PTTEP

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Dow Jones
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In Collaboration with RobecoSAM



Citi-Krungsri Securities Thailand Corporate Day 2018

24 May 2018 I Bangkok



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]

ptt

Thailand's national energy company

65.3%[2]

PTTEP

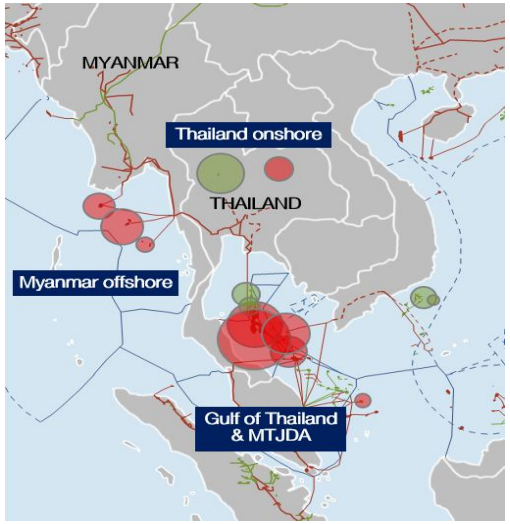
Credit ratings equivalent to parent and country		
S&P	Moody's	TRIS
BBB+	Baa1	AAA

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

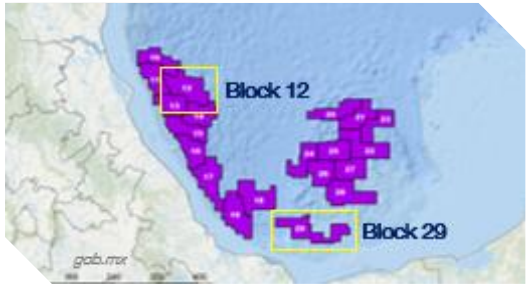
- ✓ Healthy margin and liquidity
  - **74%** EBITDA Margin
  - **$5.1Bn** Cash on hand
  - **$1Bn** Operating Cash Flow
  - **0.24x** Gearing ratio

Unlocking value through concrete growth platforms

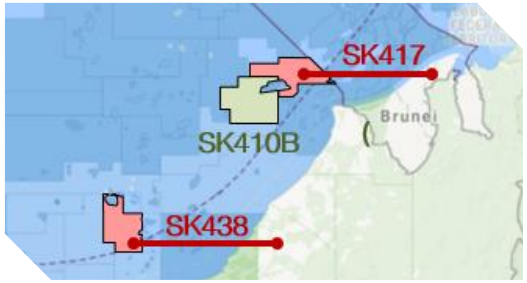
Acquired 22.2222% stake from Shell



Expanded Exploration Portfolio



2 Deepwater blocks in Mexico with prudent operators



2 Shallow-water blocks in Malaysia as an operator



Company Overview

Financial Performance

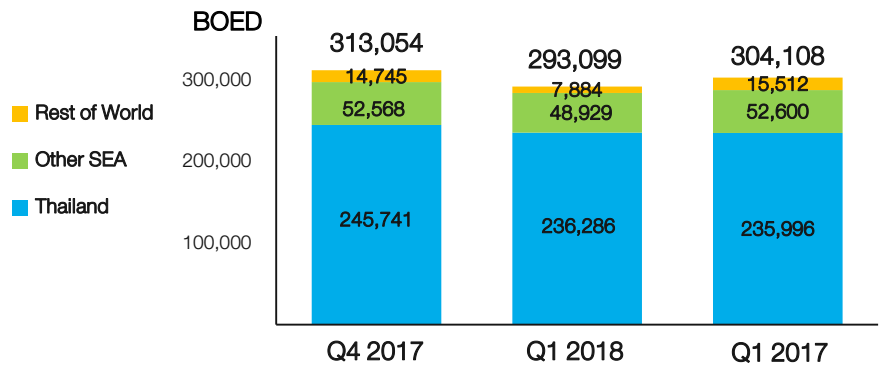
Strategy and Growth

Investment Plan & Outlook

Sales Volume & Unit Cost

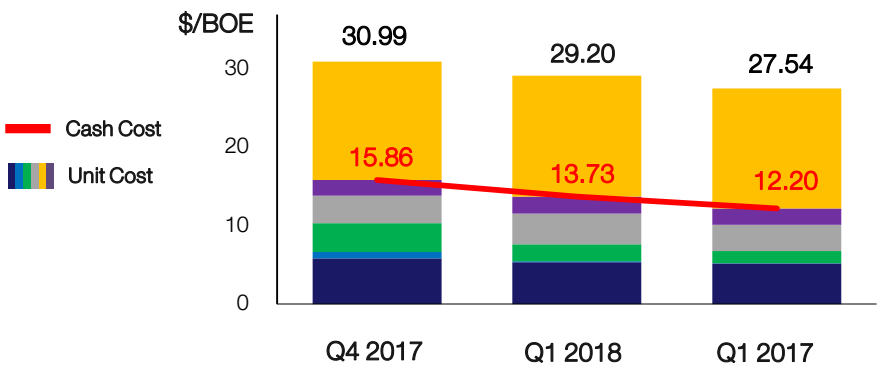
Higher selling price with competitive cost

Sales Volume and Price



	Q4 2017	Q1 2018	Q1 2017
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

Unit Cost



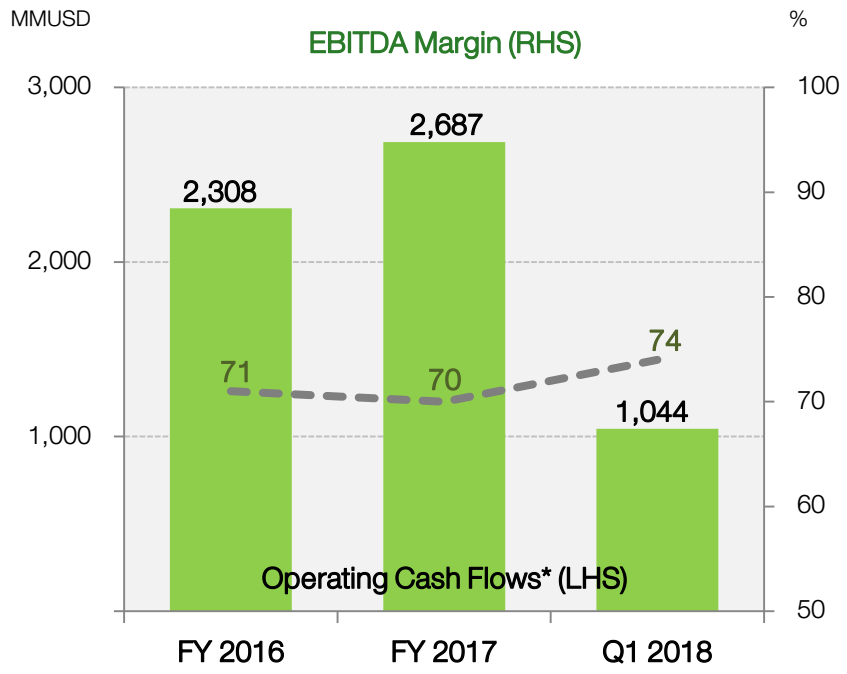
	Q4 2017	Q1 2018	Q1 2017
DD&A	15.13	**15.47**	15.34
Finance Cost	1.99	**2.16**	2.08
Royalties	3.55	**3.94**	3.34
G&A	3.68	**2.18**	1.54
Exploration Expenses	0.80	**0.10**	0.05
Operating Expenses	5.84	**5.34**	5.19
Lifting Cost	4.39	**4.04**	3.83

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

Cash Flow Performance

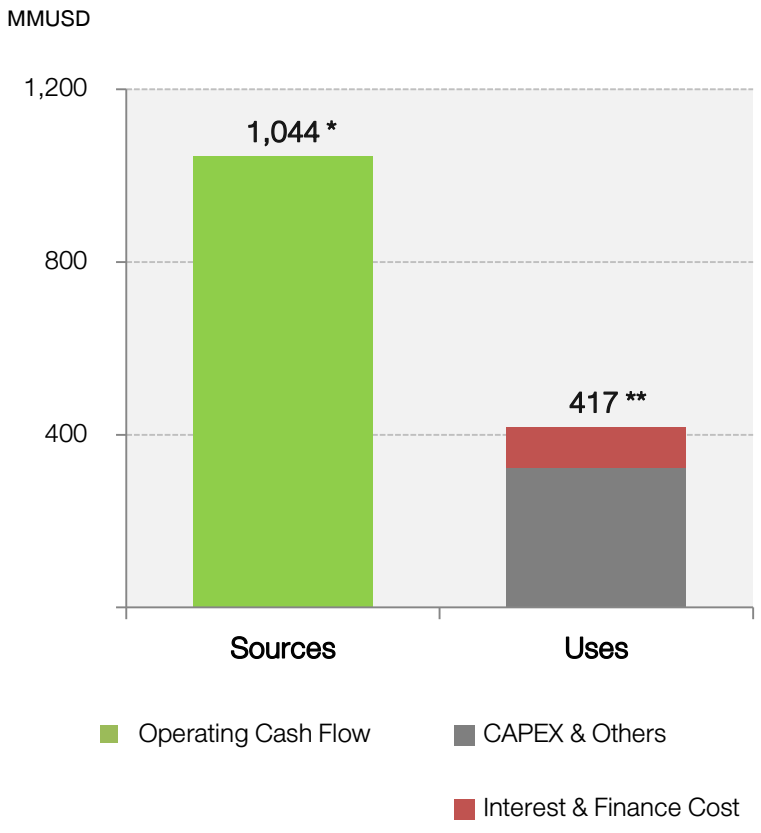
Self funding driven by robust cash flow generation

Cash Flow Performance



	FY 2016	FY 2017	Q1 2018
Net Income	372	594	**423**
Recurring Net Income***	466	836	**304**

