



**PTTEP**

MEMBER OF

**Dow Jones  
Sustainability Indices**

In Collaboration with RobecoSAM



# Introduction to PTTEP

15 September 2020



## Forward-looking Information

The information, statements, forecasts and projections contained herein reflect the Company's current views with respect to future events and financial performance. These views are based on assumptions subject to various risks. No assurance is given that these future events will occur, or that the Company's assumptions are correct. Actual results may differ materially from those projected.

## Petroleum Reserves Information

In this presentation, the Company discloses petroleum reserves that are not included in the Securities Exchange and Commission of Thailand (SEC) Annual Registration Statement Form 56-1 under "Supplemental Information on Petroleum Exploration and Production Activities". The reserves data contained in this presentation reflects the Company's best estimates of its reserves. While the Company periodically obtains an independent audit of a portion of its proved reserves, no independent qualified reserves evaluator or auditor was involved in the preparation of reserves data disclosed in this presentation. Unless stated otherwise, reserves are stated at the Company's gross basis.

This presentation may contain the terms "proved reserves" and "probable reserves". Unless stated otherwise, the Company adopts similar description as defined by the Society of Petroleum Engineers.

**Proved Reserves** - Proved reserves are defined as those quantities of petroleum which, by analysis of geological and engineering data, can be estimated with reasonable certainty to be commercially recoverable, from a given date forward, from known reservoirs and under current economic conditions, operating methods, and government regulations.

**Probable Reserves** - Probable reserves are defined as those unproved reserves which analysis of geological and engineering data suggests are more likely than not to be recoverable.





