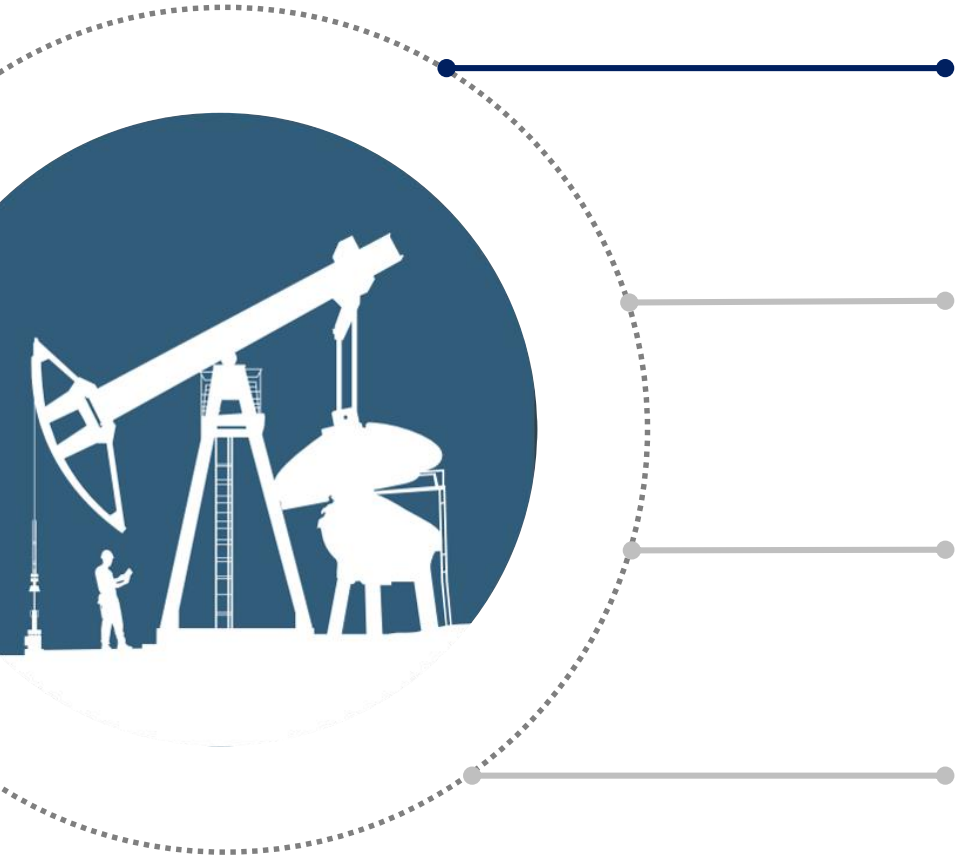


Investor Presentation

Thailand Conference, J.P. Morgan Asia Pacific
Bangkok
17 January 2019





Company Overview

Strategy and Growth

Financial Performance

Investment Plan

PTTEP: the E&P Flagship of PTT Group

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



As PTT's Upstream Flagship



Government of
Thailand

63.3%¹



Thailand's national energy company

65.3%²



Credit ratings equivalent to parent and country

S&P

Moody's

TRIS

BBB+

Baa1

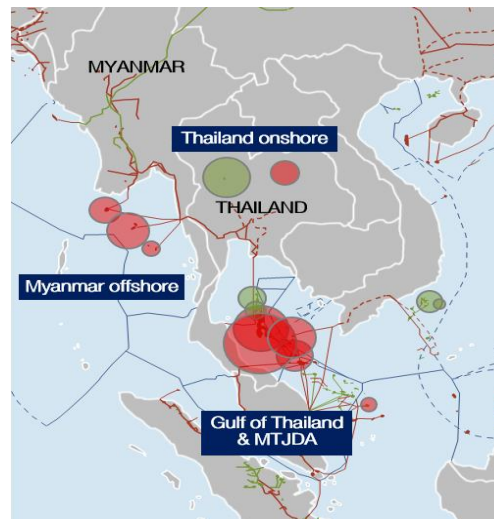
AAA

Largest oil and gas producer in
Thailand and Myanmar

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

Opportunities to expand into regional investments

PTTEP's operations in SEA



○ Approx. 20 KBOED
of net sales volume

● Gas-
weighted

● Oil-
weighted

97%

of PTTEP's total
sales volume

+99%

Reliability of plants
and field facilities*

84%

of PTTEP's sales volume
sold to PTT

13 USD/
BOE

Average regional
cash cost

* of PTTEP-operated projects in Gulf of Thailand, excl. planned shutdown
All figures are as of 9M2018

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 12 October 2018

2. Ownership as of 9 August 2018

Recent Key Achievement

Robust all round 2018 performance



Performance Achievement

Operation

On-track sales volume target

300+ KBOED*

Competitive unit cost

~31 \$/BOE*

Top quartile safety performance

~0.1 LTIF

Secured GoT position and new Exploration prospects

Financials

Healthy margin and liquidity*

70-75%

EBITDA Margin

\$3.5+ Bn

Cash on hand

\$3+ Bn

Operating Cash Flow

<0.2x

Gearing ratio

Consistent Dividend

1.75 THB/Share 1H18 (39% Payout)

* Base on 2018 Closing forecast



Portfolio Highlights

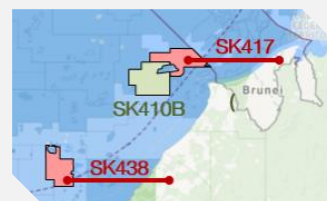
Executed “Coming-home” and “Strategic Alliance” Strategies

Consolidated Thailand Gas Supply



- Completed ~22% stake acquisition in Bongkot from Shell
- Successful Bidder of Bongkot and Erawan

Expanded Exploration Portfolio



2 Shallow-water blocks in Malaysia
as an operator

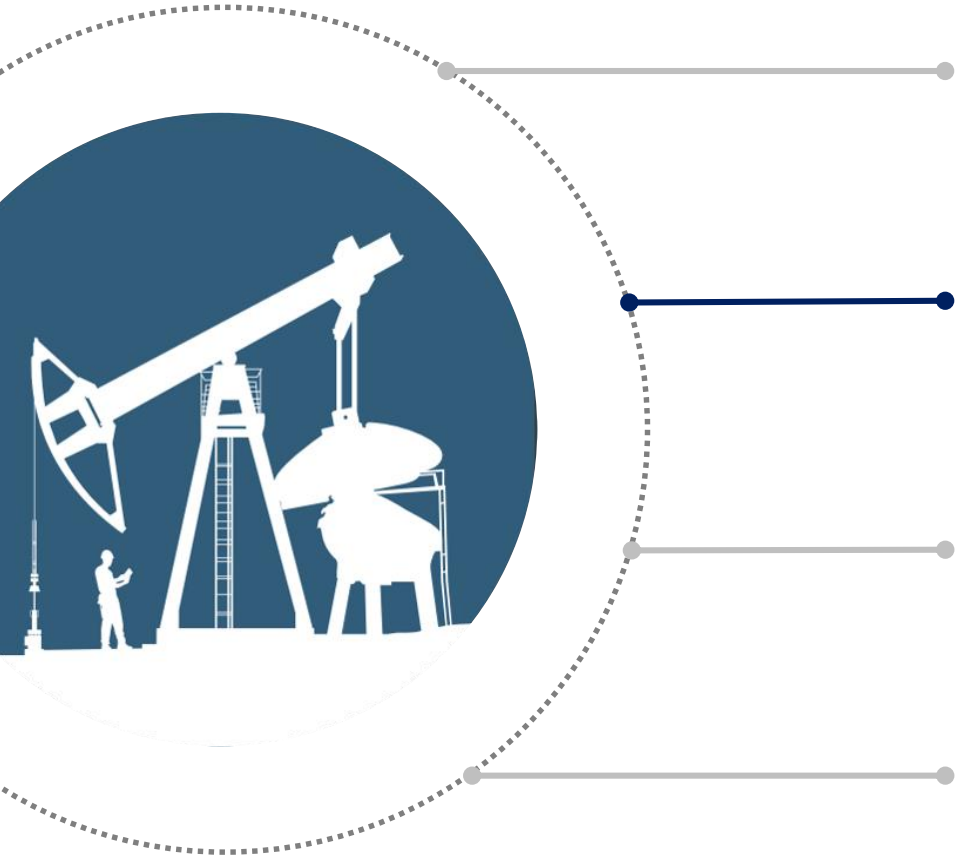


2 Deepwater blocks in Mexico
with prudent operators

Reshaped non-core asset



Divestment of Montara Oil Field
in Australia



Company Overview

Strategy and Growth

Financial Performance

Investment Plan

Investment Strategy

Strengthen E&P portfolio and diversify business opportunities



E&P
remains our core priority

"Coming-home" Strategy

- **Ensure** continuity for Bongkot and Erawan transition
- **Sustain** production plateau from legacy assets
- **Accelerate** resources discovery in Myanmar and Malaysia

Together with...

- **Increase** reserves life through FID of pre-sanctioned projects and M&A



Non E&P
ensures long-term sustainability

Materialize energy value chain

Generate revenue and deliver synergy
from In-house Technologies

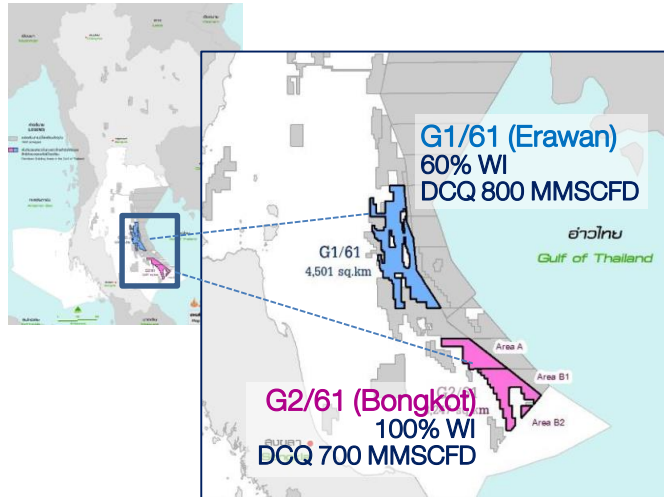
Deliver investment plan
in renewable energy



E&P: Thailand Champion in Domestic Gas Supply

Execute Bongkot and Erawan transition plan

To supply 2/3 of domestic gas production starting from 2022 onwards.....



Growing production and reserves profile

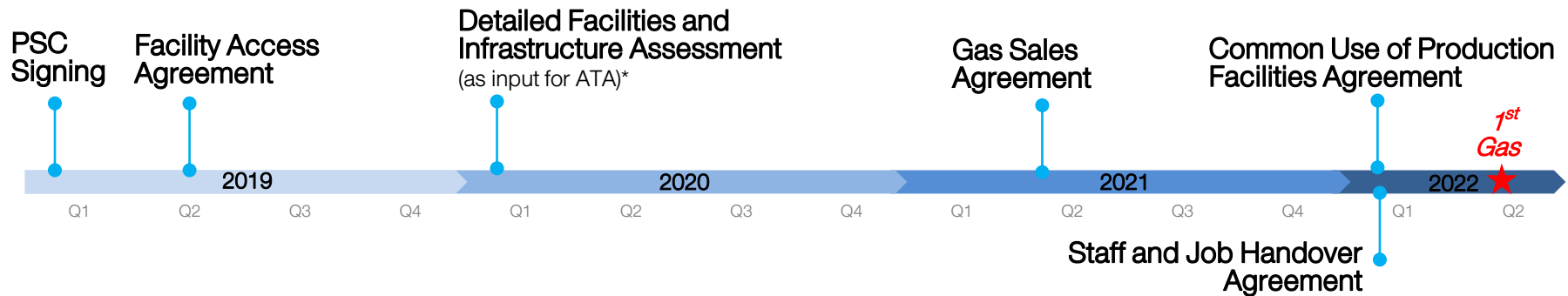
- Substantial volume boost for 10 years and beyond
- Immediate remarkable reserves addition
- Minimal risk in production profile



Generating strong cash flow

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

Concrete transition plan as an operator of G1/61 (Erawan) under PSC



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

Source : TOR

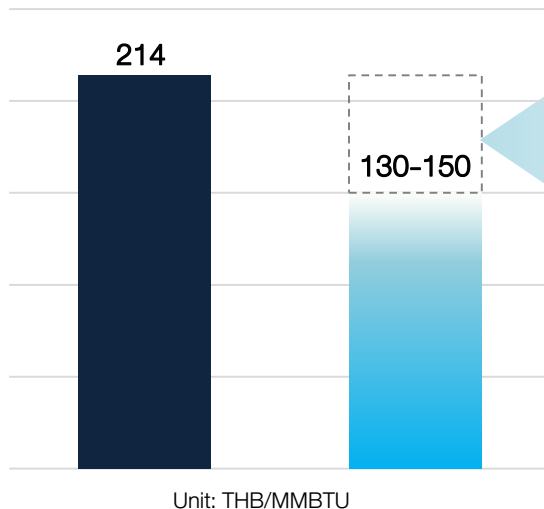
E&P: Thailand Champion in Domestic Gas Supply