Source & Use of Funds in Q1 2018



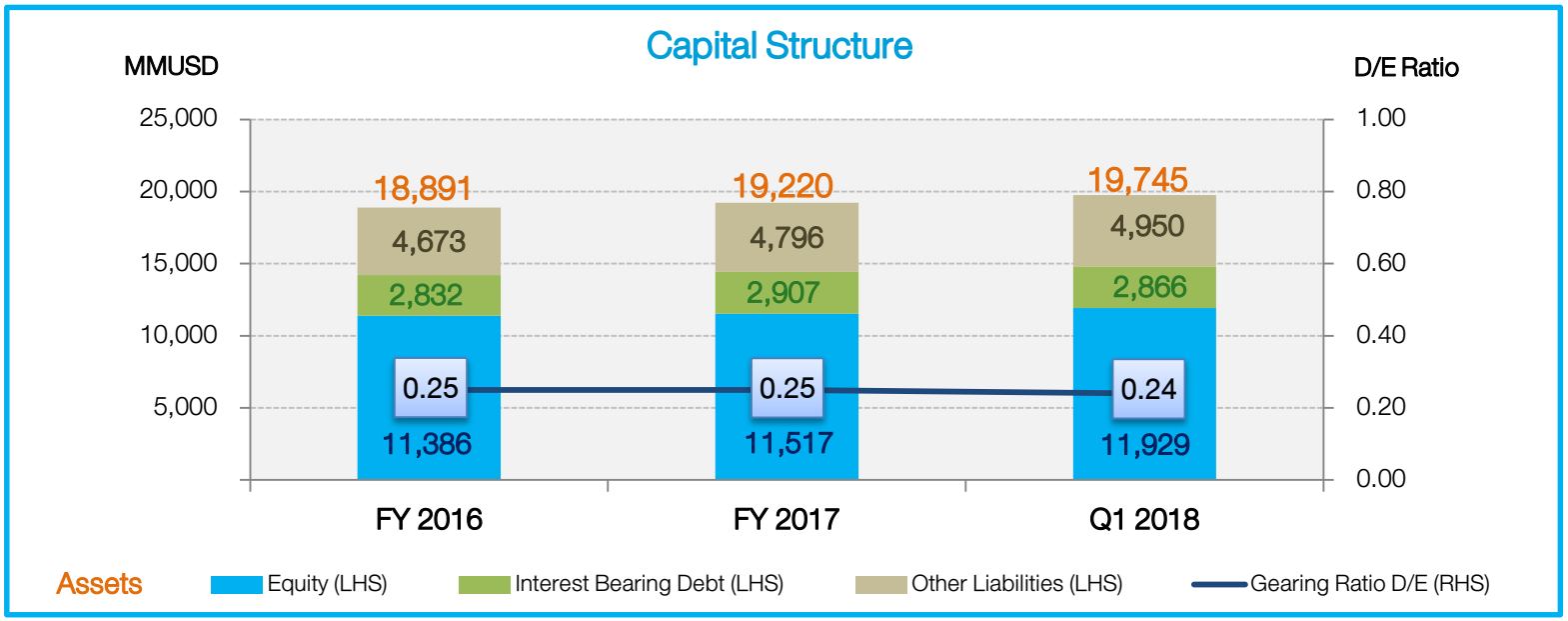
Remark: * Net of adjustment for the effect of exchange rate changes on cash and cash equivalents

** 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* (%)	4.41	4.50	**4.62**
[Fixed : Floating]	[80 : 20]	[80 : 20]	**[80 : 20]**
Average Loan Life* (Years)	8.15	7.15	**7.10**

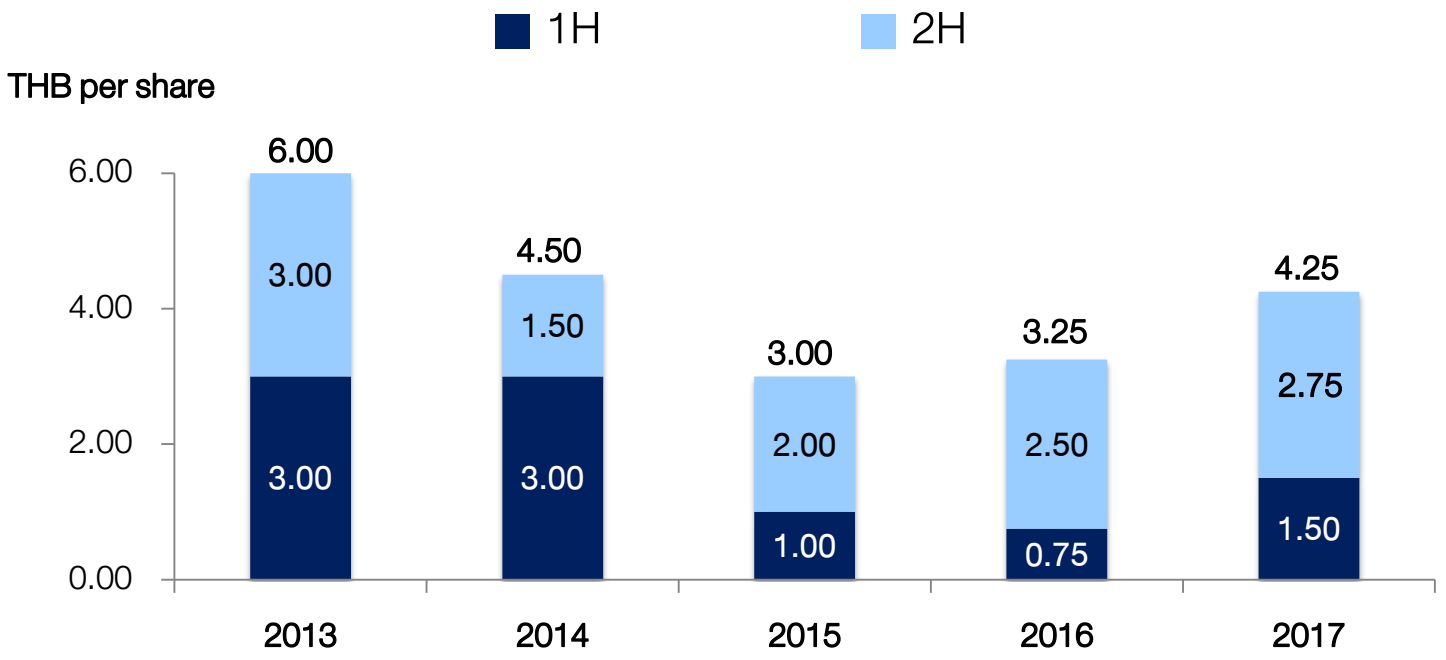
Remark: * Excludes Hybrid bonds

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

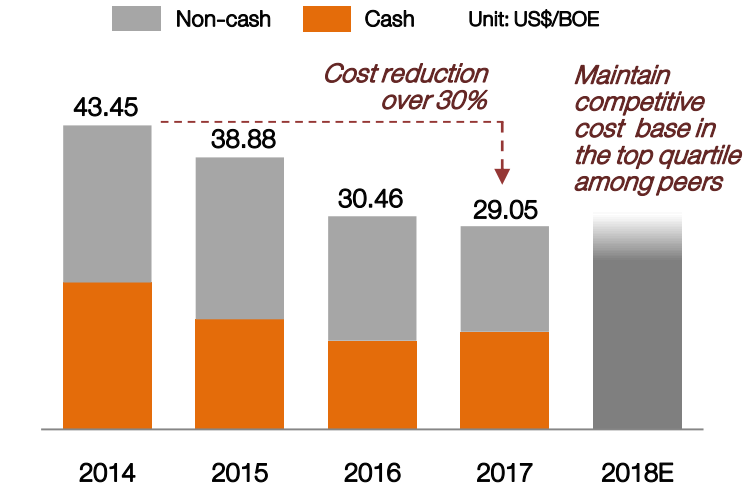
Achieved significant cost reduction and continue to improve efficiency

PTTEP

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

SPEND SMART TO BUSINESS SUSTAINABILITY

- ✓ $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

Focus on concession bidding

PTTEP is well-positioned to bid for Bongkot and Erawan

- ✓ Deep subsurface understanding with more than 20yrs operatorship experience
- ✓ Ability to ensure operational reliability and production continuation
- ✓ Synergy in the Gulf of Thailand

Strike M&A deal



Geographical: SEA, Middle East and other potential areas

Target: Focus on producing or near-producing

Size: 500 – 1,000 MMUSD

Recent Deal: Acquired additional 22.2222% of Bongkot

Daily Production	Add 35 KBOED
Cash Flow	Immediate cash-generation

Fast-track on pre-FID candidates

Mozambique Rovuma Offshore Area 1 — Production — 12 MMTPA in 2023

- Approval of key legal framework and development plan
- Commenced the resettlement plan
- Significant progress on SPA negotiation with the execution of 1st SPA of 1.2MMTPA with EDF

Southwest Vietnam — Production — 490 MMSCFD in 2021

- Finalizing commercial agreements

Algeria HBR — Production — 50 KBPD in 2023

- POD approved, finalizing documents with partners for FID

Ubon (Contract 4) — Production — 25-30 KBPD in 2021

- Preparing the POD with partners

Enhance exploration portfolio

Grow the foothold	*Focus the drilling activities in Thailand and Myanmar*
Strengthen backyard and cluster model	*Established "Sarawak Cluster" in Malaysia*
Joint venture	*Stepped in the deepwater blocks in Gulf of Mexico*

Bidding of Expiring Concessions

Strive to win Bongkot and Erawan Bidding

Process and Timeline

Step 1	May 2018	Pre-Qualification Process
Step 2	June – September 2018	Data Room & Bid Preparation
Step 3	25 September 2018	Bid Submission
Step 4	September – December 2018	Bid Evaluation & Results
Step 5	February 2019	New PSC signing



