

PTT Exploration and Production Public Company Limited

HSBC 9th Annual Asia Investor Forum

New York and Boston, USA

7 -9 November 2017



PTTEP

MEMBER OF

**Dow Jones
Sustainability Indices**

In Collaboration with RobecoSAM





Company Overview

Financial Performance

Operational Updates

Investment Plan & Outlook



As PTT's Upstream Flagship



Government of
Thailand

64.2%²



Thailand's national energy company

65.3%¹



Credit ratings equivalent to parent and country

S&P Moody's TRIS JCR

BBB+

Baa1

AAA

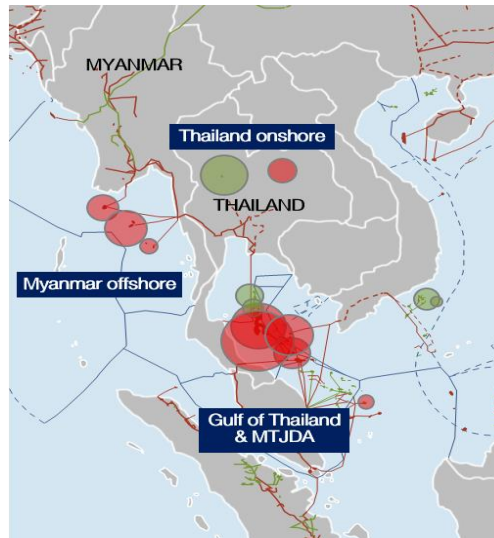
A-

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

96%

of PTTEP's total
sales volume

+99%

Reliability of plants
and field facilities*

83%

of PTTEP's sales volume
sold to PTT

12 USD/
BOE

Average regional
cash cost

* of PTTEP-operated projects in Gulf of Thailand, excl. planned shutdown
All figures are as of 9M 2017

Notes:

1. Ownership as of 11 August 2017

2. 51.1% is directly held by the Government of Thailand (Ministry of Finance), with the remaining 13.1% held by the state-controlled Vayupak Fund I as of 5 September 2017

Overview

Financials

Operations

Outlook

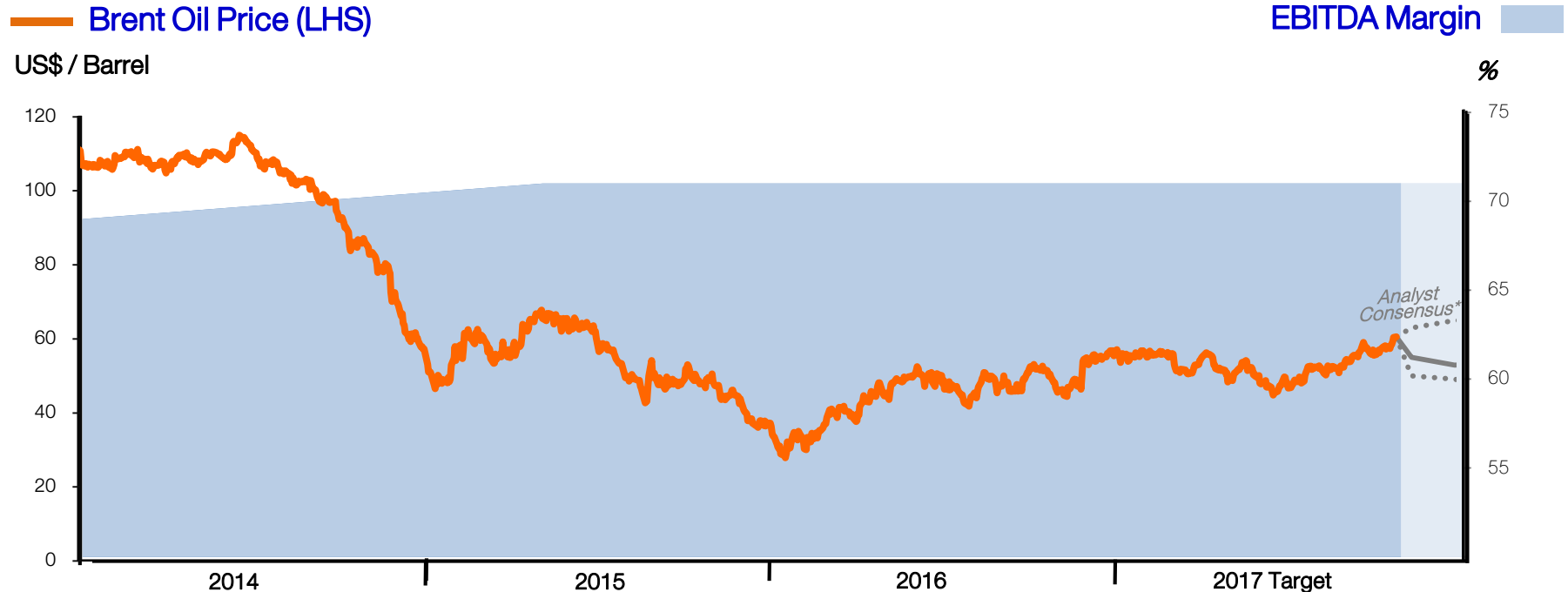


Company Overview

Financial Performance

Operational Updates

Investment Plan & Outlook

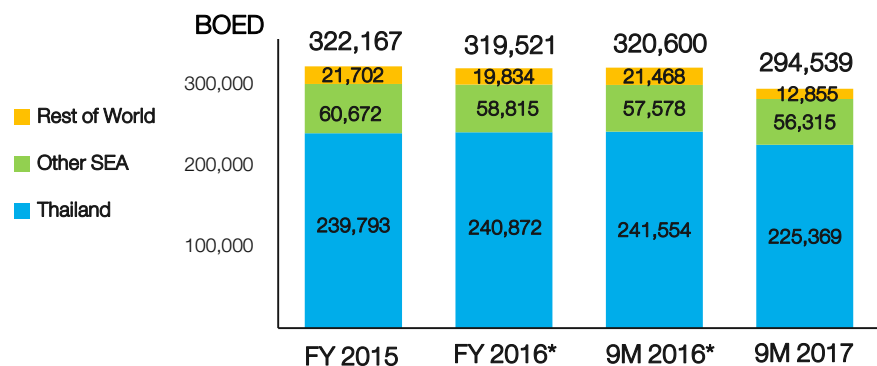


EBITDA Margin	Annual Operating Cash Flow	Cash on Hand	Outlook
69 - 71 %	2.3 - 2.9 \$ Billion	3.5 - 4.0 \$ Billion	Expect to maintain strong EBITDA margin throughout 2017 and beyond

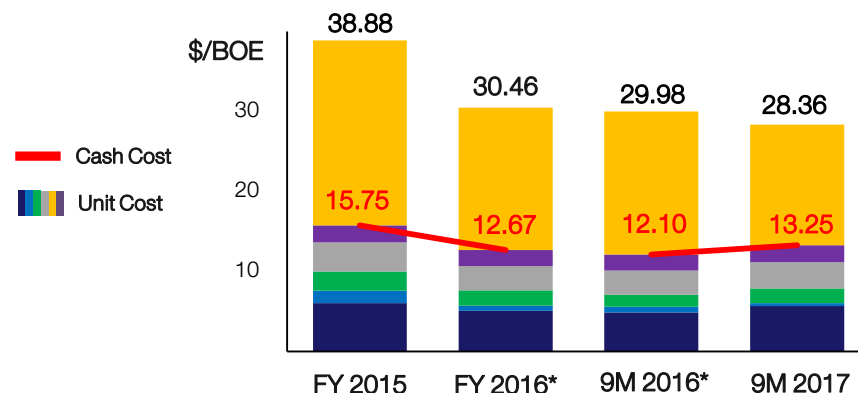
Remark * Brent oil prices consensus range: Bloomberg Analyst Consensus (CPFC) as of 25 October 2017



Sales Volume and Price



Unit Cost



Gas (\$/MMBTU)	7.20	5.60	5.75	5.54
Liquid (\$/BBL)	50.05	41.17	39.37	49.87
Weighted Avg. (\$/BOE)	45.29	35.91	36.00	38.29
Avg. Dubai (\$/BBL)	50.91	41.27	38.92	51.06
Avg. HSFO (\$/BBL) (High Sulphur Fuel Oil)	44.89	35.48	32.11	47.79
Volume Mix (Gas : Liquid)	70 : 30	69 : 31	70 : 30	70 : 30
Revenue Mix (Gas : Liquid)	66 : 34	65 : 35	66 : 34	60 : 40

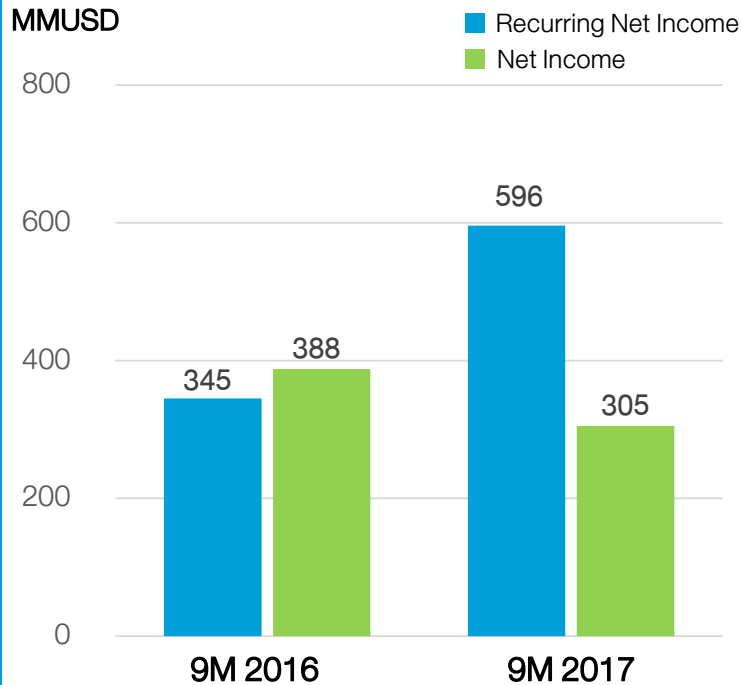
DD&A	23.13	17.79	17.88	15.11
Finance Cost	2.14	2.01	2.01	2.10
Royalties	3.62	3.02	3.02	3.30
G&A	2.39	1.93	1.50	1.81
Exploration Expenses	1.56	0.63	0.71	0.36
Operating Expenses	6.04	5.08	4.86	5.68
Lifting Cost	4.62	4.18	4.05	4.12
Drilling Success Ratio**	31 : 47	6 : 8	5 : 7	0 : 4

