PTTEP

35th ENERGY PARTNER OF CHOICE

MEMBER OF
Dow Jones Sustainability Indices
In Collaboration with RobecoSAM

Investor Presentation

HSBC Asia Credit Tour

24 November 2020

Disclaimer

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

Government of Thailand

63.3%[1]

ptt

Thailand's national energy company

65.3%[2]

PTTEP

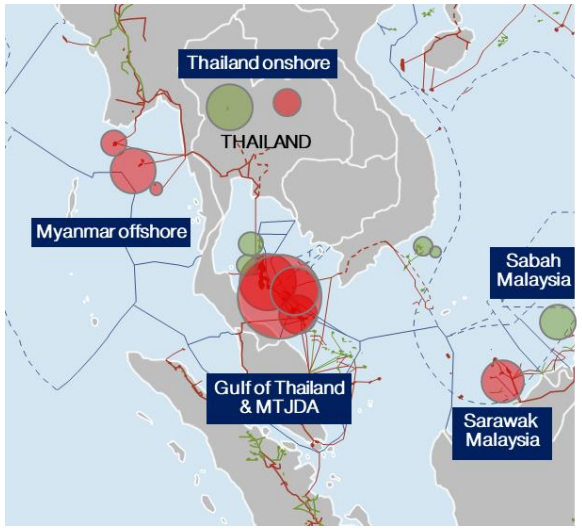
Credit ratings equivalent to parent and country			
S&P	Moody's	Fitch	TRIS (national rating)
BBB+	Baa1	BBB+	AAA

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

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)

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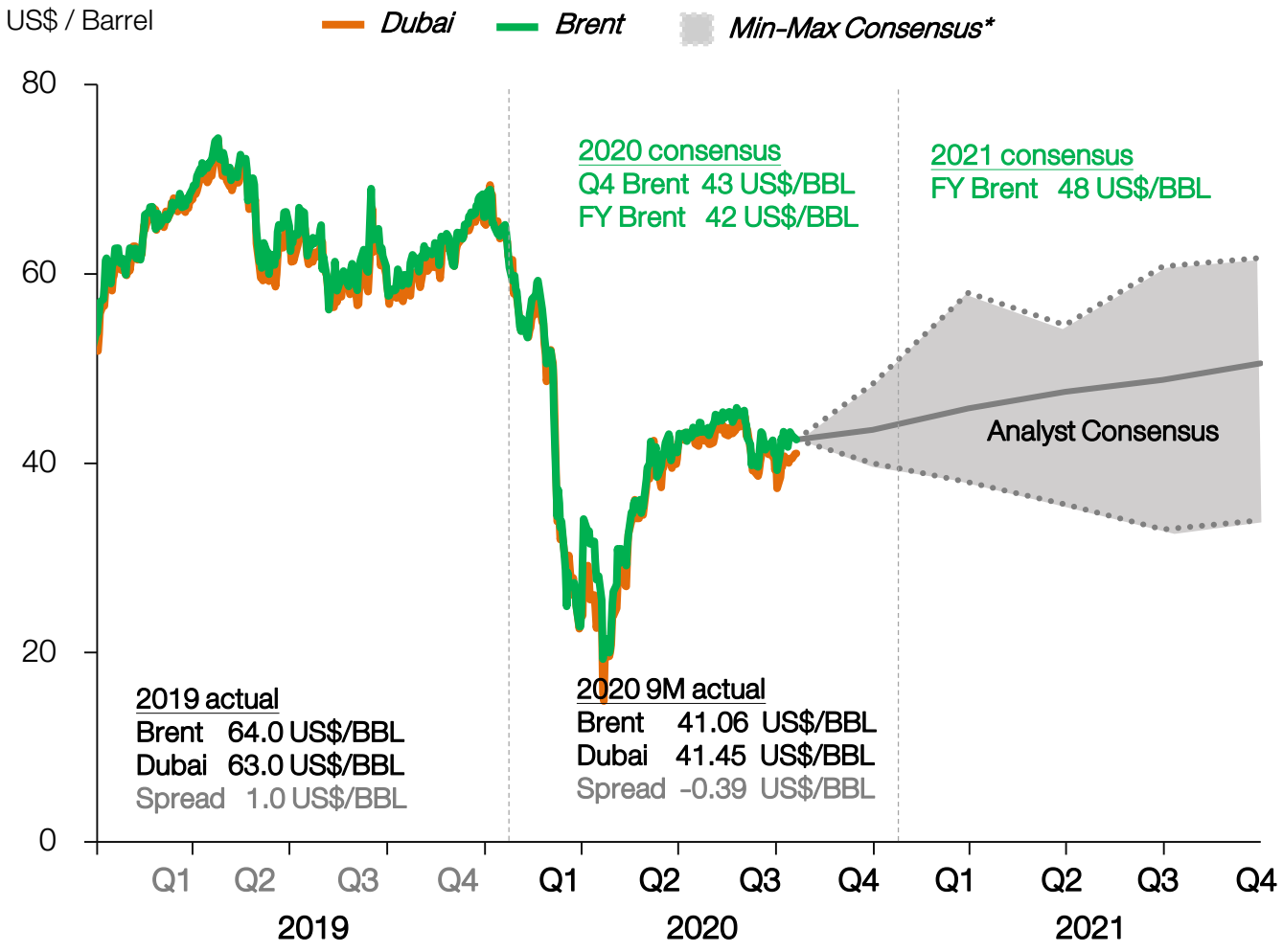
Industry Outlook

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

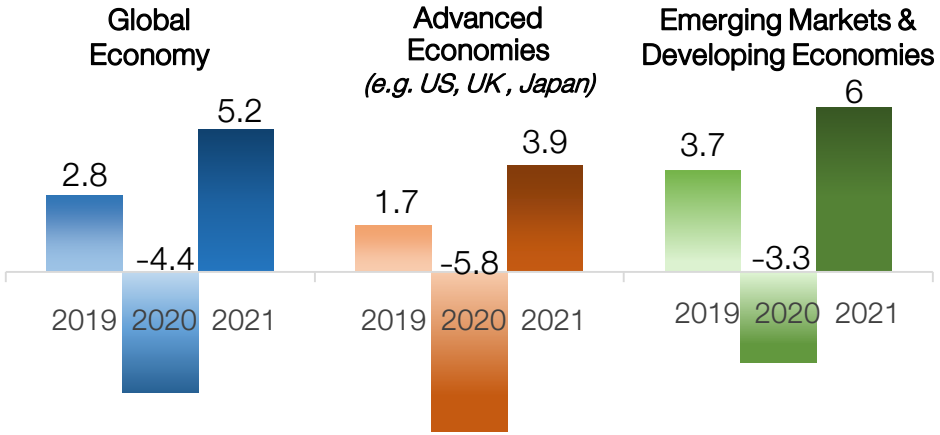


Source: Bloomberg Analyst Consensus (CPFC) as of 20 October 2020

Factors to watch

GDP Growth Outlook

Unit: % GDP

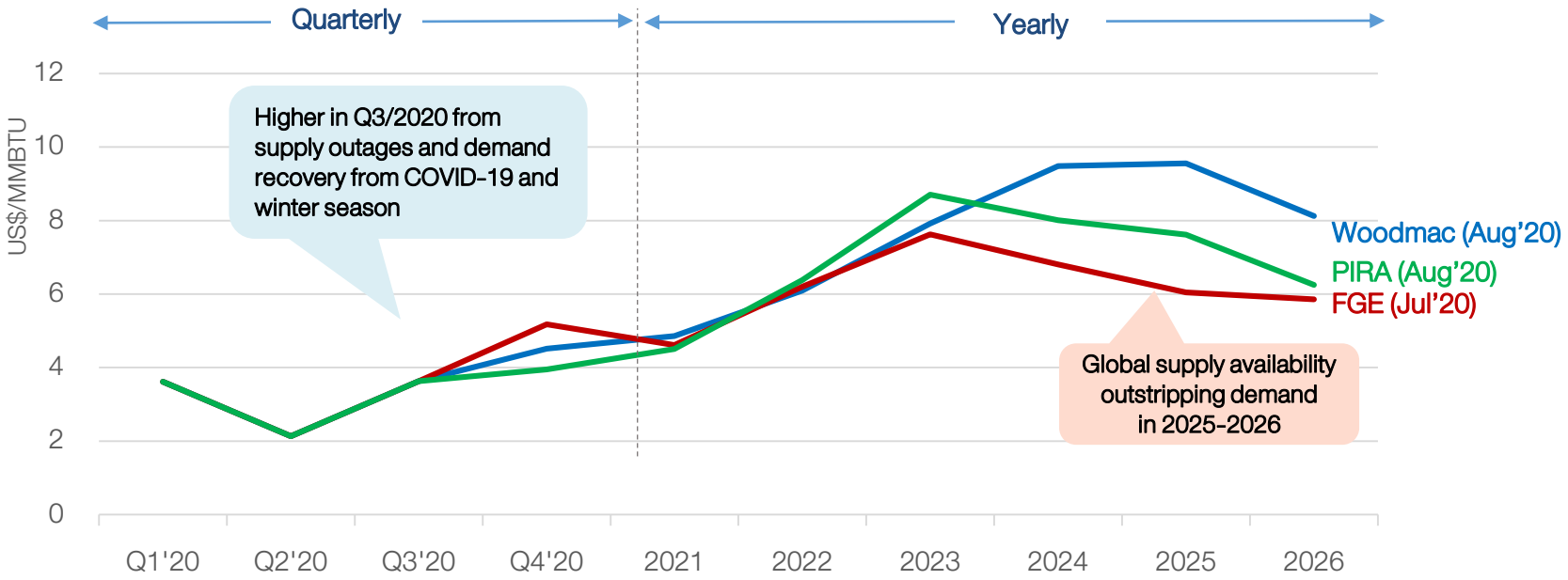


Source: IMF, World Economic Outlook, October 2020

Gas Price Outlook

Spot LNG price gradually increases as demand starting to recover. Demand for Gulf of Thailand gas not a concern.