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**
- **Exploration work plan**
- **Field development plan (FDP)**

Commercial

Terms	Weighting
Gas Price Constant: ≤ 214.26 THB/MMBTU	65%
Contractor's Profit Share: ≤ 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: ≥ 80% in 1st Year and ≥ 90% in 5th Year	5%
State Participation: Offer terms and conditions ≤ 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



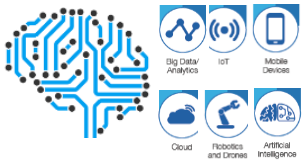
ORGANIZATIONAL TRANSFORMATION

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

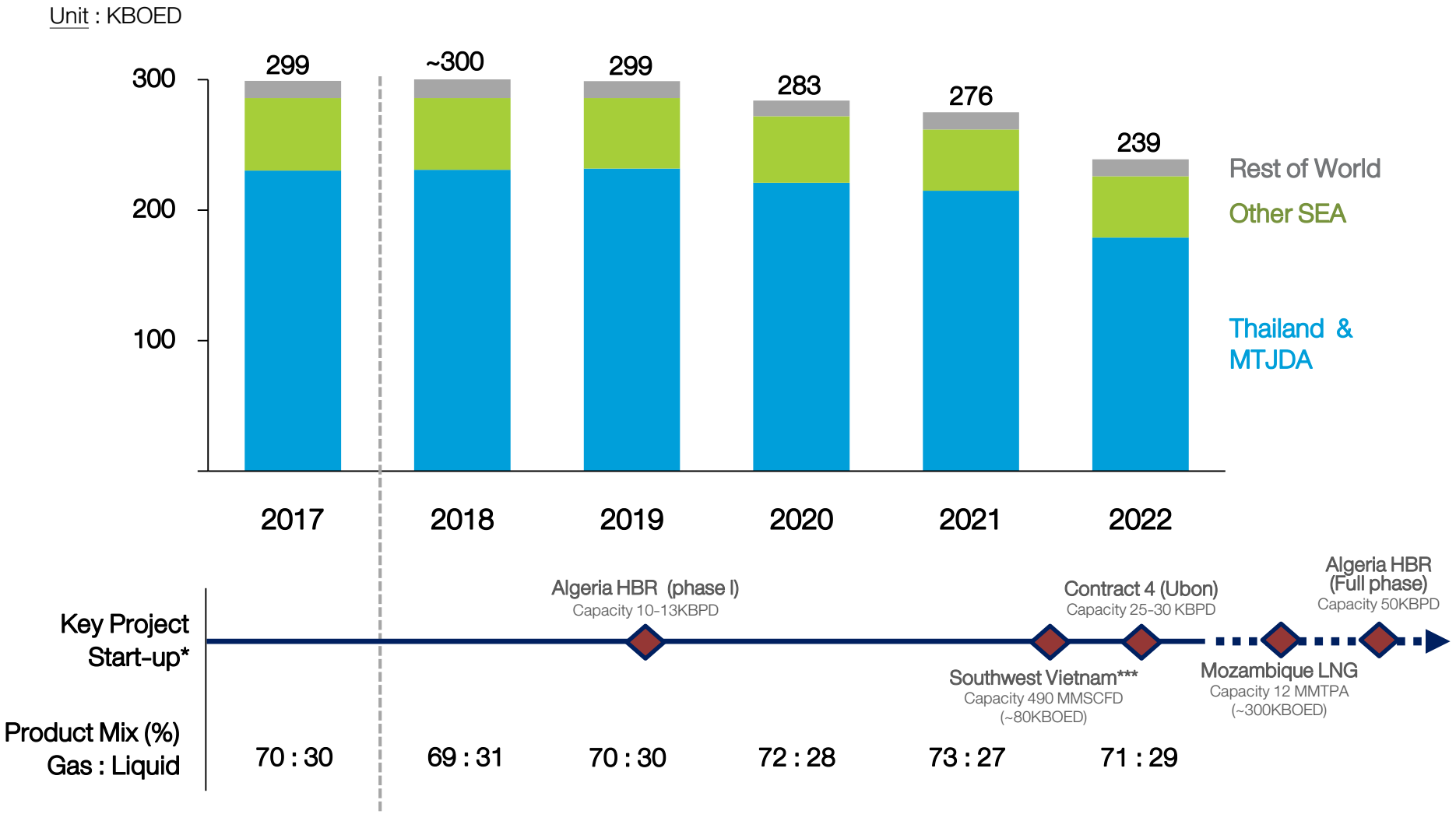
Financial Performance

Strategy and Growth

Investment Plan & Outlook

Sales Volume (excluding additional stakes in Bongkot)

M&As and concession bidding remain key upside



Note: Excludes the sales volume contribution from the acquisition of additional 22.2222% stakes in Bongkot from Shell

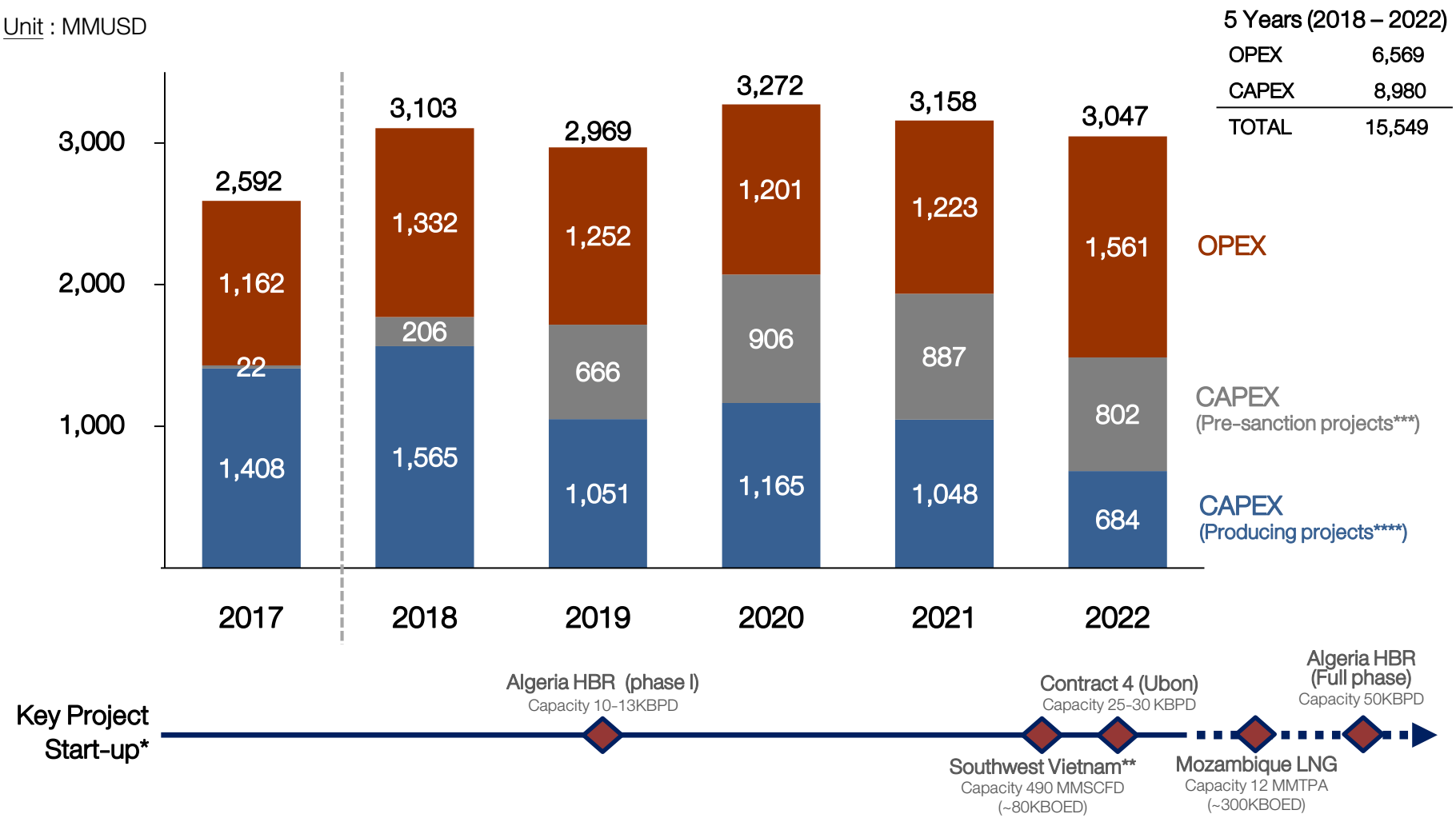
* Subject to FID timing

** 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



	Q2 2018	FY 2018
Average Sales Volume* KBOED	~297	~300
Average Gas Price** USD/MMBTU	~6.3	~6.3
Unit Cost USD/BOE	~31	30-31
EBITDA Margin % of sales volume	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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For a Sustainable Future

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Supplementary information



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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

