



MEMBER OF
Dow Jones
Sustainability Indices
In Collaboration with RobecoSAM

PTT Group Corporate Day
13 July 2018 / Singapore





Company Overview

Financial Performance

Strategy and Growth

Investment Plan & Outlook

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

63.5%¹



Thailand's national energy company

65.3%²



Credit ratings equivalent to parent and country

S&P

Moody's

TRIS

BBB+

Baa1

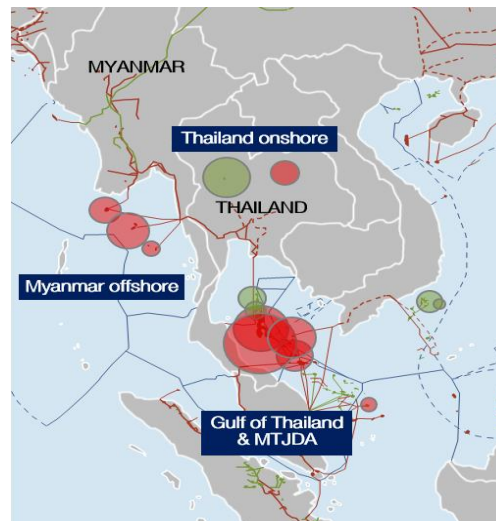
AAA

Largest oil and gas producers 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*

83%

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 Q1 2018

Notes:

1. 51.1% is directly held by the Government of Thailand (Ministry of Finance), with the remaining 12.4% held by the state-controlled Vayupak Fund I as of 7 March 2018

2. Ownership as of 7 February 2018

A Firm Core for Accretive Growth

Reflected in Q1 2018 performance



Operation

- ✓ **293 KBOED**
On-track sales volume target
- ✓ **29.20 \$/BOE**
Competitive unit cost
- ✓ Achieved **Bongkot** acquisition
& **Exploration** expansion



Financials

- ✓ **Healthy margin and liquidity**
 - **74%** EBITDA Margin
 - **\$5.1Bn** Cash on hand
 - **\$1Bn** Operating Cash Flow
 - **0.24x** Gearing ratio

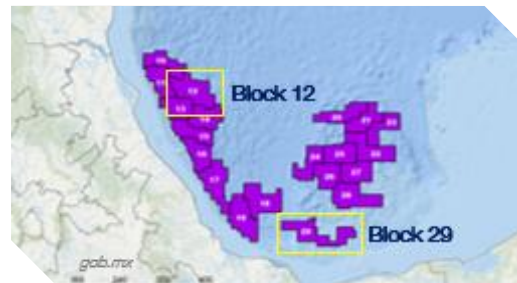
Unlocking value through concrete growth platforms

Acquired 22.2222% stake from Shell

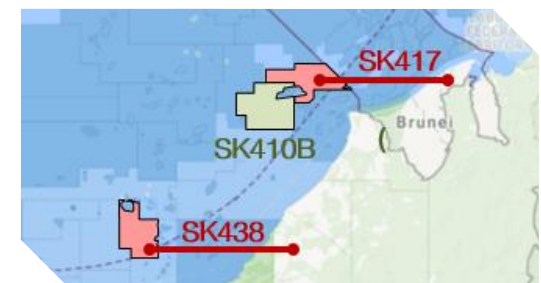
Bongkot



Expanded Exploration Portfolio



2 Deepwater blocks in Mexico
with prudent operators



2 Shallow-water blocks in Malaysia
as an operator



Company Overview

Financial Performance

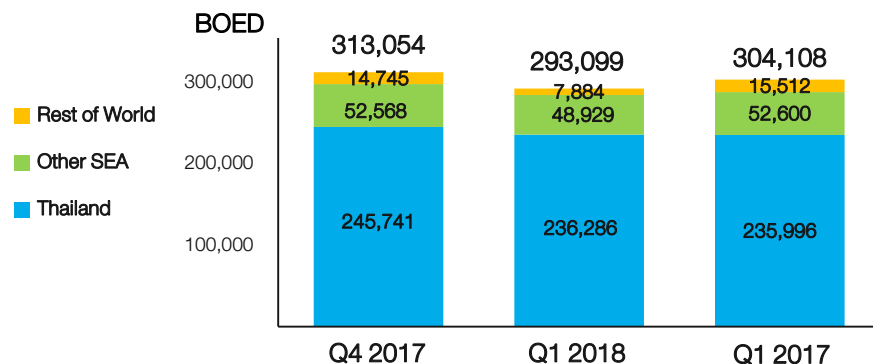
Strategy and Growth

Investment Plan & Outlook

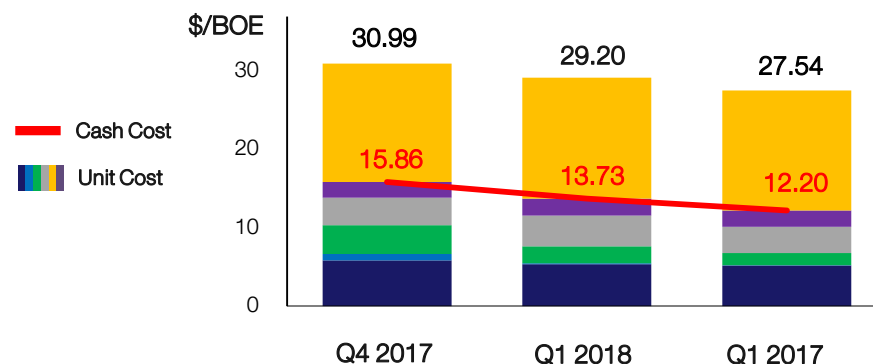
Sales Volume & Unit Cost

Higher selling price with competitive cost

Sales Volume and Price



Unit Cost



Gas (\$/MMBTU)	5.75	6.07	5.24
Liquid (\$/BBL)	59.20	63.12	52.79
Weighted Avg. (\$/BOE)	41.74	44.01	38.00
Avg. Dubai (\$/BBL)	59.31	63.96	53.03
Avg. HSFO (\$/BBL) (High Sulphur Fuel Oil)	54.98	57.64	48.72
Volume Mix (Gas : Liquid)	71 : 29	72 : 28	69 : 31
Revenue Mix (Gas : Liquid)	58 : 42	59 : 41	57 : 43

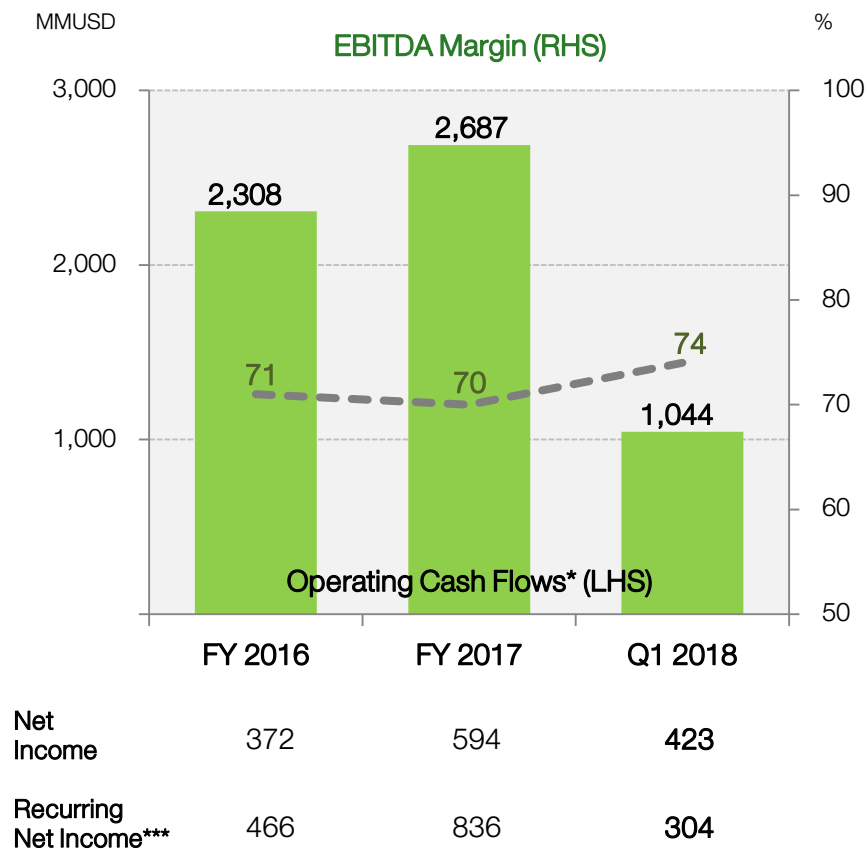
DD&A	15.13	15.47	15.34
Finance Cost	1.99	2.16	2.08
Royalties	3.55	3.94	3.34
G&A	3.68	2.18	1.54
Exploration Expenses	0.80	0.10	0.05
Operating Expenses	5.84	5.34	5.19
Lifting Cost	4.39	4.04	3.83

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

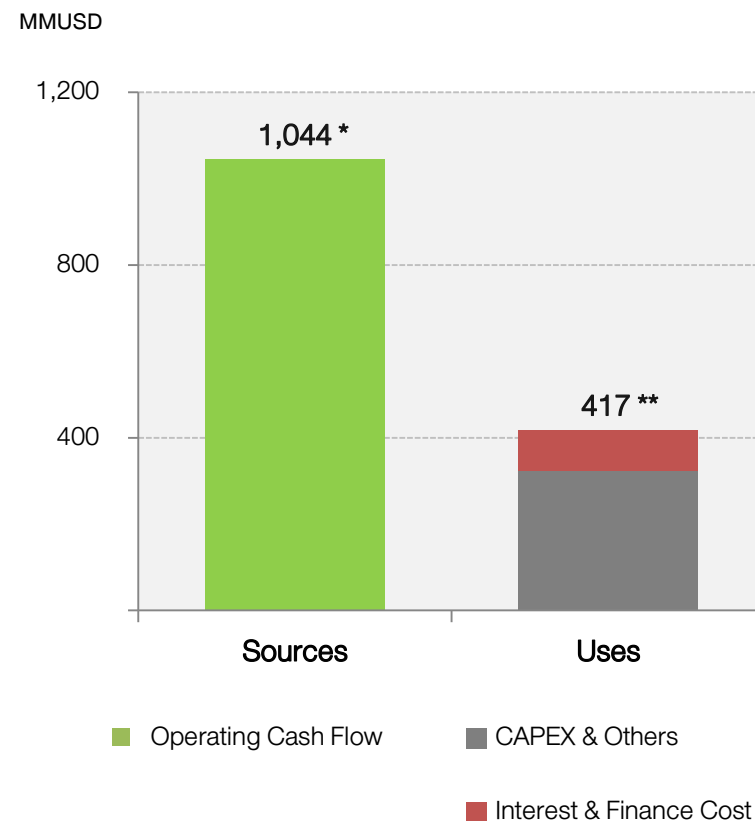
Cash Flow Performance

Self funding driven by robust cash flow generation

Cash Flow Performance



Source & Use of Funds in Q1 2018



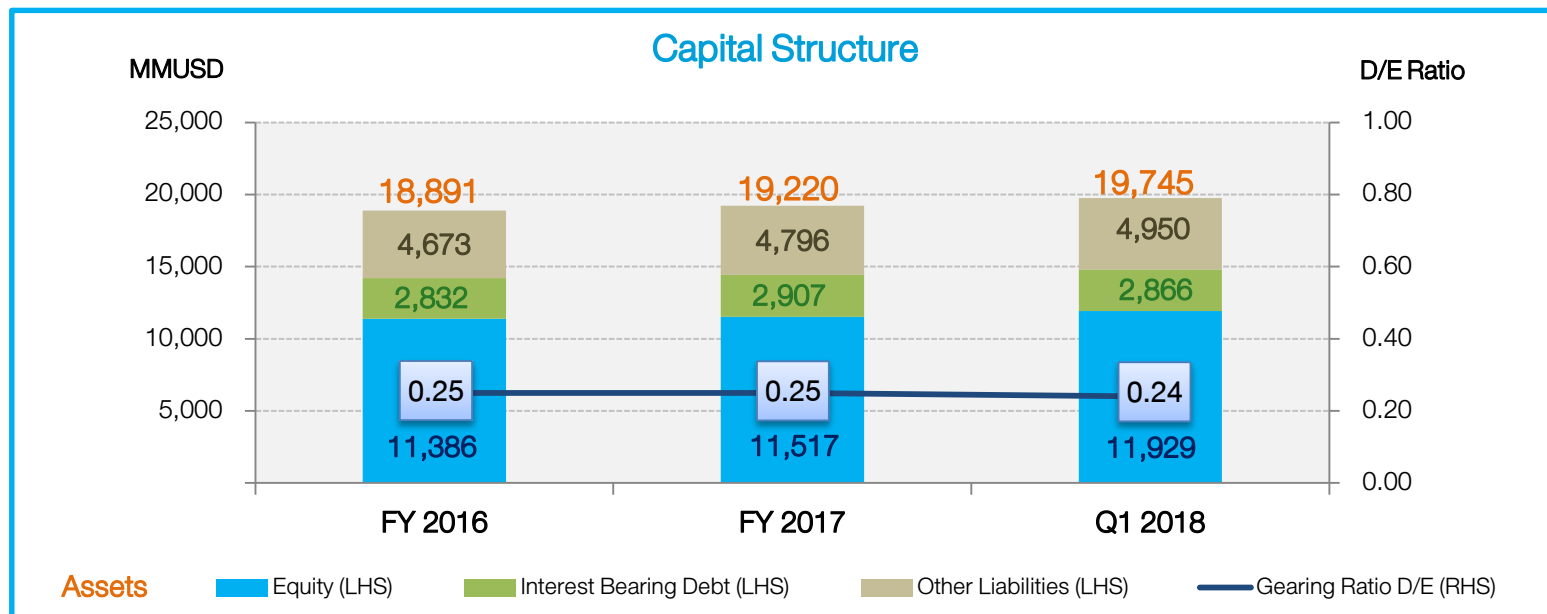
Remark: * Net of adjustment for the effect of exchange rate changes on cash and cash equivalents