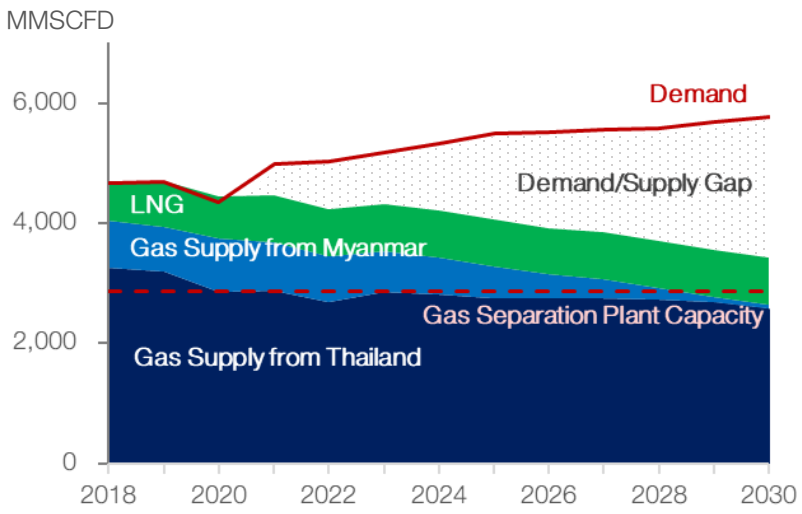
Spot LNG price



- 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

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Operational Highlights

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

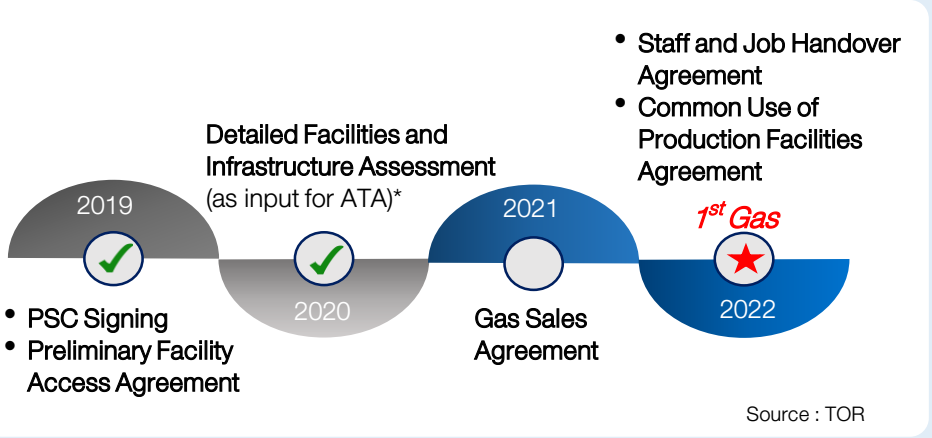
Thailand : G1/61 and G2/61

G1/61 Project

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

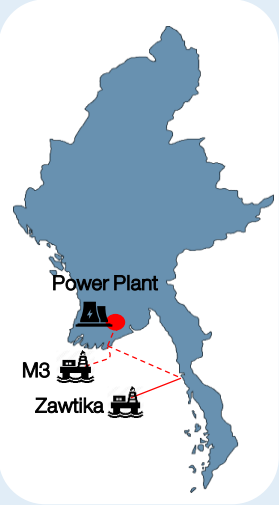
G2/61 Project

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



Source : TOR

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	In-Progress
Feasibility study & Business Proposal submitted to NECC	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

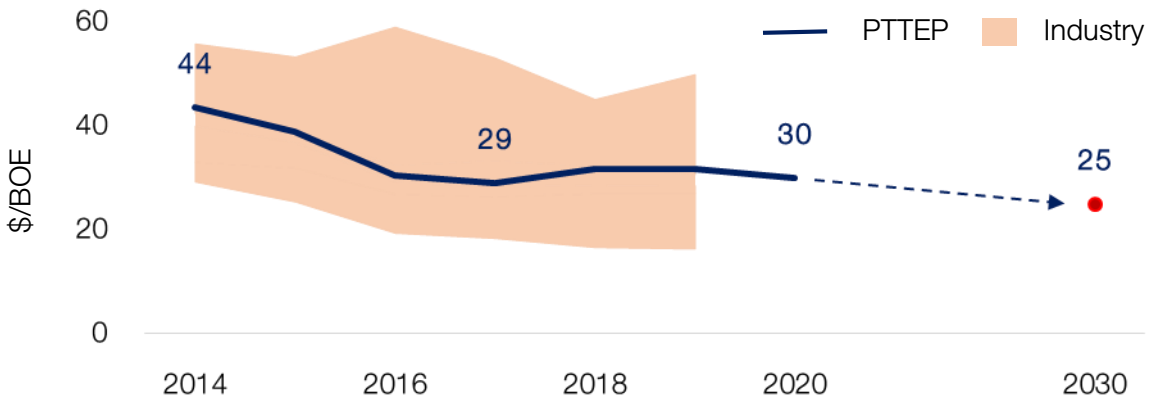
Algeria HBR

- 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

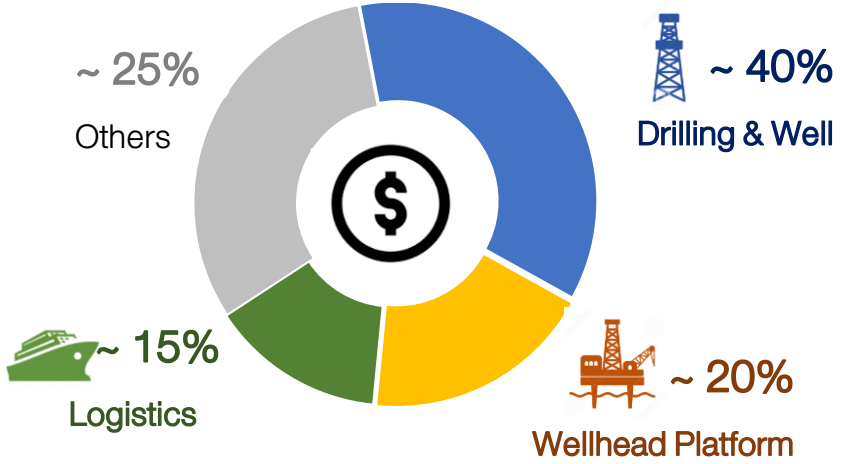
Cost reduction well underway to achieve top quartile unit cost by 2030

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%)

Remark: % cost reduction is from current cost

Cost Optimization

Drilling & Well

▼ ~8%

- Factory Drilling Implementation
- Optimize drilling rig & service contracts

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

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Industry Outlook

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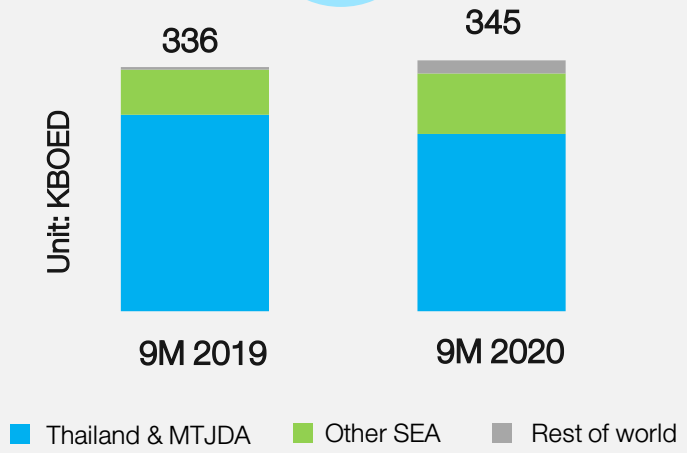
Financial Performance

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

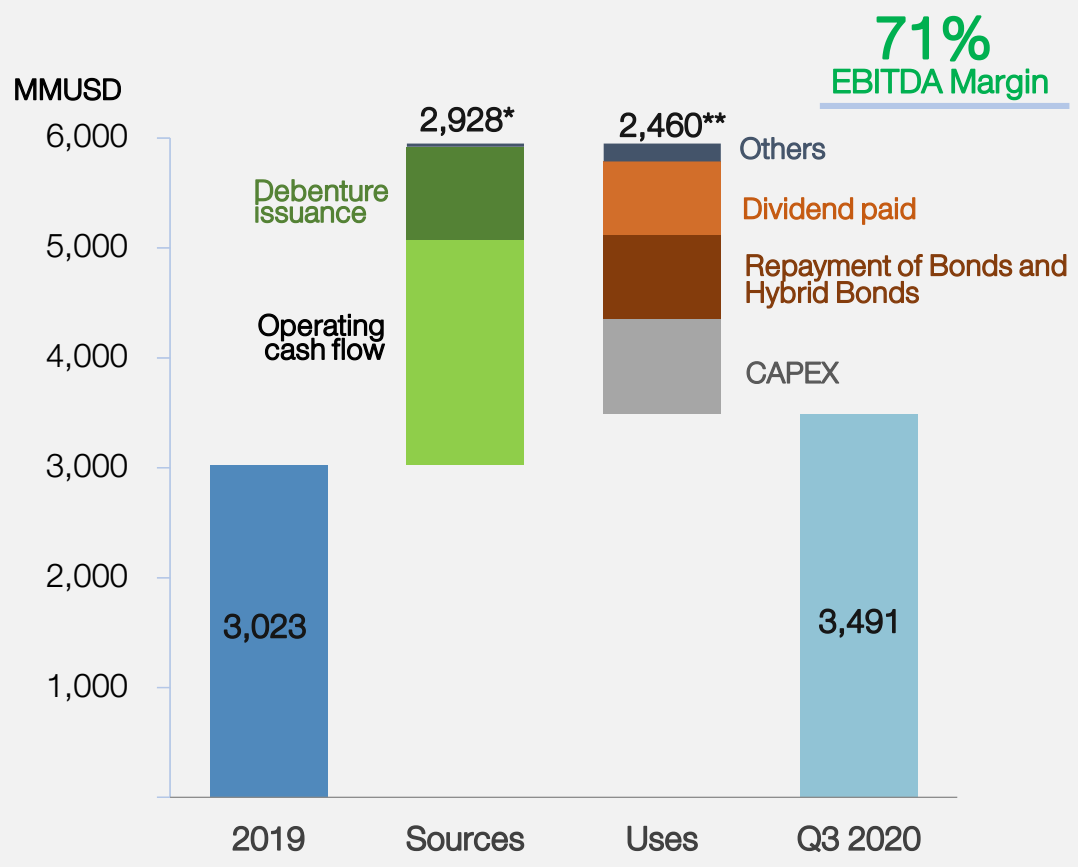
▼ 1% YTD

Maintained competitive unit cost

9M Cash flows and Financial Position

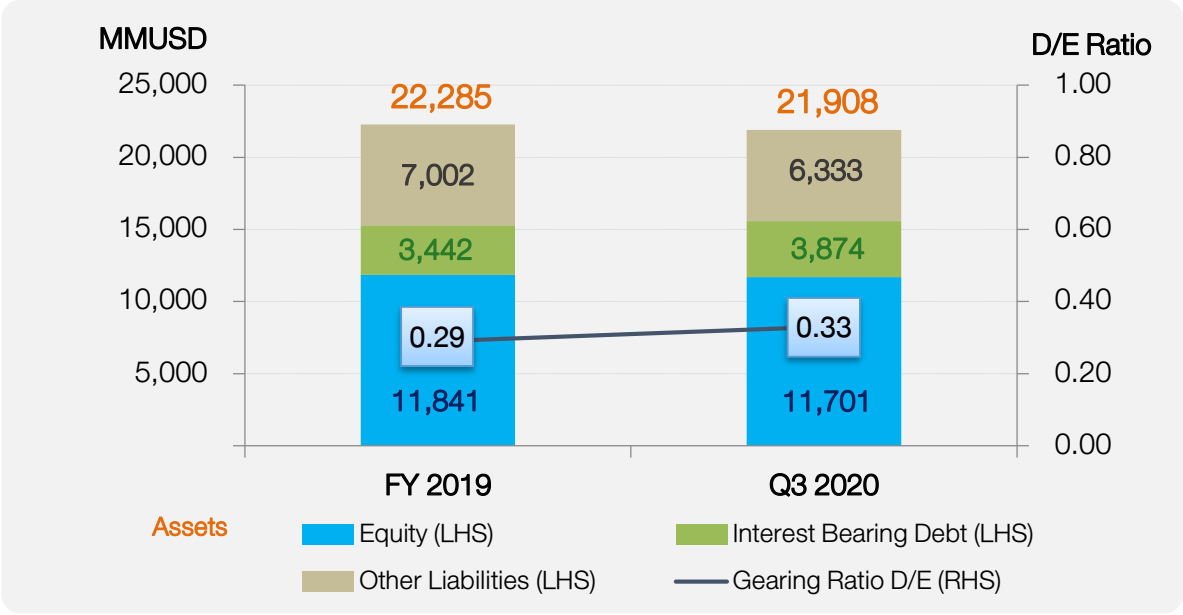
Healthy cashflows, Healthy balance sheet. Strong EBITDA Margin.

