



Analyst Meeting YE 2019

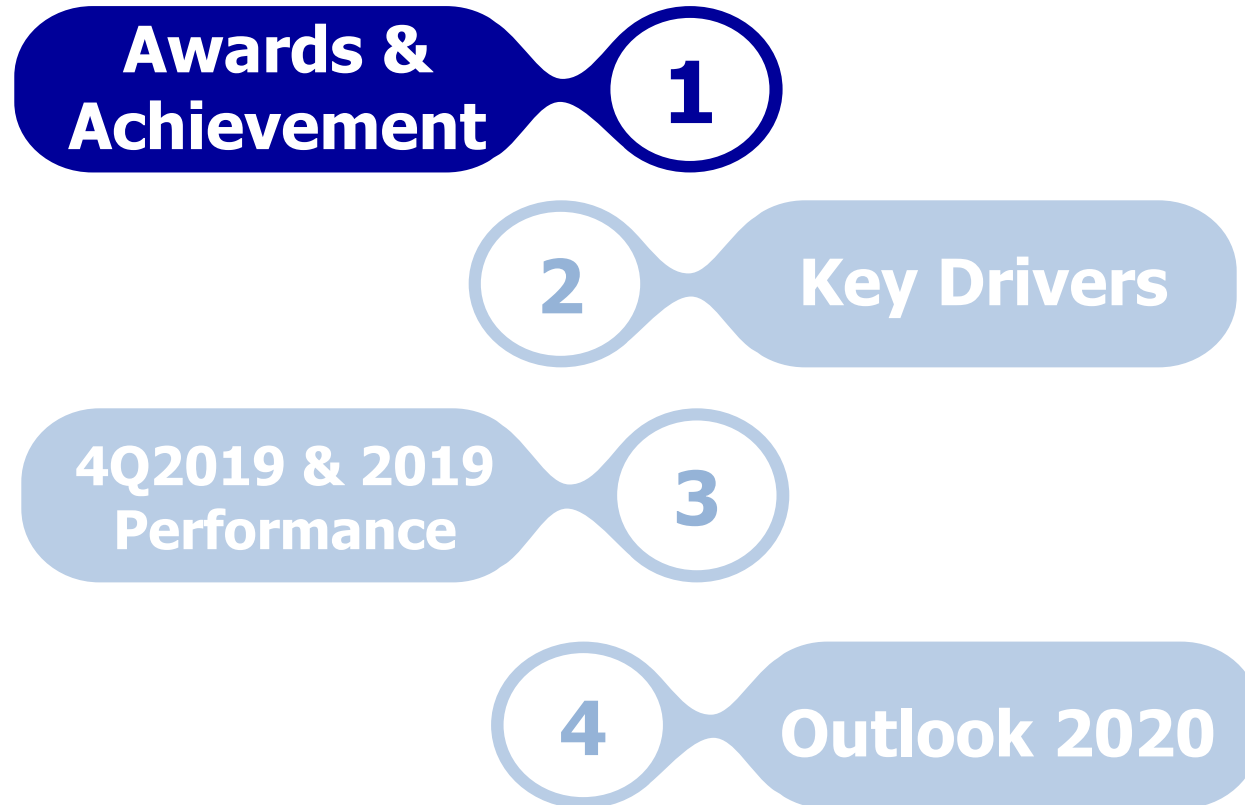
24 February 2020



SUSTAINABLE GROWTH FOR ALL



Contents



GAS

MMSCFD

5,801 Peak Gas Demand in 2019



- Peak Gas Demand on 3 March 2019
- Avg. NG sales volume in 2019: 4,797 MMSCFD



1st Air Separation Unit in Thailand

- PTT & Bangkok Industrial Gas
- High-Tech industrial gas: 450 KTA

Productivity Improvement



Gas saving: Baht 3.2 Bn i.e.

- Debottleneck
- Solution Provider
- LNG Loading



GAS Pipeline Progress

As of December 2019

80%
COD: 2021

5th Transmission Pipeline

92%
COD: 2021

RA#6 – Ratchaburi - Wangnoi

LNG Terminal 2 Progress

COD: 2022

35%



2019 Dividend Payout Ratio : 62.5%



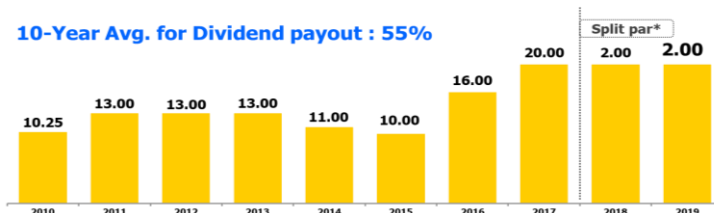
2019 Dividend

- Interim Dividend Payment: ฿ 0.9 per share (Oct. 2019)
- 2H2019 Dividend Payment: ฿1.1 per share
XD : 4 March 2020 Payment Date : 30 April. 2020
- 2019 Dividend Yield: 4.5%

฿2.0

Per share

10-Year Avg. for Dividend payout : 55%



Exit from Palm Oil Business

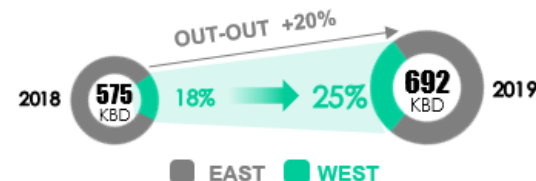


Completed Divestment in April 2019



Trading

- OUT-OUT transactions from West to West: Volume **20% to 692 KBD**



- **First LNG OUT-OUT : 500 KT**
- **Initiate Project One**
Maximize PTT Group's Value Chain



Wang Chan Valley @EECi



68%

As of December 2019

Progress of infrastructure & utilities project

- Project cost: Baht 3.2 bn
- COD : 2020



PTT Group Highlight



2019 Year of Expansion

Exploration & Production

3 concessions

Gulf of Thailand: Bongkot G2/61 & Erawan G1/61
Offshore: Arab Emirates & Peninsular Malaysia

3 Acquisition & Inc. interest:

Murphy(Malaysia) Partex (ME)
Additional Stake in Sinphuhorm (Now: 80%; direct & indirect)

2 FIDs:

Mozambique Area 1 & Algeria Hassi Bir Rekaiz



PTTEP

R/P **7.5**
Yrs.

Power



5,026 MW

"The Forth largest in Thailand"
Thailand's largest SPP player

Oil



2,213

PTT Stations

1,911 Domestic/ 302 International

COD projects in 2019:



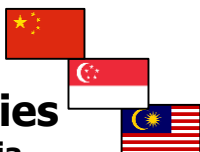
PTTOR's Non Oil business



1ST Store

In 3 New Countries

China Singapore Malaysia



Total 2,912 Domestic/238 International

3,150 Stores



JV with Central Group:
Café Amazon in Vietnam



SAI JAI
Station



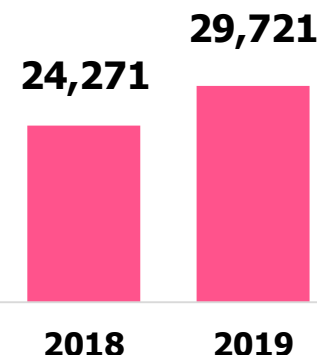
Digital technology to promote public health in PTT station

Petrochemical & Refinery

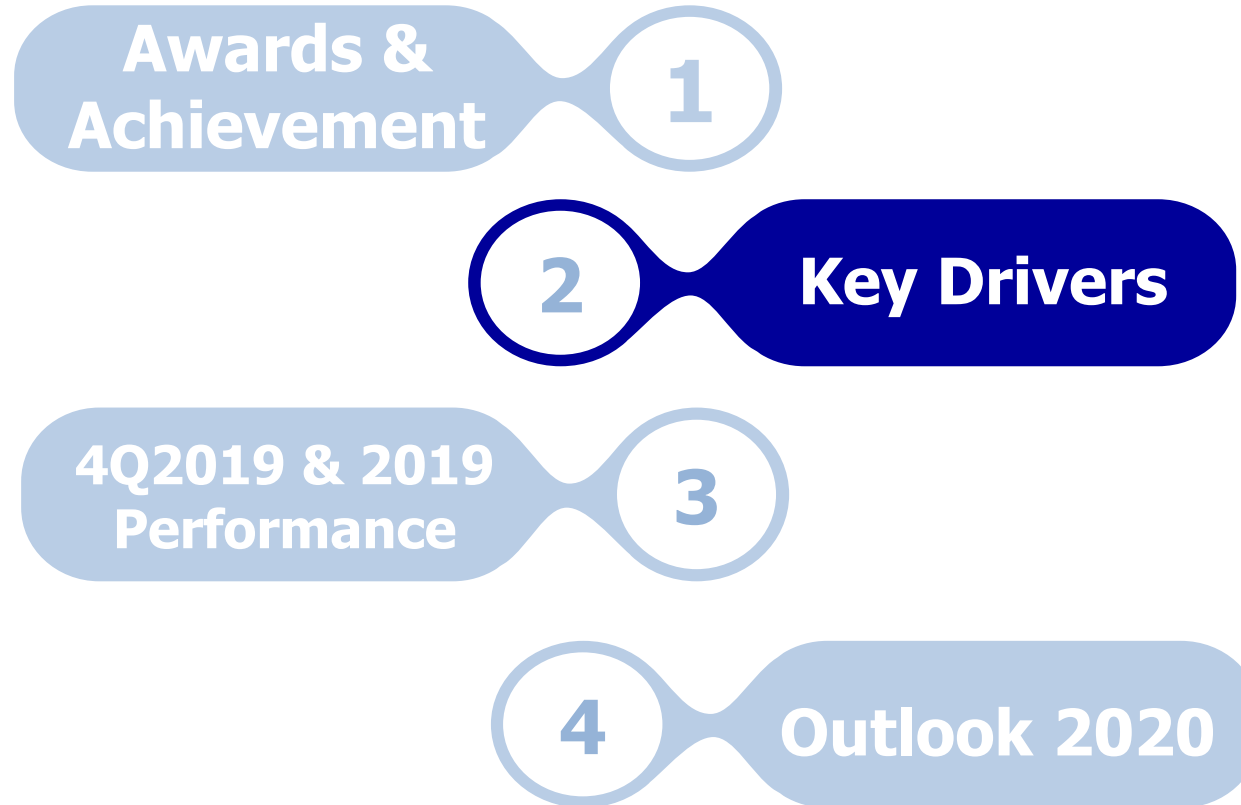


Productivity Improvement

+22%



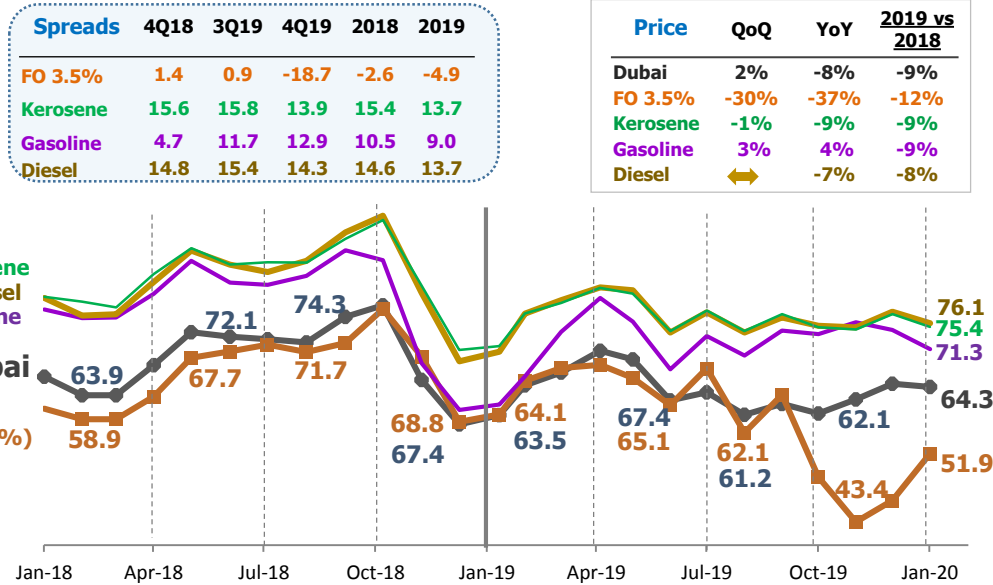
Contents



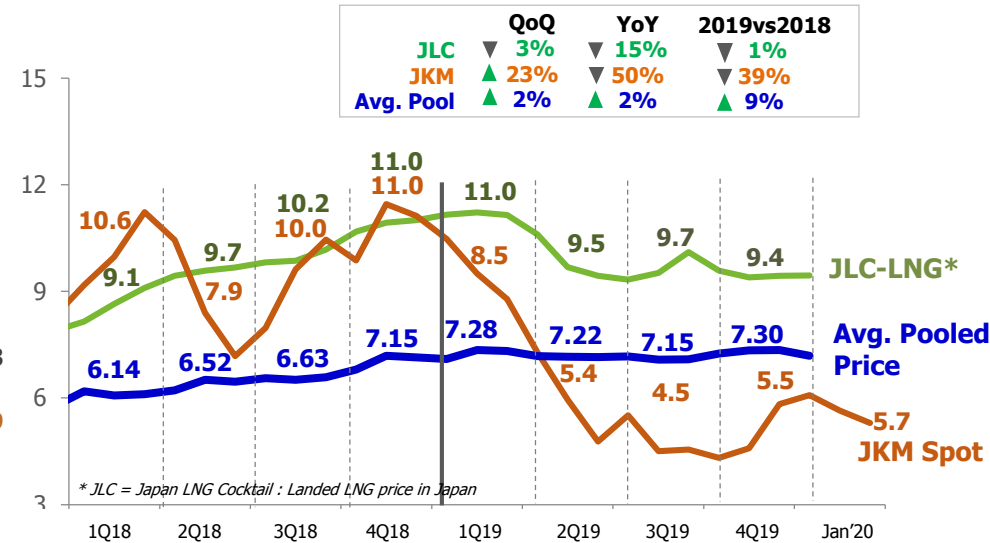
Key Business Drivers:

QoQ: Improved crude & gas prices, while downward of petchem prices due to weak global demand & new supply
2019 vs 2018: Increased pooled gas price but softened oil & petrochemical prices pursuant to market situation

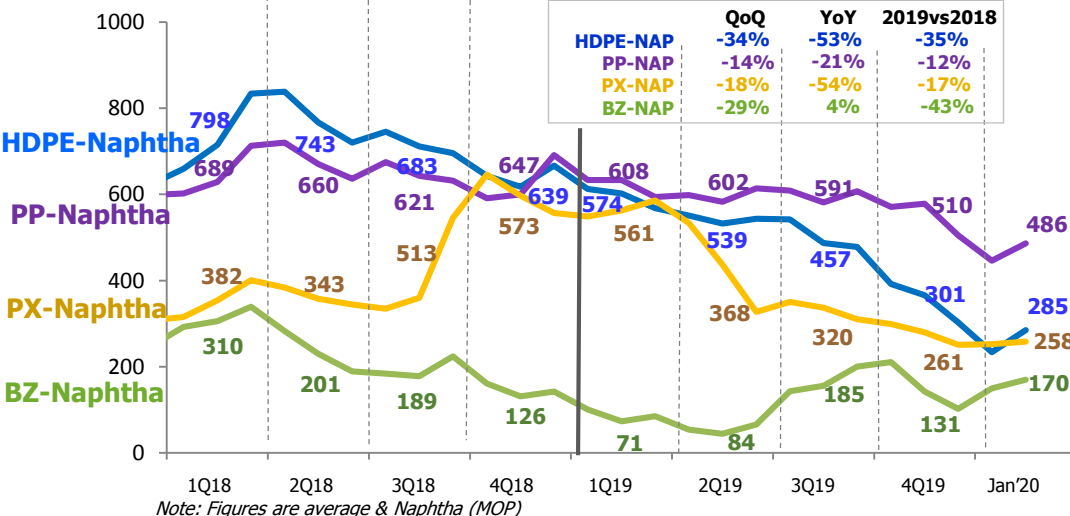
AVG. Petroleum Price (\$/bbl)



