



PTTEP



MEMBER OF

**Dow Jones
Sustainability Indices**

In Collaboration with RobecoSAM

Investor Presentation
**UBS Asia Energy, Utilities and Materials
Virtual Conference 2020**

25 November 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.

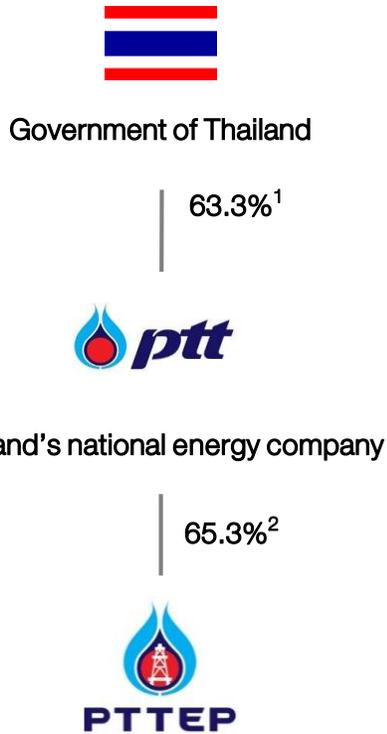
This presentation may contain the terms "proved reserves" and "probable reserves". Unless stated otherwise, the Company adopts similar description as defined by the Society of Petroleum Engineers.

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.

PTTEP: E&P arm of the PTT Group

Performing a pivotal role in Thailand's oil & gas exploration and production



Credit ratings equivalent to parent and country

S&P	Moody's	Fitch	TRIS (national rating)
BBB+	Baa1	BBB+	AAA

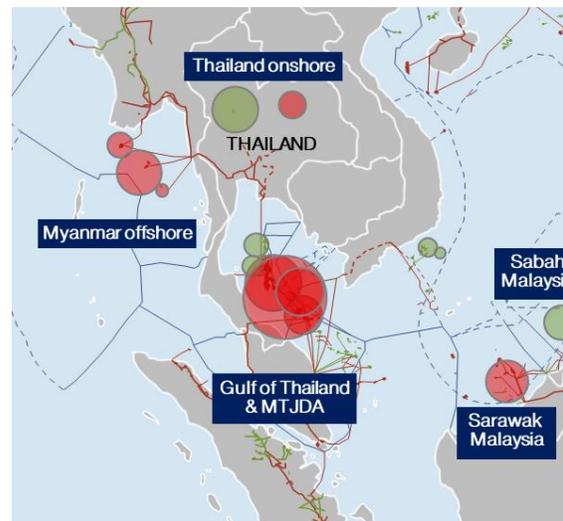
Notes:
 1. 51.1% is directly held by the Government of Thailand (Ministry of Finance), with the remaining 12.2% held by the state-controlled Vayupak Fund I as of 1 Oct 2020
 2. Ownership as of 14 August 2020 (PTT and Siam Management Holding Co., Ltd. (Subsidiary of PTT))

Largest oil & 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

Our operations in SEA



95%

of PTTEP's total sales volume

+99%

Reliability of plants and field facilities*

78%

of PTTEP's sales volume sold to PTT

13 USD/BOE

Average regional cash cost

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

* of PTTEP-operated projects in Gulf of Thailand, excl. planned shutdown
 All figures are as of 9M2020



Industry Outlook



Operational Highlights & Strategy

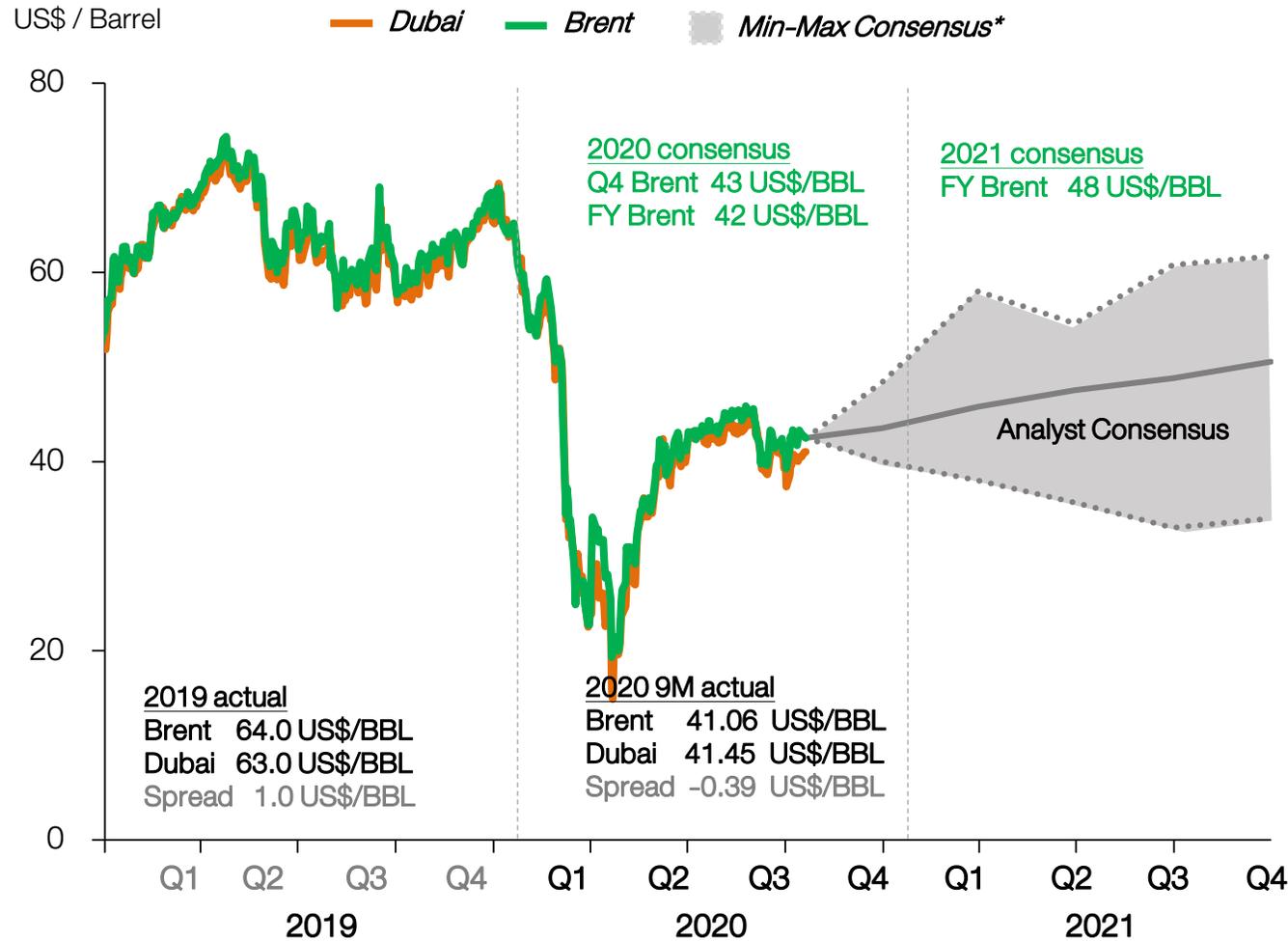


Financial Performance

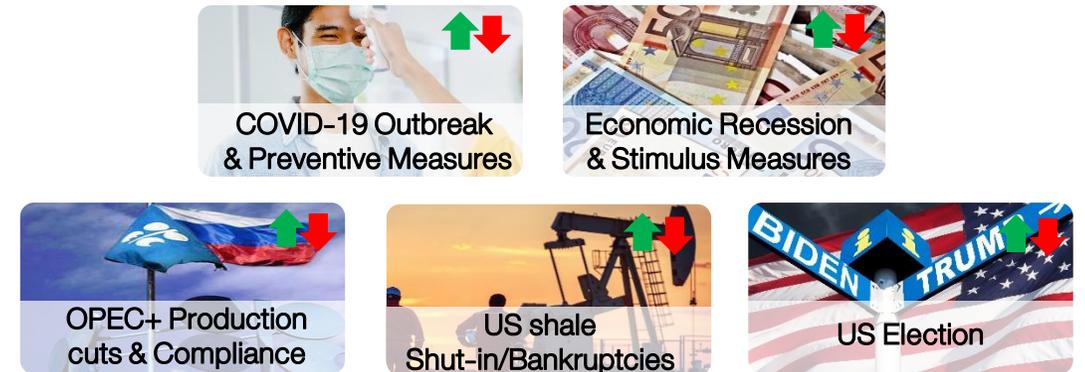


Oil Price Outlook

Sideways movement in short-term. Consensus expected avg. price of 42 US\$/BBL in 2020 and 48 US\$/BBL in 2021

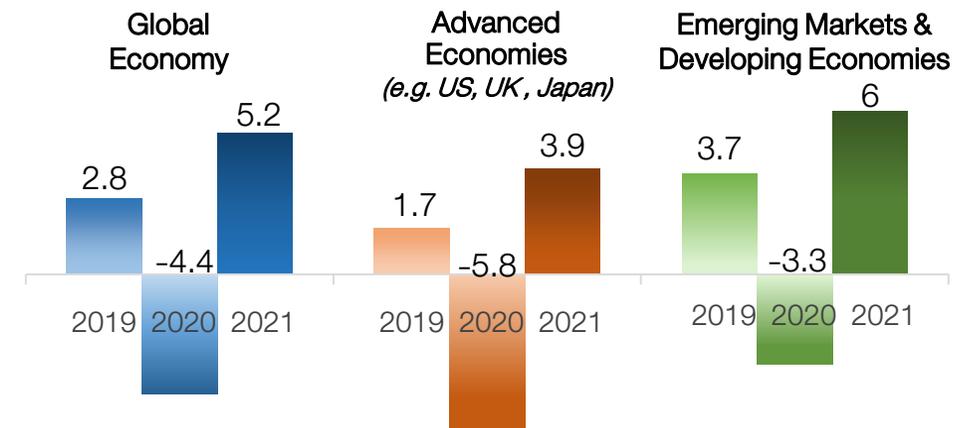


Factors to watch



GDP Growth Outlook

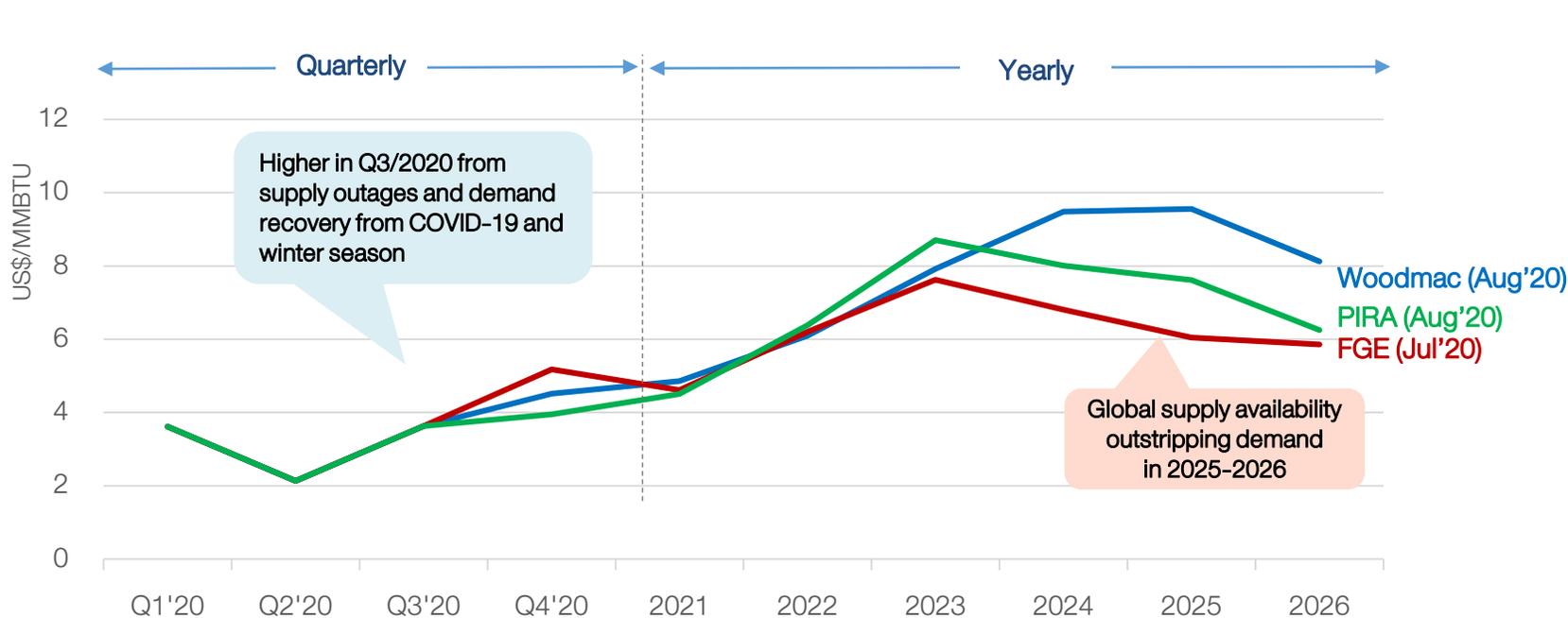
Unit: % GDP



Source: Bloomberg Analyst Consensus (CPFC) as of 20 October 2020

Source: IMF, World Economic Outlook, October 2020

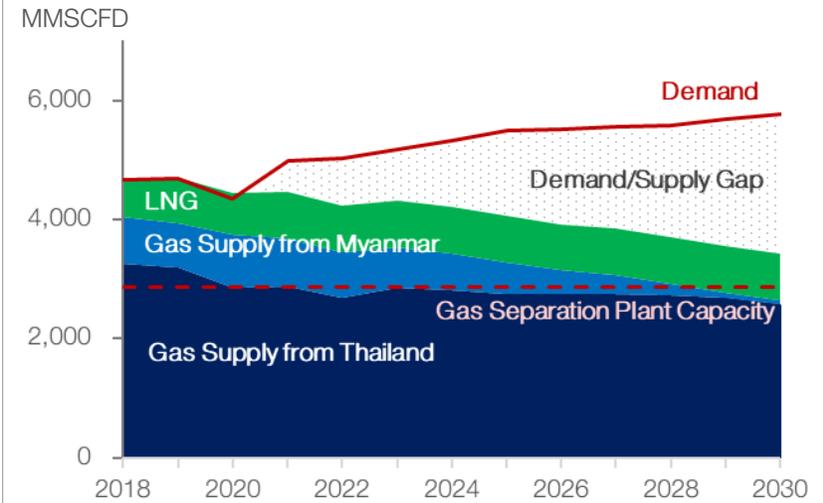
Spot LNG price



- LNG spot price in 2020 is expected to be around 3.3 – 3.6 \$/MMBTU as demand starting to recover in 2H/2020 from its lowest level in Q2/2020
- The oversupply situation is likely to continue until 2022 and will quickly turn afterwards due to the lack of FIDs over 2016-2017, however, the demand-supply is expected to rebalance in 2024 – 2025

Source: FGE, 22 October 2020

Thailand Gas Demand & Supply



Source: PDP2018 and PTTEP

- Gas from Gulf of Thailand is mainly supplied to Gas Separation Plant (GSP)
- G1/61 & G2/61 commencing production in 2022-23, the gas supply would be maintained to meet GSP capacity till at least 2030
- Opportunistic investments in LNG value chain in upstream and liquefaction plants



Industry Outlook



Operational Highlights & Strategy



Financial Performance



Operational Highlights

Good progress in all areas. Revised target date for Sabah H first gas.