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

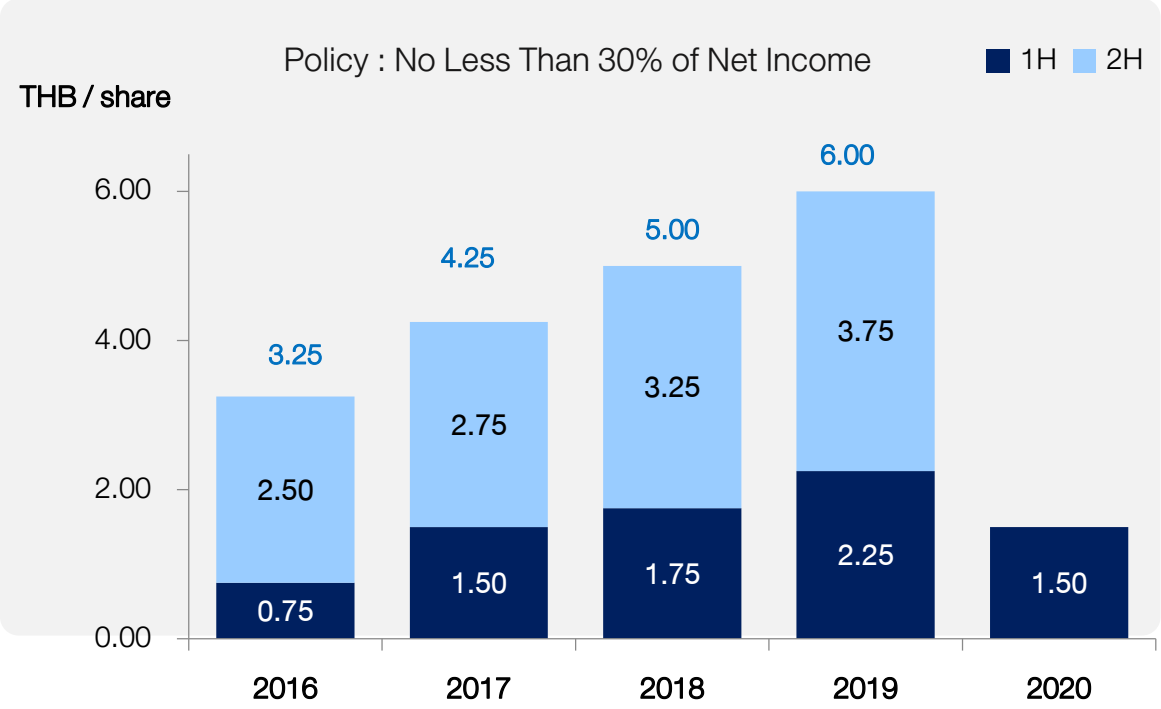


Debt Profile	US$ 100%	US$ 100%
WAVG Cost of Debt (%)	4.41	3.58
Fixed : Floating	82 : 18	82 : 18
WAVG Loan Life (Years)	13.84	14.34

Remark: Debt profile excludes Hybrid bonds

Dividends and Guidance

Dividend Payments History



	2016	2017	2018	2019	2020
Payout Ratio (% of net income)	98	90	35	55	46
Payout Ratio (% of recurring net income)	79	64	38	51	45

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

Average Sales Volume*	KBOED	~ 350
Average Gas Price	USD/MMBTU	~ 6.3
Unit Cost	USD/BOE	~ 30
EBITDA Margin	% of sales revenues	65–70 %

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

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Thank you and Q&A

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

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Please scan here to take the survey

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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

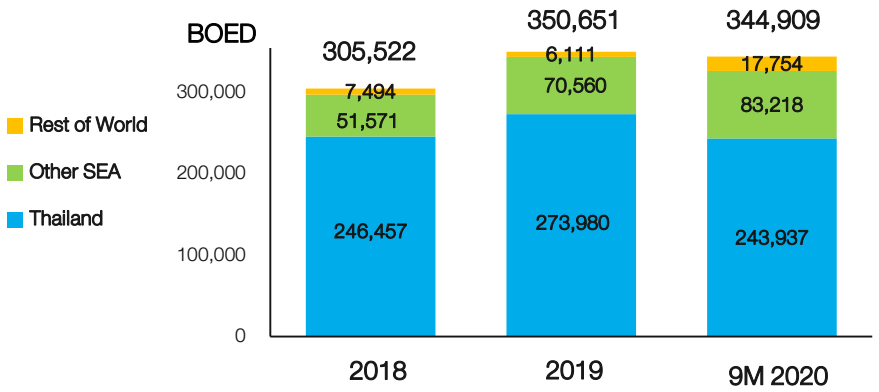
Statement of Income	Q2 20	Q3 20	% QoQ	Q3 19	% YoY	9M 20	9M 19	% YTD
Total Revenues	**1,095**	**1,305**	**19%**	**1,593**	**(18%)**	**4,082**	**4,572**	**(11%)**
Sales	1,041	1,228	18%	1,494	(18%)	3,751	4,291	(13%)
Others	54	77	43%	99	(22%)	331	281	18%
Sales Volume (BOED)	327,004	344,317	5%	352,862	(2%)	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

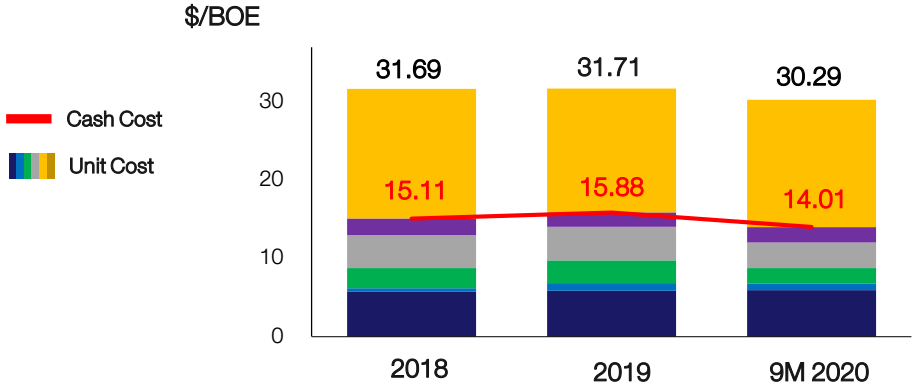
Lower sales volume from lower demand. Cost remains competitive.

Sales Volume and Price



	2018	2019	9M 2020
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) (High Sulphur Fuel Oil)	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



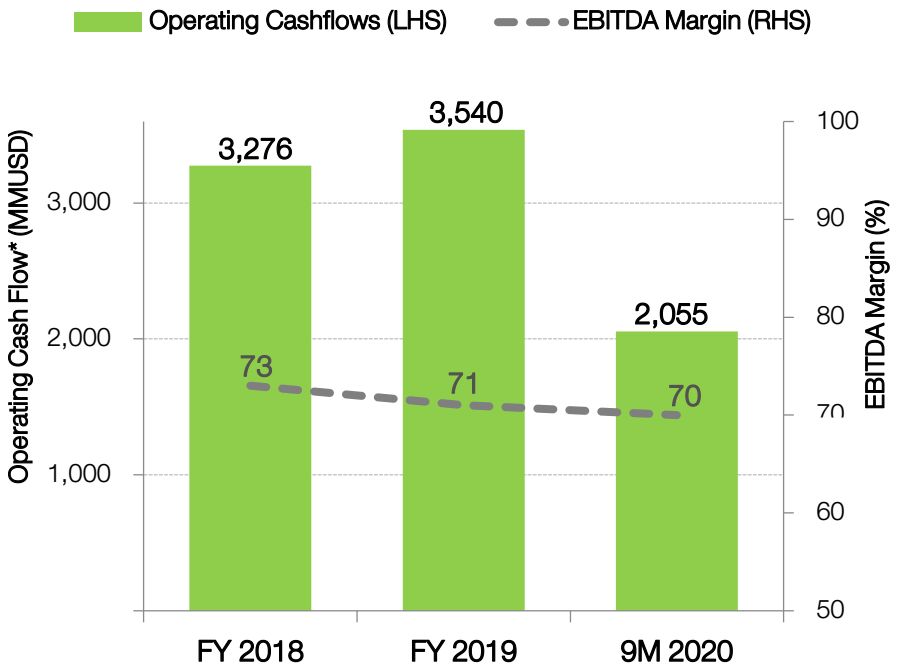
	2018	2019	9M 2020
DD&A	16.58	15.83	16.28
Finance Cost	2.14	1.84	1.98
Royalties	4.21	4.27	3.24
G&A	2.57	2.91	2.03
Exploration Expenses	0.41	1.00	0.82
Operating Expenses	5.78	5.86	5.94
Lifting Cost	4.33	4.31	4.44

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

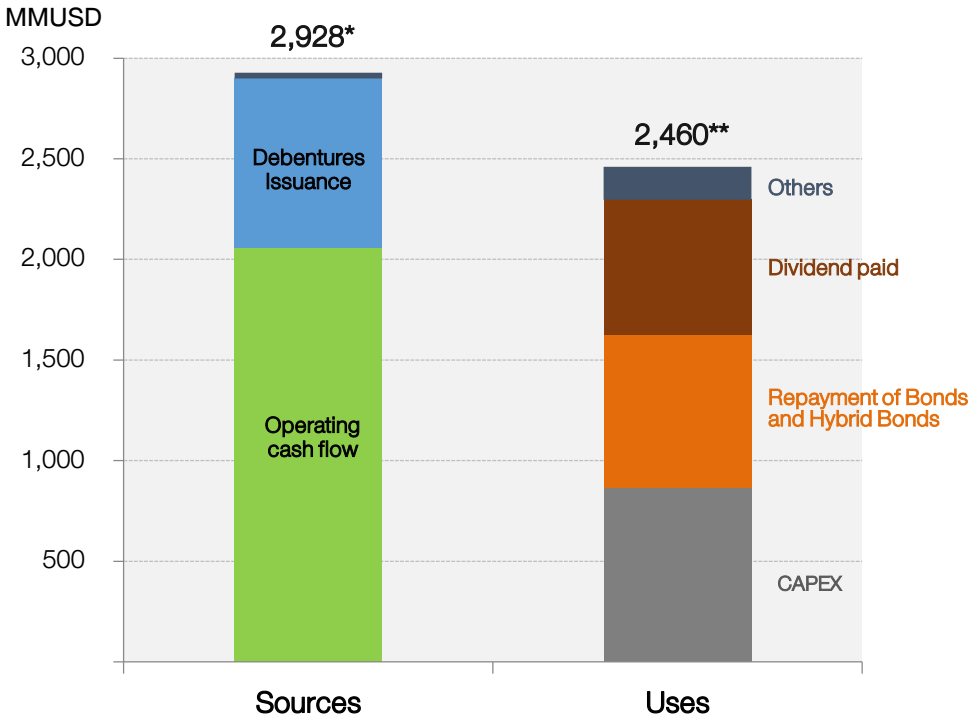
Robust operating cash flow

Cash Flow Performance



	FY 2018	FY 2019	9M 2020
Net Income	1,120	1,569	639
Recurring Net Income***	1,215	1,445	613

Source & Use of Funds in 9M 2020



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*** 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.

