

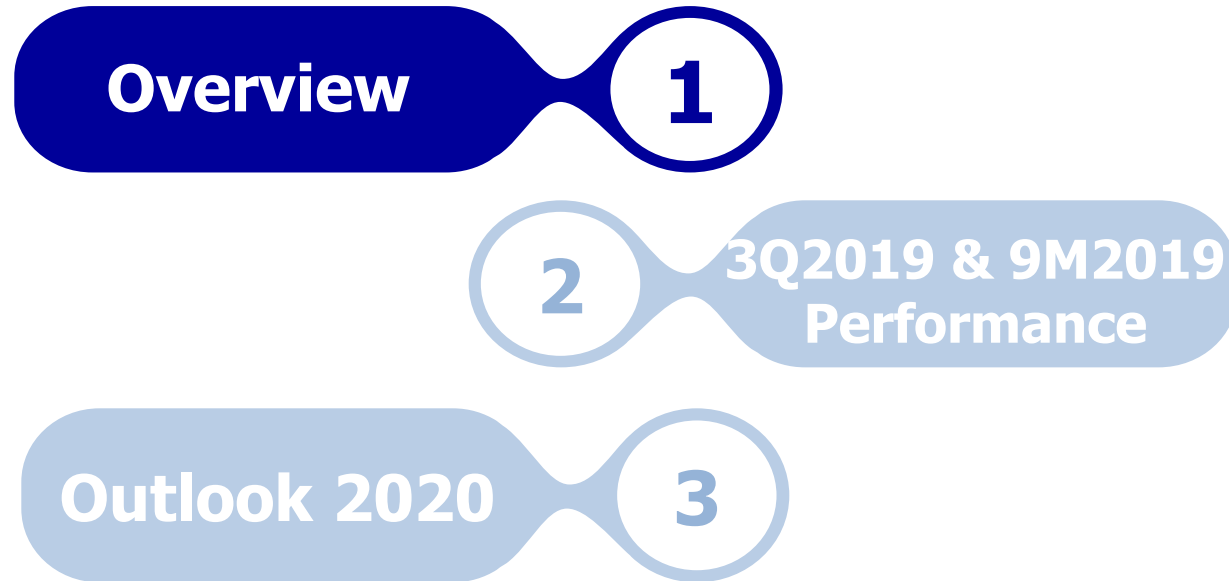


# Analyst Meeting

**3Q2019 & 9M2019**

**15 November 2019**





# Health & Safety Performance in 3Q2019

Employee's injury record and car accident slightly increased in 3Q2019 but still under target

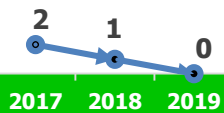
Employee

Contractor

## Personal Safety

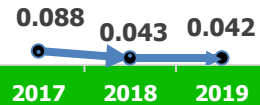
**LTA**  
0 person

(Target = 0)



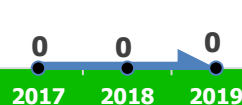
**TRIR**  
0.042 per 200,000 hrs

(Target ≤ 0.08)



**TROIR**  
0 person

(Target = 0.12)



## Process Safety

**PSE Tier I**  
0 case

(Target = 0)



**PSE Tier II**  
0 case

(Target = 0)



## Road Safety

**Truck Accident**  
0.018 cases/  
1 MKm

(Target ≤ 0.04)



**Car Accident**  
2 cases

(Target ≤ 5)



LTA (Loss Time Accident)  
PSE Tier 1 (Process Safety Event Tier 1)

TRIR (Total Recordable Injury Rate)  
TROIR (Total Recordable Occupational Illness)



## PEOPLE



### The Best of Drive Award Drive Award Excellent (Resources)

สมาคมนิสิตเก่าเอ็มบีเอ จุฬาฯ ร่วมกับ  
หลักสูตรบริหารธุรกิจมหาบัณฑิต  
คณะพาณิชยศาสตร์และการบัญชี จุฬาฯ



### กองทุนหน้าใหม่ดีเด่นประเภท Single fund สมาคมกองทุนสำรองเลี้ยงชีพ

## PROSPERITY

ปตท. – บีไอจีร่วมวางศิลาฤกษ์โครงการ  
ก่อสร้างหน่วยแยกอากาศที่ใช้พลังงาน  
ความเย็นจากการเปลี่ยนสถานะก๊าซ  
ธรรมชาติเหลว หรือ LNG แห่งแรกใน  
ประเทศไทย



## PLANET

### เปิดเส้นทางจักรยานศึกษาธรรมชาติ



### โครงการอนุรักษ์และพัฒนาแหล่งเรียนรู้ แปลงปลูกป่าการเฉลิมพระเกียรติฯ FPT 49



สมาคมนิตยสาร นิตยสาร  
Alpha Southeast Asia  
ประจำปี 2019

- Most Organized IR
- Best Senior Mgmt. IR Support
- Most Consistent Dividend
- Best Strategic Corporate Social Responsibility

MEMBER OF  
**Dow Jones Sustainability Indices**  
8th consecutive years

In Collaboration with RobecoSAM



องค์กรที่มี  
การดำเนินงาน  
คาร์บอนต่ำ  
และยั่งยืนใน  
ระดับยอดเยี่ยม



- Low Carbon and Sustainable Business Index: ยอดเยี่ยม
- Low Emission Support Scheme โครงการ "Touch Green"
- Carbon Offsetting

องค์การบริหารจัดการก๊าซเรือนกระจก แห่งประเทศไทย (อบก.)



# Activity Highlights in 3Q2019



- Won bidding of **Map Ta Phut Industrial Port Phase III** : JV with GULF (Oct.)
- 2<sup>nd</sup> adjustment of NGV price for public vehicles since 16 Sep (1 bt/time: total 3 bt/kg.)
- Repurchased USD notes and **PTT TCC** issued new Notes



- Completed **Murphy** Oil acquisition in Malaysia (Jul.)
- Acquired additional shares in Sinphuhorm project: 66.8% → 80.5% stakeholding (Jul.)
- Completed **Partex** acquisition in Oman & ME (Nov.)



- **Construction : MTP & PO/Polyol on track**  
Progress: MTP ~ 73%, PO&Polyols ~80%  
COD in Y2020



- COD of **Low Sulfur Fuel Oil** Project (Jul.)
- **Construction : Clean Fuel Project (CFP)**  
Progress: ~20% on time & on budget  
COD in 1Q2023



- Established **2 new holding companies** in Thailand and Singapore (Jul.)
- **Support Thai Community Market thru "Thai Ded"** campaign in PTT gas stations as a community distribution center
- Start up of Solar rooftop project in PTT Gas stations



- Completed **Capital Increase** of Bt 28,197 million thru right offerings
- COD **Xayaburi Hydroelectric Power Plant** in Laos (Oct.)
- COD Namlik Power Plant in Laos (Jul.)

## Lowlights in 3Q2019



Announcement of the State Enterprise Labor Relations Committee on 25 September 2019 according to the state Enterprise Labour Relations Act B.E. 2543 (2000)



Write-off 3 wells in Myanmar



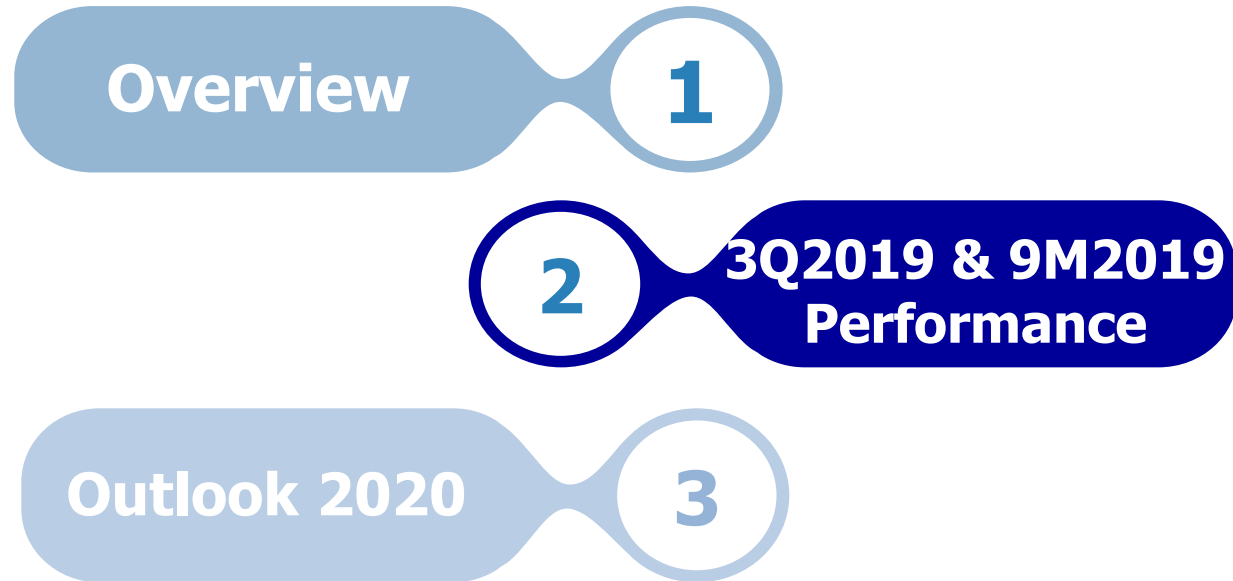
ARO 1 : Planned Shut down (May. to Jun.)



CDU 3 : 30 days Planned Shut down (mid-Jun. to mid-Jul.)  
ARO : 45 days Planned Shut down (mid-Jun. to end-Jul.)



ADU 1 : 18 days planned turnaround (Aug)

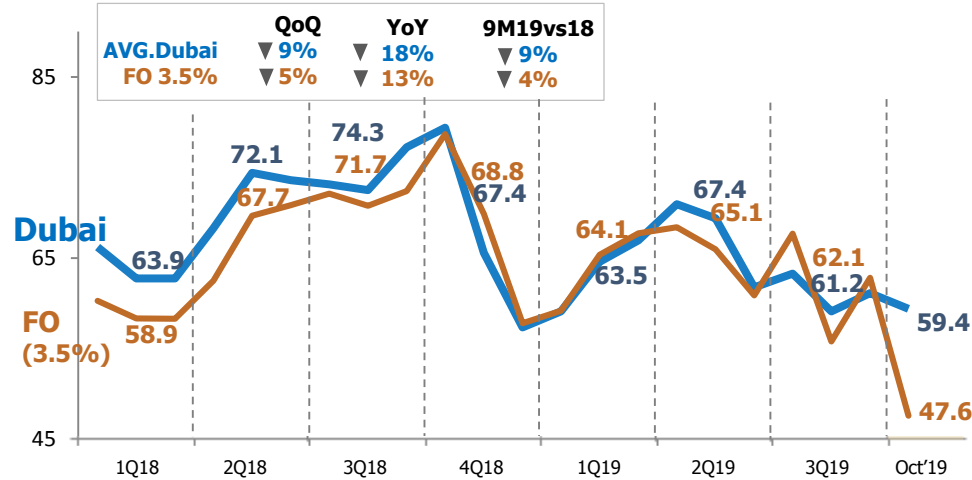


# Key Business Drivers:

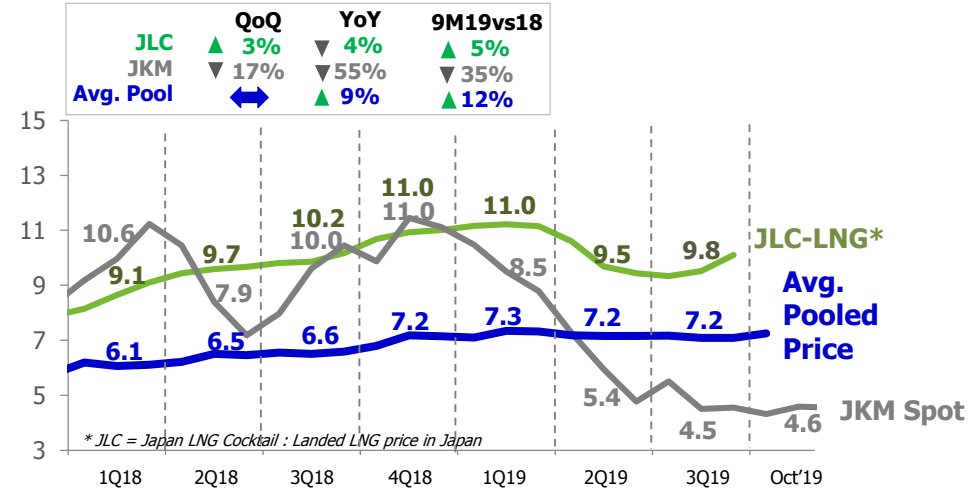


QoQ: Soften demand caused crude decline and PE spread fall despite stable NG pooled price  
9M19 vs 9M18: Weaken PE prices, drop in crude price & risen pooled gas price

