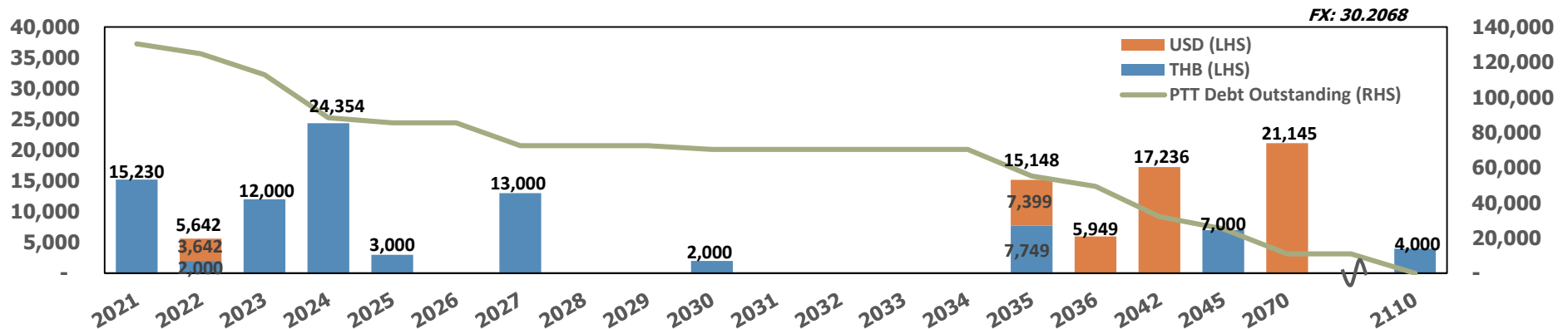
2. Debt Outstanding represents amount and portion before derivative swaps, and reconciled with accounting.

3. Cost of debts, % fixed rate, and avg. debt life took into account the derivative transactions, including withholding tax (update as of 31 Dec 20).

## Debt Outstanding and Repayment Profile

Unit : MM THB

As of 31 Dec 20



Note: 1. Debt Outstanding for Repayment Profile represents financial data and portion after derivative swaps

2. Bond repayment amounting 3,642 MB in 2022 is THB swaps to USD and amounting 7,749 MB in 2035 is USD swaps to THB

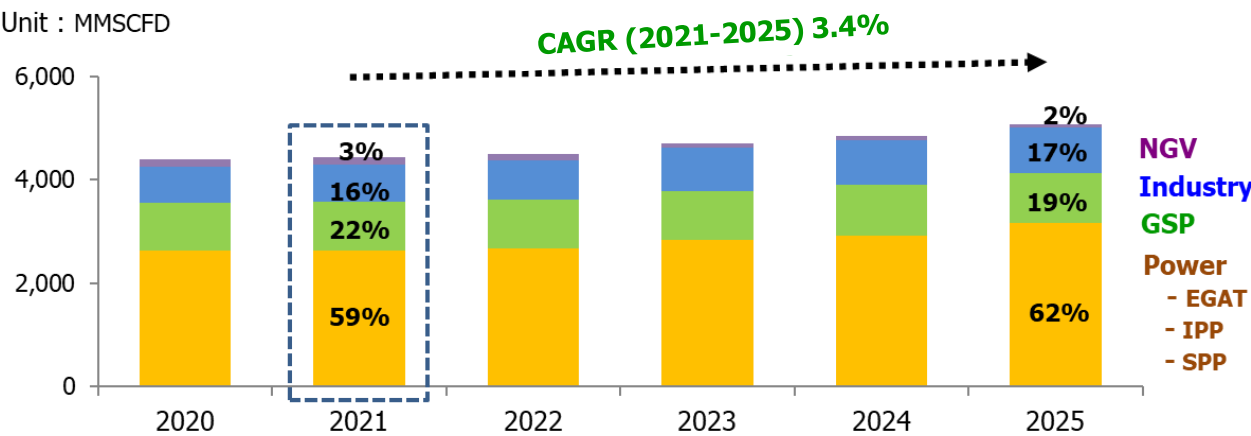
\*PTTC10DA (Century Bonds) is due on 2 Dec 2110