** Excludes cash flows for investing in short-term investments (Fixed deposit > 3 months)

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

Financial Position

Healthy balance sheet with net cash position

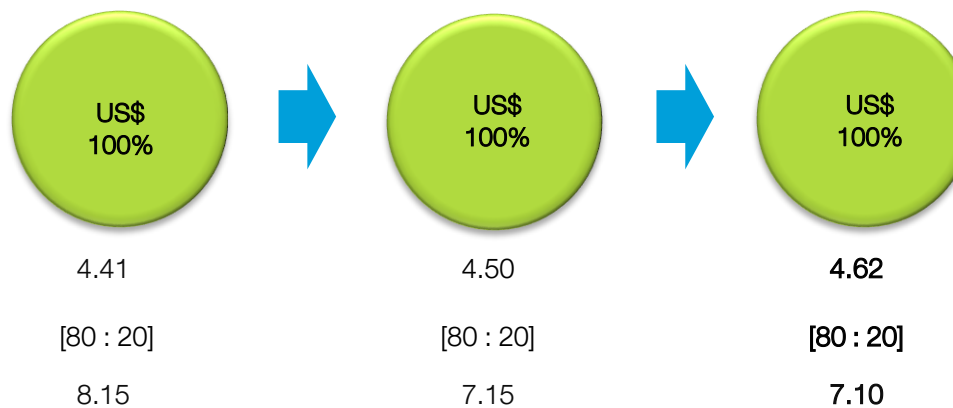


Debt Profile**

Weighted Average
Cost of Debt* (%)

[Fixed : Floating]

Average Loan Life* (Years)

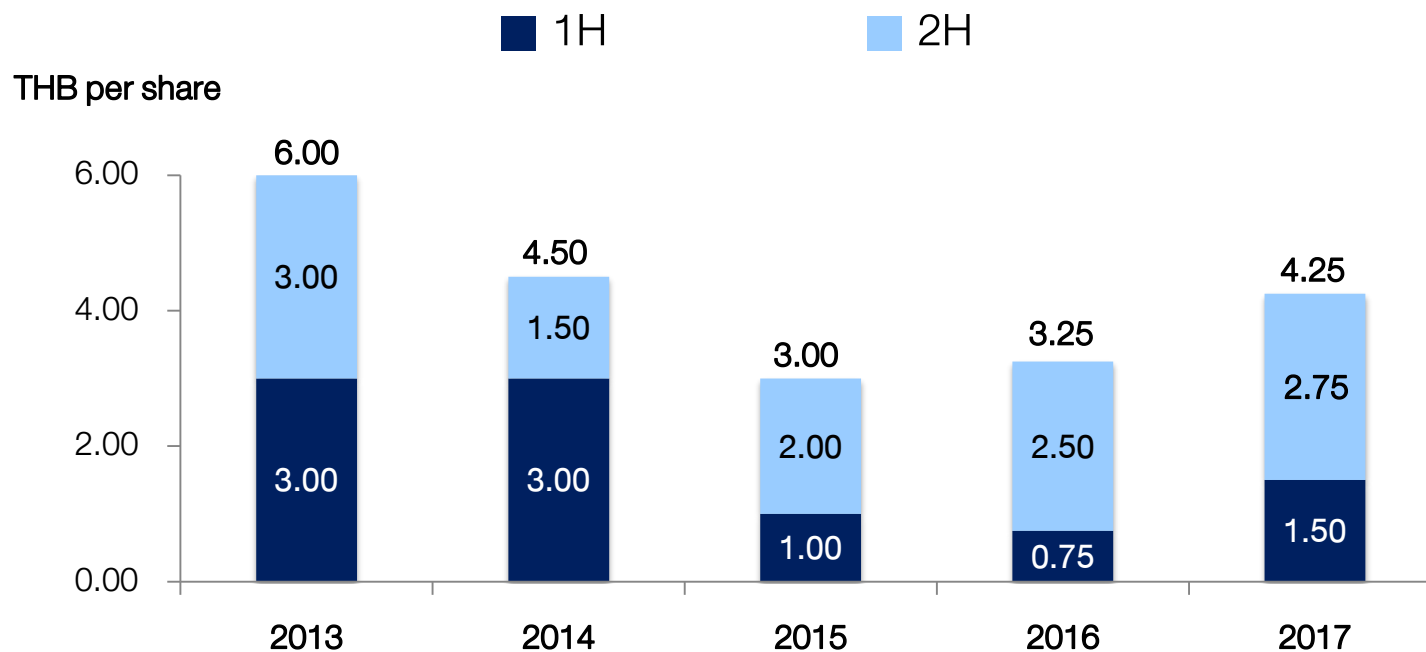


Remark: * Excludes Hybrid bonds

Dividends

Assuring our dividend commitment to shareholders

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



Payout Ratio (%)

40

82

N/A

98

90



Company Overview

Financial Performance

Strategy and Growth

Investment Plan & Outlook

"RESET" to Uphold Competitiveness

Achieved significant cost reduction and continue to improve efficiency

Ways

Optimizing Producing Projects



Capital Management



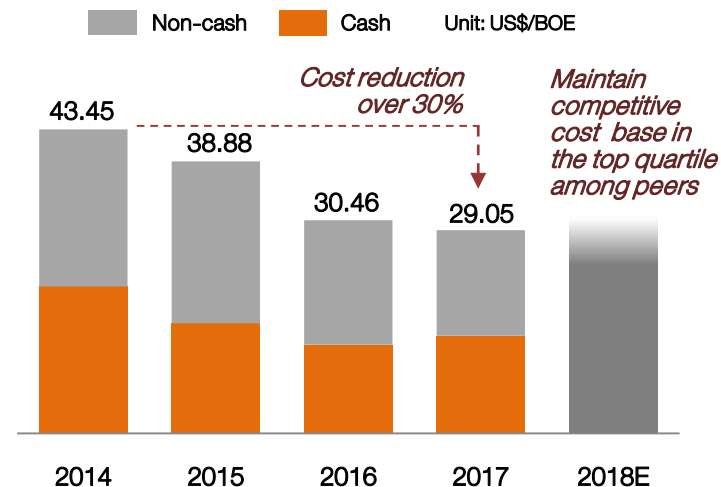
Organizational Restructuring
to cope with changing E&P landscape



Cost Management
through SPEND SMART campaign



Results



2017 SPEND SMART results



- ✓ \$200MM Savings
- ✓ \$310MM equivalent in efficiency gain
- ✓ 500+ new ideas initiated

Initiatives



Exploration



Engineering & Construction



Production Operations



Maintenance & Inspection



Drilling & Well



Logistics



Procurement



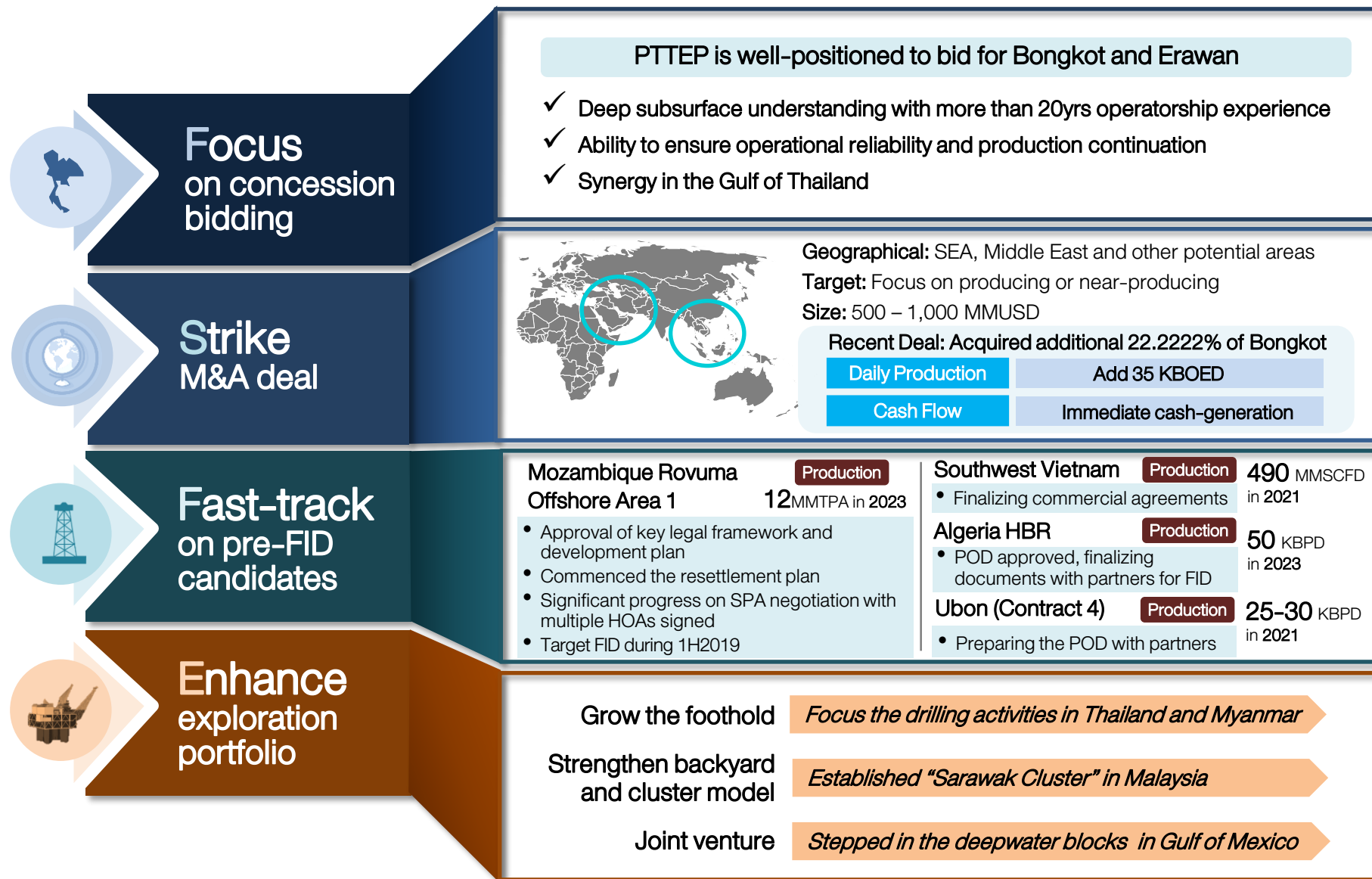
Finance & Accounting



G & A

Push Forward “REFOCUS” Growth Strategies

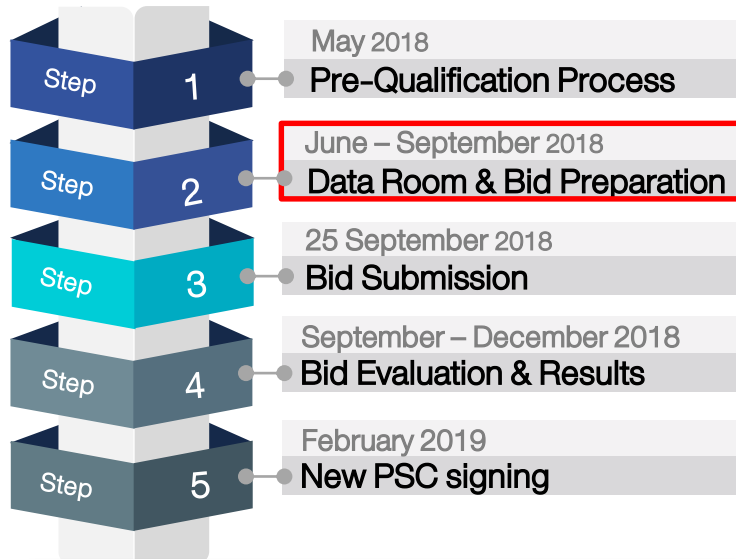
Concrete plans to boost reserves and production



Bidding of Expiring Concessions

Strive to win Bongkot and Erawan Bidding

Process and Timeline



Bidding Requirements

Bidding Obligations

- **Production:** A minimum production of 800 MMSCFD for G1/61 (Erawan) and 700 MMSCFD for G2/61 (Bongkot), for a period of 10 years
- **Gas Price:** Fixed gas price formula (linked to Dubai price)
- **Facility Bonus:** 350 MMTHB for G1/61 and 175 MMTHB for G2/61
- **Decommissioning:** Pre-expiry liabilities will be based on a ratio of remaining reserves over total recoverable reserves.