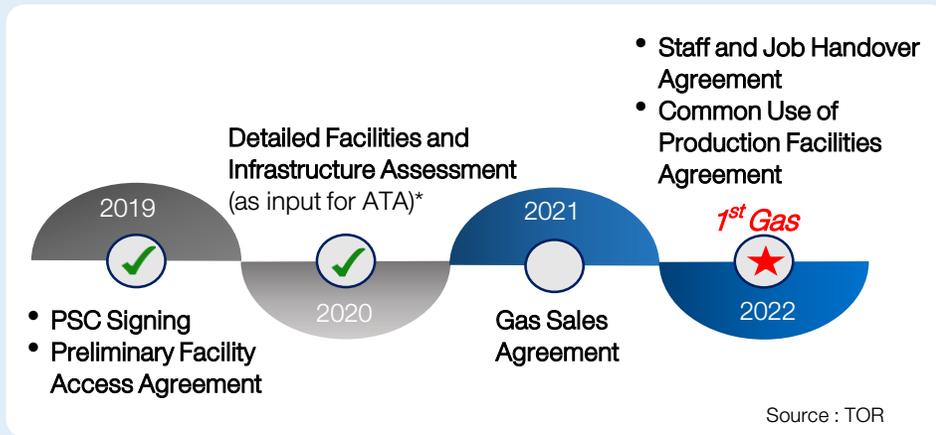
Thailand : G1/61 and G2/61

G1/61 Project

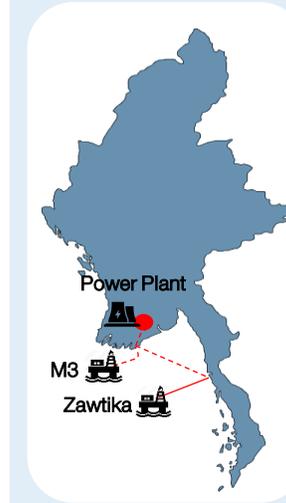
- Ready to access the site for installation of petroleum facilities as planned

G2/61 Project

- On track with transition plan for first production in 2022/2023



Myanmar Gas to Power



"Integrated Energy Solutions"

- Enhance value from Zawtika and M3 Projects
- Support pipelines development
- Partner with Independent Power Producer (IPP) for 600 MW Gas-Fired Power Plant

Completed

- Feasibility study & Business Proposal submitted to NECC

In-Progress

- Notice to Proceed Approval from Myanmar Government

Malaysia : Sabah H & SK410B

Sabah H Project

- Experienced a subsea component failure during the final stage of commissioning, no hydrocarbon leakage
- In-progress with remediation plan, with Petronas support, to achieve first gas at the earliest opportunity in 2021
- Lowering 2020 sales volume forecast by ~ 7 KBOED

SK410B Project

- Started drilling an appraisal well with results expecting within this year
- On track for FID in 2022



Algeria HBR

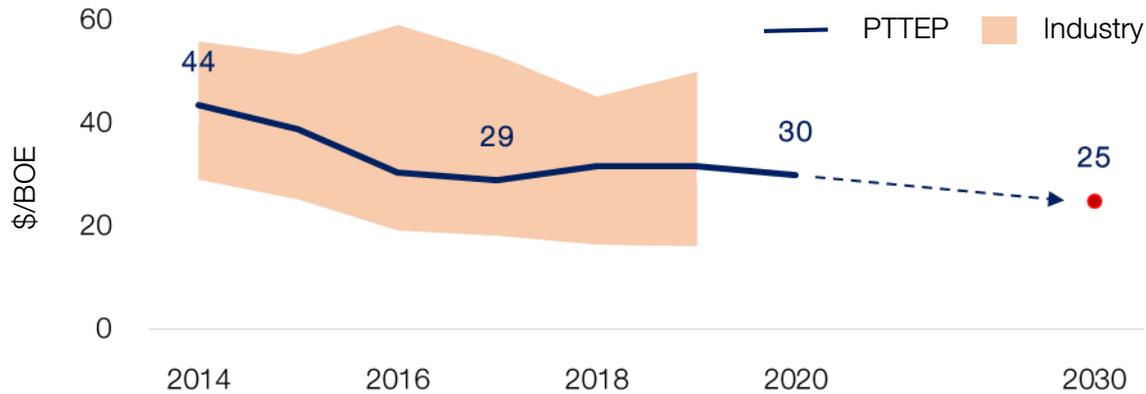


- Takeover additional stake of 24.5% in Q3/2020, with closing subjected to regulatory approvals
- After completion, PTTEP will have 49% participating interest in the project
- On track for first production in 2H/2021
 - Phase 1: 10,000 -13,000 BPD in 2021
 - Phase 2: 50,000 - 60,000 BPD in 2025

Strategy: Strengthening Core Business

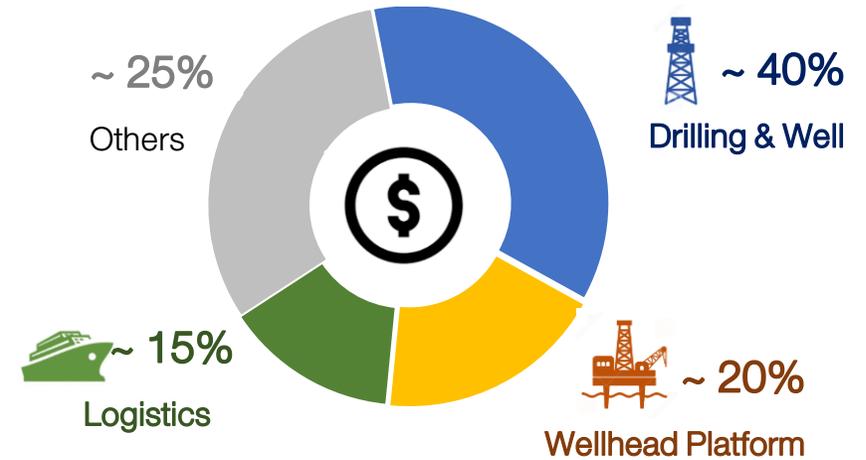
Cost reduction well underway to achieve top quartile unit cost by 2030

Unit Cost Pathway



Source: Company Annual Report

Major Cost Elements



PSC Benefits

G1/61 and G2/61

▼ ~20%

- Reduced CAPEX and DD&A as no major investment on main processing facilities
- Lower royalty rate under PSC (10%) vs Concession (12.5%)



Drilling & Well

▼ ~8%

- Factory Drilling Implementation
- Optimize drilling rig & service contracts



Cost Optimization

Wellhead Platform

▼ ~3%

- Standardized design
- Contracting Strategy e.g. volume bundling
- Facility & Equipment Reuse e.g. topside reuse



Logistics

▼ ~12%

- Synergize & optimize marine and aviation fleets across GoT
- Free Zone Pool Inventory among GoT assets for storage space & stock inventory reduction



Remark: % cost reduction is from current cost



Industry Outlook



Operational Highlights & Strategy



Financial Performance



Key Financial Performance

Soften net income from lower selling prices compensated by higher volume

9M Net Income 639 MMUSD ▼ 46% YTD

Sale Volumes



▲ 3% YTD

Acquisition of Malaysia Assets and Partex

Average Selling Price



	9M 2019	9M 2020
Gas (\$/MMBTU)	6.91	6.50
Liquid (\$/BBL)	60.82	41.14
Weighted Avg. (\$/BOE)	46.83	39.69
Avg. Dubai (\$/BBL)	64.02	41.45
Volume Mix (Gas : Liquid)	72:28	67:33

▼ 15% YTD

Lower global crude oil price

Unit Cost



Unit : \$/BOE	9M 2019	9M 2020
Cash cost	15.06	14.01
Non-Cash cost	15.80	16.28
Unit cost	30.86	30.29

Note: Unit Cost : Exclude costs related to new business

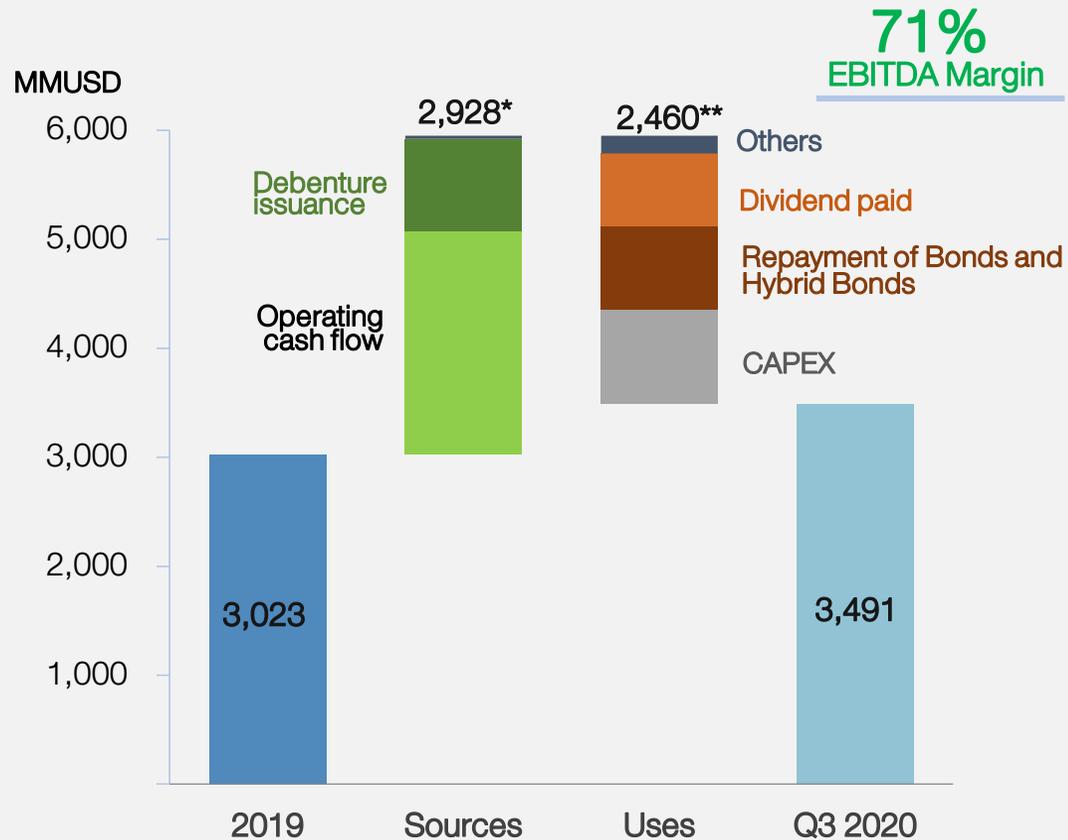
▼ 1% YTD

Maintained competitive unit cost

9M Cash flows and Financial Position

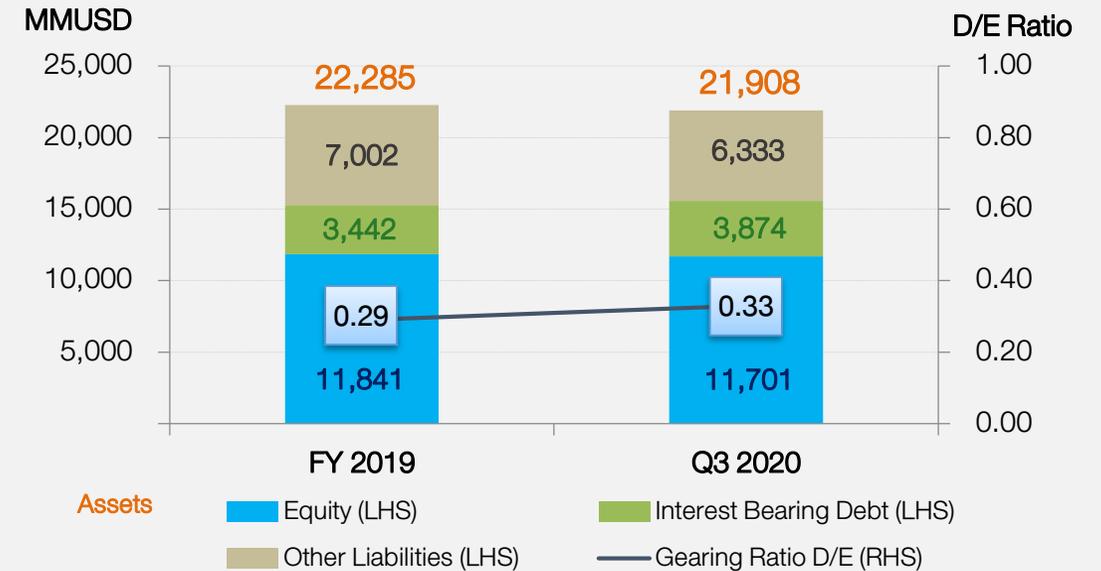
Healthy cashflows, Healthy balance sheet. Strong EBITDA Margin.

Sources and Uses of Funds

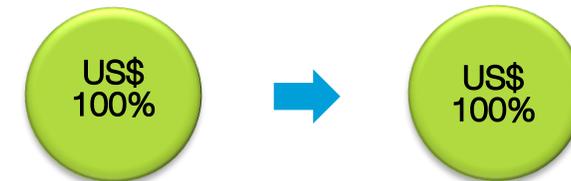


Remark: * Net of adjustment for the effect of exchange rate changes on cash and cash equivalents
 ** Excludes cash flows for investing in short-term investments (Fixed deposit > 3 months)

Capital Structure



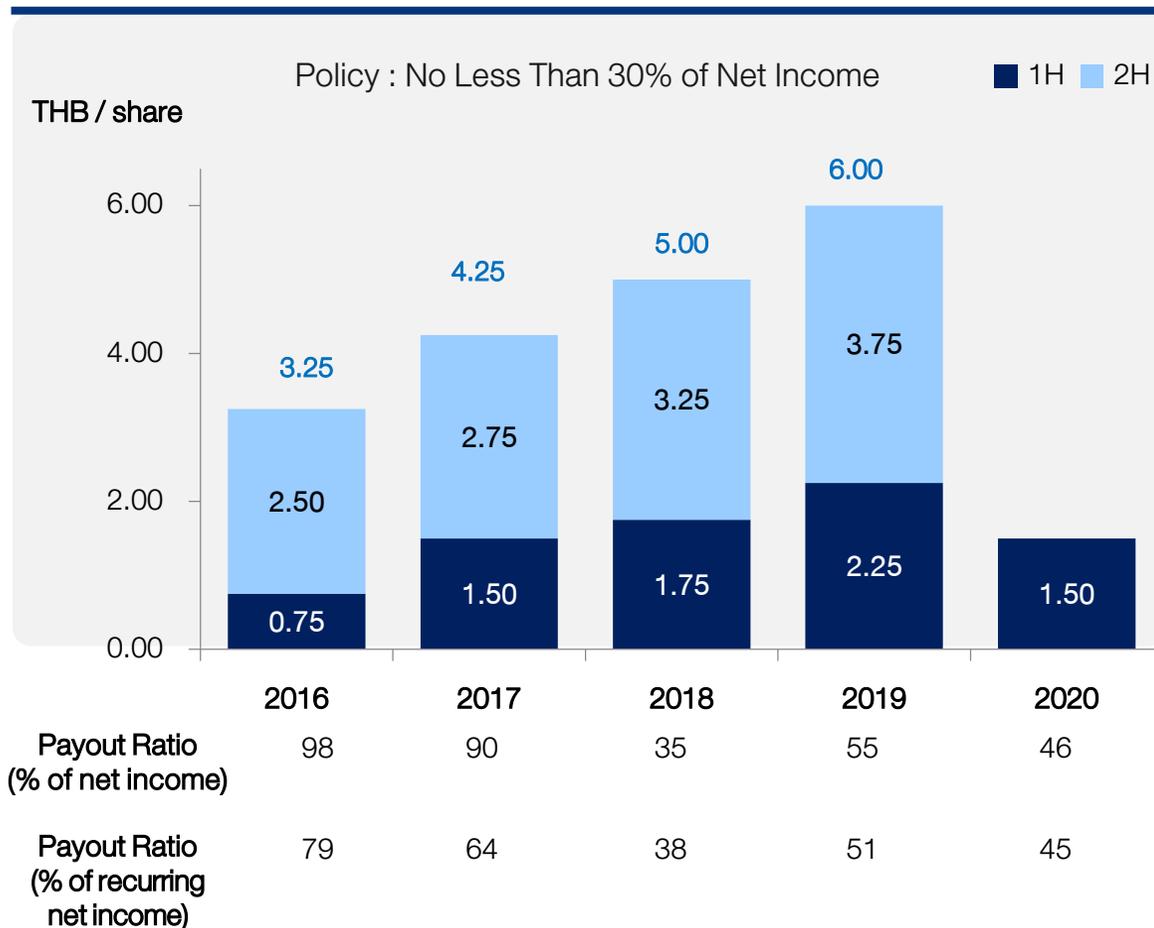
Debt Profile



WAVG Cost of Debt (%)	4.41	3.58
Fixed : Floating	82 : 18	82 : 18
WAVG Loan Life (Years)	13.84	14.34