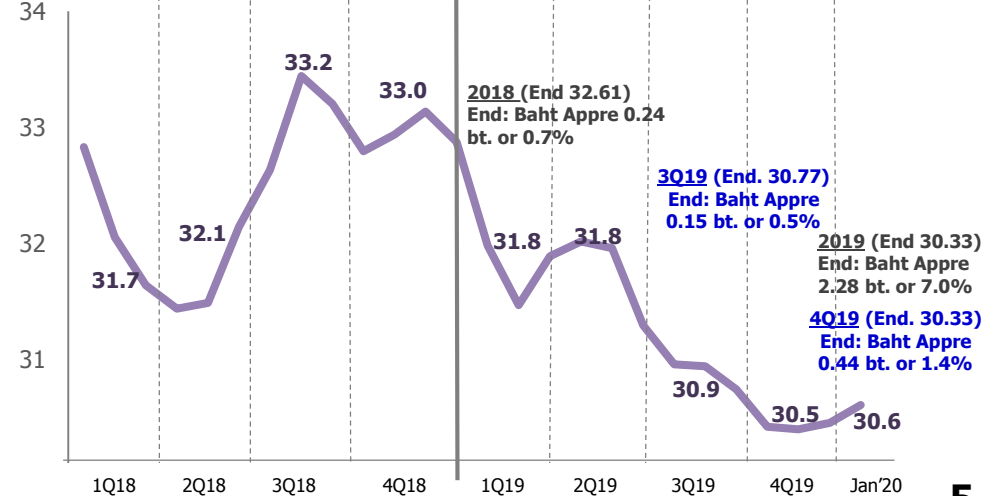
Avg. NG Prices (\$/MMBTU)



Petrochemical Spread (Avg. \$/ton)



AVG. FX (THB/USD)



Contents

**Awards &
Achievement**

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Key Drivers

**4Q2019 & 2019
Performance**

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Outlook 2020

PTT Consolidated Performance: 4Q19 & 2019

PTT's Integrated value chain benefits in the volatile market

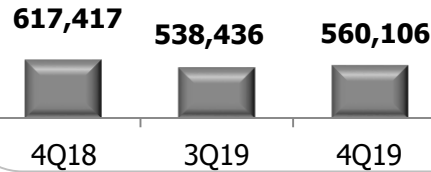
Avg. Dubai (USD/BBL) ▲2% QoQ
▼8% YoY

67.4 61.2 62.1 69.4 63.5

Unit : MMTHB

Revenue

▲4% QoQ
▼9% YoY



Revenue ▲4% QoQ

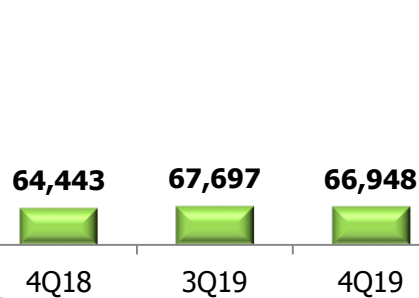
- + **Trading, Oil, EP** : Rose from higher selling prices due to increased crude oil price
- **P&R** : Dropped from lower petroleum & petrochemical prices
- **Gas** : Fell from lower selling prices linked to petchem prices

▼5% 2019 vs 2018

- **P&R, Trading, Oil** : Declined from lower selling prices because of petroleum & petrochemical price downtrend
- + **Power** : Increased from GLOW's revenue
- + **EP, Gas** : Rose from higher vol. & prices

EBITDA

▼1% QoQ
▲4% YoY



EBITDA ▼1% QoQ

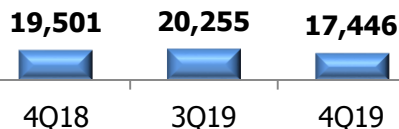
- **Gas** : Decrease in GSP's due to lower margin from downtrend of petrochemical referenced selling price
- **P&R** : Declined from lower GRM and lower petrochemical spreads
- + **EP** : Increase EBITDA from higher vol. & prices

▼18% 2019 vs 2018

- **P&R** : Declined EBITDA from lower GRM and lower Petrochemical spreads
- **GAS** : Lower from GSP's weaken selling prices vs. higher feed cost
- + **Power** : Increased from GLOW's EBITDA
- + **EP** : Stronger EBITDA from higher sales vol. & prices

Net Income

▼14% QoQ
▼11% YoY



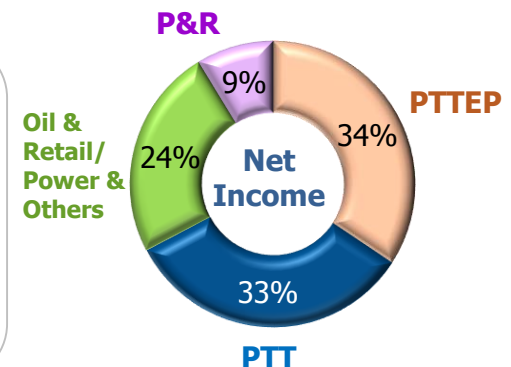
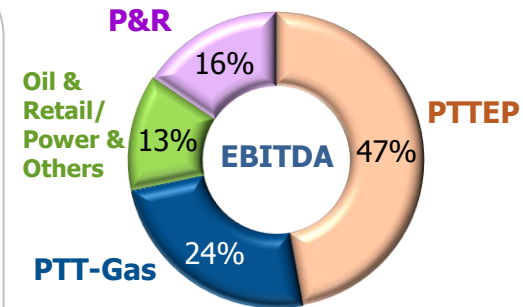
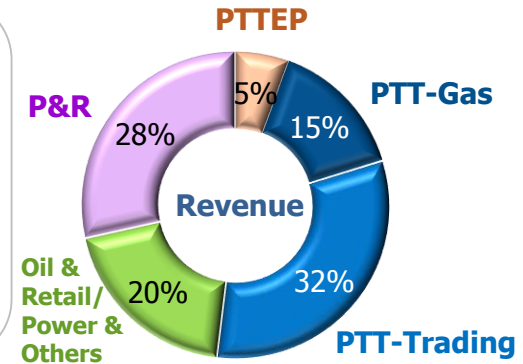
NI ▼14% QoQ

- Higher DD&A due to PTTEP's higher production vol.
- PTT's payment on damage from court's judgment & pipeline allowance for high speed train project
- + Lower tax expenses from lower performance
- + Higher FX gain from THB appreciation

▼22% 2019 vs 2018

- Higher DD&A due to power and E&P businesses
- + Lower tax expenses from lower performances
- + Higher gain on FX & lower loss on derivatives

2019

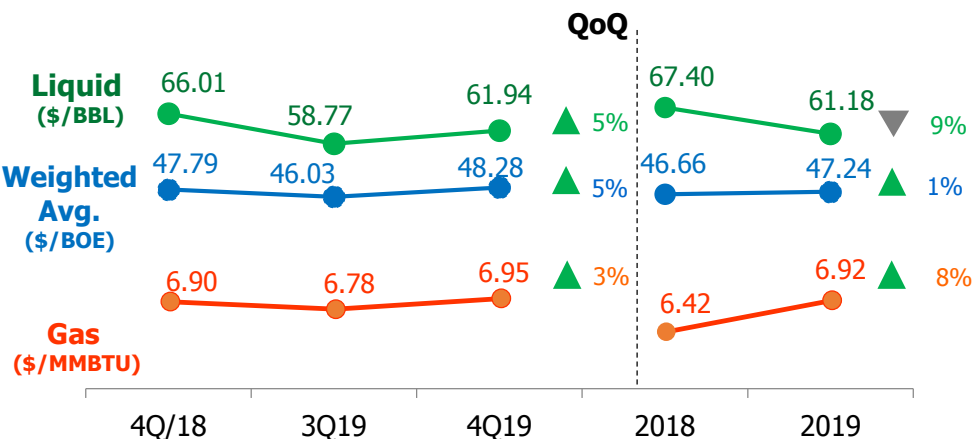


E&P : Prices & Volume and NI

QoQ: Highest record in volume after the acquisition of 3 major assets

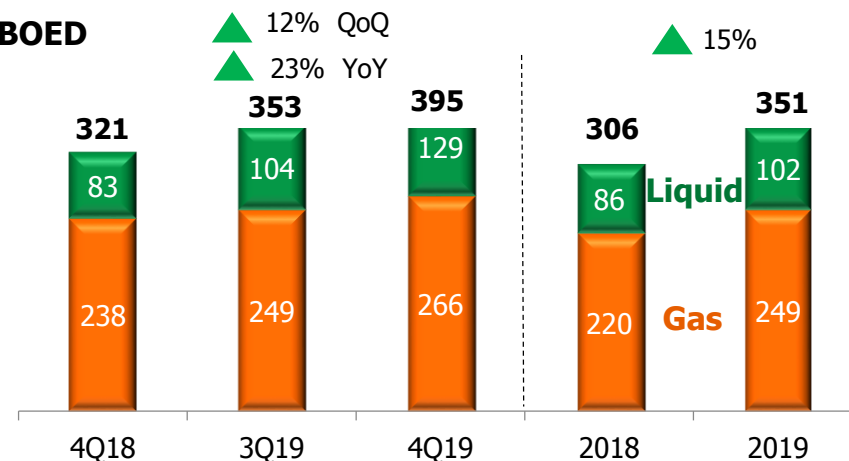
2019 vs 2018: Solid results the completion of additional stake in Bongkot and asset acquisitions in Murphy and Partex plus 7.5 year R/P ratio

Product Prices

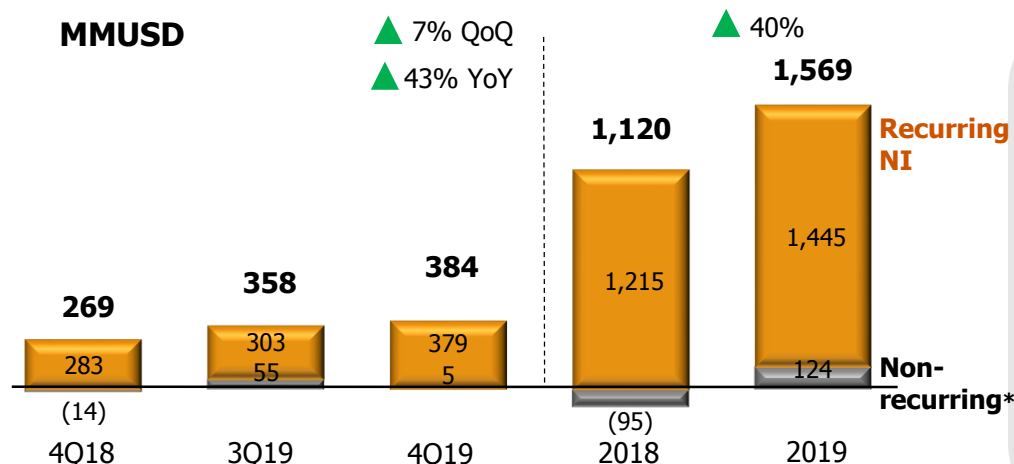


Sales Volume

KBOED



Net Income (100%)



* Includes Deferred tax from Functional currency, Current Tax from FX Revaluation, Gain/loss from Financial instruments, Gain/(loss) on FX, H1 incident Insurance Claim, and etc.

Key Highlights

QoQ

- + **Volume:** increased from Bongkot filed (3Q19 maintenance shutdown), Partex acquisition and Malaysia assets
- + **Avg. Selling Price:** increased driven by higher oil and gas price
- + **NI :** rose due to higher ASP & Vol. despite higher operating exp. from Malaysia assets & Partex, and higher DD&A following higher production vol.

Y2019 vs Y2018

- + **Volume:** increased from the acquisition of +22% Bongkot stakes, Malaysia & Partex
- + **Avg. Selling Price:** increased from higher gas price vs lower oil price
- + **NI :** increased due to higher sales Vol. & lower tax expenses from Baht appreciation and no loss from divestment, despite higher OPEX & DD&A

PTT EBITDA Breakdown by Business

(Unit: MMTHB)

Business Unit	4Q18	3Q19	4Q19	QoQ	YOY
Gas- EBITDA	21,373	18,100	15,509	↓ 14%	↓ 27%
• S&M	5,204	3,720	3,487	↓ 6%	↓ 33%
• TM	8,355	8,411	8,473	↑ 1%	↑ 1%
• GSP	6,239	4,125	2,581	↓ 37%	↓ 59%
• NGV	(1,309)	(1,032)	(982)	↑ 5%	↑ 25%
• Others ^{1/}	2,884	2,876	1,950	↓ 32%	↓ 32%

2018	2019	2019 vs 2018
94,083	71,407	↓ 24%
18,917	15,148	↓ 20%
35,157	34,037	↓ 3%
34,060	16,017	↓ 53%
(4,871)	(4,177)	↑ 14%
10,820	10,382	↓ 4%

Oil- EBITDA	907	4,290	3,364	↓ 22%	↑ >100%
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15,271	17,894	↑ 17%
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Trading^{2/} EBITDA	1,409	646	508	↓ 21%	↓ 64%
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5,929	2,130	↓ 64%
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Total^{3/}	23,689	23,036	19,381	↓ 16%	↓ 18%
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115,283	91,431	↓ 21%
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^{1/} Others include PTTLNG, PTTNGD, and PTTGL (restructured by excluding GPSC, PTTES, PTTDigital and ENCO)

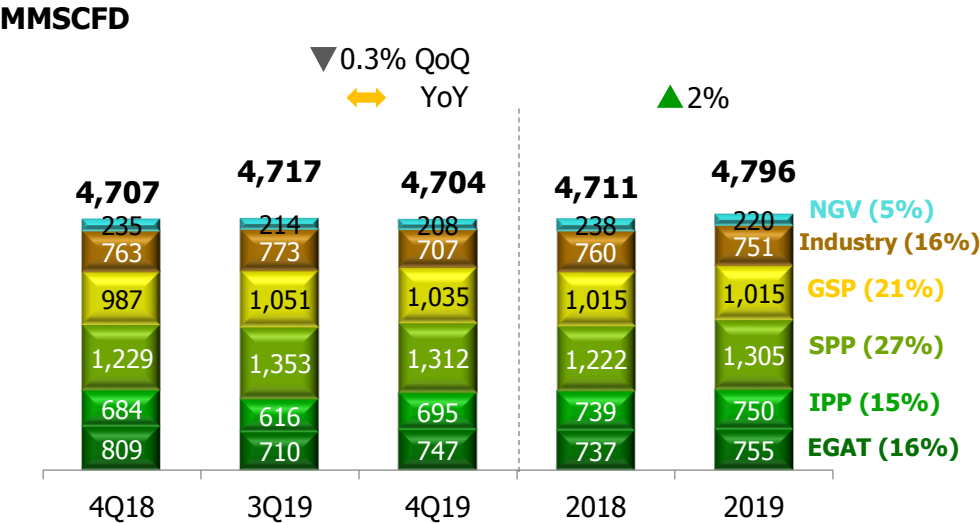
^{2/} MIS

^{3/} Included subsidiaries from all BUs

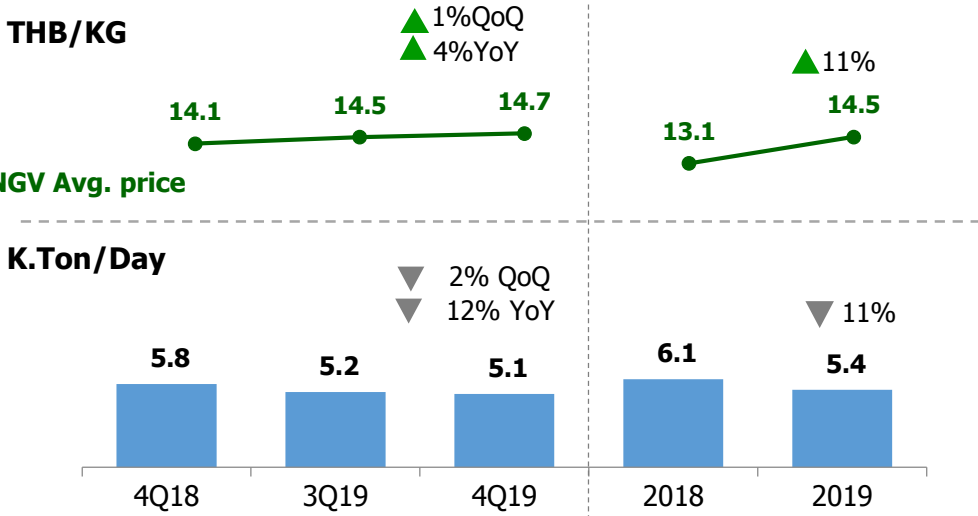
Gas Business : Prices & Sales Vol.