Achievable cost optimization to sustain target return

With new gas price, we can achieve target IRR

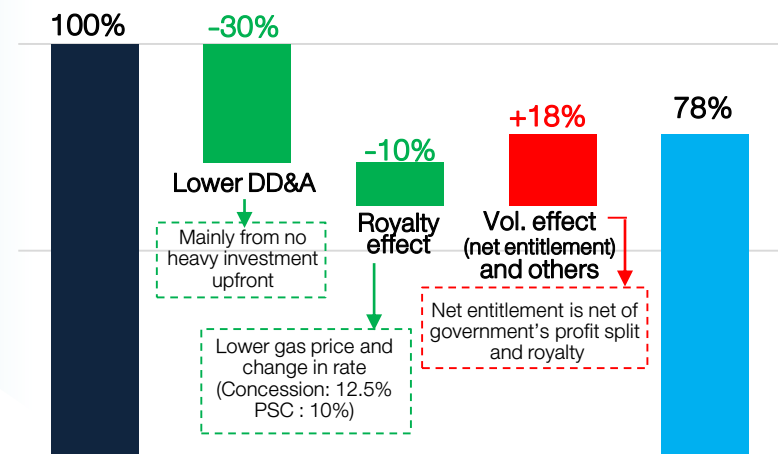
Gas price

Under Price Constant of 116 THB/MMBTU,
Gas price 130-150 THB/MMBTU (Dubai 60-80 \$/BBL)



Cost optimization

Major processing facilities already in-place. Unit cost lowered by 22% through cost synergy and optimization



Enablers of cost synergy and optimization through economy of scale and technology improvement



Wellhead Platform

- Lean design standardization
- Volume bundling & contracting strategy
- Platform topside and facility reuse



Drilling & Well

- Implement factory drilling
- Utilize drilling rig with GoT-fitted specifications
- Optimize drilling rig & service contracts across GoT



Logistics

- Synergy and optimize marine and aviation fleets across GoT
- Procurement strategy



Decommissioning

- Innovative solutions / technologies
- Economy of Scales

E&P: Continue to Grow Core Business

Production and Reserves accretion remains the top priority

Affirm FID Timeline

Mozambique Rovuma Offshore Area 1

"Stronger path towards FID by 1H2019"

Production

12 MTPA

Start-up

2024

Completed

- ✓ Commenced Legal & Contractual Framework approved and resettlement
- ✓ Sales and Purchase Agreement (SPA) signed with EDF (1.2 MTPA) and Tohuku (0.28 MTPA)
- ✓ Offshore Contractors Selected

On-going

- ⌚ Project finance: To secure 2/3 leverage
- ⌚ To convert non-binding HOAs to meet target SPAs of 8-9 MTPA

Southwest Vietnam

Ubon (Contract 4)

Algeria HBR

Production

490 MMSCFD

25-30 KBPD

50-60 KBPD

Start-up

End of 2022

2023

2024

Boost up Exploration Activities

Grow the foothold

Strengthen backyard

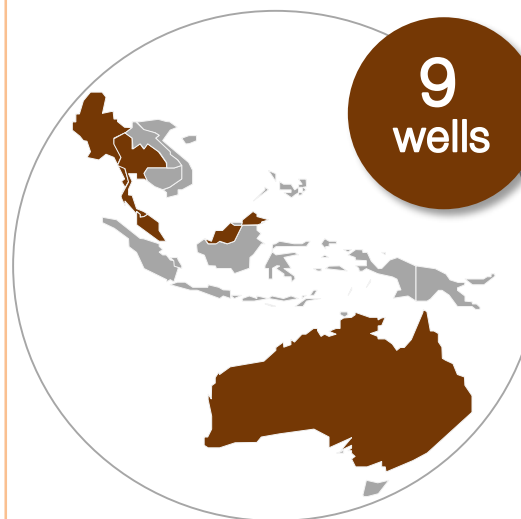
Joint Venture

Focus drilling activities in Myanmar

Establish "Cluster Model" in Malaysia

Expand into prolific areas e.g. Mexico

Key activities in 2019 focused **Myanmar and Malaysia** to accelerate resources discovery



5 wells in Myanmar

3 wells in Malaysia

1 well in Australia

And also, other exploration activities including

- FEED study in Myanmar and Australia
- Site preparation in Myanmar and Malaysia

Execute M&A Deals



Geographical

SEA, Middle East and other prolific areas

Target

Focus on producing or near-producing

Size

500 – 1,000 MMUSD

Non E&P: Explore New Business Opportunities

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



Pursue New Line of Business:



Gas Value Chain
G2P and LNG



In-House Technology
AI and Robotics



Renewable Energy

Gas to Power (G2P) in Myanmar

“Integrated Energy Solution”



E&P

+



Pipeline

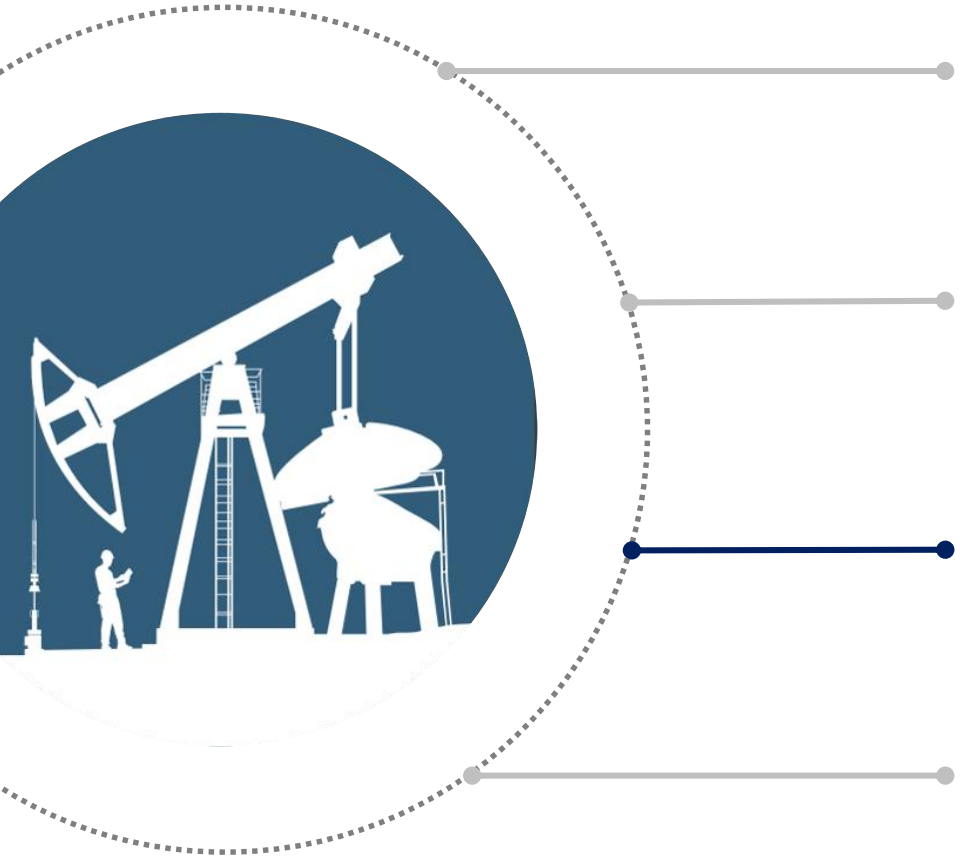
+



Power Plant



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



Company Overview

Strategy and Growth

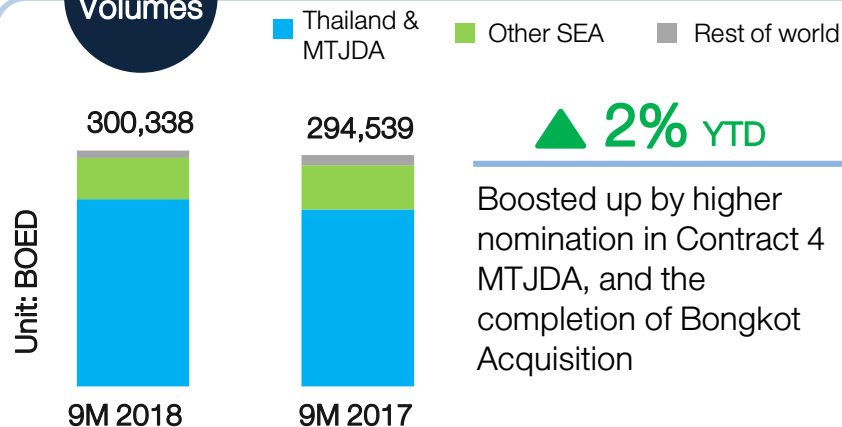
Financial Performance

Investment Plan

Financial Performance Key Drivers

Generated solid operating cash flow 9M2018 driven by strong core performance

Sale Volumes



Average Selling Price

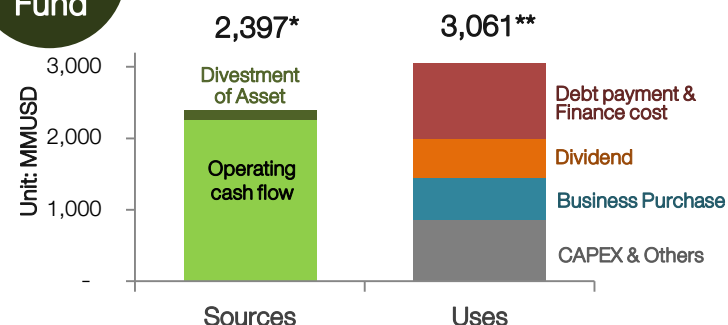
	9M 2018	9M 2017	
Gas (\$/MMBTU)	6.24	5.54	▲ 21% YTD
Liquid (\$/BBL)	67.85	49.87	
Weighted Avg. (\$/BOE)	46.25	38.29	
Avg. Dubai (\$/BBL)	70.10	51.06	
Avg. HSFO (\$/BBL) (High Sulphur Fuel Oil)	65.15	47.79	
Volume Mix (Gas : Liquid)	71:29	70:30	Better global oil price led to improved ASP

Unit Cost

Unit : \$/BOE	9M 2018	9M 2017	
Cash cost	14.64	13.25	▲ 10% YTD
Non-Cash cost	16.64	15.11	
Unit cost	31.28*	28.36	

Driven by higher royalties and DD&A from Bongkot acquisition and more completed asset in S1

Sources & Uses of Fund



73% EBITDA Margin

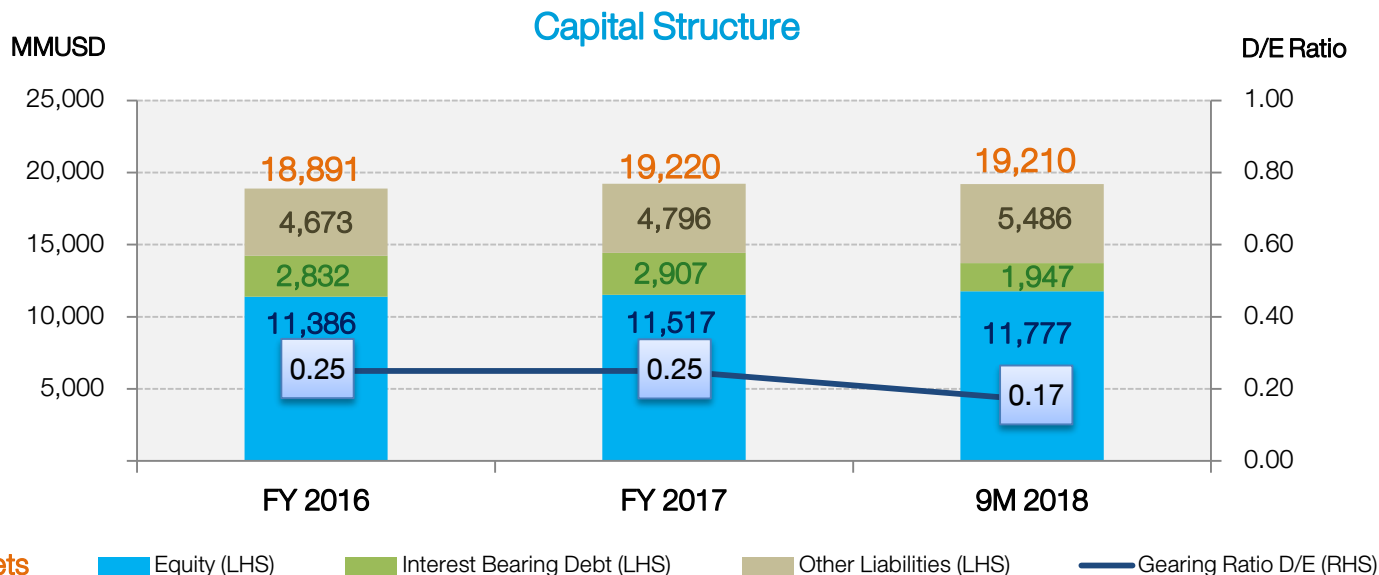
Maintain strong OCF and sustain EBITDA Margin level