Remark: Debt profile excludes Hybrid bonds

Dividend Payments History



Note:
FY2020 1H, XD 13/08/2020, Record 14/08/2020, Paid 28/08/2020

Full Year 2020 Guidance

Continue delivering growth and maintain profitability



Note:

* Include sales volume from ADNOC Gas Processing (AGP)
Based on average Dubai oil price in 2020 at 41 \$/BBL



Thank you and Q&A

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



Please scan here to take the survey



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<http://www.pttep.com>



Supplementary information

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Summary of Q3 2020 Financial Results

Improved net income QoQ driven by higher price and sales volume



Unit : MMUSD

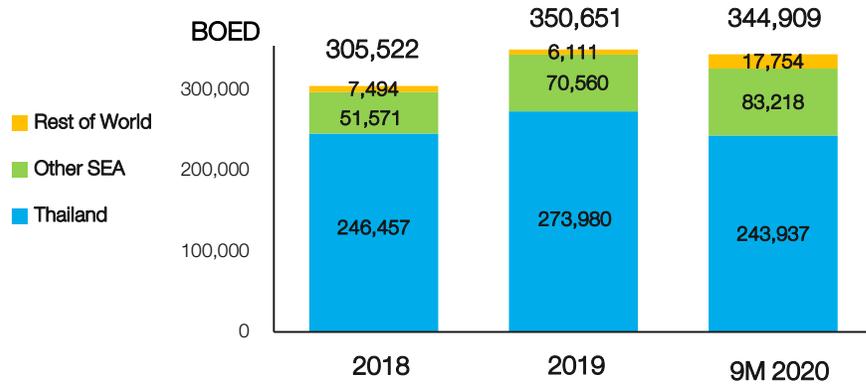
Statement of Income	Q2 20	Q3 20	% QoQ	Q3 19	% YoY	9M 20	9M 19	% YTD
Total Revenues	1,095	1,305	19%	1,593	(18%)	4,082	4,572	(11%)
Sales	1,041	1,228	18%	1,494	(18%)	3,751	4,291	(13%)
Others	54	77	43%	99	(22%)	331	281	18%
Sales Volume (BOED)	327,004	344,317	5%	352,862	(2%)	344,909	335,696	3%
Sales Price (USD/BOE)	34.97	38.77	11%	46.03	(16%)	39.69	46.83	(15%)
Total Expenses	961	1,075	12%	1,235	(13%)	3,443	3,387	2%
Major Expenses:								
Operating Expenses	183	181	(1%)	181	-	561	470	19%
DD&A	488	515	6%	512	1%	1,538	1,448	6%
Exploration Expenses	30	8	(73%)	59	(86%)	78	100	(22%)
G&A	62	69	11%	94	(27%)	197	251	(22%)
Income Tax Expense	(68)	140	>100%	194	(28%)	524	488	7%
Net Income	134	230	72%	358	(36%)	639	1,185	(46%)
Recurring Net Income	128	195	52%	303	(36%)	613	1,066	(42%)
Non-Recurring *	6	35	>100%	55	(36%)	26	119	(78%)
Non-Recurring								
Gain (Loss) on FX	9	10	11%	20	(50%)	7	79	(91%)
Gain (Loss) on FI	(78)	27	>100%	22	23%	171	(68)	>100%
Oil Price Hedging	(26)	10	>100%	18	(44%)	150	(20)	>100%
Forwards Contract and Others	(52)	17	>100%	4	>100%	21	(48)	>100%
Tax Impact from FX	122	(2)	(>100%)	13	(>100%)	(105)	108	(>100%)
Impairment Loss on Assets	(47)	-	>100%	-	-	(47)	-	(>100%)

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

Sales Volume & Unit Cost

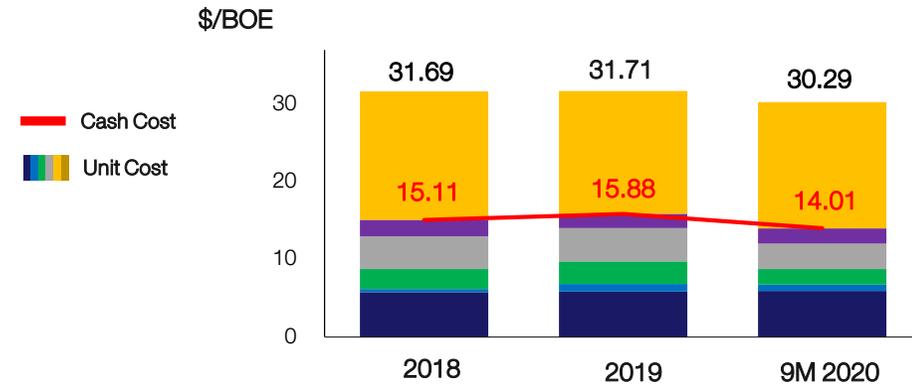
Lower sales volume from lower demand. Cost remains competitive.

Sales Volume and Price



Gas (\$/MMBTU)	6.42	6.92	6.50
Liquid (\$/BBL)	67.40	61.18	41.14
Weighted Avg. (\$/BOE)	46.66	47.24	39.69
Avg. Dubai (\$/BBL)	69.65	63.51	41.45
Avg. HSFO (\$/BBL) <small>(High Sulphur Fuel Oil)</small>	67.01	58.60	37.64
Volume Mix (Gas : Liquid)	72 : 28	71 : 29	67 : 33
Revenue Mix (Gas : Liquid)	59 : 41	62 : 38	66 : 34

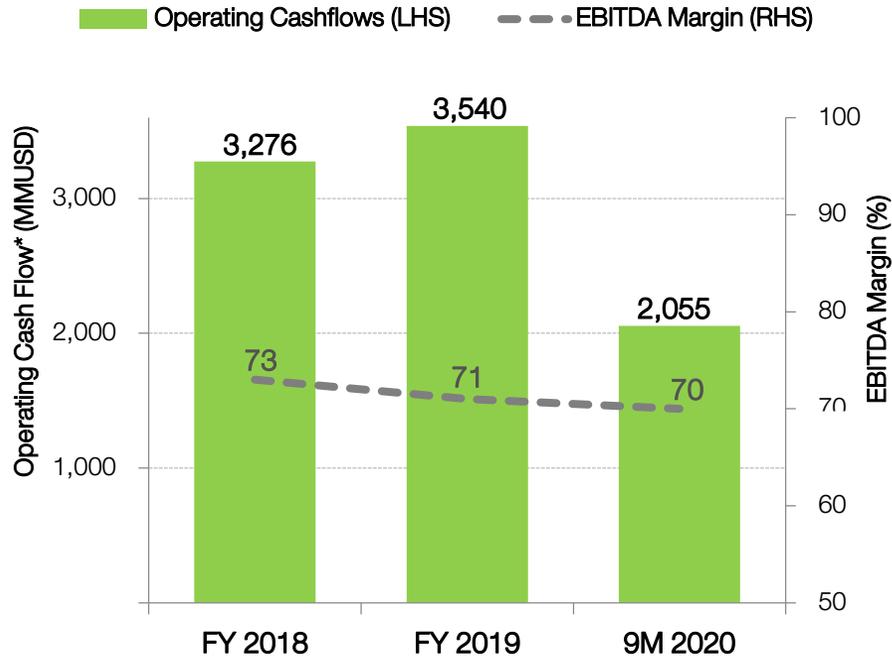
Unit Cost



DD&A	16.58	15.83	16.28
Finance Cost	2.14	1.84	1.98
Royalties	4.21	4.27	3.24
G&A	2.57	2.91	2.03
Exploration Expenses	0.41	1.00	0.82
Operating Expenses	5.78	5.86	5.94
Lifting Cost	4.33	4.31	4.44

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

Cash Flow Performance



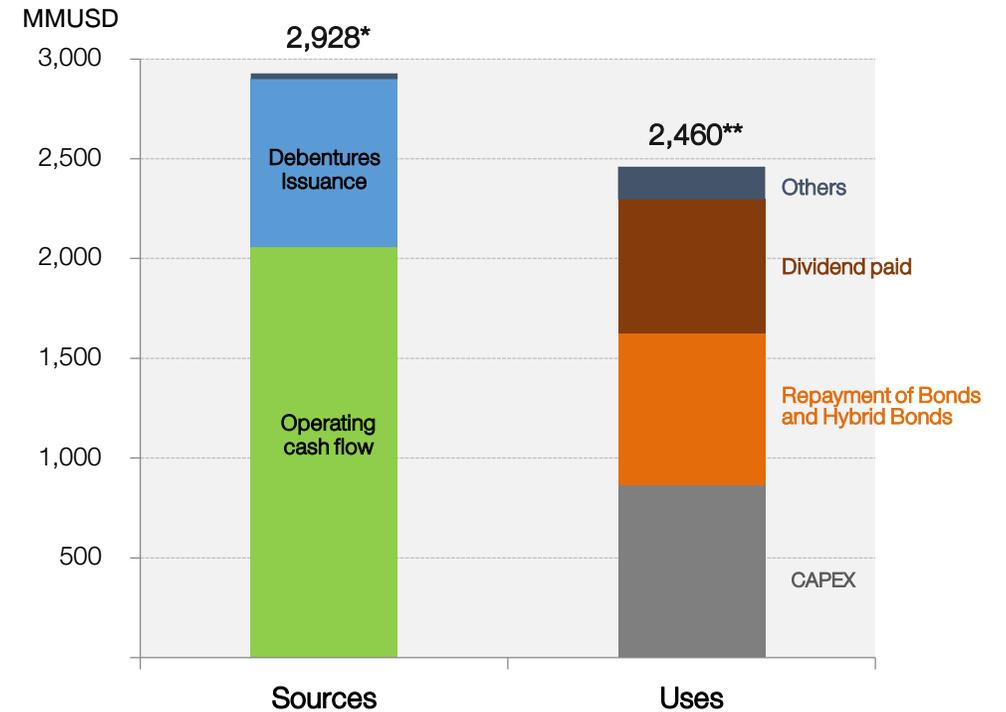
Net Income	1,120	1,569	639
Recurring Net Income***	1,215	1,445	613

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)

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

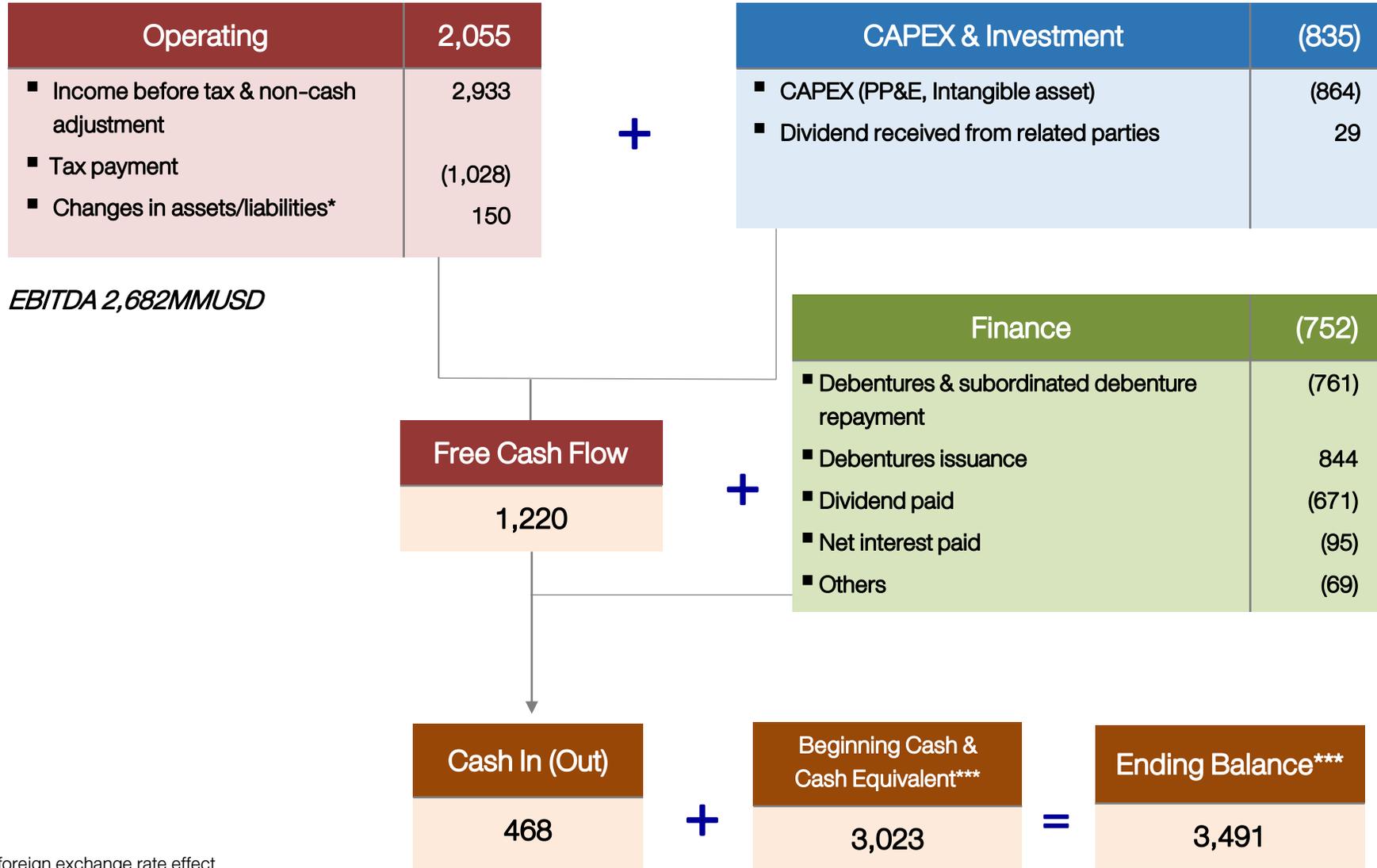
Source & Use of Funds in 9M 2020



Cash Flows : January – September 2020

Continue generating positive Operating Cash Flow and Free Cash Flow

Unit : MMUSD



Note: * Net of foreign exchange rate effect

** Net of interest received

*** Include Short-term Investment (Fixed deposit > 3 months)

Financial Performance : Income Statement

EBITDA margin remains solid

	Q2 20	Q3 20	Q3 19	9M 20	9M 19
Sales and Revenue from Pipeline Transportation (MMUSD)	1,066	1,253	1,524	3,824	4,383
EBITDA (MMUSD)	711	890	1,054	2,682	3,166
Net Income (MMUSD)	134	230	358	639	1,185
Recurring Net Income (MMUSD)	128	195	303	613	1,066
Earning Per Share (USD)	0.03	0.06	0.09	0.16	0.29
Key Financial Ratios					
EBITDA Margin (%)	67	71	69	70	72
Return on Equity (%) (LTM)	10	9	12	9	12
Return on Capital Employed (%) (LTM)	8	7	11	7	11
Return on Equity (%) (LTM, Recurring Net Income)	9	8	11	8	11
Return on Capital Employed (%) (LTM, Recurring Net Income)	8	7	10	7	10