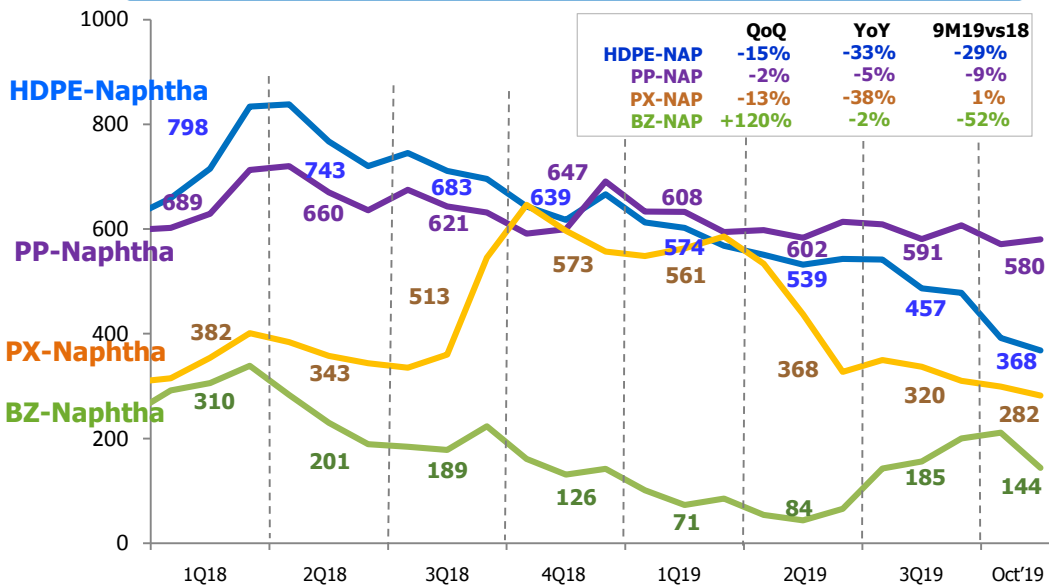
## AVG. Dubai vs FO (\$/bbl)



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

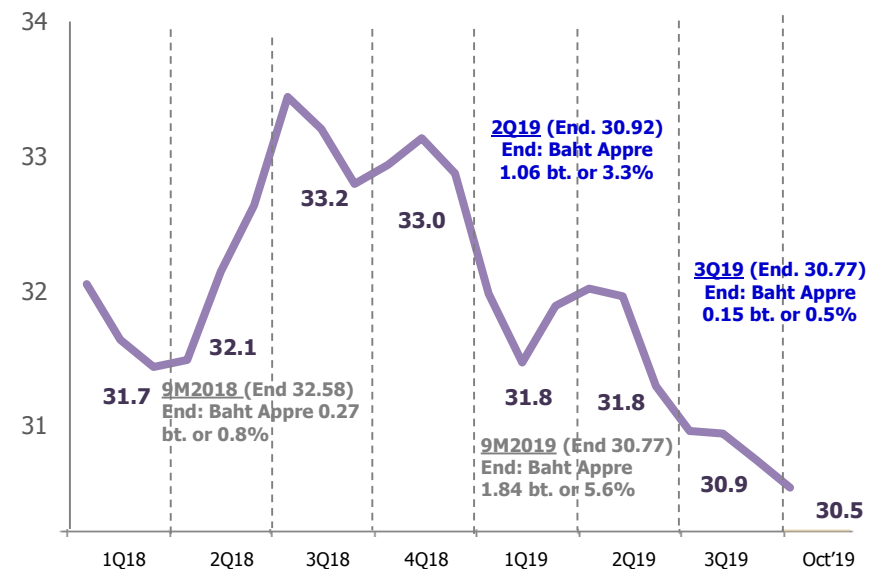


## Petrochemical Spread (Avg. \$/ton)



Note: Figures are average & Naphtha (MOP)

## AVG. FX (THB/USD)



# PTT Consolidated Performance: 3Q19 & 9M2019



**QoQ:** ⬇️ 22% NI from lower EBITDA and lower FX gain despite lower tax expenses

**9M19 vs 9M18:** ⬇️ 25% NI due to lower EBITDA, higher DDA but higher FX gain and lower tax expenses

**Avg. Dubai (USD/BBL)** ▼9% QoQ  
▼18% YoY

74.3 67.4 61.2 70.1 64.0

Unit : MB

## Revenue

▼6% QoQ  
▼11% YoY

606,980 570,323 538,436

3Q18 2Q19 3Q19

1,718,738 1,659,633

9M18 9M19

▼6% QoQ

- **Trading, P&R, Oil** : Dropped from lower selling prices due to lower petroleum & petrochemical prices
- **Gas** : Fell from both lower volume & selling prices

▼3% 9M19 vs 9M18

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

## EBITDA

▼8% QoQ  
▼30% YoY

96,138 73,804 67,696

3Q18 2Q19 3Q19

286,953 222,024

9M18 9M19

▼8% QoQ

- **EP** : Lower EBITDA from wells write-off in Myanmar
- **Gas** : Decrease in GSP's due to lower margin from downtrend of petrochemical referenced selling price
- **Power** : Weaken EBITDA from lower vol. due to seasonal low demand

▼23% 9M19 vs 9M18

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

## Net Income

▼22% QoQ  
▼33% YoY

30,329 25,938 20,255

3Q18 2Q19 3Q19

100,146 75,505

9M18 9M19

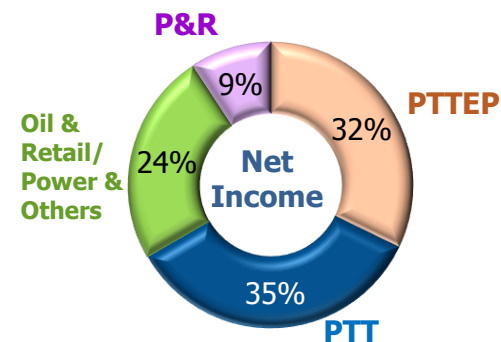
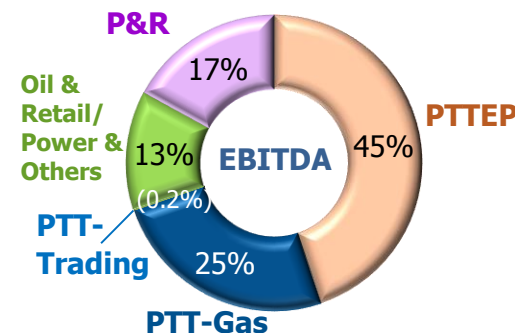
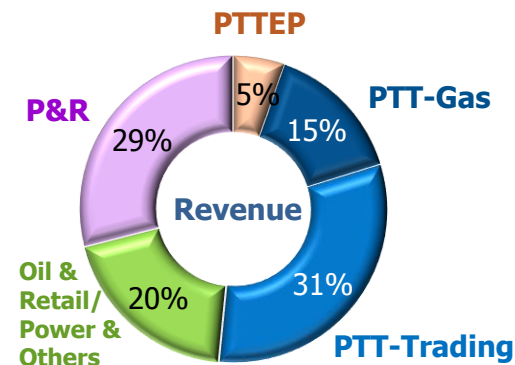
▼22% QoQ

- Lower FX gain FX from lower THB appreciation
- Higher DD&A due to PTTEP's Murphy acquisition
- + Lower tax expenses from lower performance

▼25% 9M19 vs 9M18

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

9M19





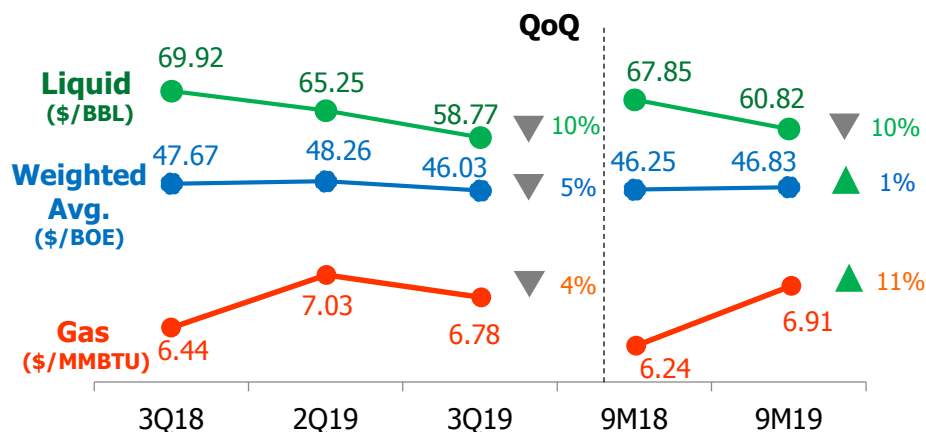
# E&P : Prices & Volume and NI

QoQ: ⬇️ Soften performance due to lower selling prices & higher write-off exploration expenses

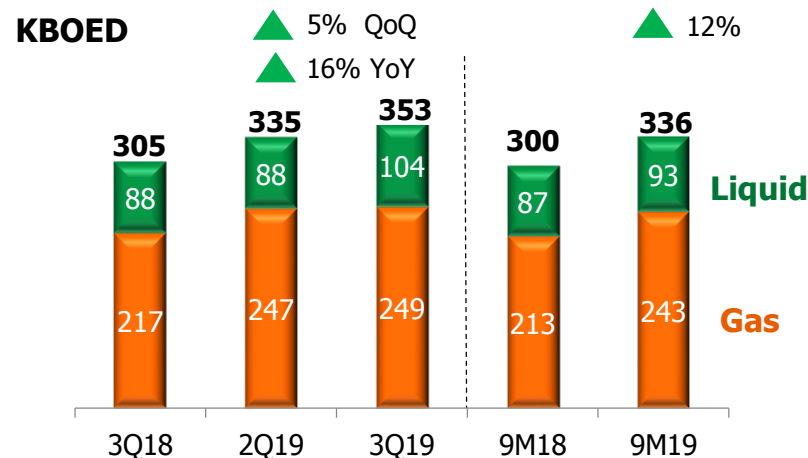
9M19 vs 9M18: ⬆️ Strengthen result from increase in sales volume from Murphy & Bongkot



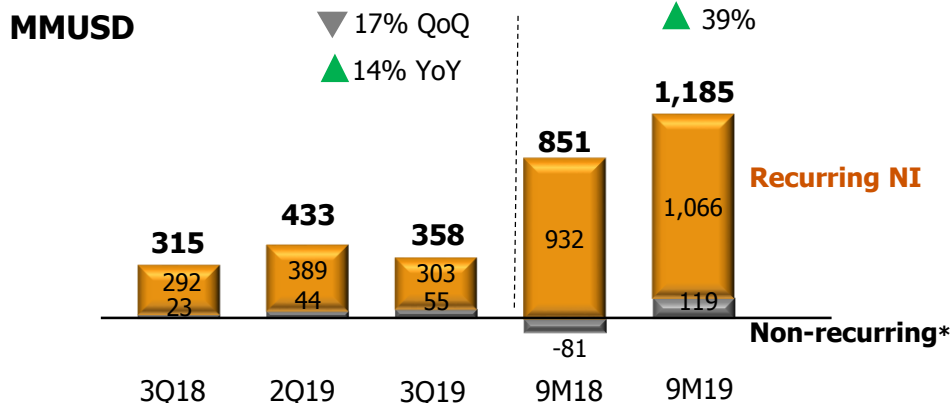
## Product Prices



## Sales Volume



## Net Income (100%)



## Key Highlights

### QoQ

- + **Avg. Selling Price:** 5% decrease driven by lower oil price
- + **Volume:** 5% increase from Murphy acquisition
- **NI :** declined 17% from lower ASP and 3 wells write-off in Myanmar

### 9M18 vs 9M19

- + **Avg. Selling Price:** 1% increase from gas price vs lower oil price
- + **Volume:** 12% increase from +22% Bongkot stake since mid of 2018 and Murphy acquisition
- + **NI :** 39% increased from Vol. increase, FX gain from Baht appreciation and no loss from divestment

\* 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.