Note: * Exclude costs related to new business, if include, unit cost for 9M 2018 will be 31.35\$/BOE

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

Financial Position

Healthy balance sheet with low gearing ratio

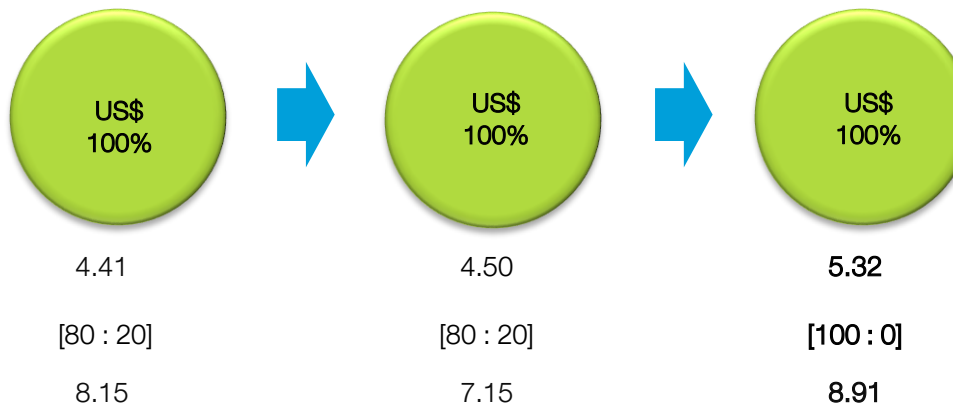


Debt Profile*

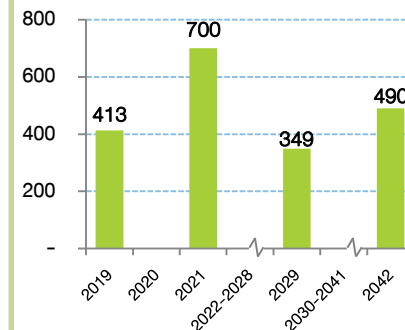
Weighted Average
Cost of Debt* (%)

[Fixed : Floating]

Average Loan Life* (Years)



Debt Maturity Profile* (as of end of September 2018)



Unit: USD Millions or equivalent after cross currency swap

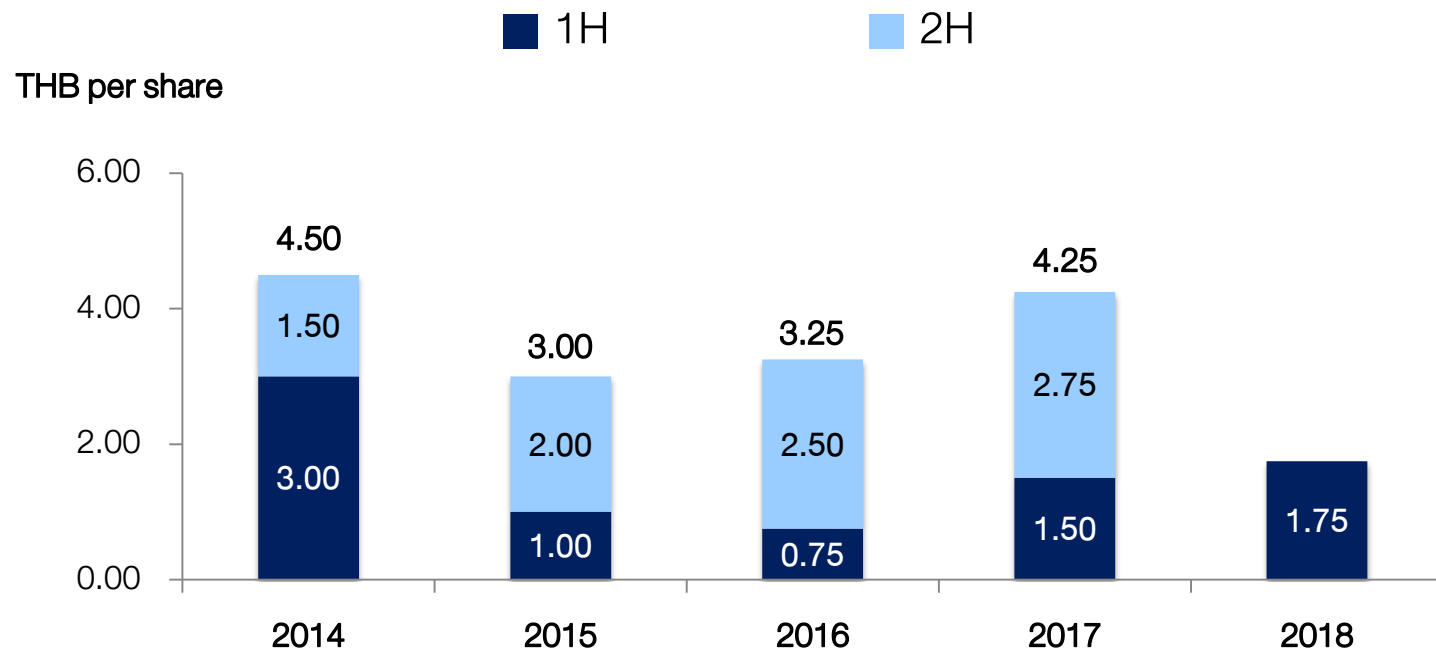
Remark: * Excludes Hybrid bonds

Dividends

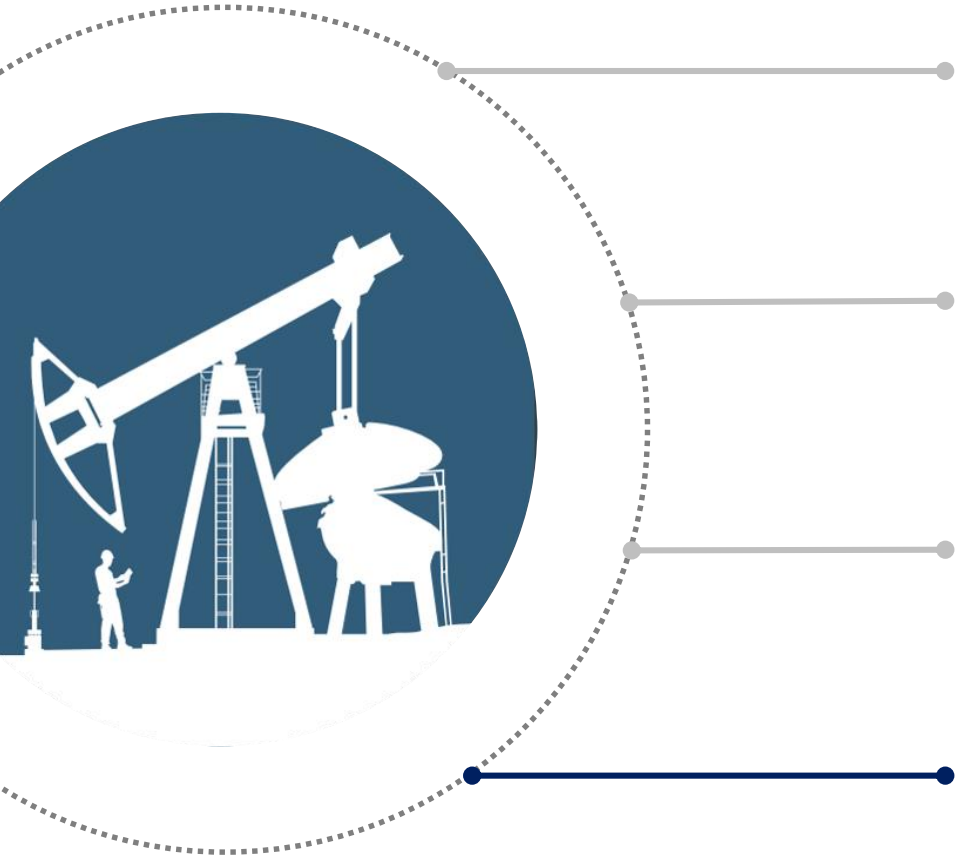
Demonstrating our dividend commitment to shareholders



Dividend Payment History (Policy : No Less Than 30% of Net Income)



Payout Ratio (%)	82	N/A	98	90	39
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Company Overview

Strategy and Growth

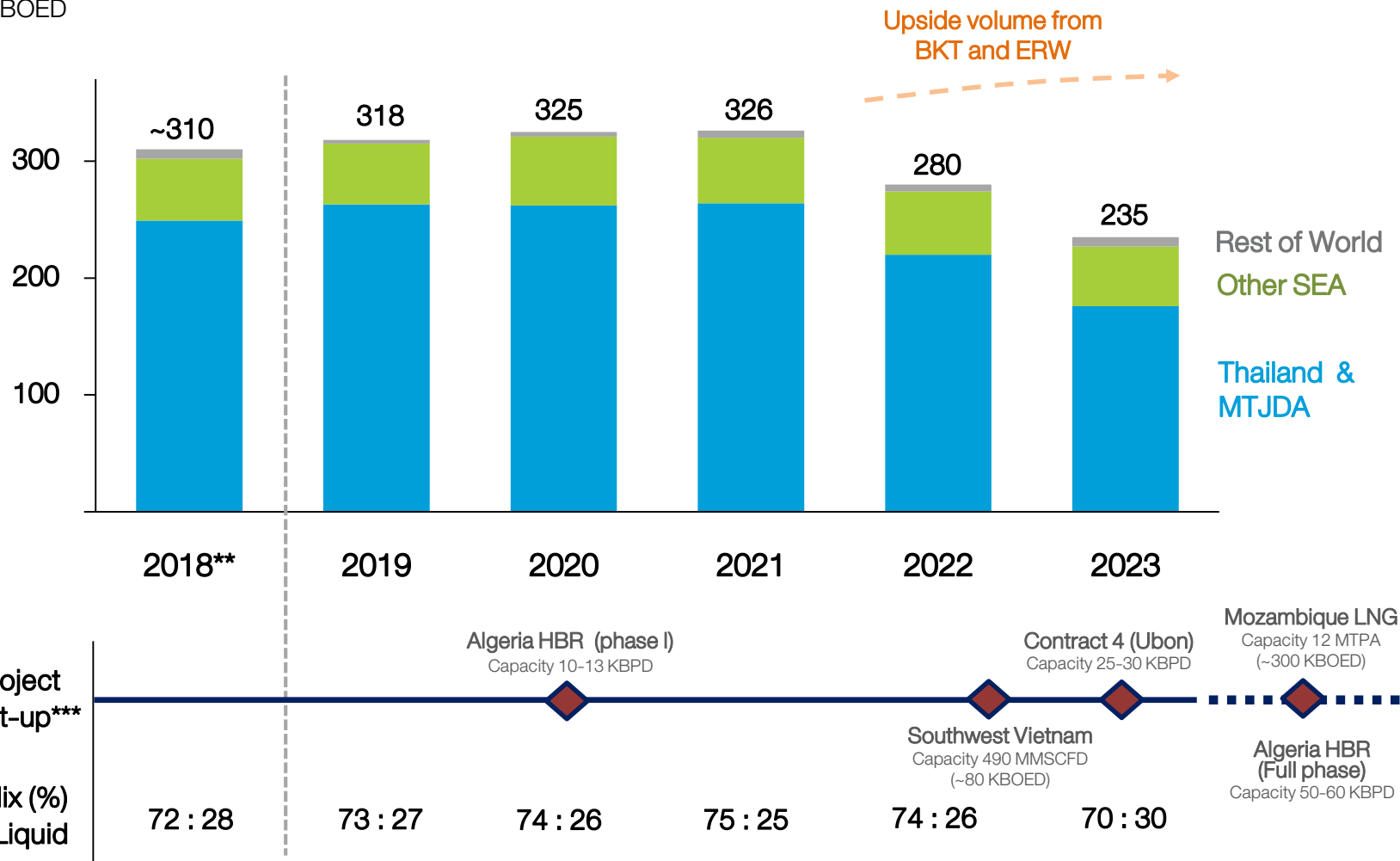
Financial Performance

Investment Plan

Target Sales Volume*

Maximize volume from legacy assets with substantial upside from BKT and ERW after 2022