Cash Flows : January – September 2020

Continue generating positive Operating Cash Flow and Free Cash Flow

Unit : MMUSD

Operating	2,055
▪ Income before tax & non-cash adjustment	2,933
▪ Tax payment	(1,028)
▪ Changes in assets/liabilities*	150

EBITDA 2,682MMUSD

+

CAPEX & Investment	(835)
▪ CAPEX (PP&E, Intangible asset)	(864)
▪ Dividend received from related parties	29

Free Cash Flow
1,220

+

Finance	(752)
▪ Debentures & subordinated debenture repayment	(761)
▪ Debentures issuance	844
▪ Dividend paid	(671)
▪ Net interest paid	(95)
▪ Others	(69)

Cash In (Out)	+	Beginning Cash & Cash Equivalent***	=	Ending Balance***
468	+	3,023	=	3,491

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

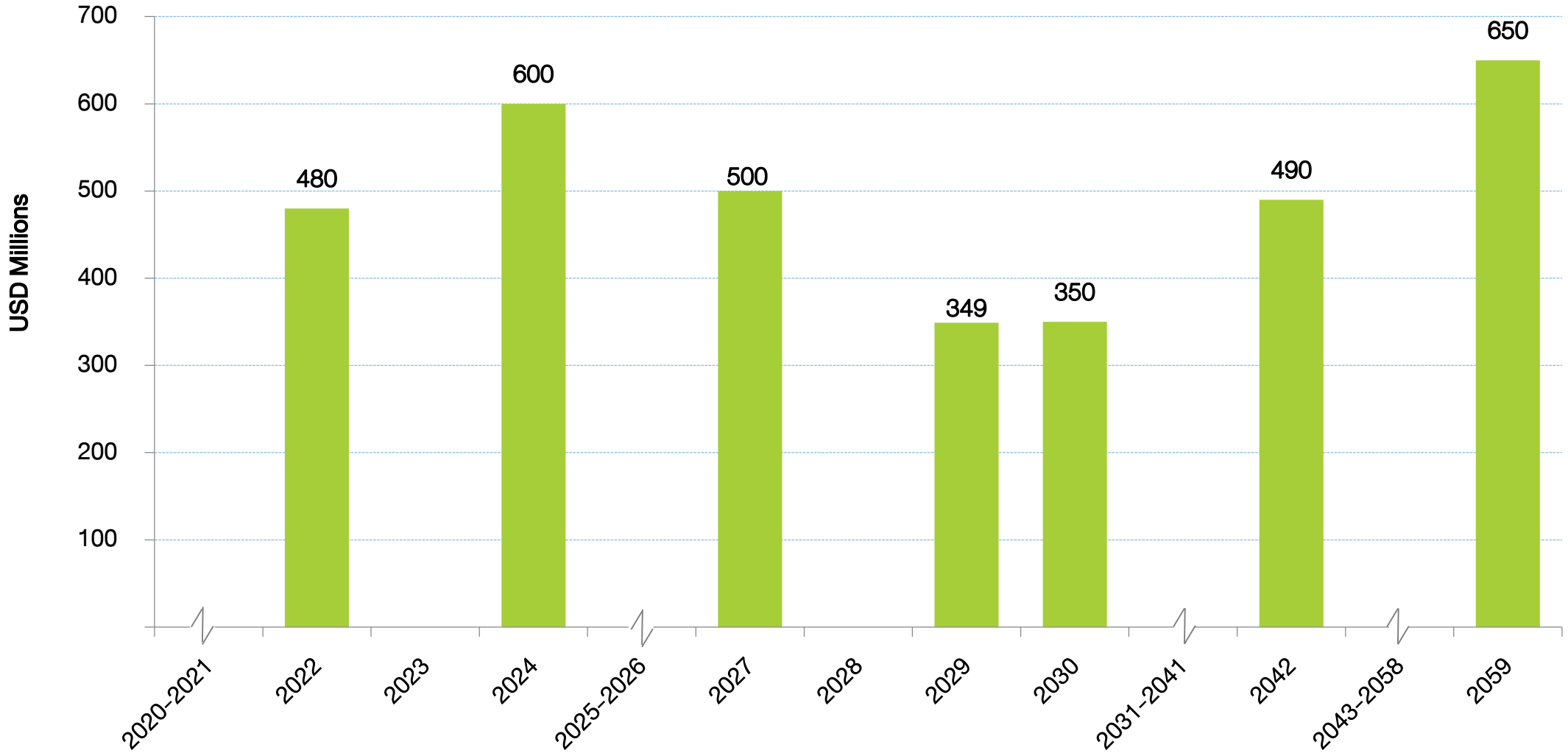
	YE 19	Q3 20
Total Assets (MMUSD)	22,285	21,908
- Cash & cash equivalents * (MMUSD)	3,023	3,491
Total Liabilities (MMUSD)	10,444	10,207
- Interest bearing debt (MMUSD)	3,442	3,874
Equity (MMUSD)	11,841	11,701
Key Financial Ratios		
Total Debt to Equity (X)	0.29	0.33
Net Debt** to Equity (X)	0.04	0.03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

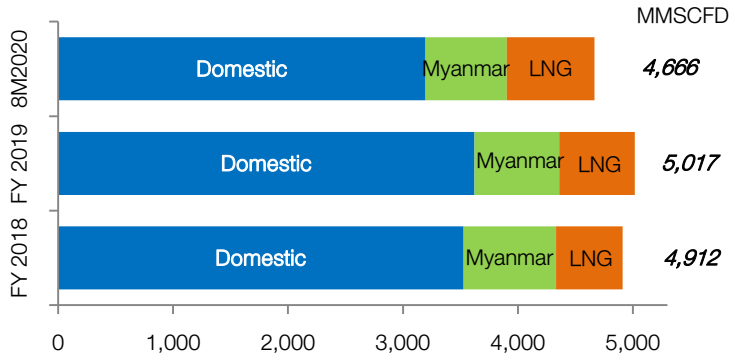
Unit: USD Millions or equivalent after cross currency swap

Thailand Updates

Domestic gas volume suppressed by LNG import; THB fluctuation continues

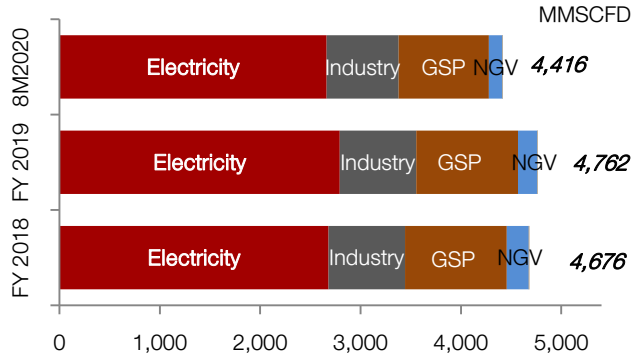
Thailand Energy Overview

Natural Gas Supply



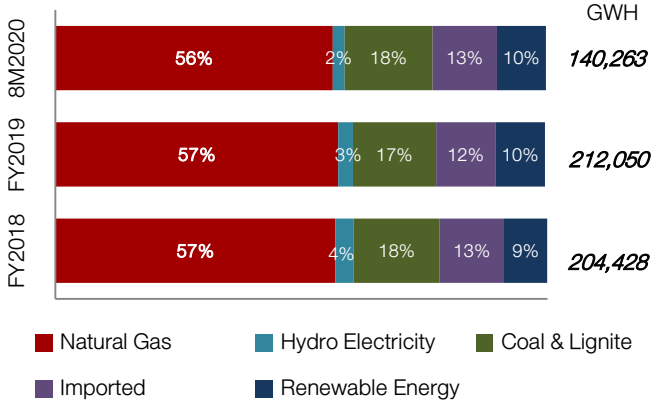
- Lower energy demand from COVID-19 outbreak
- More LNG imports from low LNG spot prices
- Slight decline from Myanmar piped gas imports due to natural decline

Natural Gas Consumption

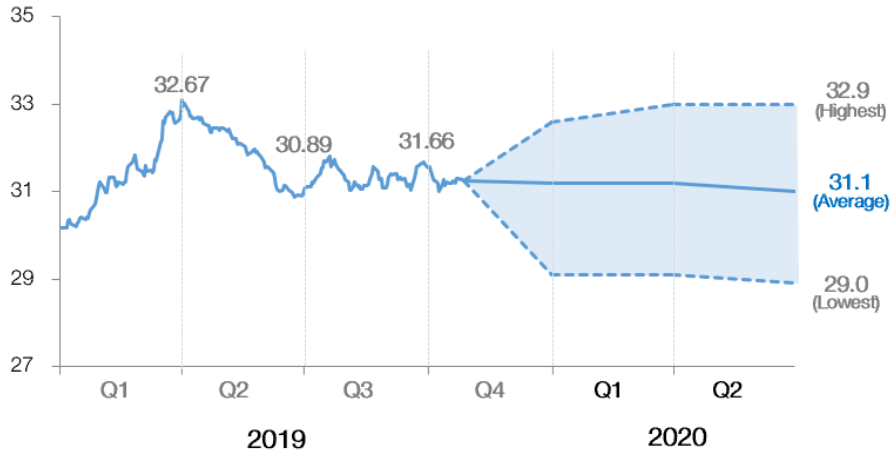


Source: EPPO

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

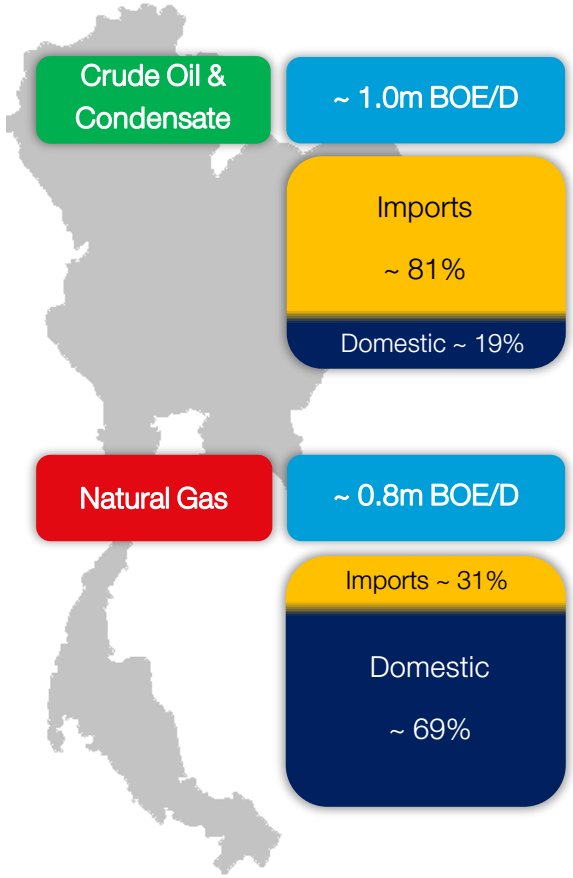
Source: Bank of Thailand, Bloomberg

Forecast based on Bloomberg Consensus as of 27 October 2020

Thailand's Energy Value Chain

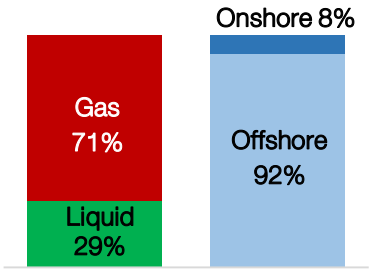
PTTEP contributes almost 1/3 of Thailand's petroleum production