# PTT EBITDA Breakdown by Business

QoQ: ⬇ Gas EBITDA due to GSP's lower petrochemical referenced selling price and S&M's from sales volume dropped

9M19 vs 9M18 : ⬇ Gas EBITDA from lower GSP's selling prices and higher feed gas cost

(Unit: MMTHB)

Business Unit	3Q18	2Q19	3Q19	QoQ	YOY	9M18	9M19	9M19vs 9M18
<b>Gas- EBITDA</b>	<b>24,831</b>	<b>19,850</b>	<b>18,100</b>	⬇ 9%	⬇ 27%	<b>72,710</b>	<b>55,898</b>	⬇ 23%
• S&M	5,306	4,438	3,720	⬇ 16%	⬇ 30%	13,712	11,661	⬇ 15%
• TM	8,237	8,520	8,411	⬇ 1%	⬆ 2%	26,802	25,564	⬇ 5%
• GSP	9,850	5,059	4,125	⬇ 18%	⬇ 58%	27,821	13,436	⬇ 52%
• NGV	(1,438)	(1,015)	(1,032)	⬇ 2%	⬆ 28%	(3,563)	(3,195)	⬆ 10%
• Others <sup>1/</sup>	2,876	2,848	2,876	⬆ 1%	↔	7,938	8,432	⬆ 6%
<b>Oil- EBITDA</b>	<b>4,103</b>	<b>4,205</b>	<b>4,166</b>	⬇ 1%	⬆ 2%	<b>14,364</b>	<b>14,100</b>	⬇ 2%
<b>Trading<sup>2/</sup> EBITDA</b>	<b>1,003</b>	<b>363</b>	<b>646</b>	⬆ 78%	⬇ 36%	<b>4,520</b>	<b>1,622</b>	⬇ 64%
<b>Total<sup>3/</sup></b>	<b>29,937</b>	<b>24,418</b>	<b>22,912</b>	⬇ 6%	⬇ 23%	<b>91,594</b>	<b>71,620</b>	⬇ 22%

<sup>1/</sup> Others include PTT LNG, PTTNGD, and PTTGL (restructured by excluding GPSC, PTES, PTT Digital and ENCO)

<sup>2/</sup> MIS

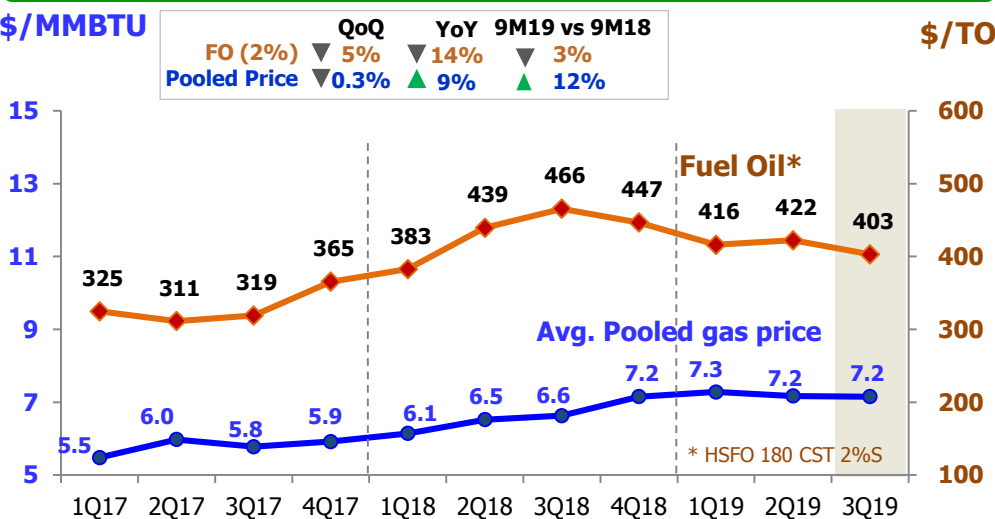
<sup>3/</sup> Included subsidiaries from all BUs

# Gas Business : Prices & Sales Vol.

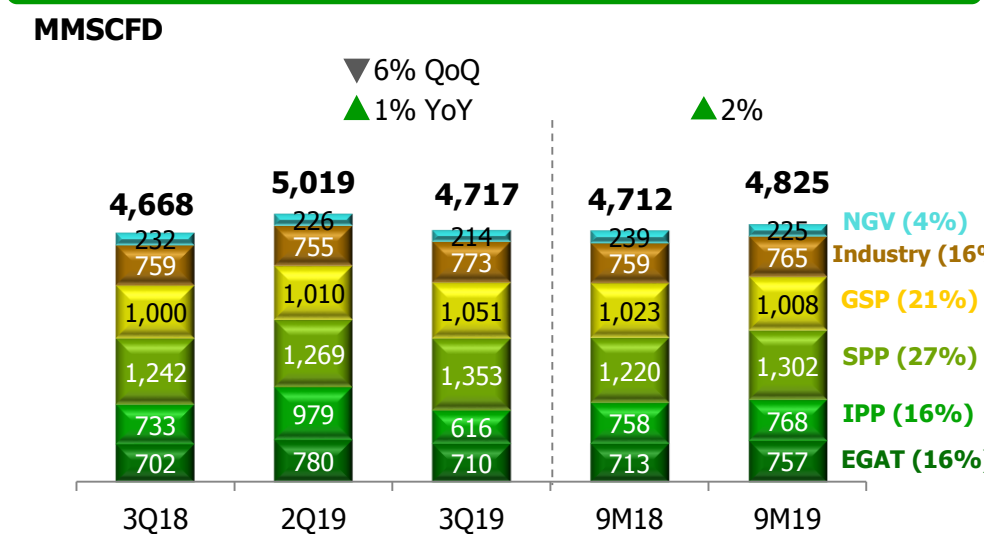
QoQ: Decreased NG volume from seasonal lower demand despite slightly dropped gas pooled price  
 9M19 vs 9M18 : Higher NG volume from all Power customers and higher pooled gas price



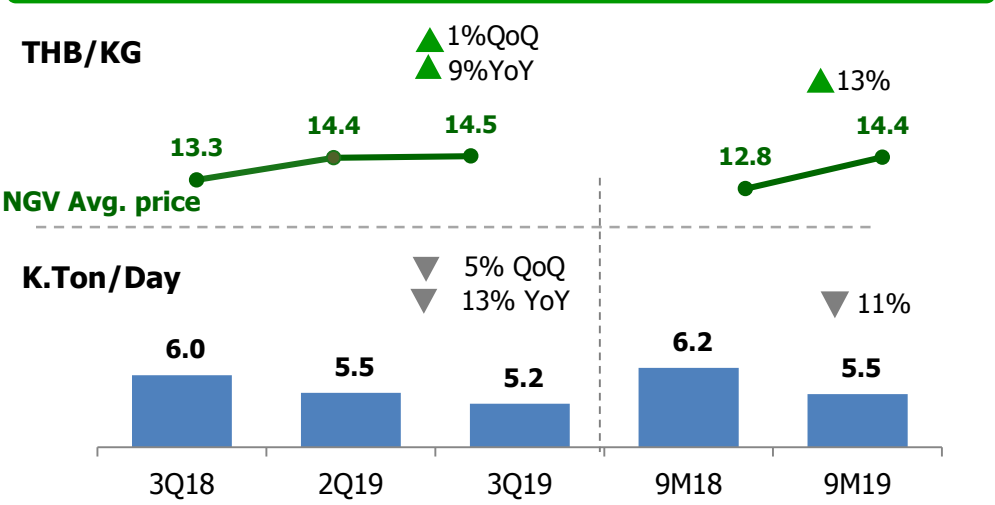
## NG Price VS FO



## NG Customer Breakdown



## NGV Price/Sales Volume



## Key Highlights

- QoQ**
- **NG sales vol.** decreased mainly from power, while GSP increased
    - Power : decreased due to seasonal lower demand (EGAT&IPP ↓, SPP ↑)
    - NGV volume continued dropping
    - + GSP : 4% vol. increased as no planned shutdown in 3Q19
  - **Price:** Industrial selling prices decreased due to dropped FO price linked
  - **Avg. pooled gas price** slightly lower
- 9M19 vs 9M18**
- + Higher **NG sales vol. from power sector**
    - + Power: Vol. increased due to 2019 longer period of summer than 2018
    - GSP volume decreased from tropical "PABUK" storm in 2019 and NGV vol. decreased
  - + **Price:** Industrial selling prices slightly increased following FO price lagged
  - **Avg. pooled gas price** : 12% increase of avg. pooled gas price

# Gas Business Performance



QoQ: ↓ Gas's EBITDA from GSP's lower selling price and S&M's decreased sales volume

9M19 vs 9M18 : ↓ Gas's EBITDA mainly due to lower GSP's petrochemical referenced selling price

E & P

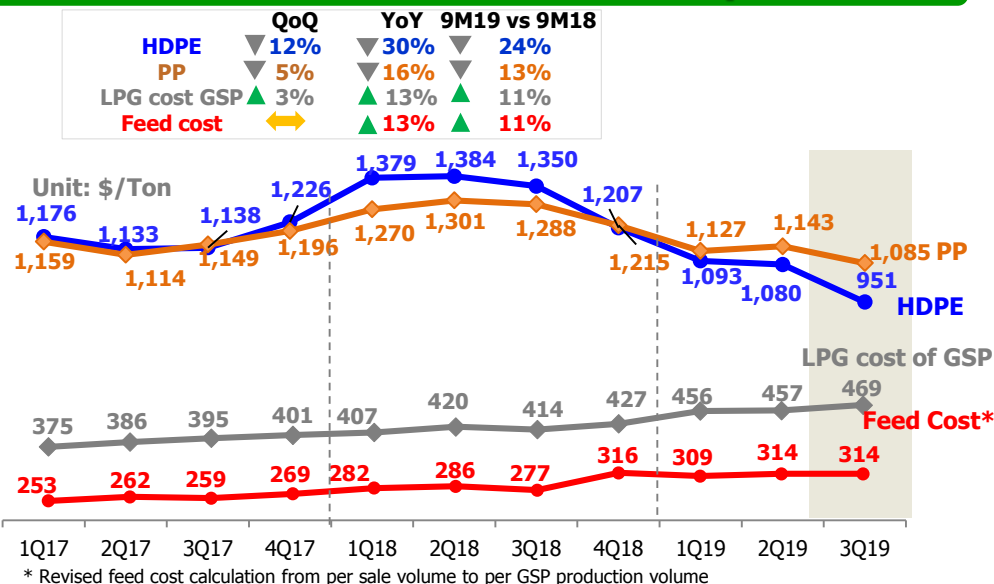
Gas

Oil & Trading

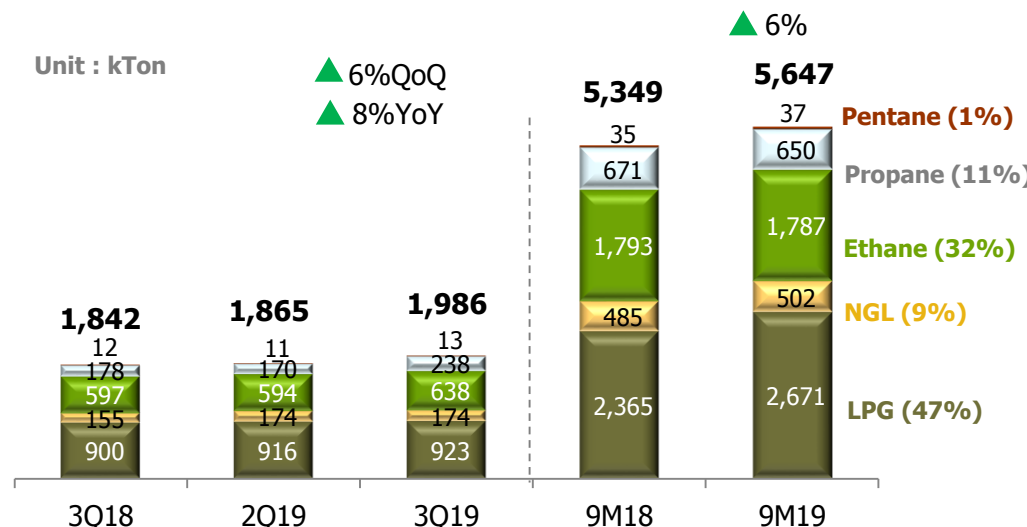
P&R

Others

## GSP Feed Cost vs Petchem. price

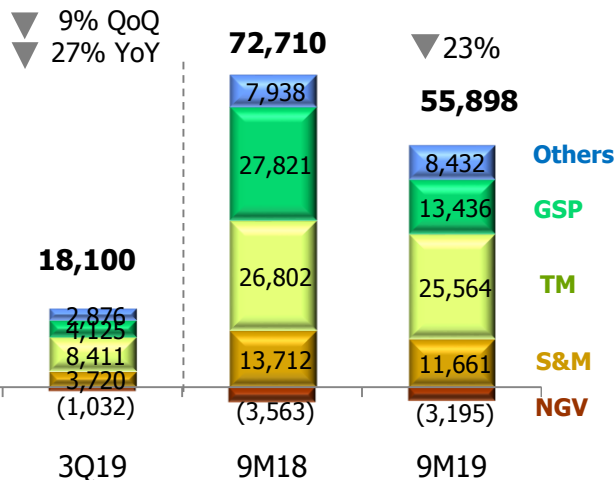


## GSP Sales Volume



## Gas - EBITDA

Unit: MMTHB



## Gas performance highlights

### QoQ

- **GSP** performance declined from drop of PE&PP prices linked to selling prices despite higher vol. with no planned turnaround in 3Q19
- **S&M** decreased from lower NG vol. during seasonal lower demand & industrial selling price drop from FO price linked
- **NGV** lower loss in gross margin from public selling price lifting (Bt1/kg. each in 16 May and 16 Sept. 19) and lower vol. while expenses increased

### 9M19 vs 9M18

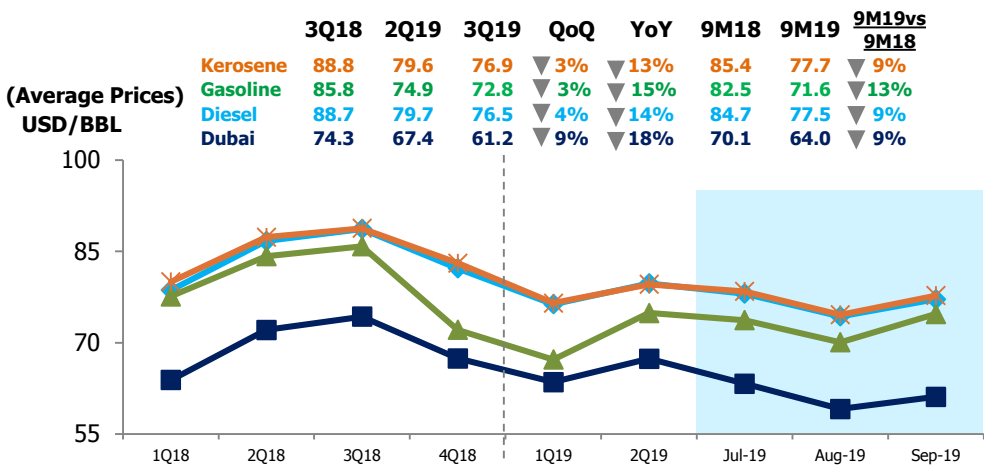
- **GSP** dropped from lower petrochemical price linked, higher feed cost, and lower volume
- **S&M** decreased from higher avg. pooled gas cost & industrial selling price drop from FO price linked
- **NGV** lower loss from higher avg. selling price & lower sales volume
- + **Other increased** from LNG Terminal 1 vol. increased from 8.4 to 10 MTA