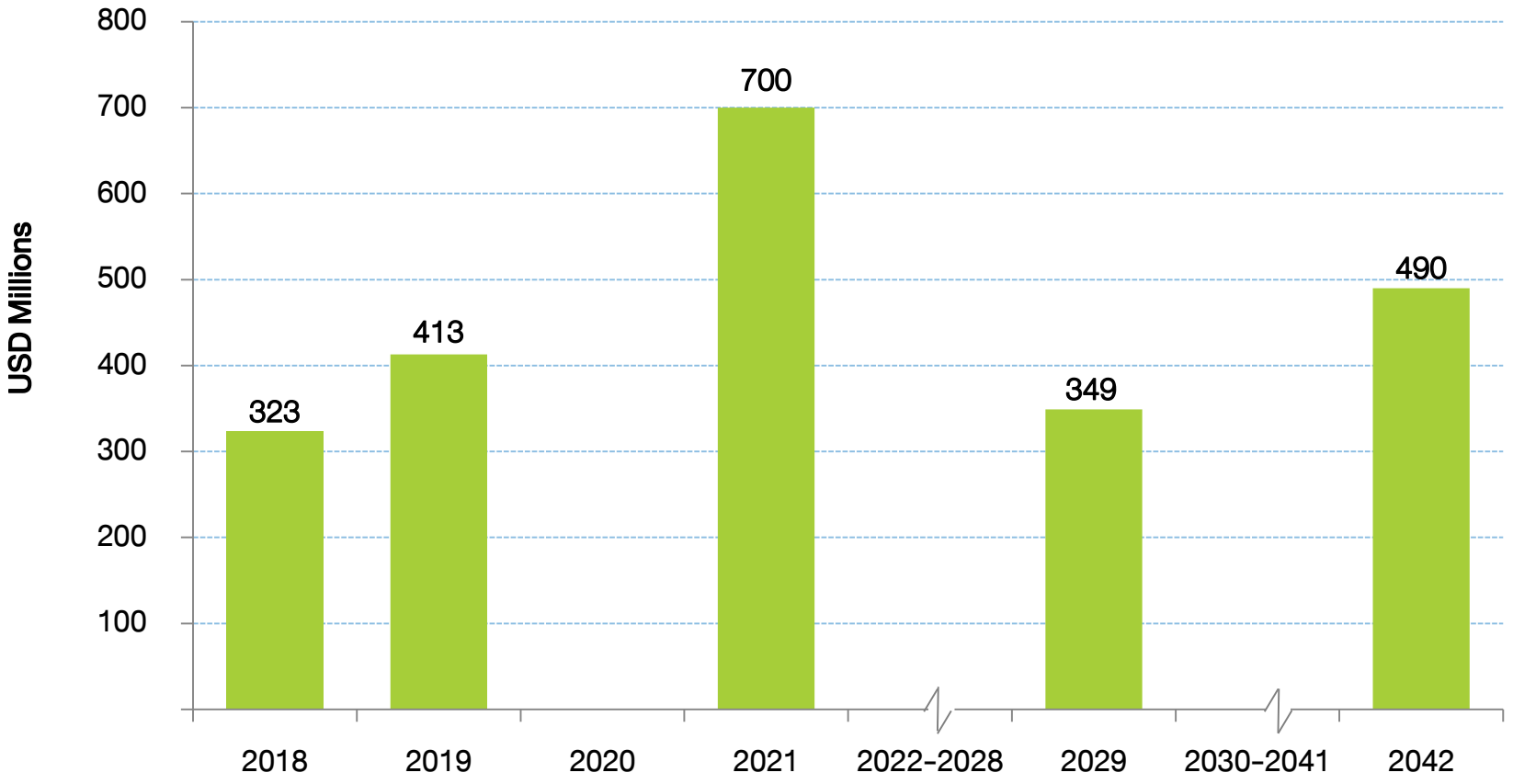
	YE 17	Q1 18
Total Assets (MMUSD)	19,220	19,745
- Cash & cash equivalents* (MMUSD)	4,468	5,095
Total Liabilities (MMUSD)	7,703	7,816
- Interest bearing debt (MMUSD)	2,907	2,866
Equity (MMUSD)	11,517	11,929
Key Financial Ratios		
Total Debt to Equity (X)	0.25	0.24
Net Debt* to Equity (X)	(0.14)	(0.19)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

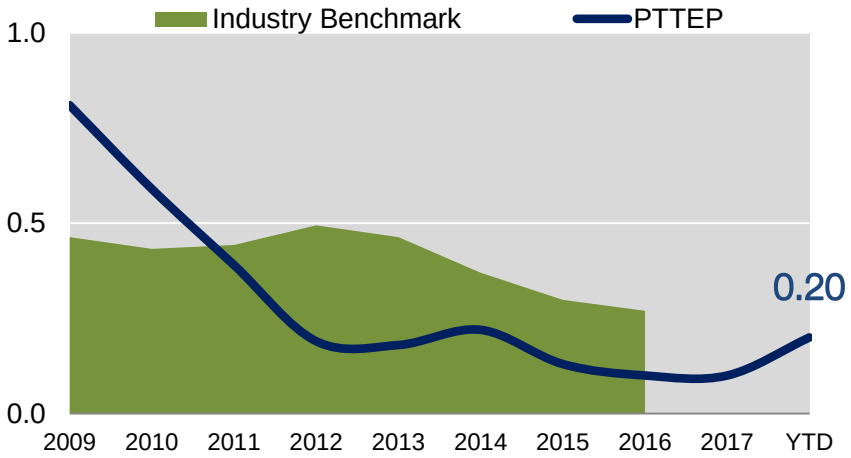
Priority on Safety and Sustainability

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

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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.



FTSE4Good

FTSE4Good Emerging Index 2017

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

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

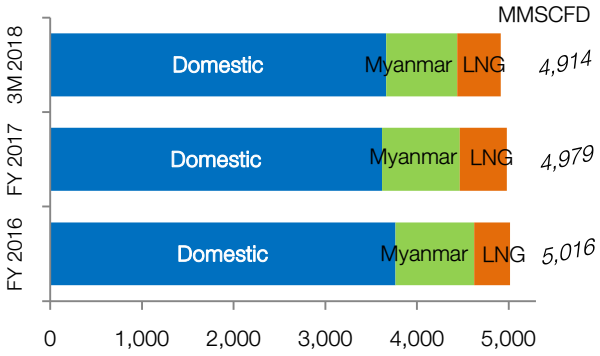
Thailand Occupational Safety and Health Awards
the Ministry of Labour

Thailand Updates

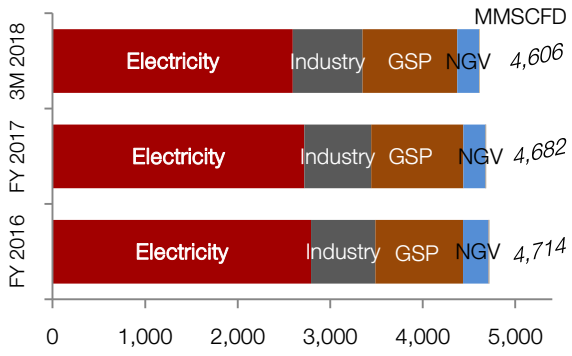
Domestic gas volume suppressed by LNG import; More clarity on Energy Reform

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

1 Energy Management
- Organizational reform
- National energy information center
- Governance reform

2 Electricity
- New Power Development Plan
- Support competition in electricity business
- Electricity business structure reform

3 Petroleum and Petrochemical
- Development of natural gas industry e.g.
  - Bongkot/Erawan bidding and future expiring concessions
  - Overlapping with Cambodia area
  - Regional LNG trading hub
- Development of Petrochemical industry (4th phase)

4 Renewable Energy
- Promote fast-growing biomass fuel
- Support solid waste for electricity
- Liberalized solar rooftop
- Reform of energy for transportation

5 Energy Conservation and Efficiency
- Energy conservation and efficiency in industry sector
- Implement building energy code (BEC)
- Implement measures of Energy Service Company (ESCO) for government agencies

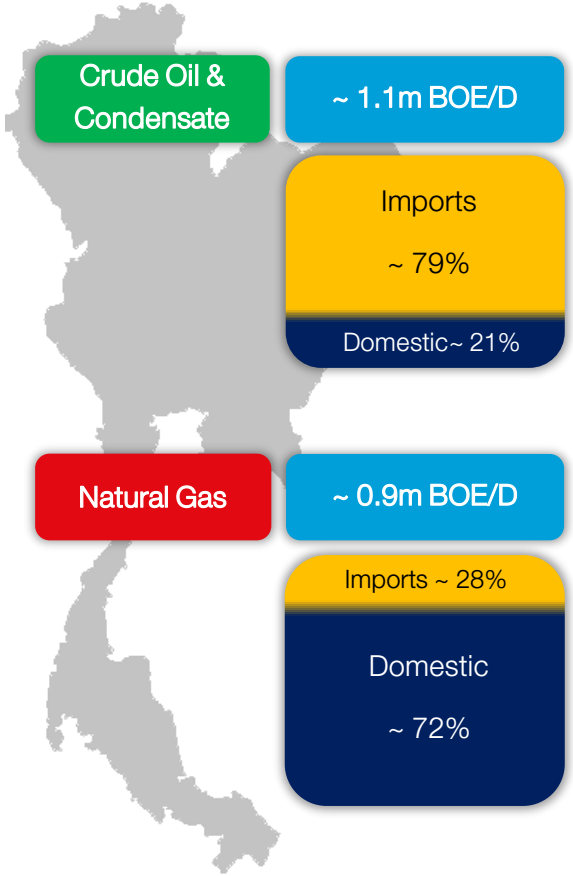
6 Technology, Innovation, Infrastructure
- Direction and development of electric vehicle
- Study potential of energy storage

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

Thailand's Energy Value Chain

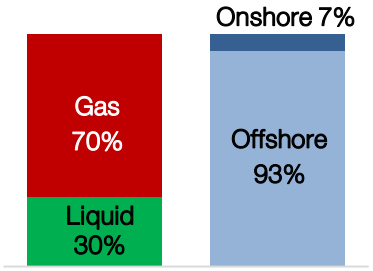
PTTEP contributes almost 1/3 of Thailand's petroleum production

Thailand's Oil and Gas Demand

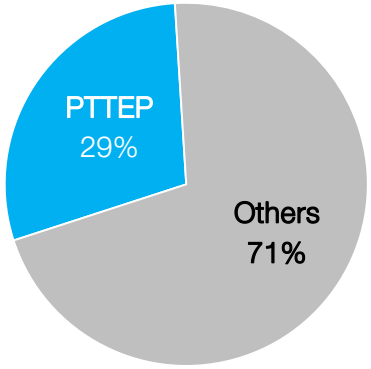


Thailand Petroleum Production 2017

% 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

SUPPLY

Import (83%)
1,043 KBD



Indigenous (17%)
211 KBD



Crude/ Condensate 979 KBD

Crude/ Condensate 175 KBD

PRODUCTION

Imported Refined Petroleum Products 64 KBD

Total Refining Capacity in Thailand
1,232 KBD



PTT's Associated Refineries 770 KBD (TOP, PTTGC, IRPC)