8M2020 Thailand's Oil and Gas Demand

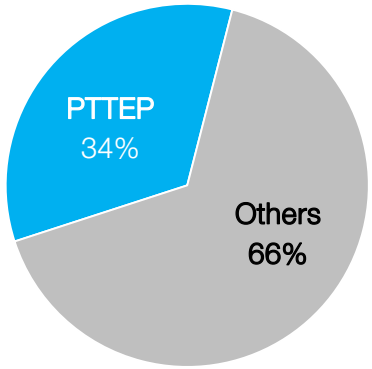


8M2020 Thailand Petroleum Production

% by Petroleum Type and Area



% Production by Company



Midstream

Gas: operated by PTT

- Transmission Pipelines
- Gas Separation Plants

Oil: PTT participates through subsidiaries

- Refineries

Downstream

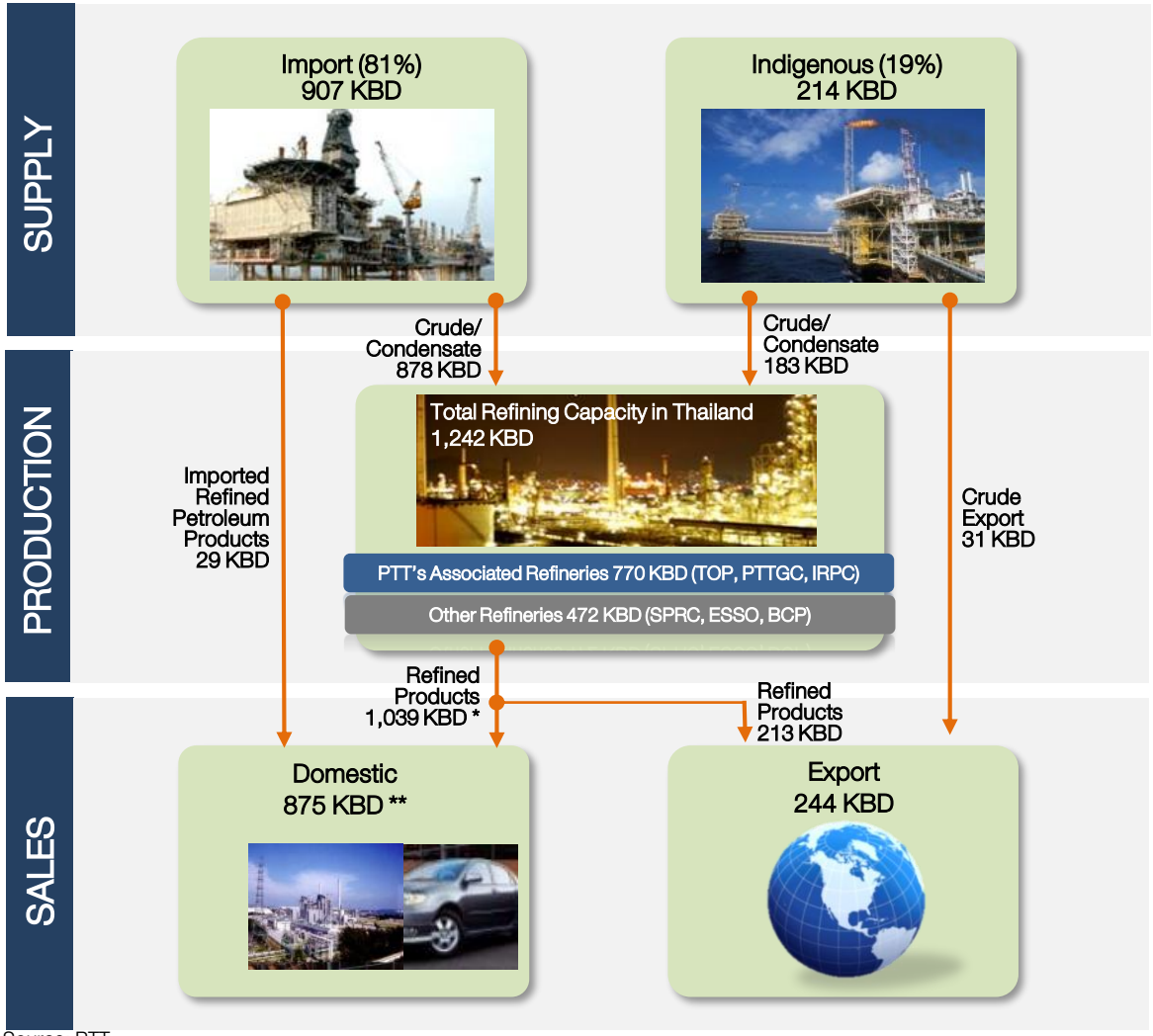
- Petrochemicals
- Oil and gas marketing

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

Thailand's Oil and Gas Balance

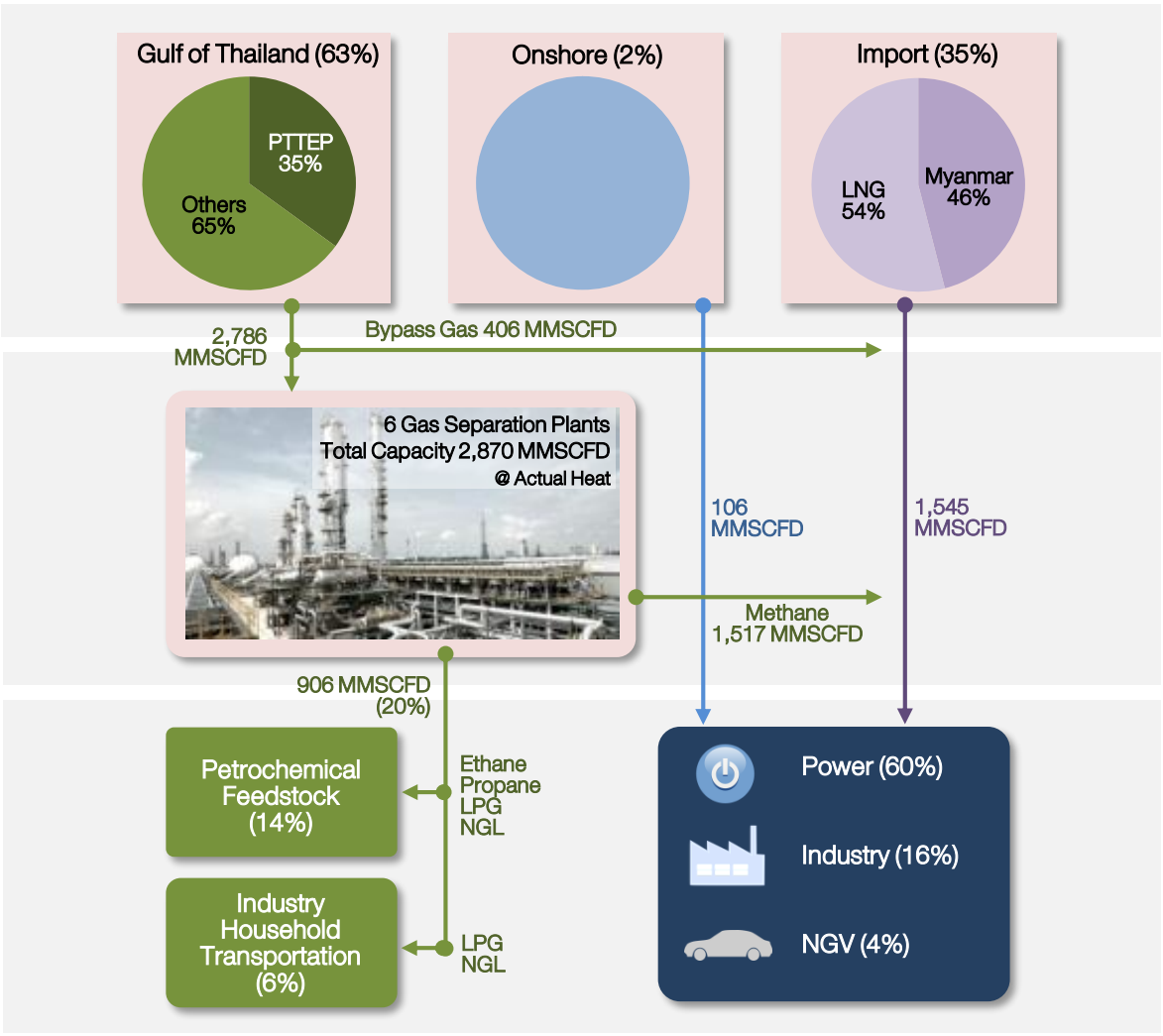
Oil Balance***

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

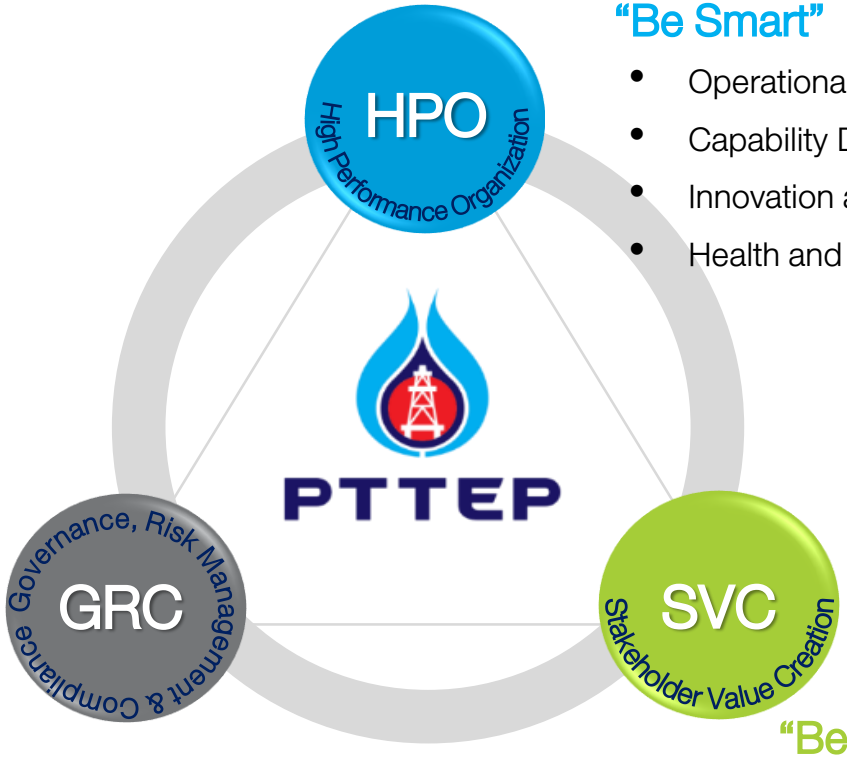
** Not included Inventory

*** Information as of 5M20

**** Information as of 9M20

MMSCFD @ Heating Value 1,000 Btu/ft^3

Driving towards Sustainability



"Be Smart"