# Oil BU & PTTOR

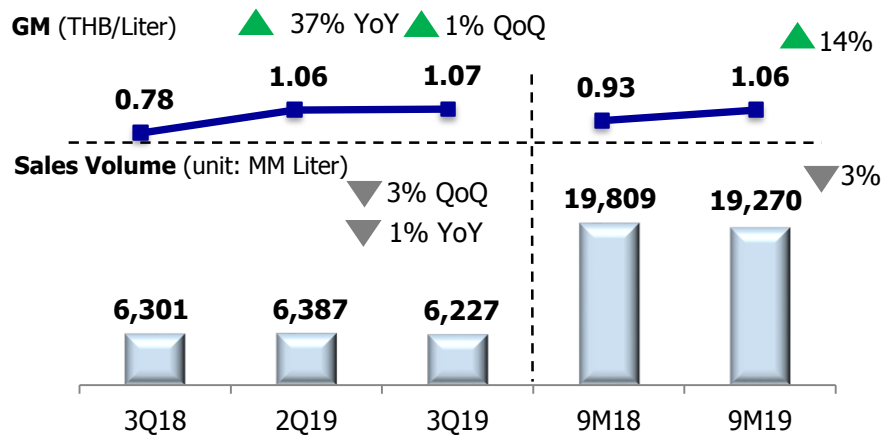
**QoQ :↘ EBITDA marginally declined from lower sales vol. & higher SG&A despite slightly increased margin**  
**9M19vs9M18 :↘ Slightly lower EBITDA from higher stock loss**



## Petroleum Prices



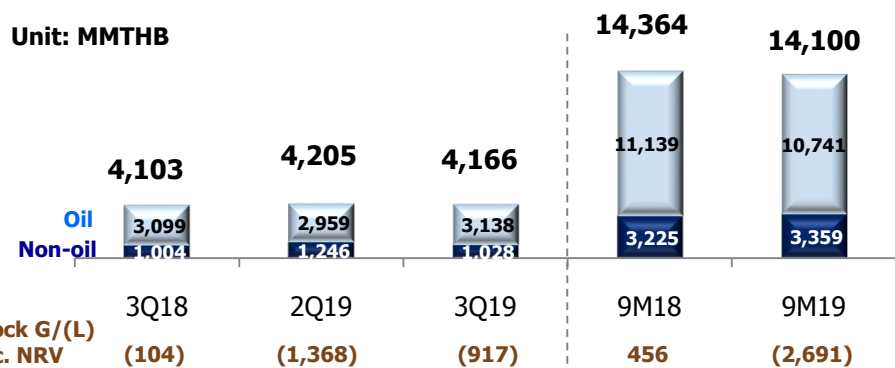
## Gross margin<sup>1</sup>/Sales volume<sup>2</sup>



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

## Oil – EBITDA

	QoQ	YoY	9M19vs9M18
Oil	▲ 6%	▲ 1%	▼ 4%
Non-oil	▼ 17%	▲ 2%	▲ 4%
Total	▼ 1%	▲ 2%	▼ 2%



## Key Highlights

### QoQ

- **Volume:** 3% lower from diesel due to lower seasonal demand (2Q19 is manufacturing & travelling season)
- + **Margin:** 1% higher from gasoline
- **EBITDA:** Slightly drop from higher SG&A

### 9M19vs9M18

- **Vol:** 3% dropped mostly from LPG due to heavy competition
- + **Margin:** 14% increased mainly from
  - Diesel : tight marketing margin during 2Q18-3Q18 competition
  - Aviation : pricing structure : Buy (M) Sell (M-1)
- **EBITDA:** lower oil EBITDA due to higher stock loss while non-oil rose mainly from Café Amazon expansion



# Trading BU:

QoQ: ▲ Improved performance from higher vol. & margin

9M19 vs 9M18 : ▾ Pressured from domestic condensate margin despite increased sales volume

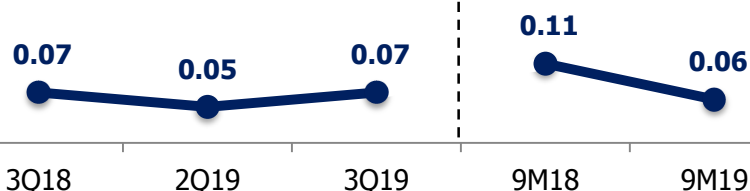


## Gross Margin<sup>1</sup>

Gross Margin  
(THB/Liter)

▲ 40% QoQ  
↔ YoY

▾ 45%



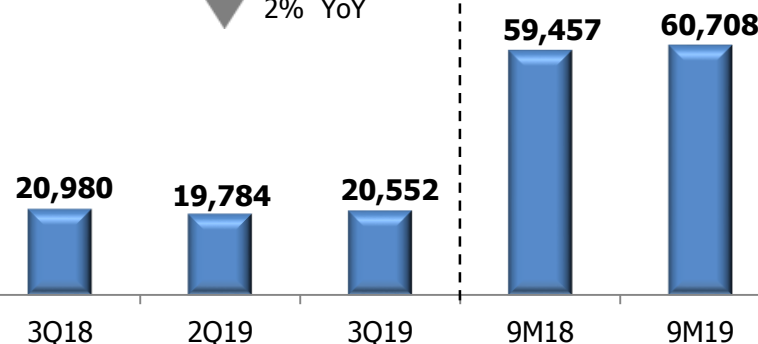
<sup>1</sup> PTT Trading BU + trading subsidiaries: FX Adjusted + derivatives

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

MM Liter

▲ 4% QoQ  
▾ 2% YoY

▲ 2%



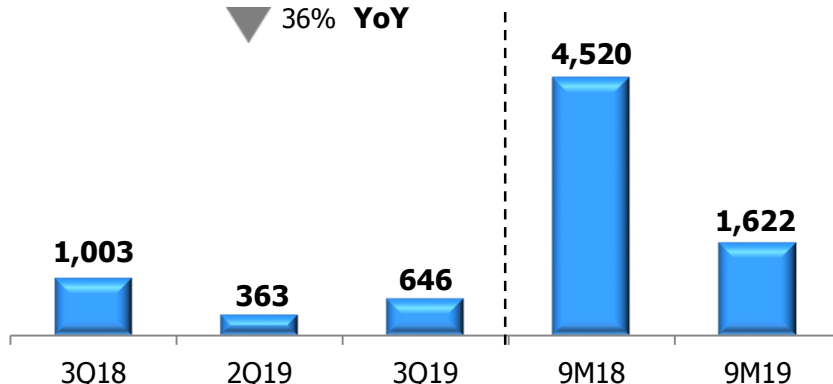
<sup>2</sup> PTT Trading BU + trading subsidiaries

## Trading – EBITDA<sup>3</sup>

MMTHB

▲ 78% QoQ  
▾ 36% YoY

▾ 64%



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

## Key Highlights

### QoQ

+ **Volume** increased mainly from higher Jet A-1 trading in EU and Aromatics export to China & light naphtha export to Singapore.

+ **Margin & EBITDA** increased from gain on derivative (MTM)

### 9M18 vs 9M19

+ **Volume** increased due to higher out-out trading activities from International offices

- **Margin & EBITDA** reduced from lower domestic condensate price and more discount in 9M19 due to oversupply of substitutes

**QoQ: ↓ Weaker NI from soften Petchem spreads & refineries' stock loss**

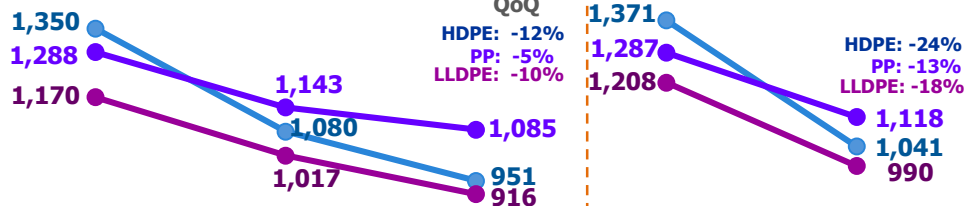
**9M19 vs 9M18: ↓ dropped NI; Soften GRM and Petchem spreads and refineries' stock loss**



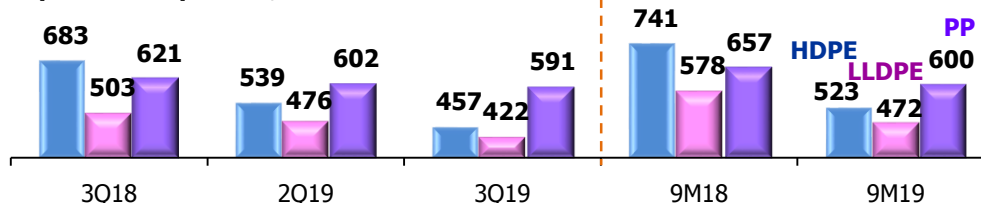
## Olefins

**Olefins U-Rate** (PE Plant) 97% → 101% → 107% → 103% → 103%

**Price: USD/Ton**



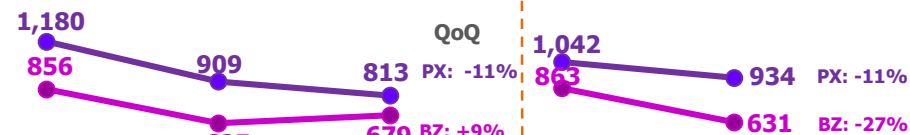
**Spread to Naphtha: \$/Ton**



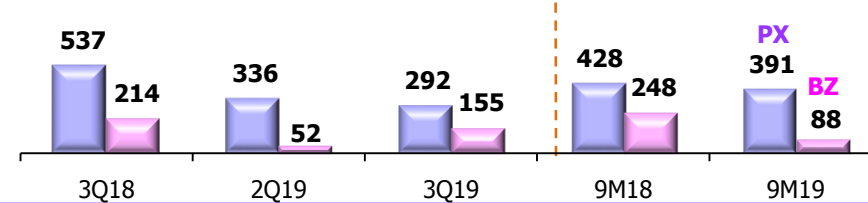
## Aromatics

**BTX U-Rate** 94% → 72% → 100% → 93% → 89%

**Price: USD/Ton**



**Spread to Condensate: \$/Ton**

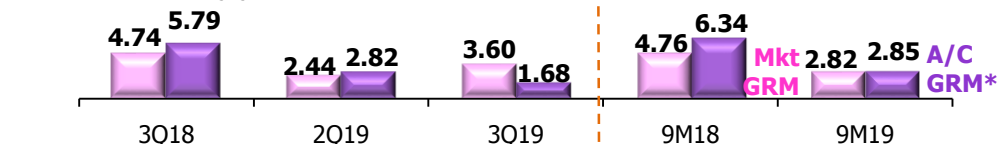


## GRM

**Dubai** 74.3 → 67.4 → 61.2 → 70.1 → 64.0

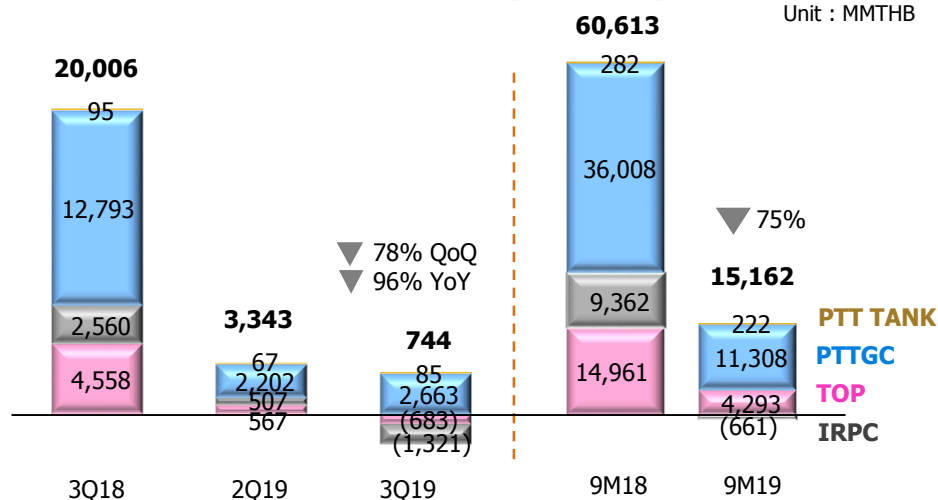
**Unit: USD/BBL**

\*A/C GRM = Mkt. GRM + Hedging + Stock G/L



## Net Income (100%)

Unit : MMTHB



# Other Businesses : Coal business (SAR)

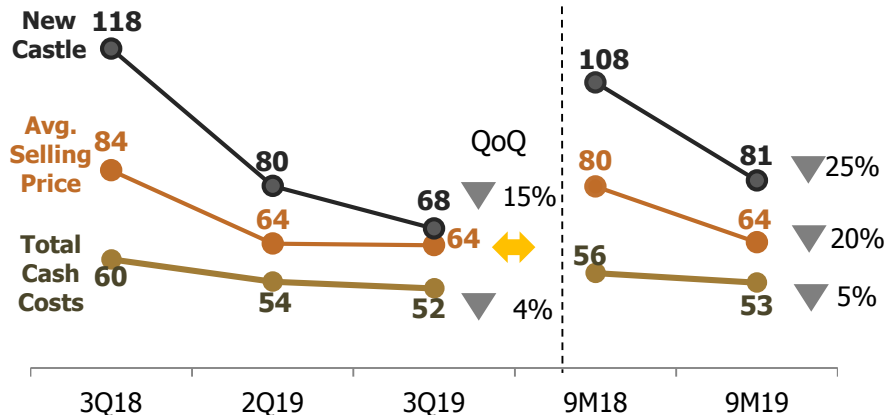
QoQ: ▲ NI slightly improved from increased vol. & lower cash cost

9M19 vs 9M18 : ▲ Higher NI due to other income from tax lawsuit case; despite lower sales vol.