Other Refineries 462 KBD (SPRC, ESSO, BCP)

Crude Export 36 KBD

Refined Products 1,159 KBD *

Refined Products 202 KBD

SALES

Domestic
1,008 KBD **



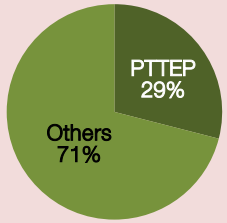
Export
238 KBD



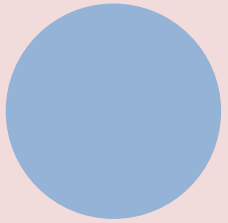
Natural Gas Balance

Main driver of the Thailand economy

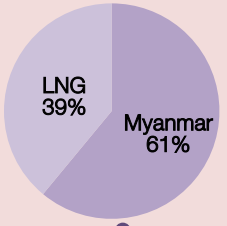
Gulf of Thailand (71%)



Onshore (2%)



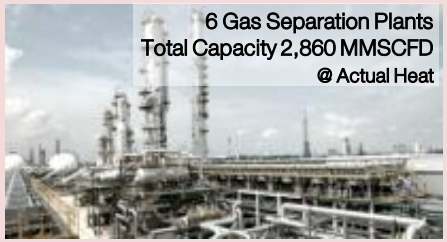
Import (27%)



3,312 MMSCFD

Bypass Gas 598 MMSCFD

6 Gas Separation Plants
Total Capacity 2,860 MMSCFD
@ Actual Heat



65 MMSCFD

1,274 MMSCFD

Methane 1,692 MMSCFD

1,023 MMSCFD (22%)

Petrochemical Feedstock (15%)

Ethane
Propane
LPG
NGL

Industry
Household
Transportation
(7%)

LPG
NGL

Power (57%)

Industry (16%)

NGV (5%)

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/ft^3

LNG Updates

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

Key Projects with expected start-up in 2018

US: Cove Point Export T1
5.25 mmtpa | Start-Up in Q1

US: Elba Island
2.5 mmtpa | Start-Up in Q3

US: Corpus Christi LNG T1
4.5 mmtpa | Start-Up in Q4

Cameroon: GoFLNG
1.2 mmtpa | Start-Up in Q2



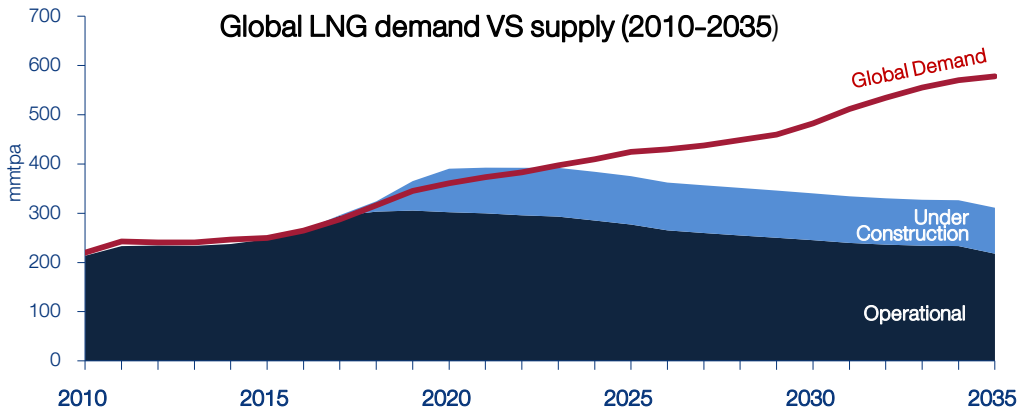
Russia: Yamal LNG T2
5.5 mmtpa | Start-Up in Q4

Australia: Wheatstone LNG T2
4.45 mmtpa | Start-Up in Q2

Australia: Ichthys
8.8 mmtpa | Start-Up in Q3

Australia: Prelude
3.6 mmtpa | Start-Up in Q4

Global LNG Situation



Source: IHS, PIRA, FGE, Wood Mackenzie

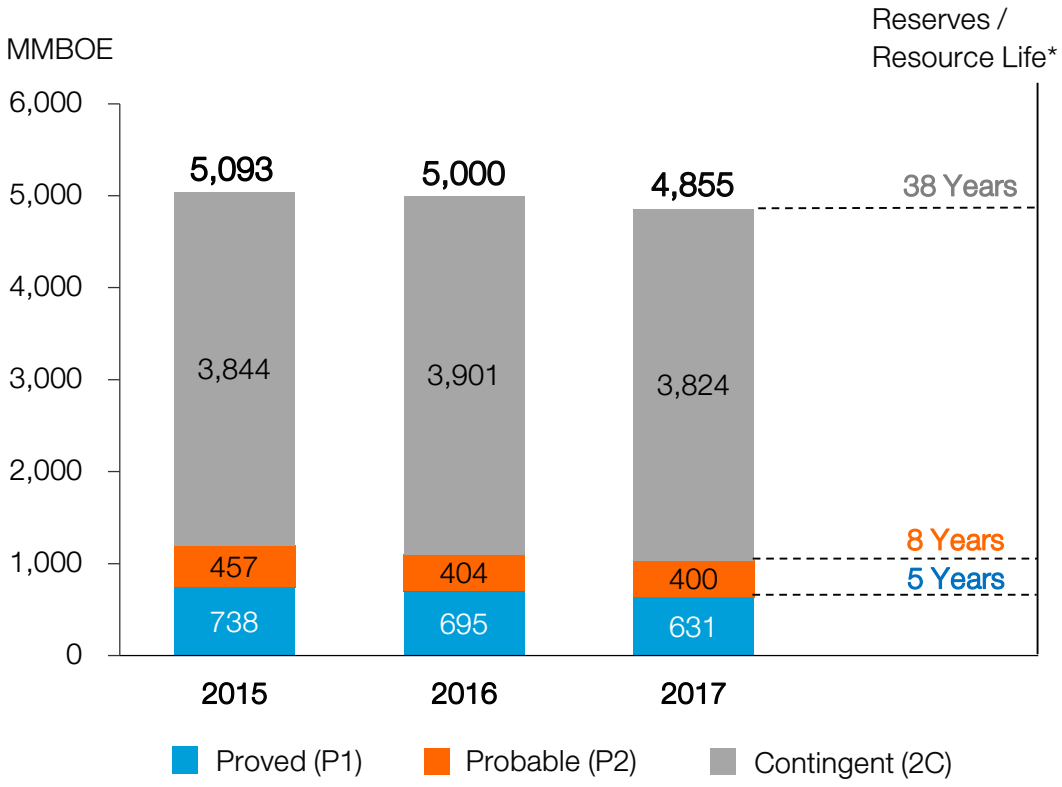
- **Short-term LNG market (2018)**: Continue to be oversupplied with average Asian spot LNG forecasted range of 6.5-7.6 $/MMBTU

Supply		Demand
320 Million Tonnes	›	310 Million Tonnes

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

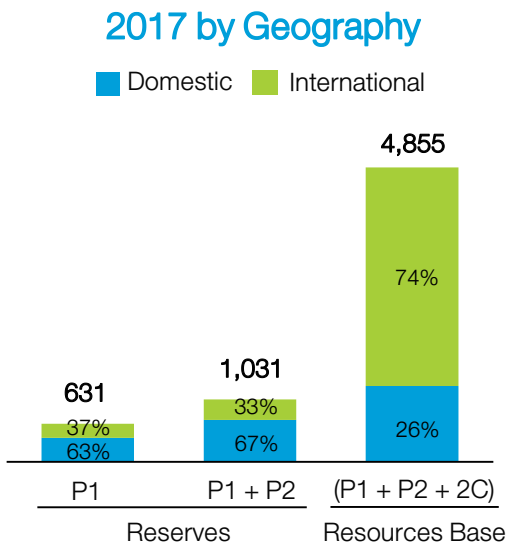
Reserves and Resources

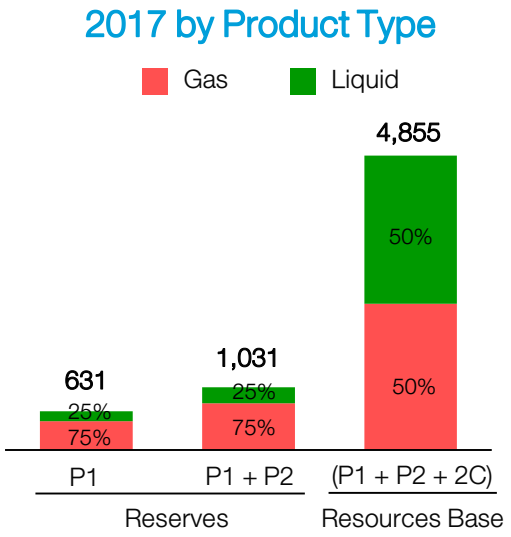
Maintained reserve life with majority of reserves base in SEA



5-Year Average Proved Reserves Replacement Ratio (RRR)