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

** Exploration and Appraisal Wells

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

Net Income 9M Comparison



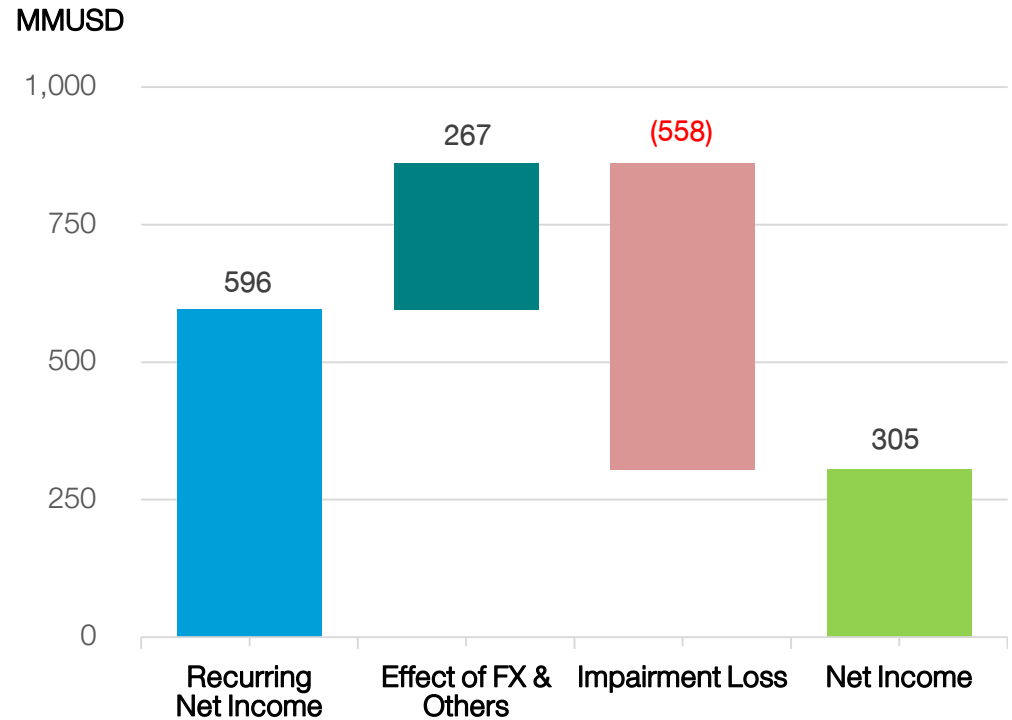
Recurring Net Income

Improved due to lower unit cost and better ASP

Net Income

Pressured by impairment loss net with higher gains from effect of FX and oil price hedging

Net Income 9M 2017

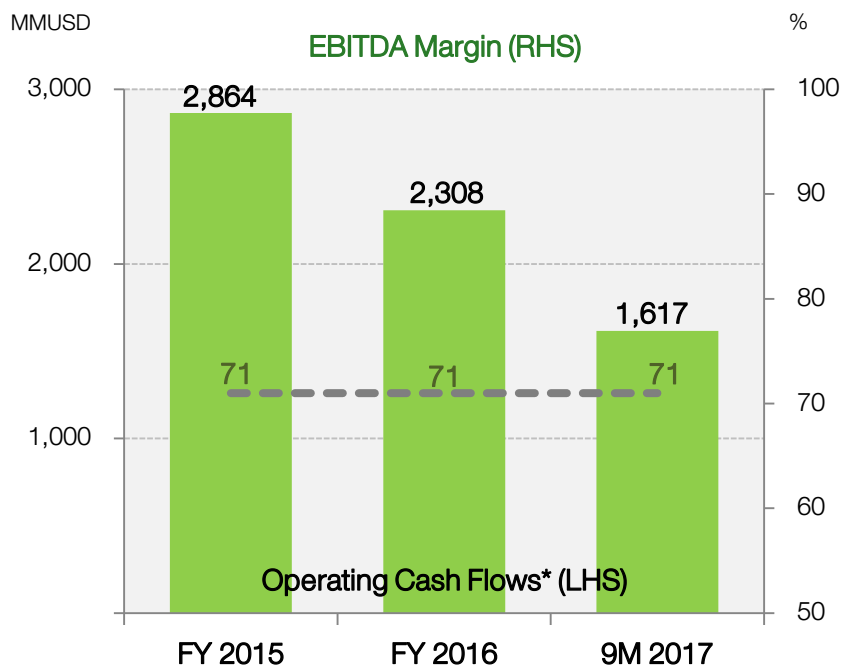


Impairment Loss

- Triggered by the revision of Mariana Oil Sands Project's development plan
- Impairment loss has no impact to cash flow