QoQ: Slightly drop in NG volume, increase in gas pooled price benefit to cost plus price structure in S&M
 2019 vs 2018: Higher NG volume from all Power customers and higher pooled gas price

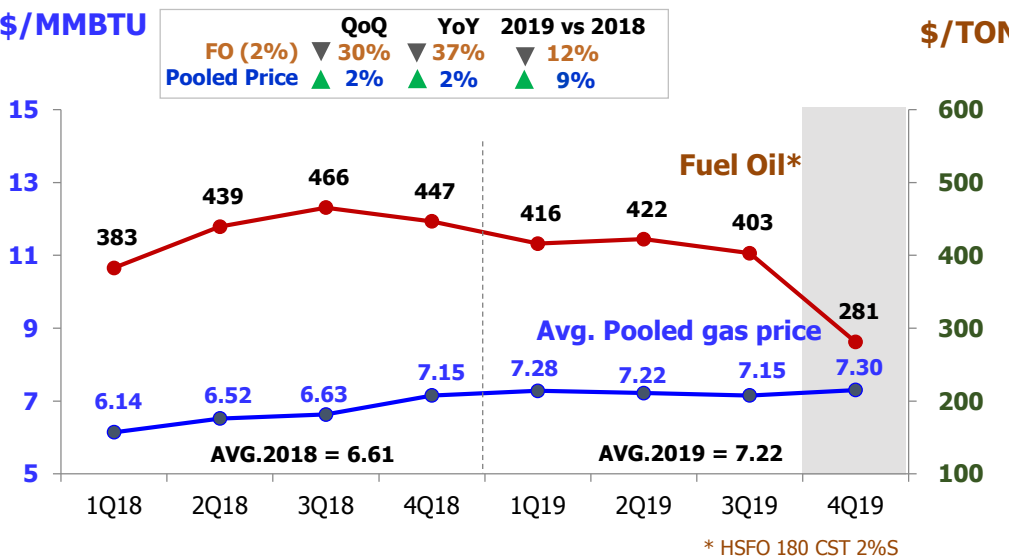
NG Customer Breakdown



NGV Price/Sales Volume



NG Price VS FO



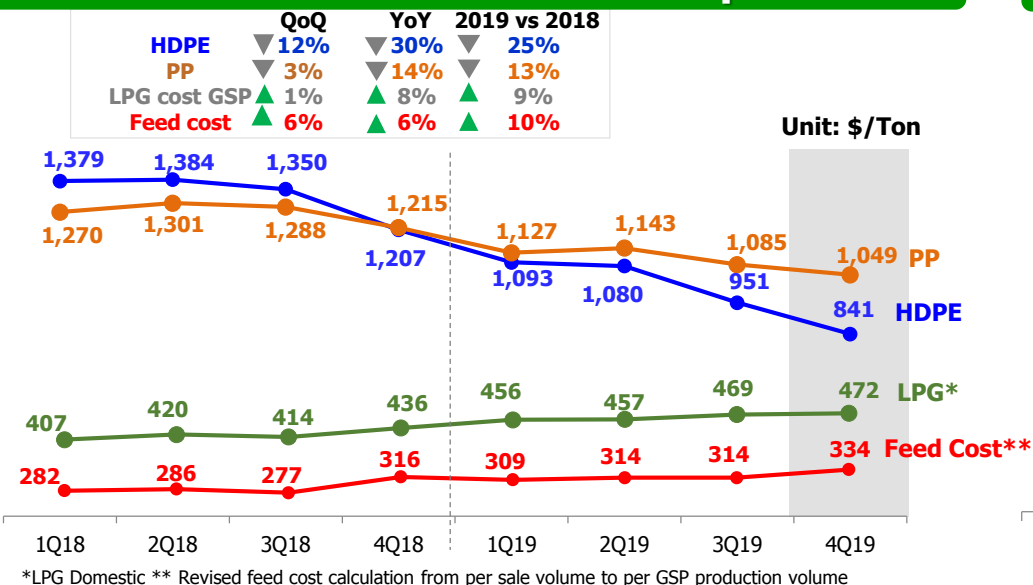
Key Highlights

- QoQ**
- **NG sales vol.** slightly decreased mainly from Industry & GSP vol., while Power vol. increased
 - Industry vol. decreased 9% due to refinery customers' T/A in 4Q19
 - GSP vol. decreased 2% as GSP#1 planned S/D in 4Q19 while no planned S/D in 3Q19
 - + Power vol. increased from less import from Laos due to unplanned S/D of Hongsa coal power plant
 - **Price:** Industrial selling prices decreased due to dropped FO price linked
 - **Avg. pooled gas price** slightly increased
 - + **NGV** selling price increased and sales vol. dropped
- 2019 vs 2018**
- + Higher **NG sales vol. from power sector**
 - + Power vol. increased 112 MMSCFD mainly from SPP due to 2019 longer period of summer than 2018
 - Industry vol. decreased from customers' T/A & economic slowdown and NGV vol. decreased
 - **Price:** Industrial selling prices decreased following FO price
 - **Avg. pooled gas price** increased 9% due to increase in last 6-12 months FO price
 - + **NGV** selling price increased and sales vol. dropped

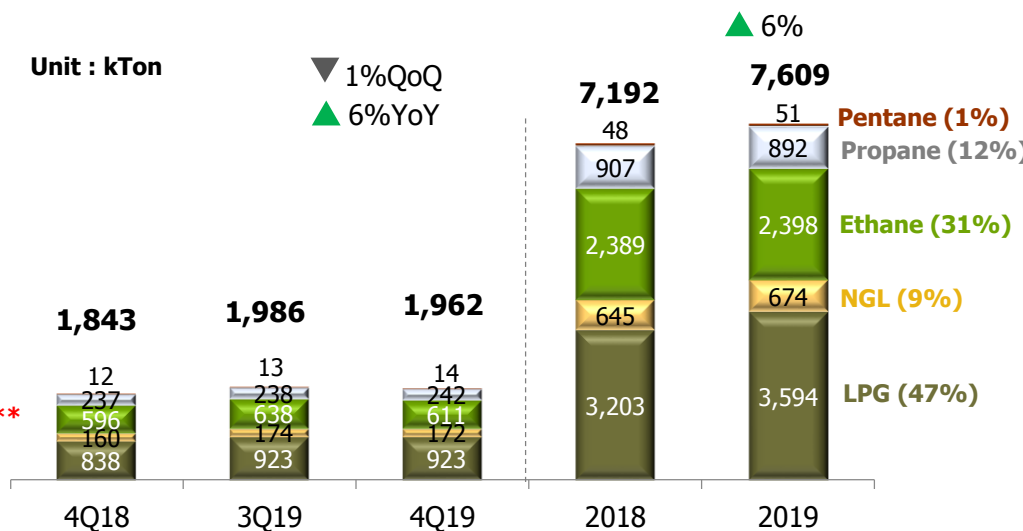
Gas Business Performance

QoQ: Lower Gas EBITDA; GSP and Industrial customers due to lower petrochem reference selling prices in line with global trend
2019 vs 2018 : Lower Gas EBITDA mainly due to lower GSP while lower loss from NGV and sustained TM Ebitda

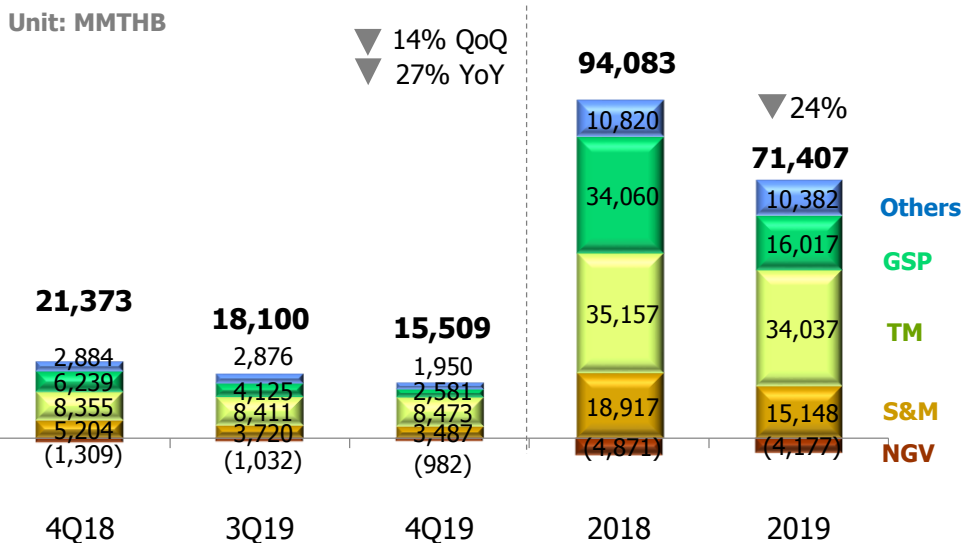
GSP Feed Cost vs Petrochem. price



GSP Sales Volume



Gas - EBITDA



Gas performance highlights

QoQ

- **GSP** performance declined from drop of PE&PP prices linked to selling prices & lower vol. from planned shutdown in 4Q19
- **Other** decreased mainly from lower performance of PTTNGD
- **S&M** decreased from lower industrial selling price from FO price linked & higher avg. pooled gas cost
- + **NGV** lower loss from public selling price lift up (Bt1/kg. each in 16 Sep 19) and lower sales vol.

2019 vs 2018

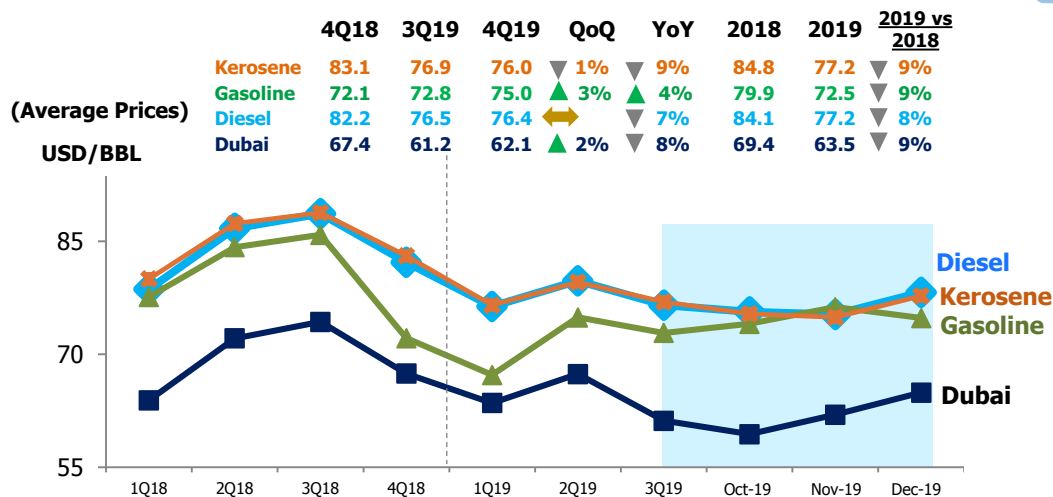
- **GSP** dropped significantly from lower petrochemical price linked to selling price, higher feed cost, despite higher volume
- **S&M** decreased from higher avg. pooled gas cost & industrial selling price drop from FO price linked
- **TM** decreased from lower TDC vol.
- + **NGV** lower loss from higher avg. selling price & lower sales volume

Oil BU & PTTOR

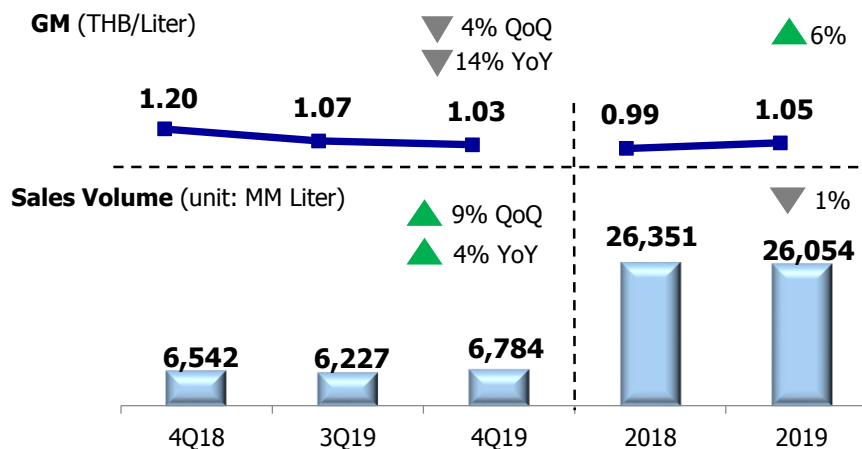
QoQ : Higher volume from seasonal demand despite higher stock loss

2019 vs 2018 : Improved EBITDA from better margin, lower stock loss, and non-oil expansion

Petroleum Prices



Gross margin¹/Sales volume²

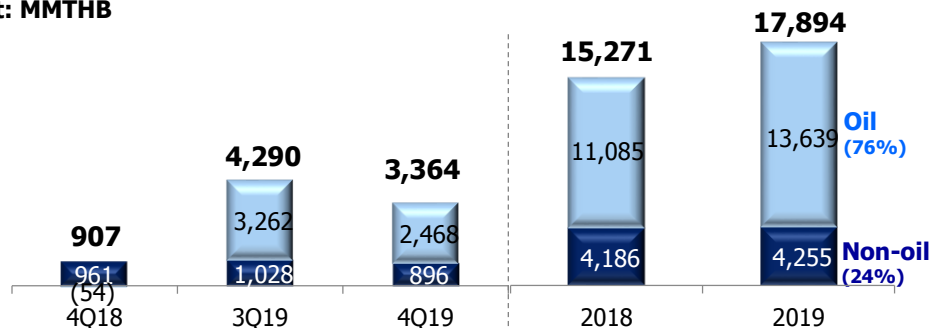


¹/Excluded Non-oil, stock gain/loss, non-recurring item ²/PTTOR only

Oil – EBITDA

	QoQ	YoY	2019 vs 2018
Oil	▼ 24%	▲ >100%	▲ 23%
Non-oil	▼ 13%	▼ 7%	▲ 2%
Total	▼ 22%	▲ >100%	▲ 17%

Unit: MMTHB



Key Highlights

QoQ

+ Volume: 4% improved from diesel & gasoline & jet from seasonal demand (more holiday in 4Q19)

- Margin: 4% lower from gasoline (slowdown price adj. during New Year)

- EBITDA: drop from higher stock loss and SG&A expenses

2019 vs 2018

- Vol: 1% dropped mostly from LPG due to heavy competition

+ Margin: 6% increased mainly from diesel tight marketing margin during high competition in 2Q18-3Q18

+ EBITDA: improved from higher oil gross margin & lower stock loss while non-oil rose mainly from Café Amazon expansion

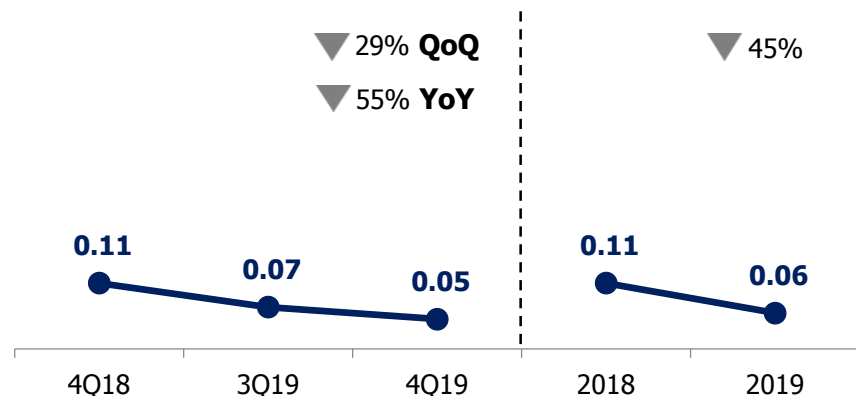
Trading BU:

QoQ: Higher volume while loss on MTM

2019 vs 2018 : Increased in sales volume from out-out activities but lower margin due to pressured domestic condensate