Proposal

Technical

- Preparation period work plan
- Field development plan (FDP)
- Exploration work plan

Commercial

Terms	Weighting
• Gas Price Constant: ≤ 214.26 THB/MMBTU	65%
• Contractor's Profit Share: $\leq 50\%$	25%
• Bonus: Signature Bonus ≥ 350 MMTHB Production Bonus ≥ 175 MMTHB Supporting Contribution e.g. Training and CSR ≥ 3.5 MMTHB/Year	5%
• Thai Employee Ratio: $\geq 80\%$ in 1 st Year and $\geq 90\%$ in 5 th Year	5%
• State Participation: Offer terms and conditions for 25% state participation	

Source: Term of Reference for bidding from Department of Mineral Fuel (DMF)

"RENEW" in Response to Changing Industry Landscape

Strengthen core competency and business diversification

Enhancing Core Capability in Exploration & Production



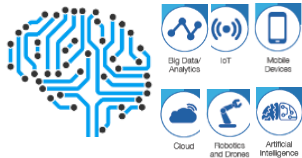
ORGANIZATIONAL TRANSFORMATION

Innovative, agile and result-driven



E&P TECHNOLOGY

Drive exploration success, production enhancement and green practices



DIGITAL TRANSFORMATION

Embrace digital technologies to drive efficiency

Value through Business Diversification



E&P-RELATED BUSINESS

*Explore for value enhancement
e.g. decommissioning*



GAS VALUE CHAIN

Extend presence across the gas chain

Midstream LNG: Invest to support E&P and develop diversified LNG supply and trading portfolio for Asian market

Gas Market: Create market beyond Thailand; and capture value along the gas-to-power chain



RENEWABLE ENERGY

Evaluate strategic and competency compatibility



Company Overview

Financial Performance

Strategy and Growth

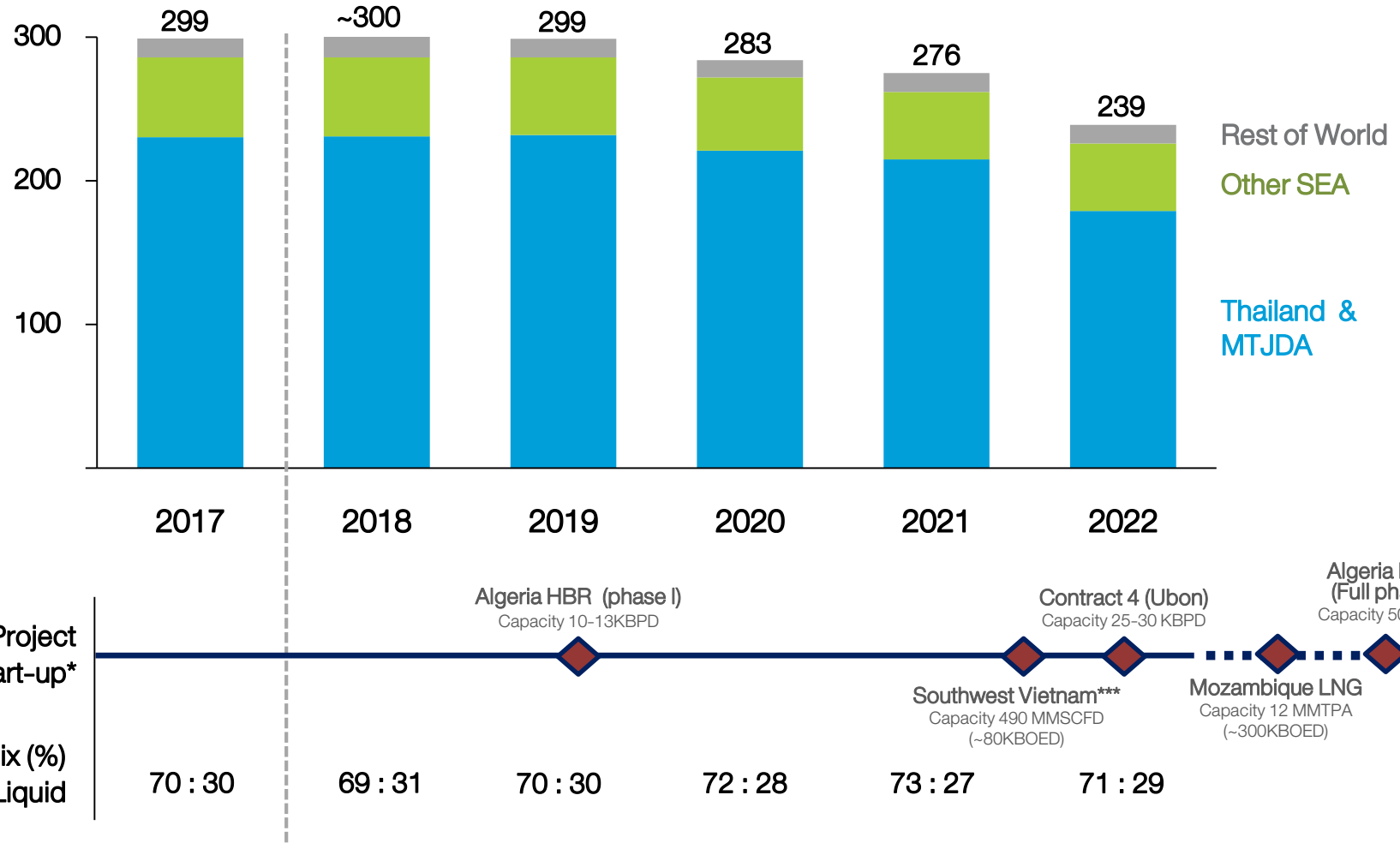
Investment Plan & Outlook

Sales Volume (excluding additional stakes in Bongkot)

M&As and concession bidding remain key upside



Unit : KBOED



Note: Excludes the sales volume contribution from the acquisition of additional 22.2222% stakes in Bongkot from Shell around 35 KBOED from 21 June 2018 onwards

* Subject to FID timing

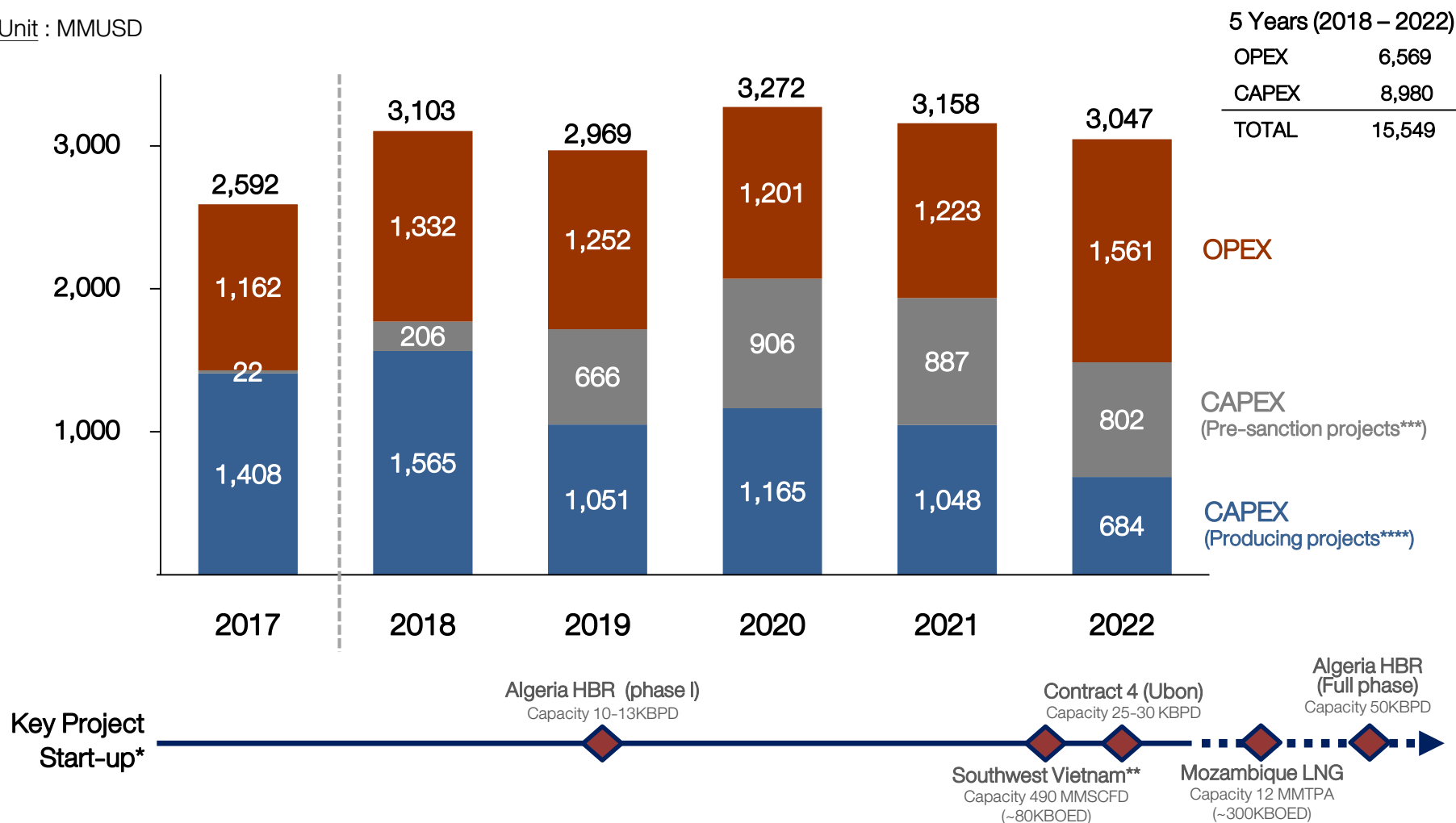
** Expected project start-up in late 2021

Investment Plan (excluding additional stakes in Bongkot)

Disciplined spending on core assets for future production growth



Unit : MMUSD



Note: Excludes the related investment from the acquisition of additional 22.2222% stakes in Bongkot from Shell

* Subject to FID timing

** Expected project start-up in late 2021

*** Pre-sanction projects include Mozambique LNG, Contract 4 (Ubon), Algeria HBR and Southwest Vietnam

**** Includes exploration and appraisal in all projects and head office CAPEX

Financial Outlook

Expect to deliver strong core financial performance



**Average
Sales Volume***
KBOED

**Average
Gas Price****
USD/MMBTU

Unit Cost
USD/BOE

EBITDA Margin
% of sales volume

Q2 2018

FY 2018

~297

~300

~6.3

~6.3

~31

30-31

70-75

Note: * Excludes sales volume from the acquisition of additional stakes in Bongkot

** Based on FY2018 Dubai oil price at 63 \$/BBL

Key Takeaways

Maximizing value through solid growth platforms

Concrete plans for reserve accretion

- Strive to win Bongkot and Erawan bidding
- Series of M&A deals execution
- Accelerate FID of key pre-development projects
- Exploration expansion to prolific areas

Competitive cost base and strong margin

- Competitive cost base in top quartile
- Sustain ~70% EBITDA margin amid oil price volatility
- Solid capital structure with \$5.1 Bn cash on hand and low gearing

Commitment to shareholders' value creation

- A consistent dividend-paying company with a track record of over 15 years

Well prepared for future challenges

- Organizational transformation to cope with changing industry landscape as well as to enhance operational efficiency
- Gas-weighted portfolio in line with global energy trend
- Diversification to LNG value chain with PTT
- Explore new business opportunities



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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Passion to Explore
For a Sustainable Future



Q1 2018 Financial Results

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Organization Structure

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Ratio and Formula

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Summary of Q1 2018 Financial Results