## Oil&Gas Overview



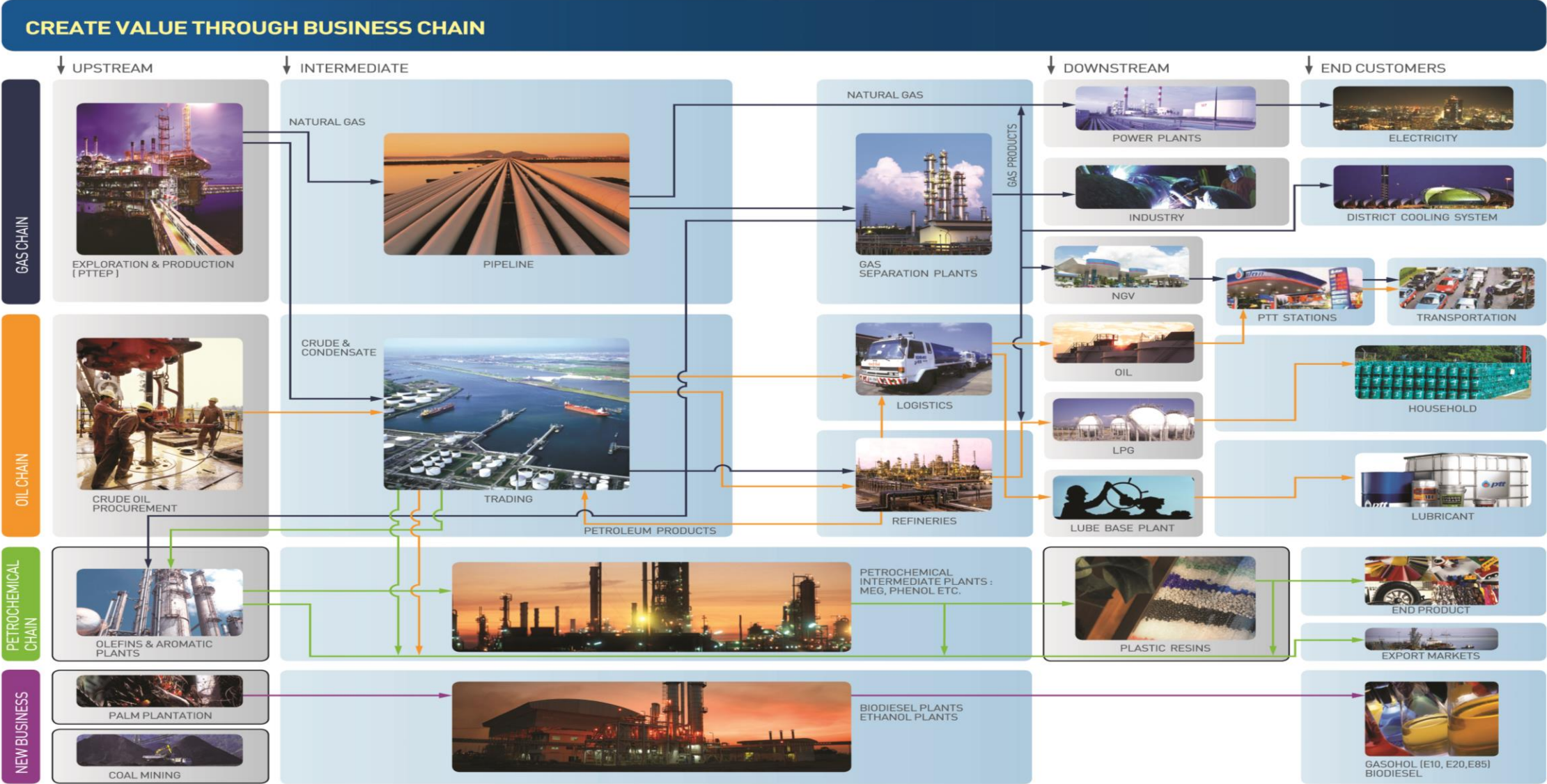
## PTTEP's Overview



## Key Financial Factors



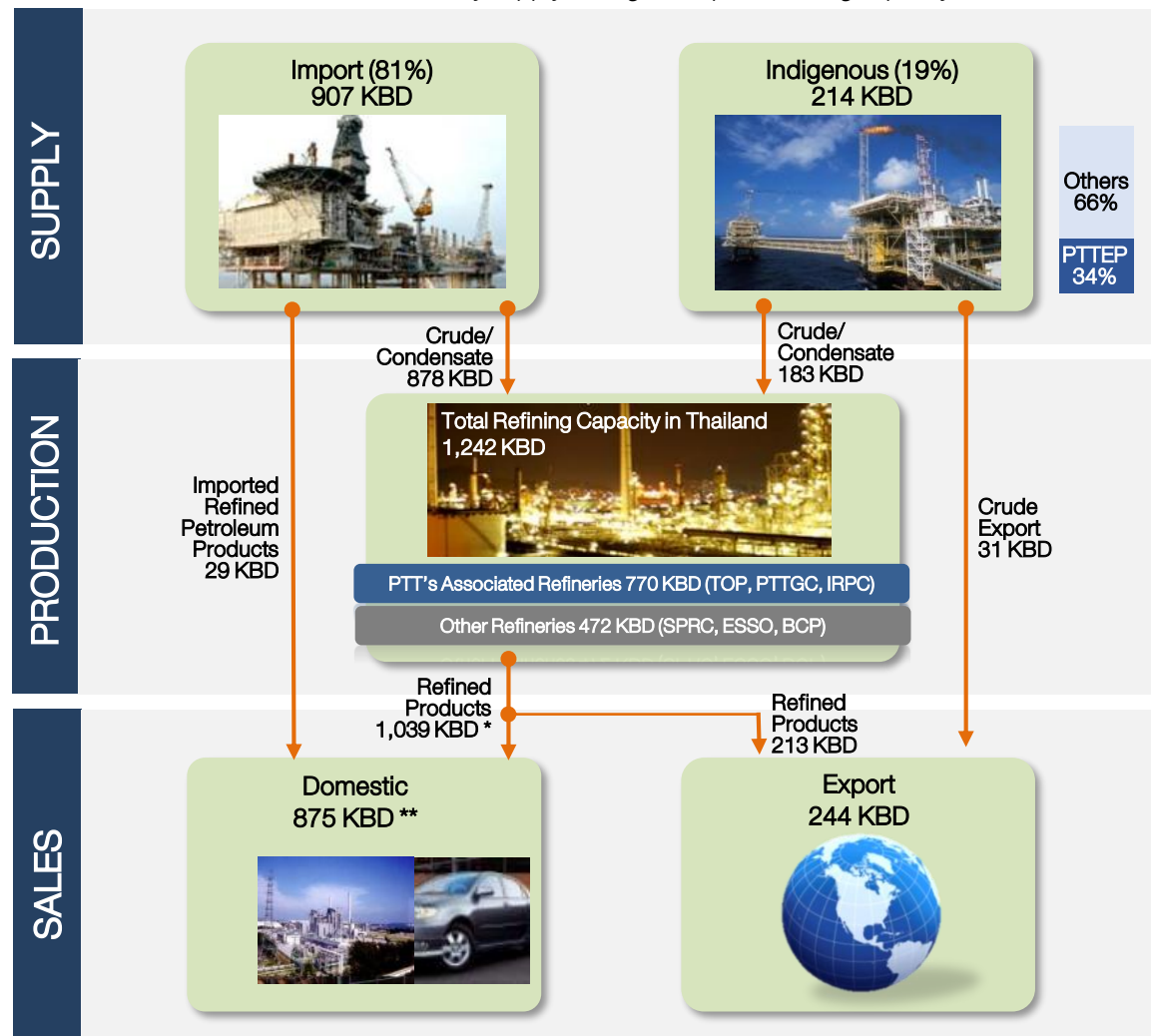




หมายเหตุ : New Business เป็นธุรกิจที่ดำเนินงานในต่างประเทศ

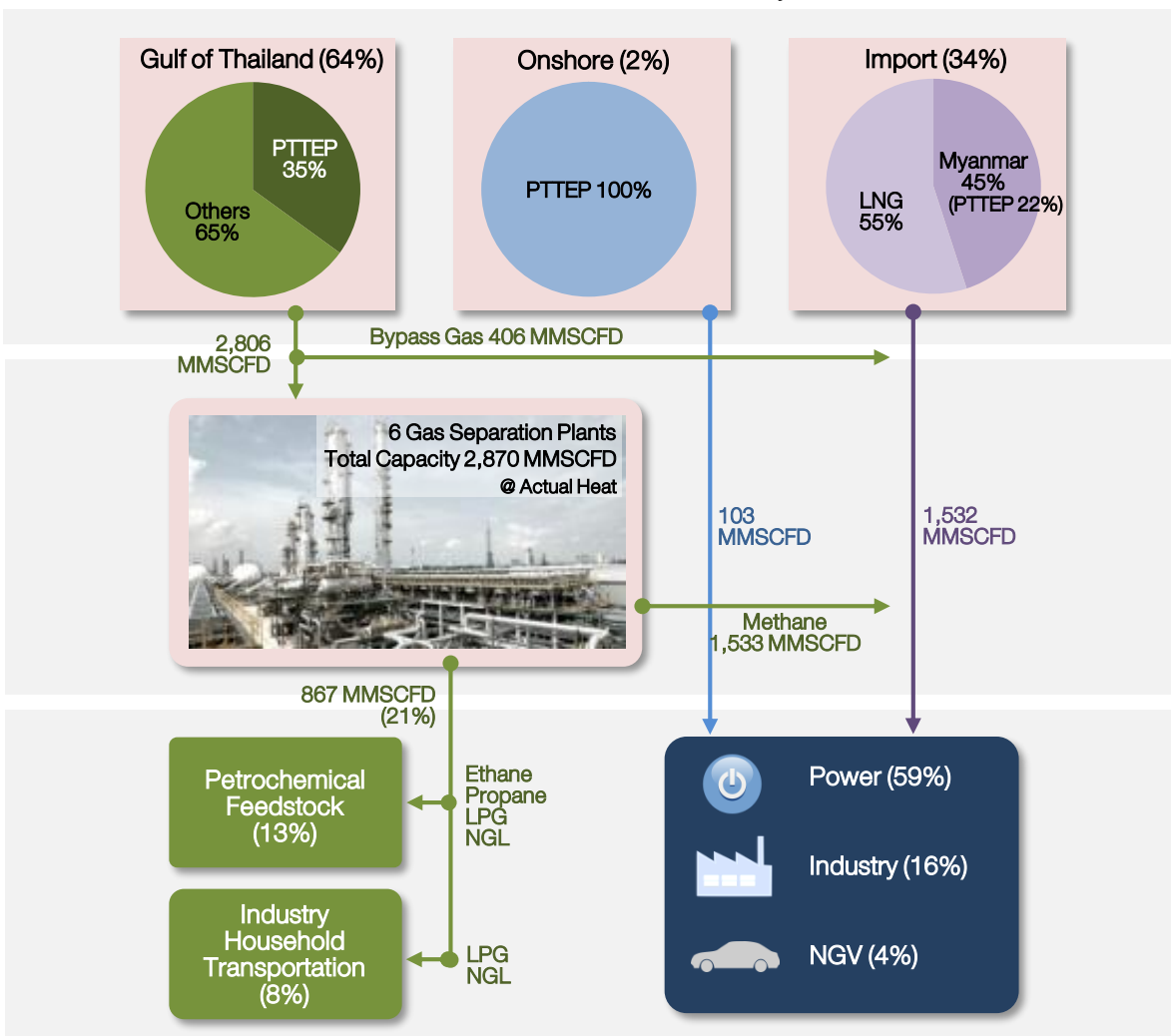
## Oil Balance\*\*\*

Maintains stability supply through adequate refining capacity



## Natural Gas Balance\*\*\*\*

Main driver of the Thailand economy



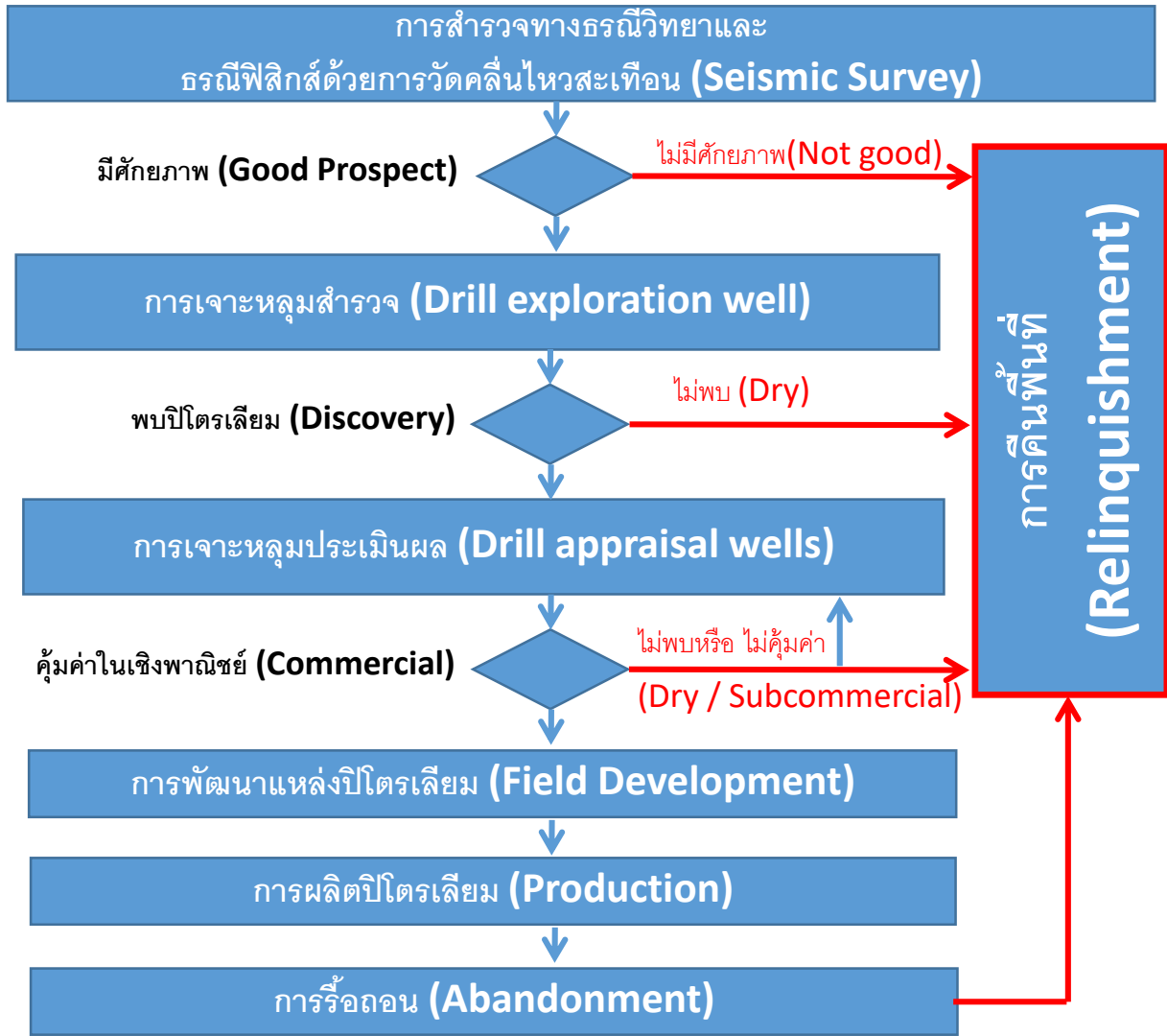
Source: PTT  
Remark: \* Refined product from refineries = 944 KBD, including domestic supply of LPG from GSPs and Petrochemical Plants = 95 KBD  
\*\* Not included Inventory  
\*\*\* Information as of 5M20  
\*\*\*\* Information as of 6M20  
MMSCFD @ Heating Value 1,000 Btu/ft<sup>3</sup>