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

Financial Performance : Balance Sheet

Healthy balance sheet at competitive leverage level

	YE 19	Q3 20
Total Assets (MMUSD)	22,285	21,908
- Cash & cash equivalents * (MMUSD)	3,023	3,491
Total Liabilities (MMUSD)	10,444	10,207
- Interest bearing debt (MMUSD)	3,442	3,874
Equity (MMUSD)	11,841	11,701
Key Financial Ratios		
Total Debt to Equity (X)	0.29	0.33
Net Debt** to Equity (X)	0.04	0.03
Total Debt to Capitalization (X)	0.23	0.25
Total Debt to EBITDA (X)	0.62	0.78
EBITDA Interest Coverage (X)	39	36

Credit Ratings : BBB+ (S&P), Baa1 (Moody's), AAA (TRIS), BBB+ (FITCH)

Weighted Average Cost of Debt ** : 3.58%

Average Loan Life ** : 14.34 years

Note: * Cash & Cash Equivalents (Cash on hand) include Short-term Investments > 3 months *but* < 12 months

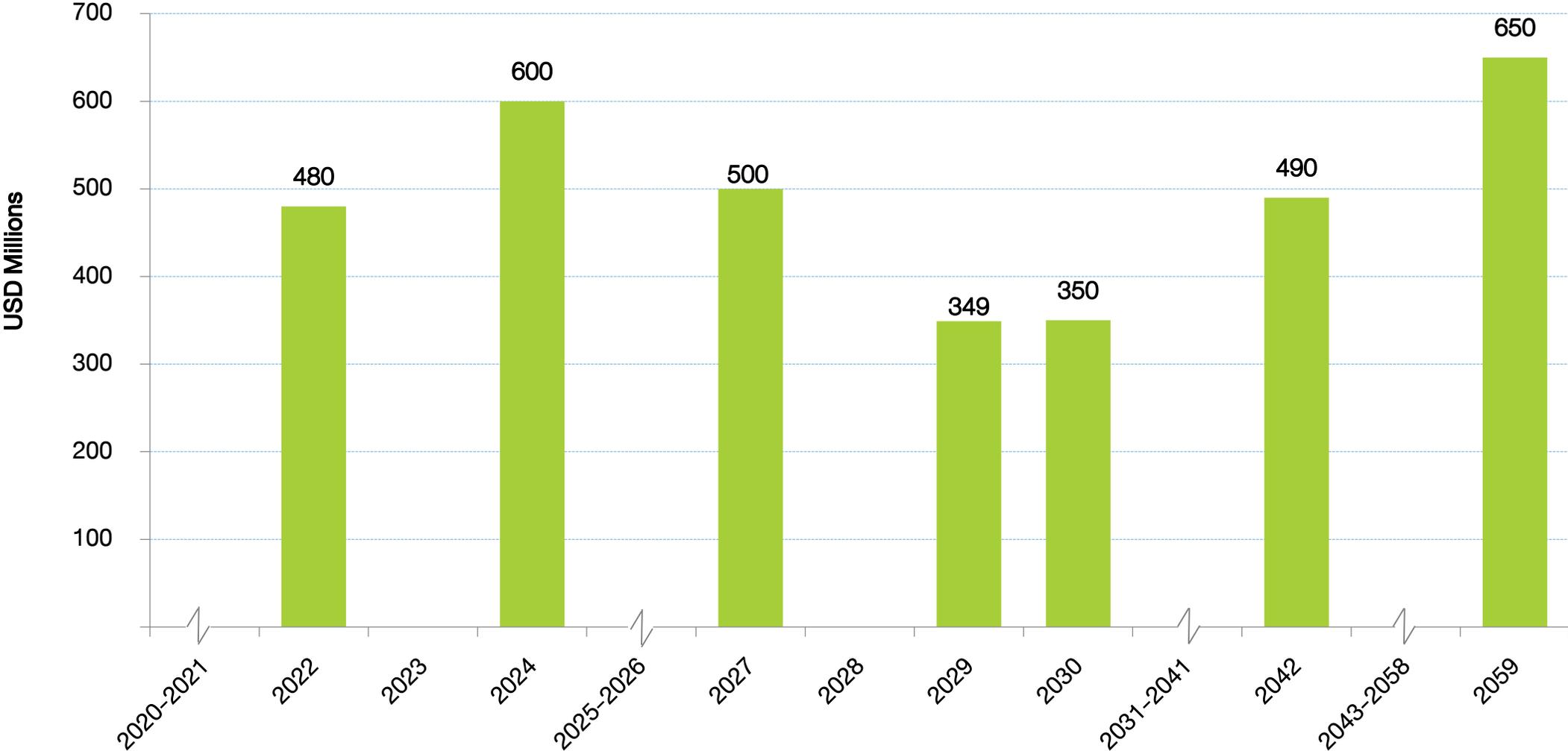
Net Debt = Total Debt less Cash & Cash Equivalents

** Excludes hybrid bonds

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

Debt Maturity Profile

As of September 2020

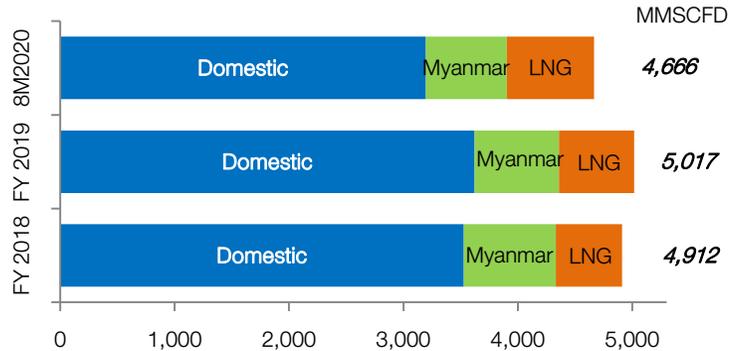


Note: Excludes Hybrid bonds

Unit: USD Millions or equivalent after cross currency swap

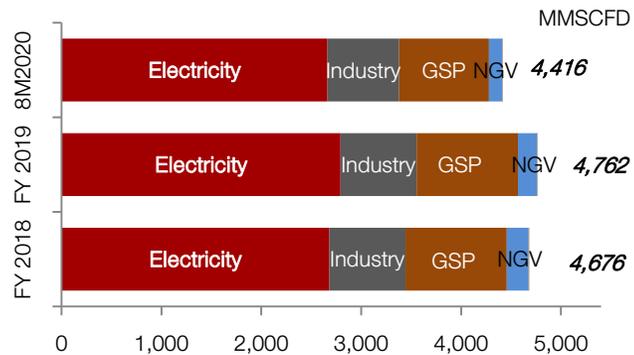
Thailand Energy Overview

Natural Gas Supply



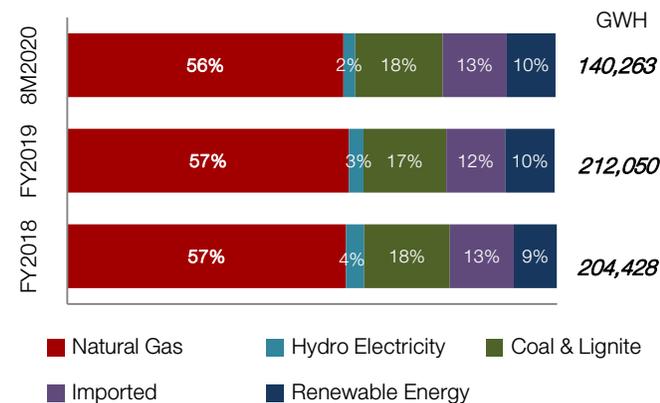
- Lower energy demand from COVID-19 outbreak
- More LNG imports from low LNG spot prices
- Slight decline from Myanmar piped gas imports due to natural decline

Natural Gas Consumption

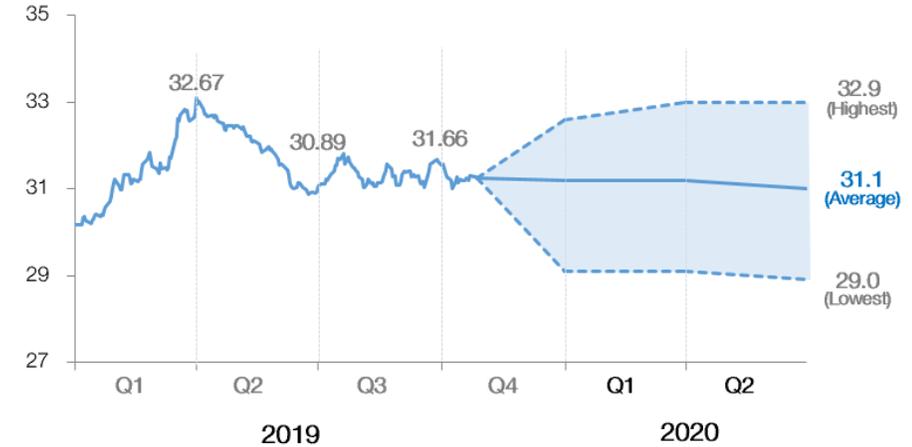


Source: EPPO

Electricity Generation



Exchange Rate Movement (THB/USD)



Consensus on the exchange rate mostly depends on

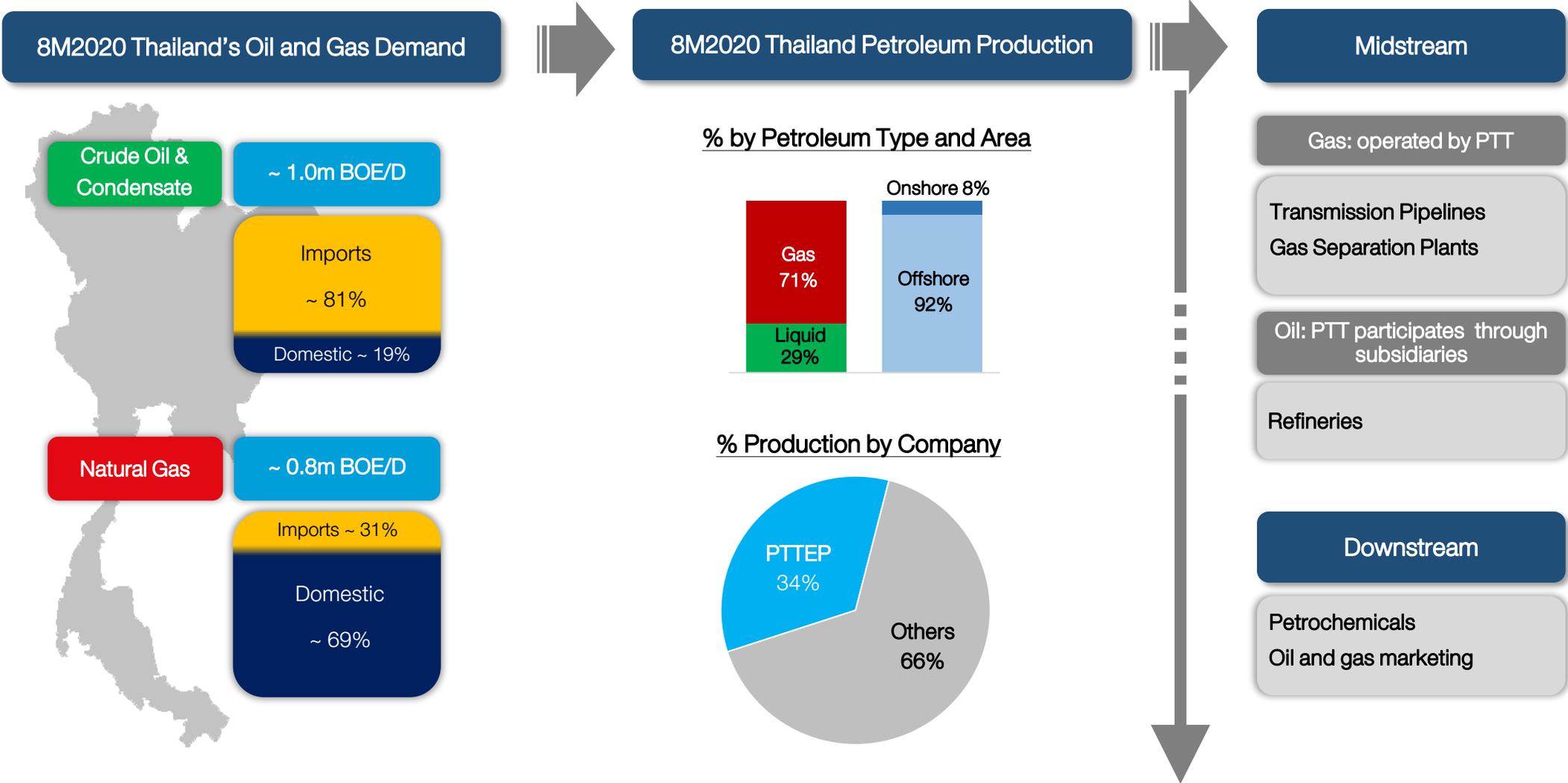
- The concern on the second wave of COVID-19 outbreak
- The uncontained COVID situation in US and the Federal Reserve's easing monetary policy guidance weighted down on US
- The rising local political uncertainty including the sudden resignation of the newly appointed Finance Minister in September
- Profit repatriation and dividend payment of foreign companies also supported USD upside

Source: Bank of Thailand, Bloomberg

Forecast based on Bloomberg Consensus as of 27 October 2020

Thailand's Energy Value Chain

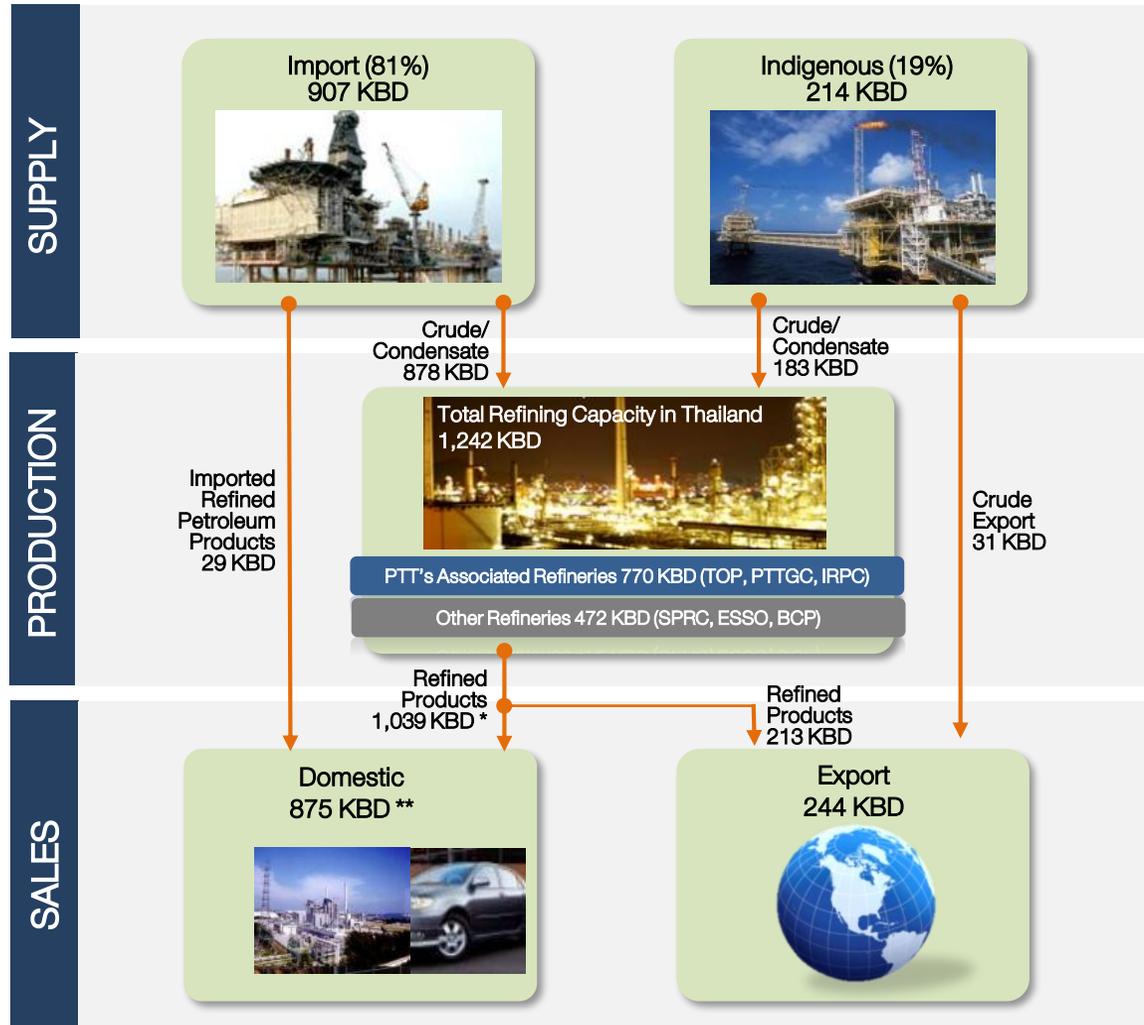
PTTEP contributes almost 1/3 of Thailand's petroleum production