2015	2016	2017
0.50x	0.57x	0.58x

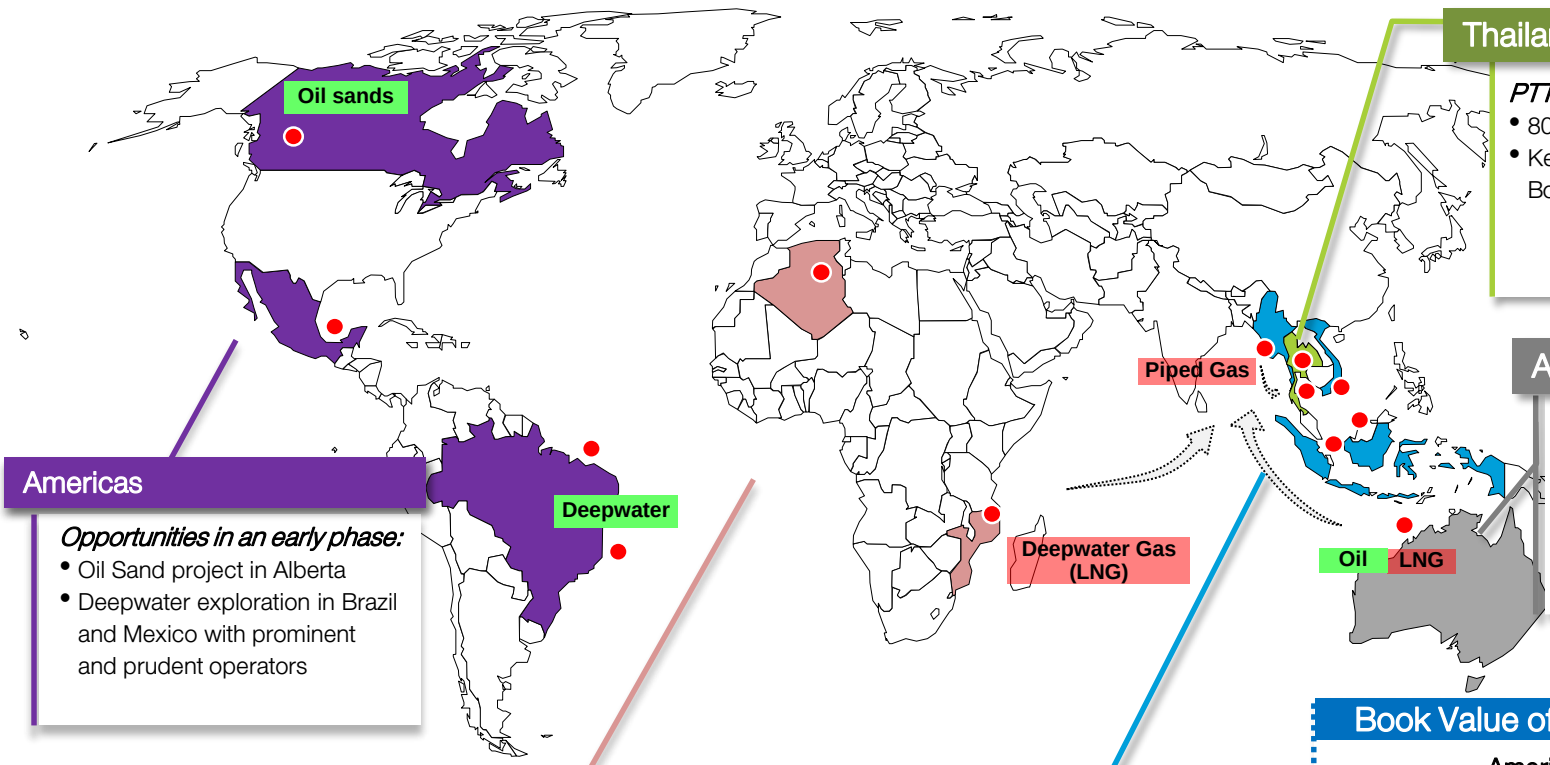




* Based on total production of natural gas, condensate, and crude oil (including LPG) of 347 KBOED for the year ended December 31, 2017

Diversified International Portfolio

Worldwide operations: 40 projects* in 11 countries



Thailand

PTTEP's core production base

- 80% of total sales volume
- Key producing assets include Bongkot, Arthit, Contract 4 and S1

Australasia

Oil producing project

- 6.1 KBPD of oil sales from wholly-owned Montara field
- Sizable undeveloped gas resource in Timor Sea

Americas

Opportunities in an early phase:

- Oil Sand project in Alberta
- Deepwater exploration in Brazil and Mexico with prominent and prudent operators

Africa

An area for growth, key projects include:

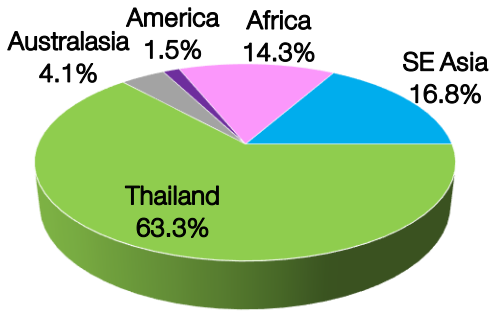
- Producing: Algeria's Bir Seba oil field has started up with current flow rate of approximately 17 KBPD
- Pre-development and Appraisal: Mozambique LNG and Algeria's Hassi Bir Rakaiz

Southeast Asia

Second heartland to PTTEP

- 17% of total sales volume
- Myanmar being most important with gas production mostly supplied into Thailand
- Other producing assets in Vietnam (oil) and Indonesia (gas)

Book Value of Assets** (by region)



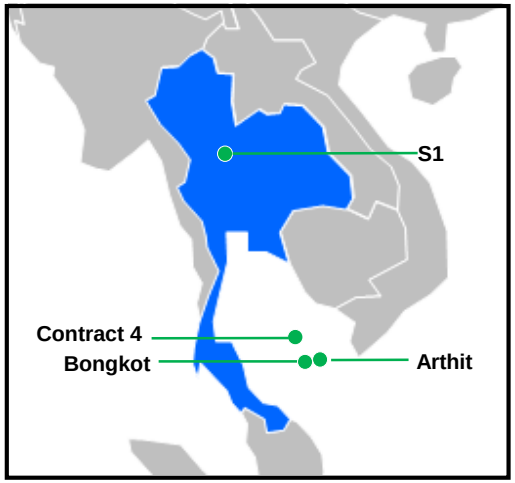
Total Assets USD 19.7 billion

Notes: * Excludes 1 project that is pending official withdrawal approval
** Information dated as of Q1 2018

Thailand

Strong home base with legacy assets maintaining production plateau





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)

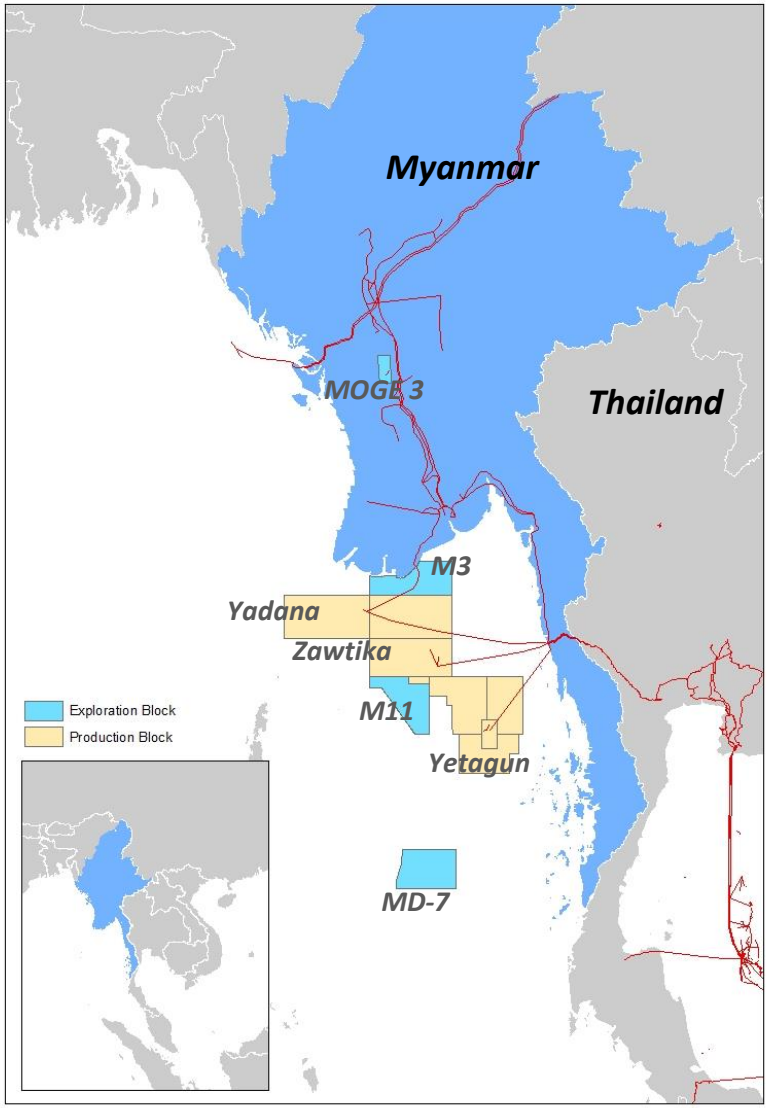
- Average sales volume in 3M2018 was 228 MMSCFD of natural gas and 11 KBPD of condensates.

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
• Yadana *(25.5% WI)*	• M3 *(80% WI)*	• MOGE 3 *(75% WI)*
• Yetagun *(19.3% WI)*		• M11 *(100% WI)*
• Zawtika *(80% 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.