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

"Be Good"

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

"Be responsible"

- GHG* Reduction
- Contribution to Society
- Environmental Management

Note: *Greenhouse Gas

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

Legacy Assets

- Sustain sales volume as committed
- Cost Management
- Operation Continuous
- Streamline Cost Structure for efficiency
- Explore full potential in Malaysia and Myanmar
- Exploration

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

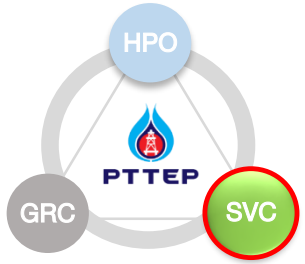
AI AND ROBOTICS VENTURES

Transitioning technology and product builder to Business Builder

Gas to Power

Integrated energy solution and enhancing value of existing assets

Stakeholder Value Creation



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

Governance, Risk Management & Compliance

GRC Baseline Application to:

- Global Operations & Newly acquired assets
- Suppliers & Contractors

How do we ensure GRC?

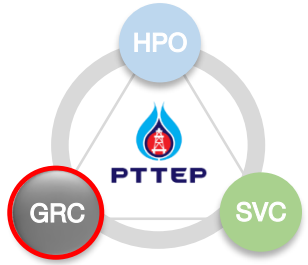
Policy
- Good Corporate Governance and Business Ethics
- Regulations and Policies for operations

Governing Body
- Board of Directors
- Sub-committees e.g. Risk Management Committee, Audit Committee and CG Committee

Awareness
- Policy, plan & process Communication
- Trainings

Control/ Audit
- 3 Lines of Defense
- Control Self-Assessment (CSA)
- External Assessment by independent organizations

Whistle-blowing
- CG Hotline



Anti corruption

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

NO GIFT POLICY

EITI Extractive Industries Transparency Initiative

UN GLOBAL COMPACT

CAC PRIVATE SECTOR COLLECTIVE ACTION AGAINST CORRUPTION

Human rights

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

UN GLOBAL COMPACT

IPIECA

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

FTSE4Good

FTSE4Good Emerging Index 2019

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

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

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

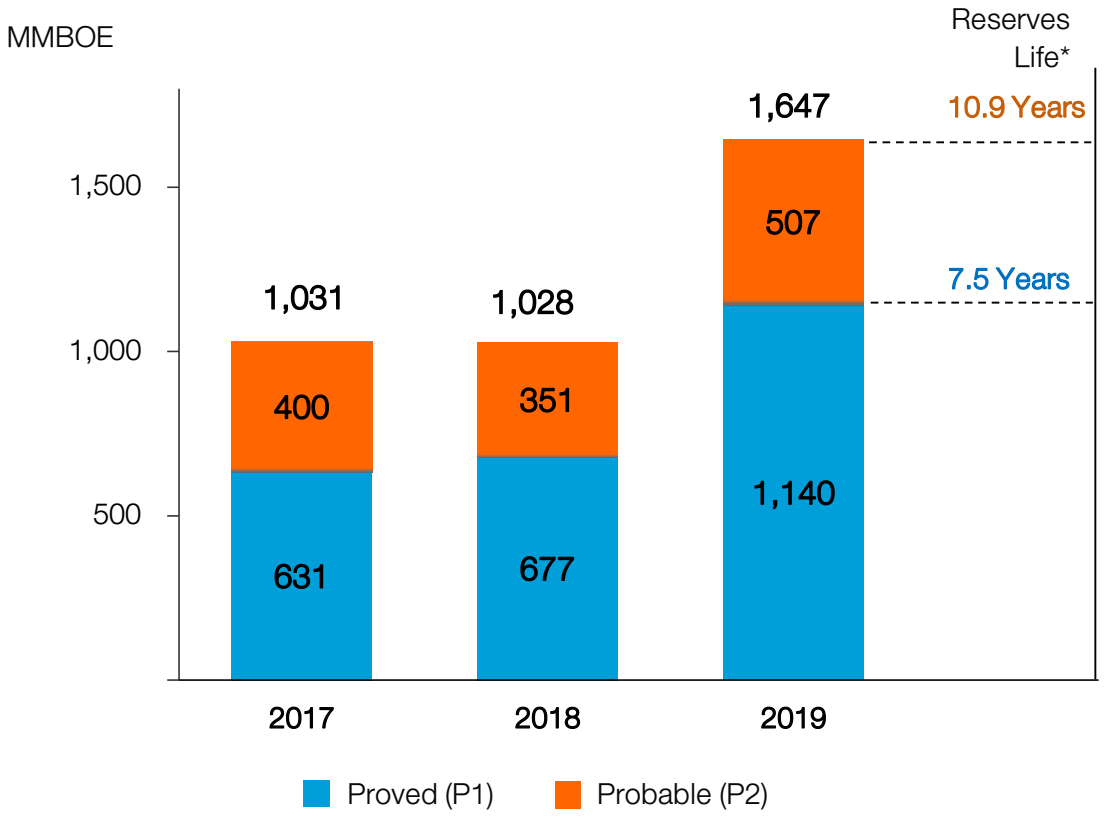
The Excellent Level (G-Gold) of the Green Office Award 2018
The Ministry of Natural Resources and Environment

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)

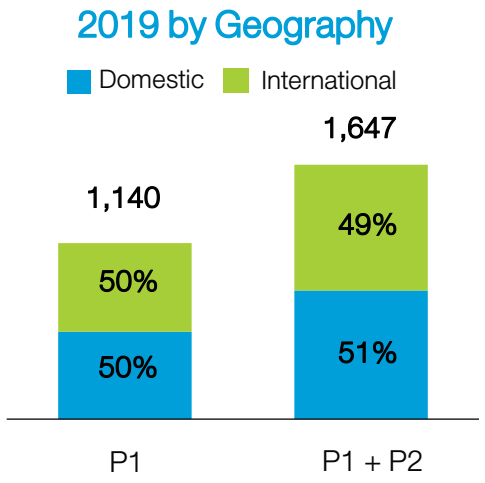
Reserves at the Year-end 2019

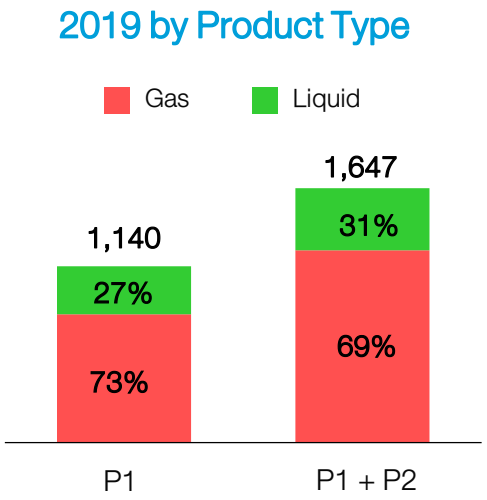
Significantly improved reserve life to over 7 years



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

Diversified international portfolio

Central Asia

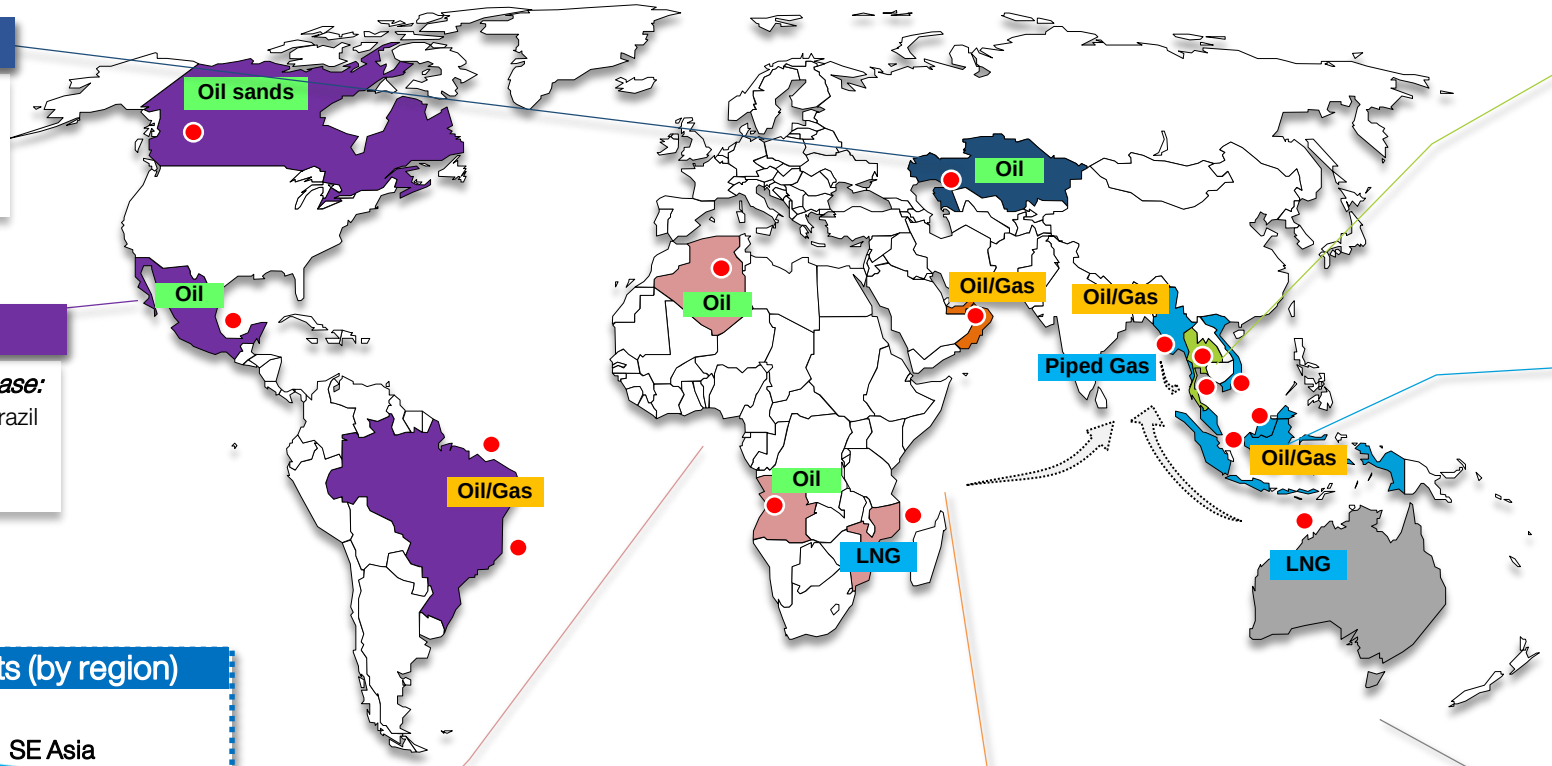
First presence in Kazakhstan:

- 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



Thailand

PTTEP's core production base

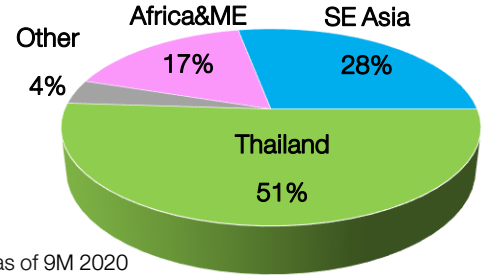
- 70% of total sales volume
- Key producing assets include Bongkot, Arthit, Contract 4 and S1
- Bongkot (G2/61) and Erawan (G1/61) are in transition process to ensure production continuity

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)

Book Value of Assets (by region)



as of 9M 2020

Total Assets USD 21.9 billion

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

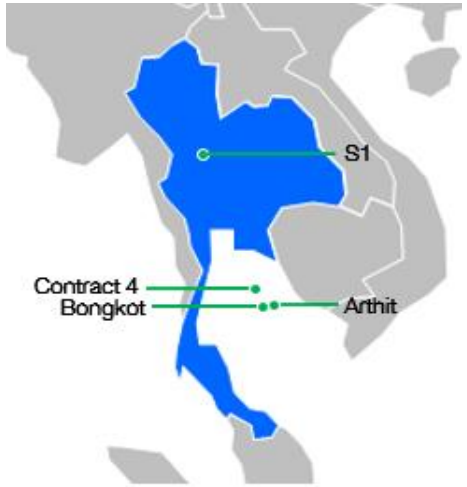
- Sizable undeveloped gas resources in Timor Sea

Information as of 30 September 2020

Thailand, Myanmar and Malaysia

"Coming Home" to maintain strong foundation with full expertise

Thailand



Production / Ramp-up Projects

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)*

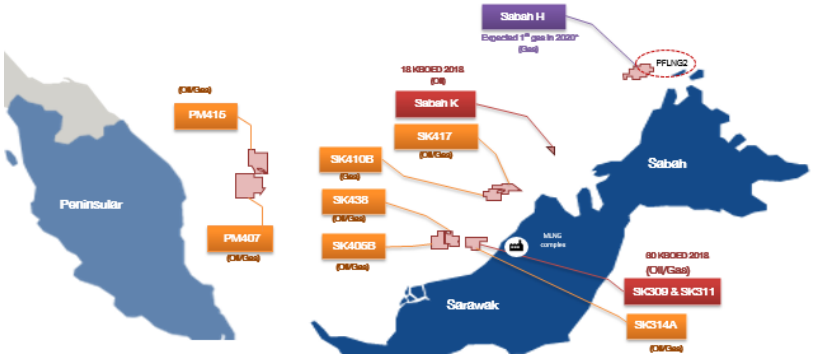
- Average sales rate of 308 MMSCFD for natural gas and 12 KBPD for condensate in 9M2020

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

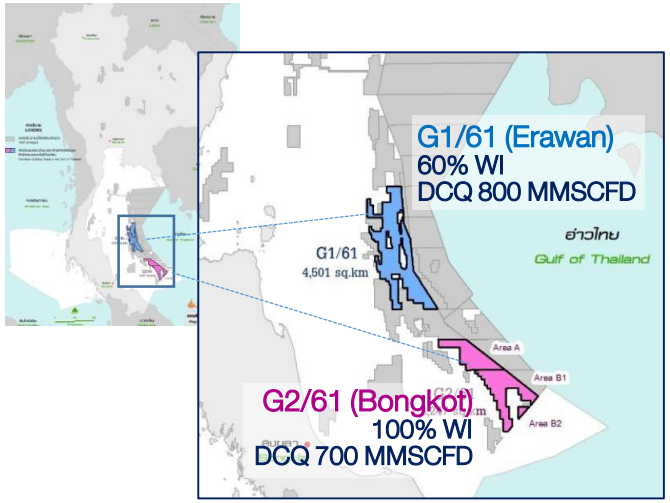
- Evaluating petroleum potentials
- Plan for exploration and appraisal drilling in 2020-2021

** 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*

	Production	Start-up
G1/61	800 MMSCFD	2022
G2/61	700 MMSCFD	2022/2023

Concrete transition plan:

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

Source : TOR

Other South East Asia countries

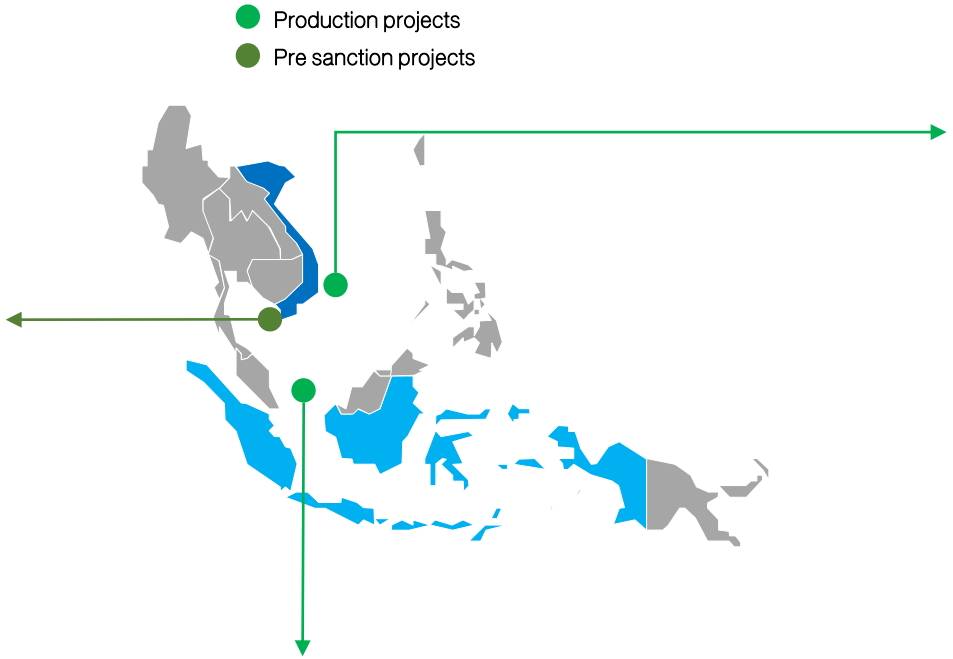
Expanding foothold in the region

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)*

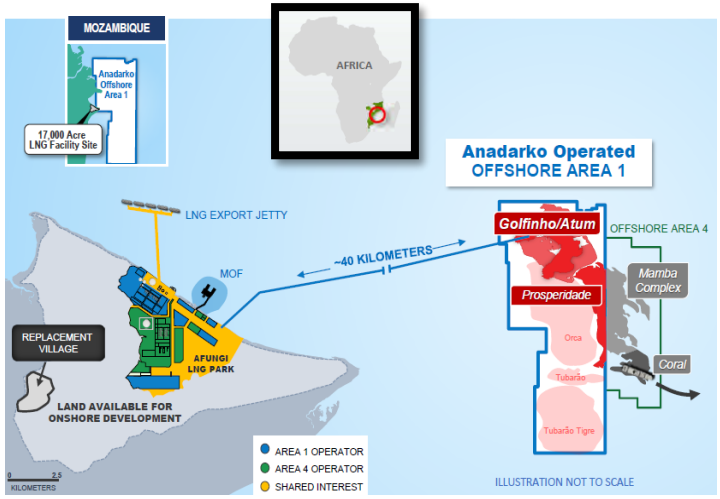
- Average sales volume of crude oil was 13 KBPD in 9M2020
- The project is currently drilling an additional production well to maintain production plateau.

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 mmcfd 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

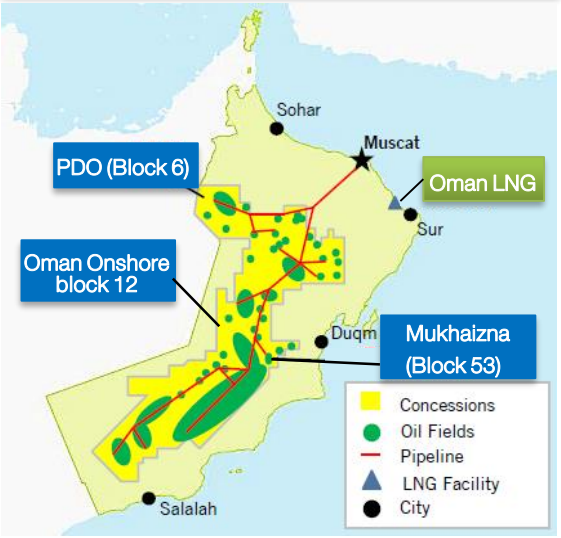
- Project Finance
  (2/3 Project Financed)
- Drilling & Completion
- Onshore Construction and Offshore Installation
- Operation Readiness
- LNG Shipping

1st Cargo *expected 2024*

The Middle East

Access to the largest oil asset in Oman and mega Midstream Complex

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)

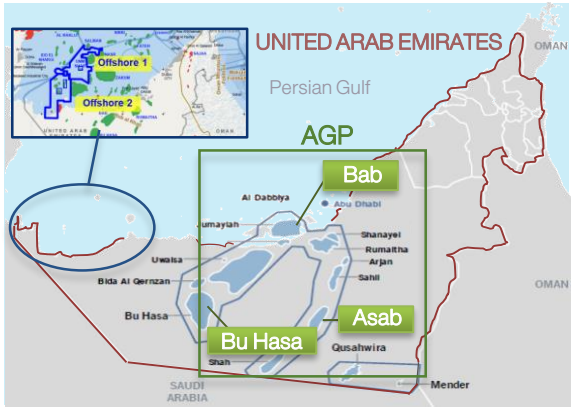
Block 12

- 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

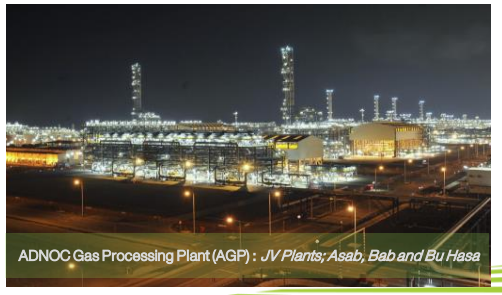


Abu Dhabi Offshore 1 and 2

- 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
- Opreated by ADNOC (68% interest)