Gross Margin¹

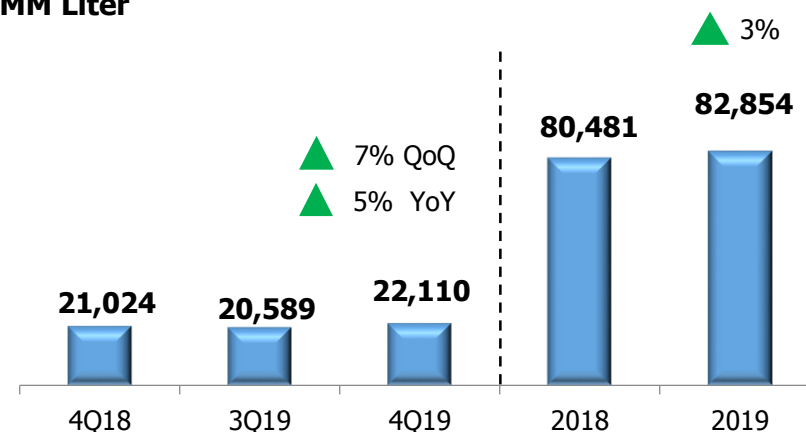
THB/Liter



¹ PTT Trading BU + trading subsidiaries: FX Adjusted + derivatives

Sales Volume²

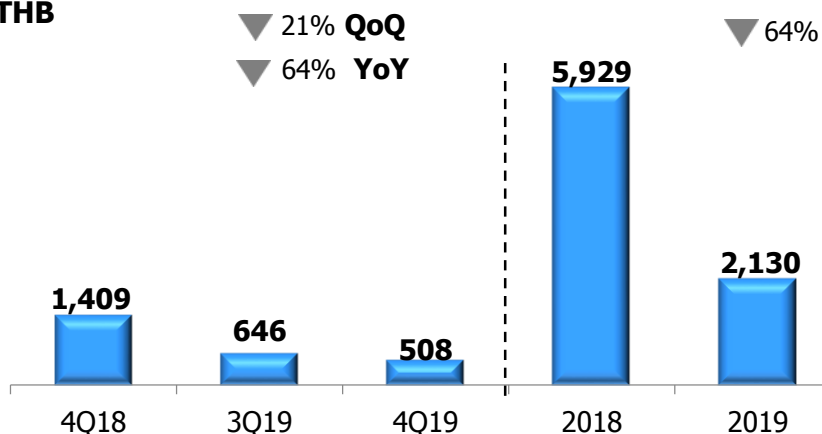
MM Liter



² PTT Trading BU + trading subsidiaries

Trading – EBITDA³

MMTHB



³ PTT Trading BU + trading subsidiaries: FX Adjusted + derivatives

Key Highlights

QoQ

- + **Volume** increased 7% mainly from trading expansion of petroleum products mainly in Asia market as trade tension eased
- **Margin** declined (0.07→0.05 THB/Liter) from loss on MTM; despite higher domestic condensate price following crude oil market
- **EBITDA** declined from loss on MTM

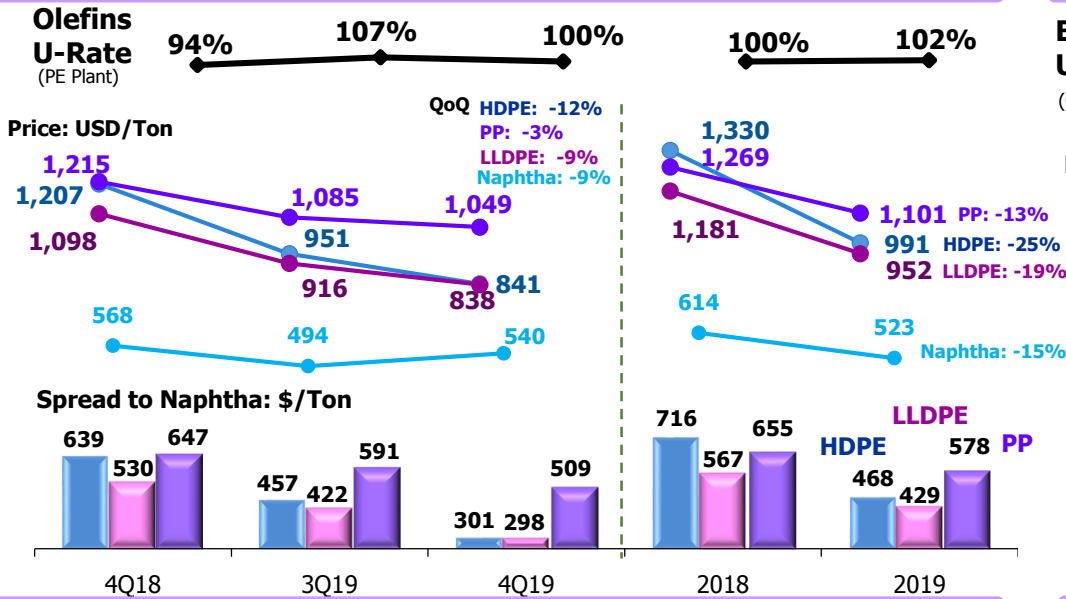
2018 vs 2019

- + **Volume** increased 3% due to higher out-out trading activities from International offices
- **Margin & EBITDA** reduced from lower domestic condensate price and more discount in 2019 due to lower prices of substitutes

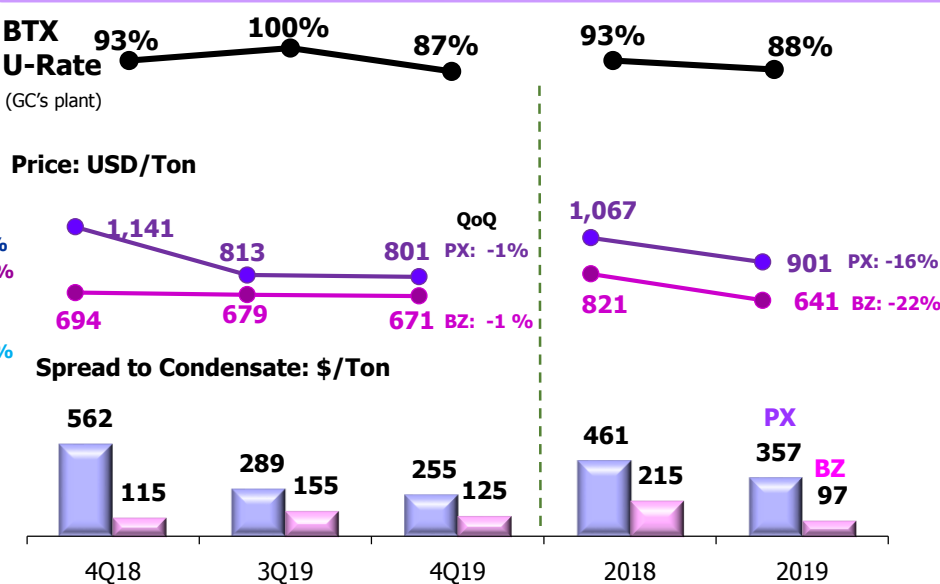
P&R BU

QoQ: Improved refining GRM from stock gain, despite pressure in petchem market due to lower demand & supply surplus
2019 vs 2018: Softer performance in line with global trend

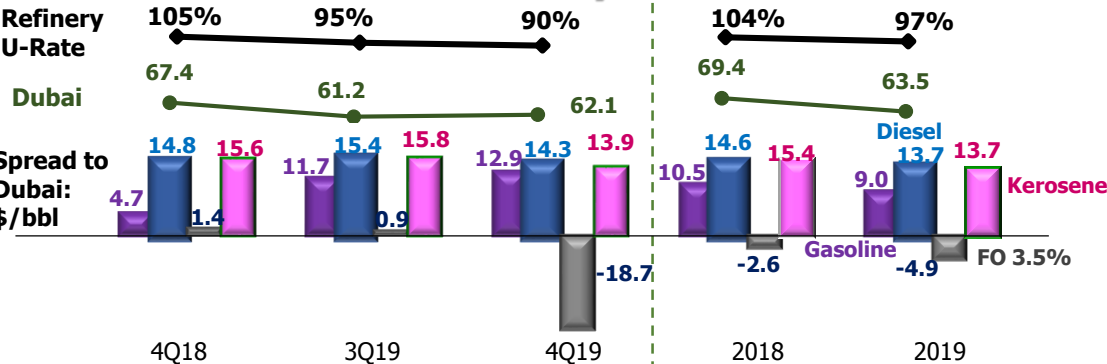
Olefins



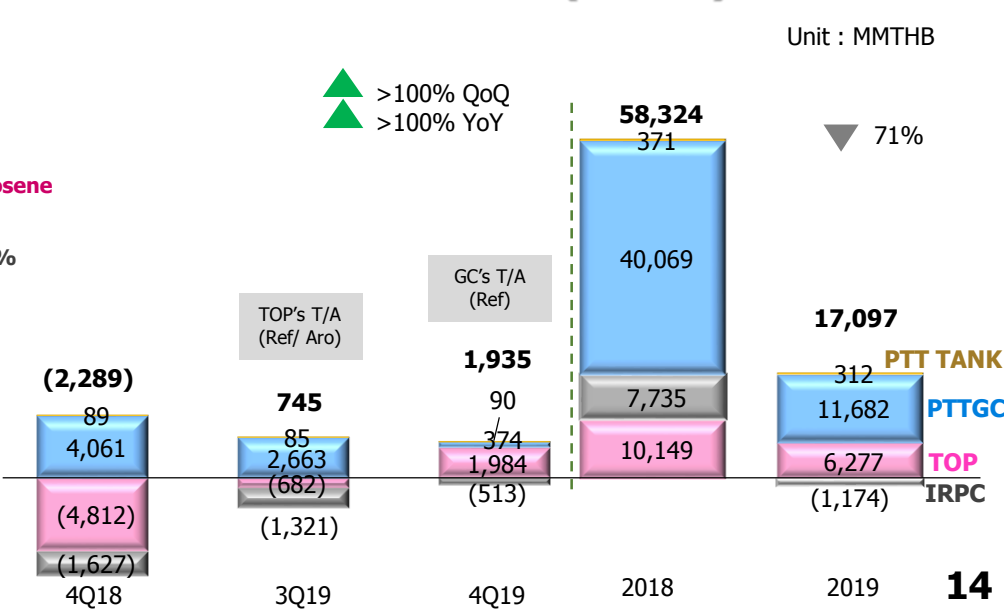
Aromatics



Refinery



Net Income (100%)



Unit: \$/BBL	4Q18	3Q19	4Q19	2018	2019
Mkt GRM	4.47	3.60	2.19	4.69	2.67
Stock G/L excl. NRV	(6.17)	(1.71)	0.89	(0.28)	0.21
Hedging G/L	(0.15)	(0.21)	0.44	(0.05)	0.13
A/C GRM	(1.85)	1.68	3.52	4.36	3.01

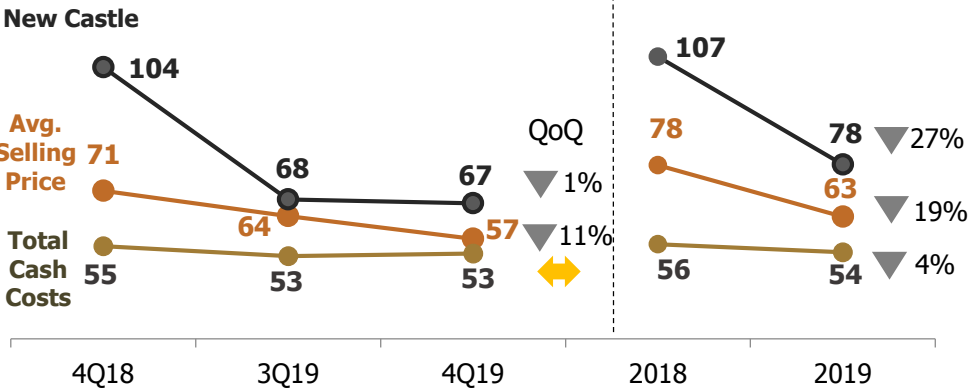
Other Businesses : Coal business (SAR)

QoQ: Performance be impacted by coal price downtrend

2019 vs 2018 : Volume and coal price dropped in line with slow down of global demand and environmental concern

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

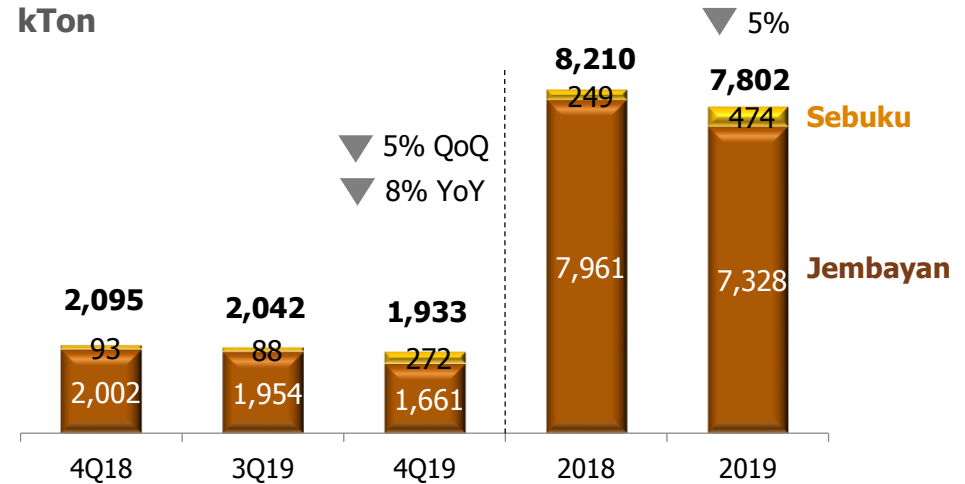
Unit: \$/Ton



^{1/}Average Calorific value ~ 5,450 kcal/kg

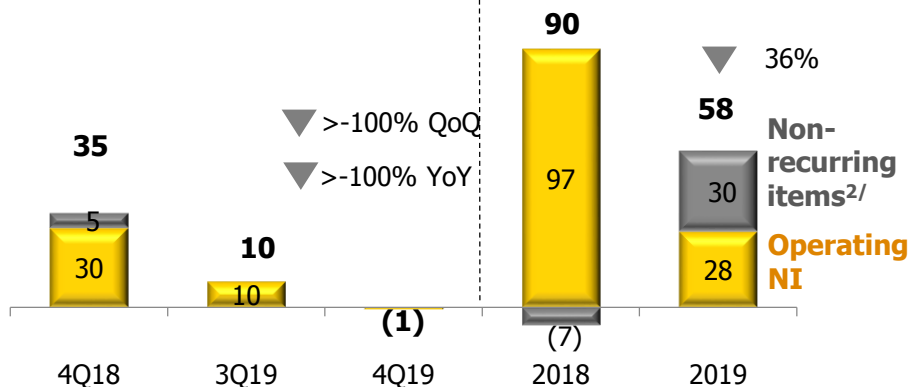
Sales Volume

kTon



Net income

Unit: MMUSD



^{2/}Non-recurring items include the payback on tax lawsuit case & impairment

Key Highlights

QoQ

- **Lower ASP** following New Castle Coal price and lower selling price of L/T contract
- **Vol. decreased** from lower export from Jembayan coal mine
- **Net Income** reduced from lower ASP & Vol.