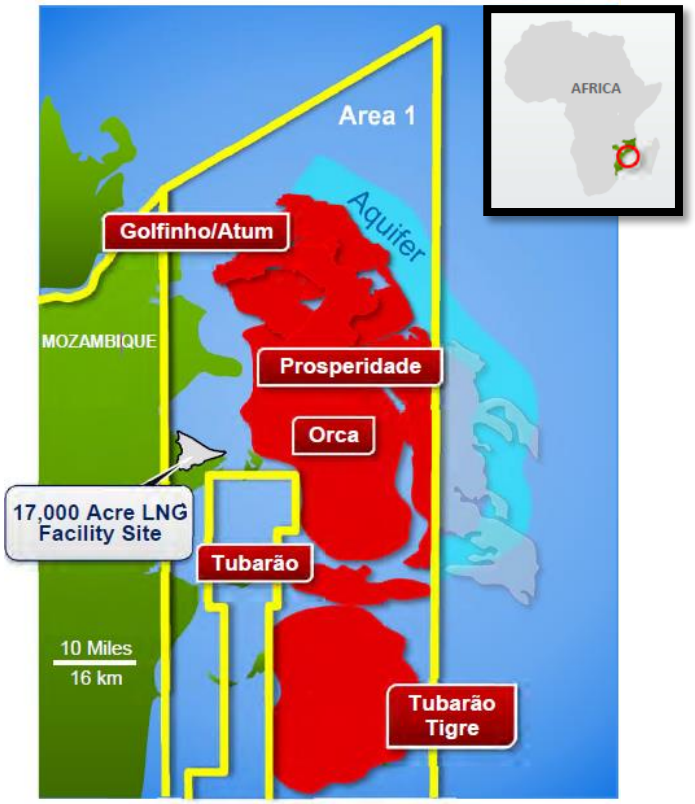
Natuna Sea A (11.5% interest)

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

Source : Premier Oil

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

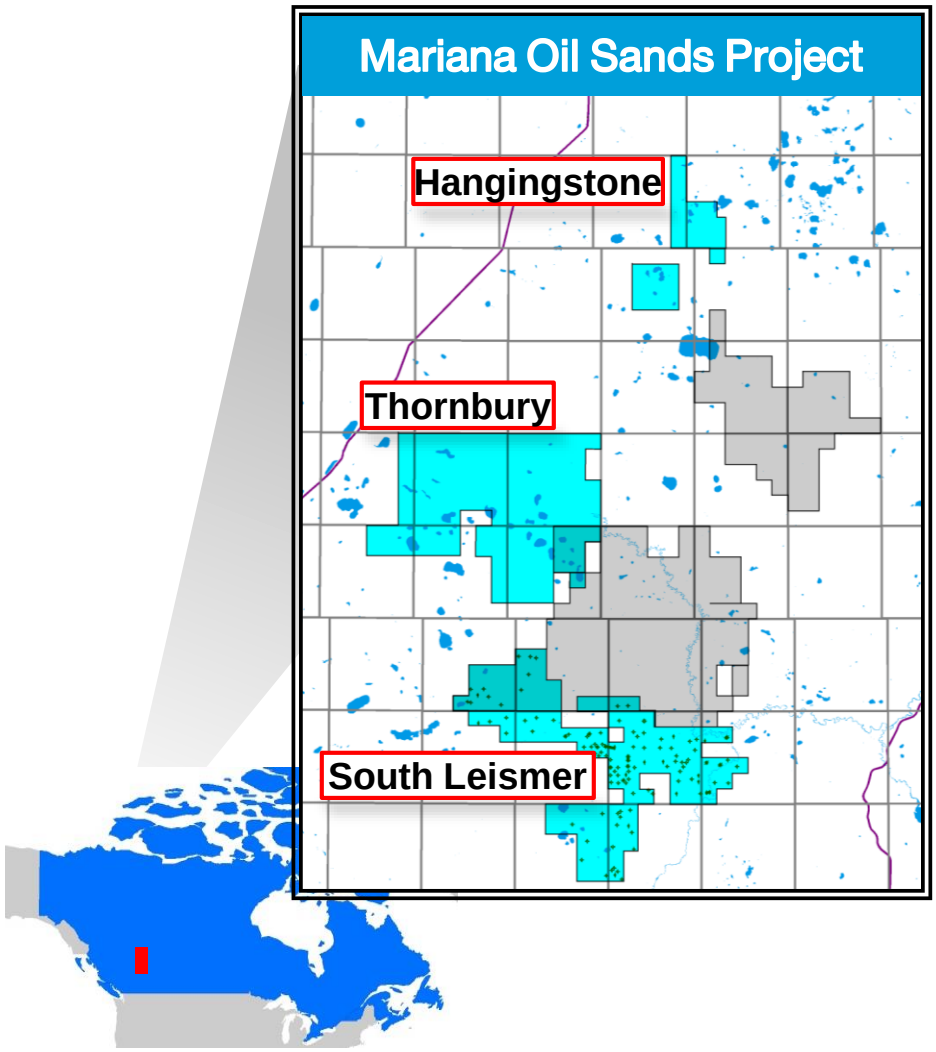
Technical	✓ Certified reserves to support initial trains ✓ Announced selection of contractor for onshore LNG facilities construction
Commercial	✓ Recently signed SPA of 1.2 MTPA with EDF (French)
Regulatory	✓ Received approval on marine concession and development plan of Golfinho-Atum Field ✓ Commenced the resettlement plan in Q4 2017
Financing	✓ On-going negotiation for project financing

Onwards to initial phase of 12 MMTPA

Source: Anadarko

America: Canada Oil Sands

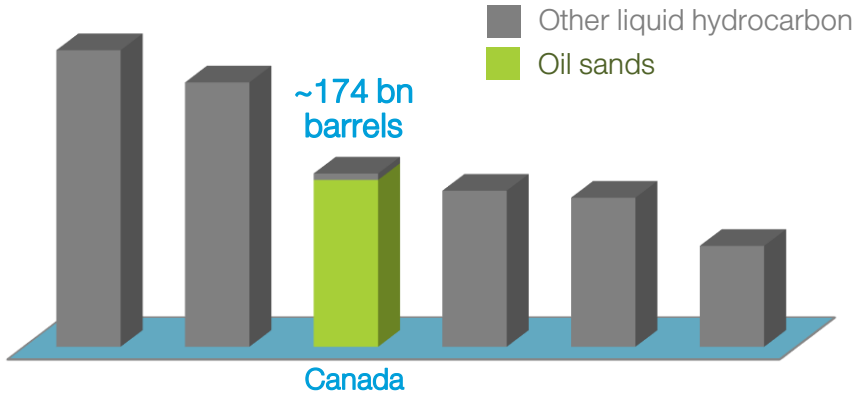
Flexibility to pursue long-term investment from the oil sands project



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

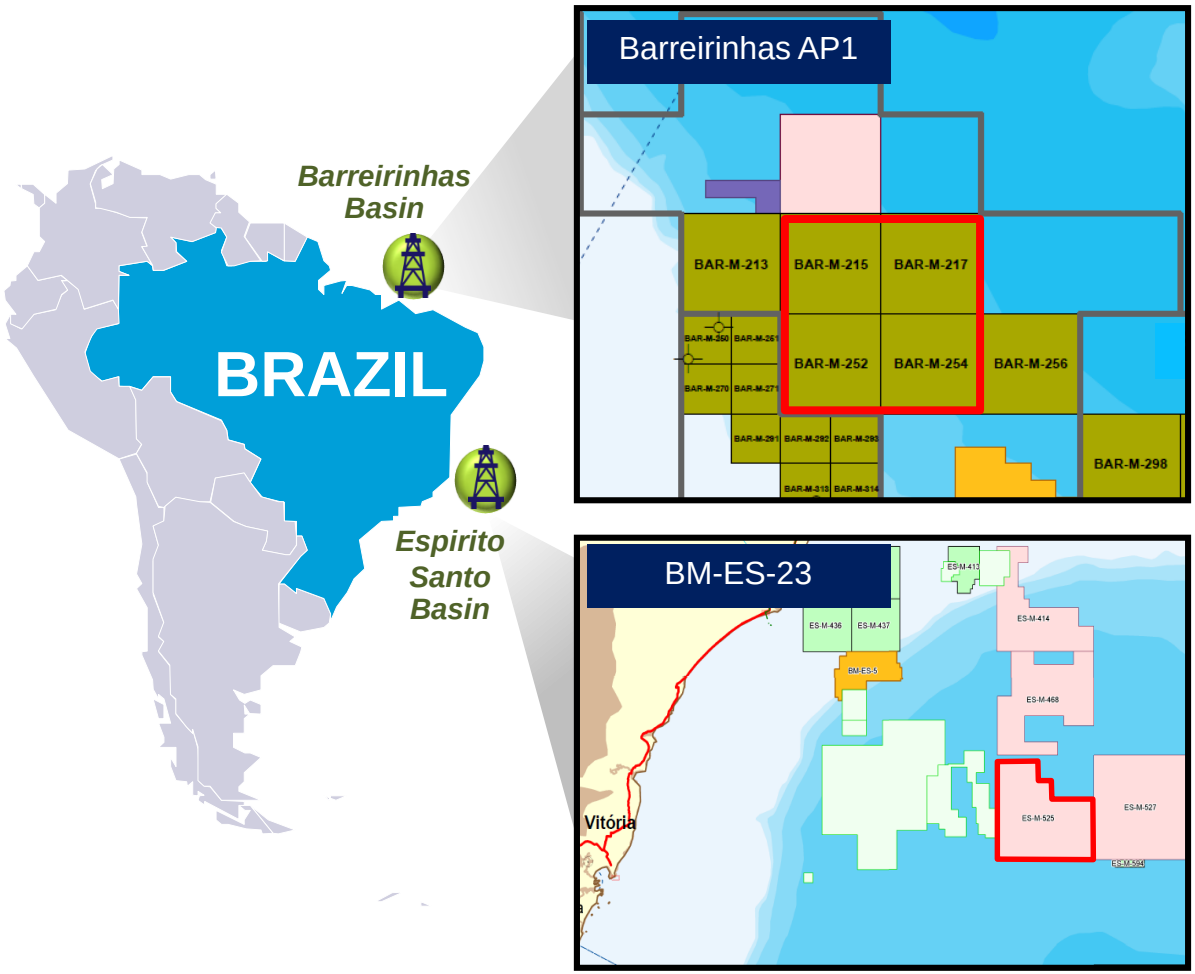
Approximately 96% of the reserves in Canada, the world's 3rd largest oil reserves, is oil sands