Unit : KBOED



Note: * Numbers shown exclude upside from result of the bidding in GoT

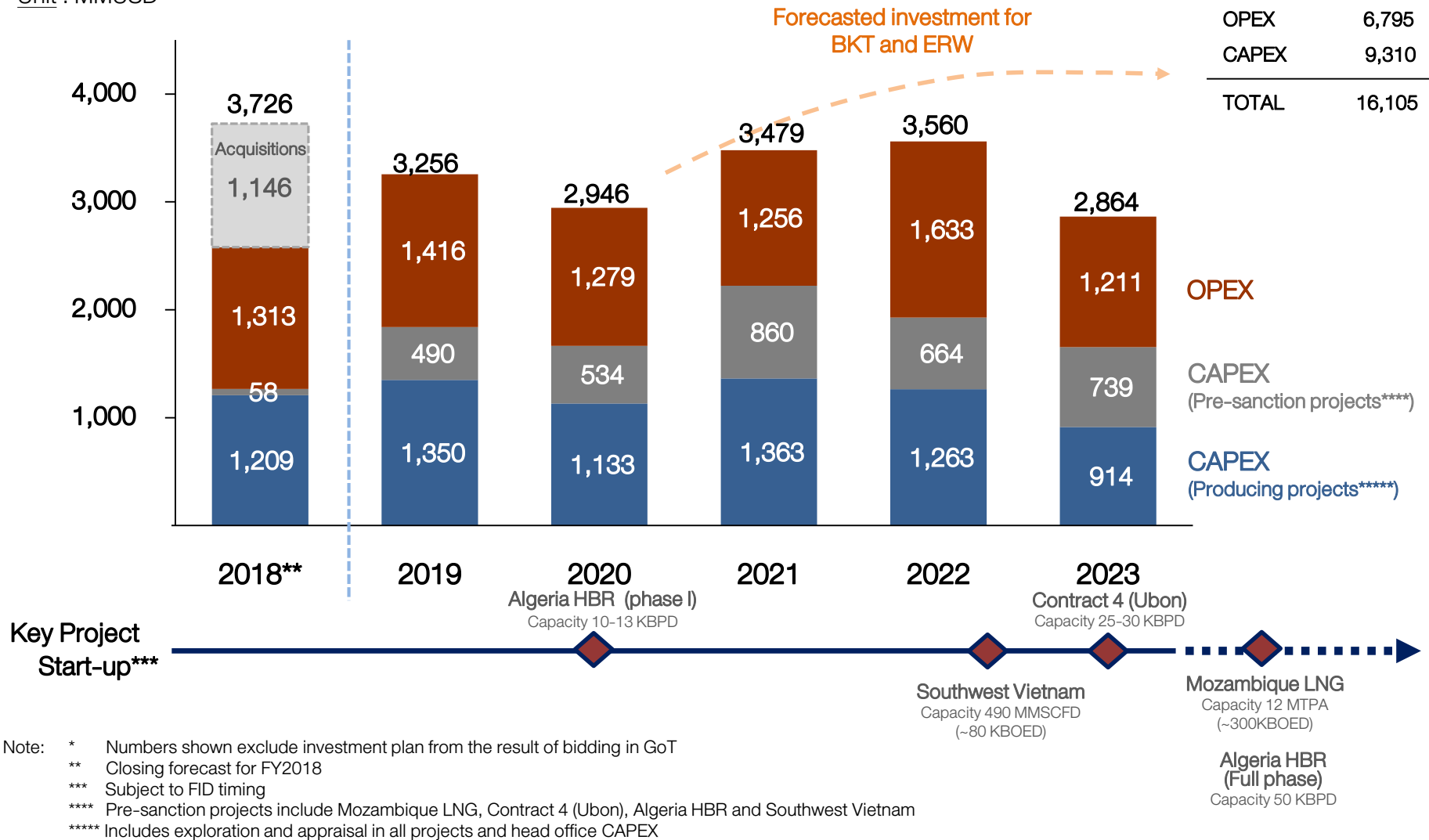
** Closing forecast for FY2018

*** Subject to FID timing

Investment Plan (CAPEX and OPEX)*

Prioritize investment to deliver volume target

Unit : MMUSD



Key Takeaways

Maximizing value through solid growth platforms

Strengthen fundamental

- Uplift sales volume through efficiency improvement
- Sustain competitive cost structure
- Maintain healthy margin

Focus on production and reserves accretion

- Implement series of portfolio rationalization
- Push forward FID of key pre-development projects
- Expand exploration portfolio and M&A execution in focus areas

Ensure long-term sustainability

- Collaborate with PTT for LNG value chain investments
- Diversify through new business opportunities

Solid balance sheet to support growth

- Maintain concrete capital structure with \$3.5+ Bn cash on hand
- Retain consistent dividend payments to shareholders



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



<http://www.pttep.com>



IR@pttep.com



+66 2 537 4000



Energy Partner of Choice



Summary of Key Terms from Bidding Results	21
Q3 2018 Financial Results	22-24
Sustainability Development	25
Thailand Energy Updates	26-28
Reserves and Resources	29
Key Project Highlights by Region	30-35
Project Details	36-38
Organization Structure	39
Ratio and Formula	40

Summary of Terms from Bidding Result of Bongkot and Erawan and PSC Model

Price Formula

Pricing Formula: $Pr_{(y)} = P_c \times M_{(y)} \times \left(a \frac{PPI_{(y)}}{PPI} + \frac{I_{(y)}}{I} \left\{ b \frac{OM_{(y)}}{OM} + c \frac{DB_{(y)}}{DB} + d \right\} \right)$

$DB_{(y)} < 52$	$M = 0.91 + 0.11 \frac{DB_y}{52}$
$52 \leq DB_{(y)} < 100$	$M = 1.02 - 0.15 \frac{DB_y - 52}{48}$
$DB_{(y)} > 100$	$M = 0.22 + 6.44 \times \frac{1}{\sqrt{DB_y}}$

Whereas:

Pr : Gas Price
Pc : Price Constant
I : Exchange rate
PPI : Producer Price Index
OM: PPI for Oil Machinery and Tools
DB: Dubai oil price

Base year numbers (2016): PPI = 101.4167 I = 35.3 THB/USD OM = 214.88 DB = 41.27\$/BBL

$Pr_{(y)} = 116 \times M_{(y)} \times \left(0.25 \frac{PPI_{(y)}}{101.4167} + \frac{I_{(y)}}{35.3} \left\{ 0.3 \frac{OM_{(y)}}{214.88} + 0.4 \frac{DB_{(y)}}{41.27} + 0.05 \right\} \right)$

Terms

	G2/61 (Bongkot)	G1/61 (Erawan)
Price Constant	116 THB per MMBTU	116 THB per MMBTU
Contractor's Profit Split	30%	32%
Bonuses	Signature Bonus* 1,050 MMTHB Production Bonus** 1,575 MMTHB Supporting Contribution 7 MMTHB Other benefits 685 MMTHB	Signature Bonus* 1,050 MMTHB Production Bonus** 1,575 MMTHB Supporting Contribution 7 MMTHB Other benefits 35 MMTHB
Thai Employee Ratio	99%	98%
Facility Bonus***	175 MMTHB	350 MMTHB

Remark of payment terms:

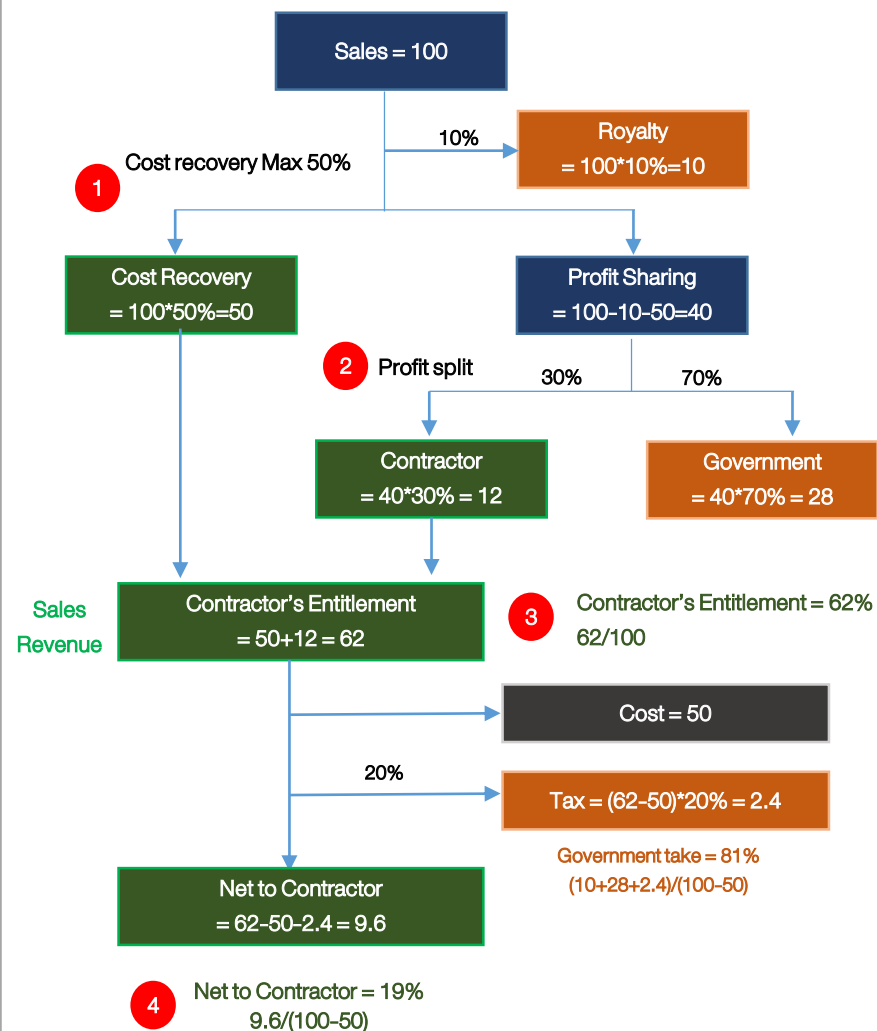
* No later than 10 working days prior to the PSC signing date

** Each time the cumulative production/sales reaches 100, 200 and 300 MMBOE

*** Equally separate into 3 payments by 24th April of every year from 2022

Source: Press release from Department of Mineral Fuels (13 December 2018) and TOR

PSC Model



*Assumption bases on field life, cost can be fully recovered

Summary of Q3 2018 Financial Results

Better net income QoQ driven by THB appreciation and strong core performance

Unit : MMUSD

Statement of Income	Q2 18	Q3 18	% QoQ	Q3 17	% YoY	9M 18	9M 17	% YTD
Total Revenues	1,347	1,398	4%	1,134	23%	3,960	3,252	22%
Sales	1,293	1,338	3%	1,064	26%	3,792	3,079	23%
Others	54	60	11%	70	(14%)	168	173	(3%)
Sales Volume (BOED)	302,846	304,940	1%	298,139	2%	300,338	294,539	2%
Sales Price (USD/BOE)	46.94	47.67	2%	38.78	23%	46.25	38.29	21%
Total Expenses	1,234	1,083	(12%)	1,398	(23%)	3,109	2,947	5%
Major Expenses:								
Operating Expenses	169	166	(2%)	162	2%	476	457	4%
Exploration Expenses	15	19	27%	9	>100%	37	29	28%
DD&A	460	496	8%	413	20%	1,364	1,214	12%
Impairment Loss on Assets	-	-	-	558	(>100%)	-	558	(>100%)
Loss on Divestment	-	37	>100%	-	>100%	37	-	>100%
Income Tax Expense	329	105	(68%)	57	84%	439	116	>100%
(Gain)/Loss on FX	30	6	(80%)	(23)	>100%	11	(37)	>100%
Net Income	113	315	>100%	(264)	>100%	851	305	>100%
Recurring Net Income	336	292	(13%)	218	34%	932	596	56%
Non-Recurring *	(223)	23	>100%	(482)	>100%	(81)	(291)	72%

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.