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

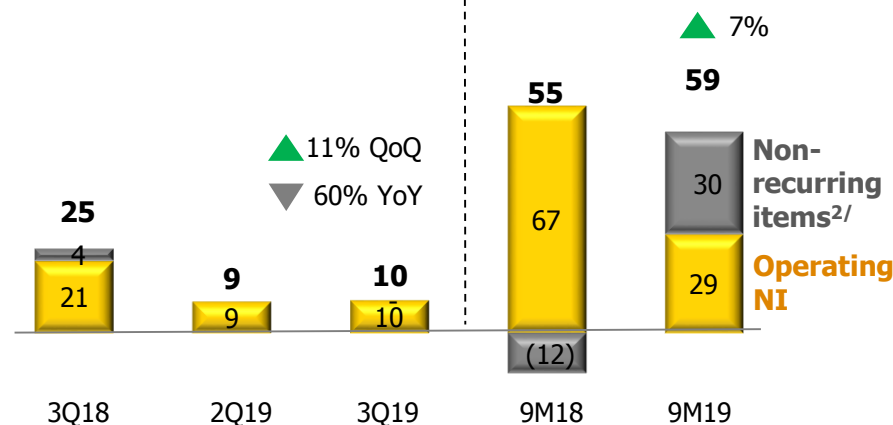
Unit: \$/Ton



<sup>1/</sup>Average Calorific value ~ 5,450 kcal/kg

## Net income

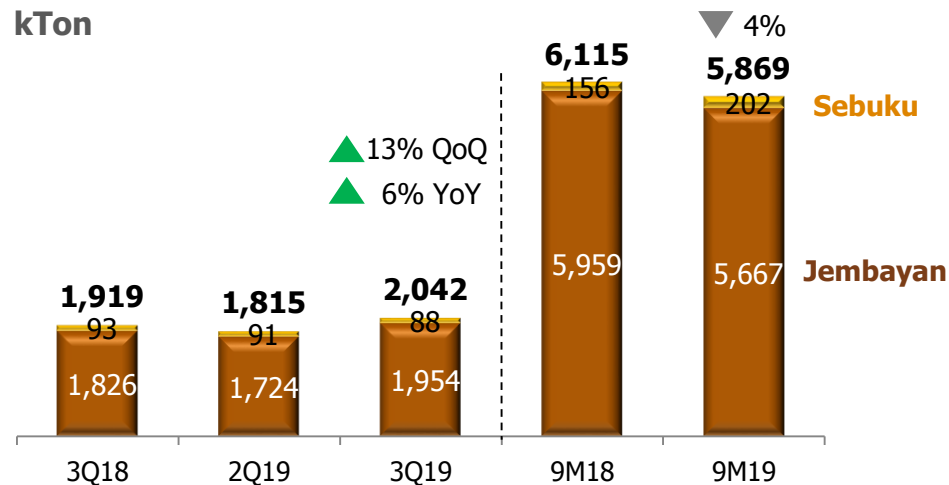
Unit: MMUSD



<sup>2/</sup>Non-recurring items include the payback on tax lawsuit case & impairment

## Sales Volume

kTon



## Key Highlights

### QoQ

- **Lower ASP** following New Castle Coal price
- + **Vol. increased** from higher export (*shipment delay from Jun. to Jul.*)
- + **Net Income:** Slightly higher from vol. and lower cash cost

### 9M18 vs 9M19

- **ASP & Cash cost drop** following coal price
- **Vol. dropped** from lower global demand and China & India import restriction
- + **Net Income:** performance increased from past tax lawsuits net payback, despite lower vol. & selling price

# Other Businesses : Power - GPSC

QoQ: ↓ Lower Sales Vol. and NI mainly from IPP's performance due to seasonal effect

9M19 vs 9M18: ↑ Higher Sales Vol. and NI from the recognition of GLOW's performance

E & P

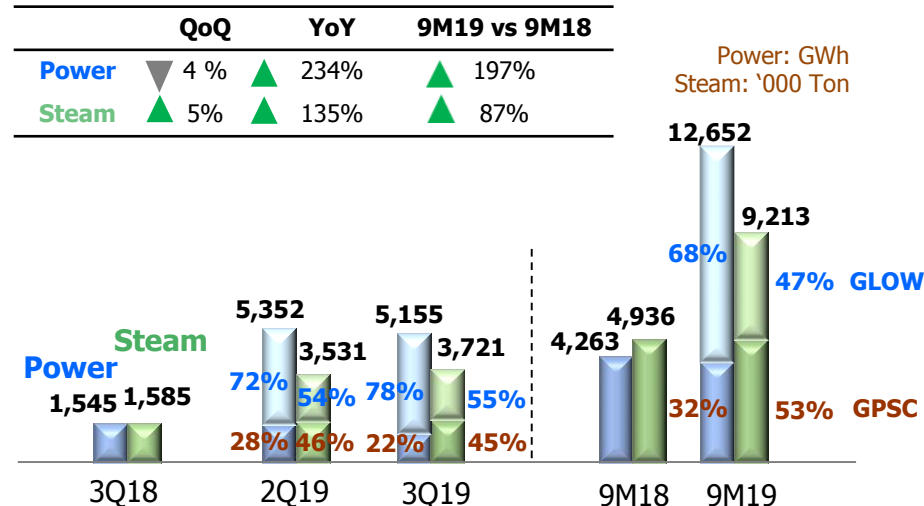
Gas

Oil & Trading

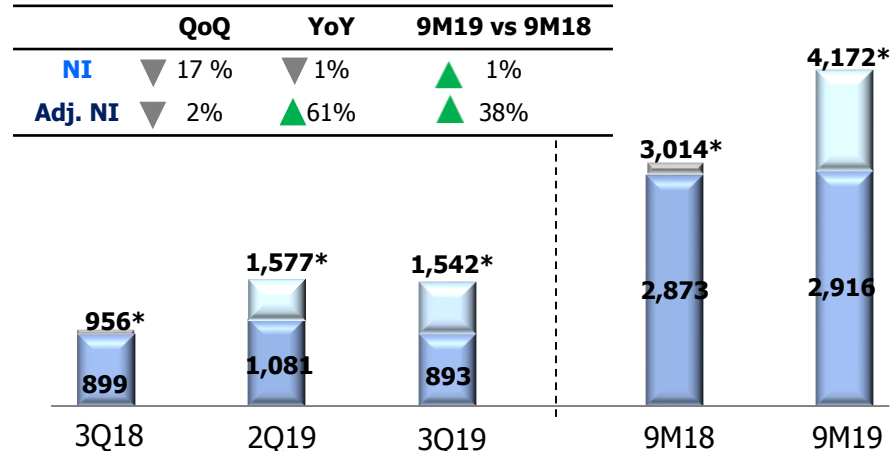
P&R

Others

## 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 as well as adjustments to remove the effects of accounting standards which are TFRS 15, TFRIC 4, foreign exchange and deferred tax asset effect

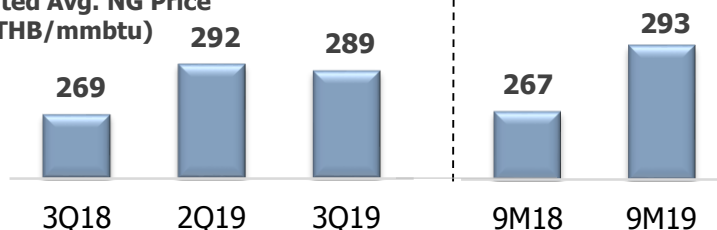
## Key Drivers: Weighted Avg. Selling & NG Prices

	QoQ	YoY	9M18 vs 9M19
SPP Weight Avg. Selling Price	▼ 2%	▲ 0.3%	▲ 1%
Weighted Avg. NG Price	▼ 1 %	▲ 7%	▲ 10%

### SPP Weighted Avg. Selling Price (THB/kWh)



### Weighted Avg. NG Price (THB/mmbtu)



## Key Highlights

### QoQ

- **Sales vol.** decreased mainly from IPP's performance following seasonality effect in 3Q19.
- **Selling Price** decreased from an appreciation of Thai Baht against USD and lower natural gas price in 3Q19.
- **NI** decreased mainly from higher interest expense from short-term loans paid for the tender offer process in May 2019.

### 9M18 vs 9M19

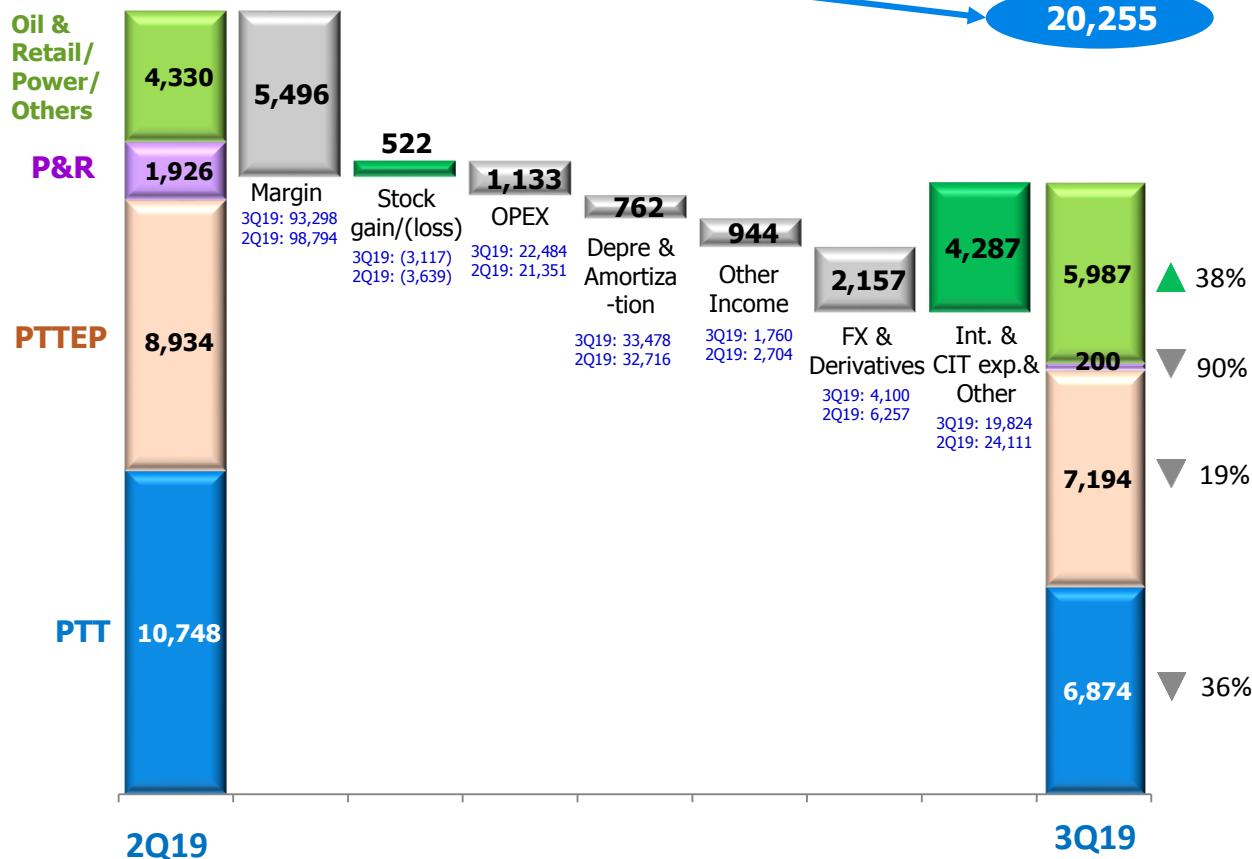
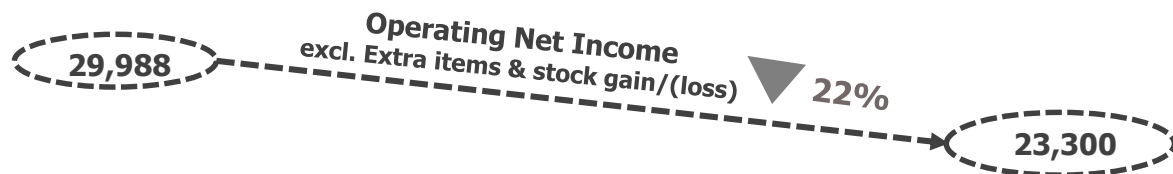
- + **Sales vol.** increased from the recognition of GLOW's performance.
- + **Selling Price** increased from higher gas price in 9M19.
- + **NI** increased from the recognition of GLOW's performance, even though the company incurred higher financial expense after the acquisition.