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

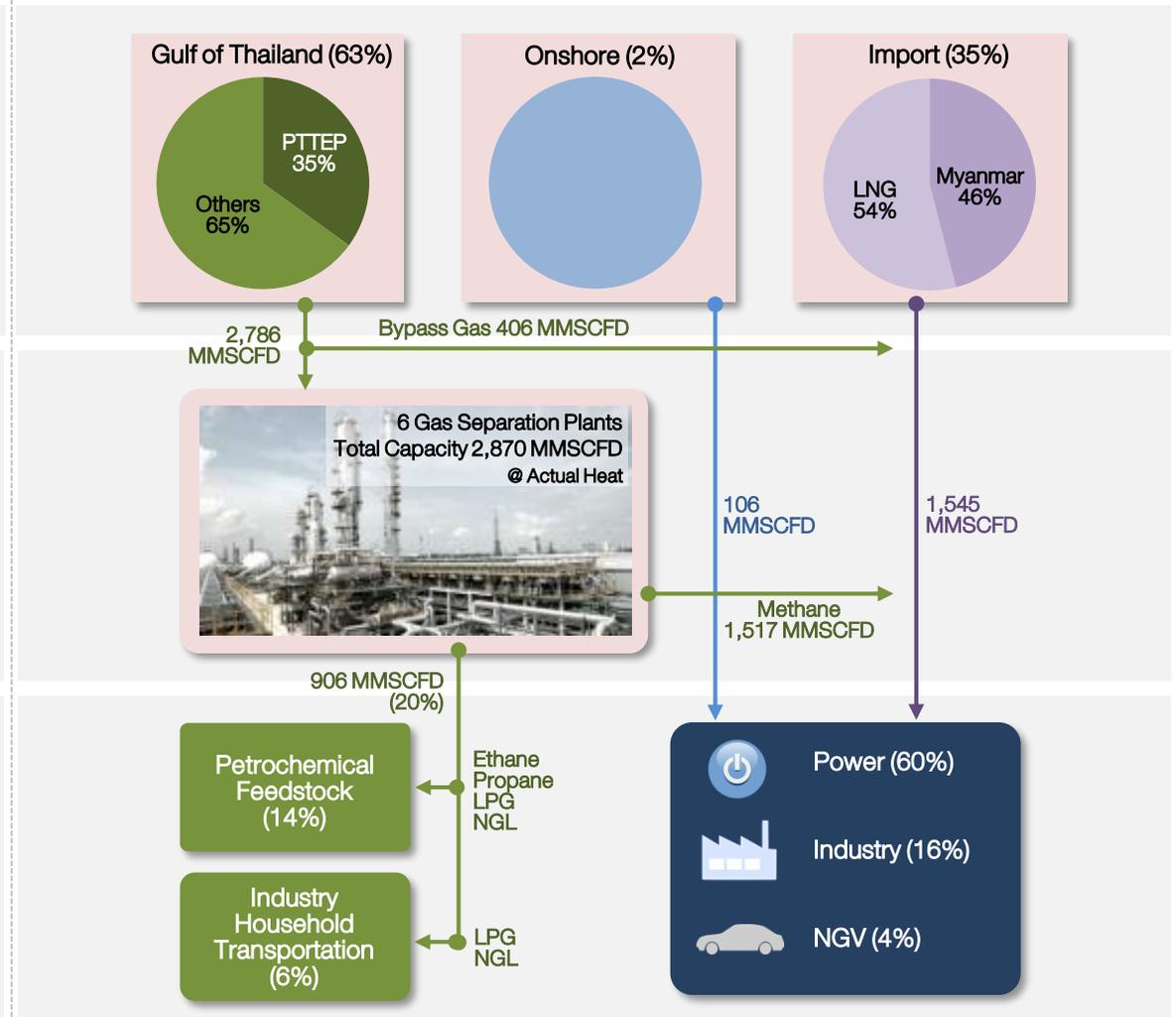
Oil Balance***

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

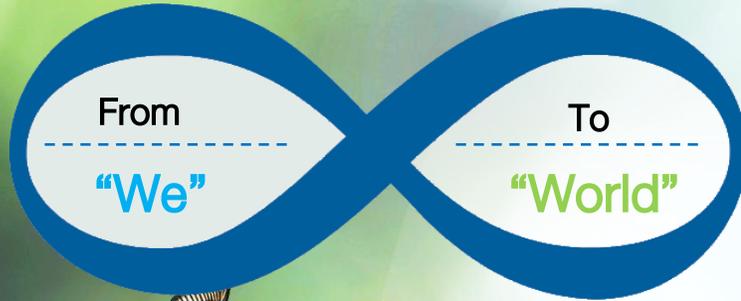
*** Information as of 5M20

**** Information as of 9M20

MMSCFD @ Heating Value 1,000 Btu/ft³

“Energy Partner of Choice”

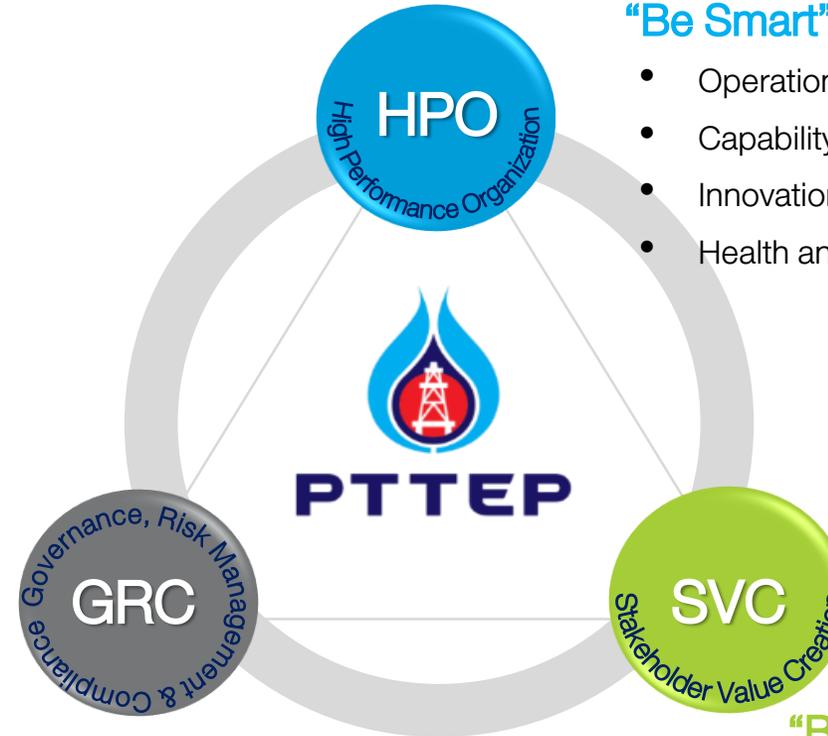
through competitive performance and innovation
for long-term value creation



“Be Good”

- Conducting business with accuracy, transparency, fairness
- Strict compliance with laws and regulations
- Good governance and appropriate risk management

Note: *Greenhouse Gas



“Be Smart”

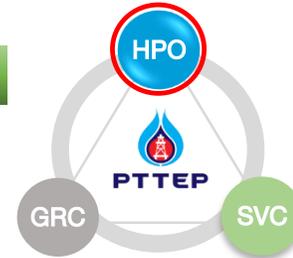
- Operational Excellence
- Capability Development
- Innovation and Technology
- Health and Safety

“Be responsible”

- GHG* Reduction
- Contribution to Society
- Environmental Management

HPO: Strategies for sustainable long term

Continue to focus on “Execute” while monitoring M&A Opportunity



Value Creation from Existing Assets



Development

Mozambique Area 1

On track to deliver first LNG



Pre-Development

SK410B : Lang-Lebah

Strong path towards FID



Transition of New Assets



- ▶ Operatorship transfer for G1/61
- ▶ Gulf of Thailand capital & operational efficiencies and synergy
- ▶ Increase efficiency and annexation to create more value in Malaysia



EXPAND: M&A and New Businesses

Opportunistic M&A in Strategic Areas



Transitioning technology and product builder to Business Builder



Gas to Power

Integrated energy solution and enhancing value of existing assets

Legacy Assets

Sustain sales volume as committed

Cost Management

Explore full potential in Malaysia and Myanmar

Operation Continuous

Streamline Cost Structure for efficiency

Exploration



GHG* Reduction

Growing business, while decreasing GHGs emission







Flare Gas Utilization Energy Efficiency Smart Logistics

Leakage Prevention Reforestation



Circular Model for E&P

Maximize resource efficiency and zero waste to landfill







New Design of reusable WHP and Well Pad Topside Reuse

Facility Reuse Part/ Inventory Refurbished Drill Cuttings Reuse in Road Construction



Ocean for Life

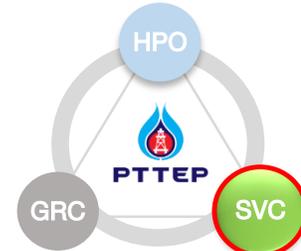
Improve biodiversity and local wealth






Zero Spill Conservation & Restoration

Rig to Reef Baseline : Micro-plastic



Achievement Targets in 2030:



25% GHG Intensity Reduction
from 2012 base year)



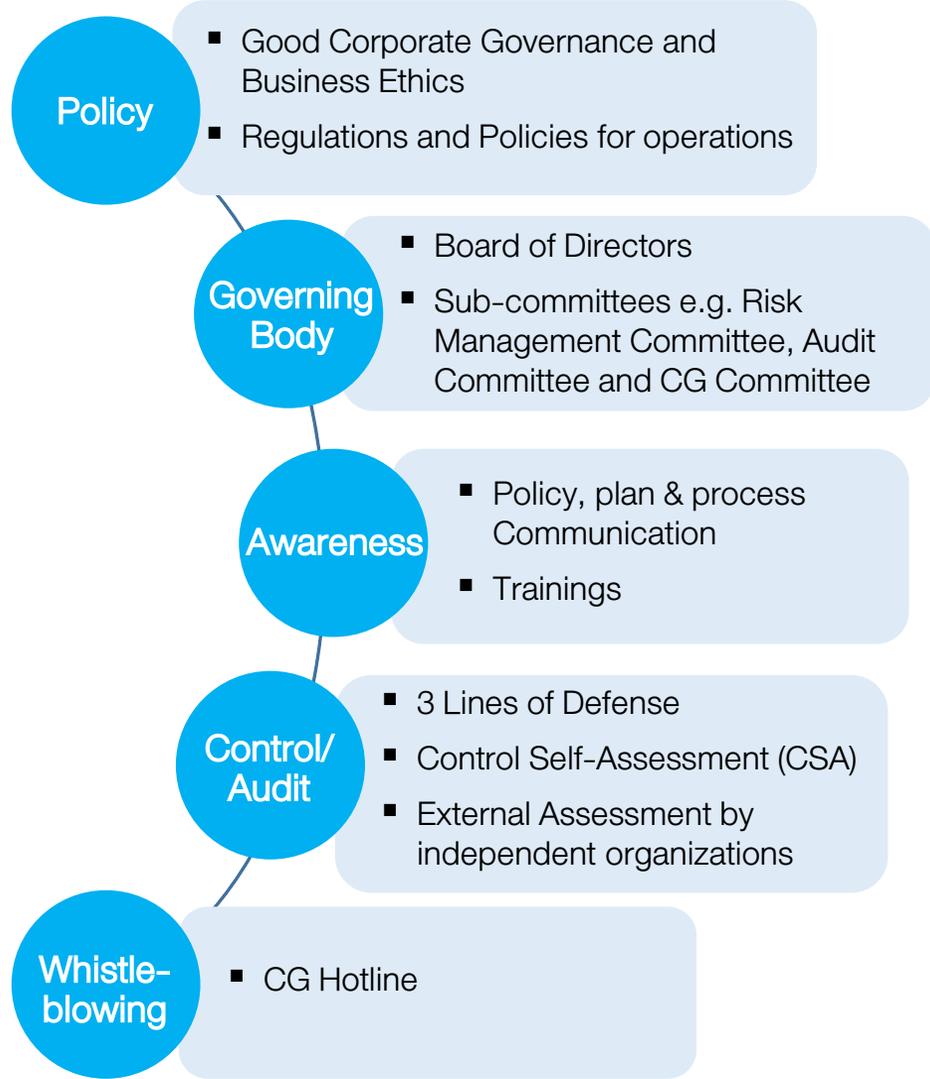
- 50% Reuse of Structure
- Zero Waste to Landfill



- Improve Positive Value to Biodiversity
- Improve Community Income

Note: GHG = Greenhouse Gas

How do we ensure GRC?