ADNOC Gas Processing Plant (AGP) : *JV Plants; Asab, Bab and Bu Hasa*

America: Mexico and Brazil

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

Deep Water Brazil

Barreirinhas AP1

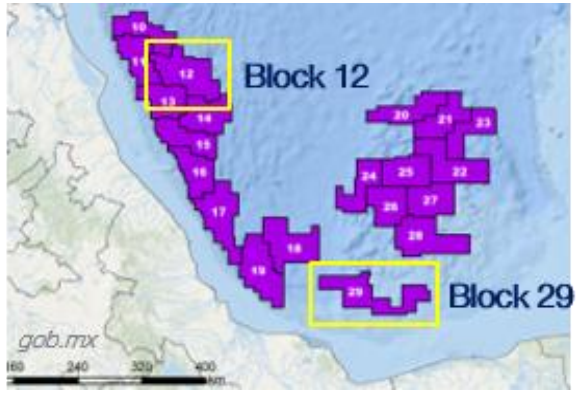
- Farm-in 25% from BG Group in 2014
- Operated by Shell Brasil (65% interest)
- Four offshore exploration blocks: BAR-M-215, BAR-M-217, BAR-M-252 and BAR-M-254

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 Satu (Train 1-3)
Capacity 8.4MTPA
COD Jan 1983

MLNG Tiga (Train 7-8)
Capacity 7.7MTPA
COD Mar 2003

MLNG Train 9
Capacity 3.6MTPA
COD Jan 2017

MLNG Dua (Train 4-6)
Capacity 9.6MTPA
COD May 1995

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)	Petronas 65% JX Nippon 10% PTT Global LNG 10% Sarawak State 10% Sabah State 5%

Key activity in 2020

- 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 information 1/5

	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 16% MOECO 4%	219	10	• Ensure gas deliverability level at DCQ*** • Drill development wells
2	**B6/27**	OP	Production	100%		-	-	• Prepare for decommissioning activities
3	**B8/32 & 9A**	JV	Production	25.001%	Chevron 51.66% MOECO 16.71% KrisEnergy 4.63% Palang Sophon 2%	51	18	• Drill development wells • Perform waterflood activities
4	**Bongkot**	OP	Production	66.6667%	TOTAL 33.3333%	749	22	• Maintained production level as planned • Prepare for decommissioning activities
5	**Contract 3** *(Formerly Unocal III)*	JV	Production	5%	Chevron 71.25% MOECO 23.75%	587	35	• Drill development wells • Prepare for decommissioning activities
6	**Contract 4** *(Formerly Pailin)*	JV	Production	60%	Chevron 35% MOECO 5%	308	12	• Ensure gas deliverability level at DCQ*** • Drill development wells
7	**E5**	JV	Production	20%	ExxonMobil 80%	8	-	• Ensure gas deliverability level at DCQ***
8	**G4/43**	JV	Production	21.375%	Chevron 51% MOECO 21.25% Palang Sophon 6.375%	2	4	• Drill development wells
9	**G4/48**	JV	Production	5%	Chevron 71.25% MOECO 23.75%	7	0.4	• Drill development wells
10	**L53/43 & L54/43**	OP	Production	100%		-	1.1	• Maintain production plateau • Drill development wells
11	**PTTEP1**	OP	Production	100%		-	0.122	• Drill a development well • Maintain production plateau
12	**S1**	OP	Production	100%		7	Crude:30 KBPD LPG: 0.2 KMT/D	• Drill development wells • Enhance oil recovery program includes hydraulic fracturing and artificial lift
13	**Sinphuhorm**	OP	Production	55%	Apico**** 35% ExxonMobil 10%	94	0.284	• 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 information 2/5

	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%		-	-	• Maintain production operation
15	**MTJDA**	JOC	Production	50%	Petronas-Carigali 50%	266	7.7	• 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%			• 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%				• 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	• 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 31.24% Chevron 28.26% MOGE 15%	775	-	• Drill exploration and development wells • Ensure gas deliverability level at DCQ***
3	**Yetagun**	JV	Production	19.3178%	Petronas-Carigali 30.00140% MOGE 20.4541% Nippon Oil 19.3178% PC Myanmar (Hong Kong) 10.90878%	59	1.5	• 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	-	• Ensure gas deliverability level at DCQ*** • Drill exploration and development wells • Perform 3D seismic activities
5	**Myanmar M3**	OP	Exploration	80%	MOECO 20%			• FEED/ Subsurface/ Surface studies • Negotiate and finalize GSA
6	**Myanmar M11**	OP	Exploration	100%				• Perform 3D seismic activities • Block relinquish
7	**Myanmar MD-7**	OP	Exploration	50%	TOTAL 50%			• 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 information 3/5

	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 10% MOECO 10% WinPreciousResources 2.5%			• G&G studies • Complete site reinstatement
9	**Vietnam 9-2**	JOC	Production	25%	PetroVietnam 50% SOCO 25%	14	4.0	• Maintain production level • Perform well intervention program • Development drilling study support
10	**Vietnam 16-1**	JOC	Production	28.5%	PetroVietnam 41% SOCO 28.5% OPECO 2%	6	13	• Maintain production level • Drill development wells
11	**Vietnam B & 48/95**	JV	Exploration	8.5%	PVN 65.88% MOECO 25.62%			• 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 73.4% MOECO 19.6%			• 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 28.67% KUFPEC 33.33% Petronas 15% Pertamina 11.5%	208	1.6	• FEED study: Start Anoa & Gajah Baru compressor project
Middle East								
1	**Abu Dhabi Offshore 1**	JV	Exploration	30%	Eni Abu Dhabi 70%			• Reprocess Seismic • G&G studies
2	**Abu Dhabi Offshore 2**	JV	Exploration	30%	Eni Abu Dhabi 70%			• Drill an exploration well • Perform 3D seismic activities
3	**PDO (Block 6)**	JOC	Production	2%	Government of Oman 60% Shell 34% Total 4%		521	• A part of Partex acquisition which was completed on 4 November 2019 • Maintain production plateau
4	**Mukhaizna**	JV	Production	1%	Occidental 47% OOCEP 20% Indian Oil 17% Mubadala 15%		79	• 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%			• 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

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** Sales volume stated at 100% basis

Project information 4/5

	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)				• 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%			• 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 40% Sonatrach 25%	-	17 *(net entitlement)*	• Drill production wells
4	**Algeria Hassi Bir Rekaiz**	OP	Development	24.5%	CNOOC 24.5% Sonatrach 51%			• Drilling development wells • FEED study • Continue Improvement oil study (IOR)
5	**Mariana Oil Sands**	OP	Exploration	100%				• Assess appropriated development approach
6	**Barreirinhas AP1**	JV	Exploration	25%	Shell Brasil 65% Mitsui E&P Brasil 10%			• G&G studies
7	**Brazil BM-ES-23**	JV	Exploration	20%	Petrobras 65% INPEX 15%			• G&G studies
8	**Mexico block 12 (2.4)**	JV	Exploration	20%	PC Carigali Mexico 60% Ophir Mexico 20%			• EIA and G&G study to access petroleum potential
9	**Mexico block 29 (2.4)**	JV	Exploration	16.67%	Repsol Mexico 30% PC Carigali Mexico 28.33% Wintershal DEA 25%			• 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)

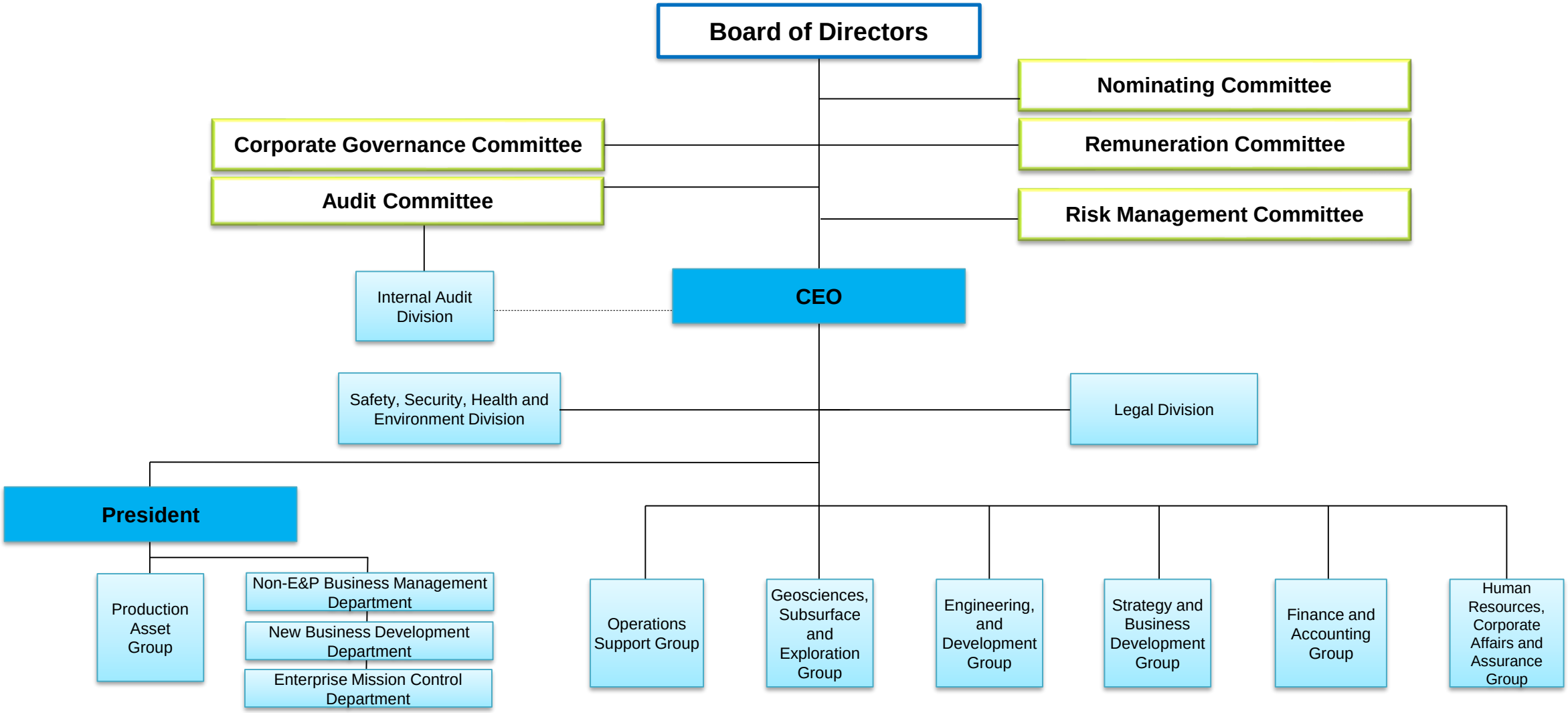
Project information 5/5

	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 30% Sonangol 30% SSI 27.5% Acrep 5% Falcon Oil 5%			• 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	• A part of Partex acquisition which was completed on 4 November 2019 • Maintain production plateau
12	**Dunga**	JV	Production	20%	Total* 60% OOCEP 20%	2	12	• 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 51% Shell 30% Total 5.54% Korea LNG 5% Mitsubishi 2.77% Mitsui 2.77% Itochu 0.92%			• A part of Partex acquisition which was completed on 4 November 2019
2	**ADNOC Gas Processing (AGP)**	JV	On line	2%	ADNOC 68% Shell 15% Total 15%			• 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

Supplementary Index : Ratio & Formula

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