Solid net income supported by improved selling price and cost management



Unit : MMUSD

Statement of Income	Q4 17	Q1 18	% QoQ	Q1 17	% YoY
Total Revenues	1,271	1,240	(2%)	1,092	14%
Sales	1,202	1,161	(3%)	1,040	12%
Others	69	79	14%	52	52%
Sales Volume (BOED)	313,054	293,099	(6%)	304,108	(4%)
Sales Price (USD/BOE)	41.74	44.01	5%	38.00	16%
Total Expenses	982	817	(17%)	743	10%
Major Expenses:					
Operating Expenses	168	141	(16%)	142	(1%)
Exploration Expenses	23	3	(87%)	1	>100%
DD&A	436	408	(6%)	420	(3%)
Income Tax Expense	64	5	(92%)	(8)	>100%
(Gain)/Loss on FX	(14)	(25)	79%	(3)	>100%
Net Income from Continuing Operations	289	423	46%	349	21%
Profit (Loss) from Discontinued Operations	(0.35)	-	100%	-	-
Net Income	289	423	46%	349	21%
Recurring Net Income	240	304	27%	211	44%
Non-Recurring*	49	119	>100%	138	(14%)

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

Strong core earnings and EBITDA margin

	Q4 17	Q1 18	Q1 17
Sales and Revenue from Pipeline Transportation (MMUSD)	1,224	1,184	1,053
EBITDA (MMUSD)	825	879	776
Net Income (MMUSD)	289	423	349
Recurring Net Income (MMUSD)	240	304	211
Earning Per Share (USD)	0.07	0.10	0.09
Key Financial Ratios			
EBITDA Margin (%)	67	74	74
Return on Equity (%) (LTM)	5	6	5
Return on Capital Employed (%) (LTM)	5	5	5
Return on Equity (%) (LTM, Recurring Net Income)	7	8	5
Return on Capital Employed (%) (LTM, Recurring Net Income)	7	7	5

Note:

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

Financial Performance : Balance Sheet

Healthy balance sheet with net cash position

	YE 17	Q1 18
Total Assets (MMUSD)	19,220	19,745
- Cash & cash equivalents* (MMUSD)	4,468	5,095
Total Liabilities (MMUSD)	7,703	7,816
- Interest bearing debt (MMUSD)	2,907	2,866
Equity (MMUSD)	11,517	11,929
Key Financial Ratios		
Total Debt to Equity (X)	0.25	0.24
Net Debt* to Equity (X)	(0.14)	(0.19)
Total Debt to Capitalization (X)	0.20	0.19
Total Debt to EBITDA (X)	0.95	0.91
EBITDA Interest Coverage (X)	23	23

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

Weighted Average Cost of Debt :** 4.62%

Average Loan Life :** 7.10 years

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

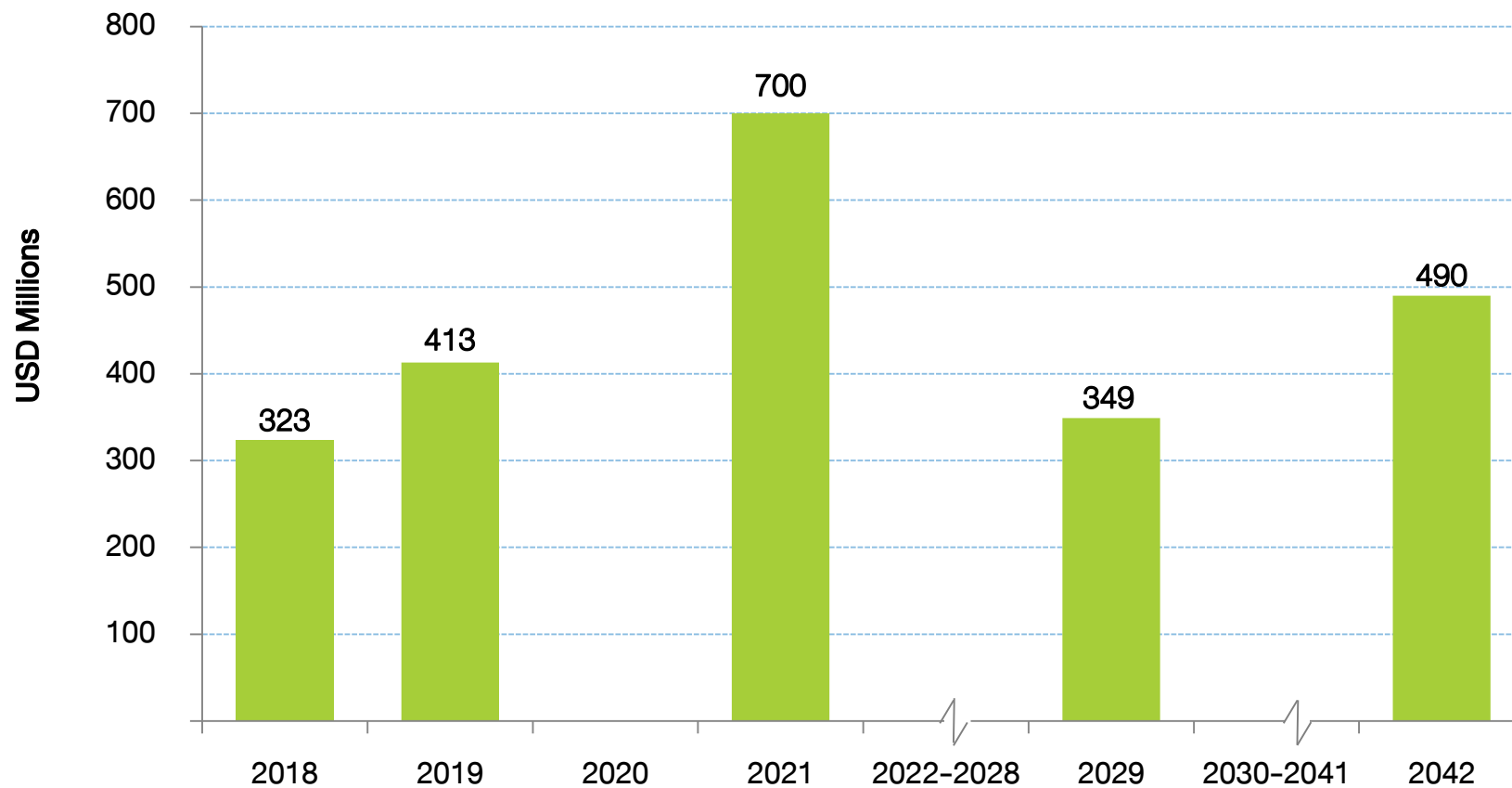
Net Debt = Total Debt less Cash & Cash Equivalents and Short-term Investments

** Excludes hybrid bonds

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

Debt Maturity Profile

(as of end of April 2018)



Note: Excludes Hybrid bonds

Unit: USD Millions or equivalent after cross currency swap

Priority on Safety and Sustainability

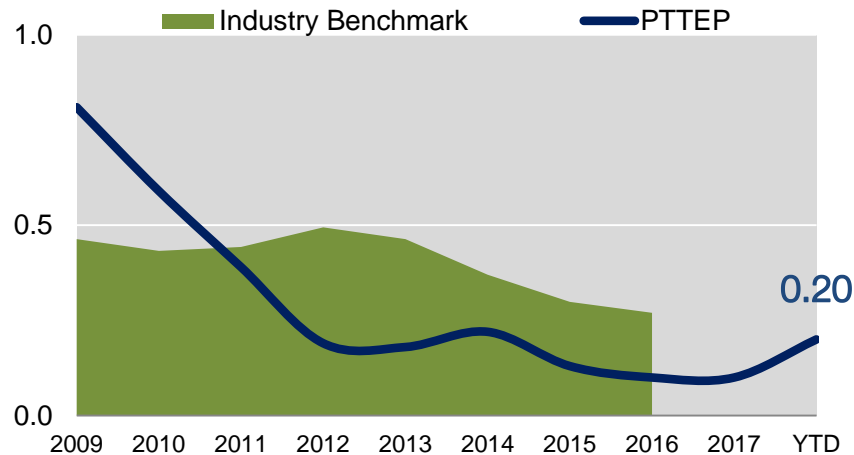
Deliver high safety performance and ensure our commitment to all stakeholders

Safety

Maintain high safety standard

of incidents per million man hours

(Lost time injury incident frequency, LTIF)



Safety of PTTEP employees and contractors in every aspect of our operations is key to achieve the goal of "Target Zero"

Sustainability

Create a long-term value for society



PTTEP won 6 international CSR awards 2018 from 4 key CSR projects

- 3 Awards from the 10th Annual Global CSR Summit and Awards and the Global Good Governance Awards 2018, *Indonesia*
- 1 Award from the Area Responsible Entrepreneurship Awards 2018, *Philippines*
- 2 Awards from the 2018 Asia-Pacific Stevie Awards, *Hong Kong*



H.T.M.S. Underwater Learning Site Project



Free Clinic Project



Waste to Energy Project



Crab Hatchery Learning Center Project

Sustainable development

Pursue long-term growth with social and environmental wellness



MEMBER OF

**Dow Jones
Sustainability Indices**

In Collaboration with RobecoSAM

2017 DJSI Listed Company

PTTEP has been selected as a member of the 2017 Dow Jones Sustainability Indices (DJSI) in the DJSI World Oil and Gas Upstream & Integrated Industry for its fourth consecutive year.



Proven business integrity

Asia's Icon on Corporate Governance Award
Corporate Governance Asia Magazine

Platinum Corporate Award
The Asset Corporate Awards 2017

Sustainability Report Award 2017
Securities and Exchange Commission



FTSE4Good

FTSE4Good Emerging Index 2017

PTTEP becomes a constituent of the FTSE4Good Emerging Index 2017 for a second consecutive year



Exemplary social contributor

Platinum and Gold Awards for 3 CSR Projects:
Best Environmental Excellence and Community Program

the 10th Annual Global CSR Summit 2018

Silver Award for Free Clinic and Waste to Energy Project:
the 2018 Asia-Pacific Stevie Awards Program

Green driver to environment

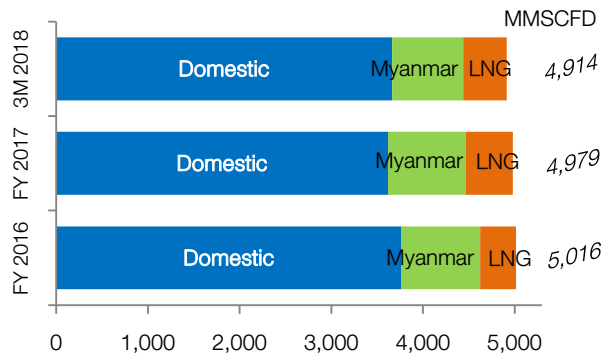
Water A List Award
Carbon Disclosure Project (CDP)

2017 LESS Award Letter of Recognition
Thailand Greenhouse Gas Management Organization

Thailand Occupational Safety and Health Awards
the Ministry of Labour

Thailand Energy Overview

Natural Gas Supply



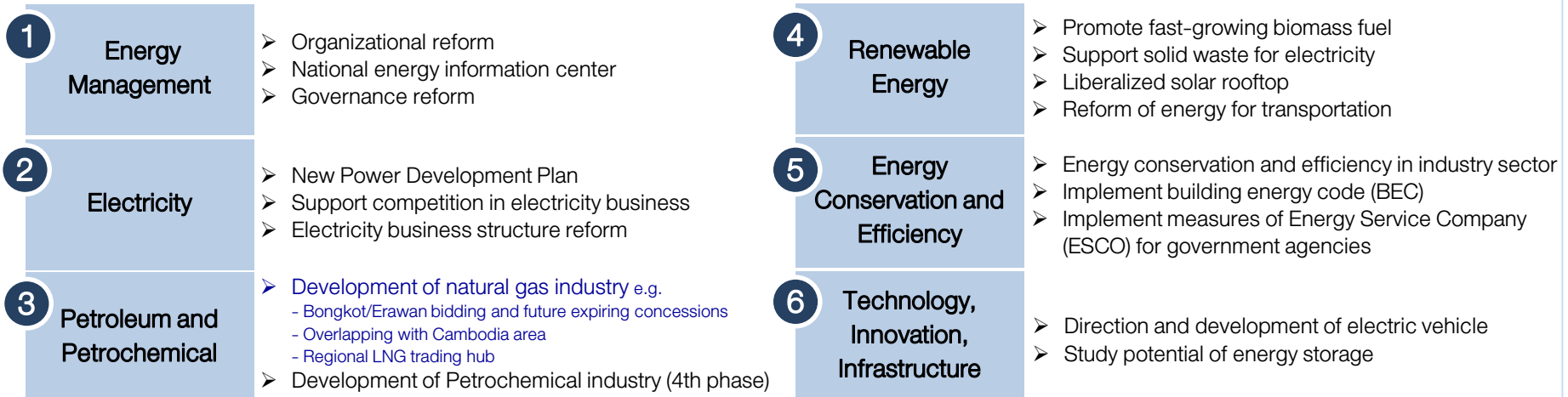
Natural Gas Consumption



- Slight decline in domestic production and Myanmar piped gas imports as a result of lower demands
- Domestic volumes were pressured due to growth in LNG import