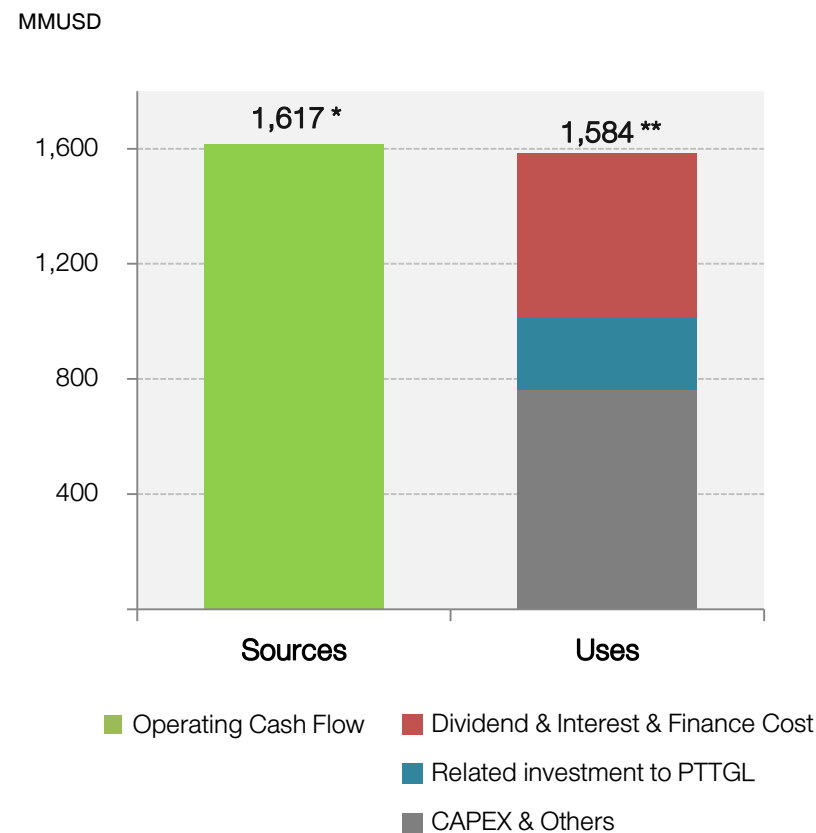


Cash Flow Performance



Net Income	(854)	372	305
Recurring Net Income***	718	466	596

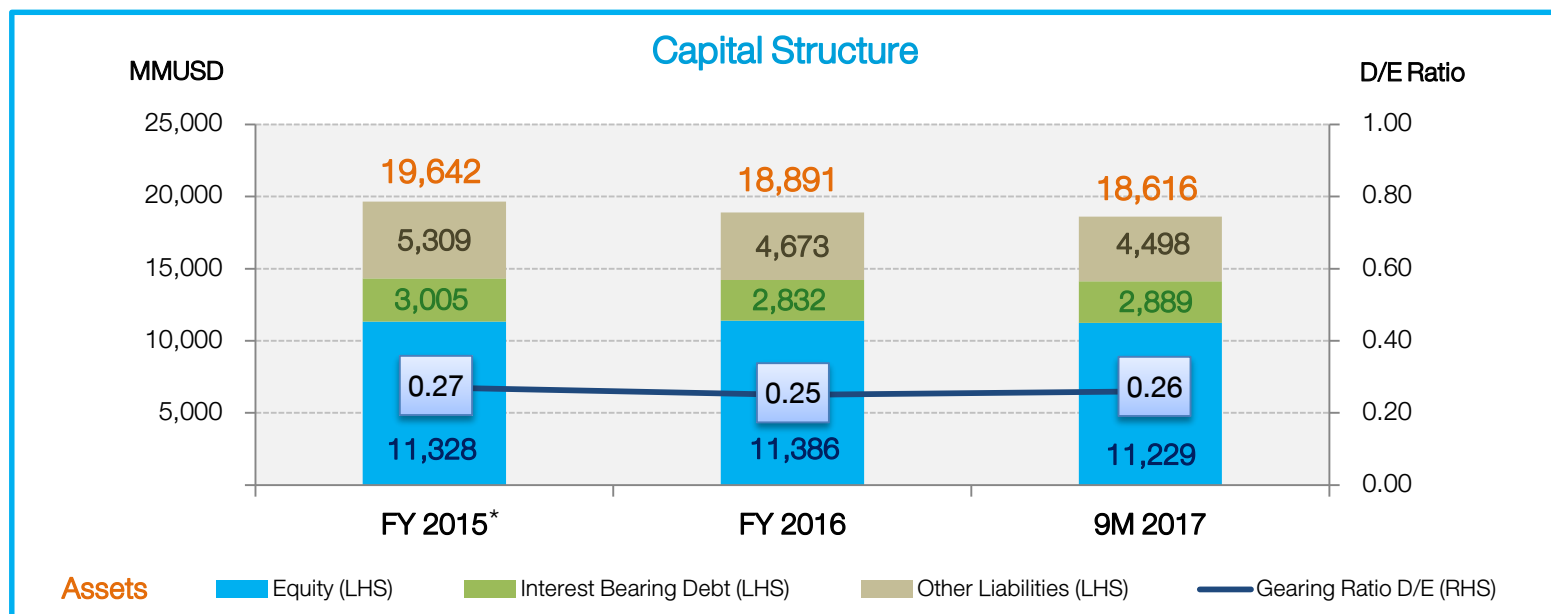
Source & Use of Funds in 9M 2017



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.



Debt Profile**



Weighted Average
Cost of Debt** (%)

4.32

4.41

4.49

[Fixed : Floating]

[82 : 18]

[80 : 20]

[80 : 20]

Average Loan Life** (Years)

8.17

8.15

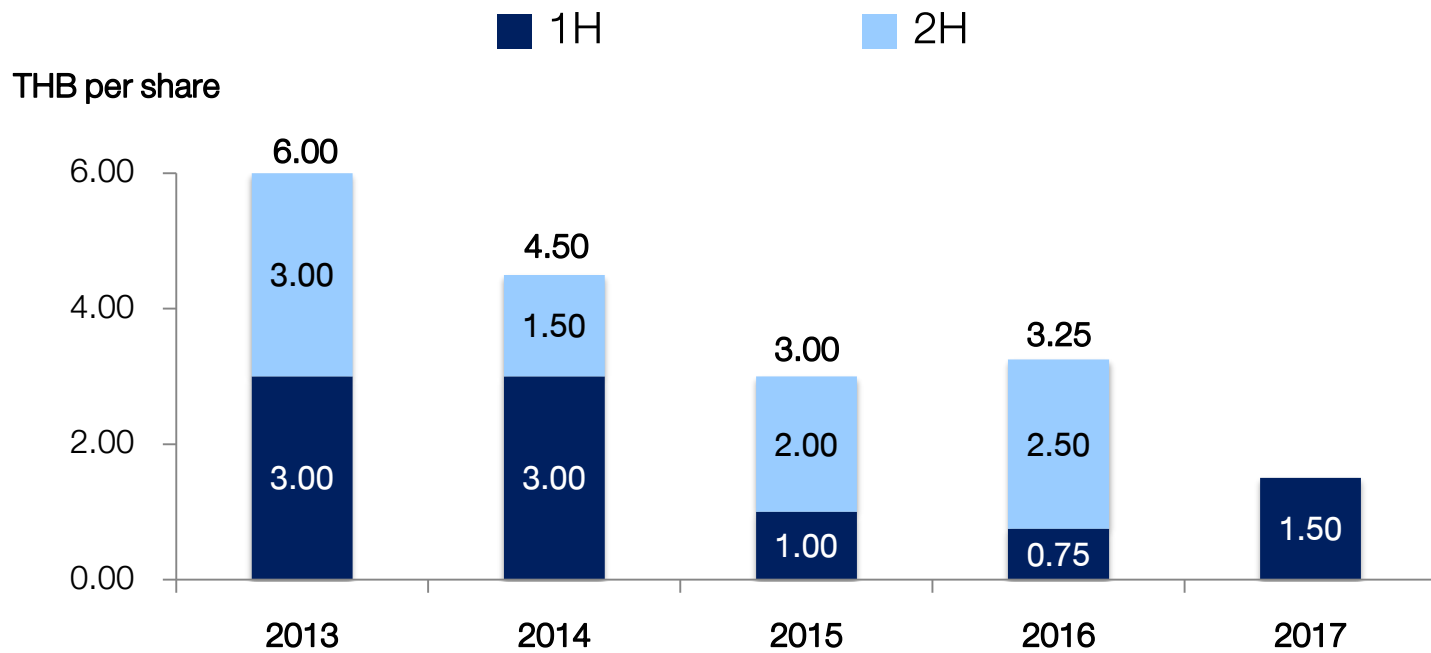
7.40

Remark: * Restated

** Excludes Hybrid bonds



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



Payout Ratio (%)	40	82	N/A	98	31
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Company Overview

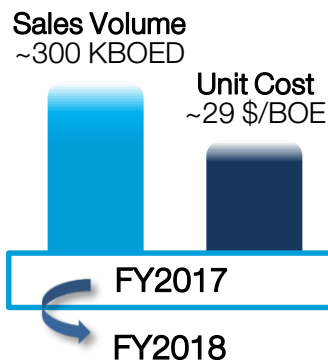
Financial Performance

Operational Updates

Investment Plan & Outlook



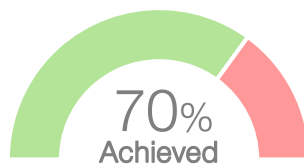
On track for FY2017 sales volume and unit cost targets



aims to maintain sales volume and unit cost at similar level as FY2017

Initiatives to uplift production volume

Progress (as of Oct 2017)



Total initiatives ~7 KBOED

Total initiatives are already included in Sales volume guidance of ~300 KBOED

S1 project

- Maximize crude production in current development areas and new discovery areas

Myanmar projects

- Best endeavor to increase export and domestic gas
- Shutdown plan optimization

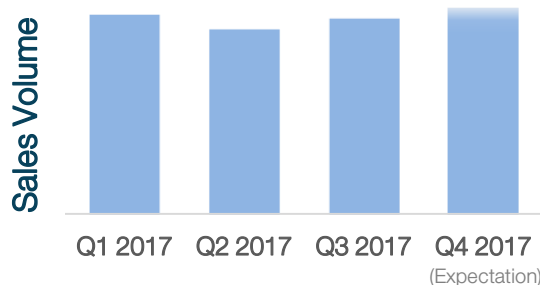
Montara field

- Maximize crude production by facility reliability improvement and reservoir management

Bongkot and Arthit projects

- Maximize condensate production by high yield well management

Strong 2H 2017 sales volume outlook



2H 2017

- Improved situation on nomination of natural gas projects in Thailand
- Recovering volume from MTJDA project after resolving technical problem of Malaysian buyer's receiving plant
- Low maintenance shutdown activities
- Additional contribution from the company's initiatives



Mozambique Offshore LNG



8.5%

(operated by Anadarko)

Production

12MMTPA

Expected Start-up

2022/23

- Received approval on marine concessions
- Under preparation for resettlement action plan which is to begin in Q4 2017
- Significant progress on SPA negotiation, especially with PTT – foundation buyer, and project finance is ongoing as planned

Algeria HBR



24.5%

(operator)

Production

50KBPD

Expected Start-up

2023

- Planned full production of 50 KBPD (including the development phase 1 of 10-13 KBPD with expected start-up in 2019)
- Submitting development plan in Q4 2017 and FID once government approval is received

Ubon (Contract 4)



60%

(operated by Chevron)

Production

25-30KBPD

Expected Start-up

2021

- Oil field in the Gulf of Thailand
- Pursuing further cost rationalization

Southwest Vietnam



Block B&48/95 **Block 52/97**
8.5% **7.0%**
(operated by PetroVietnam)

Production

490MMSCFD

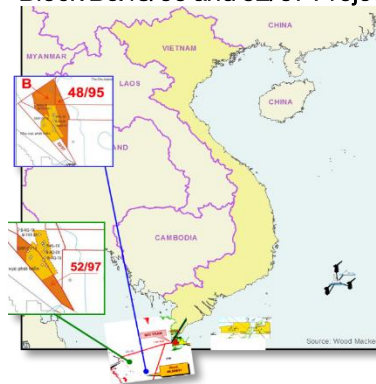
Expected Start-up

2021

- Gas production will support domestic power plants through Block B O-Mon Gas Pipeline Project (PTTEP's WI 5.183%)
- Signed Letter of Agreement on gas price and pipeline tariff in Q3 2017
- Finalizing commercial agreements and FID once government approval on FDP is received

Upstream

Block B&48/95 and 52/97 Project



Midstream (Pipeline)

Block B O-Mon Gas Pipeline Project





Path to Retendering Process



Related Rules/Laws to the Bidding

Petroleum Act & Petroleum Income Tax Act



Announcement of Petroleum Committee about rules in determining E&P areas



3 Ministerial Regulations relating to Production Sharing Contract

Terms of Reference for this bidding

2 Ministerial Regulations relating to Service Contract (Not required prior to this bidding)

Under State Council's consideration

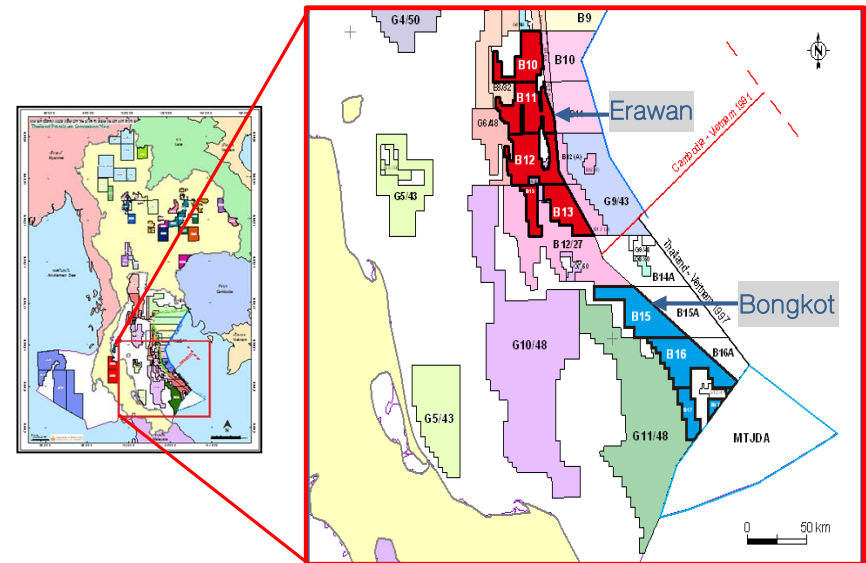
Under MoE's consideration

With key objective to ensure energy security...