# 3Q19 Performance (QoQ):



↓ Soften performance from lower petchem prices resulting to weaken Gas & Petrochem business

## MMTHB



### Oil & retail/ Power/ Others ▲

#### Others: ▲

+ PTTT: Gain on derivatives

+ PTTLNG: Gain on FX

#### Oil & Retail ↔

+ Margin increased from gasoline

+ Lower stock loss

— Decreased sales vol. from lower seasonal demand

— Higher SG&A

#### Power ▼

— Soften operating income from seasonal effect

— Higher finance cost for tender offer

#### Coal ▲

+ Higher sales vol. & lower cash cost

### Petrochemical & Refining ▼

— Higher stock loss in 3Q19

— Olefins dropped from all product spreads

+ Improved Aromatics from higher vol. & BZ spread

+ Better GRM from improved spread esp. gasoline

### PTTEP ▼

— Higher write-off expenses in Myanmar

— Lower ASP from lower gas & crude oil price

+ Higher Volume from Murphy acquisition

### Gas ▼

— Softened GSP performance from lower selling prices despite higher vol.

— S&M drop from power vol. due to seasonal effect

### Trading ▲

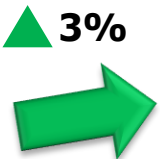
+ Gain on derivatives (Mark-to-market)

+ Improved sales vol.



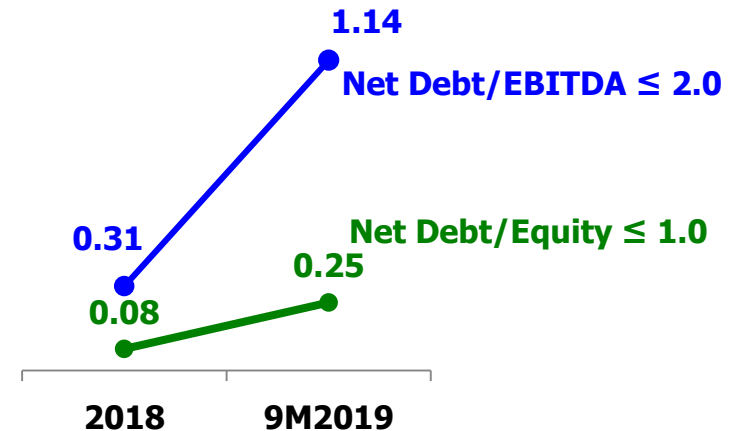
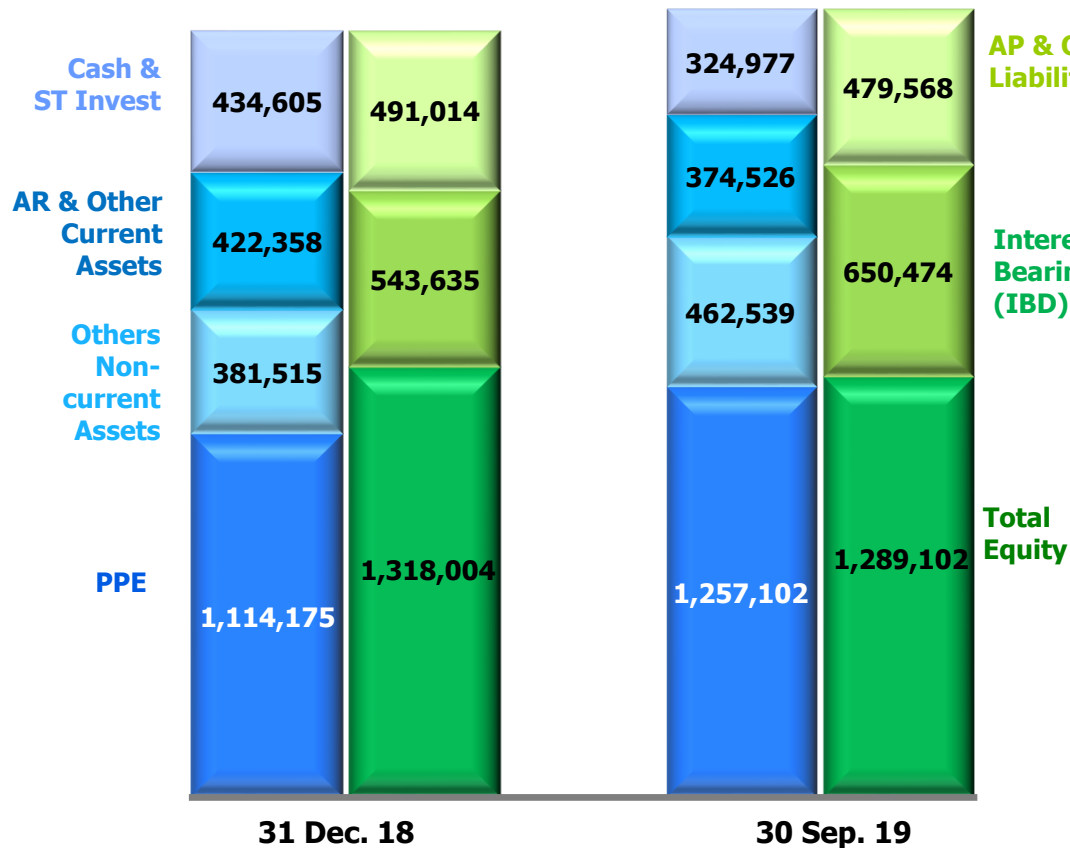
# Statement of Financial Position

MMTHB

2,352,653  2,419,144

**Assets/Liabilities increased :** mainly from

- + Increased in PPE from;
  - GPSC's acquisition of Glow
  - PTTEP's acquisition of Murphy
- + Increased in IBD from 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 : 9M2019

Operating	9M2018 176,137	9M2019 179,158
Net Income	100,146	75,505
Changes in assets & liabilities	(70,265)	7,406
Income Tax	(43,608)	(61,759)
Non-Cash Adjustment	189,864	158,006

Investing	9M2018 23,264	9M2019 (156,828)
CAPEX (PP&E, Intangible asset)	(76,825)	(110,646)
Investment (Sub. & Affiliates & others)	(21,239)	(141,455)
Current investment	109,632	84,335
Dividend/Interest Received	10,031	9,165
Others	1,665	1,773

Free Cash flow	
199,401	22,330



Adjustment	
813	(2,674)

Financing	(88,885)	(48,431)
Repayment Loans	(111,512)	(73,613)
Interest paid	(20,191)	(20,453)
Dividend paid	(61,354)	(55,193)
Received from share issue	52	236
Received from loans/Bonds	113,322	135,336
Others	(9,202)	(34,744)

Ending Cash & Cash Equivalents	
166,189	292,184
229,651	142,421
17,602	10,876
<b>413,442</b>	<b>445,481</b>



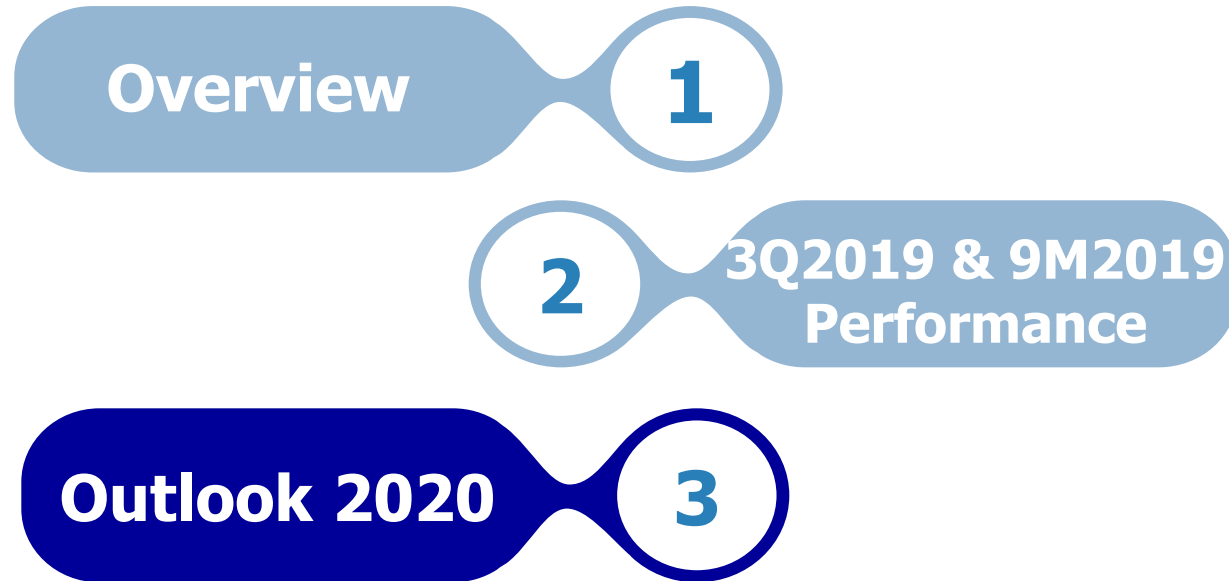
Cash In/(Out)	
111,329	(28,775)
(102,734)	(80,853)
(3,954)	(4,176)
<b>4,641</b>	<b>(113,804)</b>



Ending Cash & Cash Equivalents	277,518	263,409
Current inv.	126,917	61,568
AFS* inv.	13,648	6,700
<b>Ending cash incl. S/T investment</b>	<b>418,083</b>	<b>331,677</b>

Cash & cash eqi  
Current inv.  
AFS\* inv.

\*AFS = Available for sales



# Global Economic Outlook:

## Precarious Growth amid Difficult Headwinds



2018 GDP = \$21,480 Bn  
24% of World GDP

### *US economy : Moderate, but Solid, Growth*



- + **Strong labor market** to underpin consumption
- + Shift toward increased **monetary policy accommodation**
- + **Stimulus from the recently adopted 2-year budget deal**



- **Fading income tax-cut boost**
- **Trade-related policy uncertainty**



2018 GDP = \$14,170 Bn  
15% of World GDP

### *Chinese economy: Steady Slowdown in Growth*



- + Beijing's commitment to support the economy via **fiscal stimulus and accommodative monetary policy**, while delivering on promised reforms



- **Trade tensions** with the US



2018 GDP = \$14,030 Bn  
16% of World GDP

### *Eurozone economy: Uptick in Growth*



- + **Improving labor market**
- + **Ultra-accommodative monetary policy** (QE restart) and pre-emptive **fiscal stimulus**
- + **Continued fading temporary drags** (German auto woes)



- **Uncertain political landscape** (UK election/Brexit indecision and paralysis)

# Asian Economic Outlook:

## Caught in Prolonged Uncertainties



2018 GDP = \$5,220 Bn  
6% of World GDP

### *Japan economy: Solid but Volatile Growth*



- + Sustained **accommodative monetary stance**
- + **Investment** to replace aging capital stock and address labor shortages
- + **Spending** related to the 2020 **Tokyo Olympics**



- **Consumption tax rate increased** in Oct 2019, despite stimulus spending to offset the hit from higher taxes
- Impact from **US China Trade war**
- A trend **decline in the labor force**



2018 GDP = \$2,960 Bn  
3% of World GDP

### *India economy : Further Pick-Up in Growth*



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



- **Weaker than expected domestic demand**
- Non-banking financial companies (NBFCs) **liquidity crisis**



2018 GDP = \$524 Bn  
0.6% of World GDP

### *Thai economy: Moderate Growth to Continue*



- + **Public investment** with more infrastructure projects entering construction
- + **Government stimulus measures to help spur foreign tourism**



- **Challenging merchandise export conditions**
- **Divisive politics** adversely affecting confidence
- **High household debt** continuing to constrain domestic demand

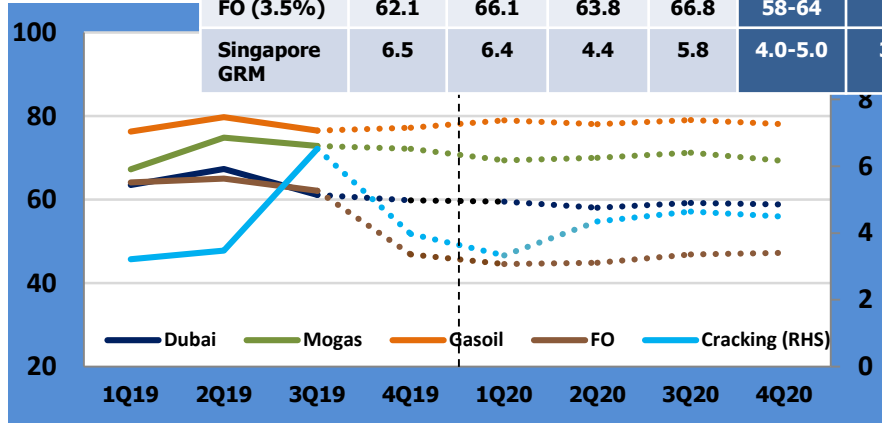


# 2020 Petroleum and Gas Outlook

## Petroleum

\$/bbl

Price	3Q19	9M18	9M19	Y18	Y19E	Y20E
Dubai	61.2	70.1	64.0	69.7	60-65	55-65
Mogas	72.8	82.6	71.6	79.9	70-75	68-72
Gasoil	76.5	84.7	77.5	84.1	75-80	76-81
FO (3.5%)	62.1	66.1	63.8	66.8	58-64	44-48
Singapore GRM	6.5	6.4	4.4	5.8	4.0-5.0	3.5-4.5