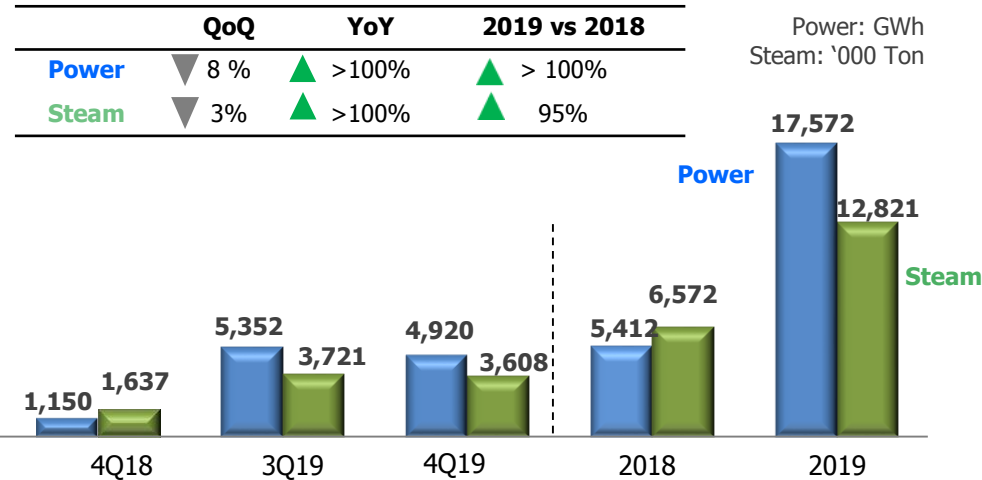
2019 vs 2018

- **ASP & Cash cost drop** following coal price
- **Vol. dropped** from lower global demand and China & Taiwan import restriction due to pollution concern
- **Net Income**: decreased from lower volume & selling price, despite past tax lawsuits net payback

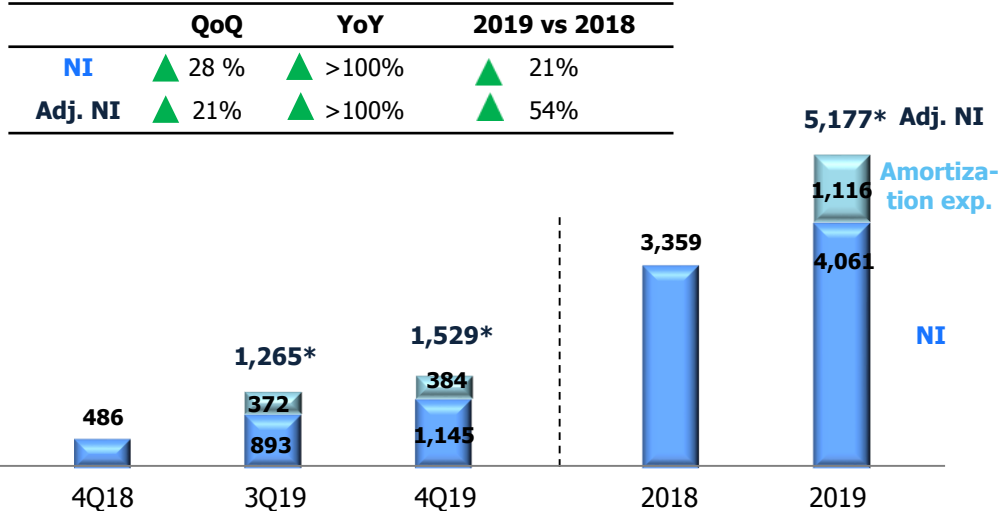
TEG Businesses : Power - GPSC

QoQ: Performance increased from COD of Xayaburi & CUP-4 and capital restructure
2019 vs 2018: Better performance from GPSC's acquisition of GLOW

Sales Volume

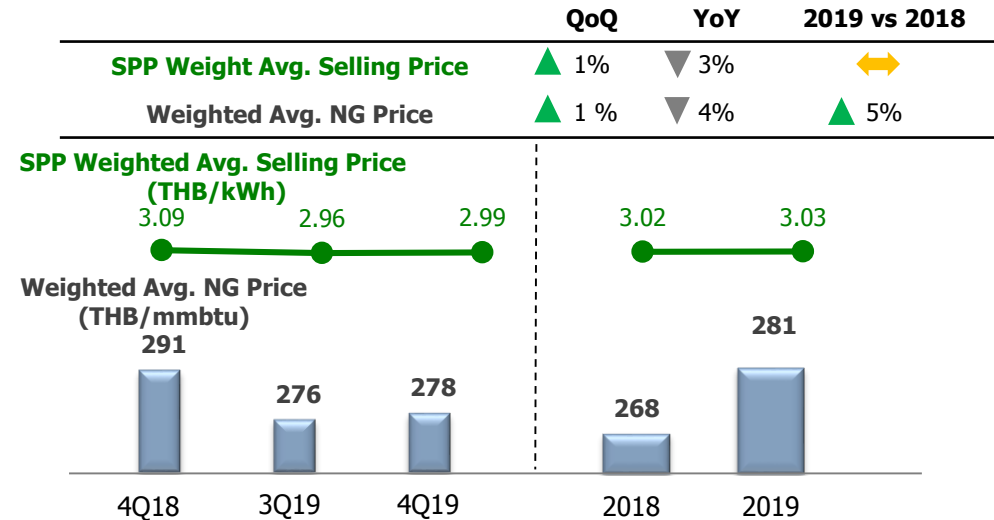


Net Income



*Adjusted Net Income: The net profit attribute to the company that excludes the "fair value of intangible asset from the acquisition of GLOW" which is the amortization expense

Weighted Avg. Selling & NG Prices



Key Highlights

QoQ

- Sales vol. decreased due to shutdown & low seasonal demand.
- Avg. selling price maintained and in line with natural gas price.
- + NI increased from recognition of COD projects (Xayaburi & GPSC's CUP-4) and lower finance cost due to capital restructure.

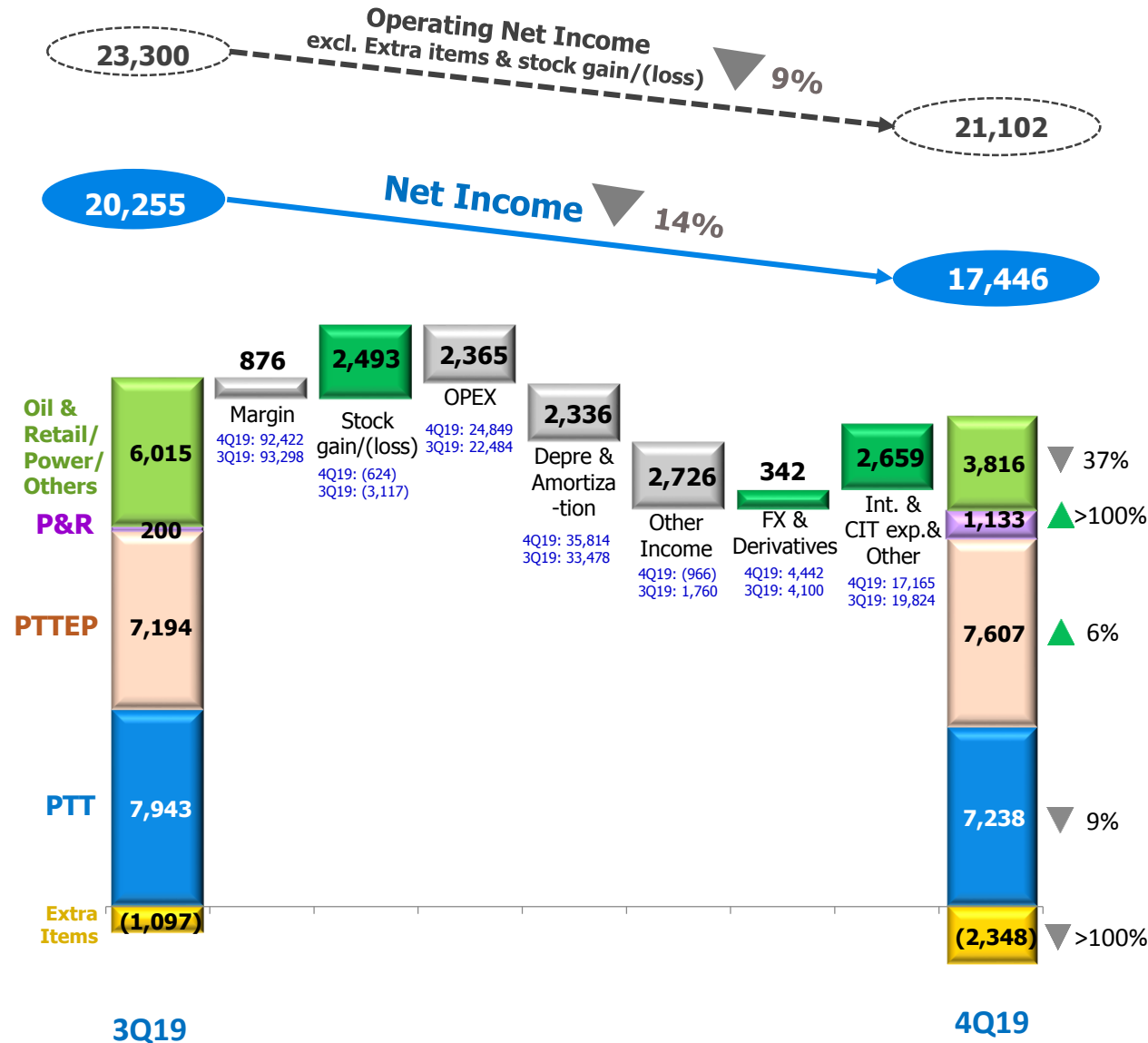
2019 vs 2018

- + Sales vol. increased from the recognition of GLOW's performance.
- + Avg. selling price slightly increase from higher gas price in 2019.
- + NI increased from the recognition of GLOW's performance, COD of Xayaburi, CUP-4, and Num Lik 1 Power plants and no major maintenance of Sriracha power plant; despite higher DD&A, amortization cost of goodwill & finance cost.

4Q19 vs 3Q19 Performance (QoQ):

Stable and better performance in most businesses if excluding non-recurring items

MMTHB



Oil & retail/ Power/ Others ▼

Others: ▼

- **Trading Affiliates (PTTT)**: Loss on derivatives (MTM)
- **PTTLNG**: higher FX loss from AR forward contract
- **Coal**: Lower selling prices & sales vol.

Oil & Retail ▼

- Higher stock loss
- Margin decreased; gasoline due to delay of retail price adj.
- Higher SG&A
- + Diesel & Gasoline vol. increased from seasonal demand

Power ▲

- + Lower finance cost after capital increase
- + COD Xayaburi & CUP-4
- Softer performance due to seasonal and shutdown

Petrochemical & Refining ▲

- + Stock gain in 4Q19 while stock loss in 3Q19
- Lower GRM from reduced products spread, especially FO
- Olefins: all products spreads dropped from slow economy demand and new supply
- Aromatics: PX & BZ spread decreased from supply surplus

PTTEP ▲

- + Higher sales vol. from Bongkot & Malaysia Project, and Partex acquisition
- + Higher ASP from higher gas & crude oil prices

Gas ▼

- GSP: lower selling prices, lower vol. & higher feed cost
- S&M: Industrial customer's lower selling prices from FO referenced price

Trading ▼

- Loss on Derivatives (MTM)
- + Improved sales vol.

Extra Items ▲

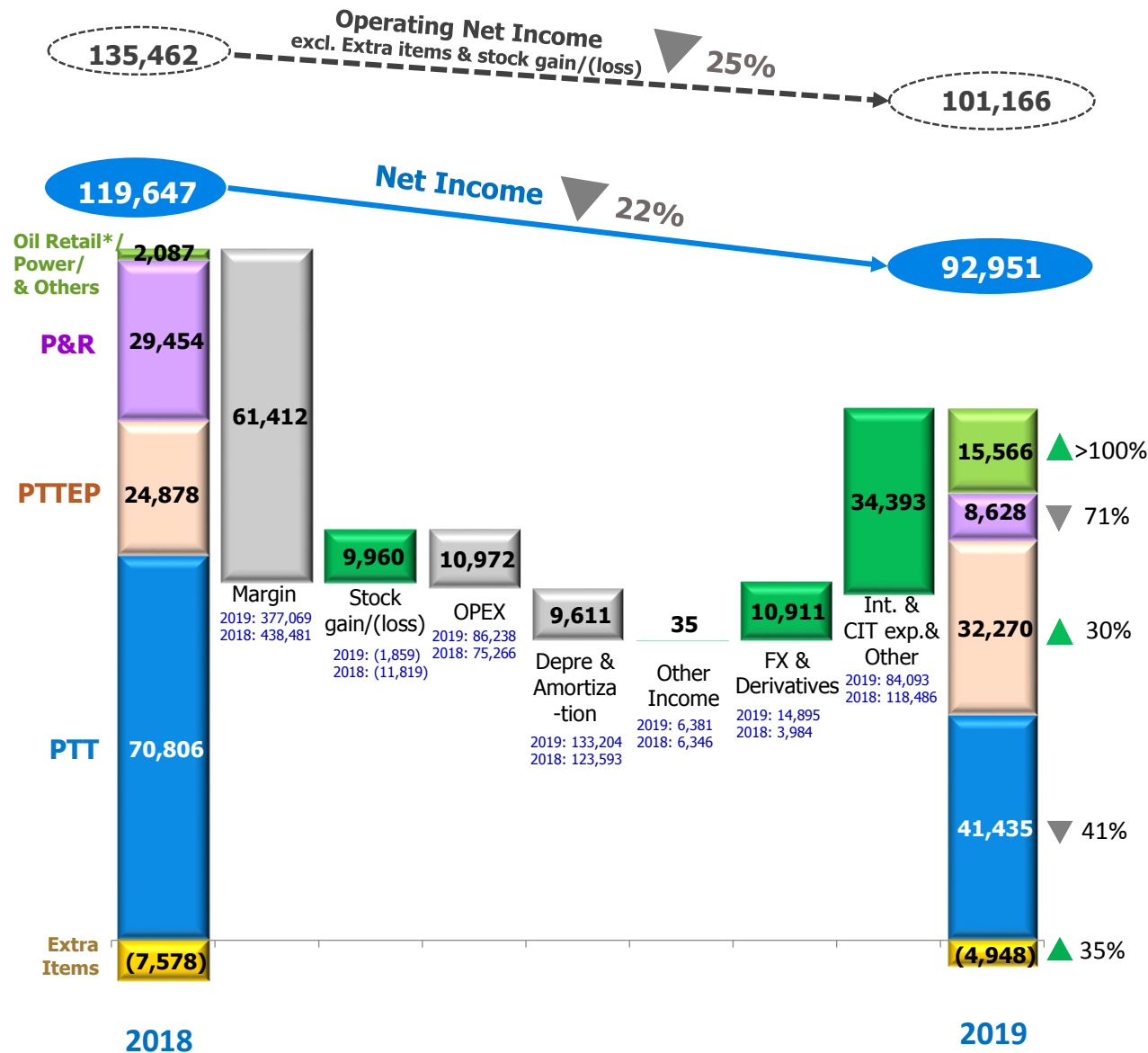
3Q19: PTT's Additional Employee Compensation according to the State Enterprise Labor Relations Act.