น้อย

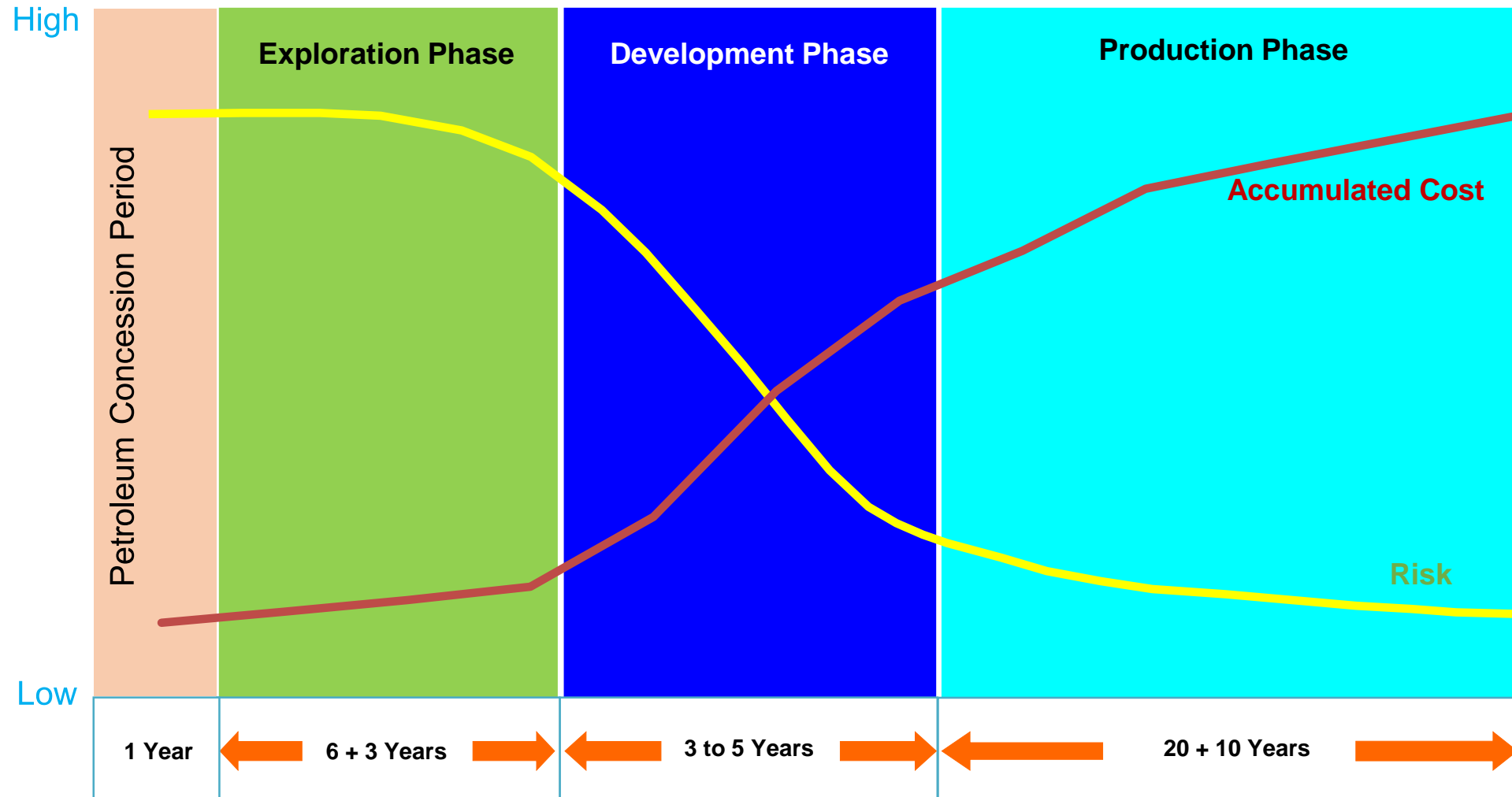
โอกาสที่จะสำเร็จ

มาก

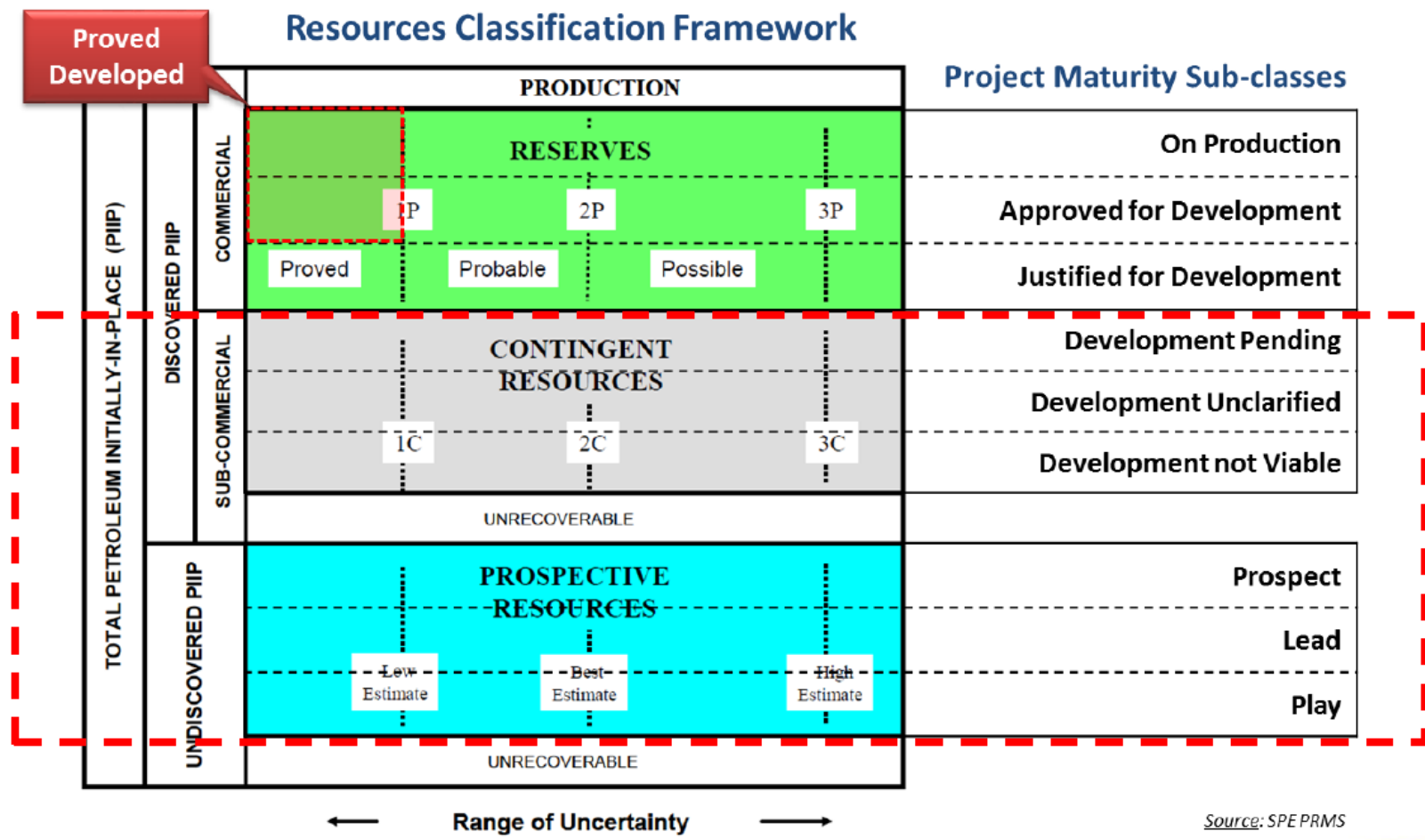


# Upstream Oil & Gas Exploration and Production

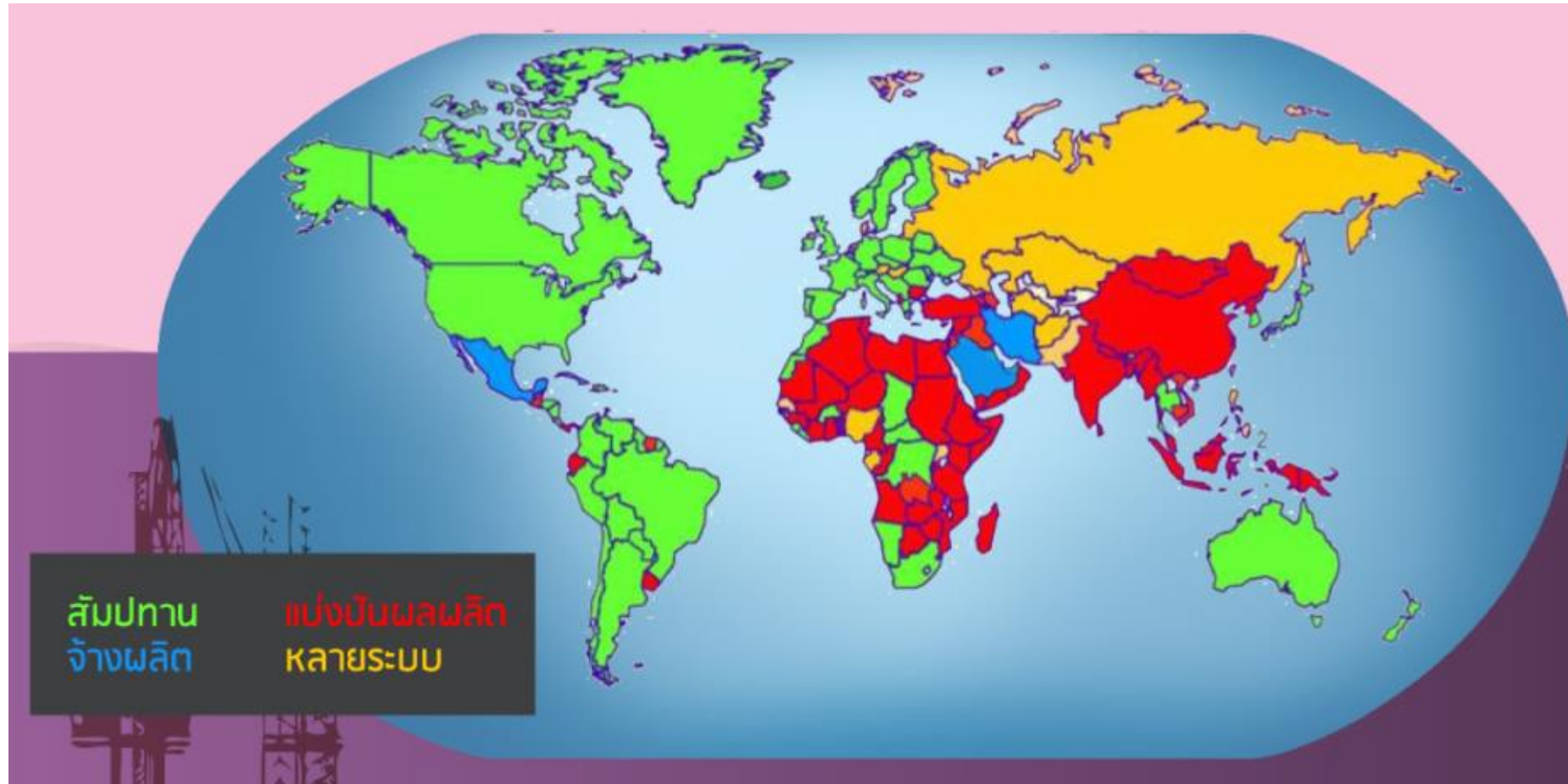
Phases vs. Risks









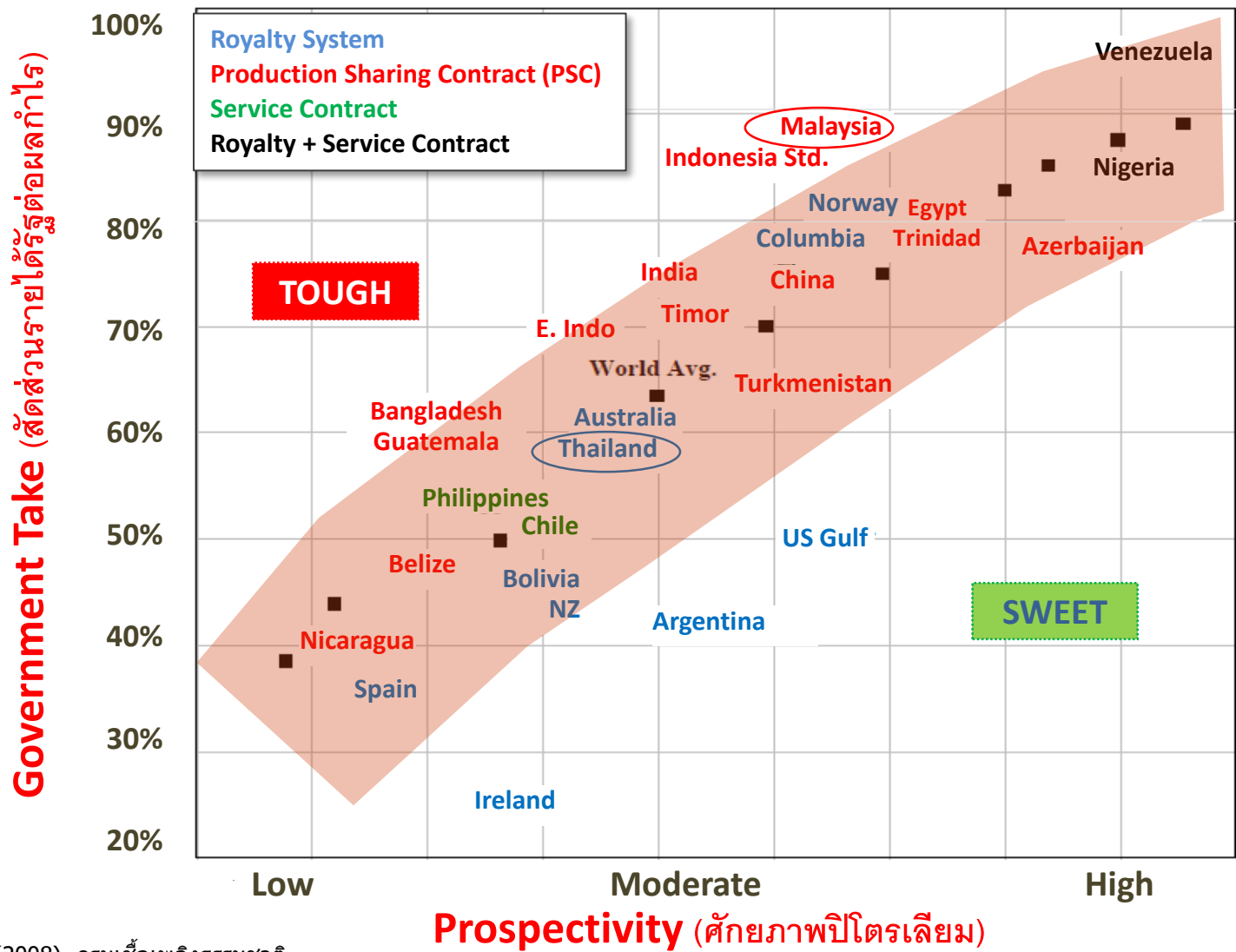


## Similarities and Differences

| หัวข้อ | ประเด็น                    | สัมปทาน                                           | สัญญาแบ่งปันผลผลิต                                                                           |
|--------|----------------------------|---------------------------------------------------|----------------------------------------------------------------------------------------------|
| 1      | Risk and Reward            | ผู้รับสัมปทานรับความเสี่ยงในการดำเนินงานฝ่ายเดียว | ขึ้นอยู่กับเงื่อนไขในสัญญา                                                                   |
| 2      | ความเป็นเจ้าของ/กรรมสิทธิ์ |                                                   |                                                                                              |
|        | ปิโตรเลียมที่ผลิตได้       | เป็นกรรมสิทธิ์ของผู้รับสัมปทาน                    | รัฐกับผู้รับสัญญาแบ่งกัน ตามข้อตกลง                                                          |
|        | ทรัพย์สิน                  | เป็นของผู้รับสัมปทาน                              | เป็นของรัฐ                                                                                   |
|        | ข้อมูล                     | เป็นของผู้รับสัมปทาน                              | เป็นของรัฐ                                                                                   |
| 3      | การบริหารจัดการ            |                                                   |                                                                                              |
|        | แผนงานและงบประมาณ          | N/A                                               | ขออนุมัติจากรัฐ                                                                              |
|        | การบริหารจัดการ            | เป็นอำนาจของผู้รับสัมปทาน                         | มีคณะกรรมการจัดการตั้งขึ้นจากตัวแทนของรัฐ และผู้รับสัญญา                                     |
|        | การจัดซื้อจัดจ้าง          | เป็นอำนาจของผู้รับสัมปทาน                         | จัดทำและนำเสนอแผนการจัดซื้อจัดจ้างประจำปี พร้อม<br>กับแผนงานและงบประมาณเพื่อให้รัฐอนุมัติ    |
| 4      | ค่าใช้จ่ายในการดำเนินงาน   | Expenses                                          | Cost recovery หักได้ไม่เกินตามที่กำหนด และต้อง<br>เป็นไปตามแผนงานและงบประมาณที่ได้รับอนุมัติ |