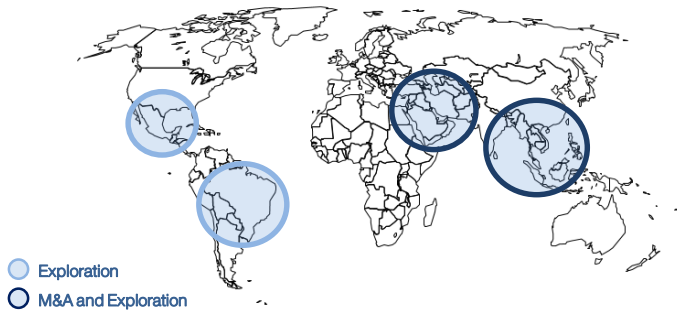
PTTEP is competitively positioned to continue as operator for Bongkot

- Experienced and reliable
- Operational efficiency
- Deep subsurface understanding
- Synergies in the Gulf of Thailand



Note: indicative timeline and Progress as of 1 November 2017

M&A and Exploration



Geographical

- SEA and other potential areas

M&A

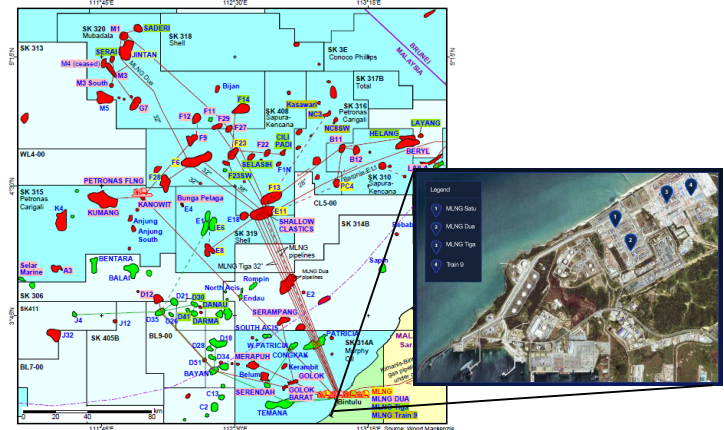
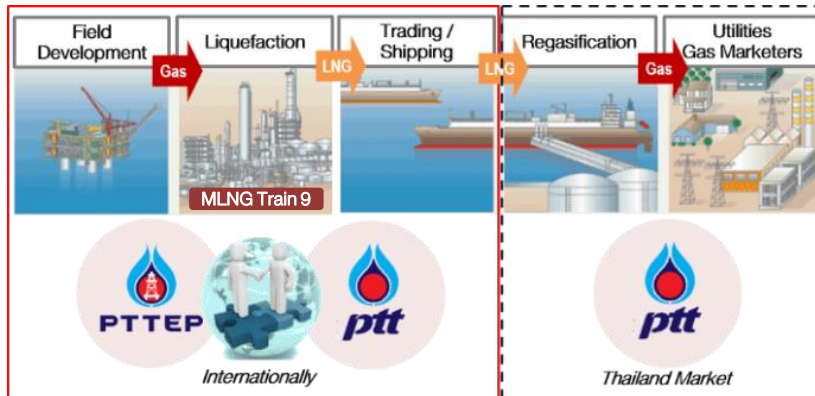
- Focus on producing or near-producing

Exploration

- Focus on prolific areas and quick commercialization
- Participating in bid rounds in potential areas

Cooperation with PTT on LNG Value Chain

To capture opportunity from increasing LNG demand, while creating value from synergy with PTT in the LNG value chain



Recent 10% Investment in MLNG Train 9 in Malaysia marked as first step into midstream LNG business in strategic area and in vicinity of current and future upstream opportunities

Source – map of Offshore Sarawak: Woodmac



Company Overview

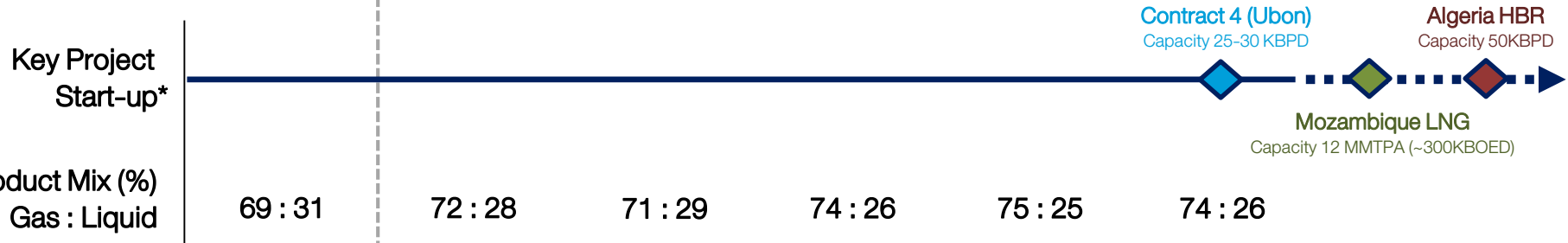
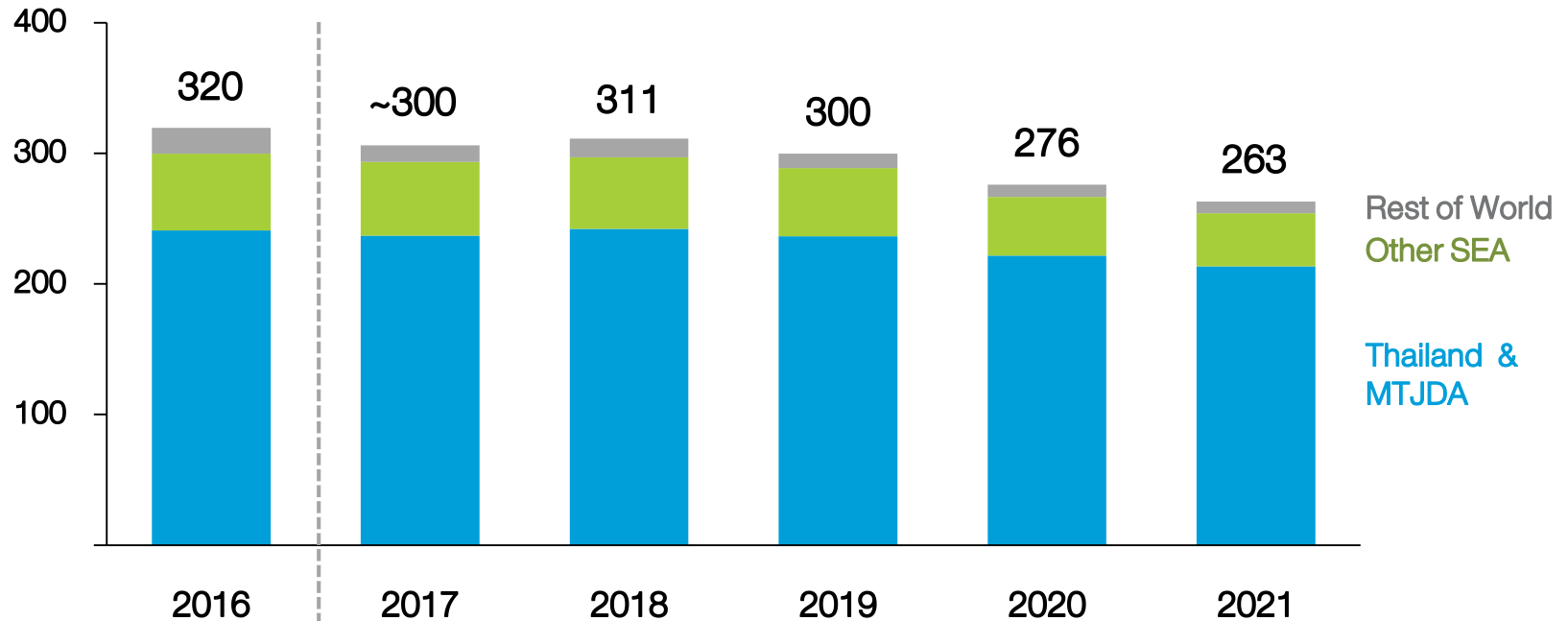
Financial Performance