4Q19: PTT's payment on damage from court's judgment (NACAP) & pipeline allowance for high speed train project : IRPC's reverse impairment

2019 vs 2018 Performance :

Soften performance from squeezed margin due to pressure in both petroleum and petrochemical market

MMTHB



Oil & retail / Power / Others ▲

Oil & Retail ▲

- + Higher diesel and gasoline vol. from station expansion & margin increased
- + Lower stock loss
- + Non-Oil rose from café Amazon expansion

Power ▲

- + Performance rose from GLOW since 1Q19 & Projects' COD in 4Q19
- Higher finance cost and DD&A expenses from Glow acquisition

Others: ▲

- + **PTTLNG**: Improved from higher revenue recognition of LNG Terminal 1 (10 MTA)
- **Coal**: Weaken ASP according to coal price downtrend & lower vol. due to soften global demand

Petrochemical & Refining ▼

- Weaken petchem spreads both Olefins & Aromatics
- Soften Mkt. GRM from lower product spreads and higher crude premium
- Lower vol. from more T/A in 2019 than 2018
- + Stock gain in 2019 VS stock loss in 2018

PTTEP ▲

- + Higher Vol. from additional stake in Bongkot (+22.22%) and M&A (Murphy & Partex)
- + Improved ASP following higher gas price

Gas ▼

- GSP dropped from lower selling prices from downtrend of ref. petchem product prices & higher feed cost; despite higher vol.
- S&M: industrial margin squeezed from lower ASP & higher NG cost

Trading ▼


- Margin decreased from domestic condensate
- + Sales vol. increased from Out-Out expansion

Extra Items ▲

- 2019:**
- PTT Group: Additional Employee Compensation : Labor Protection Act 2019
 - PTT's payment on damage from court's judgement (NACAP)
 - PTT's pipeline allowance from high speed train project
- 2018:**
- Tax effect from oil business transferred in 3Q18
 - GGC: Expenses of raw material derogation
 - PTTEP's loss on Montara Divestment

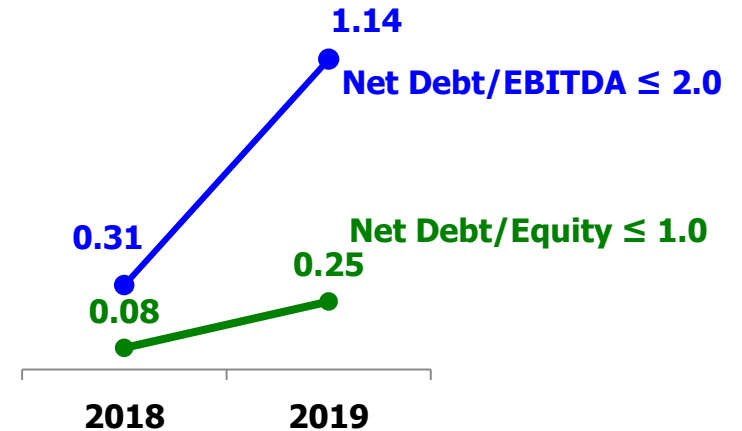
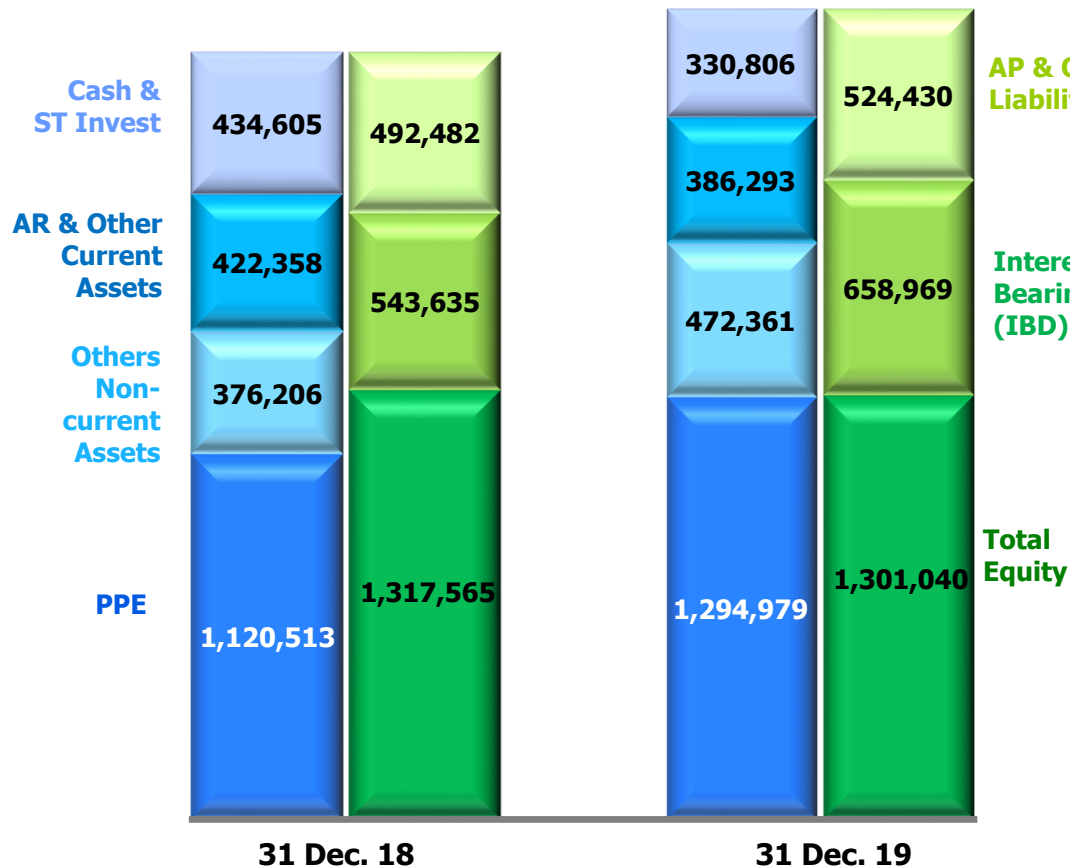
Statement of Financial Position

MMTHB

2,353,682  2,484,439

Assets/Liabilities increased : mainly from

- + Increased in PPE from;
 - GPSC's acquisition of Glow
 - PTTEP's acquisition of Murphy and Partex
- + Increased in IBD from Glow acquisition



PTT Ratings at Sovereign Level

- FC : Moody's (Baa1), S&P* (BBB+), FITCH (BBB+)
- LC : Moody's (Baa1), S&P* (A-), FITCH (BBB+)

*S&P final rating uplift 1 notch at LC only but maintain for FC

Statements of Consolidated Cash Flows : YE 2019

Operating	2018 269,405	2019 265,107
Net Income	119,647	92,951
Changes in assets & liabilities	(42,439)	26,663
Income Tax	(45,371)	(65,259)
Non-Cash Adjustment	237,568	210,752

Investing	2018 (35,752)	2019 (188,218)
CAPEX (PP&E, Intangible asset)	(108,560)	(149,951)
Investment (Sub. & Affiliates & others)	(38,035)	(161,121)
Current investment	93,821	108,719
Dividend/Interest Received	13,173	11,213
Others	3,851	2,922

Free Cash flow	
233,653	76,889



Adjustment	
3,810	(6,305)

Financing	(111,468)	(70,226)
Repayment Loans	(137,770)	(103,578)
Interest paid	(28,148)	(25,462)
Dividend paid	(85,035)	(81,351)
Received from share issue	93	18,346
Received from loans/Bonds	148,595	163,809
Others	(9,202)	(41,990)

Beginning Cash & Cash Equivalents	
166,189	292,184
229,651	142,421
17,602	10,876
413,442	445,481



Cash In/(Out)	
125,995	358
(87,230)	(104,158)
(6,726)	(4,189)
32,039	(107,989)



Ending Cash & Cash Equivalents	292,184	292,542
Current inv.	142,421	38,263
AFS* inv.	10,876	6,687
Ending cash incl. S/T investment	445,481	337,492

Cash & cash eqi

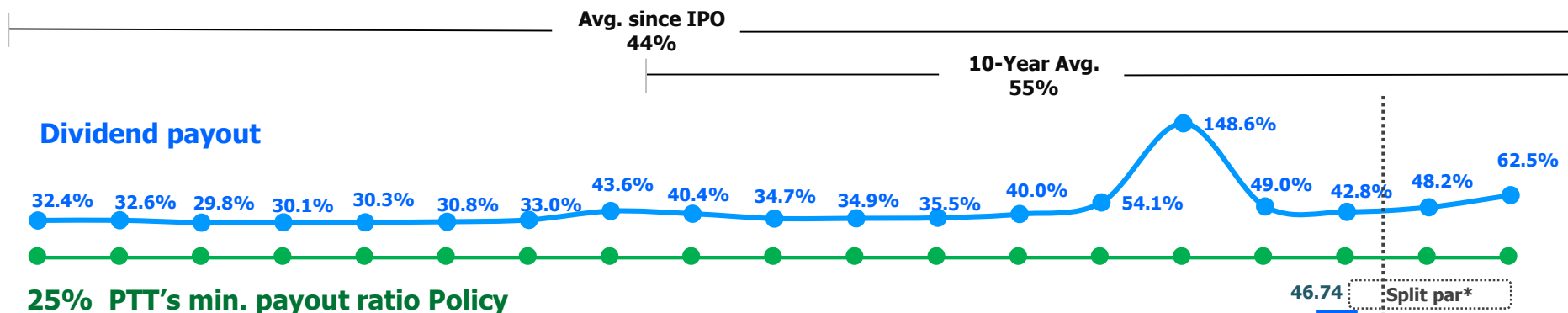
Current inv.

AFS* inv.

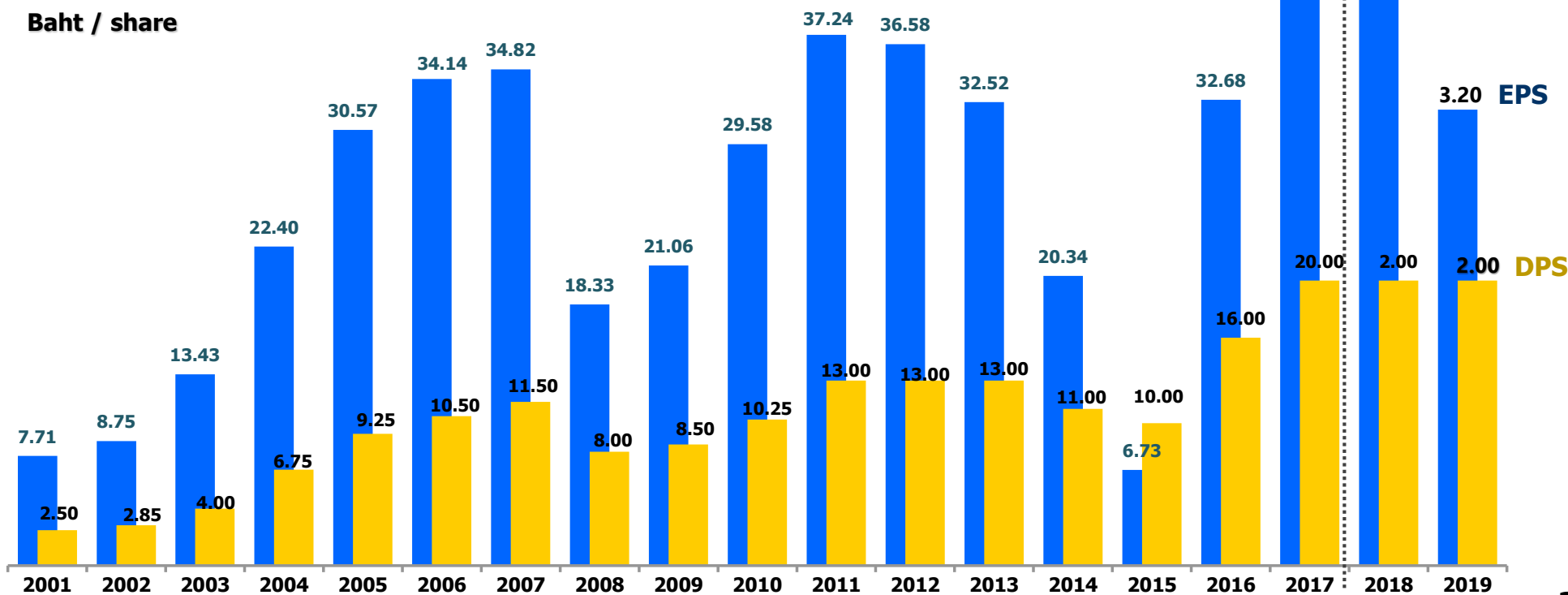
*AFS = Available for sales

Dividend Policy & Historical Payments

2019 Dividend payout at 62.5% and dividend yield at 4.5%



Baht / share

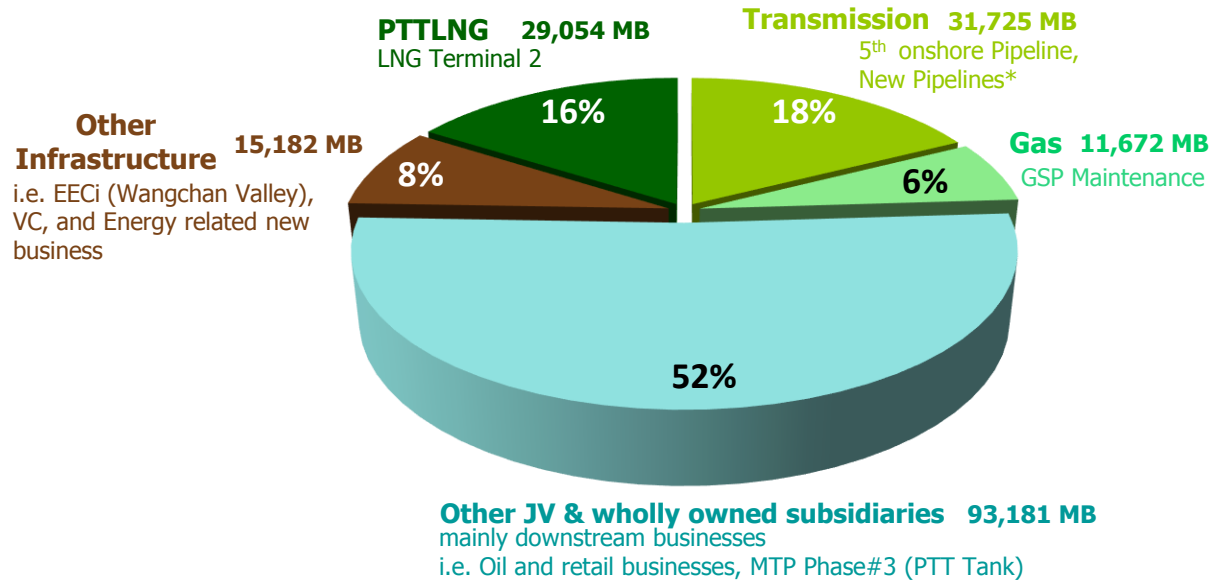


* Split par value from 10 to 1 Baht/share since 24 April 2018

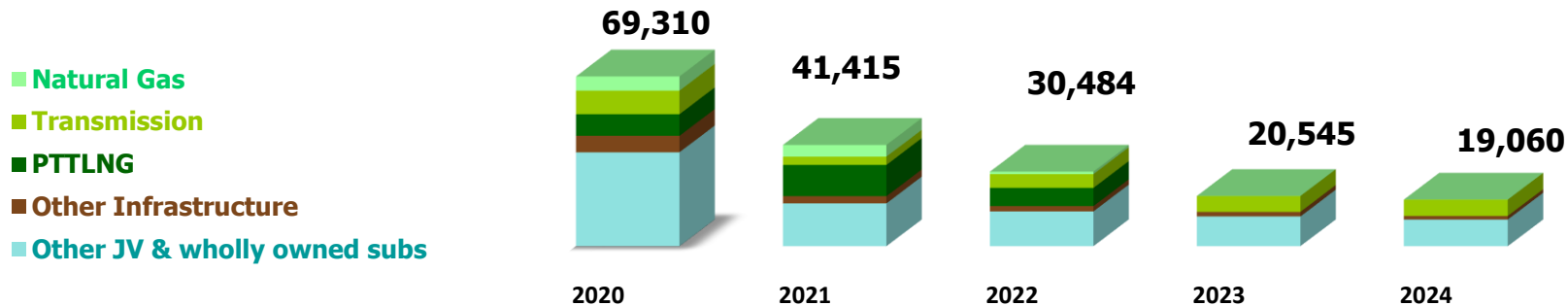
PTT: Committed CAPEX (PTT and Wholly Owned Subsidiaries)

Focus on core businesses (Gas and Downstream)

PTT 5-Years (2020-2024) Committed CAPEX Plan totaling Baht 180,814 million or ~ USD 6 bn



Unit: MMTHB



Note: 2020-2024 CAPEX budget approved by BOD on 16 Jan 20

* Subject to project's approval

The Provisional CAPEX ~Bt 204 bn which mainly focus on LNG Value Chain/LNG Hub, Gas-to-power project and New Businesses (Renewable energy, Life Sciences)

Committed CAPEX: PTT Group

Total committed CAPEX during 2020-2024* : ~Bt 865 bn or USD 28 bn

Unit: MMTHB

Downstream Business

Key Projects

- **TOP**: Clean Fuel Project (CFP)
- **GC**: Olefin reconfiguration Plant, Propylene Oxide/Polyols,
- **IRPC**: MARS
- **PTTOR**: Oil & Retail Expansion in domestic & international

Power Business

Key Projects

- ERU
- Synergy Capture
- Renewable Energy (Solar/Wind)

PTT Business

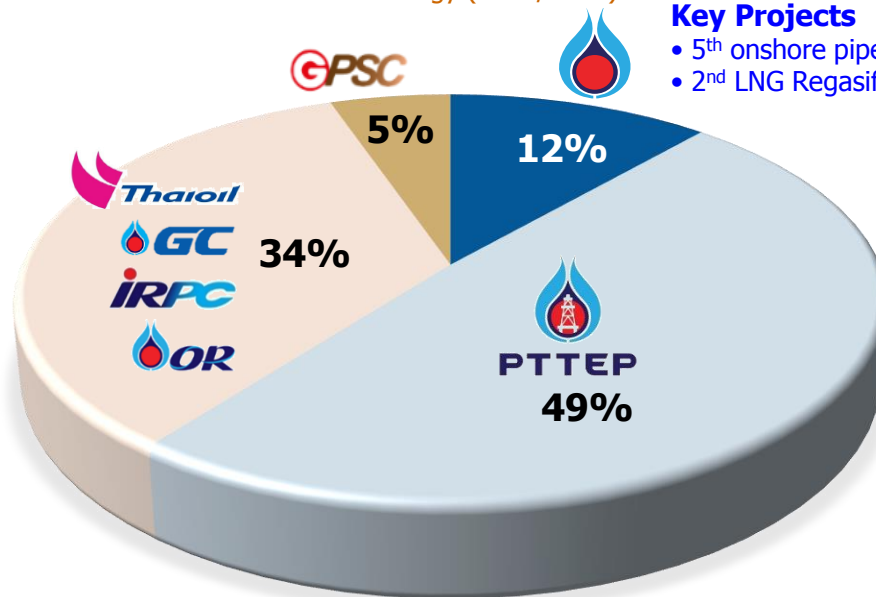
Key Projects

- 5th onshore pipeline
- 2nd LNG Regasification Terminal

Upstream Business

Key Projects

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



Contents

**Awards &
Achievement**

1

2

Key Drivers

**4Q2019 & 2019
Performance**

3

4

Outlook 2020

Global Economic Outlook:

Precarious Growth amid Difficult Headwinds

US economy : Moderate, but Solid, Growth



2020 GDP Growth: 2%



- + **Strong labor market** to underpin consumption
- + **Low interest rates to help boost growth**



- **Return to a neutral fiscal stance**
- **Trade-related policy uncertainty**, despite intermittent favorable news on US-China trade negotiations

Chinese economy: Steady Slowdown in Growth?