## Government Take vs. Petroleum Prospectivity

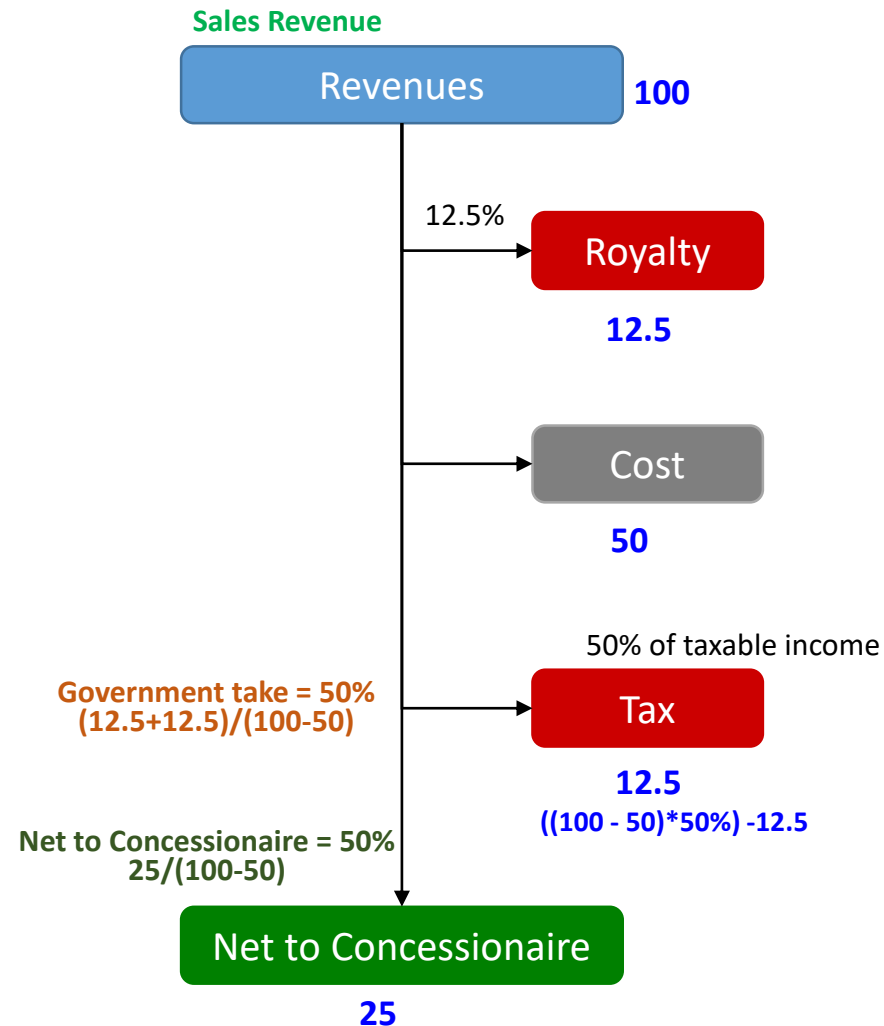


แหล่งที่มาข้อมูล: Daniel Johnston (2008), กรมเชื้อเพลิงธรรมชาติ

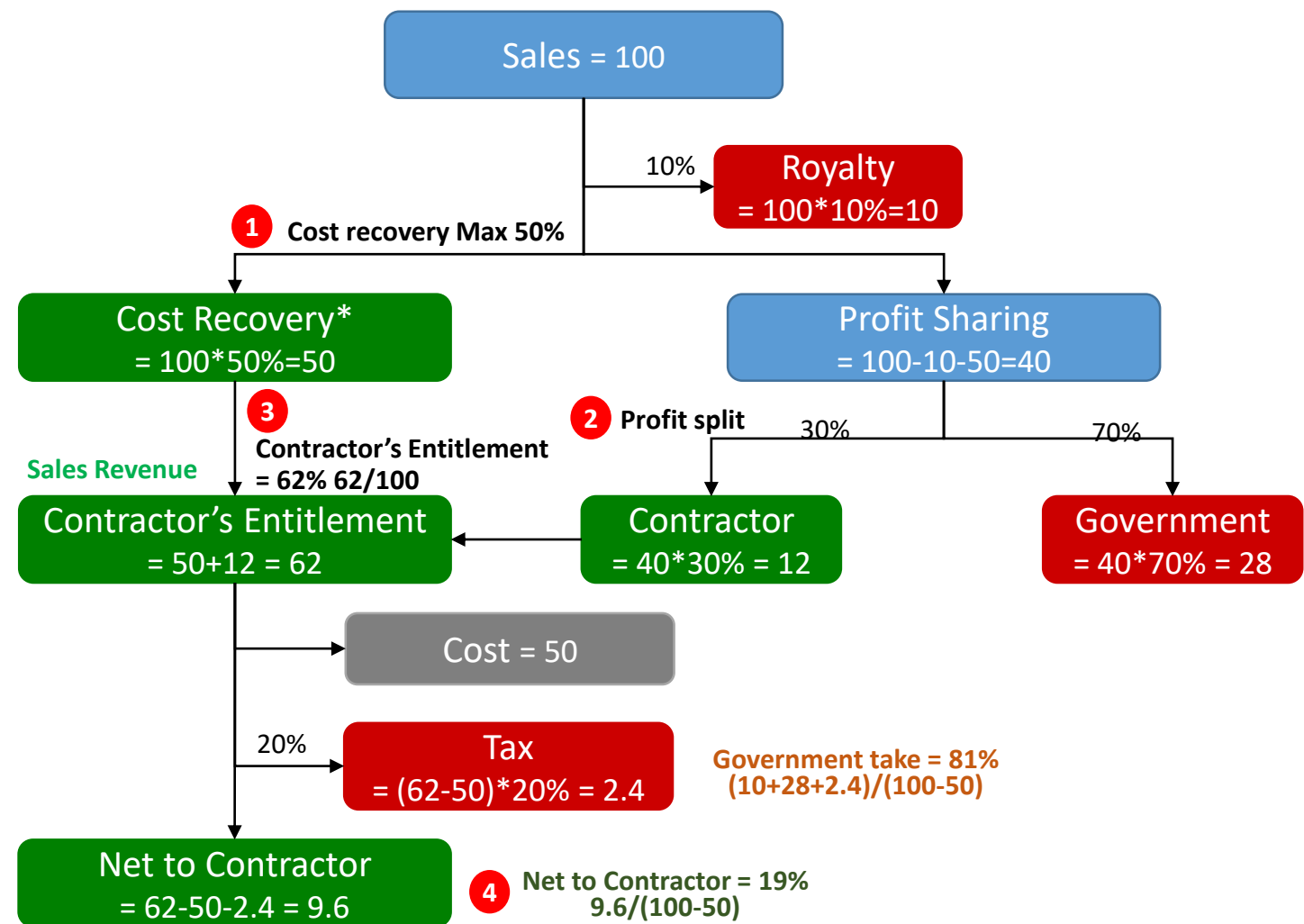
# Thailand Petroleum Act Update

Key terms for concession and PSC have been finalized

## Concession: Thailand I

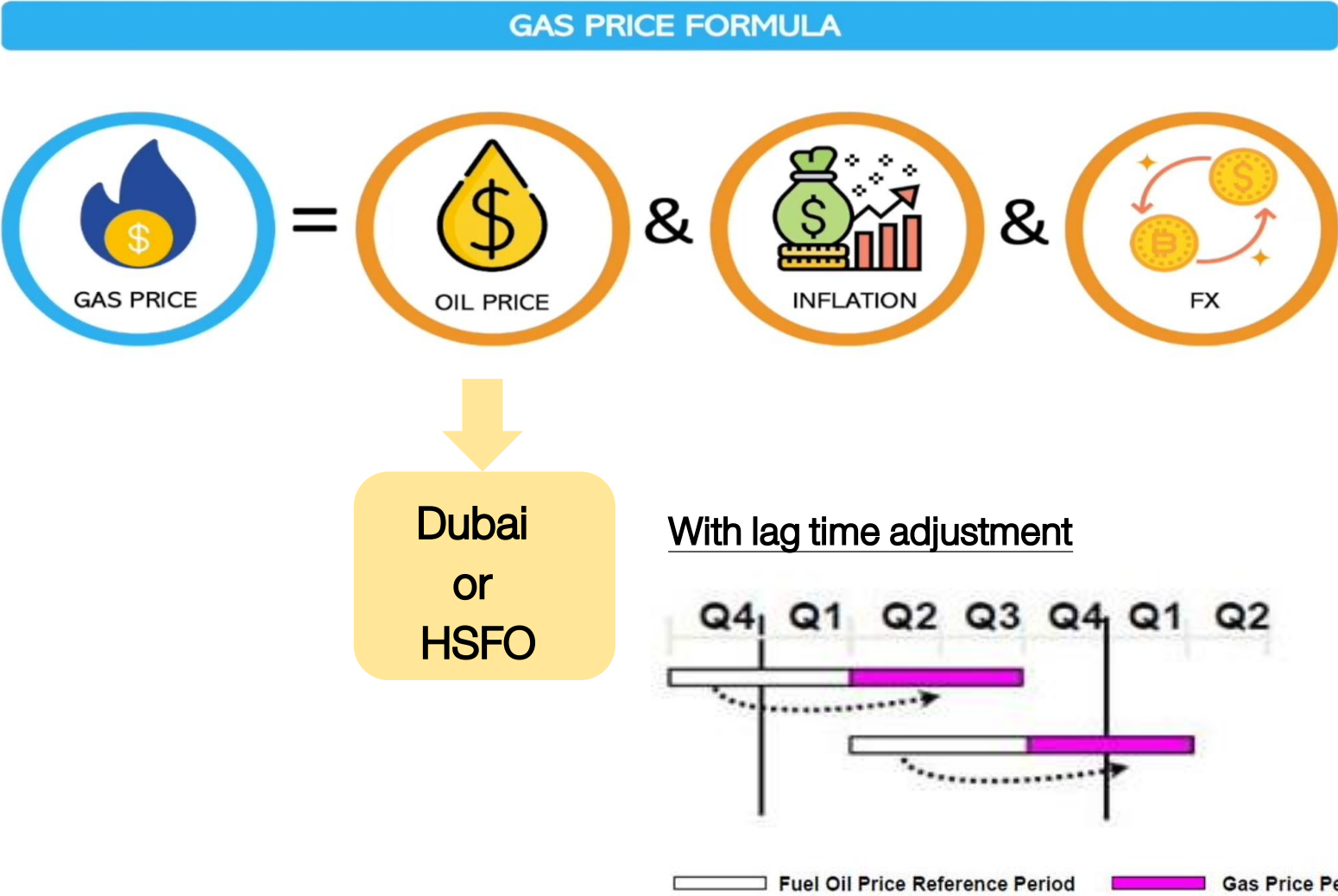


## PSC



Remark: Assuming that cost can be fully recovered.