# 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	LNG Terminal 2	GSP#7
Cum. Capacity (MTA)	19.0	460 mmscfd

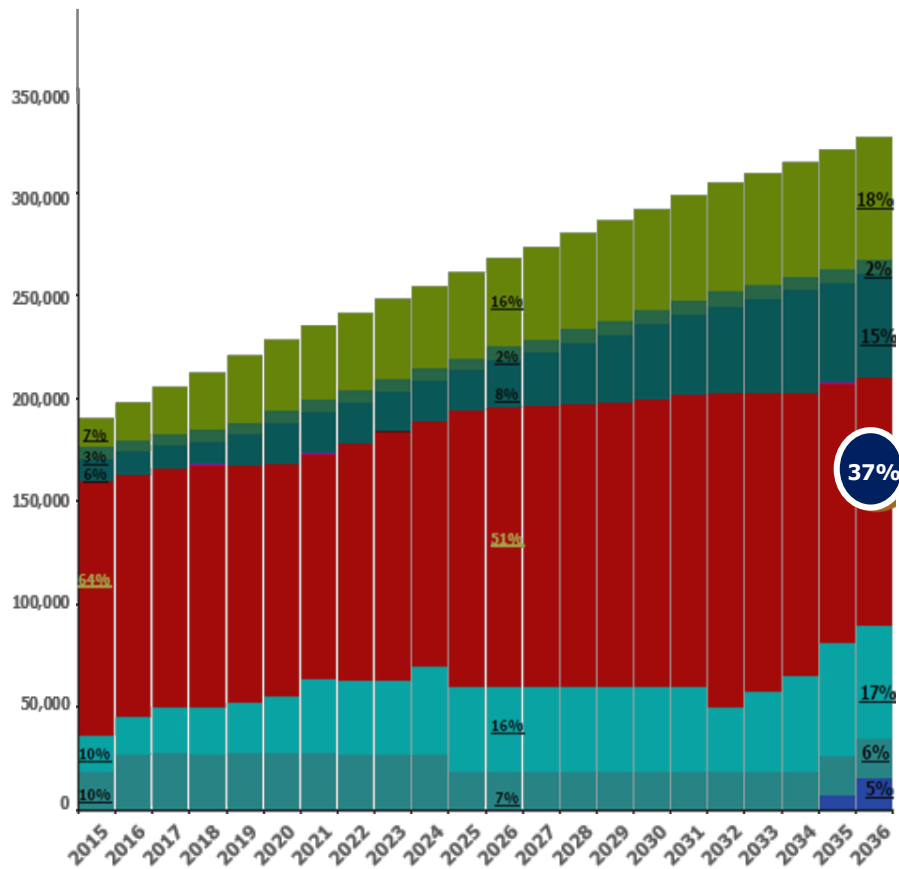
# Newly Thailand Power Development Plan

Stronger demand of NG for power plants

**PDP 2015\***

**Natural Gas growth upon  
Government fuel diversification policy  