Operational Updates

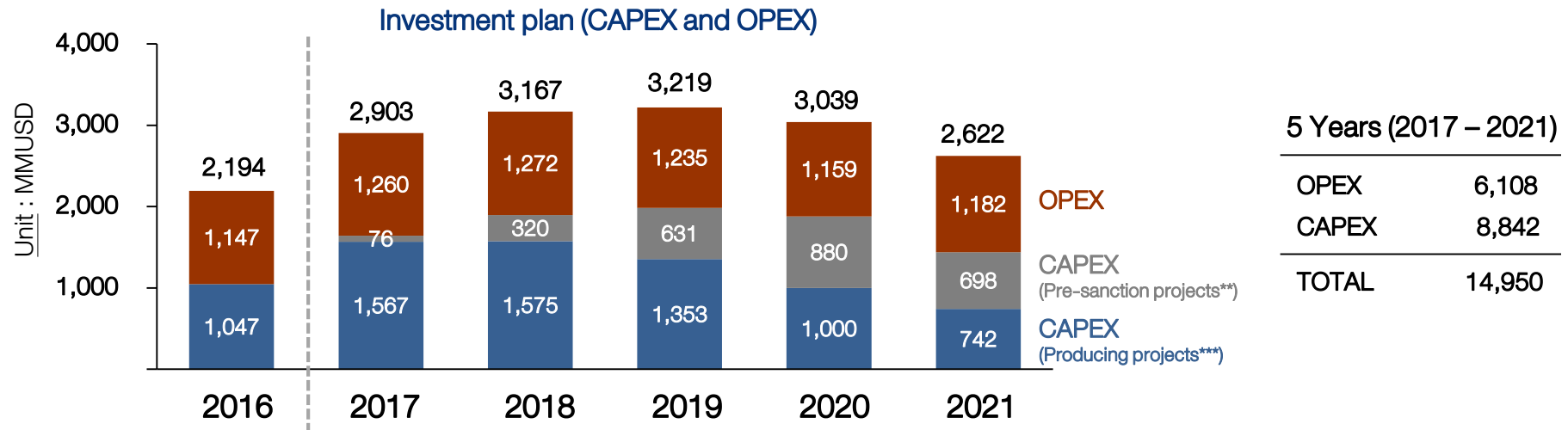
Investment Plan & Outlook



Unit : KBOED



Note: * Subject to FID timing

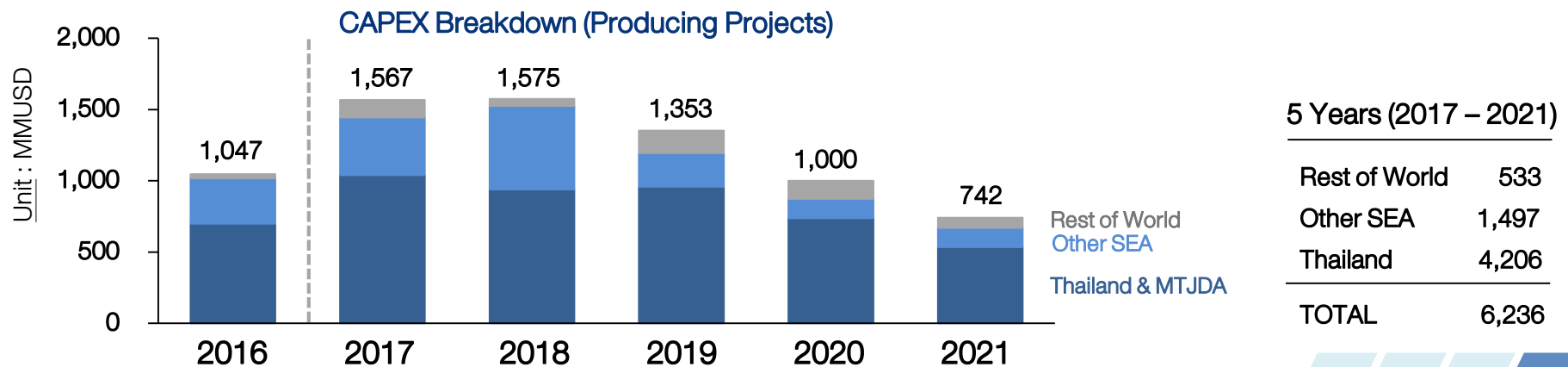


Key Project
Start-up*

Contract 4 (Ubon)
Capacity 25-30 KBPD

Algeria HBR
Capacity 50KBPD

Mozambique LNG
Capacity 12 MMTPA (~300KBOED)



Note: * Subject to FID timing
 ** Pre-sanction projects include Mozambique LNG, Contract 4 (Ubon), Algeria HBR
 *** Includes exploration and appraisal in all projects and head office CAPEX



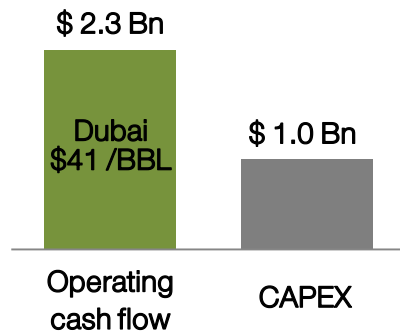
Strong Financial Capability in 2016

2.3 billion USD Operating cash flow

4.0 billion USD Cash on hand

2.0 billion USD Debt headroom

0.25 x Total debt/equity ratio



"Solid cash flow from operations in 2016 despite low oil price environment"

Financial Outlook

FY 2017



Average Sales Volume

~300
KBOED



Average Gas Price *

~5.6
USD/MMBTU



Unit Cost

~29
USD/BOE



EBITDA Margin

~70
% of sales revenue

* Based on FY2017 Dubai oil price at 52 \$/BBL



Focused Portfolio with revenue stability

- +90% of sales volume concentrated in SEA
- Stable revenues from PTT +80% of sales volume via long term off-take contracts
- Gas-weighted portfolio to cushion oil price volatility and in line with global trend towards gas

Competitive Cost base and strong margin

- Low cost operations in SEA with ~70% EBITDA margin amid the low oil prices
- Cost discipline and operation efficiency with over 30% Unit cost reduction

Best Balance sheet and Capital Management

- \$4 Bn cash on hand and solid capital structure with low D/E ratio
- A consistent dividend-paying company for over 15 years

Well positioned for future growth

- Organizational Restructuring to enhance operational efficiency
- Series of project developments in the pipeline and M&A
- Cooperation with PTT in LNG Value Chain investments with First Step into LNG midstream



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



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Detailed Financial Results	23-29
Cost Management & Peers Benchmarking	30-31
Safety and Sustainability	32-33
Thailand Updates	34
Reserves and Resources	35
Key Project Highlights by Region	36-43
Project Details	44-46
Organization Structure	47
Ratios and Formula	48

Summary of Q3 2017 Financial Results

Improved core earnings while net income hurt by impairment charge

Unit : MMUSD

Statement of Income	Q2 17	Q3 17	% QoQ	Q3 16 *	% YoY	9M 17	9M 16 *	% YTD
Total Revenues	1,032	1,134	10%	1,109	2%	3,252	3,281	(1%)
Sales	975	1,064	9%	1,047	2%	3,079	3,152	(2%)
Others	57	70	23%	62	13%	173	129	34%
Sales Volume (BOED)	281,435	298,139	6%	311,386***	(4%)	294,539	320,600***	(8%)
Sales Price (USD/BOE)	38.08	38.78	2%	36.32	7%	38.29	36.00	6%
Total Expenses	812	1,398	72%	953	47%	2,947	2,896	2%
Major Expenses:								
Operating Expenses	153	162	6%	146	11%	457	415	10%
Exploration Expenses	19	9	(53%)	20	(55%)	29	61	(52%)
DD&A	381	413	8%	534	(23%)	1,214	1,570	(23%)
Impairment Loss on Assets	-	558	>100%	-	>100%	558	-	>100%
Income Tax Expense	67	57	(15%)	67	(15%)	116	152	(24%)
(Gain)/Loss on FX	(11)	(23)	(>100%)	(14)	(64%)	(37)	(27)	(37%)
Net Income from Continuing Operations	220	(264)	(>100%)	156	(>100%)	305	385	(21%)
Profit (loss) from Discontinued Operations	-	-	-	0.27	(100%)	-	3	(100%)
Net Profit	220	(264)	(>100%)	156	(>100%)	305	388	(21%)
Recurring Net Income	167	218	31%	75	>100%	596	345	73%
Non-Recurring **	53	(482)	(>100%)	81	(>100%)	(291)	43	(>100%)