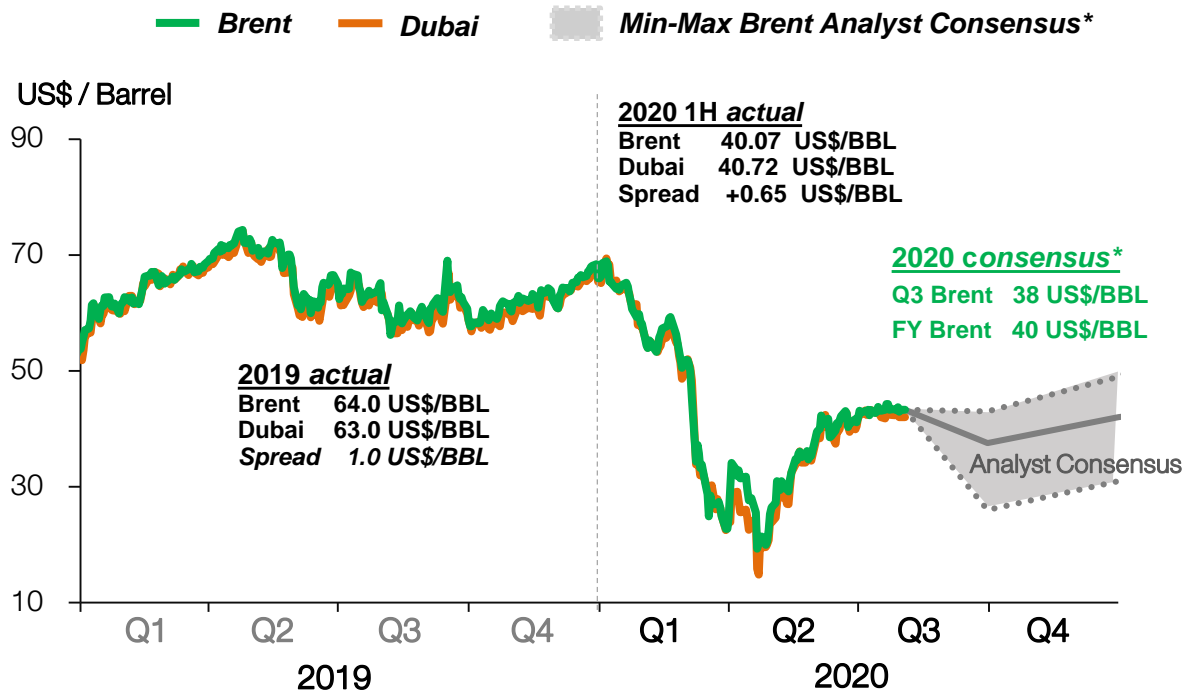


Note: This is simplified price formula, not the actual price

# Oil Price and Global Demand and Supply outlook

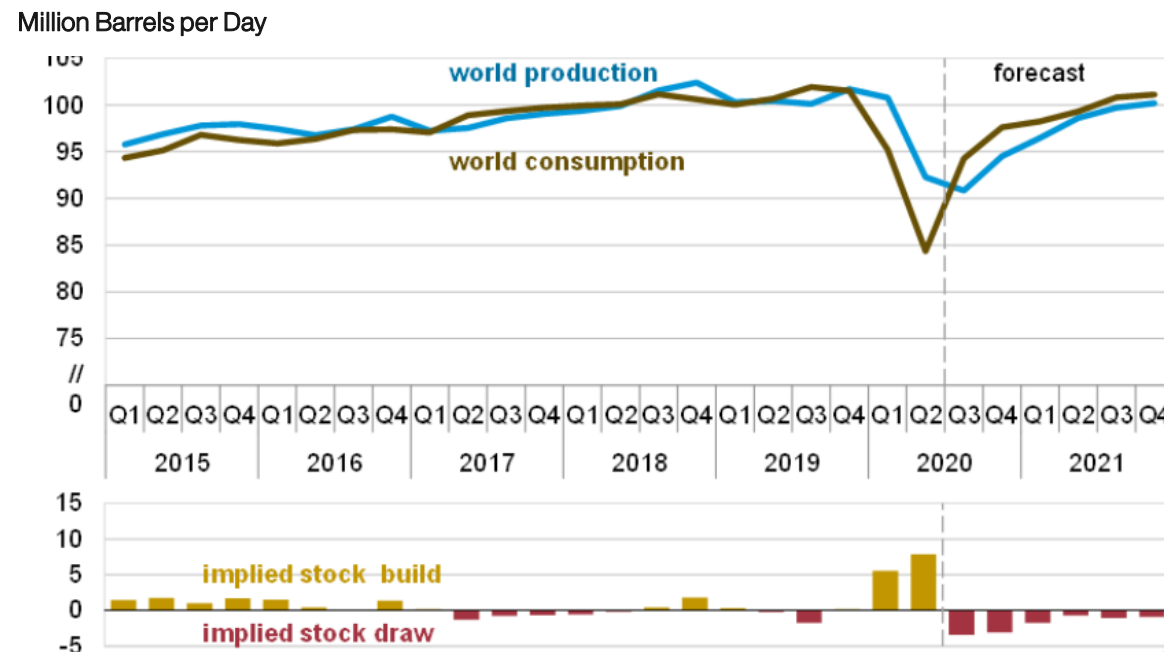
*Oil markets fundamentally volatile*

## Oil price

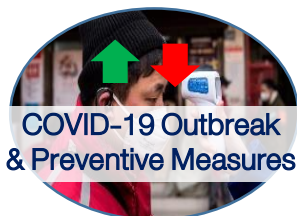


Remark: \* Bloomberg Analyst Consensus (CPFC) as of 31 July 2020

## Global Liquid Supply and Demand Outlook



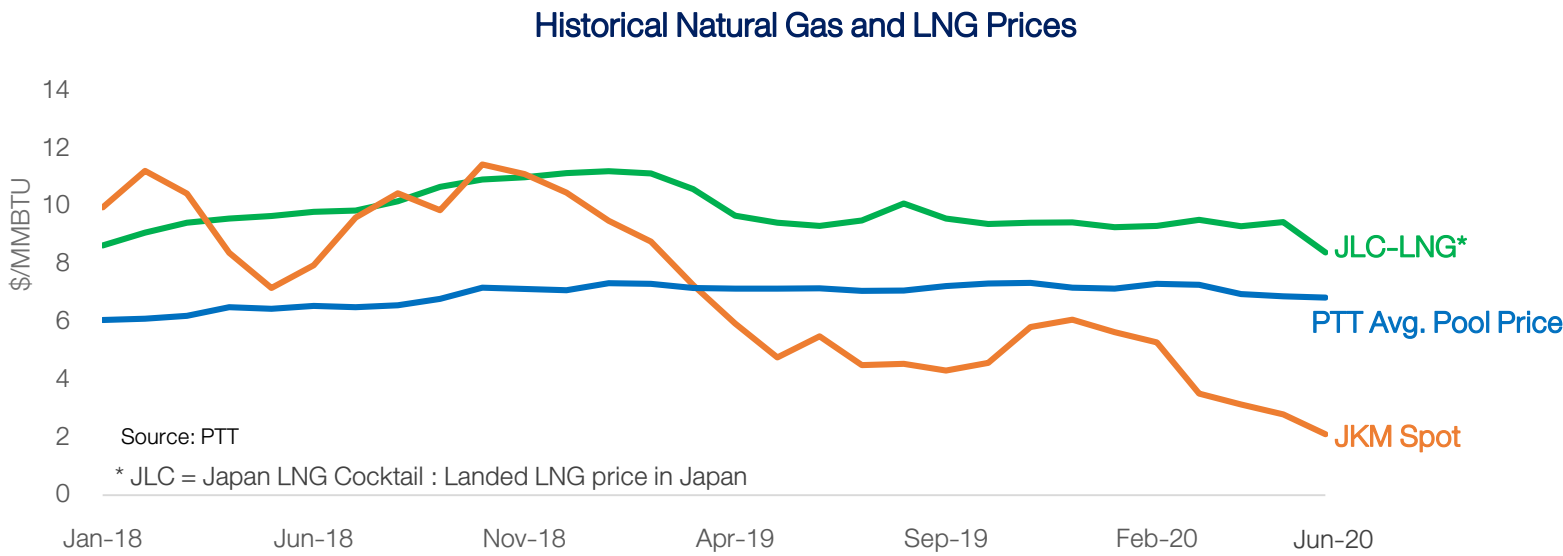
Source: Short-term energy outlook, EIA, July 2020



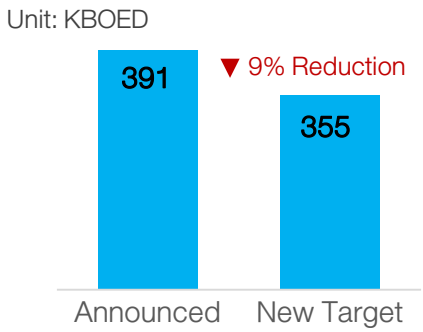


# Operational Impact from lower LNG Prices

Lower volumes with downside protection from minimum offtake requirements

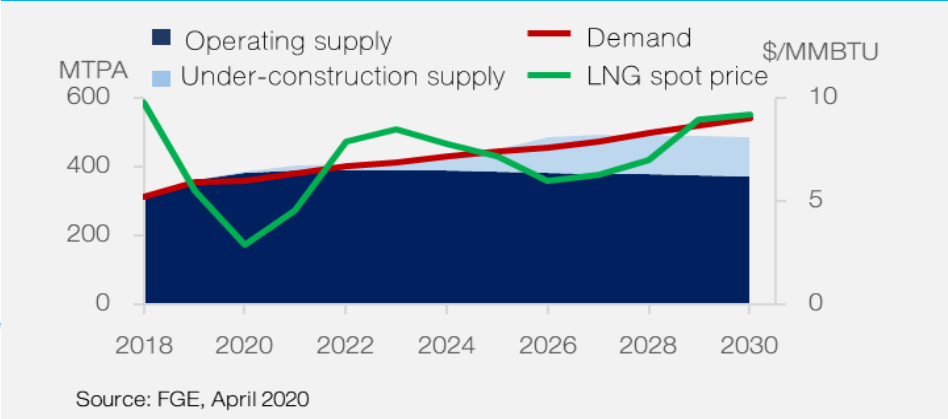


## 2020 Targeted Sales Volume



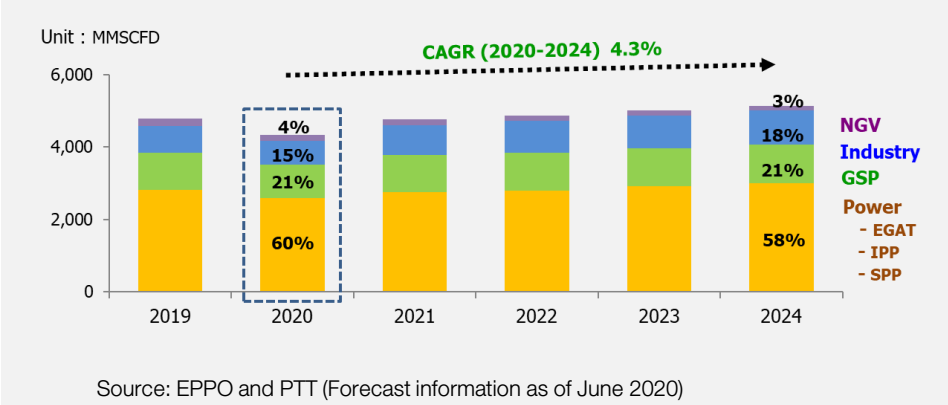
- The drop in LNG spot prices has encouraged additional LNG imports in Thailand
- Lower gas demand & more LNG imports effect sales volume forecast to be down by 9%
- Impacts are lessen due to the minimum offtake requirements with take-or-pay obligations in the gas sales agreements

## Global LNG Outlook



- Oversupply likely to continue in short term
- In 2023-2024 , demand-supply expected to rebalance and price to recover

## Thailand Gas Demand Outlook





Oil&Gas Overview



PTTEP's Overview



Key Financial Factors





# PTTEP: the E&P Flagship of PTT Group

*Plays a pivotal role in Thailand's oil and gas production*

## As PTT's Upstream Flagship



Government of Thailand

63.3%<sup>1</sup>



Thailand's national energy company

63.8%<sup>2</sup>



Credit ratings equivalent to parent and country

S&P

BBB+

Moody's

Baa1

FITCH

BBB+

TRIS  
(national rating)

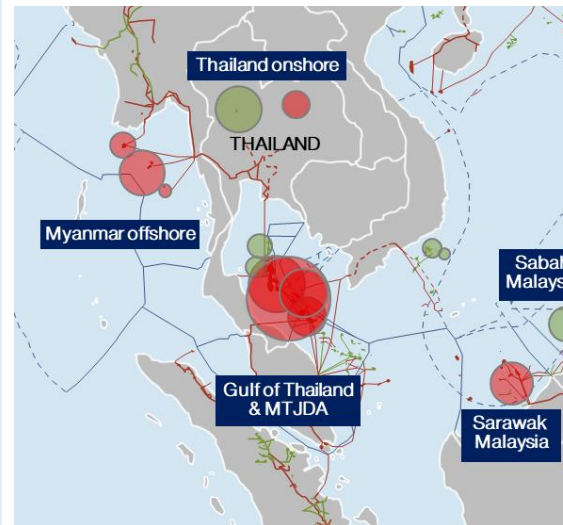
AAA

**Largest** oil and gas producer in Thailand and Myanmar

**Synergy** with PTT's gas value chain through its dominant position in the regional gas market

**Opportunities** to expand into regional investments

## PTTEP's operations in SEA



○ Approx. 20 KBOED of net sales volume    ● Gas-weighted    ● Oil-weighted

94%

of PTTEP's total sales volume

+99%

Reliability of plants and field facilities\*

78%

of PTTEP's sales volume sold to PTT

14 USD/BOE

Average regional cash cost

\* of PTTEP-operated projects in Gulf of Thailand, excl. planned shutdown  
All figures are as of 6M2020