### Singapore GRM:

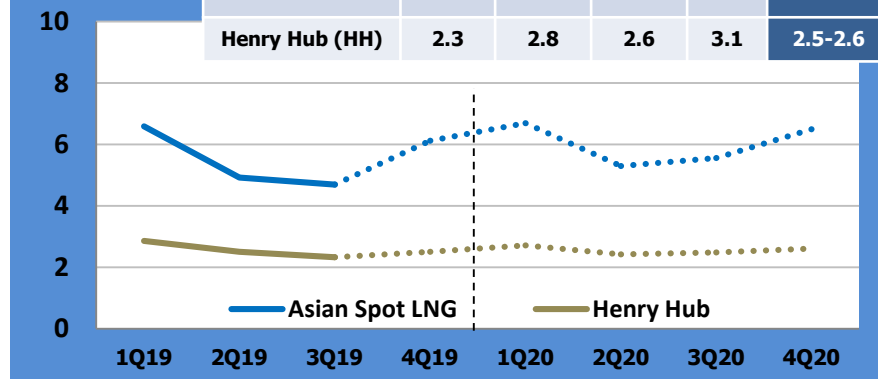
Asian refining margins to range between **4.0 – 5.0 \$/bbl** in 2019, and **3.5 – 4.5 \$/bbl** in 2020

▼ Lower gasoline & FO crack margins during IMO 2020

## Gas/LNG

\$/MMBTU

Price	3Q19	9M18	9M19	Y18	Y19E	Y20E
Asian Spot LNG	4.7	9.7	5.4	9.9	5.9-6.1	4.9-6.5
Henry Hub (HH)	2.3	2.8	2.6	3.1	2.5-2.6	2.5-2.6



Source: PTT, PRISM  
Petroleum Rolling as of Oct 19, Petrochemical Rolling as of Sep 19

### Dubai

- ▼ **Lower demand** due to expectation on global economic slowdown, as concerns on trade war and Brexit remain
- ▼ **Surging Non-OPEC output**, especially in the U.S. – increasing crude exports after more pipeline expansion completed in 4Q2019 & 2020
- ▲ **OPEC+ cut supply at 1.2 MMBD** to balance market until 1Q2020 and they are discussing to extend the deal further
- ▲ **Geopolitical Risks**; U.S. sanction on Iran and Venezuela, plus unrest in oil producing countries
- ▲ **Temporary impact from the attack on Saudi's key oil facilities**

### Mogas

- ▼ **Softened demand** amid global economic slowdown
- ▼ **Ample supply** due to higher refinery intakes of lighter crude, after the U.S. shale oil exports surge
- ▲ **Lower supply from refinery's yield shifting** to maximize middle distillate ahead of IMO implementation in 2020
- ▲ **Market concerns over lower supply** stemming from the attack on Saudi's key oil facilities

### Gasoil

- ▲ **Rising diesel demand** from IMO 2020
- ▼ **Softened demand** due to global economic slowdown

### Fuel Oil

- ▼ **Lower bunker demand** from IMO 2020
- ▼ **Lower trading activities** in the midst of economic slowdown

### Gas/LNG

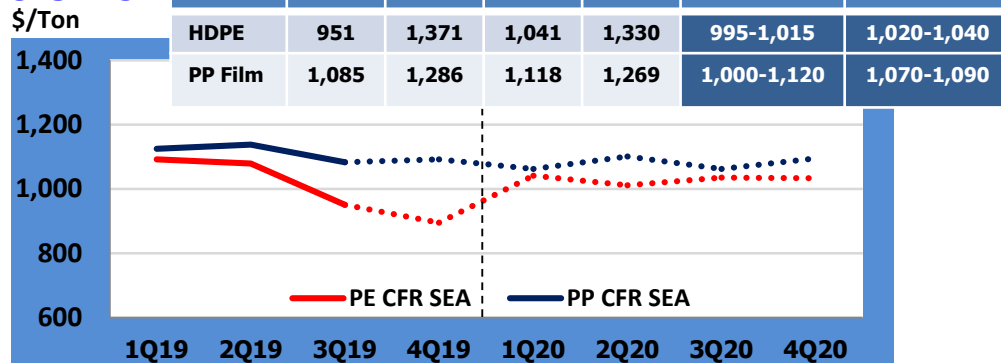
#### ▼ Asian Spot LNG:

- New LNG trains will continue to boost output
- Asia remains bearish with limited demand from buyers due to high inventory level

↔ **Henry Hub:** U.S. natural gas prices expected to be stable to soft due to the supply that remains high

# 2020 Petrochemical Outlook

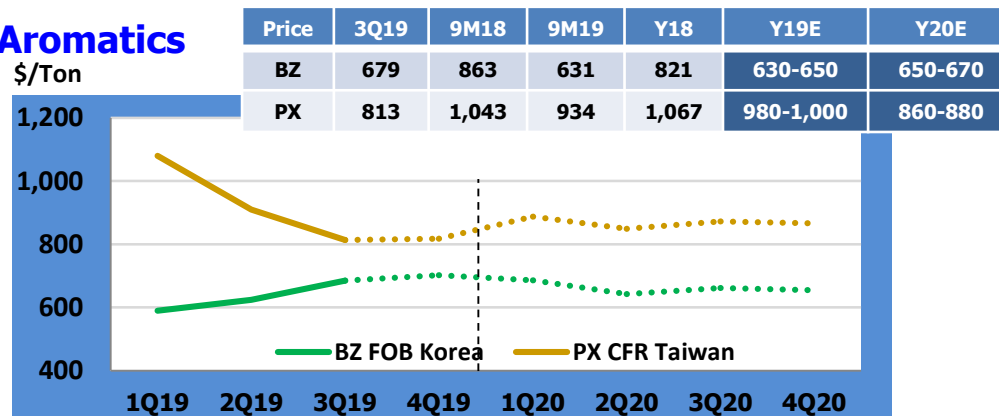
## Olefins



## Olefins

- Expected **new PE, PP supply** from PrefChem (Malaysia) and Chandra Asri (Indonesia) in 4Q2019
- Impact from **US-China trade tensions**
- Concerns on economic slowdown** and uncertainty of global market outlook

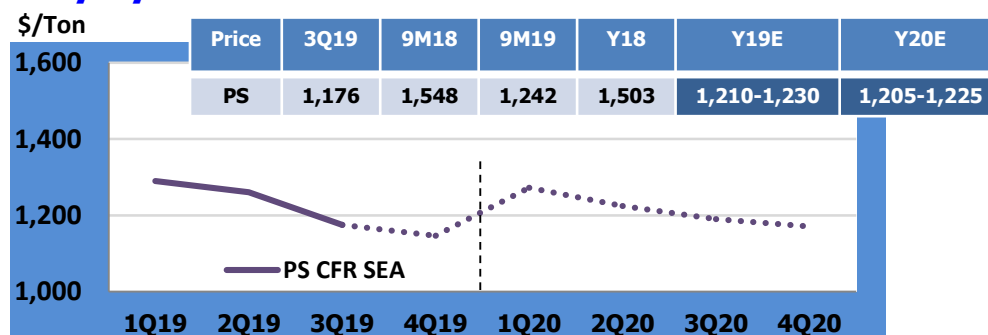
## Aromatics



## Aromatics

- Concerns on PX and BZ supply** due to start-up of Sinopec Hainan and Hengli Group in 4Q2019
- Additional capacity** from Hengyi (Brunei) and Zhejiang Petrochemical in early 2020
- The resumption of BZ derivative units** in 4Q2019 to support demand

## Polystyrene



## Polystyrene (PS)

- Pressure by the **uncertainty of global economy and trade war**
- Limited growth in the long term:** PS packaging demand continues facing **competition from alternative materials** and will face **risks of bans** and negative consumer perception
- Limited new investment on PS capacity**

# Guidance 4Q2019 & 2020

## GAS trend

Avg. pooled gas price

4Q19   
2020



## Gulf MTP LNG Terminal

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

To start "Land Reclamation" by Mid 2020

## Gas Separation Plant

GSP Major Turnaround in 2020

1Q20: GSP#5 (20 days)

2Q20: GSP#1 (25 days)

2H20: -



Public price: Lifted 1 Baht/kg for total 3 Baht

Adjust every 4 months

1<sup>st</sup> : May 16, 2019

2<sup>nd</sup> : Sep 16, 2019

3<sup>rd</sup> : Jan 16, 2020

Optimize asset &  
Improve public sector price

## IMO 2020



## Overall benefits to PTT Group

### Downstream:



Thai oil

IRPC

GC

+ Drives light crude & middle distillate demand → Boosted refining margin

### Upstream:

#### Gas BU:

+ Lower gas supply cost  
- Lagging time basis between purchasing & selling price (Industrial customer sales)

### PTTEP: Soften Gas price formula



(1/3 linked with HSFO but lower impact from 2024 onwards)



4Q19: Completion of Partex acquisition in Oman

4Q19: Additional 39% stake in Sinphuhorm proj. → 80%

Y2019: Strengthening sales volume (345 KBD)



4Q19: Refinery major TA 54 days (Oct-Nov)

1Q20: Olefins major TA (Crackers & Oleflex)

2H20: COD of MTP Retrofit & PO/Polyols



1H20: Planned TA (Hyvahl, PP, ABS)



4Q19: COD of Xayaburi Power Plant (25% stake) & CUP4 Expansion proj.

3Q20: NNEG Expansion Project

# 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) : 9M2019

Operating	9M2018	9M2019
	<b>46,640</b>	<b>26,848</b>
Net Income	153,147	55,329
Changes in assets & liabilities	(21,555)	7,243
Income Tax	(12,000)	(29,030)
Non-Cash Adjustment	(72,952)	(6,694)

Investing	9M2018	9M2019
	<b>71,141</b>	<b>8,701</b>
CAPEX (PP&E, Intangible asset)	(10,253)	(13,878)
Investment (Sub. & Affiliates & others)	(1,901)	(2,333)
Current investment	45,554	17,019
Dividend/Interest Received	36,374	30,685
Others	1,367	(22,792)

Free Cash flow	
117,781	35,549

Financing	(51,559)	(66,686)
Repayment Loans	(11,431)	(27,496)
Interest paid	(6,924)	(4,917)
Dividend paid	(34,258)	(34,273)
Received from share issue	-	-
Received from loans/Bonds	1,054	-
Others	-	-

Adjustment	
(268)	178

Ending Cash and Cash Equivalents	
38,692	86,204
68,056	21,972
4,533	2,580
<b>111,281</b>	<b>110,756</b>

Cash In/(Out)	
65,954	(30,959)
(39,504)	(7,316)
(1,793)	287
<b>27,658</b>	<b>38,562</b>

Ending Cash & Cash Equivalents	104,646	55,245
Current inv.	28,552	14,656
AFS* inv.	2,740	2,867
<b>Ending cash incl. S/T investment</b>	<b>135,939</b>	<b>72,768</b>

Cash & cash eqi  
Current inv.  
AFS\* inv.



# PTT Group Performance : 3Q2019 (QoQ)



Unit : MMTHB

	Performance 100%			% PTT holding	Equity Method % PTT		
	<u>2Q19</u>	<u>3Q19</u>	<u>QoQ</u>		<u>2Q19</u>	<u>3Q19</u>	<u>QoQ</u>
<b>PTT Net operating Income</b>	<b>10,748</b>	<b>6,868</b>	<b>(36%)</b>		<b>10,748</b>	<b>6,874</b>	<b>(36%)</b>
<b>E&amp;P - PTTEP</b>	<b>13,684</b>	<b>11,019</b>	<b>(19%)</b>	<b>65.29%</b>	<b>8,934</b>	<b>7,194</b>	<b>(19%)</b>
<b>Petrochemical</b>	<b>2,269</b>	<b>2,748</b>	<b>21%</b>		<b>1,173</b>	<b>1,374</b>	<b>17%</b>
<b>- PTTGC</b>	<b>2,202</b>	<b>2,663</b>	<b>21%</b>	<b>47.69%</b>	<b>1,106</b>	<b>1,289</b>	<b>17%</b>
<b>- Other</b>	<b>67</b>	<b>85</b>	<b>27%</b>		<b>67</b>	<b>85</b>	<b>27%</b>
<b>Refining</b>	<b>1,074</b>	<b>(2,003)</b>	<b>&lt;(100%)</b>		<b>753</b>	<b>(1,174)</b>	<b>&lt;(100%)</b>
<b>- TOP</b>	<b>567</b>	<b>(682)</b>	<b>&lt;(100%)</b>	<b>47.53%</b>	<b>540</b>	<b>(590)</b>	<b>&lt;(100%)</b>
<b>- IRPC</b>	<b>507</b>	<b>(1,321)</b>	<b>&lt;(100%)</b>	<b>47.55%</b>	<b>213</b>	<b>(584)</b>	<b>&lt;(100%)</b>
<b>Others Business</b>	<b>6,002</b>	<b>7,306</b>	<b>22%</b>		<b>4,643</b>	<b>5,955</b>	<b>28%</b>
<b>Inter - PTTER/PTTGE/PTTGM</b>	<b>57</b>	<b>303</b>	<b>&gt;100%</b>	<b>100%</b>	<b>62</b>	<b>277</b>	<b>&gt;100%</b>
<b>Gas - PTTLNG/PTTNGD/PTTGL/TTM(T)/TTM(M)</b>	<b>2,094</b>	<b>2,462</b>	<b>18%</b>		<b>1,862</b>	<b>2,159</b>	<b>16%</b>
<b>Utilities - GPSC/TP/DCAP/PTTES/PTTDIGITAL/ENCO</b>	<b>1,526</b>	<b>1,361</b>	<b>(11%)</b>		<b>382</b>	<b>349</b>	<b>(9%)</b>
<b>Oil &amp; Oth. - PTTT/PTTOR/THAPPLINE/Others<sup>1/</sup></b>	<b>2,325</b>	<b>3,180</b>	<b>37%</b>		<b>2,337</b>	<b>3,170</b>	<b>36%</b>
<b>Shared of Net Income from Affiliates</b>	<b>23,029</b>	<b>19,070</b>	<b>(17%)</b>		<b>15,503</b>	<b>13,349</b>	<b>(14%)</b>
<b>Tax adjustment for gain on disposal of investment and asset</b>	<b>(313)</b>	<b>32</b>	<b>&gt; 100%</b>		<b>(313)</b>	<b>32</b>	<b>&gt; 100%</b>
<b>PTT Conso. Net Income</b>	<b>33,464</b>	<b>25,970</b>	<b>(22%)</b>		<b>25,938</b>	<b>20,255</b>	<b>(22%)</b>