Source: Gas supply and consumption from EPPO

Thailand Energy Reform - Focus on 6 dimensions

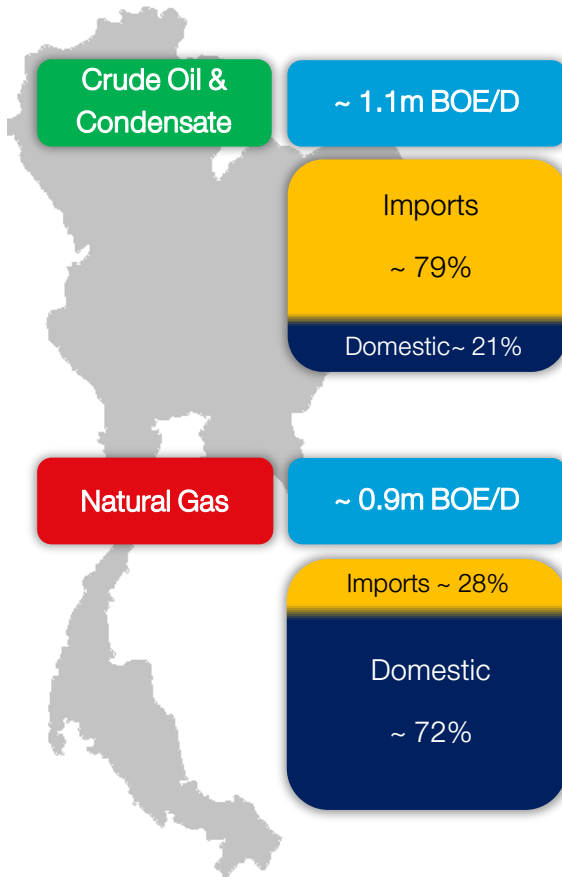


Source: Announcement of the Office of the Prime Minister regarding national reform plan, announced on 6 April 2018

Thailand's Energy Value Chain

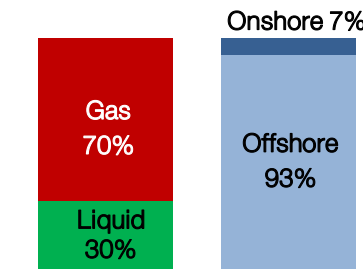
PTTEP contributes almost 1/3 of Thailand's petroleum production

Thailand's Oil and Gas Demand

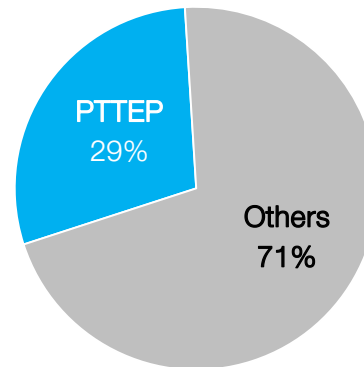


Thailand Petroleum Production 2017

% 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

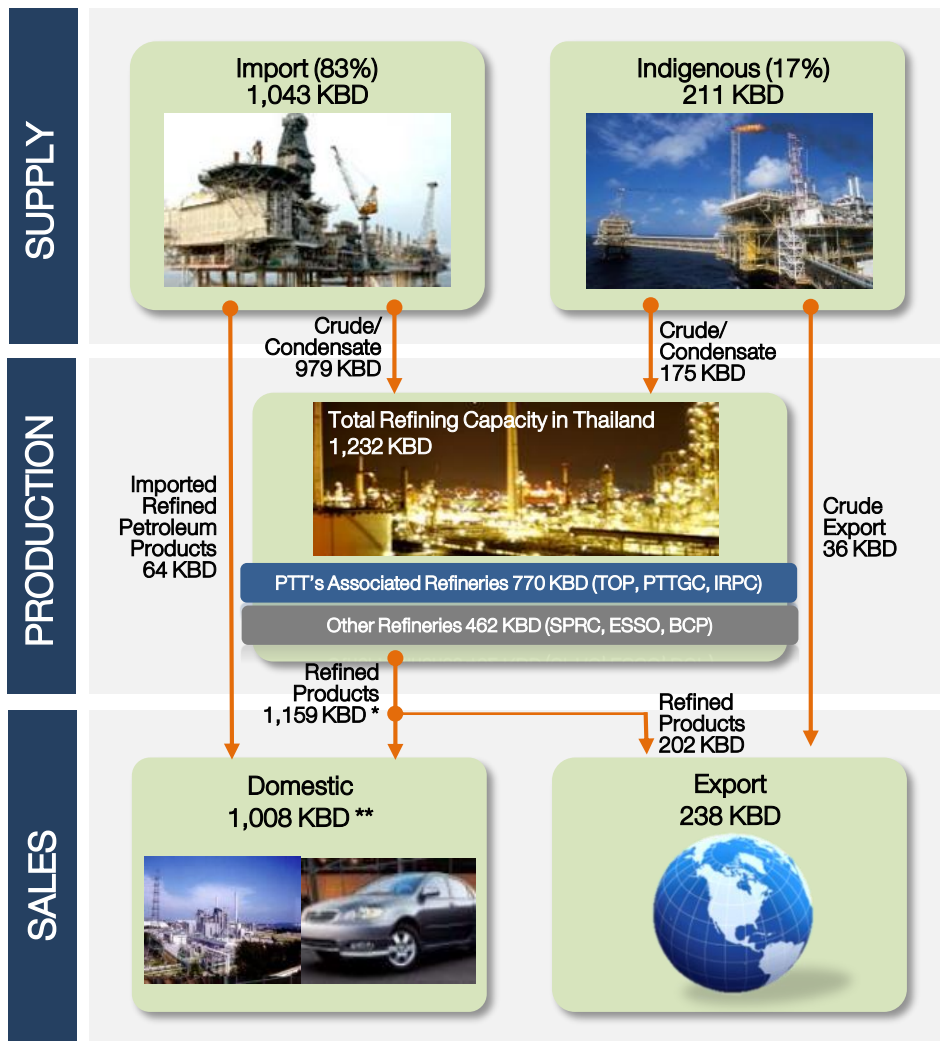
Source: Energy Policy and Planning Office (EPPO) and Department of Mineral Fuels (DMF)

Thailand's Oil and Gas Balance

January – March 2018

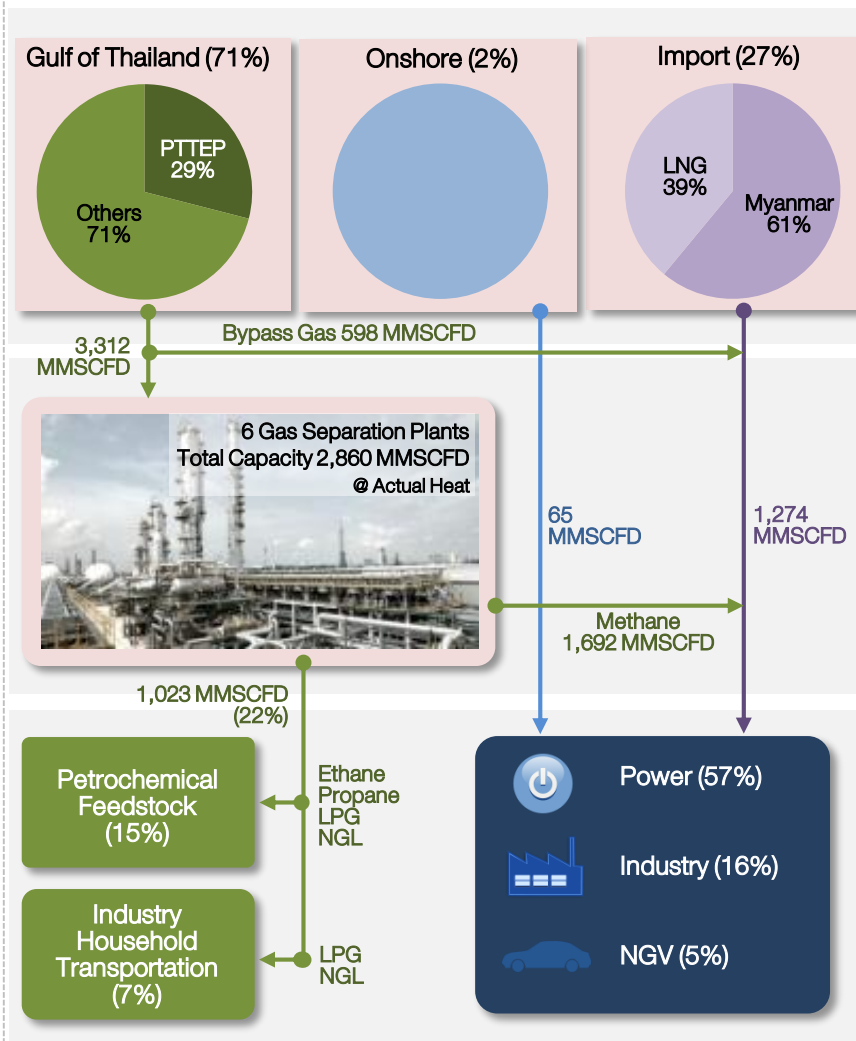
Oil Balance

Maintains stability supply through adequate refining capacity



Natural Gas Balance

Main driver of the Thailand economy



Source: PTIT

Remark: * Refined product from refineries = 1,051 KBD, including domestic supply of LPG from GSPs and Petrochemical Plants = 108 KBD

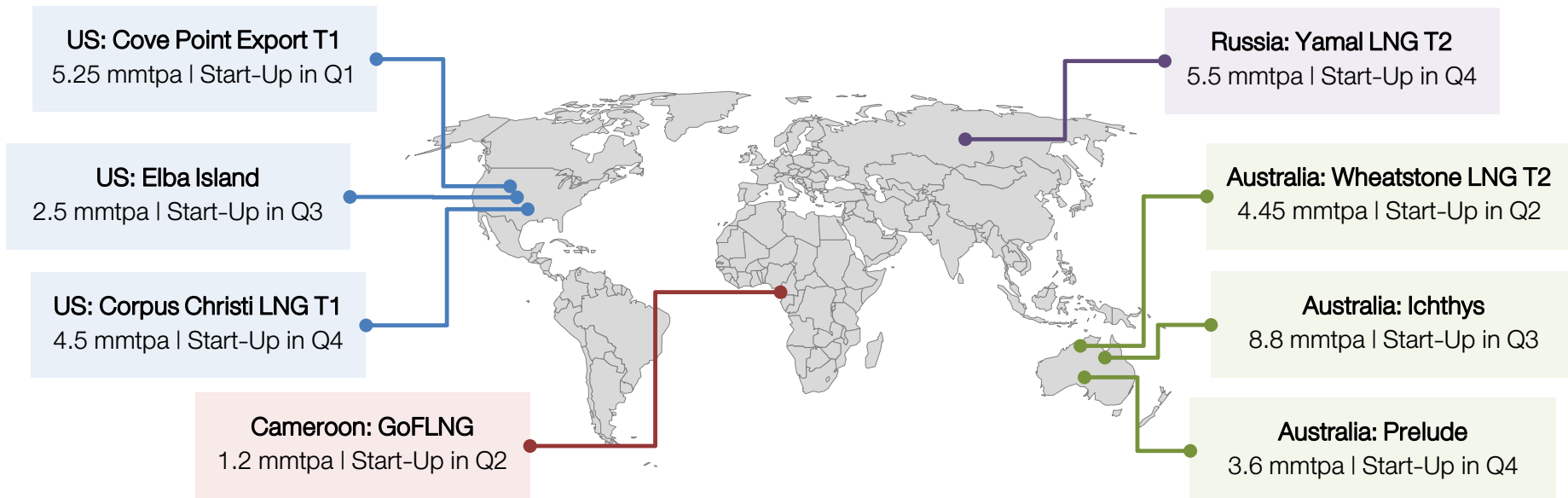
** Not included Inventory

MMSCFD @ Heating Value 1,000 Btu/ft³

LNG Updates

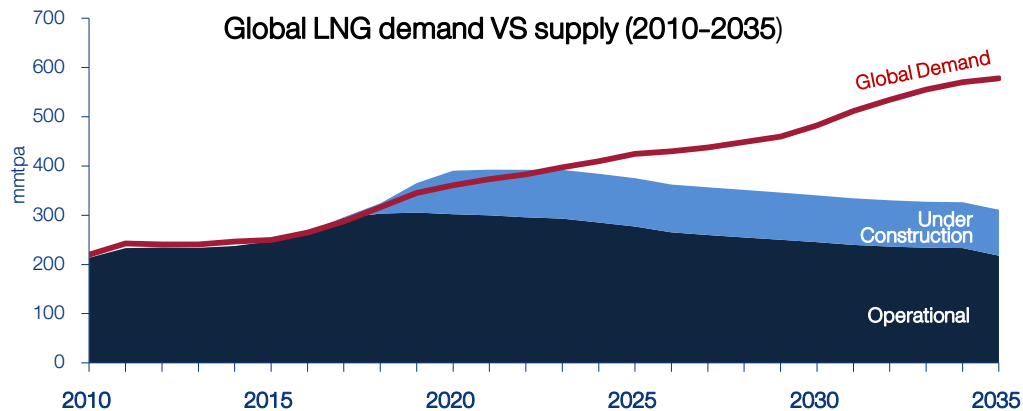
LNG market remains oversupplied, but expected to rebalance from 2023 onwards