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

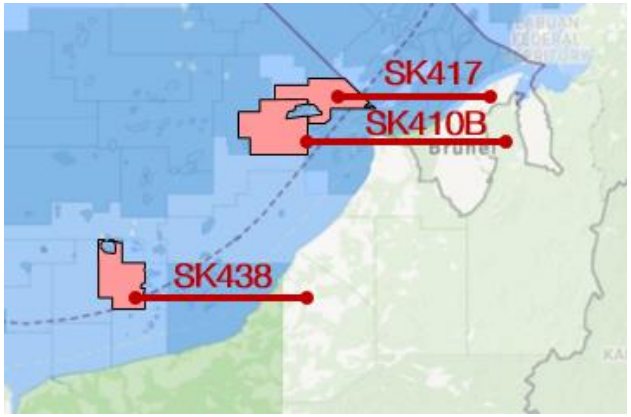
- Acquired 20% interest from Shell in Q3 2014
- Partnered with Petrobras (65%, operator) and INPEX (15%)

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

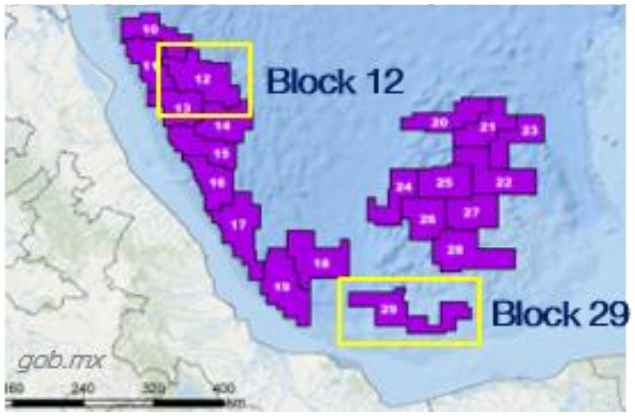
Location: Sarawak Basin, Malaysia

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 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 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 16% MOECO 4%	228 MMSCFD	Condensate: 11 k BPD	• Ensure gas deliverability level at DCQ*** • Drill development wells
2	**B6/27**	OP	100%		-	-	• Prepare drilling plan
3	**B8/32 & 9A**		25%	Chevron 51.66% MOECO 16.71% KrisEnergy 4.63% Palang Sophon 2%	77 MMSCFD	Crude: 21 k BPD	• Drill development wells • Perform waterflood activities
4	**Bongkot**	OP	44.4445%	TOTAL 33.3333% Shell 22.2222%	841 MMSCFD	Condensate: 27 k BPD	• Ensure gas deliverability level at DCQ*** • Drill development wells • Install wellhead platforms
5	**Contract 3** *(Formerly Unocal III)*		5%	Chevron 71.25% MOECO 23.75%	659 MMSCFD	Crude: 23 k BPD Condensate: 24 k BPD	• Drill exploration / appraisal / development wells • Install wellhead platforms • Perform waterflood activities
6	**Contract 4** *(Formerly Pailin)*		60%	Chevron 35% MOECO 5%	385 MMSCFD	Condensate: 17 k BPD	• Ensure gas deliverability level at DCQ*** • Drill development wells • Install wellhead platforms • Review development plan of Ubon field
7	**E5**		20%	ExxonMobil 80%	7.4 MMSCFD	-	
8	**G4/43**		21.375%	Chevron 51% MOECO 21.25% Palang Sophon 6.375%	1.7 MMSCFD	Crude: 5.4 k BPD	• Drill development wells • Perform waterflood activities
9	**G4/48**		5%	Chevron 71.25% MOECO 23.75%	3.9 MMSCFD	Crude: 1.2 k BPD	
10	**L53/43 & L54/43**	OP	100%		-	Crude: 1.0 k BPD	• Drill exploration / appraisal / development wells
11	**PTTEP1**	OP	100%		-	Crude: 224 BPD	• Drill development wells • Perform waterflood activities
12	**S1**	OP	100%		15 MMSCFD	Crude: 25 k BPD	• Drill exploration / development wells • Enhance oil recovery program includes waterflooding and artificial lift
13	**Sinphuhorm**	OP	55%	Apico 35% ExxonMobil 10%	51 MMSCFD	Condensate: 177 BPD	• Drill development wells
14	**MTJDA**	JOC	50%	Petronas-Carigali 50%	361 MMSCFD	Condensate: 7.0 k BPD	• Drill development wells • Install wellhead platforms
15	**L22/43**	OP	100%		-	Crude: 44 BPD	• 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	• Maintain production operation • Perform reservoir management
17	**Yadana**		25.5%	TOTAL 31.24% Chevron 28.26% MOGE 15%	752 MMSCFD	-	• Ensure gas deliverability level at DCQ***
18	**Yetagun**		19.3178%	Petronas-Carigali 30.00140% MOGE 20.4541% Nippon Oil 19.3178% PC Myanmar (Hong Kong) 10.90878%	169 MMSCFD	Condensate: 2.0 k BPD	• Drill appraisal / development wells • Perform reservoir Management
19	**Vietnam 16-1**	JOC	28.5%	PetroVietnam 41% SOCO 28.5% OPECO 2%	4.0 MMSCFD	Crude: 17 k BPD	• Drill development wells • Maintain production operation
20	**PTTEP Australasia (PTTEP AA)**	OP	90%-100% (varied by permits)		-	Crude: 6.1 k BPD	• 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	• Maintain production operation
22	**Zawtika (M9 & a part of M11)**	OP	80%	Myanma Oil and Gas Enterprise (MOGE) 20%	281 MMSCFD	-	• Maintain production rate • Drill development wells • Install wellhead platforms
23	**Algeria 433a & 416b (Bir Seba)**	JOC	35%	PetroVietnam 40% Sonatrach 25%	-	Crude: 1.8 k BPD *(net entitlement)*	• 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

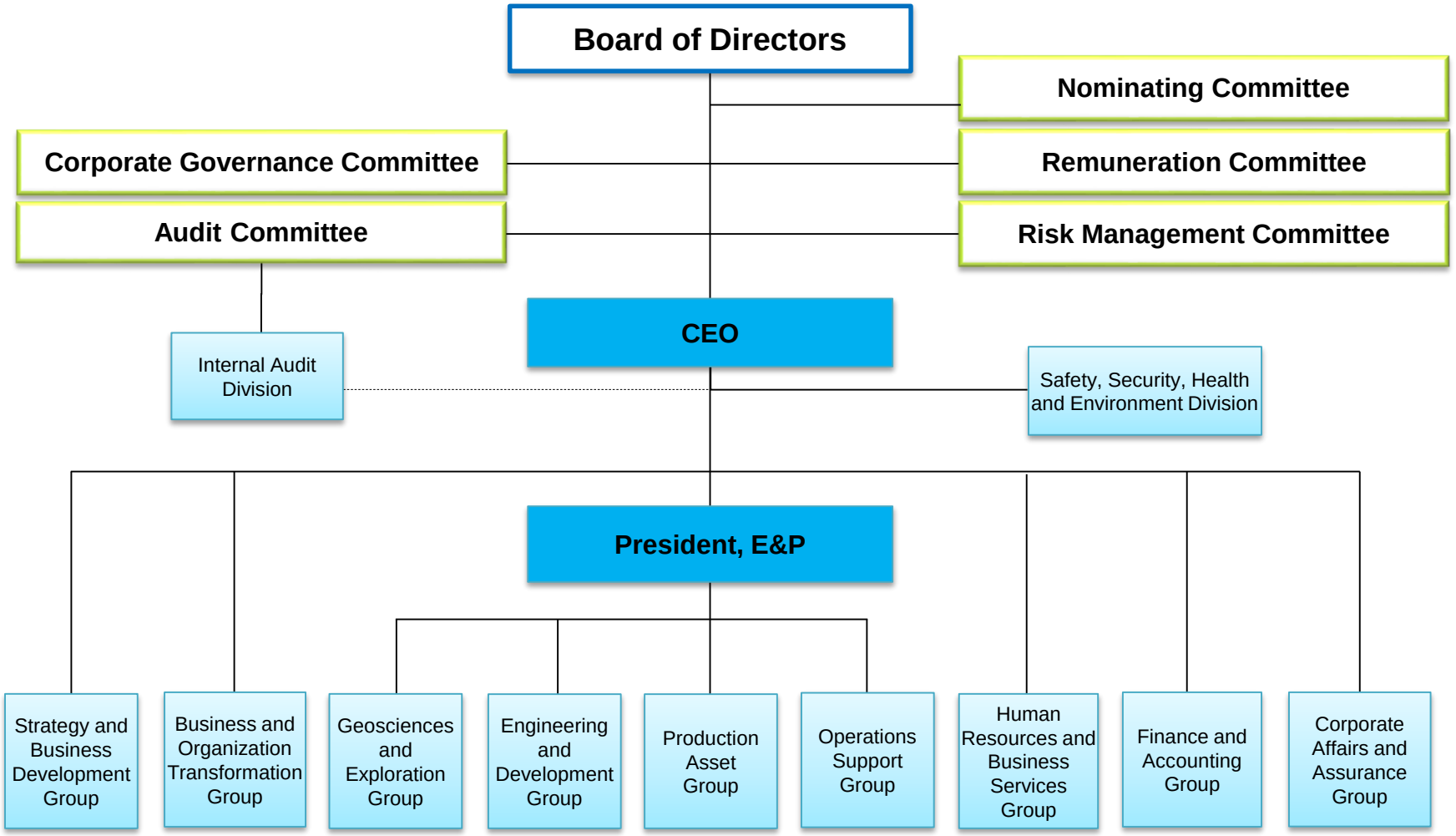
Exploration phase

	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



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