Financial Performance : Income Statement and Balance Sheet

Sustained solid EBITDA margin with healthy balance sheet

Income Statement		Q2 18	Q3 18	Q3 17	9M 18	9M 17
	Sales and Revenue from Pipeline Transportation (MMUSD)	1,319	1,367	1,089	3,870	3,135
	EBITDA (MMUSD)	965	992	777	2,836	2,238
	Net Income (MMUSD)	113	315	(264)	851	305
	Recurring Net Income (MMUSD)	336	292	218	932	596
	Earning Per Share (USD)	0.03	0.07	(0.07)	0.20	0.06
Key Financial Ratios						
	EBITDA Margin (%)	73	73	71	73	71
	Return on Equity (%) (LTM)	5	10	3	10	3
	Return on Capital Employed (%) (LTM)	5	9	3	9	3
	Return on Equity (%) (LTM, Recurring Net Income)	9	10	6	10	6
	Return on Capital Employed (%) (LTM, Recurring Net Income)	8	9	6	9	6

Balance Sheet		YE 17	Q3 18
	Total Assets (MMUSD)	19,220	19,210
	- Cash & cash equivalents * (MMUSD)	4,468	3,804
	Total Liabilities (MMUSD)	7,703	7,433
	- Interest bearing debt (MMUSD)	2,907	1,947
	Equity (MMUSD)	11,517	11,777
Key Financial Ratios			
	Total Debt to Equity (X)	0.25	0.17
	Net Debt** to Equity (X)	(0.14)	(0.16)
	Total Debt to Capitalization (X)	0.20	0.14
	Total Debt to EBITDA (X)	0.95	0.66
	EBITDA Interest Coverage (X)	23	27

Note:

*Cash & Cash Equivalents (Cash on hand) include Short-term Investments (Fixed deposit > 3 months)

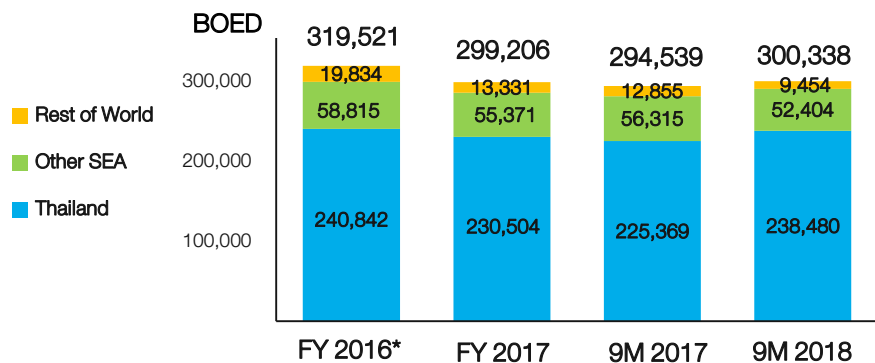
Net Debt = Total Debt less Cash & Cash Equivalents and Short-term Investments

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

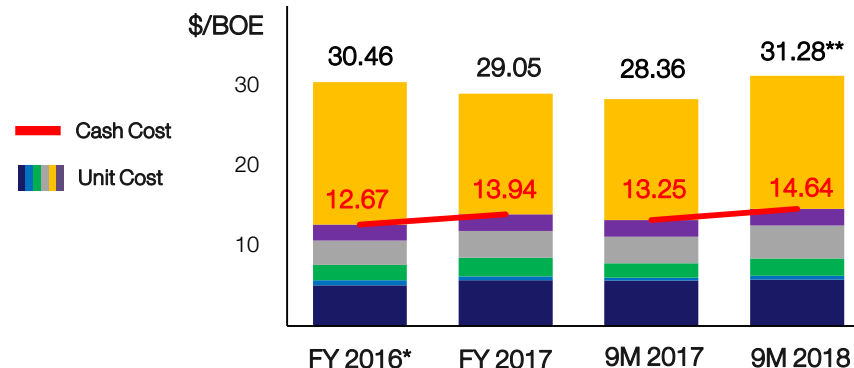
Sales Volume & Unit Cost

Improved sales volume and selling price with continuous cost management effort

Sales Volume and Price



Unit Cost



Gas (\$/MMBTU)	5.60	5.59	5.54	6.24
Liquid (\$/BBL)	41.17	52.26	49.87	67.85
Weighted Avg. (\$/BOE)	35.91	39.20	38.29	46.25
Avg. Dubai (\$/BBL)	41.27	53.14	51.06	70.10
Avg. HSFO (\$/BBL)	35.48	49.64	47.79	65.15
(High Sulphur Fuel Oil)				
Volume Mix (Gas : Liquid)	69 : 31	70 : 30	70 : 30	71 : 29
Revenue Mix (Gas : Liquid)	65 : 35	60 : 40	60 : 40	58 : 42

DD&A	17.79	15.11	15.11	16.64
Finance Cost	2.01	2.07	2.10	2.09
Royalties	3.02	3.37	3.30	4.10
G&A	1.93	2.30	1.81	2.19
Exploration Expenses	0.63	0.48	0.36	0.45
Operating Expenses	5.08	5.72	5.68	5.81
Lifting Cost	4.18	4.19	4.12	4.38

Note: * Represented and includes discontinued operations until end of August 2016

** Exclude costs related to new business, If include, unit cost for 9M18 will be 31.35 \$/BOE.

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

Sustainable development

Pursue long-term growth with social and environmental wellness



MEMBER OF

**Dow Jones
Sustainability Indices**

In Collaboration with RobecoSAM

2018 DJSI Listed Company

PTTEP has been selected as a member of the 2018 Dow Jones Sustainability Indices (DJSI) in the DJSI World Oil and Gas Upstream & Integrated Industry for its fifth consecutive year.



Proven business integrity

SET Sustainability Award 2018 – Outstanding Category

The Stock Exchange of Thailand (SET)

ASEAN Corporate Governance (CG) Awards

ASEAN CG Scorecard

Thailand's Strongest Adherence to Corporate Governance (ranked second)

Alpha Southeast Asia Magazine 2018



FTSE4Good

FTSE4Good Emerging Index 2018

PTTEP becomes a constituent of the FTSE4Good Emerging Index 2018 for the third consecutive year



Exemplary social contributor

Top Corporate Social Responsibility Advocates winner

The Asia Corporate Excellence & Sustainability Awards 2018

Health Promotion Category for PTTEP LKC Free Health Service Program (Free Clinic Project)

The Asia Responsible Enterprise Awards 2018

Thailand's Best Strategic Corporate Social Responsibility (ranked first)

Alpha Southeast Asia Magazine 2018

Green driver to environment

Green Leadership Category for T.M.S. Underwater Learning Site Project

The Asia Responsible Enterprise Awards 2018

The Excellent Level (G-Gold) of the Green Office Award 2017

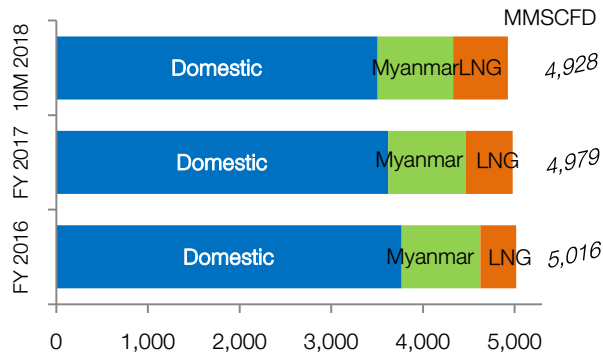
The Ministry of Natural Resources and Environment

Water A List Award

Carbon Disclosure Project (CDP)

Thailand Energy Overview

Natural Gas Supply



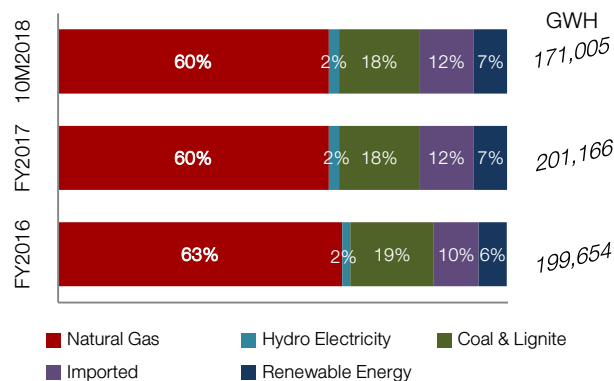
Slight decline in domestic production and Myanmar piped gas imports as a result of lower demands and growth in LNG import

Natural Gas Consumption



Source: EPPO

Electricity Generation



Exchange Rate Movement (THB/USD)



Consensus on the exchange rate mostly depends on

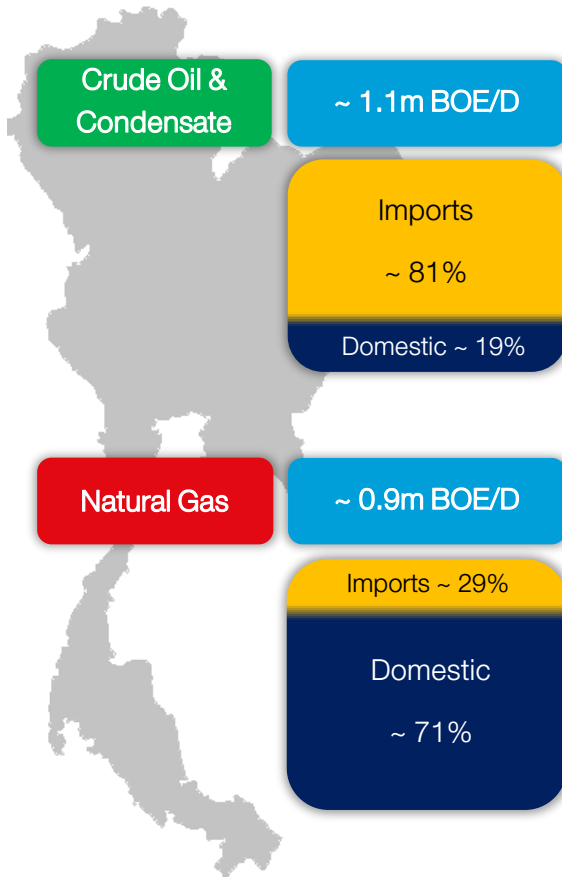
- Tendency on FED interest rate hike
- Trade war between the US and China
- Domestic export and tourism growth as well as the upcoming election

Source: Bank of Thailand, Bloomberg
Forecast based on Bloomberg Consensus as of 3 January 2019

Thailand's Energy Value Chain

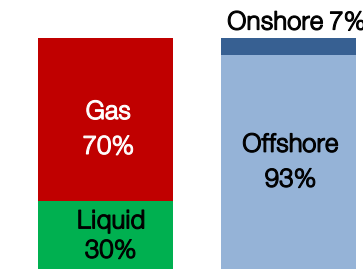
PTTEP contributes almost 1/3 of Thailand's petroleum production

Thailand's Oil and Gas Demand

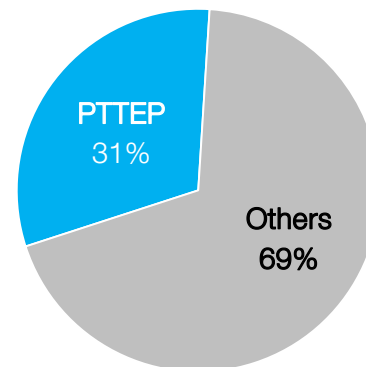


Thailand Petroleum Production 9M2018

% 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

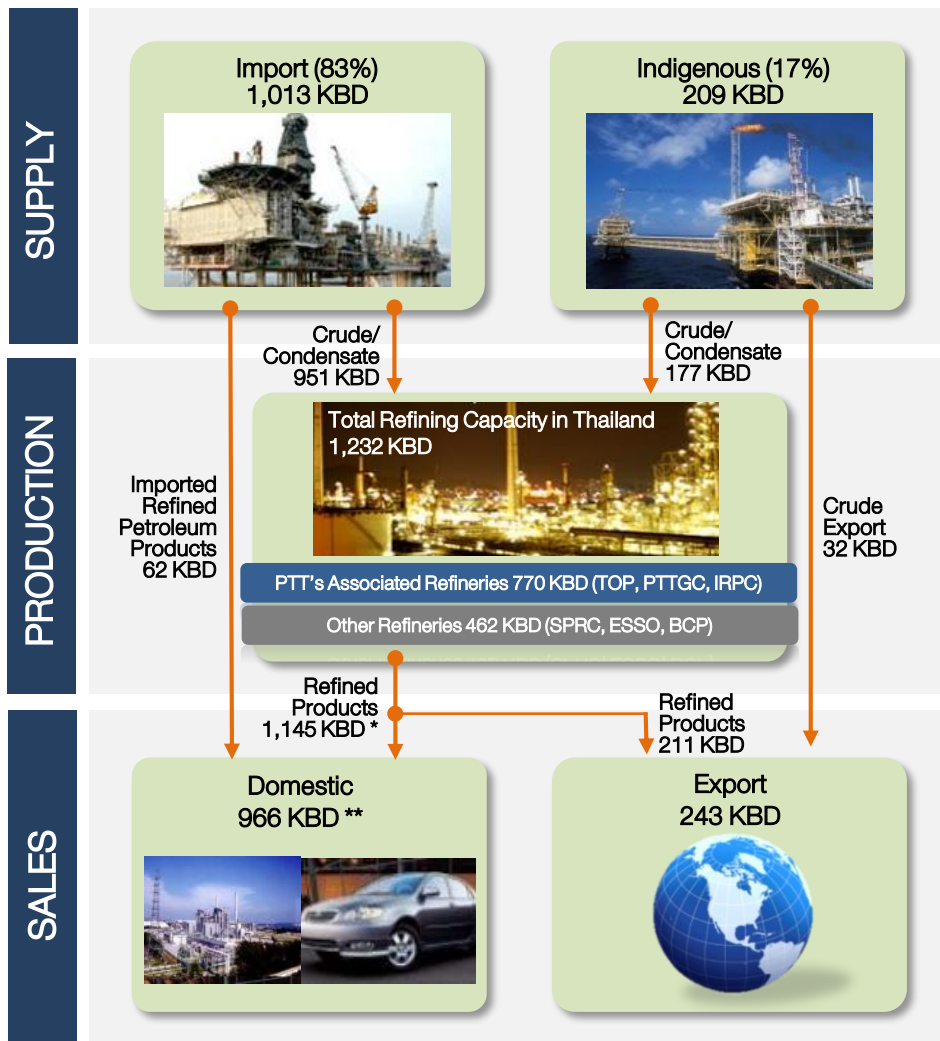
Source: Energy Policy and Planning Office (EPPO) and Department of Mineral Fuels (DMF)