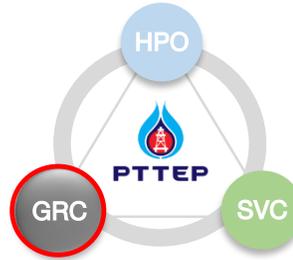
GRC Baseline Application to:



Global Operations & Newly acquired assets



Suppliers & Contractors



STOP CORRUPTION Anti corruption



The NACC Integrity Award from National Anti-Corruption Commission (NACC)



Human rights



The 2019 Role Model Organization Award on Human Rights from Ministry of Justices



Awards on Sustainable development

Pursue long-term growth with social and environmental wellness



MEMBER OF
Dow Jones Sustainability Indices
In Collaboration with RobecoSAM

2019 DJSI Listed Company

PTTEP has been selected as a member of the 2019 Dow Jones Sustainability Indices (DJSI) for the 6th consecutive year and the 2nd time as industry leader in the DJSI World Oil and Gas Upstream & Integrated Industry



Proven business integrity

- Role Model Organization on Human Rights Award 2020
The Department of Rights and Liberties Protection, Ministry of Justice
- NACC Integrity Award 2019
The National Anti-Corruption Commission (NACC)
- Asia's Icon on Corporate Governance 2019 Award
Corporate Governance Asia magazine



FTSE4Good FTSE4Good Emerging Index 2019

PTTEP becomes a constituent of the FTSE4Good Emerging Index 2019 for the fourth consecutive year



Exemplary social contributor

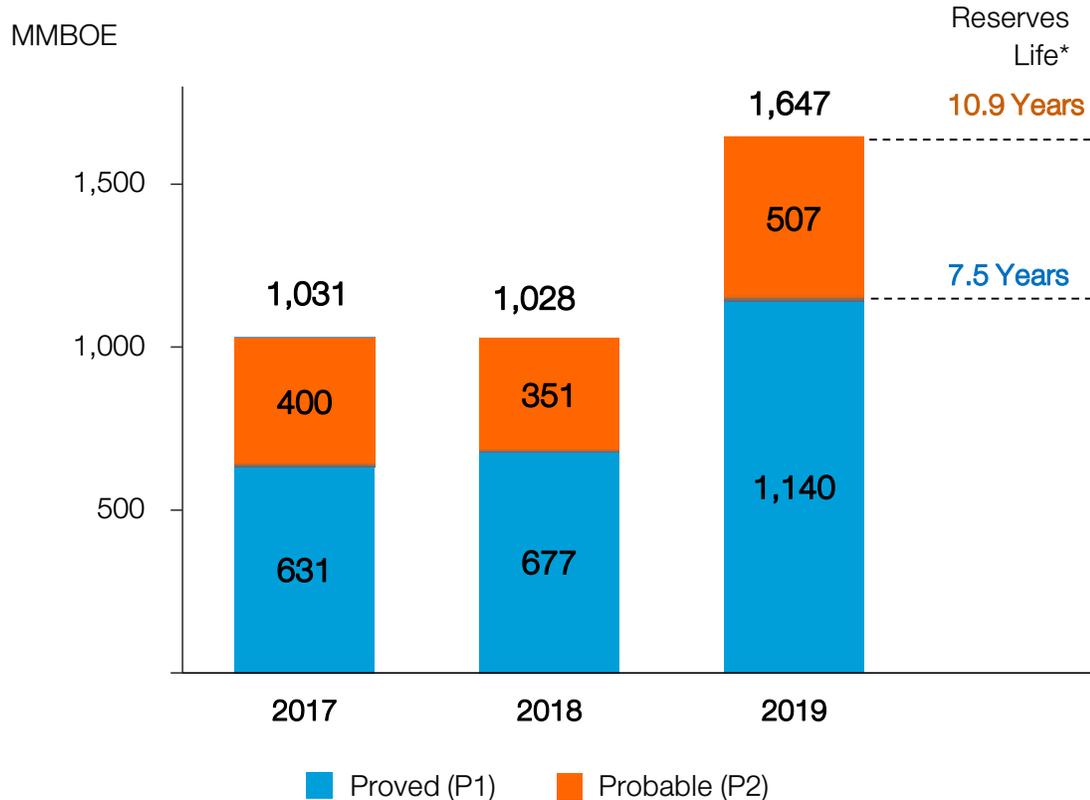
- 3G Best Social Empowerment Award 2020
Global Good Governance Awards, IF Analytica
- Global CSR Award 2020 (Platinum Winner)
The Energy and Environment Foundation, Global CSR Awards
- Best CSR Organizer 2019
BAZNAS of Indonesia (The National Zakat Board)

Green driver to environment

- The Excellent Level (G-Gold) of the Green Office Award 2018
The Ministry of Natural Resources and Environment
- Green Leadership Category for T.M.S. Underwater Learning Site Project
The Asia Responsible Enterprise Awards 2018
- Water A List Award
Carbon Disclosure Project (CDP)

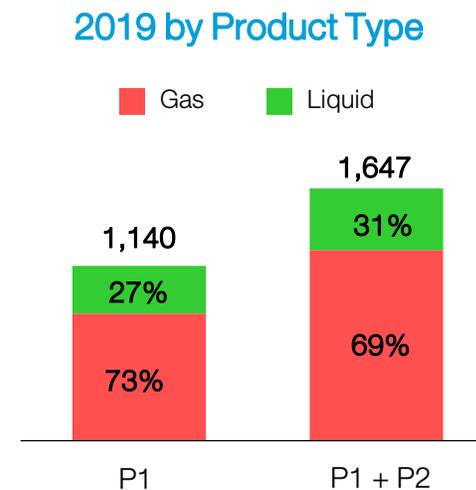
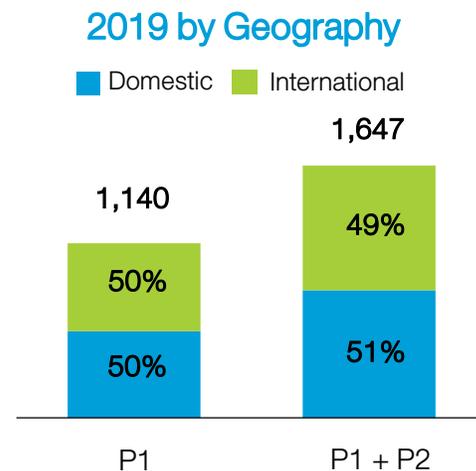
Reserves at the Year-end 2019

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



- 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

Central Asia

First presence in Kazakhstan:

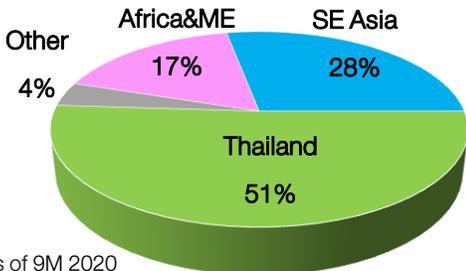
- Production: Dunga onshore oil field from the acquisition of Partex in 2019

North & South America

Opportunities in an early phase:

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

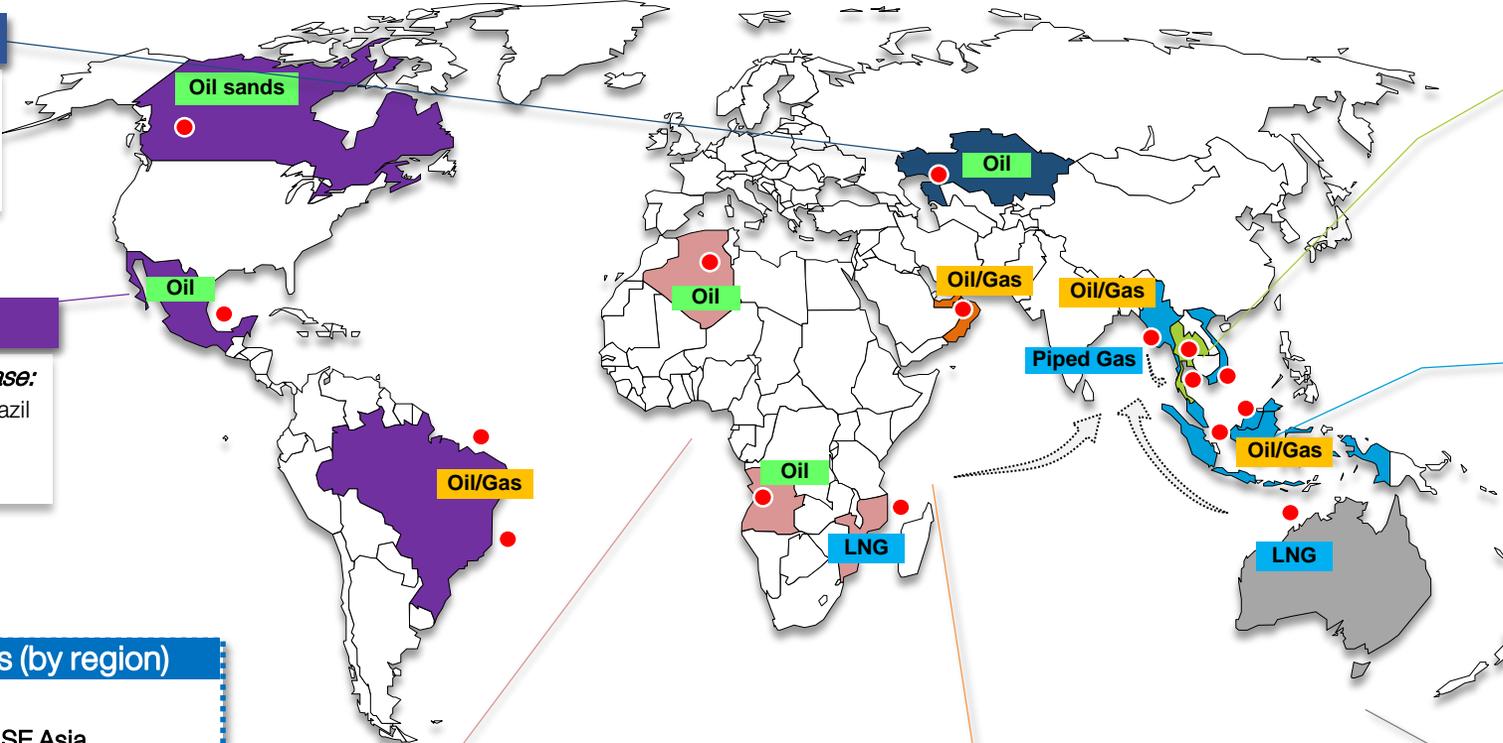
Book Value of Assets (by region)



Total Assets USD 21.9 billion

as of 9M 2020

Information as of 30 September 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
- 3rd 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)

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:

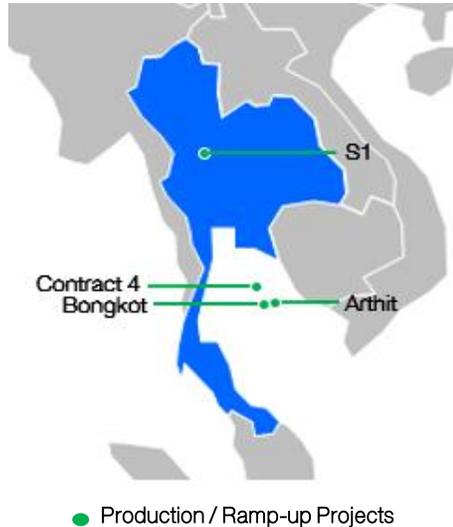
- 2 offshore exploration blocks partnered with experienced operator, ENI in Jan 2019
- 3 onshore blocks including PDO (Block 6), the largest producing oil asset in Oman

Australasia

Potential gas development

- Sizable undeveloped gas resources in Timor Sea

Thailand



Bongkot (66.6667% WI)

- Average natural gas and condensate sales volume of 749 MMSCFD and 22 KBPD in 9M2020

S1 (100% WI)

- The largest onshore crude oil production field in Thailand with 9M2020 average crude oil sales volume of 30 KBPD

Arthit (80% WI)

- Average sales volume in 9M2020 was 219 MMSCFD of natural gas and 10 KBPD of condensates

Contract 4 (60% WI)

- Average sales rate of 308 MMSCFD for natural gas and 12 KBPD for condensate in 9M2020

Myanmar



- 3 producing gas fields supplying gas to both Thailand and Myanmar: Yadana, Yetagun, and Zawtika
- Operate Zawtika project, brought online in March 2014 with current gas supply of 323 MMSCFD in 9M2020

Project Status

Production

- Zawtika (80% WI)
- Yadana (25.5% WI)
- Yetagun (19.3% WI)

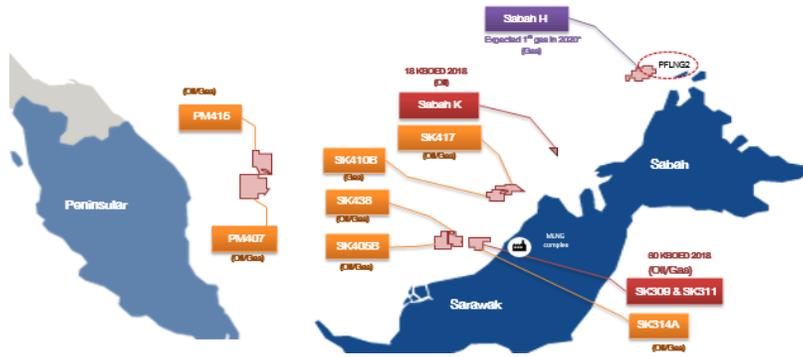
Appraisal

- M3 (80% WI)

Exploration

- MD-7 (50% WI)

Malaysia



Production

Block K Project :

Kikeh (56% WI), Siakap North-Petai (SNP) (22.4% WI) and Gumusut-Kakap (GK) (6.4% WI)

- Average production volume in 9M2020 was 28* KBPD of crude oil and 24* MMSCFD of natural gas

SK309 and SK311 Project (59.5% WI)

For East Patricia field (42% WI)

- Average production volume in 9M2020 was 201* MMSCFD of natural gas and 21* KBPD of condensates and crude.

Development

Block H Project* :

Rotan field (56% WI) Remaining Area (42% WI)

- First gas expected in 2021
- Full capacity at 270 MMSCFD

Exploration

Sarawak SK410B Project (42.5% WI)

- Multi TCF significant discovery
- Expected Final Investment Decision (FID) announcement in 2022

Other projects

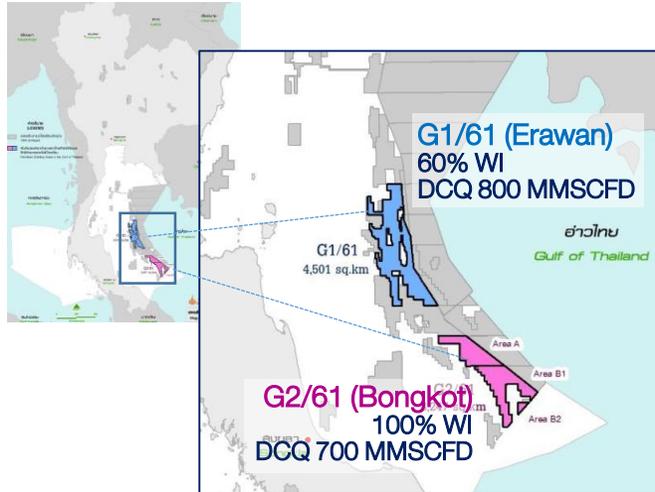
- Evaluating petroleum potentials
- Plan for exploration and appraisal drilling in 2020-2021

* The average production volumes per day, For Block K, gross production is net off utilization

Note: WI – working interest

Bongkot and Erawan: Thailand Champion in Domestic Gas Supply

Execute Bongkot and Erawan transition plan to ensure production continuity



Growing production and reserves profile

- Substantial volume boost for 10 years and beyond
- Immediate remarkable reserves addition
- Minimal risk in production profile



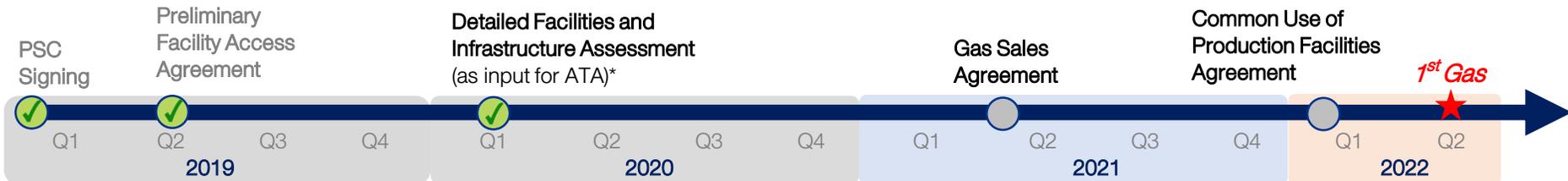
Generating strong cash flow

- No heavy upfront investment
- Self funding (positive net cash flow)
- Achieved target IRR with strong margin despite lower price