2020 GDP Growth: 6%



- + Beijing's commitment to support the economy via **fiscal stimulus and accommodative monetary policy**, while delivering on promised reforms
- + **"Phase One" trade deal with the US** likely to alleviate near-term cyclical weakness



- **Coronavirus outbreak**
- **Unresolved disputes** on broader **US-China economic relations**

Eurozone economy: Uptick in Growth



2020 GDP Growth: 1.3%



- + **Improving labor market**
- + **Ultra-accommodative monetary policy** and pre-emptive **fiscal stimulus**
- + **Improvement in German auto sector** as disruptions from new emission standard start to fade



- **Chronic political instability** in Italy and Spain
- Talk on the **UK's future relationship with the EU**

Sources: International Industry Research and Economics Department, IMF

Remark: 2020 GDP Growth as of Jan 2020

Asian Economic Outlook:

Caught in Prolonged Uncertainty

Japan economy: Moderate in Growth



2020 GDP Growth: 0.7%



- + **Sustained accommodative monetary stance**
- + **Boost from the government spending package**
- + **Tokyo Olympics and Paralympics** - linked spending by tourists



- **Sales tax hike** to constrain private consumption
- **Sluggish global economy** poised to drag on exports
- A trend **decline in the labor force**

India economy : Recovery from Decelerating Growth



2020 GDP Growth: 5.8%



- + **Monetary policy easing**
- + **Reduction in corporate income tax rates**
- + **Government programs** to support rural consumption



- **Risk aversion and high level of bad debt** in the banking sector possibly impeding lending, restraining consumption and investment growth

Thai economy: Moderate Growth to Continue



2020 GDP Growth:
1.5%-2.5%*



- + **Acceleration of budget disbursement** following delayed adoption of the FY 2020 budget
- + **Public investment**, with more infrastructure projects entering construction
- + **BOT cuts key rate to record-low 1%**



- **Lost tourism revenue** over coronavirus
- **The 2020 drought**
- **Budget bill controversy**
- **Challenging merchandise export conditions**
- **Divisive politics** adversely affecting confidence

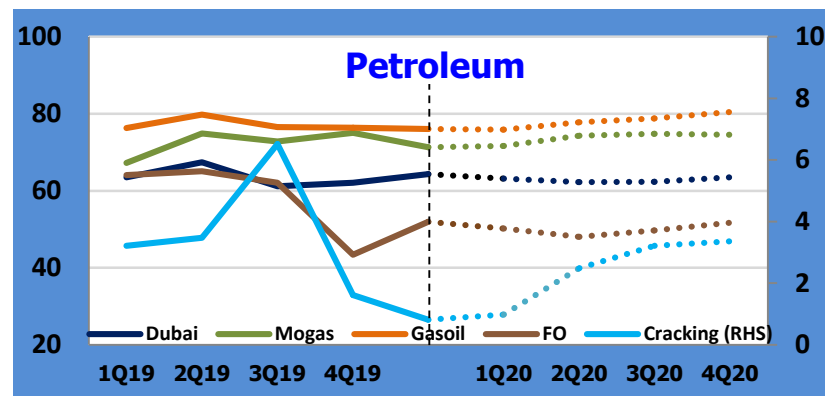
Sources: International Industry Research and Economics Department, IMF

Remark: 2020 GDP Growth as of Jan 2020

*Referencing to Office of the National Economic and Social Development Council's February announcement

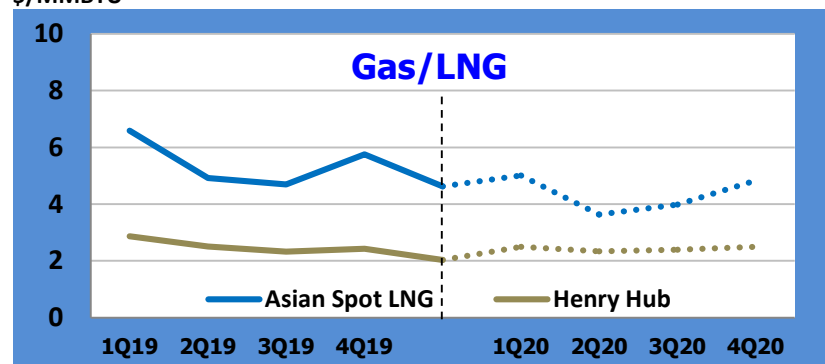
2020 Petroleum and Gas Outlook

\$/bbl



Price	Y19A	4Q19A	Y20E
Dubai	63.5	62.0	54-64
Mogas	72.5	75.0	69-74
Gasoil	77.2	76.4	72-77
FO (3.5%)	58.7	43.4	46-51
Singapore GRM	3.7	1.6	2.5 – 3.5

\$/MMBTU



Price	Y19A	4Q19A	Y20E
Asian Spot LNG	5.6	5.8	3.0 – 5.0
Henry Hub (HH)	2.5	2.4	2.2 – 2.5

Source: PTT, PRISM (Petroleum Rolling as of 14 Feb 2020)

Dubai

- ▼ **Surging Non-OPEC oil output**, led by U.S. producing at record-high level of 13 MMBD, and increased exports around 3 MMBD after more pipeline expansion completed
- ▼ **Coronavirus outbreak concerns** could dampen world oil demand
- ▼ **Uncertainty of economic recovery** despite U.S. agreed on trade deal (Phase 1) with China
- ▲ **OPEC+ supply cut** to balance market (at 1.7 MMBD until 1Q20)
- ▲ **Geopolitical Risks**; U.S. conflicts with Iran, Iraq, and Venezuela, plus unrest in other oil producing countries such as Libya

Mogas

- ▼ **Ample supply** from new refineries start-up and higher refinery intakes of lighter crude
- ▲ **Lower supply from refinery's yield shifting** to maximize middle distillate after IMO 2020 implementation

Gasoil

- ▼ **Softened heating oil demand** due to mild winter in Asia
- ▼ **Coronavirus outbreak concerns** could dampen demand
- ▲ **Rising middle distillates demand** if global economic recovers and IMO 2020 (but jet fuel can be impacted by less air travel)

Singapore GRM:

- ▼ **Lower FO crack margins** due to the implementation of IMO 2020

Fuel Oil

- ▼ **Higher LSFO demand replacing HSFO** as a result of IMO 2020

Gas/LNG

- ▼ **Asian Spot LNG:**
 - Northeast Asia remains under pressure due to limited demand
 - Market expected to see more LNG supply especially from the ramp up of US projects
- ▼ **Henry Hub:** U.S. natural gas prices expected to remain low due to high natural gas production

Guidance 2020

Gas Business Guidance



- **Price** : soften avg. pooled gas price in Y2020 - All sources

Gas Demand :

- Gas plan 2018 to be finalized in 2020
- Minor changes in PDP 2018 revised; portion change in renewable energy



GSP : major turnaround



- 1Q2020 GSP#5 (20 days)
- 2Q2020 GSP#1 (25 days)
- 2H2020 minor turndown of GSP#5 and GSP#6

NGV Subsidy

- + Price adjustment to reflect NGV's cost
- Only subsidy for Public vehicles



LPG Subsidy

- Only subsidy thru "State Welfare smart card" to low-income households
- Cap subsidy at 30 MB per quarter & extend to Jun'20

Upcoming Projects



- **Master Gas Sales Agreement**
• Expect to be finalized within 1H2020



- **PTT & GC New Master Agreement for Purchase and Sales of products**



- **Gulf MTP LNG Terminal**

(JV : PTT TANK 30% & GULF 70%)

"Land Reclamation" to start in Mid 2020

- **Consortium (GPC)**

(PTT TANK 30% GULF 40% & China Harbour 30%)
Bidding results to announce in 2020



- **LNG Regional Hub :**

- To be commercialized by 2020
- Reloaded test in Jan. 2020
- First cargo in 3Q2020
- Target customer: Asean & China



- **Gas-to-Power**

PTT Group was chosen by the Yangon "New City" megaproject to do feasibility for supply and distribute electricity



Environmental Situation



- **Thailand's drought in 2020 :**
PTT Group mitigation plan

Short-term

- Water usage efficiency
- Reuse water
- Plant optimization
- Own & Private reservoirs

Medium-term

- Vessel carrier with fresh water
- Seawater to fresh water via desalination units



PTT Group



Productivity improvement

PTT and Flagships' Productivity improvement in order to enhance income

- Enhance equipment reliability & efficiency
- Reduce travelling expenses
- Less consultancy services & organizers; more in-house services

Thank you



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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.

Statements of Cash Flows (PTT Only) : YE 2019

Operating	2018 62,872	2019 46,834
Net Income	165,237	61,657
Changes in assets & liabilities	(23,453)	16,254
Income Tax	(12,330)	(29,289)
Non-Cash Adjustment	(66,582)	(1,788)

Investing	2018 80,004	2019 6,212
CAPEX (PP&E, Intangible asset)	(15,860)	(18,205)
Investment (Sub. & Affiliates & others)	(1,095)	(20,098)
Current investment	49,530	17,761
Dividend/Interest Received	39,147	33,035
Others	8,282	(6,281)

Free Cash flow	
142,876	53,046

Financing	(95,730)	(93,171)
Repayment Loans	(29,999)	(50,658)
Interest paid	(10,188)	(6,720)
Dividend paid	(57,108)	(59,979)
Received from share issue	-	-
Received from loans/Bonds	1,565	24,186
Others	-	-

Adjustment	
366	402

Beginning Cash and Cash Equivalents	
2018	2019
38,692	86,204
68,056	21,972
4,533	2,580
111,281	110,756

Cash In/(Out)	
47,512	(39,723)
(46,084)	(6,970)
(1,953)	407
(525)	(46,286)

Ending Cash & Cash Equivalents	86,204	46,481
Current inv.	21,972	15,002
AFS* inv.	2,580	2,987
Ending cash incl. S/T investment	110,756	64,470

Cash & cash equi
Current inv.
AFS* inv.

PTT Group Performance : 4Q2019 (QoQ)

Unit : MMTHB

	Performance 100%			% PTT holding	Equity Method % PTT		
	3Q19	4Q19	QoQ		3Q19	4Q19	QoQ
PTT Net operating Income	6,874	4,635	(33%)		6,874	4,635	(33%)
E&P - PTTEP	11,019	11,621	5%	65.29%	7,194	7,607	6%
Petrochemical	2,748	464	(83%)		1,374	216	(84%)
- PTTGC	2,663	374	(86%)	47.92%	1,289	126	(90%)
- Other	85	90	6%		85	90	6%
Refining	(2,003)	1,471	>100%		(1,174)	917	>100%
- TOP	(682)	1,984	>100%	47.53%	(590)	1,089	>100%
- IRPC	(1,321)	(513)	61%	47.55%	(584)	(172)	(71%)
Others Business	7,306	5,431	(26%)		5,955	4,042	(32%)
Inter - PTTER/PTTGM	303	(39)	<(100%)	100%	277	(25)	<(100%)
Gas - PTTLNG/PTTNGD/PTTGL/TTM(T)/TTM(M)	2,462	1,675	(32%)		2,159	1,542	(29%)
Utilities - GPSC/TP/DCAP/PTTME/PTTES/PTTDIGITAL/ENCO	1,361	1,734	27%		349	456	31%
Oil & Oth. - PTTT/PTTOR/THAPPLINE/Others^{1/}	3,180	2,061	(35%)		3,170	2,069	(35%)
Shared of Net Income from Affiliates	19,070	18,987	(0%)		13,349	12,782	(4%)
Tax adjustment for gain on disposal of investment and asset	32	29	(9%)		32	29	(9%)
PTT Conso. Net Income	25,976	23,651	(9%)		20,255	17,446	(14%)

1/ Including BSA, PTT TCC and RTC

PTT Group Performance : 2019 vs 2018

Unit : MMTHB

	Performance 100%			% PTT holding	Equity Method % PTT		
	Y2018	2,019	YOY		2018	2019	YOY
PTT Net operating Income	59,123	30,673	(48%)		59,123	30,673	(48%)
E&P - PTTEP	36,206	48,803	35%	65.29%	23,646	31,882	35%
Petrochemical	40,440	11,994	(70%)		20,174	5,767	(71%)
- PTTGC	40,069	11,682	(71%)	47.92%	19,802	5,455	(72%)
- Other	371	312	(16%)		372	312	(16%)
Refining	17,884	5,103	(71%)		8,967	2,335	(74%)
- TOP	10,149	6,277	(38%)	47.53%	5,330	2,788	(48%)
- IRPC	7,735	(1,174)	<(100%)	47.55%	3,637	(453)	<(100%)
Others Business	26,552	28,095	6%		13,933	22,546	62%
Inter - PTTER/PTTGM	8,496	1,817	(79%)	100%	2,064	1,815	(12%)
Gas - PTTLNG/PTTNGD/PTTGL/TTM(T)/TTM(M)	8,409	8,442	0%		6,788	7,456	10%
Utilities - GPSC/TP/DCAP/PTTME/PTTES/PTTDIGITAL/ENCO	5,379	6,145	14%		1,367	1,574	15%
Oil & Oth. - PTTT/PTTOR/THAPPLINE/Others ^{1/}	4,268	11,691	>100%		3,714	11,701	215%
Shared of Net Income from Affiliates	121,082	93,995	(22%)		66,720	62,530	(6%)
Tax adjustment for gain on disposal of investment and asset	(6,196)	(252)	(96%)		(6,196)	(252)	(96%)
PTT Conso. Net Income	174,009	124,416	(29%)		119,647	92,951	(22%)

1/ Including BSA, PTT TCC and RTC

Debt Profile : Control Cost & Manage Risk

Managed debt according to financial risk and policy

Debt Portfolio

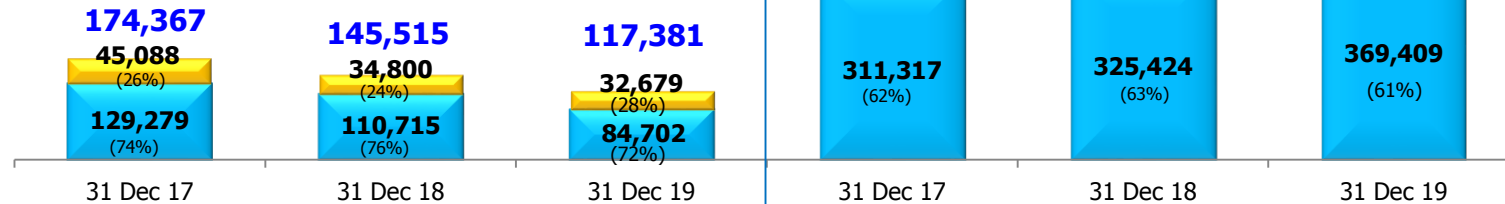
Unit : MM THB

PTT Only : Cost of debts ~ 5.16%
: % fixed-rate ~ 83.15%
: Avg. debt life ~ 10.27 years

Consolidated : Cost of debts ~ 4.08%
: % fixed-rate ~ 71.33%
: Avg. debt life ~ 9.15 years **605,458**

■ USD&Others

■ THB



Note : 1. PTT Data as of 31 Dec 19 (THB/USD = 30.3313 THB/JPY = 0.2796) Excluding liabilities from finance leases.