Thailand's Oil and Gas Balance

January – September 2018

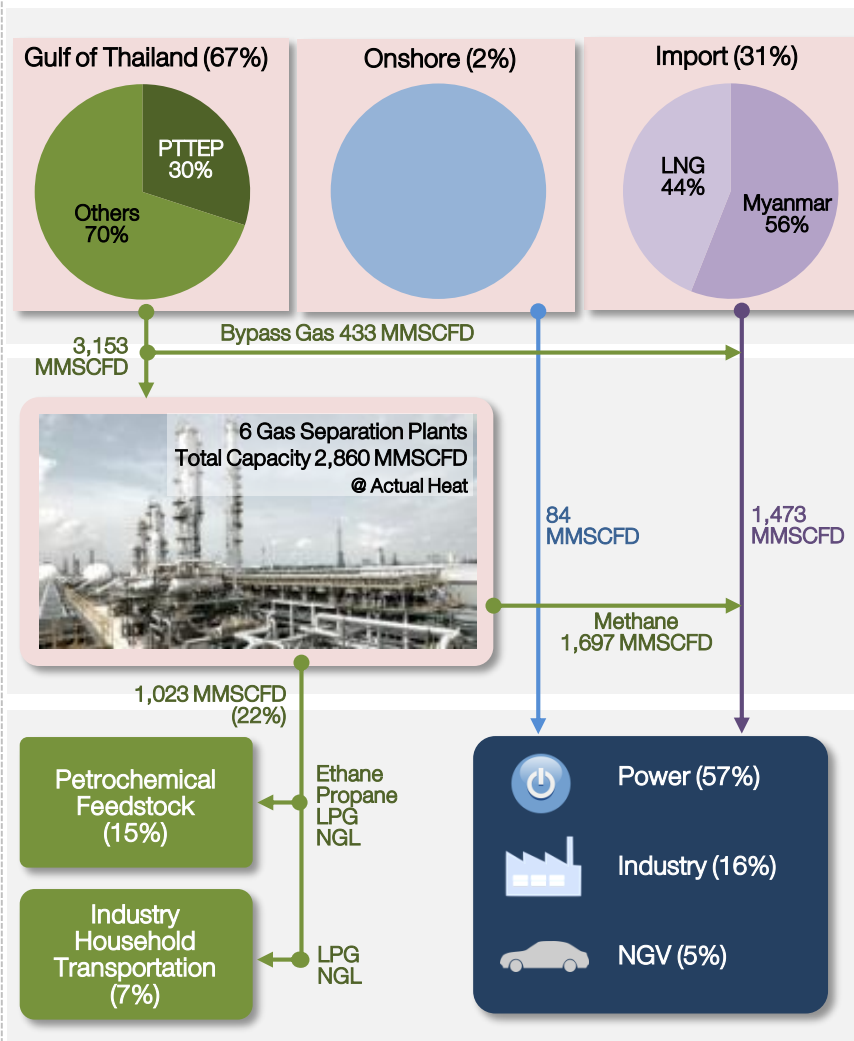
Oil Balance

Maintains stability supply through adequate refining capacity



Natural Gas Balance

Main driver of the Thailand economy



Source: PTIT

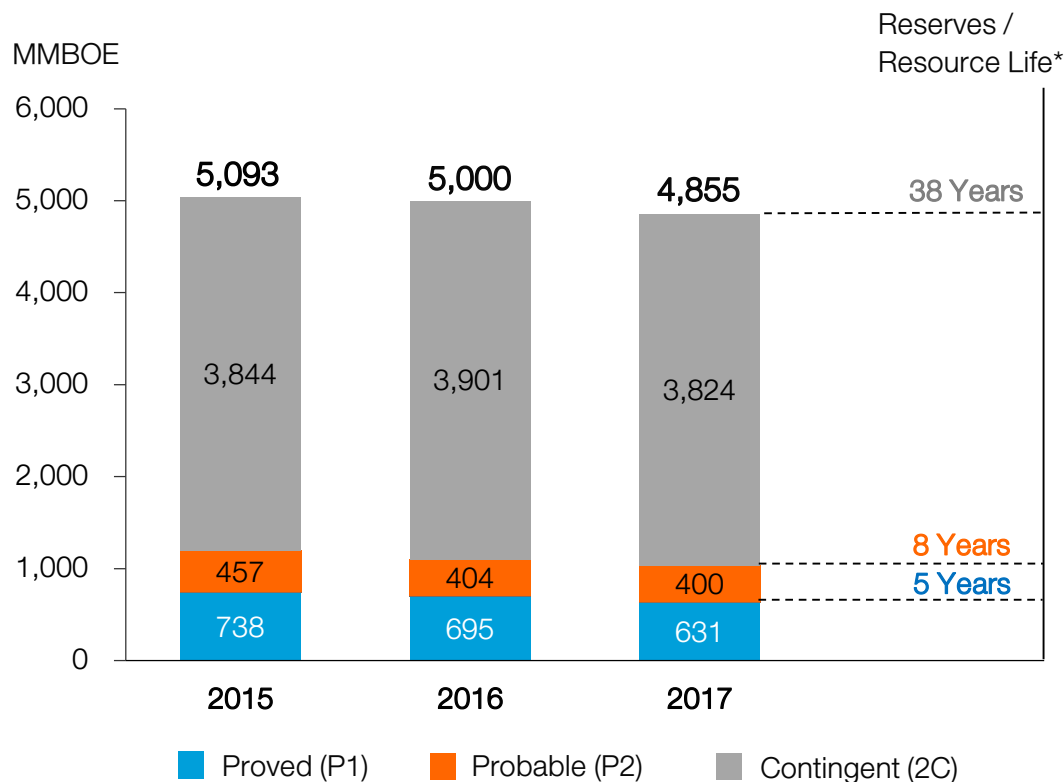
Remark: * Refined product from refineries = 1,034 KBD, including domestic supply of LPG from GSPs and Petrochemical Plants = 111 KBD

** Not included Inventory

MMSCFD @ Heating Value 1,000 Btu/ft³

Reserves and Resources

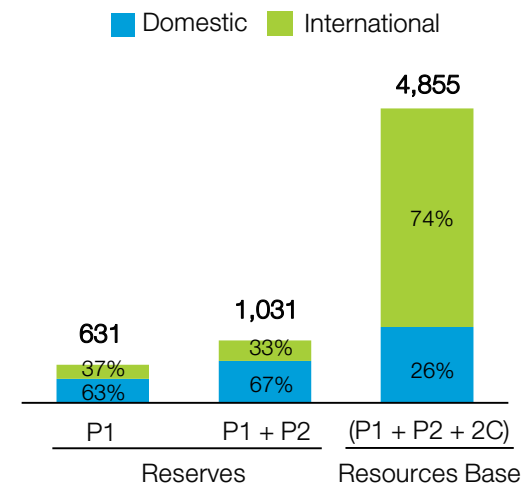
Maintained reserves life with majority of reserves base in SEA



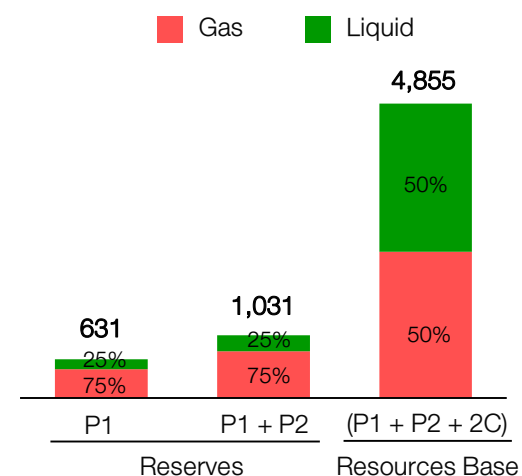
5-Year Average Proved Reserves Replacement Ratio (RRR)

2015	2016	2017
0.50x	0.57x	0.58x

2017 by Geography



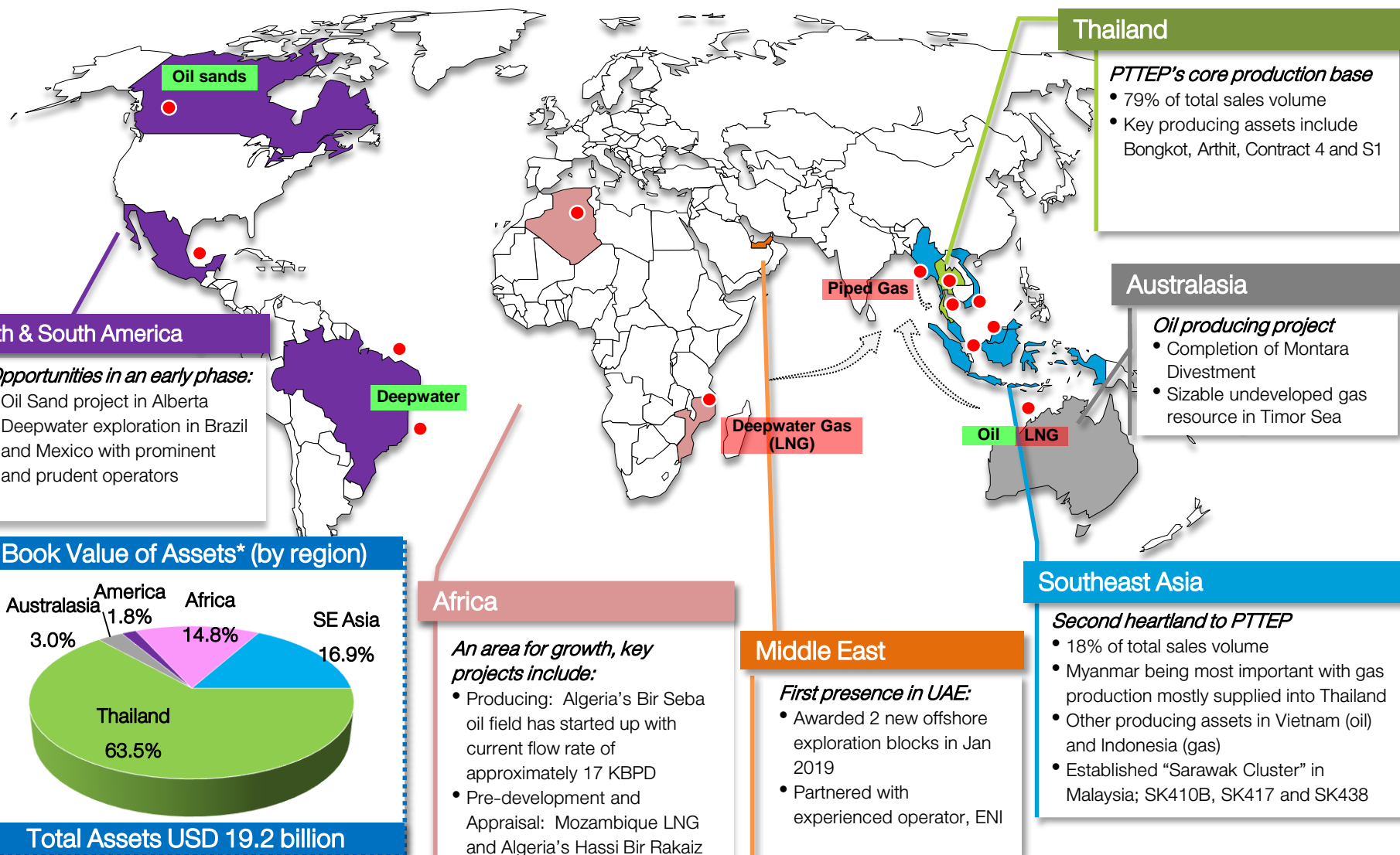
2017 by Product Type



* Based on total production of natural gas, condensate, and crude oil (including LPG) of 347 KBOED for the year ended December 31, 2017