### Notes:

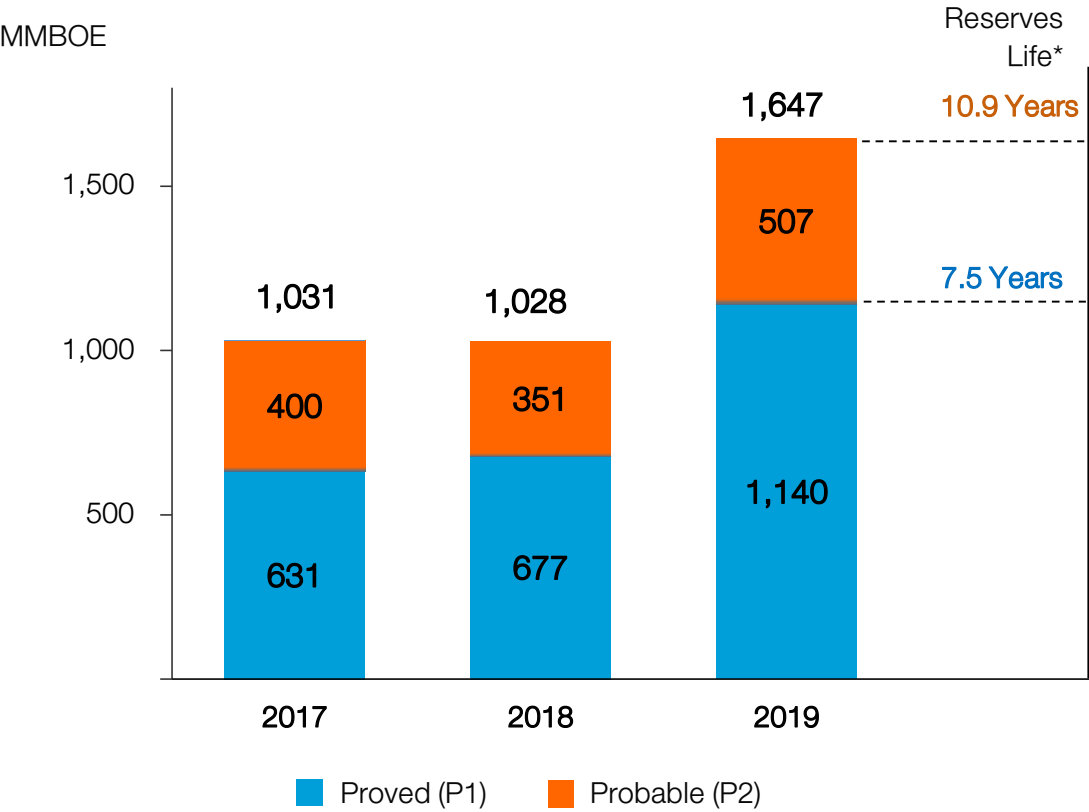
1. 51.1% is directly held by the Government of Thailand (Ministry of Finance), with the remaining 12.2% held by the state-controlled Vayupak Fund I as of 29 May 2020

2. Ownership as of 14 August 2020



# Reserves at the Year-end 2019

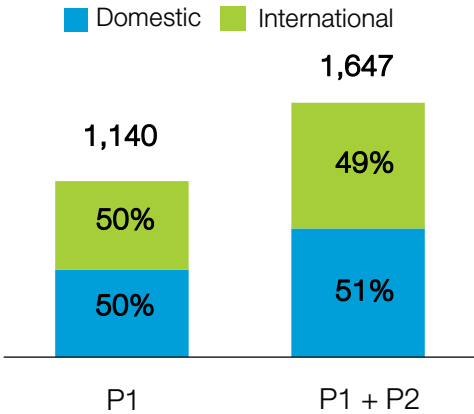
Significantly improved reserve life to over 7 years



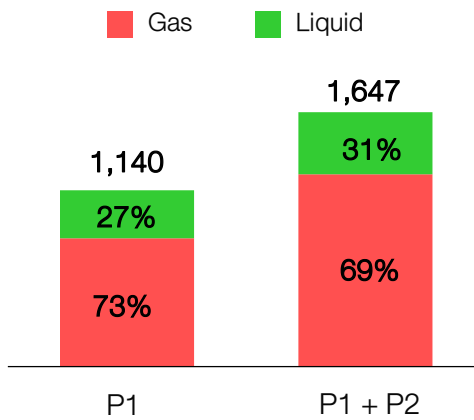
5-Year Average Proved Reserves Replacement Ratio (RRR)

| 2017  | 2018  | 2019  |
|-------|-------|-------|
| 0.58x | 0.74x | 1.53X |

## 2019 by Geography



## 2019 by Product Type



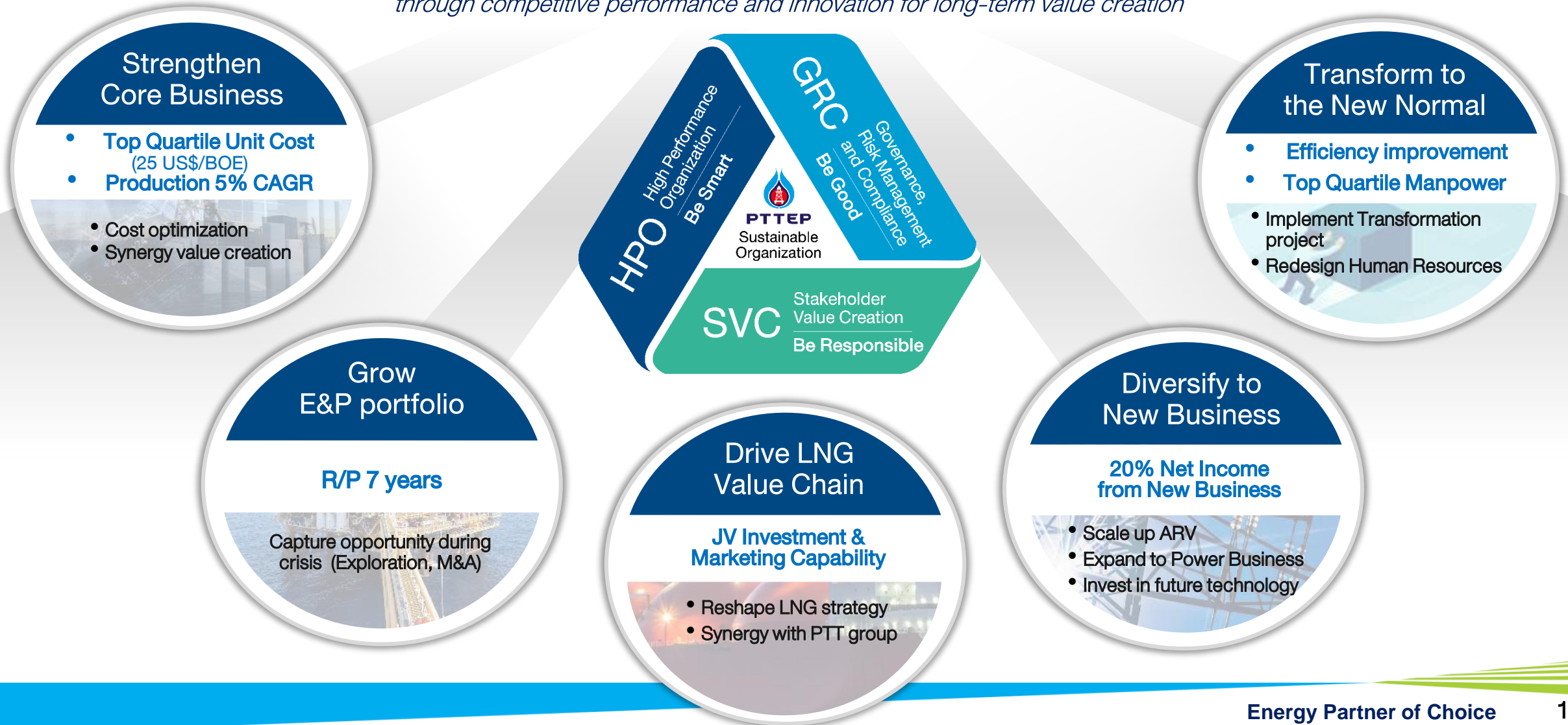
- Based on total production of natural gas, condensate, and crude oil (including LPG) of 414 KBOED for the year ended December 31, 2019
- Figures include reserves from equity method

# 2030 Aspiration Targets

Achievable through “Execute” and “Expand” Strategy

## Energy Partner of Choice

through competitive performance and innovation for long-term value creation



## Central Asia

### First presence in Kazakhstan:

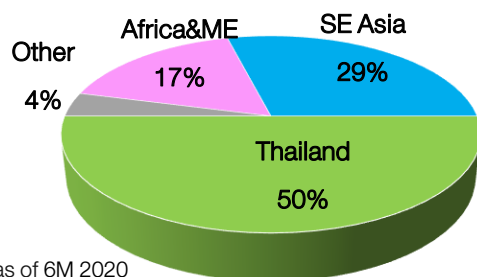
- Production: Dunga onshore oil field from the acquisition of Partex in 2019

## North & South America

### Opportunities in an early phase:

- Deepwater exploration in Brazil and Mexico with prominent and prudent operators

## Book Value of Assets (by region)



Total Assets USD 21.8 billion

Information as of 30 June 2020

## Thailand

### PTTEP's core production base

- 70% of total sales volume
- Key producing assets include Bongkot, Arthit, Contract 4 and S1
- Bongkot (G2/61) and Erawan (G1/61) are in transition process to ensure production continuity

## Southeast Asia

### Second heartland to PTTEP

- 24% of total sales volume mainly from Malaysia and Myanmar
- 3<sup>rd</sup> Largest by resources size in Malaysia with significant gas discovery in Sarawak SK 410B Project
- Gas production in Myanmar mostly supplied into Thailand
- Other producing assets in Vietnam (oil) and Indonesia (gas)

## Australasia

### Potential gas development

- Sizable undeveloped gas resources in Timor Sea

## Africa

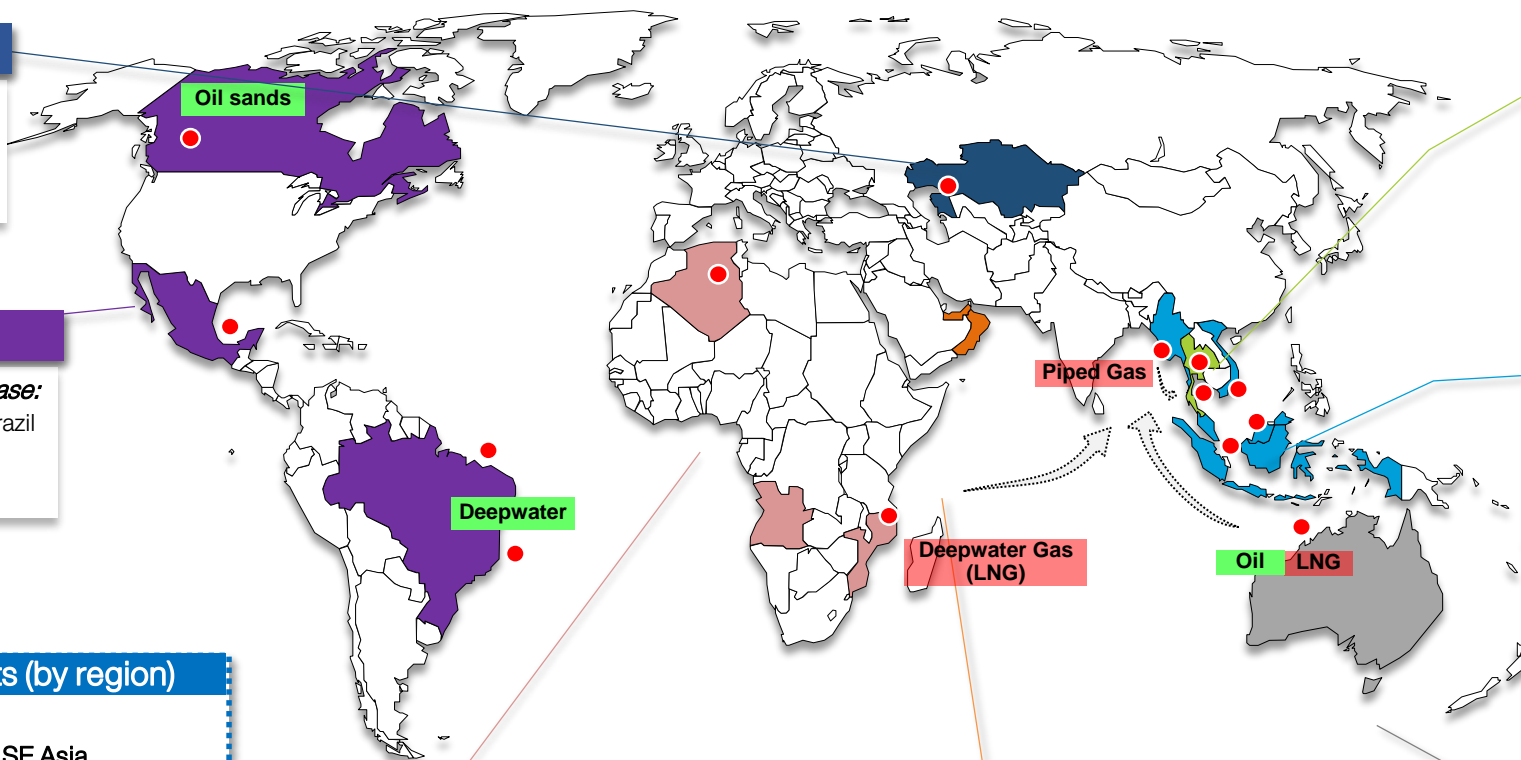
### An area for growth, key projects include:

- Production: Algeria's Bir Seba oil field with current flow rate of approximately 17 KBPD
- Development : Algeria's Hassi Bir Rakaiz with target 1st phase production in 2021
- Mozambique Area 1 with target first cargo in 2024

## Middle East

### Presence in UAE and Oman:

- 2 offshore exploration blocks partnered with experienced operator, ENI in Jan 2019
- 3 onshore blocks including PDO (Block 6), the largest producing oil asset in Oman







## Oil&Gas Overview



## PTTEP's Overview



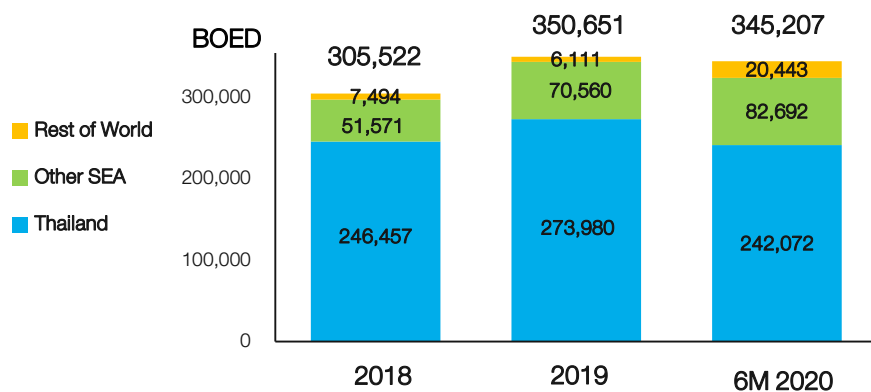
## Key Financial Factors



# Sales Volume & Unit Cost

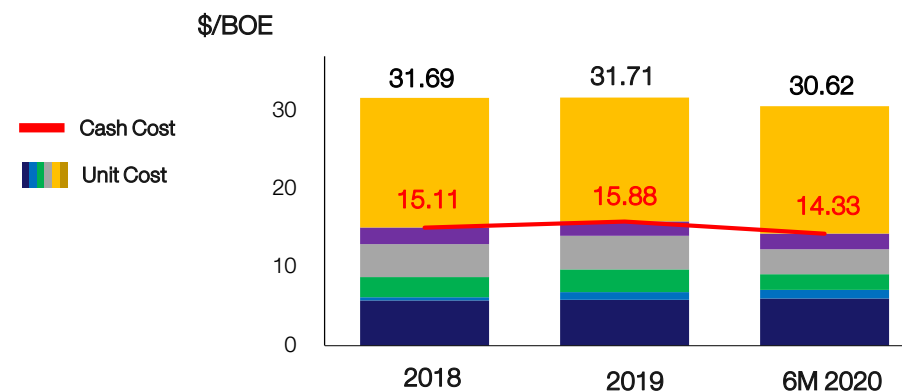
*Lower sales volume from lower demand with competitive cost*

## Sales Volume and Price



|                                               |         |         |         |
|-----------------------------------------------|---------|---------|---------|
| Gas (\$/MMBTU)                                | 6.42    | 6.92    | 6.64    |
| Liquid (\$/BBL)                               | 67.40   | 61.18   | 40.80   |
| Weighted Avg. (\$/BOE)                        | 46.66   | 47.24   | 40.15   |
| Avg. Dubai (\$/BBL)                           | 69.65   | 63.51   | 40.72   |
| Avg. HSFO (\$/BBL)<br>(High Sulphur Fuel Oil) | 67.01   | 58.60   | 36.26   |
| Volume Mix (Gas : Liquid)                     | 72 : 28 | 71 : 29 | 67 : 33 |
| Revenue Mix (Gas : Liquid)                    | 59 : 41 | 62 : 38 | 66 : 34 |

## Unit Cost



|                      |       |       |       |
|----------------------|-------|-------|-------|
| DD&A                 | 16.58 | 15.83 | 16.29 |
| Finance Cost         | 2.14  | 1.84  | 2.00  |
| Royalties            | 4.21  | 4.27  | 3.20  |
| G&A                  | 2.57  | 2.91  | 1.98  |
| Exploration Expenses | 0.41  | 1.00  | 1.10  |
| Operating Expenses   | 5.78  | 5.86  | 6.05  |
| Lifting Cost         | 4.33  | 4.31  | 4.40  |

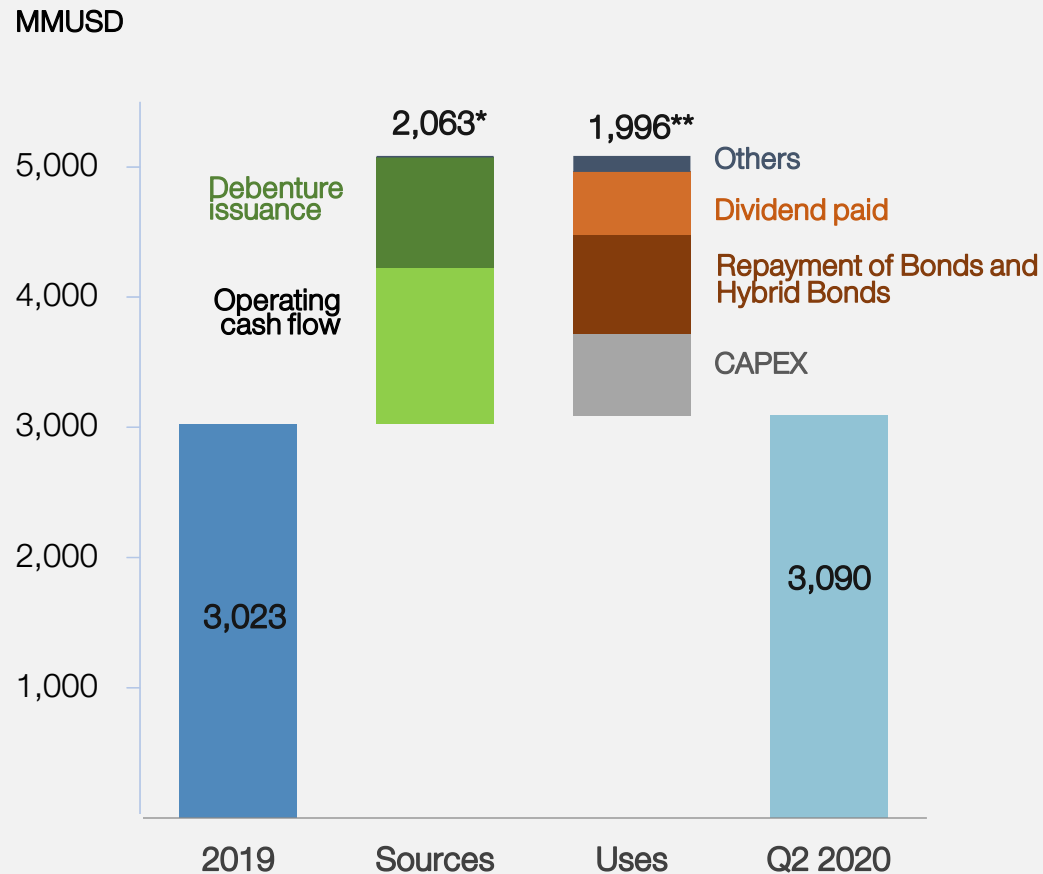
Note: Exclude costs related to new business and applied Thai Financial Reporting No. 16 (TFRS 16: Lease), effective 1 Jan 2020

The formulas for calculating ratios are provided in the supplementary section for your reference



## 6M 2020 : Source and Use of Funds

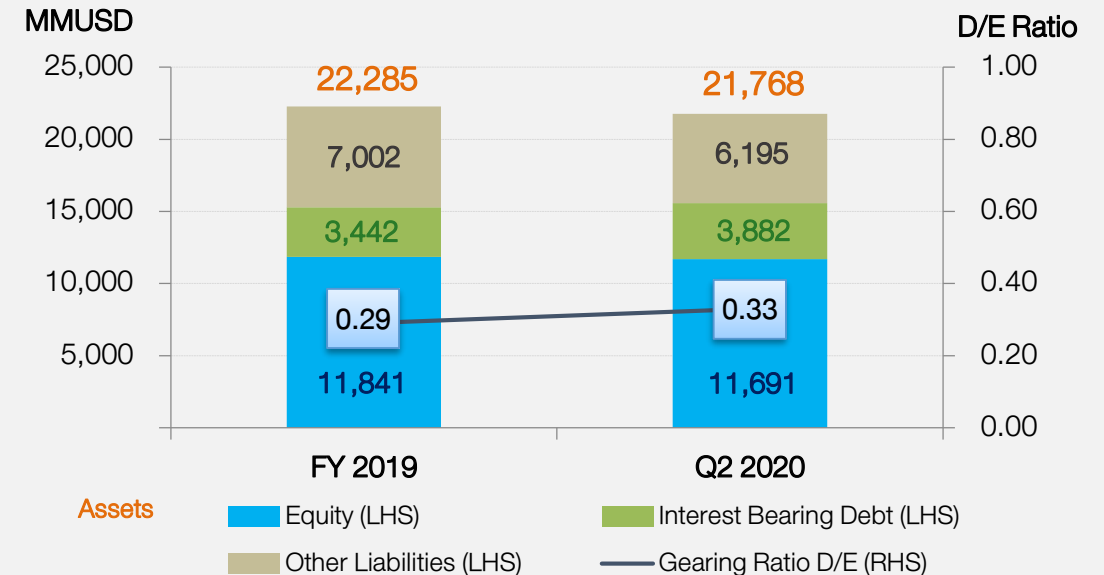
*Healthy operating cash flow*



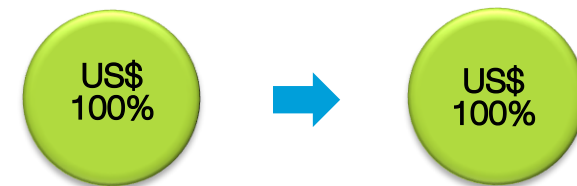
Remark: \* Net of adjustment for the effect of exchange rate changes on cash and cash equivalents  
 \*\* Excludes cash flows for investing in short-term investments (Fixed deposit > 3 months)

## Capital Structure

*Healthy balance sheet at competitive leverage level*



### Debt Profile



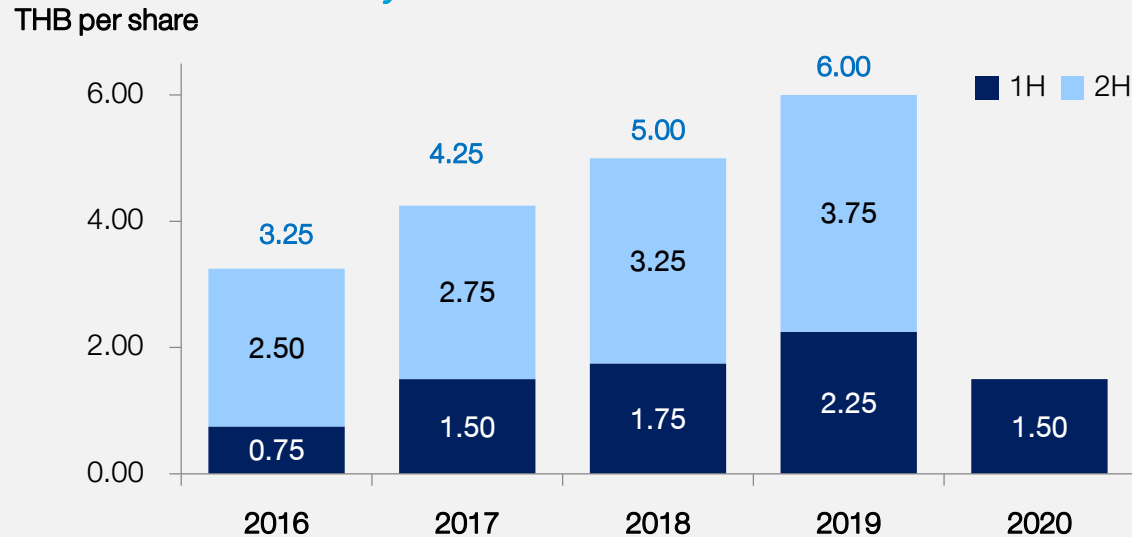
|                                   |           |           |
|-----------------------------------|-----------|-----------|
| Weighted Average Cost of Debt (%) | 4.41      | 3.74      |
| [Fixed : Floating]                | [82 : 18] | [82 : 18] |
| Average Loan Life (Years)         | 13.84     | 14.59     |