for power generation**

Unit: GWh

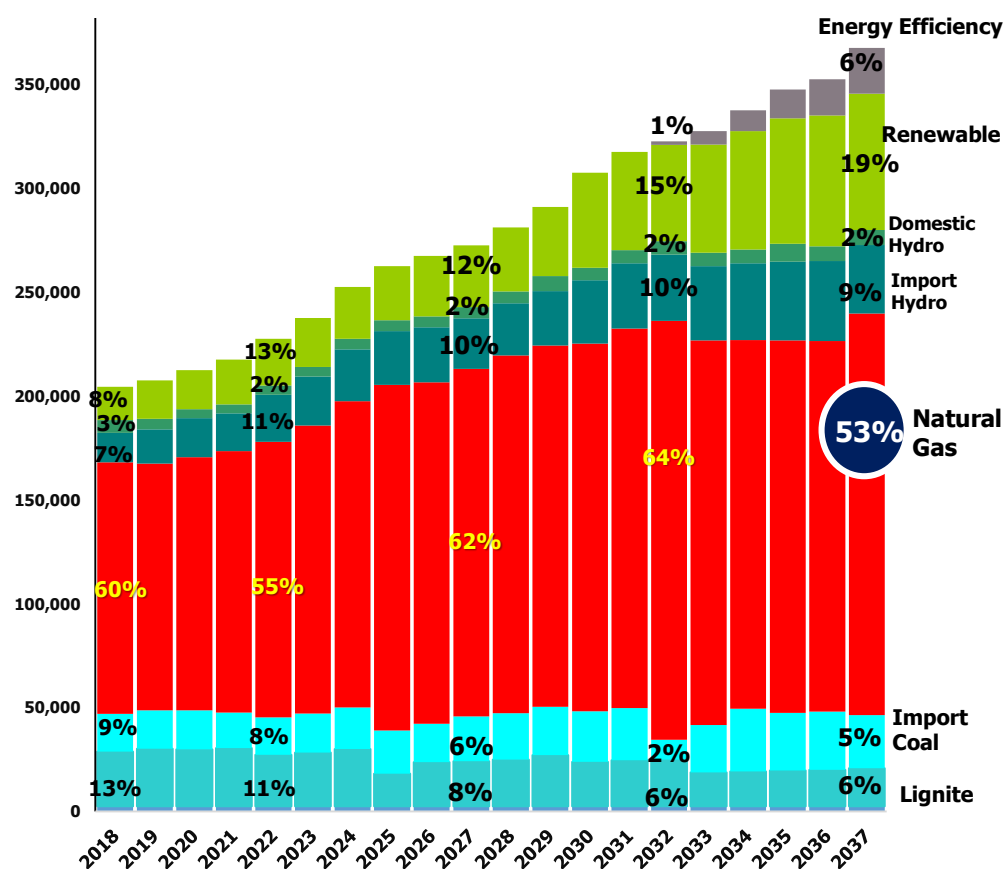


\*Source: Ministry of Energy

**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 :

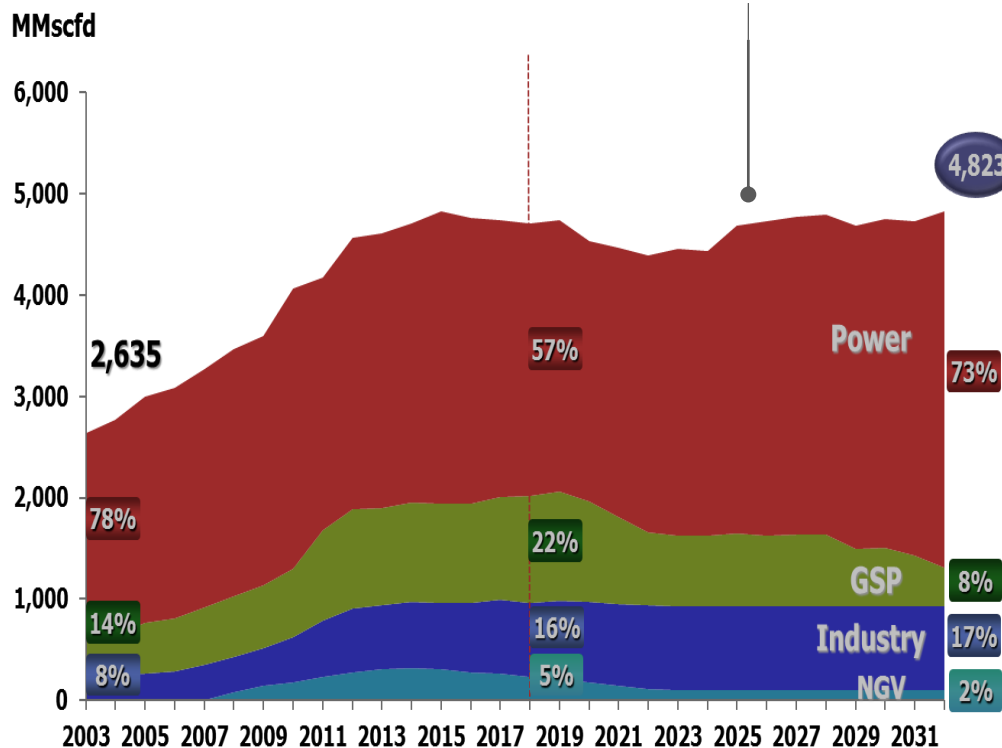
Growth of natural gas upon Government fuel diversification policy for power generation