Diversified international portfolio

Worldwide operations: 42 projects in 12 countries



Notes: * Information dated as of 9M 2018

Thailand and other Southeast Asia

Strong base maintaining production plateau and significant contribution to growth

Thailand

Bongkot (66.6667% WI)

- Average natural gas and condensate sales volume of 739 MMSCFD and 25 KBPD in 9M2018

S1 (100% WI)

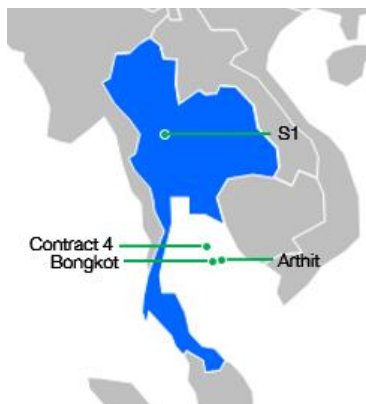
- The largest onshore crude oil production field in Thailand with 9M2018 average crude oil sales volume of 27 KBPD

Arthit (80% WI)

- Average sales volume in 9M2018 was 206 MMSCFD of natural gas and 10 KBPD of condensates

Contract 4 (60% WI)

- Average sales rate of 403 MMSCFD for natural gas and 17 KBPD for condensate in 9M2018



● Production / Ramp-up Projects

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 301 MMSCFD in 9M2018
- Significant exploration acreage both onshore and offshore in the Moattama Basin

Project Status

Producing

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

Appraisal

- M3 (80% WI)

Exploration

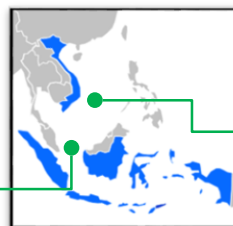
- MOGE 3 (75% WI)
- M11 (100% WI)
- MD-7 (50% WI)

Vietnam and Indonesia

“Reinforcing regional exposure through strategic partnerships”

Natuna Sea A (11.5% WI)

- Average sales volume of natural gas was 222 MMSCFD in 9M2018



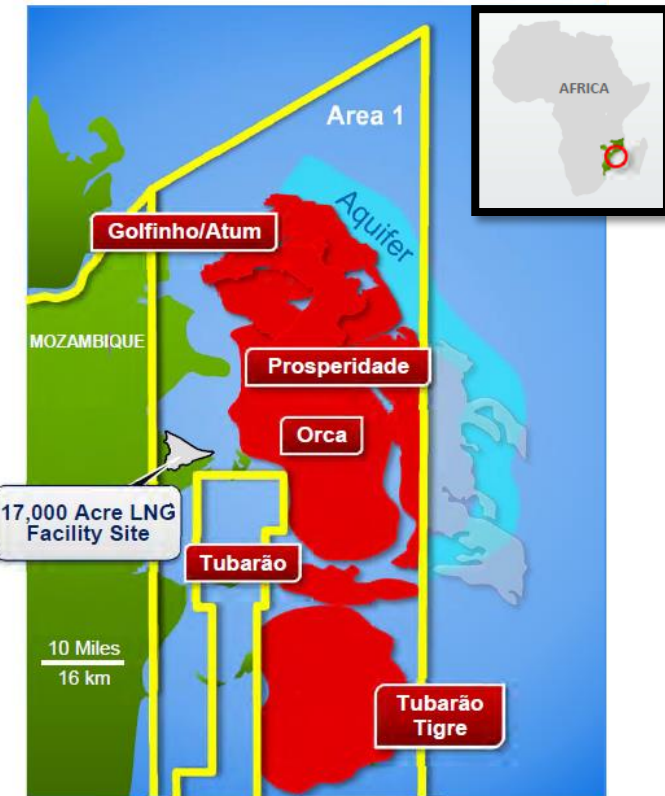
● Production / Ramp-up Projects

Vietnam 16-1 (28.5% WI)

- Average sales volume of crude oil was 18 KBPD in 9M2018
- The project is preparing further production drilling plan aiming to maintain production plateau.

East Africa: Mozambique

Potential to become one of the world's largest emerging LNG supply hubs



Location and Cost Advantage

- Close proximity to shore
- High quality reservoirs
- Access to Asian markets

*Substantial recoverable resources of **70+ tcf** with scalable offshore development of **more than 6 LNG trains***

Key Milestones to Final Investment Decision – targeting at 1H2019

Technical

- ✓ Certified reserves to support initial trains
- ✓ Announced selection of contractor for onshore LNG facilities construction

Commercial

- ✓ Recently signed SPA of 1.2 MTPA with EDF (French) and 0.28 MTPA signed with Tohoku Electric

Regulatory

- ✓ Received approval on marine concession and development plan of Golfinho–Atum Field
- ✓ Commenced the resettlement plan in Q4 2017

Financing

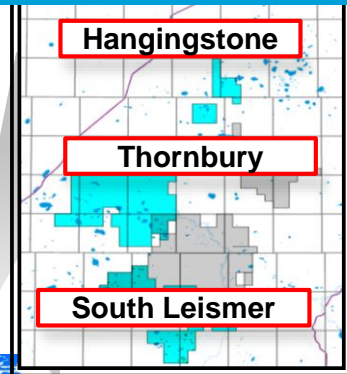
- ✓ On-going negotiation for project financing

Onwards to initial phase of 12 MMTPA

Canada Oil Sands

Flexibility to pursue long-term investment from the oil sands project

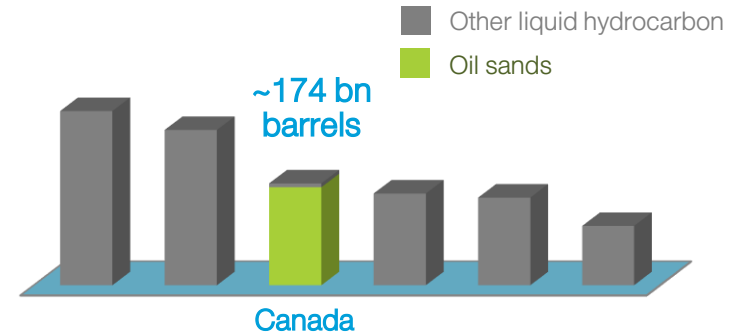
Mariana Oil Sands Project



Project Overview

- Operates 100% interest of the Thornbury, Hangingstone and South Leismer (THSL) areas (exploration and appraisal phase)
- Potential large resource base with over a billion barrel
- In Q3 2017, the Company revised the project's development plan which involves delaying the project's Final Investment Decision, to reflect results from the assessment of the industry and commercial feasibility studies

Approximately 96% of the reserves in Canada, the world's 3rd largest oil reserves, is oil sands

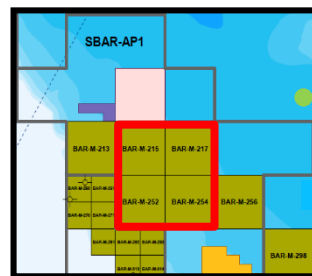


Brazil Deepwater

Entry into high potential petroleum province at exploration phase

Barreirinhas AP1

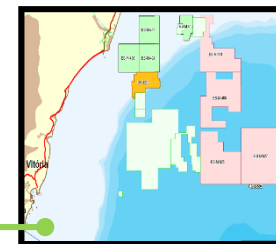
- Farm-in 25% from BG Group in 2014
- Operated by Shell Brasil (65% interest)
- Four offshore exploration blocks: BAR-M-215, BAR-M-217, BAR-M-252 and BAR-M-254
- Completed 3D seismic activities and is in the process of assessing the petroleum potential



Barreirinhas Basin



Espirito Santo Basin



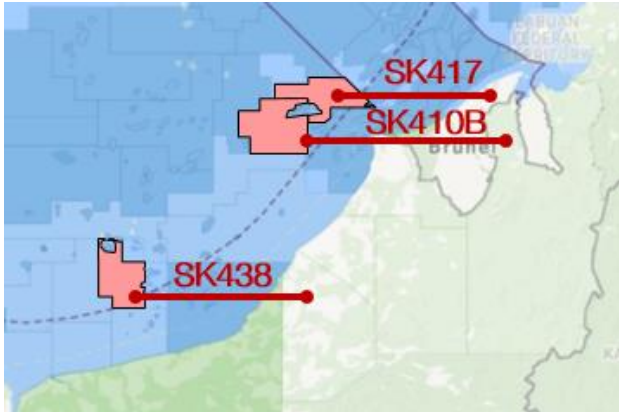
BM-ES-23

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

Unlocking the Exploration Potentials

Expanded portfolio in high prolific areas: Malaysia and Mexico

Sarawak Basin, Malaysia



PTTEP's Block: SK410B (42.5%), SK417 (80%) and SK438 (80%) with operatorship

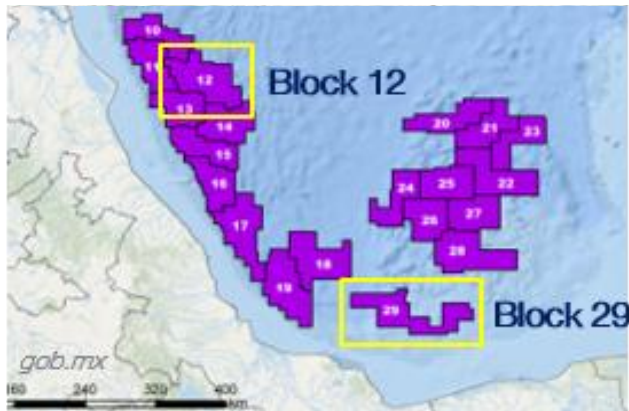
Location: Sarawak Basin, Malaysia

Characteristic: Shallow-water with low operational risk

Exploration Strategy:

- Expect exploration drilling activities during 2019-2021
- "Cluster Model" synergy operations within basin to optimize costs
- In place production infrastructure in nearby area

Gulf of Mexico, Mexico



PTTEP's Block: Block 12 (20%) and Block 29 (16.67%), as non-operating partner

Location: Mexican Ridges Basin for Block 12 and Campeche Basin for Block 29

Characteristic: Deep-water with high petroleum potentials and attractive fiscal regime

Exploration Strategy:

- Joined hand with prudent operators being Petronas and Repsol
- Mexico still has high potential prospective resources with significant sizeable discoveries

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)	<div> <div>Petronas</div> <div>80%</div> </div> <div> <div>JX Nippon</div> <div>10%</div> </div> <div> <div>PTT Global LNG</div> <div>10%</div> </div>	  

Investment Rationales

- Capture opportunity from increasing LNG demand as a supplement to Thailand gas production
- Venture into midstream LNG as a mean to secure LNG supply and growth of PTT and PTTEP, as well as capture value added along with LNG value chain
- Low risk and highly market secured opportunity
 - Highly experienced operator
 - Already commenced commercial production with immediate revenue stream
- In vicinity of future upstream opportunities in focus area – offshore Sarawak