G1/61 and G2/61: Supply 80% of natural gas production in Thailand



Concrete transition plan:



*Asset Transfer Agreement (ATA): To be agreed between current concessionaires and DMF by 2021 (1 year prior concession end)
Source : TOR

G1/61	800	2022
	MMSCFD	
G2/61	700	2022/2023
	MMSCFD	

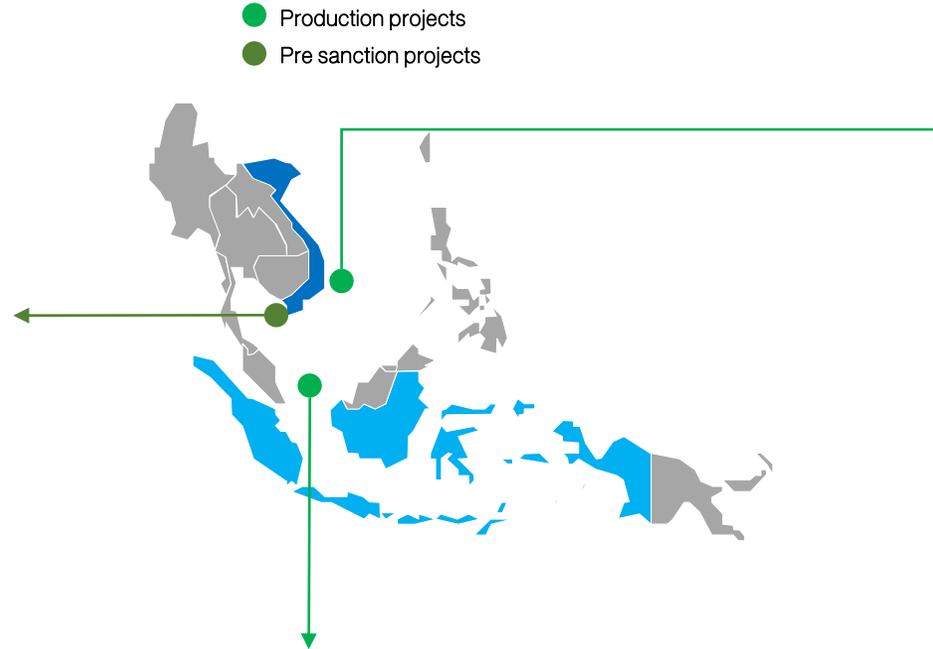
Vietnam and Indonesia



Southwest Vietnam

- Vietnam B & 48/95 (8.5% WI)
- Vietnam 52/97 (7% WI)

- Field Development Plan was approved by Government
- The project is currently in the negotiation process on commercial terms to put forward FID
- First production target by end of 2023, and ramp up to full capacity of 490 MMSCFD



Vietnam 16-1 (28.5% WI)

- Average sales volume of crude oil was 13 KBPD in 9M2020
- The project is currently drilling an additional production well to maintain production plateau.

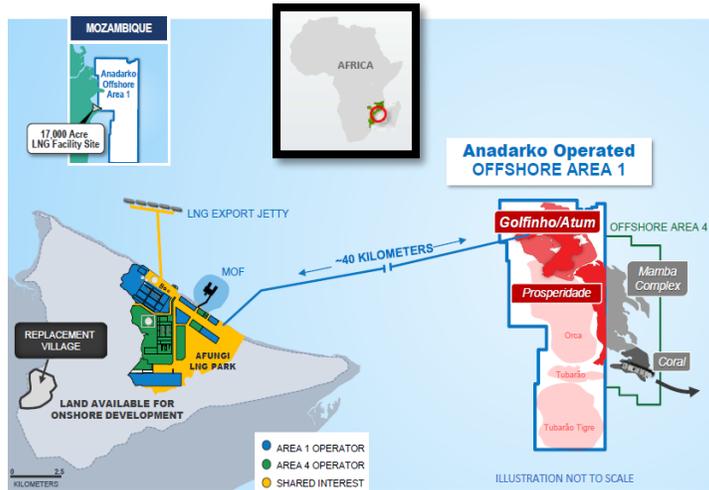


Natuna Sea A (11.5% WI)

- Average sales volume of natural gas was 208 MMSCFD in 9M2020

Mozambique Area 1

FID, on the path of unlocking value from world class LNG asset



Substantial recoverable resources of approximately 75 tcf with scalable offshore development expending up to 50 MTPA

Location and Cost Advantage

- Close proximity to shore
- High quality reservoirs
capable of flow up to 200 mmcf/d per well
- Access to Asian and European markets

Achievements

- ✓ Legal & Contractual Framework
- ✓ Plan of Development Approved
- ✓ Onshore & Offshore Contractors Awarded
- ✓ First Mover for the Marine Facility
- ✓ LNG SPAs ~11.1 MTPA

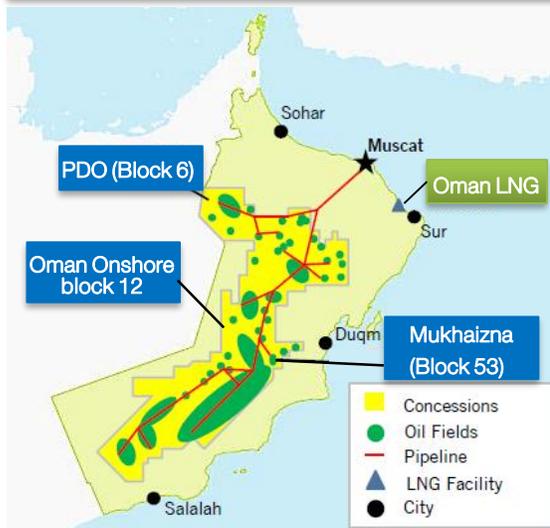
**FID in June 2019
with initial 2 trains of
13.1 MTPA capacity**

Way Forward

- ✓ Project Finance
(2/3 Project Financed)
- ⊗ Drilling & Completion
- ⊗ Onshore Construction and Offshore Installation
- ⊗ Operation Readiness
- ⊗ LNG Shipping

**1st Cargo
expected
2024**

Oman



PDO (Block 6)

- Largest asset covering around 1/3 of the country
- Long-life asset, produced only 15% of reserves in-place
- Multi-field oil production: 610,000 BPD (70% of Oman production)
- Operated by Petroleum Development of Oman (Joint Operating Company)

Mukhaizna (Block 53)

- Largest single onshore producing field in Oman
- Oil production: 120,000 BPD (13% of Oman production)
- Operated by Occidental Petroleum (47% interest)

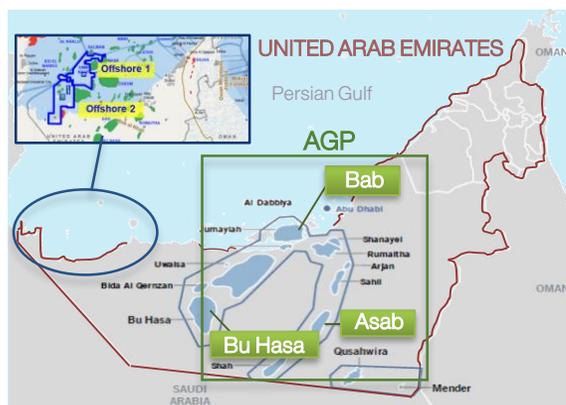
Block 12

- Located onshore central part of the Sultanate of Oman
- Signed agreement with Oman's Ministry of Oil and Gas (MOG) for exploration and production rights in February 2020
- Operated by Total E&P Oman Block 12 B.V. (80% interest)

Oman LNG

- The only LNG facility in Oman
- Processing capacity 10.4 MTPA
- Contracted LNG sales to international buyers: Japan and South Korea
- Government of Oman 51% (Operator)

UAE



Abu Dhabi Offshore 1 and 2

- High potential prospective resources with significant sizeable discoveries
- Located North-west of Abu Dhabi Emirates, United Arab Emirates
- Granted the award for exploration in January 2019
- Operated by Eni Abu Dhabi B.V. (70% interest)

ADNOC Gas Processing (AGP)

- One of the largest gas processing complexes in the world (total capacity of 8 BCFD)
 - JV: 3 plants with capacity of 1.2 BCFD
 - Adnoc: 2 plants with capacity of 6.9 BCFD
- Essential to Abu Dhabi and UAE's economy
- Sizeable volumes of Propane, Butane and Naphtha offtake
- Operated by ADNOC (68% interest)



-- Entry into high potential petroleum province at exploration phase --

Deep Water Brazil



Barreirinhas AP1

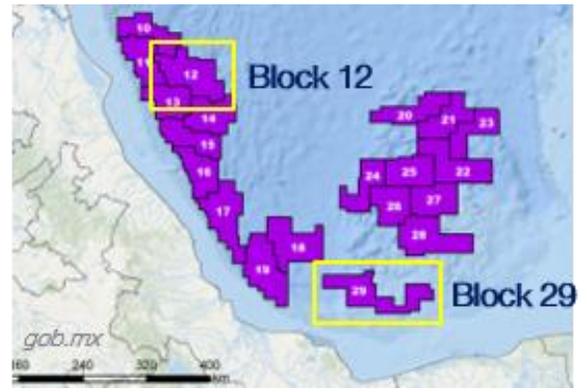
- Farm-in 25% from BG Group in 2014
- Operated by Shell Brasil (65% interest)
- Four offshore exploration blocks: BAR-M-215, BAR-M-217, BAR-M-252 and BAR-M-254

BM-ES-23

- Acquired 20% interest from Shell in Q3 2014
- Partnered with Petrobras (65%, operator) and INPEX (15%)

In 2020, Both projects are currently evaluating the petroleum potential

Gulf of Mexico, Mexico



Deep-water with high petroleum potentials and attractive fiscal regime

Mexico block 12 (2.4)

- Non-operating partner with 20% participating interest
- Located in the Mexican Ridges, western Gulf of Mexico
- Currently being evaluated for petroleum potential to prepare for drilling of an exploration well in 2021

Mexico block 29 (2.4)

- Non-operating partner with 16.67% participating interest
- Located in the Campeche, southern Gulf of Mexico
- Made two successful deep-water oil discoveries with good quality reservoirs in May 2020
- Currently preparing to evaluate for petroleum potential as well as future development plans for further regulatory approval

LNG Value Chain Investment : MLNG Train 9

First step into midstream LNG business in strategic area of focus

10% Investment in MLNG Train 9 by PTT Global LNG....

....continue to look for more LNG opportunities globally



MLNG Train 9 – Overview												
Location	Bintulu, Sarawak, Malaysia											
Asset	Liquefaction Train 9 Tank 7											
Phase	Commercial: Jan 2017											
Capacity	3.6MTPA											
Contract Life	20 years											
Partners (subject to closing)	<table border="0"> <tr> <td>Petronas</td> <td>65%</td> <td rowspan="5">  </td> </tr> <tr> <td>JX Nippon</td> <td>10%</td> </tr> <tr> <td>PTT Global LNG</td> <td>10%</td> </tr> <tr> <td>Sarawak State</td> <td>10%</td> </tr> <tr> <td>Sabah State</td> <td>5%</td> </tr> </table>	Petronas	65%		JX Nippon	10%	PTT Global LNG	10%	Sarawak State	10%	Sabah State	5%
Petronas	65%											
JX Nippon	10%											
PTT Global LNG	10%											
Sarawak State	10%											
Sabah State	5%											
Key activity in 2020												
<ul style="list-style-type: none"> • Keep maximizing LNG production up to plant capacity • Continue to improve plant reliability & utility rejuvenation • Get ready for 2021 plant turnaround 												

New Business Opportunities

Expand value chain, create innovation and step towards long-term sustainability



Gas to Power

"Integrated Energy Solution"



E&P



Pipeline



Power Plant

- Enhance value of existing assets in Myanmar e.g. Zawtika, M3
- Support Myanmar pipeline infrastructure development
- Partner with Independent Power Producer (IPP)



AI AND ROBOTICS VENTURES

Shifting Gear to Business Building



Subsea



- End-to-end AI-augmented Inspection Repair and Maintenance (IRM)



DroneBiz



- Infrastructure Asset Inspection On-demand



AgriTech



- Smart Farming Services Platform



MedTech



- Fully autonomous model of UVC-Disinfection Robot

	Project	Status*	Phase	PTTEP's Share	Partners (as March 2020)	9M2020 Average Sales Volume **		2020 Key Activities	
						Gas (MMSCFD)	Liquid (KBPD)		
Thailand and JDA									
1	Arthit	OP	Production	80%	Chevron MOECO	16% 4%	219	10	<ul style="list-style-type: none"> Ensure gas deliverability level at DCQ*** Drill development wells
2	B6/27	OP	Production	100%			-	-	<ul style="list-style-type: none"> Prepare for decommissioning activities
3	B8/32 & 9A	JV	Production	25.001%	Chevron MOECO KrisEnergy Palang Sophon	51.66% 16.71% 4.63% 2%	51	18	<ul style="list-style-type: none"> Drill development wells Perform waterflood activities
4	Bongkot	OP	Production	66.6667%	TOTAL	33.3333%	749	22	<ul style="list-style-type: none"> Maintained production level as planned Prepare for decommissioning activities
5	Contract 3 (Formerly Unocal III)	JV	Production	5%	Chevron MOECO	71.25% 23.75%	587	35	<ul style="list-style-type: none"> Drill development wells Prepare for decommissioning activities
6	Contract 4 (Formerly Pailin)	JV	Production	60%	Chevron MOECO	35% 5%	308	12	<ul style="list-style-type: none"> Ensure gas deliverability level at DCQ*** Drill development wells
7	E5	JV	Production	20%	ExxonMobil	80%	8	-	<ul style="list-style-type: none"> Ensure gas deliverability level at DCQ***
8	G4/43	JV	Production	21.375%	Chevron MOECO Palang Sophon	51% 21.25% 6.375%	2	4	<ul style="list-style-type: none"> Drill development wells
9	G4/48	JV	Production	5%	Chevron MOECO	71.25% 23.75%	7	0.4	<ul style="list-style-type: none"> Drill development wells
10	L53/43 & L54/43	OP	Production	100%			-	1.1	<ul style="list-style-type: none"> Maintain production plateau Drill development wells
11	PTTEP1	OP	Production	100%			-	0.122	<ul style="list-style-type: none"> Drill a development well Maintain production plateau
12	S1	OP	Production	100%			7	Crude:30 KBPD LPG: 0.2 KMT/D	<ul style="list-style-type: none"> Drill development wells Enhance oil recovery program includes hydraulic fracturing and artificial lift
13	Sinphuhorm	OP	Production	55%	Apico**** ExxonMobil	35% 10%	94	0.284	<ul style="list-style-type: none"> Ensure gas deliverability Drill an exploration well and development wells

* Status: OP = PTTEP operatorship / JOC = PTTEP joint operatorship / JV = PTTEP Joint Venture Partner

** Sales volume stated at 100% basis.

*** DCQ = Daily Contractual Quantity

**** PTTEP holds indirectly and directly 80.48% participating interest in Sinphuhorm Project. APICO also holds 100% participating interest in Block L15/43 and Block L27/43.