Key Projects with expected start-up in 2018



Global LNG Situation

Global LNG demand VS supply (2010-2035)



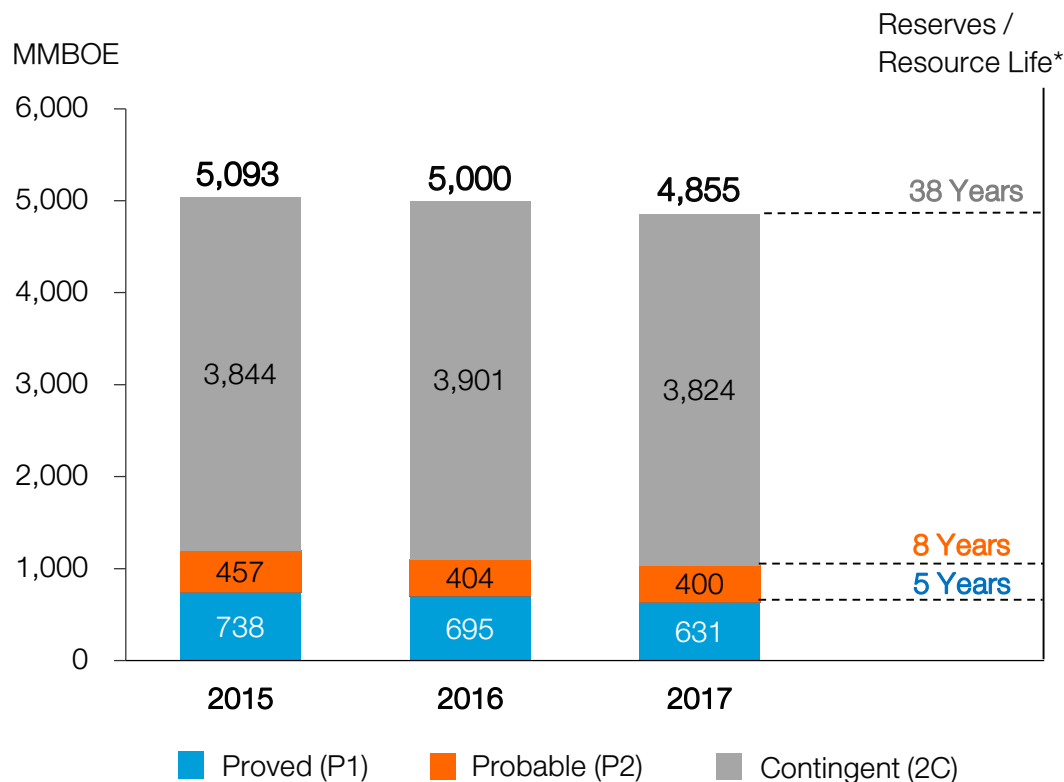
- **Short-term LNG market (2018):** Continue to be oversupplied with average Asian spot LNG forecasted range of 6.5-7.6 \$/MMBTU



- Oversupply conditions are expected to rebalance from 2023 onwards, however, uncertainty in demand growth especially from China, will impact the timing of rebalancing point

Reserves and Resources

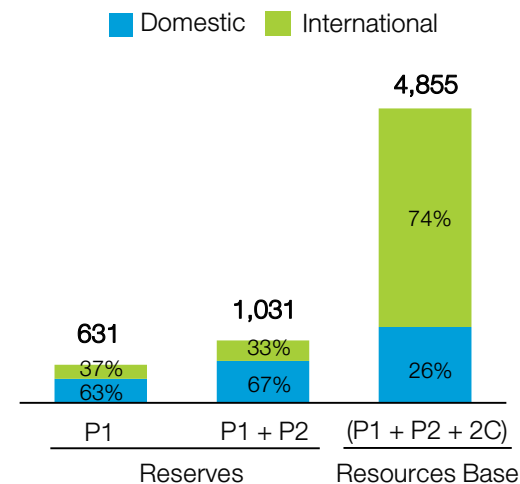
Maintained reserve life with majority of reserves base in SEA



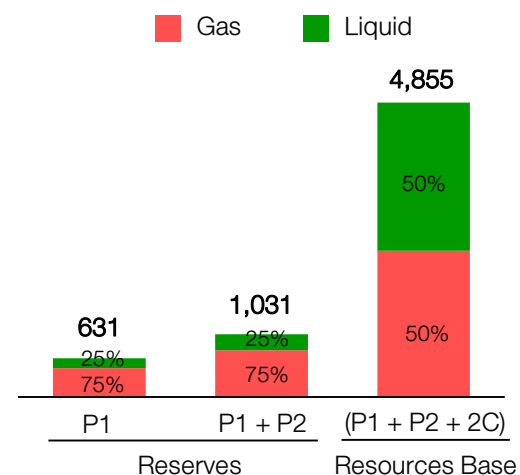
5-Year Average Proved Reserves Replacement Ratio (RRR)

2015	2016	2017
0.50x	0.57x	0.58x

2017 by Geography



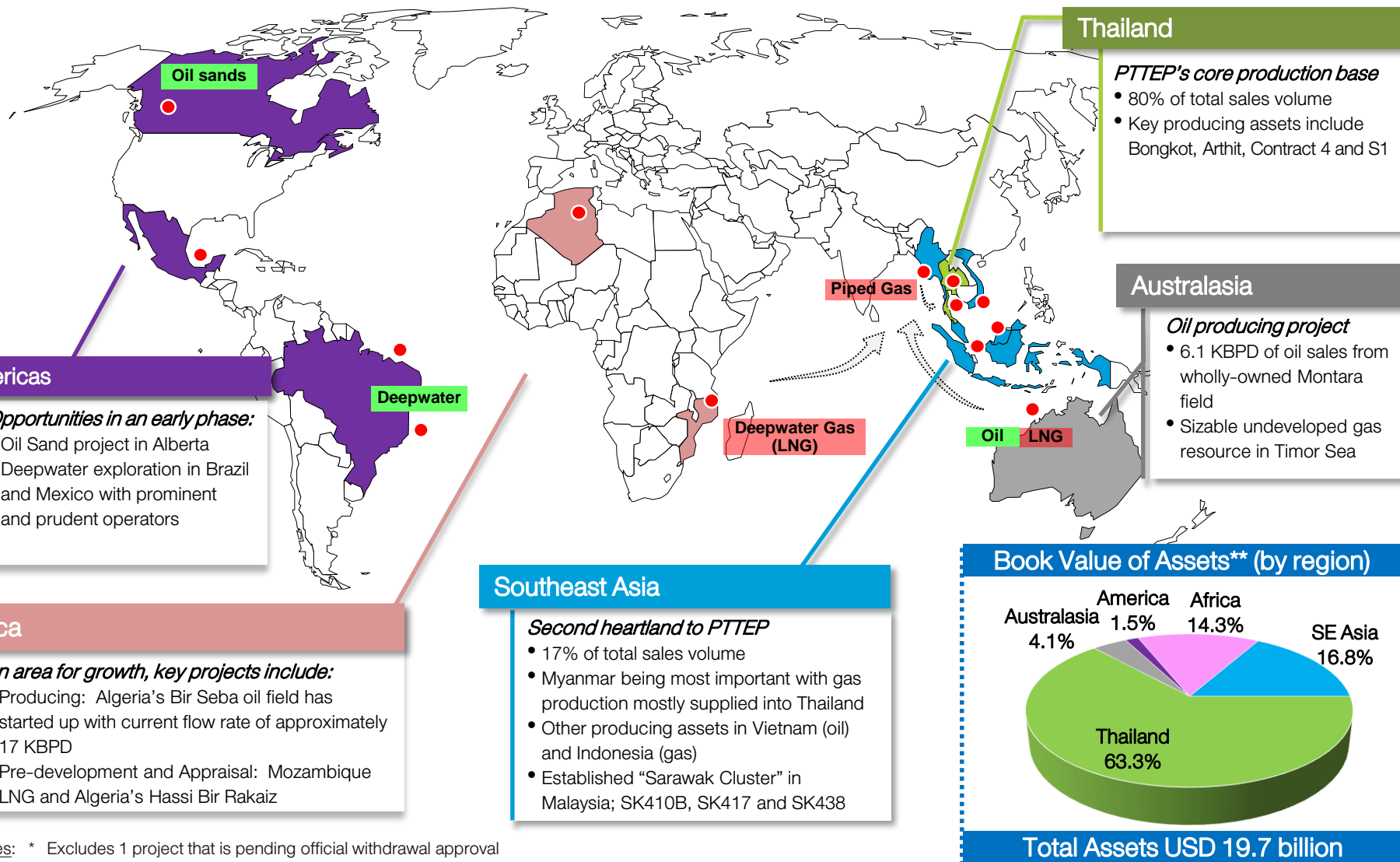
2017 by Product Type



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

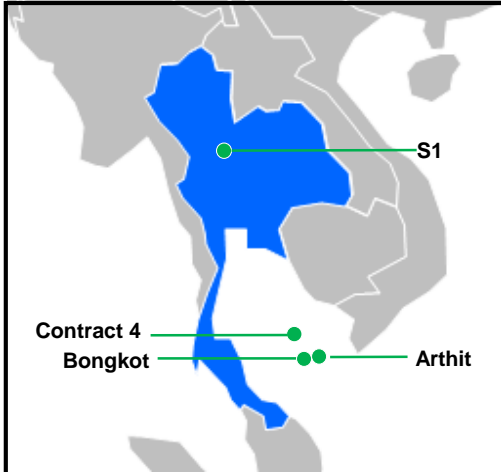
Diversified International Portfolio

Worldwide operations: 40 projects* in 11 countries



Notes: * Excludes 1 project that is pending official withdrawal approval

** Information dated as of Q1 2018



● Production / Ramp-up Projects

Bongkot (44.4445% interest)

- Bongkot's natural gas sales volume of 841 MMSCFD in 3M2018.
- Average condensate sales volume was 27 KBPD in 3M2018.

S1 (100% interest)

- S1 is the largest onshore crude oil production field in Thailand.
- Average crude oil sales volume was 25 KBPD in 3M2018.

Arthit (80% interest)

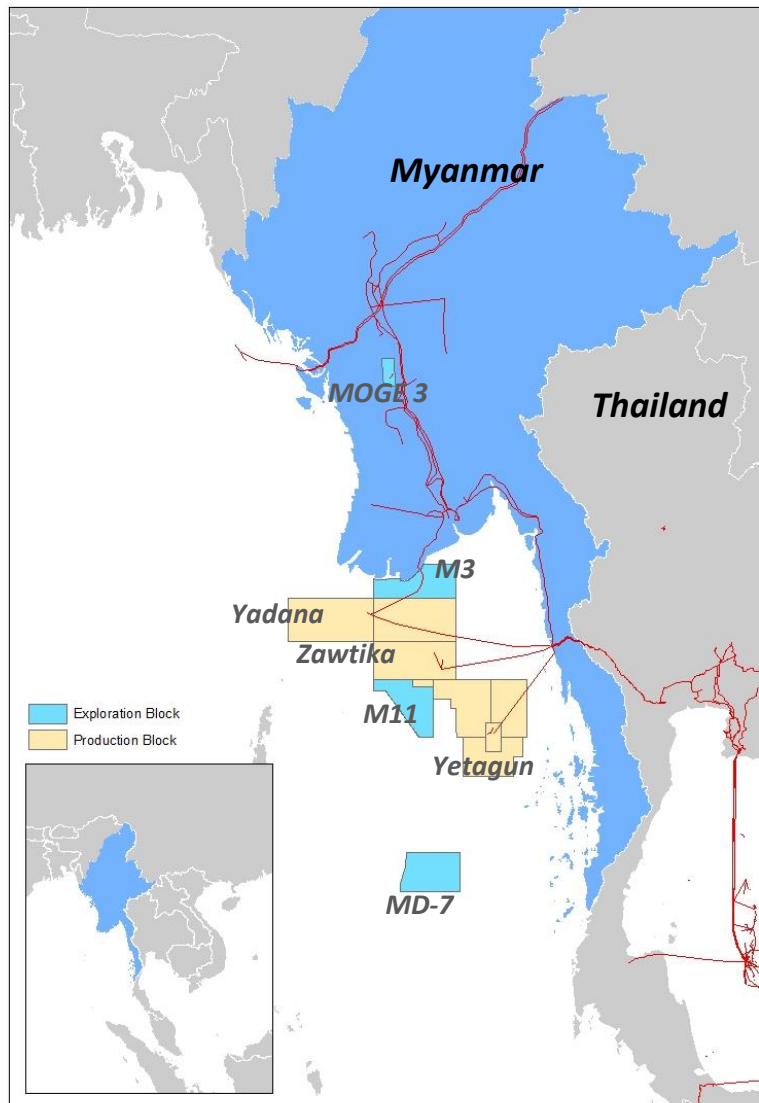
- Average sales volume in 3M2018 was 228 MMSCFD of natural gas and 11 KBPD of condensates.