Project information 1/3

Production phase: Thailand and JDA

	Project	Status*	PTTEP's Share	Partners (as YE2018)	9M2018 Average Sales Volume **		2019 Key Activities
					Gas	Oil and Other	
Production Phase							
Thailand and JDA							
1	Arthit	OP	80%	Chevron MOECO 16% 4%	212 MMSCFD	Condensate: 10 k BPD	<ul style="list-style-type: none">• Ensure gas deliverability level at DCQ***• Install wellhead platforms• Drill development wells
2	B6/27	OP	100%		-	-	
3	B8/32 & 9A		25%	Chevron MOECO KrisEnergy Palang Sophon 51.66% 16.71% 4.63% 2%	70 MMSCFD	Crude: 18 k BPD	<ul style="list-style-type: none">• Drill development wells• Perform waterflood activities
4	Bongkot	OP	66.6667%	TOTAL 33.3333%	739 MMSCFD	Condensate: 25 k BPD	<ul style="list-style-type: none">• Maintained production level as planned• Drill development wells• Awarded as a sole operator under PSC (after concession-end in 2022/2023)
5	Contract 3 (Formerly Unocal III)		5%	Chevron MOECO 71.25% 23.75%	604 MMSCFD	Crude: 23 k BPD Condensate: 21 k BPD	<ul style="list-style-type: none">• Drill development wells• Prepare for decommissioning activities• Awarded as a sole operator for Erawan field (Contract 1, 2 and 3) under PSC (after concession-end in 2022)
6	Contract 4 (Formerly Pailin)		60%	Chevron MOECO 35% 5%	408 MMSCFD	Condensate: 17 k BPD	<ul style="list-style-type: none">• Ensure gas deliverability level at DCQ***• Drill development wells• In process of pre-development of Ubon field
7	E5		20%	ExxonMobil 80%	8.3 MMSCFD	-	<ul style="list-style-type: none">• Ensure gas deliverability level at DCQ***
8	G4/43		21.375%	Chevron MOECO Palang Sophon 51% 21.25% 6.375%	1.4 MMSCFD	Crude: 4 k BPD	<ul style="list-style-type: none">• Drill development wells• Perform waterflood activities
9	G4/48		5%	Chevron MOECO 71.25% 23.75%	6 MMSCFD	Crude: 1.4 k BPD	<ul style="list-style-type: none">• Drill development wells
10	L53/43 & L54/43	OP	100%		-	Crude: 1.1 k BPD	<ul style="list-style-type: none">• Maintain production plateau• Perform reservoir management and waterflood activities
11	PTTEP1	OP	100%		-	Crude: 263 BPD	<ul style="list-style-type: none">• Maintain production plateau• Perform reservoir management and waterflood activities
12	S1	OP	100%		15 MMSCFD	Crude: 27 k BPD LPG: 0.2 k MT/D	<ul style="list-style-type: none">• Drill development wells• Enhance oil recovery program includes waterflood, hydraulic fracturing and artificial lift

* Status: OP = PTTEP operatorship / JOC = PTTEP joint operatorship

** Sales volume stated at 100% basis.

*** DCQ = Daily Contractual Quantity

Project information 2/3

Production phase: Overseas

	Project	Status*	PTTEP's Share	Partners <i>(as of YE2018)</i>		9M2018 Average Sales Volume **		2019 Key Activities
						Gas	Oil and Other	
Production Phase								
13	Sinphuhorm	OP	55%	Apico ExxonMobil	35% 10%	69 MMSCFD	Condensate: 218 BPD	<ul style="list-style-type: none">• Ensure gas deliverability• Improve recovery from infill drilling
14	L22/43	OP	100%			-	Crude: 29 BPD	<ul style="list-style-type: none">• Maintain production operation
15	MTJDA	JOC	50%	Petronas-Carigali	50%	327 MMSCFD	Condensate: 6.8 k BPD	<ul style="list-style-type: none">• Drill exploration and development wells
Overseas								
16	Vietnam 9-2	JOC	25%	PetroVietnam SOCO	50% 25%	13 MMSCFD	Crude: 3.7 k BPD	<ul style="list-style-type: none">• Maintain production level• Perform well intervention program
17	Vietnam 16-1	JOC	28.5%	PetroVietnam SOCO OPECO	41% 28.5% 2%	6.7 MMSCFD	Crude: 18 k BPD	<ul style="list-style-type: none">• Maintain production level• Drill development wells and water injection well• Upgrade gas lift system
18	Natuna Sea A		11.5%	Premier Oil KUFPEC Petronas Pertamina	28.67% 33.33% 15% 11.5%	222 MMSCFD	Crude: 1.3 k BPD	<ul style="list-style-type: none">• Well intervention program to secure Gas Deliverability• Drill development wells
19	Yadana		25.5%	TOTAL Chevron MOGE	31.24% 28.26% 15%	794 MMSCFD	-	<ul style="list-style-type: none">• Drill infill wells• Perform 3D seismic activities• Ensure gas deliverability level at DCQ***
20	Yetagun		19.3178%	Petronas-Carigali MOGE Nippon Oil PC Myanmar (Hong Kong)	30.00140% 20.4541% 19.3178% 10.90878%	154 MMSCFD	Condensate: 2.9 k BPD	<ul style="list-style-type: none">• Maintain production level• Drill exploration and development wells• Perform 3D seismic activities
21	Zawtika (M9 & a part of M11)	OP	80%	Myanma Oil and Gas Enterprise (MOGE)	20%	301 MMSCFD	-	<ul style="list-style-type: none">• Drill 3 exploration wells• Drill development wells• Perform 3D seismic activities• Prepare to Install wellhead platforms
22	Algeria 433a & 416b (Bir Seba)	JOC	35%	PetroVietnam Sonatrach	40% 25%	-	Crude: 2.3 k BPD <i>(net entitlement)</i>	<ul style="list-style-type: none">• Drill development wells• Plan for BRS Phase 2 oil field development

* Status: OP = PTTEP operatorship / JOC = PTTEP joint operatorship

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

*** DCQ = Daily Contractual Quantity

Project information 3/3

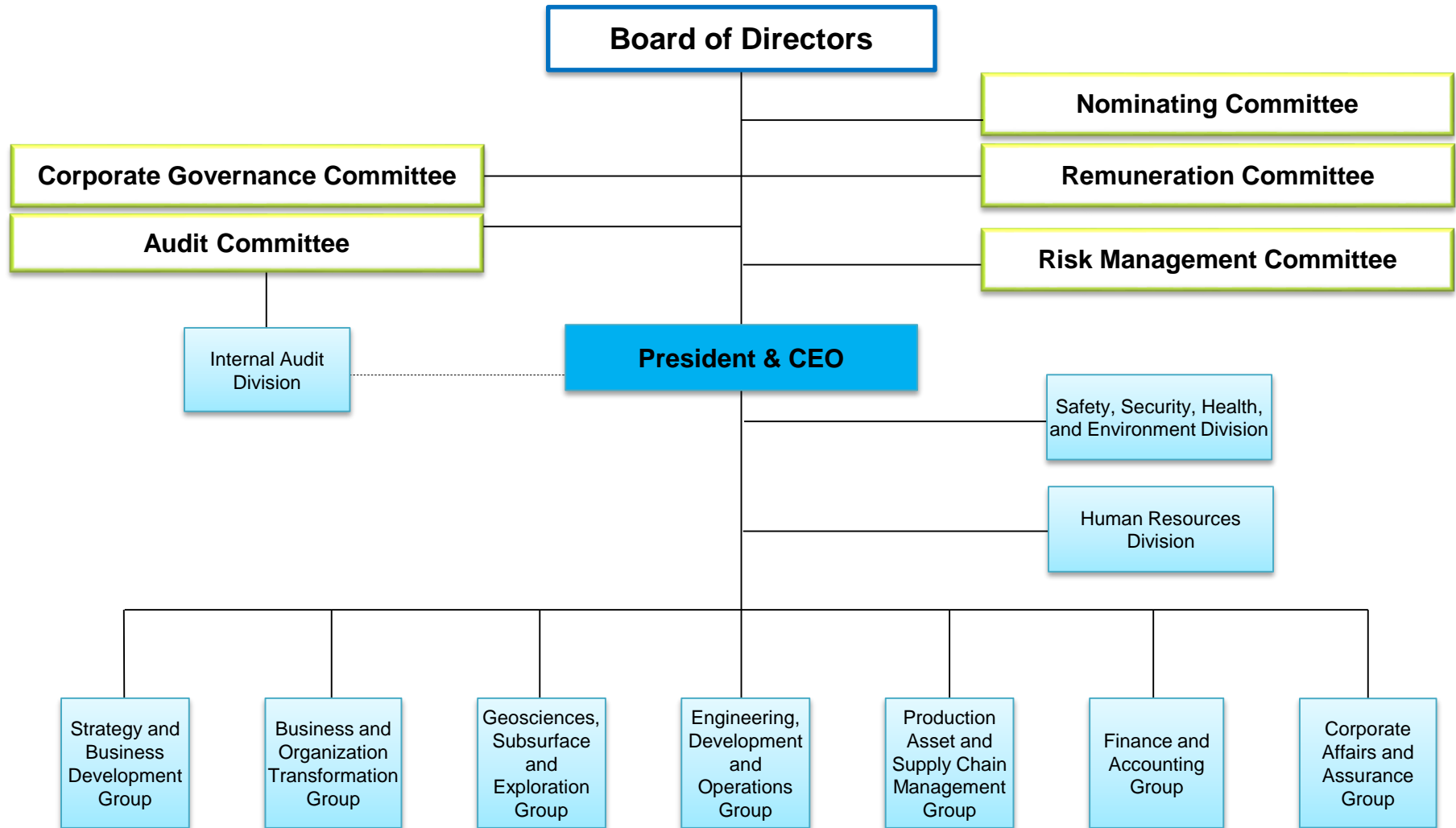
Exploration/Development phase

	Project	Status*	PTTEP's Share	Partners (as of YE2018)	2019 Key Activities
Exploration/Development Phase					
Thailand and JDA					
23	G9/43	OP	100%		-
Overseas					
24	Myanmar M3	OP	80%	MOECO 20%	<ul style="list-style-type: none"> Negotiate the commercial framework with the Myanmar government Perform Front End Engineering Design (FEED study)
25	Myanmar M11	OP	100%		<ul style="list-style-type: none"> Drill first exploration well to prove up recoverable resources
26	Myanmar MD-7	OP	50%	TOTAL 50%	<ul style="list-style-type: none"> Drill first exploration well to prove up recoverable resources
27	Myanmar MOGE 3	OP	75%	Palang Sophon 10% MOECO 10% WinPreciousResources 5%	<ul style="list-style-type: none"> Drill 3 exploration wells
28	Vietnam B & 48/95		8.5%	PVN 65.88% MOECO 25.62%	<ul style="list-style-type: none"> Finalize on Commercial agreements Finalize on Engineering Procurement Construction Installation (EPCI) bidding process
29	Vietnam 52/97		7%	PVN 73.4% MOECO 19.6%	<ul style="list-style-type: none"> Finalize on Commercial agreements Finalize on Engineering Procurement Construction Installation (EPCI) bidding process
30	Sarawak SK410B	OP	42.5%	KUFPEC 42.5% Petronas-Carigali 15%	<ul style="list-style-type: none"> Drill 1 appraisal well
31	Sarawak SK417	OP	80%	Petronas-Carigali 20%	<ul style="list-style-type: none"> Prepare to drill exploration and appraisal wells
32	Sarawak SK438	OP	80%	Petronas-Carigali 20%	<ul style="list-style-type: none"> Drill 1 exploration well and 1 appraisal well
33	PTTEP Australasia (PTTEP AA)	OP	90%-100% (varied by permits)		<ul style="list-style-type: none"> Completed Montara Field Divestment to Jadestone on 28 Sep 2018 Drill exploration well in AC/P54
34	Mozambique Rovuma Offshore Area 1		8.5%	Anadarko, Mitsui, 26.5%, 20% ENH, ONGC 15%, 10% Beas Rovuma, Bharat 10%, 10%	<ul style="list-style-type: none"> Prepare work to support Final Investment Decision (FID) targeted in 1H 2019 including LNG marketing and finalize remaining commercial contracts together with project finance
35	Algeria Hassi Bir Rekaiz	OP	24.5%	CNOOC 24.5% Sonatrach 51%	<ul style="list-style-type: none"> Finalize on Engineering Procurement and Construction (EPC) Drill development wells
36	Mariana Oil Sands	OP	100%		<ul style="list-style-type: none"> Assess appropriated development approach
37	Barreirinhas AP1		25%	Shell Brasil 65% Mitsui E&P Brasil 10%	<ul style="list-style-type: none"> Assess petroleum potential
38	Brazil BM-ES-23		20%	Petrobras 65% INPEX 15%	<ul style="list-style-type: none"> Assess petroleum potential
39	Mexico block 12 (2.4)		20%	PC Carigali Mexico 60% Ophir Mexico 20%	<ul style="list-style-type: none"> G&G study to access petroleum potential
40	Mexico block 29 (2.4)		16.67%	Repsol Mexico 30% PC Carigali Mexico 28.33% Sierra Nevada 25%	<ul style="list-style-type: none"> G&G study to access petroleum potential
41	Abu Dhabi Offshore 1		30%	Eni Abu Dhabi 70%	<ul style="list-style-type: none"> Conduct Seismic
42	Abu Dhabi Offshore 2		30%	Eni Abu Dhabi 70%	<ul style="list-style-type: none"> Conduct Seismic and drill exploration & appraisal wells

* Status: OP = PTTEP operatorship / JOC = PTTEP joint operatorship

Organization structure

Ensuring transparency, integrity and good corporate governance



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	$\text{Trailing-12-month EBITDA} / \text{Trailing-12-month Interest Expenses \& Amortization of Bond Issuing Cost}$