Remark: Debt profile excludes Hybrid bonds



## Dividend Payment History

*Policy : No Less Than 30% of Net Income*







|                                                |    |    |    |    |    |
|------------------------------------------------|----|----|----|----|----|
| Payout Ratio<br>(% of net income)              | 98 | 90 | 35 | 55 | 46 |
| Payout Ratio<br>(% of recurring<br>net income) | 79 | 64 | 38 | 51 | 45 |

|                     |                |
|---------------------|----------------|
| <i>XD Date</i>      | 13 August 2020 |
| <i>Record date</i>  | 14 August 2020 |
| <i>Payment Date</i> | 28 August 2020 |

## 2020 Guidance

*Strong gas price with competitive unit cost*

|                                                                                                                                  | Q3 2020 | FY 2020 |
|----------------------------------------------------------------------------------------------------------------------------------|---------|---------|
|  <b>Average Sales Volume*</b><br>KBOED        | ~ 340   | ~ 355   |
|  <b>Average Gas Price</b><br>USD/MMBTU        | ~ 6.1   | ~ 6.0   |
|  <b>Unit Cost</b><br>USD/BOE                  | ~ 30    |         |
|  <b>EBITDA Margin</b><br>% of sales revenues | 65-70 % |         |

Note:

\* Include sales volume from ADNOC Gas Processing (AGP)  
Based on average Dubai oil price in 2020 at 38 \$/BBL

|                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Info Graphic</b></p> <ul style="list-style-type: none"> <li>- สาระน่ารู้กับ ปตท.สผ. ตอนที่ 1: วิธีบริหารจัดการเพื่อลดผลกระทบของราคาน้ำมันที่ตกต่ำ</li> <li>- สาระน่ารู้กับ ปตท.สผ. ตอนที่ 2: มาทำความรู้จักกับ DD&amp;A</li> <li>- สาระน่ารู้กับ ปตท.สผ. ตอนที่ 3: ปตท.สผ. ทำ Oil Price Hedging เพื่ออะไร</li> </ul> | <p>Please see in link</p> <p><a href="https://www.pttep.com/th/Investorrelations/Generalinformation/Toolkits.aspx">https://www.pttep.com/th/Investorrelations/Generalinformation/Toolkits.aspx</a></p>                                                                                                                                      |
| <p><b>Video</b></p> <ul style="list-style-type: none"> <li>- “มาทำความเข้าใจกับ Non-recurring Items ที่ส่งผลกระทบต่อผลประกอบการของ ปตท.สผ.” (มีการอธิบายถึง impairment กับ deferred tax ด้วย)</li> <li>- PTTEP 101 ตอนที่ 1 : ว่าจะมาเป็นกำไรสุทธิ (Net Income)</li> </ul>                                                 | <p>Please see in link</p> <p><a href="https://pttep.listedcompany.com/media/cast/company/infographic.mp4">https://pttep.listedcompany.com/media/cast/company/infographic.mp4</a></p> <p><a href="https://www.youtube.com/watch?v=dM2ayG3SJQU&amp;feature=youtu.be">https://www.youtube.com/watch?v=dM2ayG3SJQU&amp;feature=youtu.be</a></p> |



# Thank you and Q&A

You can reach the Investor Relations team for more information and inquiry through the following channels



[IR@pttep.com](mailto:IR@pttep.com)



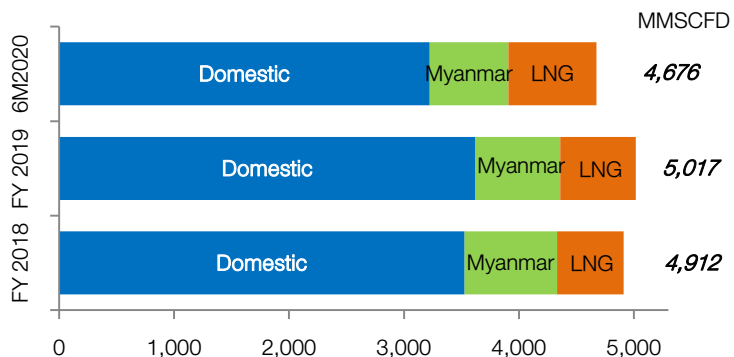
<http://www.pttep.com>





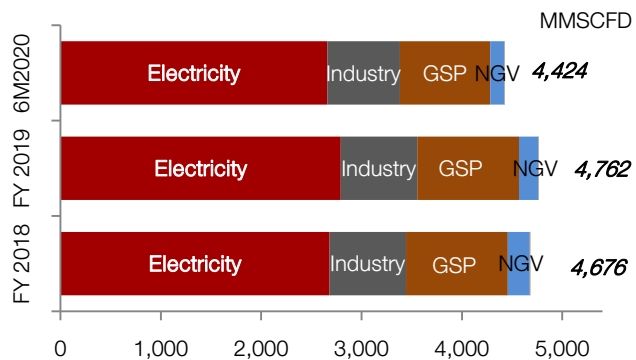
## Thailand Energy Overview

### Natural Gas Supply



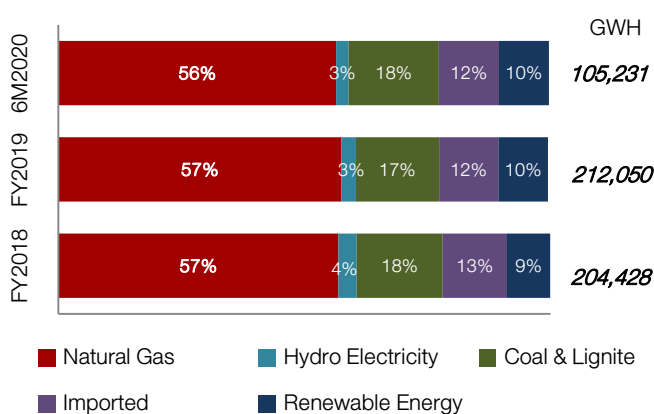
- Lower energy demand from COVID-19 outbreak
- More LNG imports from low LNG spot prices
- Slight decline from Myanmar piped gas imports due to natural decline

### Natural Gas Consumption

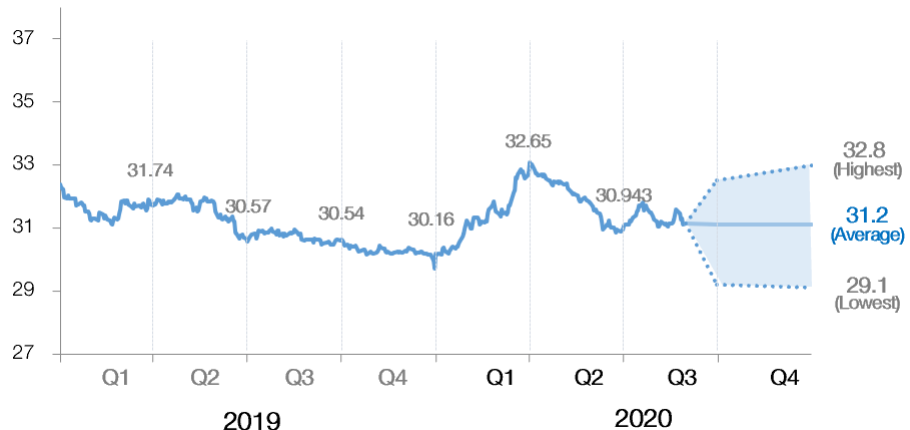


Source: EPPO

### Electricity Generation



## Exchange Rate Movement (THB/USD)



### Consensus on the exchange rate mostly depends on

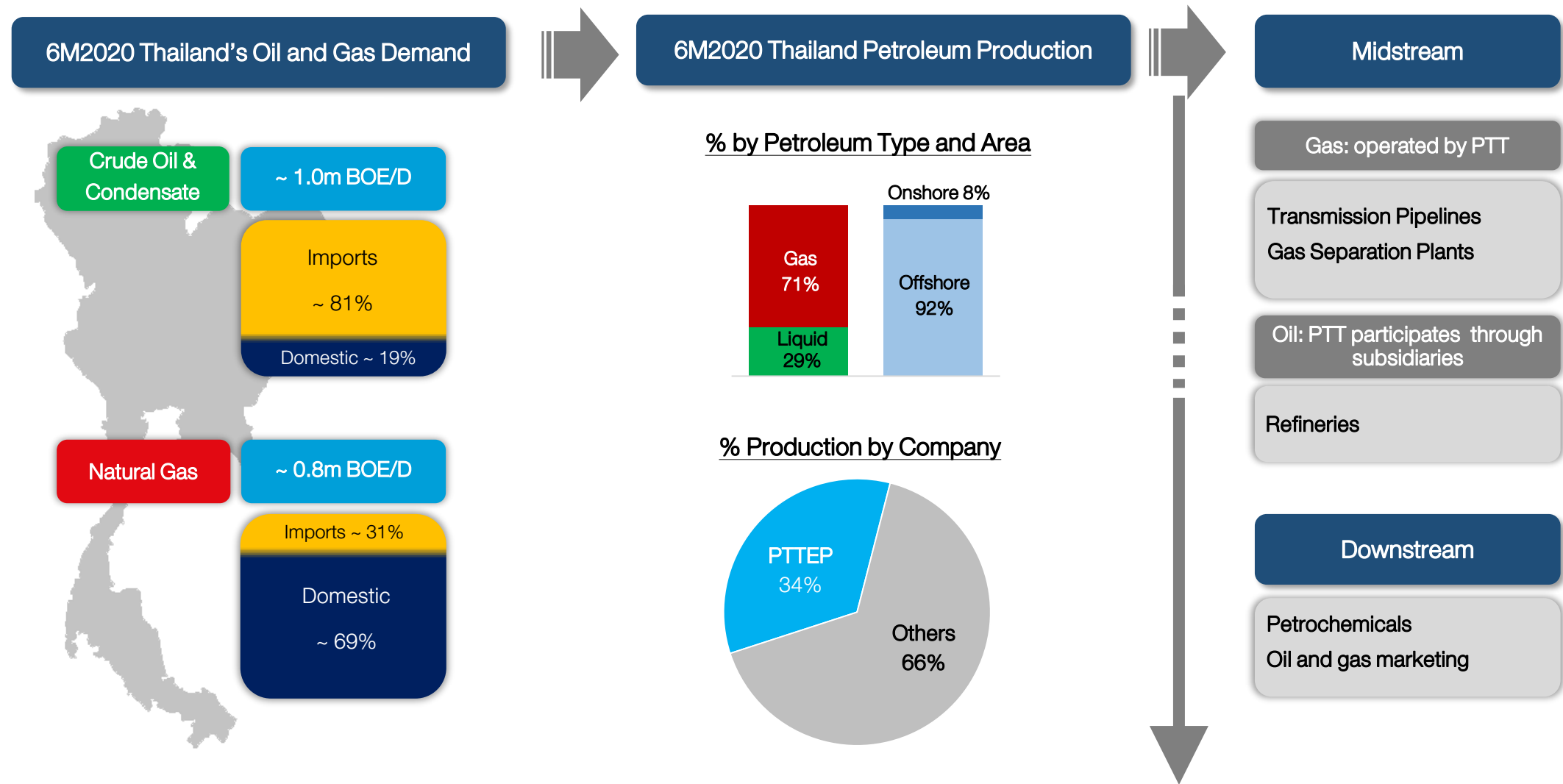
- The concern on the second wave of COVID-19 outbreak
- Additional monetary policies from BOT and easing lockdown restriction will boost economic growth
- Capital outflows of bond and stock markets into safer assets

Source: Bank of Thailand, Bloomberg

Forecast based on Bloomberg Consensus as of 30 August 2020

# Thailand's Energy Value Chain

*PTTEP contributes almost 1/3 of Thailand's petroleum production*



Source: Energy Policy and Planning Office (EPPO) and Department of Mineral Fuels (DMF)