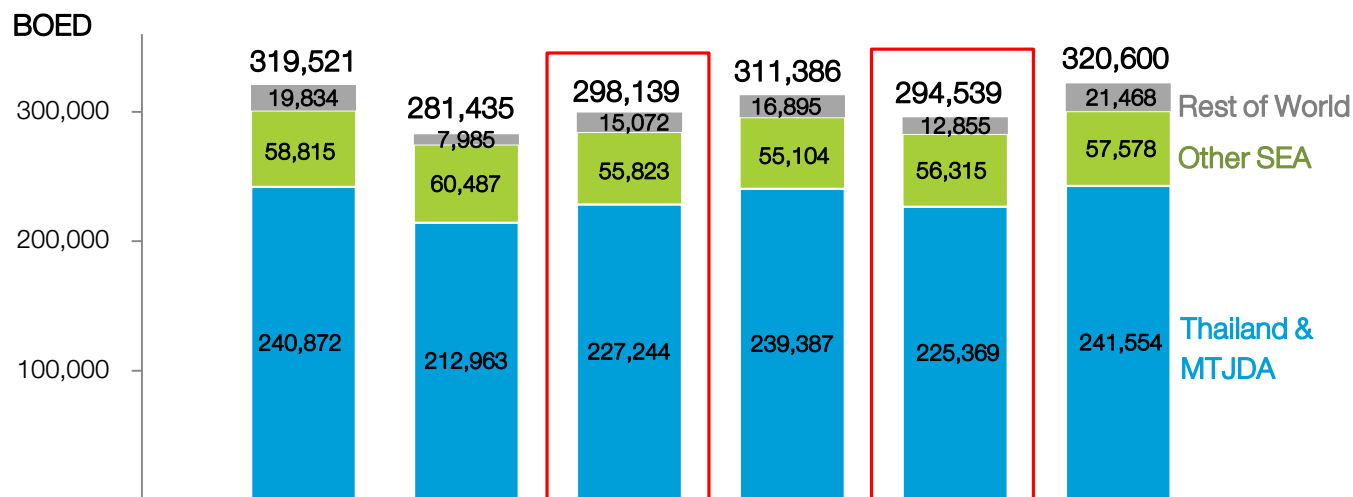
Note: * Represented

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

*** Sales volume includes discontinued operations



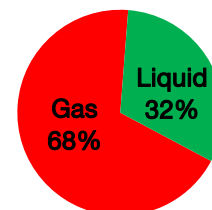
Sales Volume



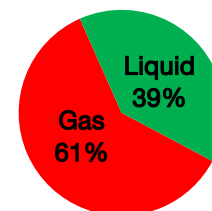
Sales Price	2016*	Q2 17	Q3 17	Q3 16*	9M 17	9M 16*
Gas (\$/MMBTU)	5.60	5.66	5.72	5.56	5.54	5.75
Liquid (\$/BBL)	41.17	48.19	48.46	43.15	49.87	39.37
Weighted Avg. (\$/BOE)	35.91	38.08	38.78	36.32	38.29	36.00
Avg. Dubai (\$/BBL)	41.27	49.68	50.43	43.17	51.06	38.92
Avg. HSFO (\$/BBL) (High Sulphur Fuel Oil)	35.48	46.80	47.95	38.02	47.79	32.11

Q3 2017 Sales Volume & Revenue By Product

Volume Mix



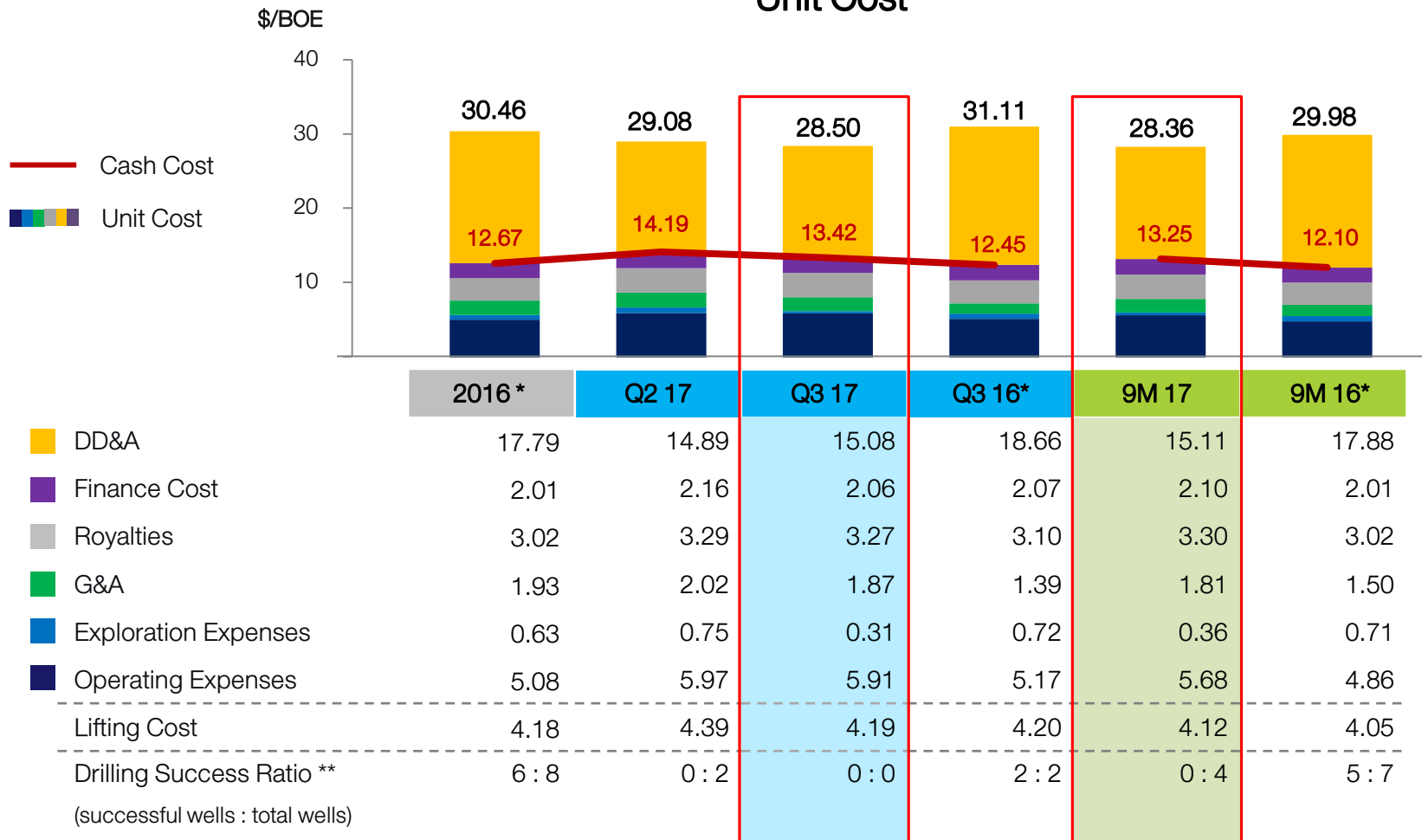
Revenue Mix



Note: * Includes discontinued operations until end of August 2016



Unit Cost



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

** Exploration and Appraisal Wells

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



	Q2 17	Q3 17	Q3 16*	9M 17	9M 16*
Sales Revenue ** (MMUSD)	993	1,089	1,065	3,135	3,204
EBITDA (MMUSD)	685	777	770	2,238	2,337
Net Income (MMUSD)	220	(264)	156	305	388
Recurring Net Income (MMUSD)	167	218	75	596	345
Earning Per Share (USD)	0.04	(0.07)	0.04	0.06	0.09
Key Financial Ratios					
EBITDA Margin (%)	69	71	72	71	73
Return on Equity (%) (LTM)	6	3	5	3	5
Return on Capital Employed (%) (LTM)	6	3	4	3	4
Return on Equity (%) (LTM, Recurring Net Income)	5	6	3	6	3
Return on Capital Employed (%) (LTM, Recurring Net Income)	5	6	3	6	3

Note: * Represented

** Sales and revenue from pipeline transportation

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



	Q4 16	Q1 17	Q2 17	Q3 17
Total Assets (MMUSD)	18,891	19,251	18,872	18,616
- Cash & cash equivalents ** (MMUSD)	4,022	4,446	4,206	4,055
Total Liabilities (MMUSD)	7,505	7,800	7,213	7,387
- Interest bearing debt (MMUSD)	2,832	2,863	2,874	2,889
Equity (MMUSD)	11,386	11,451	11,659	11,229
Key Financial Ratios				
Total Debt to Equity (X)	0.25	0.25	0.25	0.26
Net Debt** to Equity (X)	(0.11)	(0.14)	(0.11)	(0.10)
Total Debt to Capital (X)	0.20	0.20	0.20	0.20
Total Debt to EBITDA (X)	0.94	0.95	0.98	0.99
Net Debt** to EBITDA (X)	(0.40)	(0.53)	(0.46)	(0.40)
EBITDA Interest Coverage (X)	22	22	22	22

Credit Ratings :

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

Weighted Average Cost of Debt ** :

4.49%

Average Loan Life ** :