	Project	Status*	Phase	PTTEP's Share	Partners (as March 2020)		9M2020 Average Sales Volume **		2020 Key Activities
							Gas (MMSCFD)	Liquid (KBPD)	
Thailand and JDA									
14	L22/43	OP	Production	100%			-	-	<ul style="list-style-type: none"> Maintain production operation
15	MTJDA	JOC	Production	50%	Petronas-Carigali	50%	266	7.7	<ul style="list-style-type: none"> Drill development wells Ensure gas deliverability level at DCQ***
16	G9/43	OP	Exploration	100%					
17	G1/61 (Erawan)	OP	Exploration	60%	MP G2 (Thailand) Limited	40%			<ul style="list-style-type: none"> Awarded as an operator for Erawan field (Contract 1, 2 and 3) under PSC (after concession-end in 2022) E&A study (seismic interpretation) Installation new head platform
18	G2/61 (Bongkot)	OP	Exploration	100%					<ul style="list-style-type: none"> Awarded as a sole operator under PSC (after concession-end in 2022/2023) Drill appraisal and exploration wells Installation new head platform
Others SEA									
1	Malaysia	OP (except Gumusut-Kakap (GK) in Block K)	Production/ Exploration/ Development	6.4-80% (varied by permits)			SK309 and SK311 201 Block K 24	SK309 and SK311 21 Block K 28	<ul style="list-style-type: none"> Production projects(SK309 and SK311, Block K): Maintain production plateau Block H: first gas expected in 2H/2020 Sarawak SK410B: drill an appraisal well Other exploration projects: drill exploration wells, G&G study and perform 3D seismic activities
2	Yadana	JV	Production	25.5%	TOTAL Chevron MOGE	31.24% 28.26% 15%	775	-	<ul style="list-style-type: none"> Drill exploration and development wells Ensure gas deliverability level at DCQ***
3	Yetagun	JV	Production	19.3178%	Petronas-Carigali MOGE Nippon Oil PC Myanmar (Hong Kong)	30.00140% 20.4541% 19.3178% 10.90878%	59	1.5	<ul style="list-style-type: none"> Maintain production level Drill exploration and development wells
4	Zawtika (M9 & a part of M11)	OP	Production	80%	Myanma Oil and Gas Enterprise (MOGE)	20%	323	-	<ul style="list-style-type: none"> Ensure gas deliverability level at DCQ*** Drill exploration and development wells Perform 3D seismic activities
5	Myanmar M3	OP	Exploration	80%	MOECO	20%			<ul style="list-style-type: none"> FEED/ Subsurface/ Surface studies Negotiate and finalize GSA
6	Myanmar M11	OP	Exploration	100%					<ul style="list-style-type: none"> Perform 3D seismic activities Block relinquish
7	Myanmar MD-7	OP	Exploration	50%	TOTAL	50%			<ul style="list-style-type: none"> Drill an exploration well 3D Reprocessing seismic activities G&G studies

* Status: OP = PTTEP operatorship / JOC = PTTEP joint operatorship/ JV = PTTEP Joint Venture Partner

** Sales volume stated at 100% basis except Malaysia (Production volume 100% as of 3M/2020)/ For Block K, gross production is net off unitization

*** DCQ = Daily Contractual Quantity

	Project	Status*	Phase	PTTEP's Share	Partners (as March 2020)	9M2020 Average Sales Volume **		2020 Key Activities	
						Gas (MMSCFD)	Liquid (KBPD)		
Others SEA									
8	Myanmar MOGE 3	OP	Exploration	77.5%	Palang Sophon MOECO WinPreciousResources	10% 10% 2.5%			<ul style="list-style-type: none"> G&G studies Complete site reinstatement
9	Vietnam 9-2	JOC	Production	25%	PetroVietnam SOCO	50% 25%	14	4.0	<ul style="list-style-type: none"> Maintain production level Perform well intervention program Development drilling study support
10	Vietnam 16-1	JOC	Production	28.5%	PetroVietnam SOCO OPECO	41% 28.5% 2%	6	13	<ul style="list-style-type: none"> Maintain production level Drill development wells
11	Vietnam B & 48/95	JV	Exploration	8.5%	PVN MOECO	65.88% 25.62%			<ul style="list-style-type: none"> FEED study Negotiation process on commercial terms in order to push forward the Final Investment Decision (FID) the first production target at the end of 2023
12	Vietnam 52/97	JV	Exploration	7%	PVN MOECO	73.4% 19.6%			<ul style="list-style-type: none"> FEED study Negotiation process on commercial terms in order to push forward the Final Investment Decision (FID) the first production target at the end of 2023
13	Natuna Sea A	JV	Production	11.5%	Premier Oil KUFPEC Petronas Pertamina	28.67% 33.33% 15% 11.5%	208	1.6	<ul style="list-style-type: none"> FEED study: Start Anoa & Gajah Baru compressor project
Middle East									
1	Abu Dhabi Offshore 1	JV	Exploration	30%	Eni Abu Dhabi	70%			<ul style="list-style-type: none"> Reprocess Seismic G&G studies
2	Abu Dhabi Offshore 2	JV	Exploration	30%	Eni Abu Dhabi	70%			<ul style="list-style-type: none"> Drill an exploration well Perform 3D seismic activities
3	PDO (Block 6)	JOC	Production	2%	Government of Oman Shell Total	60% 34% 4%		521	<ul style="list-style-type: none"> A part of Partex acquisition which was completed on 4 November 2019 Maintain production plateau
4	Mukhaizna	JV	Production	1%	Occidental OOCEP Indian Oil Mubadala	47% 20% 17% 15%		79	<ul style="list-style-type: none"> A part of Partex acquisition which was completed on 4 November 2019 Maintain production plateau
5	Block 12	JV	Exploration	20%	Total E&P Oman Block 12 B.V.	80%			<ul style="list-style-type: none"> Signed Exploration and Production Sharing Agreement (EPSA) with Oman's Ministry of Oil and Gas (MOG) for exploration and production rights on 19 Feb 2020

* Status: OP = PTTEP operatorship / JOC = PTTEP joint operatorship // JV = PTTEP Joint Venture Partner

** Sales volume stated at 100% basis

	Project	Status*	Phase	PTTEP's Share	Partners (as March 2020)		9M2020 Average Sales Volume **		2020 Key Activities
							Gas (MMSCFD)	Liquid (KBPD)	
Other International									
1	PTTEP Australasia (PTTEP AA)	OP	Exploration	90%-100% (varied by permits)					<ul style="list-style-type: none"> AC/RL7 (Cash Maple): under the evaluation of appropriated development plan and seeking partner to manage the project's risk Other exploration projects: G&G and P&A studies AC/L3: total block relinquishment
2	Mozambique Area 1	JV	Development	8.5%	Total, Mitsui, ENH, ONGC Beas Rovuma, Bharat	26.5%, 20% 15%, 10% 10%, 10%			<ul style="list-style-type: none"> First Cargo is expected by 2024 Finalize project Finance Continue Onshore and Offshore well construction Complete Resettlement
3	Algeria 433a & 416b (Bir Seba)	JOC	Production	35%	PetroVietnam Sonatrach	40% 25%	-	17 (net entitlement)	<ul style="list-style-type: none"> Drill production wells
4	Algeria Hassi Bir Rekaiz	OP	Development	24.5%	CNOOC Sonatrach	24.5% 51%			<ul style="list-style-type: none"> Drilling development wells FEED study Continue Improvement oil study (IOR)
5	Mariana Oil Sands	OP	Exploration	100%					<ul style="list-style-type: none"> Assess appropriated development approach
6	Barreirinhas AP1	JV	Exploration	25%	Shell Brasil Mitsui E&P Brasil	65% 10%			<ul style="list-style-type: none"> G&G studies
7	Brazil BM-ES-23	JV	Exploration	20%	Petrobras INPEX	65% 15%			<ul style="list-style-type: none"> G&G studies
8	Mexico block 12 (2.4)	JV	Exploration	20%	PC Carigali Mexico Ophir Mexico	60% 20%			<ul style="list-style-type: none"> EIA and G&G study to access petroleum potential
9	Mexico block 29 (2.4)	JV	Exploration	16.67%	Repsol Mexico PC Carigali Mexico Wintershal DEA	30% 28.33% 25%			<ul style="list-style-type: none"> Drilling Exploration wells G&G study to access petroleum potential

* Status: OP = PTTEP operatorship / JOC = PTTEP joint operatorship/ JV = PTTEP Joint Venture Partner

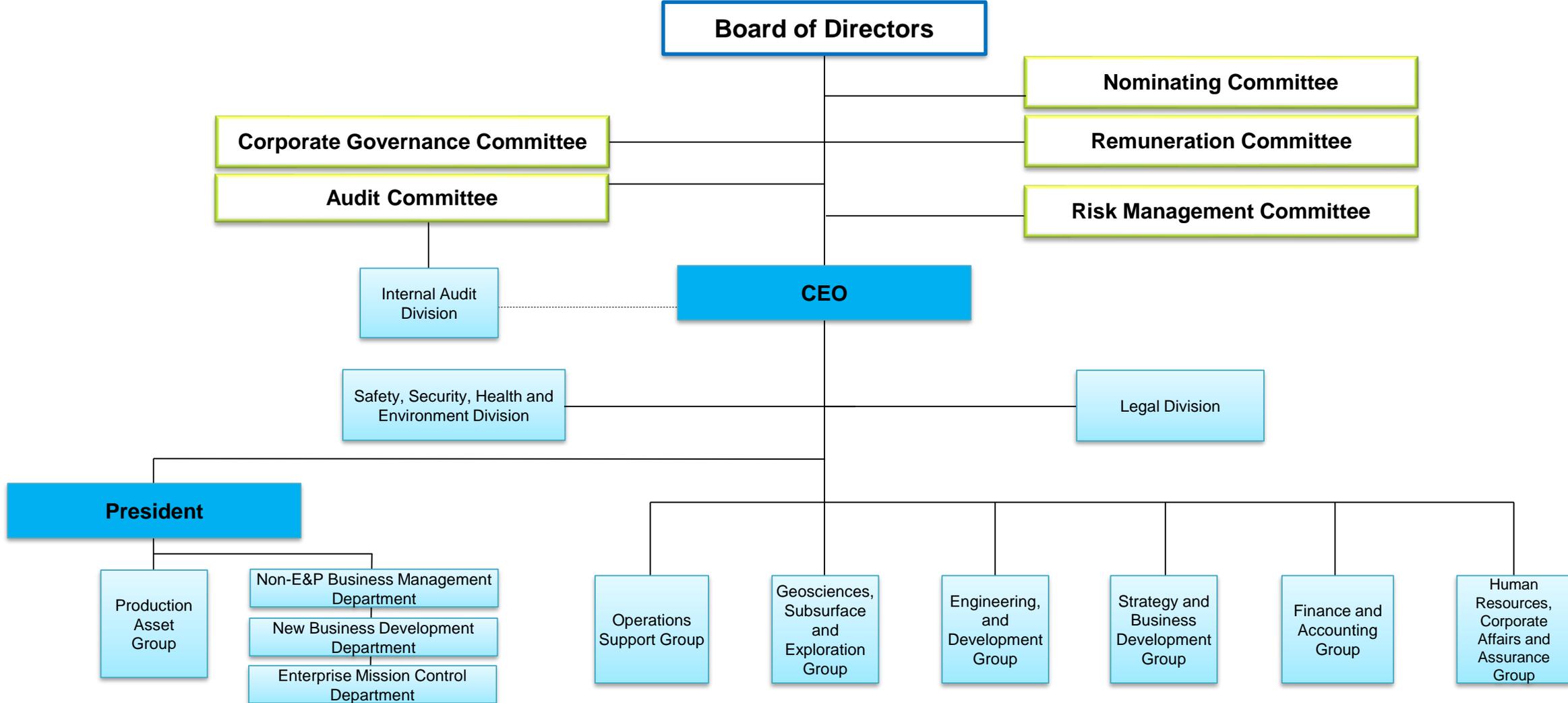
** Sales volume stated at 100% basis except for Algeria 433a & 416b (Net Entitlement)

	Project	Status*	Phase	PTTEP's Share	Partners (as March 2020)	9M2020 Average Sales Volume **		2020 Key Activities	
						Gas (MMSCFD)	Liquid (KBPD)		
Other International									
10	Block 17/06	JV	Pre development	2.5%	Total Sonangol SSI Acrep Falcon Oil	30% 30% 27.5% 5% 5%			<ul style="list-style-type: none"> A part of Partex acquisition which was completed on 4 November 2019 Maintain production plateau
11	Potiguar	OP	Production	50%	Petro reconcavo	50%	0.182		<ul style="list-style-type: none"> A part of Partex acquisition which was completed on 4 November 2019 Maintain production plateau
12	Dunga	JV	Production	20%	Total* OOCEP	60% 20%	2	12	<ul style="list-style-type: none"> A part of Partex acquisition which was completed on 4 November 2019 Maintain production plateau
Midstream Project									
1	Oman LNG	Shareholder	On line	2%	Government of Oman Shell Total Korea LNG Mitsubishi Mitsui Itochu	51% 30% 5.54% 5% 2.77% 2.77% 0.92%			<ul style="list-style-type: none"> A part of Partex acquisition which was completed on 4 November 2019
2	ADNOC Gas Processing (AGP)	JV	On line	2%	ADNOC Shell Total	68% 15% 15%			<ul style="list-style-type: none"> A part of Partex acquisition which was completed on 4 November 2019

* Status: OP = PTTEP operatorship / JOC = PTTEP joint operatorship/ / JV = PTTEP Joint Venture Partner
 ** Sales volume stated at 100% basis

Organization structure

Ensuring transparency, integrity and good corporate governance



Information as of 1 October 2020

Ratio	Formula
Lifting Cost (\$/BOE)	$(\text{Operating Exp.} - \text{Transportation Cost} - \text{Stock Variation} - \text{Other expenses not related to lifting}) / \text{Production Volume}$
Cash Cost (\$/BOE)	$(\text{Operating Exp.} + \text{Exploration Exp.} + \text{G\&A} + \text{Royalties} + \text{Finance Cost}) / \text{Sales Volume}$
Unit Cost (\$/BOE)	$(\text{Operating Exp.} + \text{Exploration Exp.} + \text{G\&A} + \text{Royalties} + \text{Finance Cost} + \text{DD\&A}) / \text{Sales Volume}$
Reserves Replacement Ratio	$5\text{-Yr Additional Proved Reserves} / 5\text{-Yr Production Volume}$
Reserves Life Index (Year)	$\text{Proved Reserves} / \text{Production Volume}$
Success Ratio	$\text{Number of wells with petroleum discovery} / \text{Total number of exploration and appraisal wells}$
Sales Revenue	$\text{Sales} + \text{Revenue from pipeline transportation}$
EBITDA	$(\text{Sales} + \text{Revenue from pipeline transportation}) - (\text{Operating expenses} + \text{Exploration expenses} + \text{Administrative expenses} + \text{Petroleum royalties and remuneration} + \text{Management's remuneration})$
EBITDA Margin	$\text{EBITDA} / \text{Sales Revenue}$
Return on Equity	$\text{Trailing-12-month net income} / \text{Average shareholders' equity between the beginning and the end of the 12-month period}$
Return on Capital Employed	$(\text{Trailing-12-month net income} + \text{Trailing-12-month Interest Expenses \& Amortization of Bond Issuing Cost}) / (\text{Average shareholders' equity and average total debt between the beginning and the end of the 12-month period})$
Simple Effective Tax Rate	$\text{Income tax expenses} / \text{Income before income taxes}$
Total debt	$\text{Short-term loans from financial institution} + \text{Current portion of long-term debts} + \text{Bonds} + \text{Long-term loans from financial institution}$
Net debt	$\text{Total debt} - \text{Liquidity}$
Debt to Equity	$\text{Total debt} / \text{Shareholders' equity}$
Net Debt to Equity	$\text{Net debt} / \text{Shareholders' equity}$
Total Debt to Capital	$\text{Total debt} / (\text{Total debt} + \text{Shareholders' equity})$
Total Debt to EBITDA	$\text{Total debt} / \text{Trailing-12-month EBITDA}$
Net Debt to EBITDA	$\text{Net debt} / \text{Trailing-12-month EBITDA}$
EBITDA Interest Coverage Ratio	$\text{Trailing-12-month EBITDA} / \text{Trailing-12-month Interest Expenses \& Amortization of Bond Issuing Cost}$