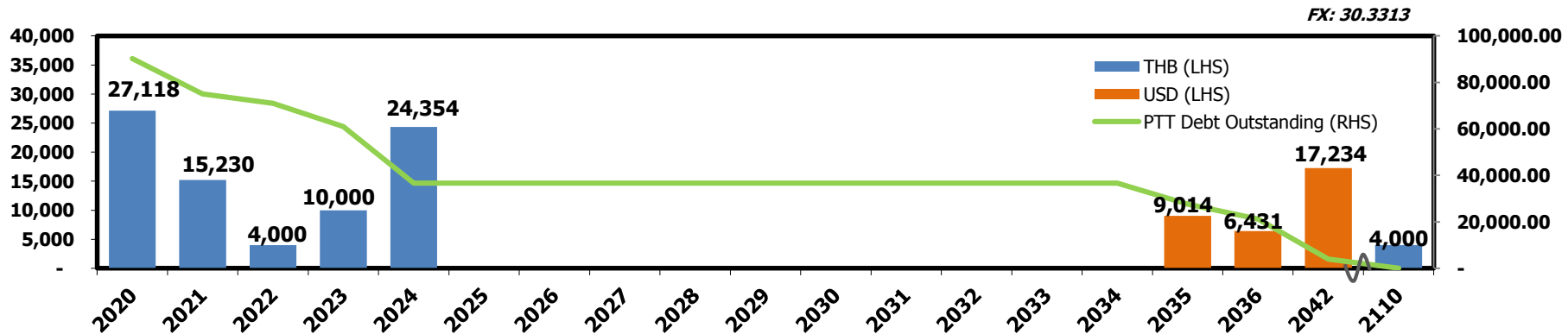
2. Debt Outstanding represents amount and portion before derivative swaps, and reconciled with accounting.

3. Cost of debts, % fixed rate, and avg. debt life took into account the derivative transactions, including withholding tax (update as of 31 Dec 19).

Debt Outstanding and Repayment Profile (PTT only)

Unit : MM THB

As of 31 Dec 2019



PTT Group Accounting Structure

Data as of 31 Dec 2019

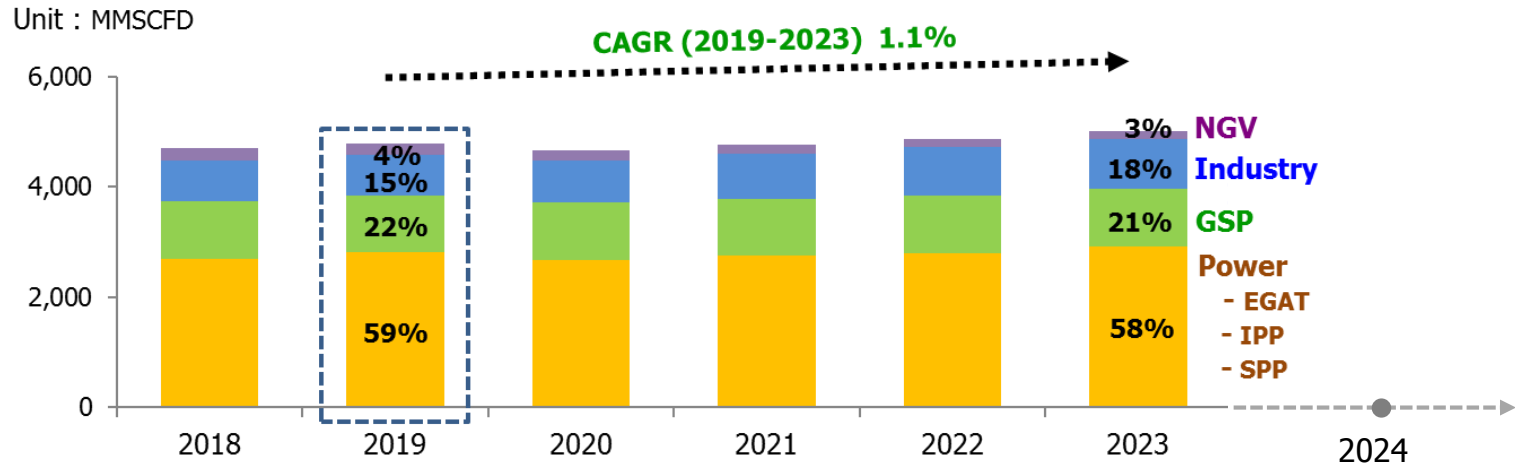
E&P and Gas Business Group			Oil Business Group			Petrochemicals & Refining Business Group		
Subsidiaries PTT Exploration & Production Plc. PTTEP 65.29% PTT Natural Gas Distribution Co., Ltd. PTTNGD 58.00% PTT LNG Co., Ltd. PTTLNG 100.00% PTT Global LNG Co., Ltd. PTTGL 50.00% Joint Ventures Trans Thai-Malaysia (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 47.53% IRPC Plc.* IRPC 47.55%		
						International Trading Business Group		
						Subsidiaries PTT International Trading Pte. PTTT 100.00% PTT International Trading London Ltd PTTTLDN 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 slightly increased

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



New Supply Additional capacity (mmscfd)

Bongkot Erawan
700 800

Mozambique

Major Project : COD

Nakhon
Ratchasima
Compressor
Wangnoi

5th pipeline
RA#6 Pipeline

Cum. Pipeline Length (Km)

4,182

4,702

GSP project: COD

GSP#5
Debottleneck

Cum. GSP Production (mmscfd)

2,870

LNG new project

LNG1 Extension

LNG Terminal 2

Cum. Capacity (MTA)

11.5

19.0

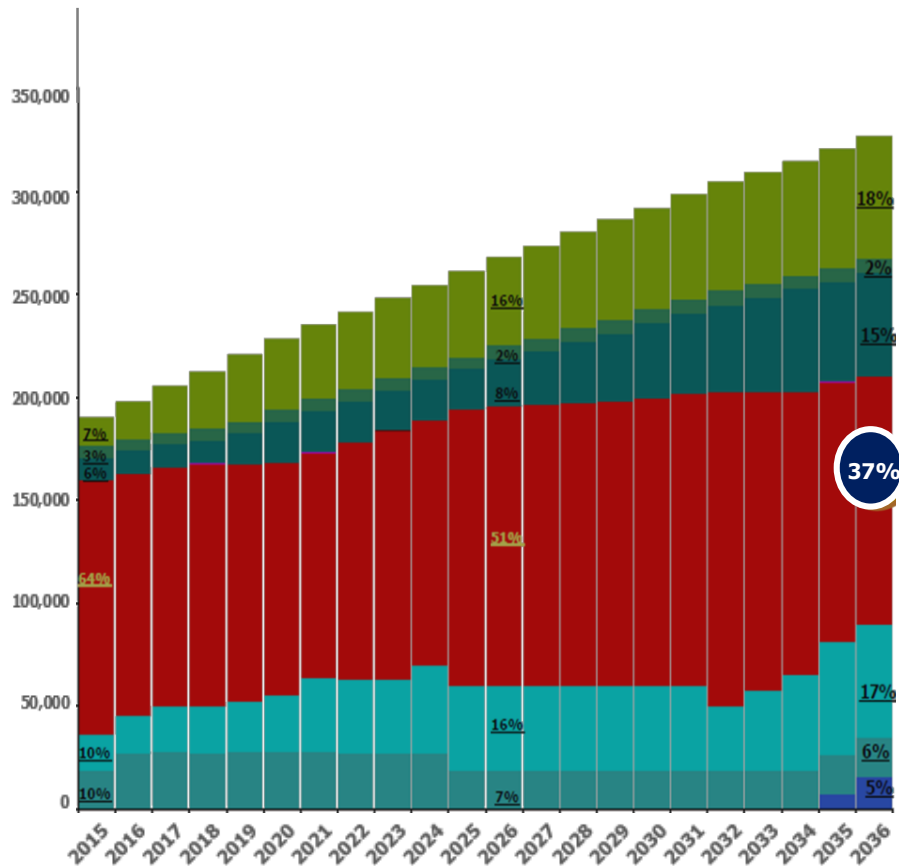
Newly Thailand Power Development Plan

Stronger demand of NG for power plants

PDP 2015*

Natural Gas growth upon
Government fuel diversification policy
for power generation

Unit: GWh

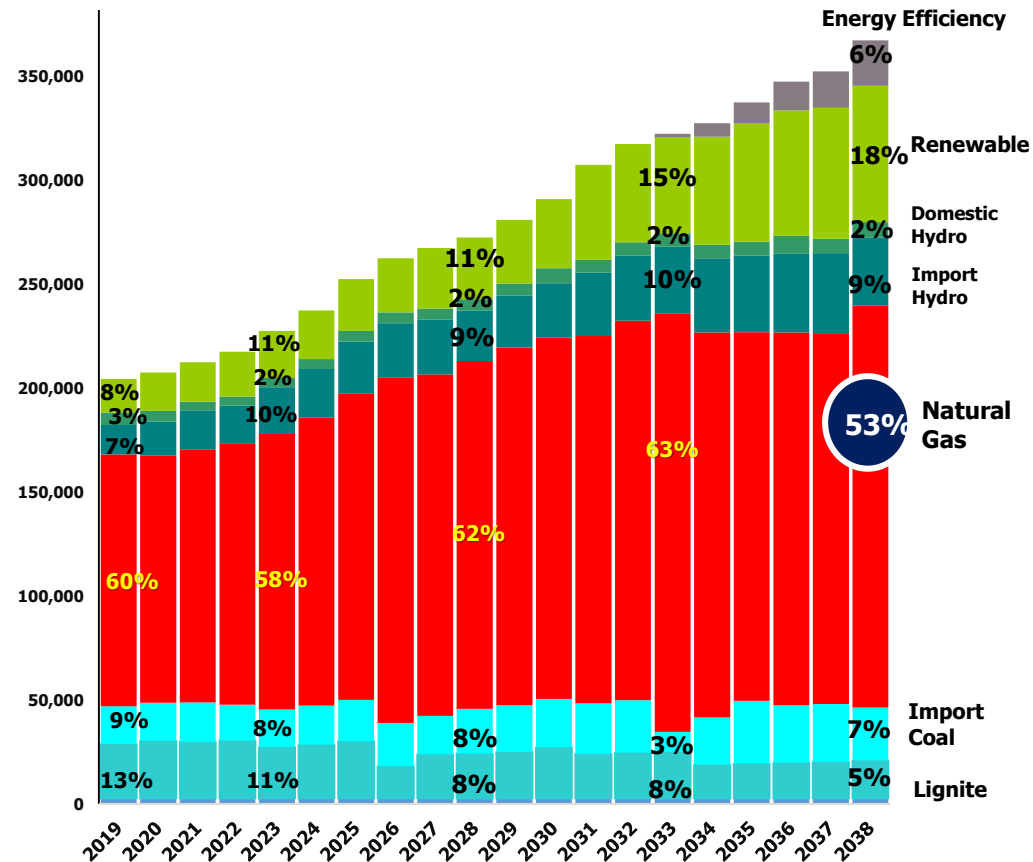


*Source: Ministry of Energy

PDP 2018**

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

Unit: GWh



** Source : EPPO (Public Hearing presentation)

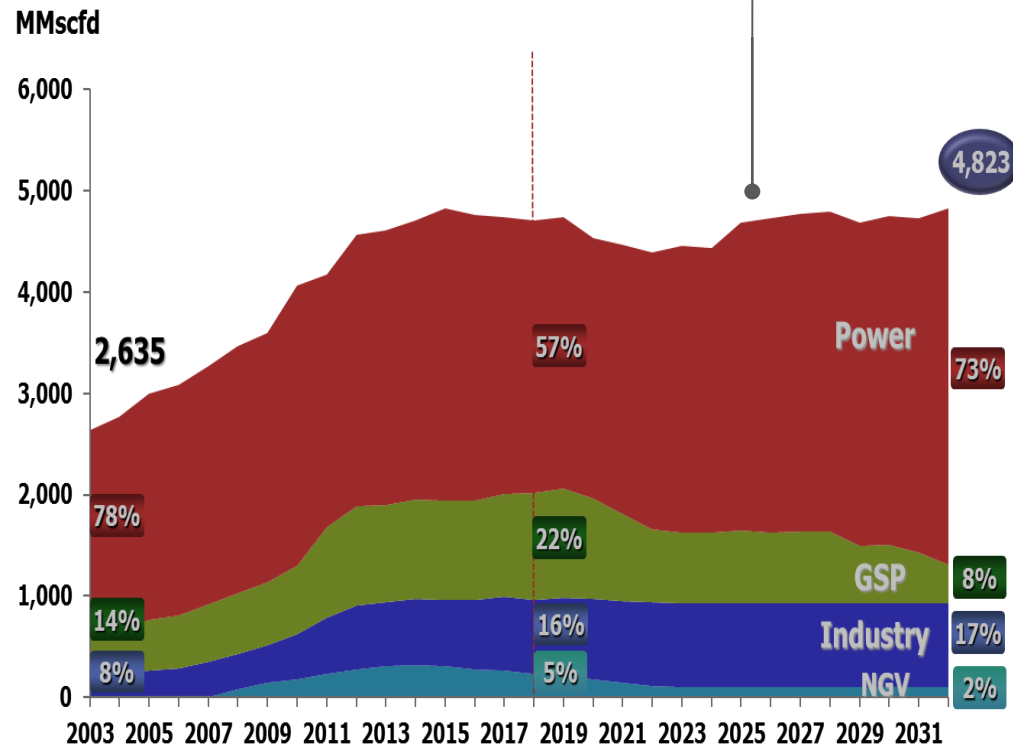
NG Growth upon Government fuel diversification policy for power generation

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 ๓๕๖๖ (800 MW),
EE 30%



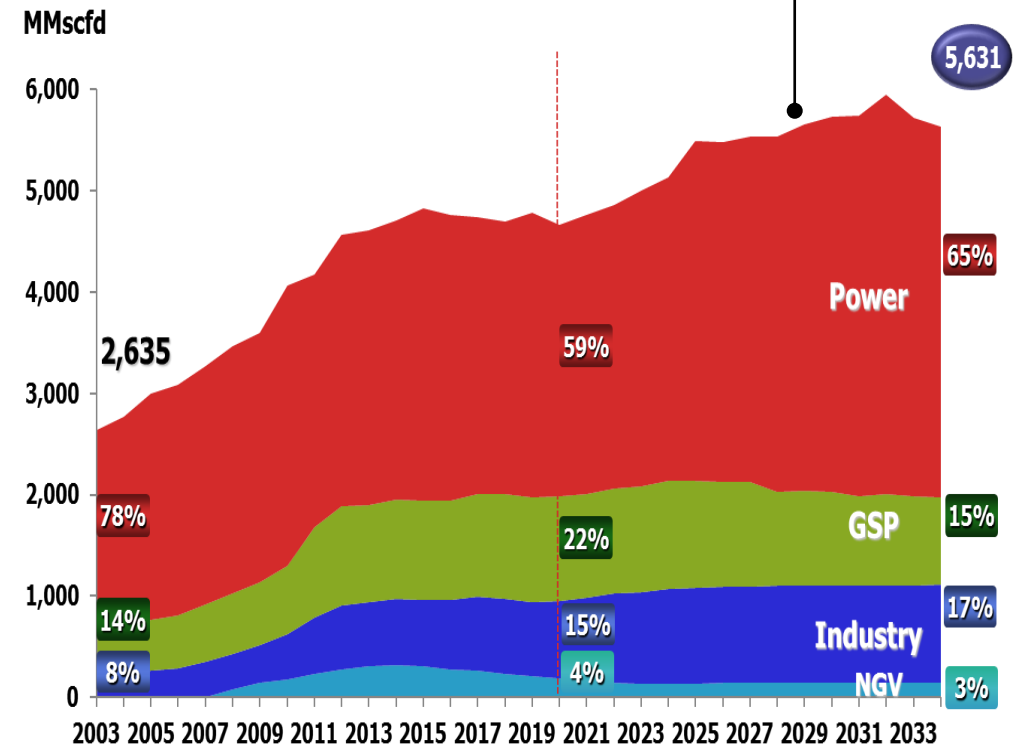
*Source: Ministry of Energy

NEW**

Thailand Gas demand forecast (CAGR during 2019-2034)

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

Thailand Gas Demand :



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