Contract 4 (60% interest)

- Acquired from Hess Corporation in 2014.
- Contract 4 had an average sales rate of 385 MMSCFD for natural gas and 17 KBPD for condensate in 3M2018.

Southeast Asia: Myanmar

Significant contribution to growth



- Participating in three producing gas fields which supply gas to both Thailand and Myanmar: Yadana, Yetagun, Zawtika.
- Operate Zawtika project, brought online in March 2014 with current gas supply of 281 MMSCFD in 3M2018.
- Significant exploration acreage both onshore and offshore in the Moattama Basin.

Project Status		
Producing	Appraisal	Exploration
<ul style="list-style-type: none">• Yadana (25.5% WI)• Yetagun (19.3% WI)• Zawtika (80% WI)	<ul style="list-style-type: none">• M3 (80% WI)	<ul style="list-style-type: none">• MOGE 3 (75% WI)• M11 (100% WI)• MD-7 (50% WI)

Note: WI – working interest

Southeast Asia: Vietnam and Indonesia

Reinforcing regional exposure through strategic partnerships

Vietnam 16-1



● Production / Ramp-up Projects

Natuna Sea A



Vietnam 16-1 (28.5% interest)

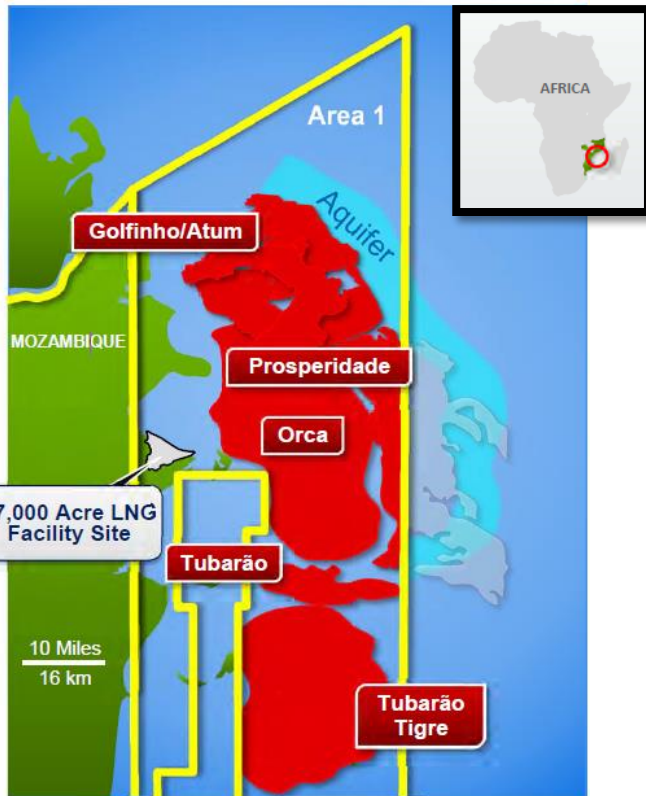
- Average sales volume of crude oil was 17 KBPD in 3M2018.
- The project is preparing further production drilling plan aiming to maintain production plateau.

Natuna Sea A (11.5% interest)

- Average sales volume of natural gas was 222 MMSCFD in 3M2018.

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 multiple HOAs signed

Regulatory

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

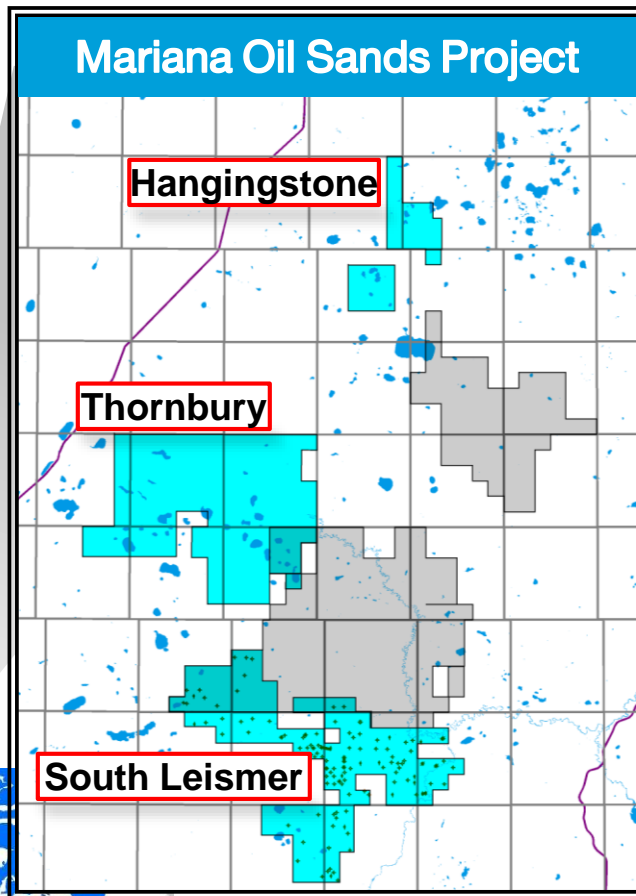
Financing

- ✓ On-going negotiation for project financing

Onwards to initial phase of 12 MMTPA

America: Canada Oil Sands

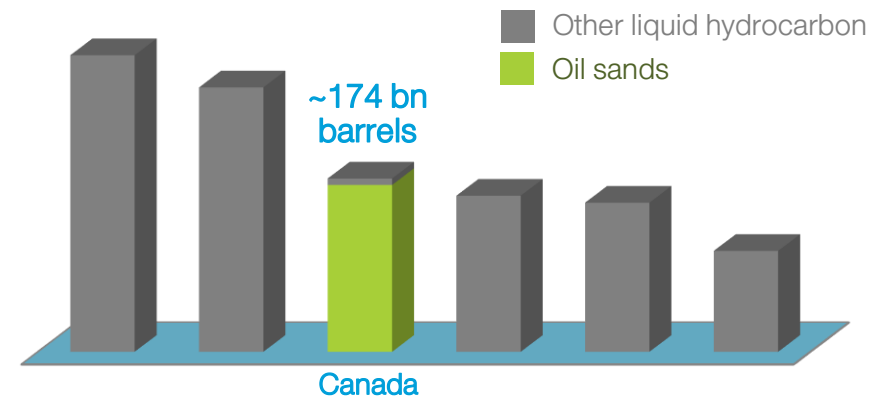
Flexibility to pursue long-term investment from the oil sands project



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

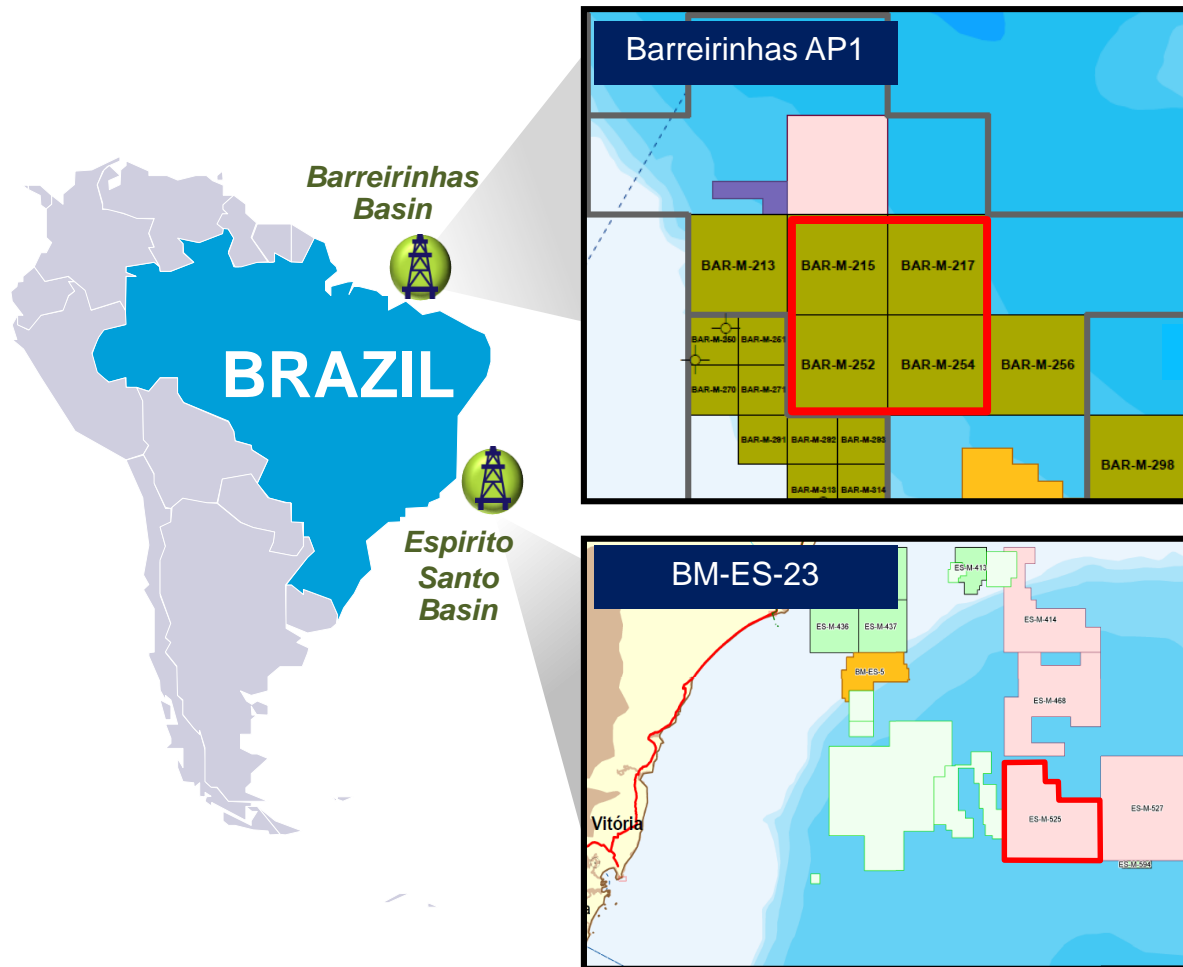
Approximately 96% of the reserves in Canada, the world's 3rd largest oil reserves, is oil sands



Source: Company data, BP Statistical Review of World Energy 2014

America: Brazil Deepwater

Entry into high potential petroleum province at exploration phase



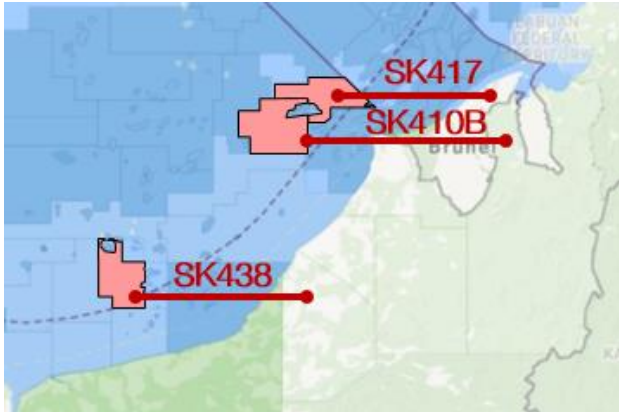
- Farm-in 25% from BG Group in 2014
 - Operated by Shell Brasil (65% interest)
 - Four offshore exploration blocks: BAR-M-215, BAR-M-217, BAR-M-252 and BAR-M-254
 - Completed 3D seismic activities and is in the process of assessing the petroleum potential
-
- Acquired 20% interest from Shell in Q3 2014
 - Partnered with Petrobras (65%, operator) and INPEX (15%)