1/ Including BSA, PTT TCC and RTC

# PTT Group Performance : 9M2019 (9M19 vs 9M18)



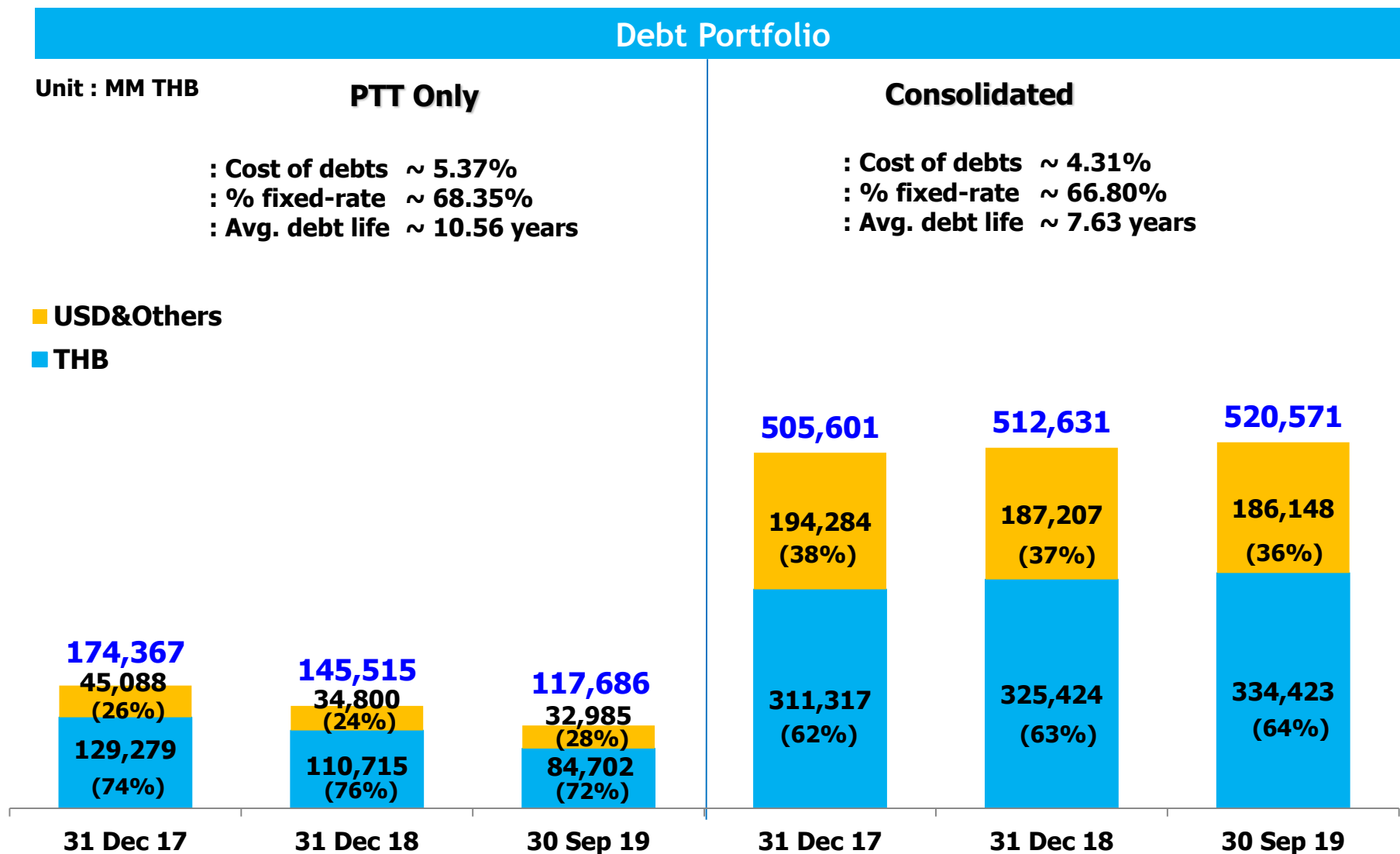
Unit : MMTHB

	Performance 100%			% PTT holding	Equity Method % PTT		
	9M/18	9M19	9Mvs9M		9M18	9M19	9Mvs9M
<b>PTT Net operating Income</b>	48,152	26,038	(46%)		48,152	26,038	(46%)
<b>E&amp;P - PTTEP</b>	27,372	37,182	36%	65.29%	17,871	24,275	36%
<b>Petrochemical</b>	36,290	11,530	(68%)		18,172	5,551	(69%)
- PTTGC	36,008	11,308	(69%)	47.69%	17,889	5,329	(70%)
- Other	282	222	(21%)		283	222	(22%)
<b>Refining</b>	24,323	3,632	(85%)		11,749	1,418	(88%)
- TOP	14,961	4,293	(71%)	47.53%	7,215	1,699	(76%)
- IRPC	9,362	(661)	<(100%)	47.55%	4,534	(281)	<(100%)
<b>Others Business</b>	22,800	22,664	(1%)		11,272	18,504	64%
<b>Inter - PTTER/PTTGE/PTTGM</b>	7,258	1,589	(78%)	100%	853	1,573	84%
<b>Gas - PTTLNG/PTTNGD/PTTGL/TTM(T)/TTM(M)</b>	6,330	6,767	7%		5,055	5,914	17%
<b>Utilities - GPSC/TP/DCAP/PTTES/PTTDIGITAL/ENCO</b>	4,400	4,411	0%		1,106	1,118	1%
<b>Oil &amp; Oth. - PTTT/PTTOR/THAPPLINE/Others<sup>1/</sup></b>	4,812	9,897	>100%		4,258	9,899	>100%
<b>Shared of Net Income from Affiliates</b>	110,785	75,008	(32%)		59,064	49,748	(16%)
<b>Tax adjustment for gain on disposal of investment and asset</b>	(7,070)	(281)	(96%)		(7,070)	(281)	(96%)
<b>PTT Conso. Net Income</b>	151,867	100,765	(34%)		100,146	75,505	(25%)

1/ Including BSA, PTT TCC and RTC

# Debt Profile : Control Cost & Manage Risk

Managed debt according to financial risk and policy



Note : 1. Data as of 30 Sep 19 (THB/USD = 30.7661 THB/JPY = 0.2873) Excluding liabilities from finance leases; Cost of debts includes withholding tax.

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.

# PTT Group Accounting Structure



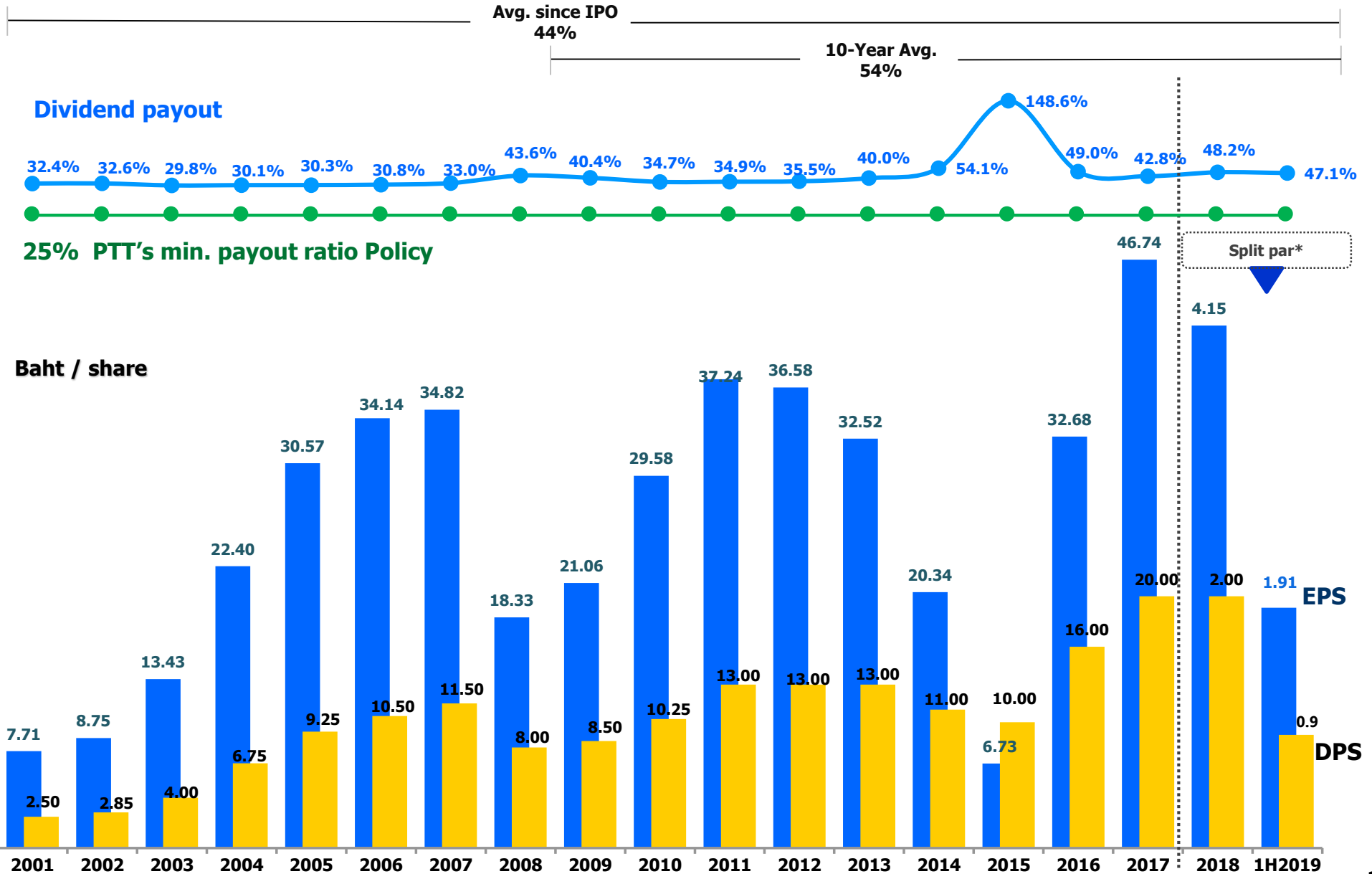
Data as of 30 Sep 2019

E&P and Gas Business Group			Oil 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>Subsidiaries</b> PTT Oil & Retail Business Co., Ltd. PTTOR 100.00%			<b>Petrochemical Subsidiaries</b> PTT Global Chemical Plc.* PTTGC 47.69% PTT Tank Terminal Co., Ltd. PTTTANK 100.00%		
<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>Others</b> PetroAsia (Maoming) Co., Ltd. PA(Maoming) 20.00% PetroAsia (Sanshui) Co., Ltd. PA(Sanshui) 25.00%			<b>Refining Subsidiaries</b> Thai Oil Plc.* TOP 47.53% IRPC Plc.* IRPC 47.55%		
Power Business Group			International Investment			International Trading Business Group		
<b>Subsidiaries</b> Global Power Synergy Co., Ltd* GPSC 22.58% Thai Oil Power Co., Ltd.* TP 26.00%			<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> PTT International Trading Pte. PTTT 100.00% PTT International Trading London Ltd PTTTLDN 100.00%		
<b>Joint Ventures</b> District Cooling System and Power Plant DCAP 35.00%								
Others								
<b>Subsidiaries</b> PTT Digital Solutions Co., Ltd.* PTT DIGITAL 20.00% PTT Energy Solutions Co., Ltd.* PTTES 40.00% Energy Complex Co., Ltd. EnCo 50.00% Business Service Alliance Co., Ltd.* BSA 100.00% PTT Regional Treasury Center Pte. Ltd. PTTRTC 100.00% PTT Treasury Center Co. Ltd PTT TCC 100.00%			<b>Others</b> Sarn Palung Social Enterprise Company Ltd. SPSE 20.00% Baania (Thailand) Company Ltd. Baania 3.57%			<b>Cost</b>		
			<b>Others</b> Dhipaya Insurance Plc. TIP 13.33% HR Robotics Plc. HG Robotics 9.49%			<b>Fair Value</b>		

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

# Dividend Policy & Historical Payments

## Dividend payout Policy: Not less than 25% of net income



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