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 Krabi (800 MW),  
EE 30%

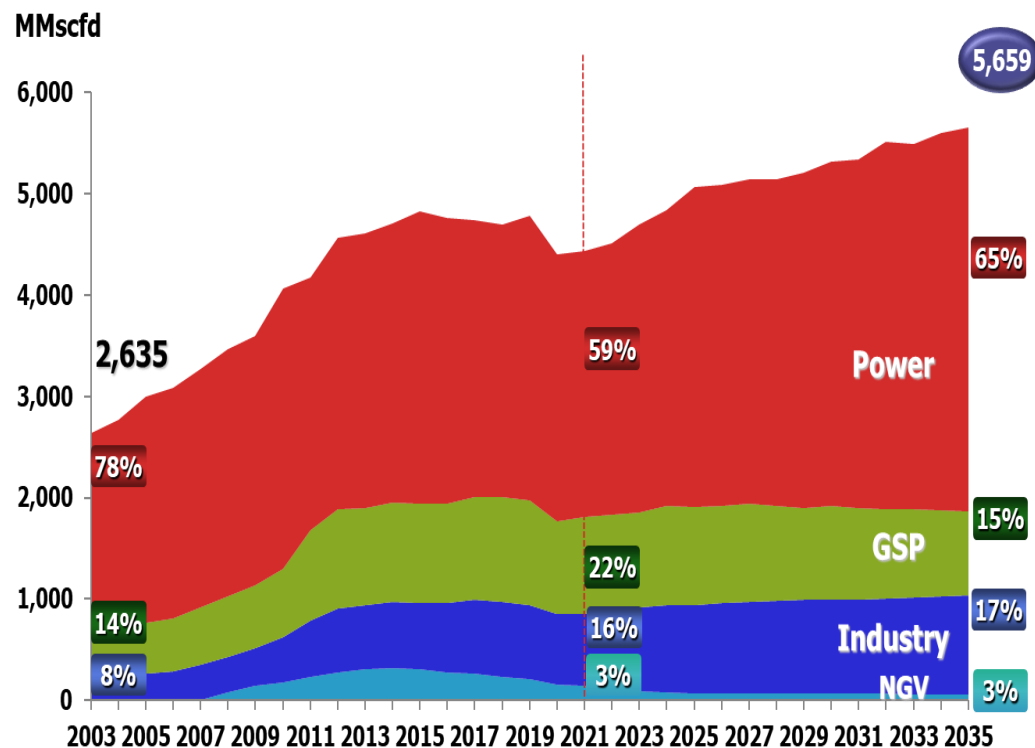


\*Source: Ministry of Energy

NEW\*\*

Thailand Gas demand forecast (CAGR during 2021-2035)

: Total	~	2%
: Power	~	3%
: GSP	~	-1%
: Industry	~	2%
: NGV	~	-6%



\*\* Source : PTT Business plan 2021 approved by BOD on 17 Dec 2020