Source : The National Agency of Petroleum, Natural Gas and Biofuels, Brazil (the ANP)

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

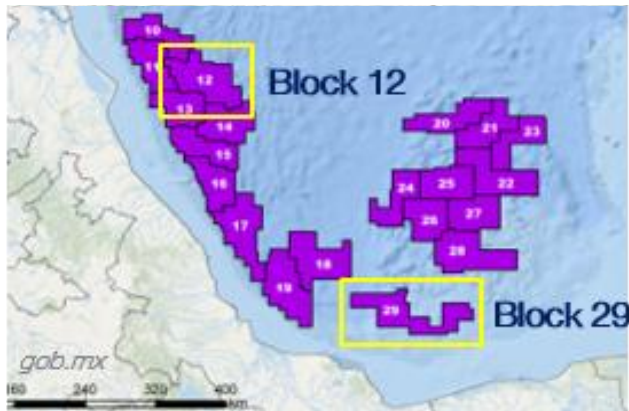
Location: Sarawak Basin, Malaysia

Characteristic: Shallow-water with low operational risk

Exploration Strategy:

- Expect exploration drilling activities during 2018-2021
- "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)	Petronas	80%
	JX Nippon	10%
	PTT Global LNG	10%



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 of Q1 2018)	3M2018 Average Sales Volume **		2018 Key Activities
					Gas	Oil and Other	
Production Phase							
Thailand and JDA							
1	Arthit	OP	80%	Chevron MOECO 16% 4%	228 MMSCFD	Condensate: 11 k BPD	<ul style="list-style-type: none">Ensure gas deliverability level at DCQ***Drill development wells
2	B6/27	OP	100%		-	-	<ul style="list-style-type: none">Prepare drilling plan
3	B8/32 & 9A		25%	Chevron MOECO KrisEnergy Palang Sophon 51.66% 16.71% 4.63% 2%	77 MMSCFD	Crude: 21 k BPD	<ul style="list-style-type: none">Drill development wellsPerform waterflood activities
4	Bongkot	OP	44.4445%	TOTAL Shell 33.3333% 22.2222%	841 MMSCFD	Condensate: 27 k BPD	<ul style="list-style-type: none">Ensure gas deliverability level at DCQ***Drill development wellsInstall wellhead platforms
5	Contract 3 (Formerly Unocal III)		5%	Chevron MOECO 71.25% 23.75%	659 MMSCFD	Crude: 23 k BPD Condensate: 24 k BPD	<ul style="list-style-type: none">Drill exploration / appraisal / development wellsInstall wellhead platformsPerform waterflood activities
6	Contract 4 (Formerly Pailin)		60%	Chevron MOECO 35% 5%	385 MMSCFD	Condensate: 17 k BPD	<ul style="list-style-type: none">Ensure gas deliverability level at DCQ***Drill development wellsInstall wellhead platformsReview development plan of Ubon field
7	E5		20%	ExxonMobil 80%	7.4 MMSCFD	-	
8	G4/43		21.375%	Chevron MOECO Palang Sophon 51% 21.25% 6.375%	1.7 MMSCFD	Crude: 5.4 k BPD	<ul style="list-style-type: none">Drill development wellsPerform waterflood activities
9	G4/48		5%	Chevron MOECO 71.25% 23.75%	3.9 MMSCFD	Crude: 1.2 k BPD	
10	L53/43 & L54/43	OP	100%		-	Crude: 1.0 k BPD	<ul style="list-style-type: none">Drill exploration / appraisal / development wells
11	PTTEP1	OP	100%		-	Crude: 224 BPD	<ul style="list-style-type: none">Drill development wellsPerform waterflood activities
12	S1	OP	100%		15 MMSCFD	Crude: 25 k BPD	<ul style="list-style-type: none">Drill exploration / development wellsEnhance oil recovery program includes waterflooding and artificial lift
13	Sinphuhorm	OP	55%	Apico ExxonMobil 35% 10%	51 MMSCFD	Condensate: 177 BPD	<ul style="list-style-type: none">Drill development wells
14	MTJDA	JOC	50%	Petronas-Carigali 50%	361 MMSCFD	Condensate: 7.0 k BPD	<ul style="list-style-type: none">Drill development wellsInstall wellhead platforms
15	L22/43	OP	100%		-	Crude: 44 BPD	<ul style="list-style-type: none">Drill development wells

* 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 (as of Q1 2018)	3M2018 Average Sales Volume **		2018 Key Activities
					Gas	Oil and Other	
Production Phase							
Overseas							
16	Vietnam 9-2	JOC	25%	PetroVietnam 50% SOCO 25%	13 MMSCFD	Crude: 2.8 k BPD	<ul style="list-style-type: none">Maintain production operationPerform reservoir management
17	Yadana		25.5%	TOTAL 31.24% Chevron 28.26% MOGE 15%	752 MMSCFD	-	<ul style="list-style-type: none">Ensure gas deliverability level at DCQ***
18	Yetagun		19.3178%	Petronas-Carigali 30.00140% MOGE 20.4541% Nippon Oil 19.3178% PC Myanmar 10.90878% (Hong Kong)	169 MMSCFD	Condensate: 2.0 k BPD	<ul style="list-style-type: none">Drill appraisal / development wellsPerform reservoir Management
19	Vietnam 16-1	JOC	28.5%	PetroVietnam 41% SOCO 28.5% OPECO 2%	4.0 MMSCFD	Crude: 17 k BPD	<ul style="list-style-type: none">Drill development wellsMaintain production operation
20	PTTEP Australasia (PTTEP AA)	OP	90%-100% (varied by permits)		-	Crude: 6.1 k BPD	<ul style="list-style-type: none">Maintain production operation
21	Natuna Sea A		11.5%	Premier Oil 28.67% KUFPEC 33.33% Petronas 15% Pertamina 11.5%	222 MMSCFD	Crude: 1.6 k BPD	<ul style="list-style-type: none">Maintain production operation
22	Zawtika (M9 & a part of M11)	OP	80%	Myanma Oil and Gas Enterprise (MOGE) 20%	281 MMSCFD	-	<ul style="list-style-type: none">Maintain production rateDrill development wellsInstall wellhead platforms
23	Algeria 433a & 416b (Bir Seba)	JOC	35%	PetroVietnam 40% Sonatrach 25%	-	Crude: 1.8 k BPD (net entitlement)	<ul style="list-style-type: none">Maintain production operation

* 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

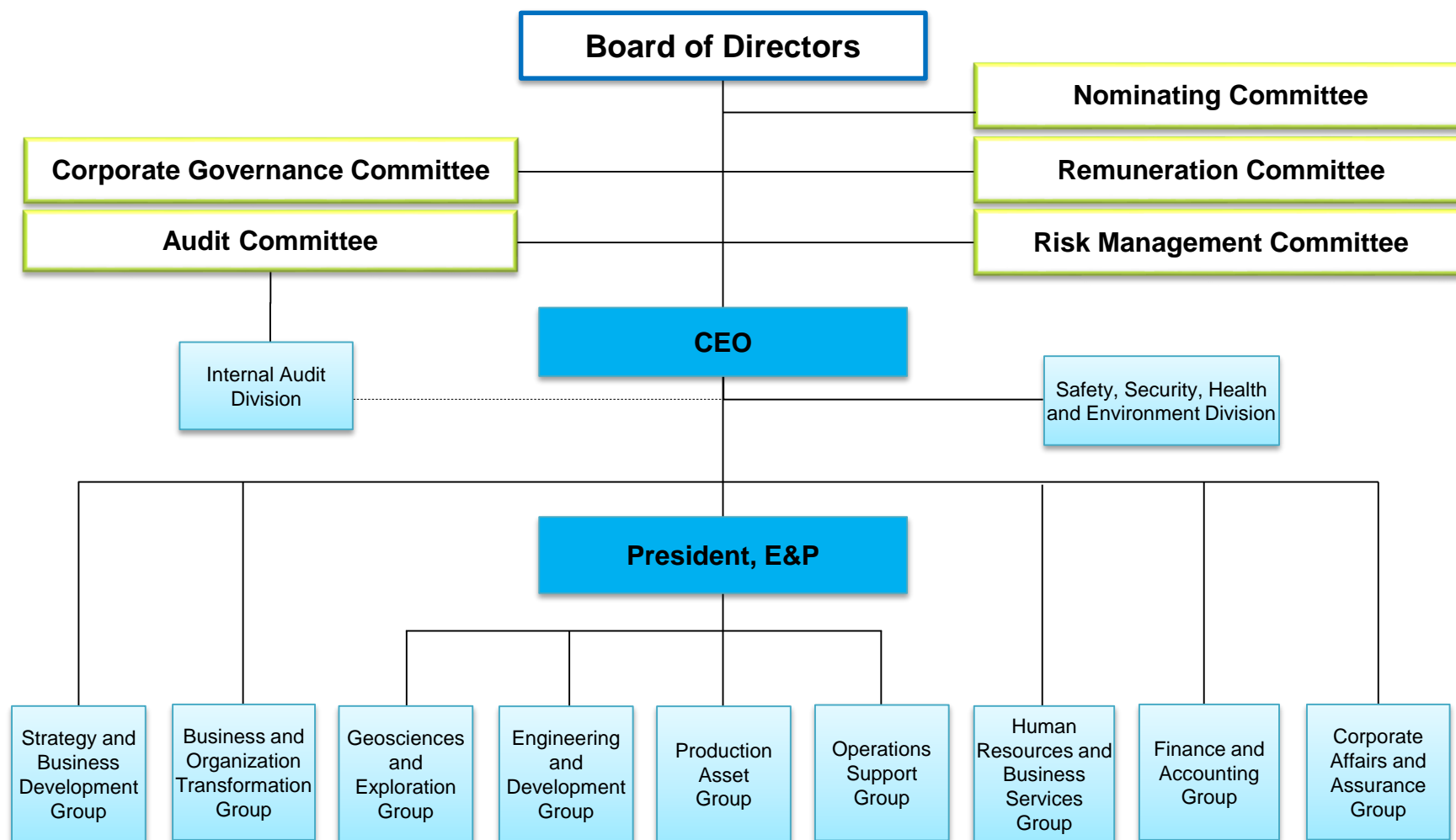
Exploration phase

	Project	Status*	PTTEP's Share	Partners (as of Q1 2018)	2018 Key Activities
Exploration Phase					
Thailand and JDA					
24	G9/43	OP	100%		
Overseas					
25	Myanmar M3	OP	80%	MOECO 20%	• Negotiate the commercial framework with the Myanmar government
26	Mozambique Rovuma Offshore Area 1		8.5%	Anadarko, Mitsui, 26.5%, 20% ENH, ONGC 15%, 10% Beas Rovuma, Bharat 10%, 10%	• Preparatory work for Final Investment Decision (FID) including LNG marketing and finalization of remaining commercial contracts
27	Algeria Hassi Bir Rekaiz	OP	24.5%	CNOOC 24.5% Sonatrach 51%	• Conduct pre-development study and prepare project development plan
28	Myanmar M11	OP	100%		• Acquire 3D seismic
29	Vietnam B & 48/95		8.5%	PVN 65.88% MOECO 25.62%	• Negotiate a GSA with the Vietnamese government
30	Vietnam 52/97		7%	PVN 73.4% MOECO 19.6%	• Negotiate a GSA with the Vietnamese government
31	Myanmar MD-7	OP	50%	TOTAL 50%	• Assess resource potential and prepare exploration drilling
32	Mariana Oil Sands	OP	100%		• Assess appropriated development approach
33	Barreirinhas AP1		25%	Shell Brasil 65% Mitsui E&P Brasil 10%	• Assess petroleum potential
34	Myanmar MOGE 3	OP	75%	Palang Sophon 10% MOECO 10% WinPreciousResources 5%	• Assess petroleum potential and prepare exploration drilling plan
35	Brazil BM-ES-23		20%	Petrobras 65% INPEX 15%	• Assess petroleum potential
36	Sarawak SK410B	OP	42.5%	KUFPEC 42.5% Petronas-Carigali 15%	• Assess petroleum potential and prepare exploration drilling plan
37	Sarawak SK417	OP	80%	Petronas-Carigali 20%	• Acquire 3D seismic
38	Sarawak SK438	OP	80%	Petronas-Carigali 20%	• Acquire 3D seismic
39	Mexico block 12 (2.4)		20%	PC Carigali Mexico 60% Ophir Mexico 20%	• Assess petroleum potential
40	Mexico block 29 (2.4)		16.67%	Repsol Mexico 30% PC Carigali Mexico 28.33% Sierra Nevada 25%	• Assess petroleum potential

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