7.40 years

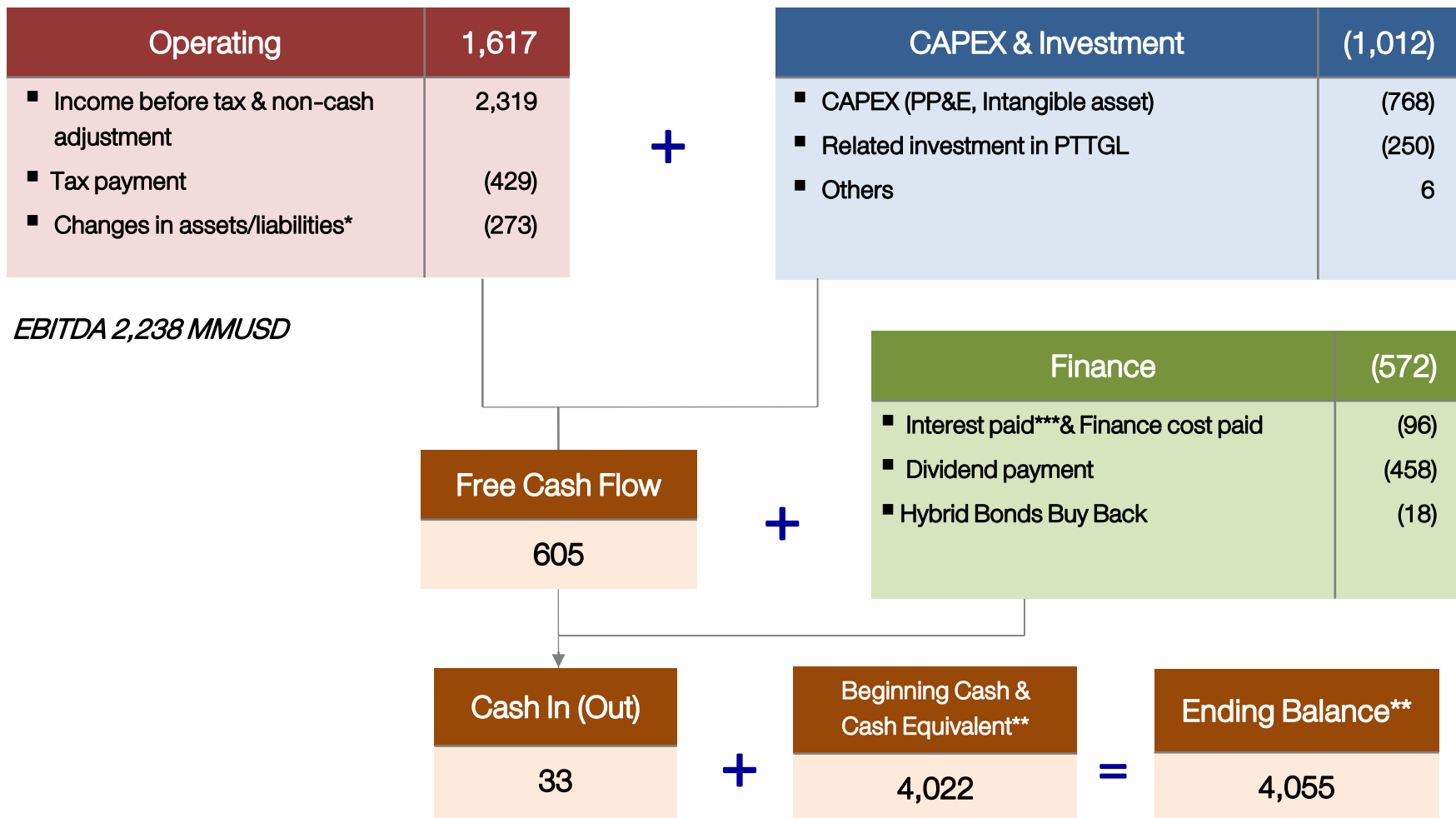
Note: * Cash & Cash Equivalents (Cash on hand) include Short-term Investments (Fixed deposit > 3 months)

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

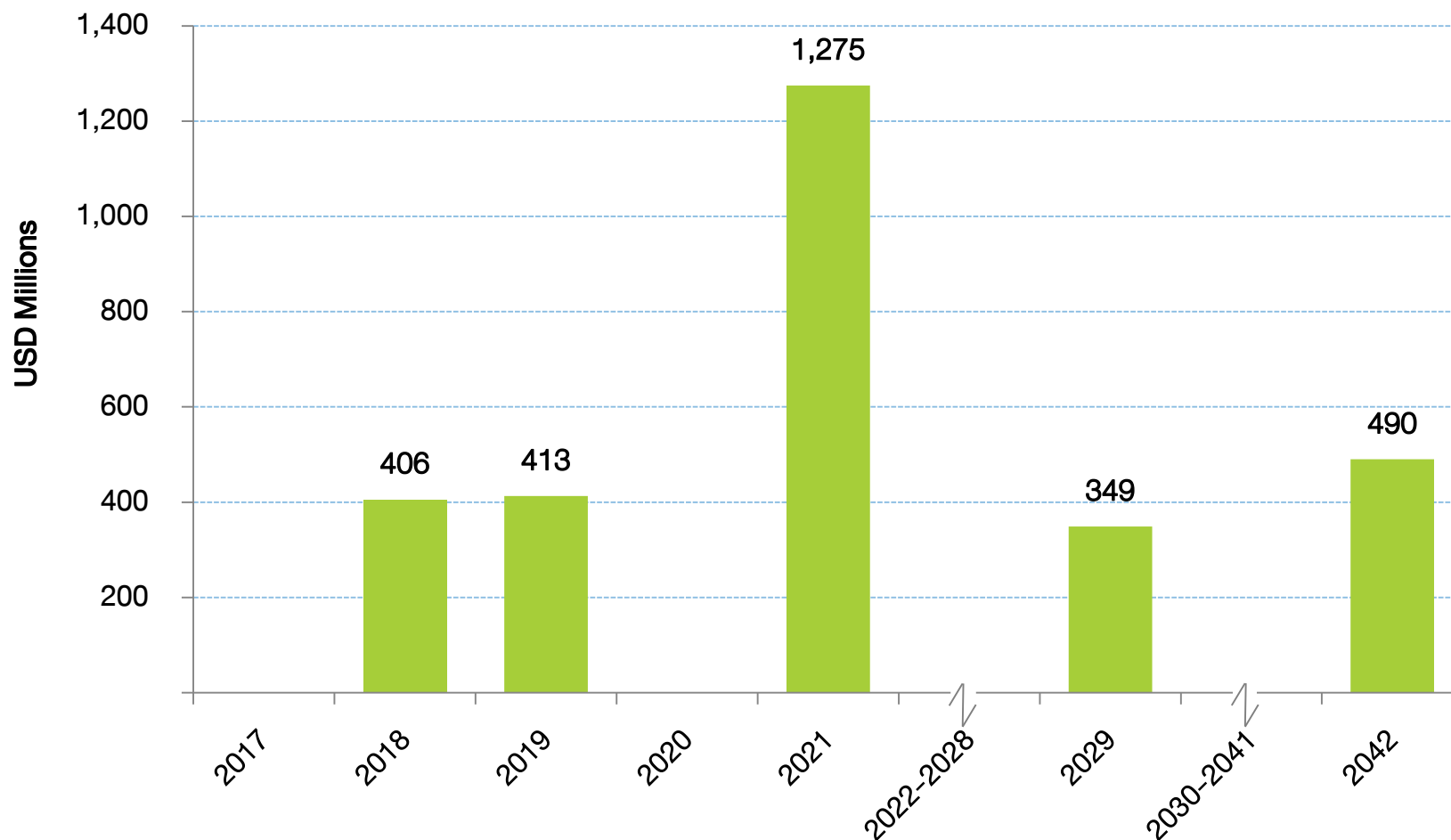
Unit : MMUSD



Note: * Net of foreign exchange rate effect

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

*** Net of interest received

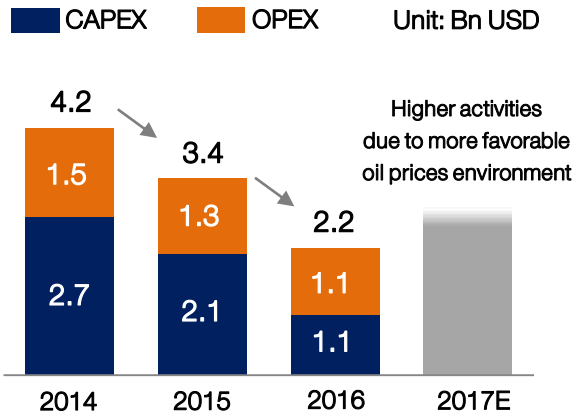


Note: Excludes Hybrid bonds

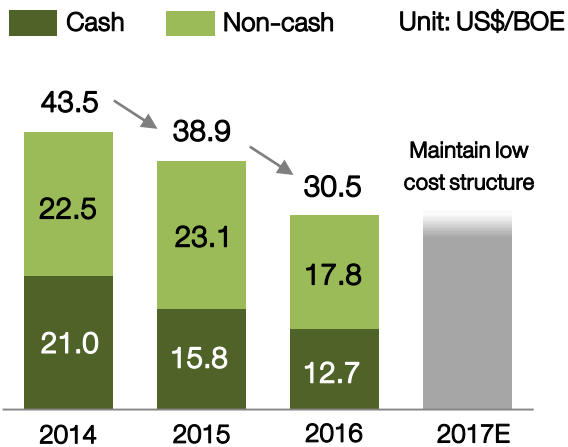
Unit: USD Millions or equivalent after cross currency swap



Expenditure (CAPEX + OPEX)

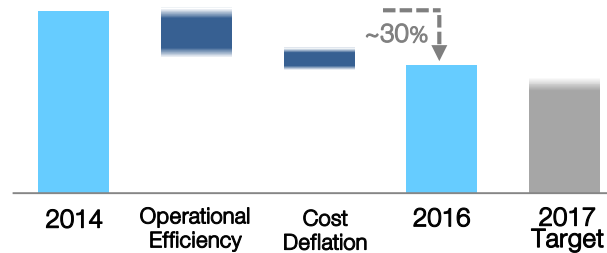


Maintain Low Unit Cost



Continuing Cost Improvement Momentum

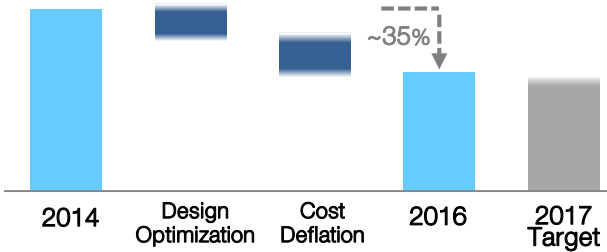
Development Drilling Cost per Well*



Reductions achieved through ...

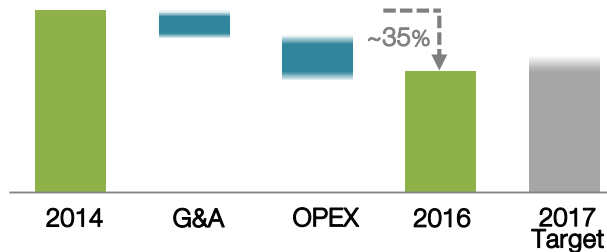
- Drilling performance improvement
- Drilling days reduction
- Standardizing well design

Wellhead Platform Cost per Unit*



- Platform design standardization
- Enhance more savings on marine costs related
- Contract renegotiation

OPEX and G&A per BOE



- Process streamline e.g. logistics, maintenance optimization
- Disciplined G&A policies
- Enhance procurement savings

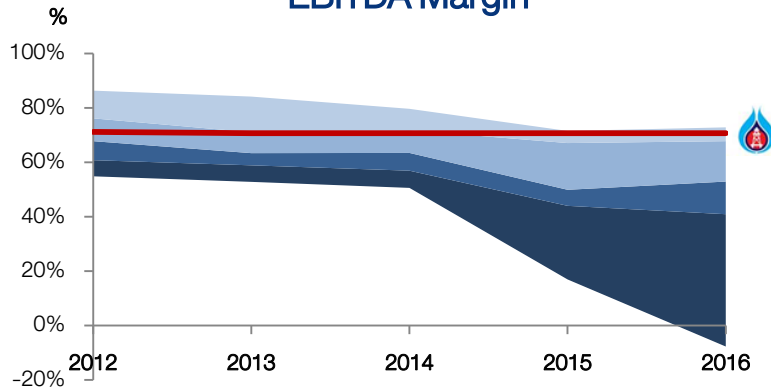
Remark * Primarily applicable in PTTEP-operated projects in the Gulf of Thailand

Note : For Wellhead Platform Cost: Graph represents cost reduction captured but not yet fully realized

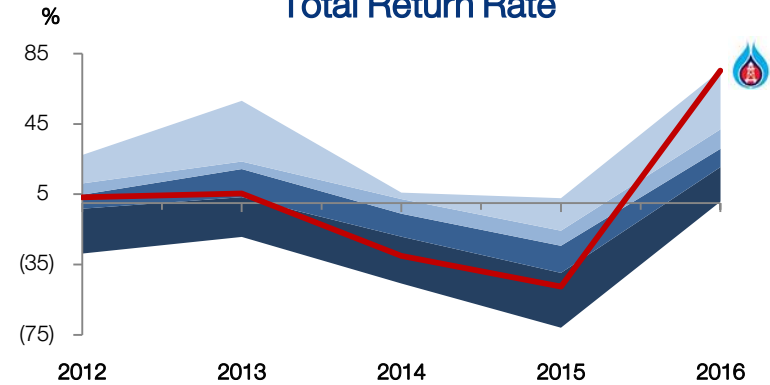


Deliver better performance...

EBITDA Margin

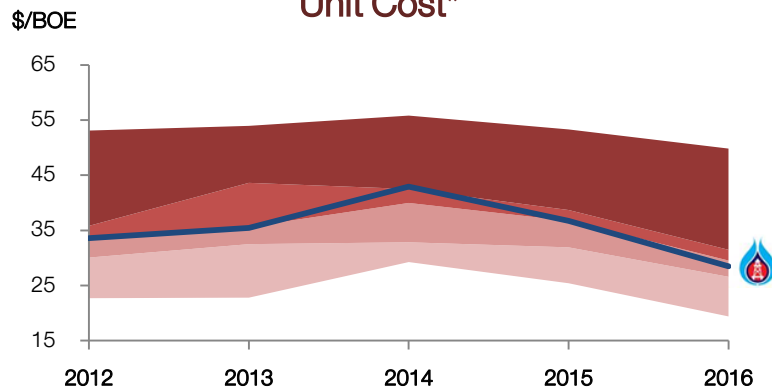


Total Return Rate



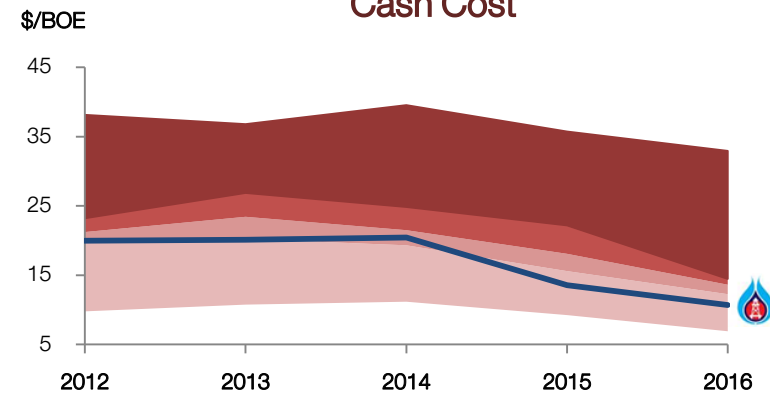
...with competitive cost structure

Unit Cost*



Remark: * Exclude Finance cost

Cash Cost



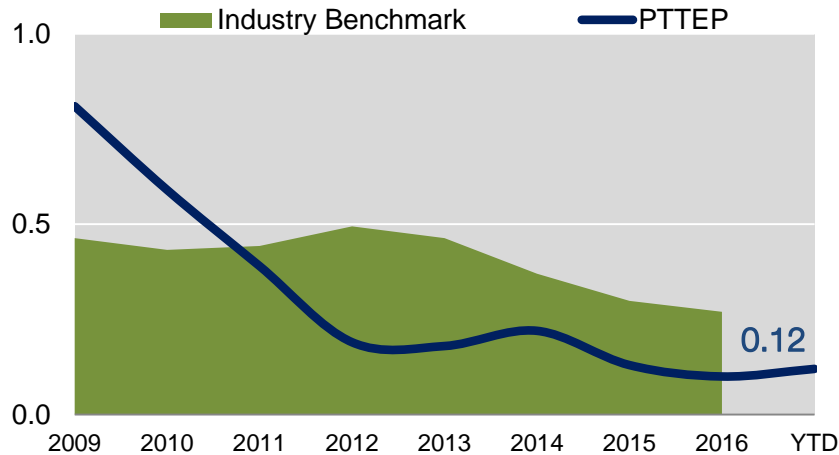


Safety

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

Affirm our path to sustainable development





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

Outstanding Sustainability Report Award 2016
Thai Listed Companies Association

Certified Member
Thailand's Private Sector Collective Action Coalition Against Corruption (CAC)

CG Asia Recognition Awards
Corporate Governance Asia Magazine



FTSE4Good

FTSE4Good Emerging Index 2017

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



Exemplary social contributor

Platinum Award for SIOLA Project:
Best Community Program
the 9th Annual Global CSR Summit 2017

Bronze Stevie Award for SIOLA and Crab
Hatchery Learning Center Project:
The Asia-Pacific Stevie Awards Program

Green driver to environment

Asia's Best Environmental Responsibility Award
Corporate Governance Asia Magazine

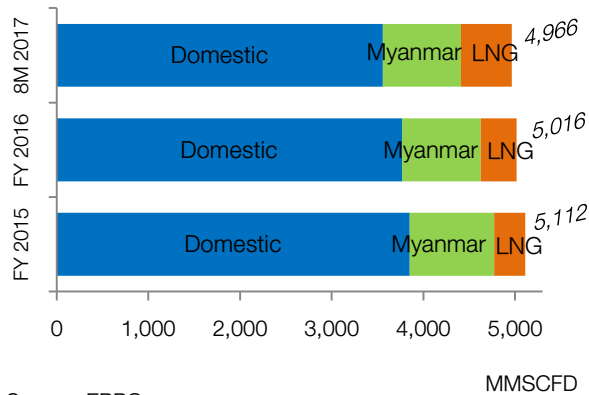
2017 LESS Award Letter of Recognition
Thailand Greenhouse Gas Management Organization

Thailand Occupational Safety and Health Awards
the Ministry of Labour

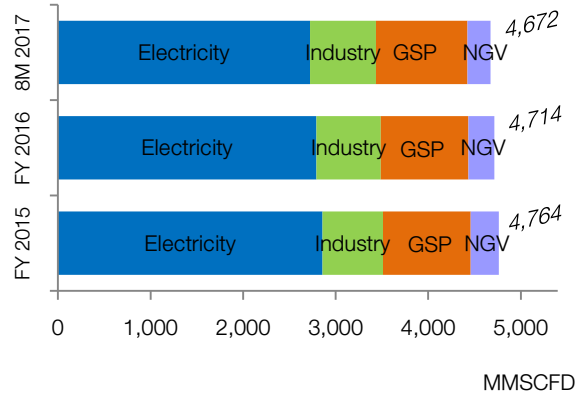


Thailand Energy Overview

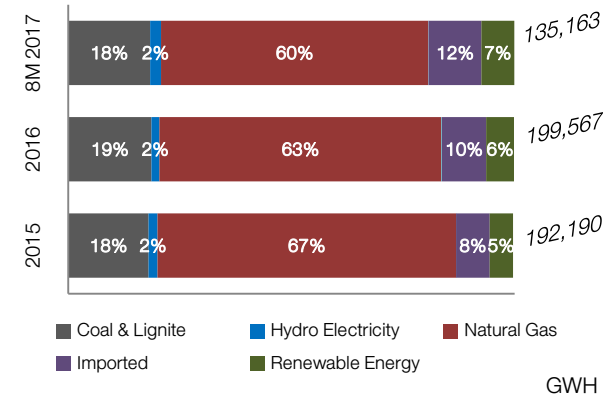
Natural Gas Supply



Natural Gas Consumption



Electricity Generation



Source: EPPO

Exchange Rate Movement (THB/USD)



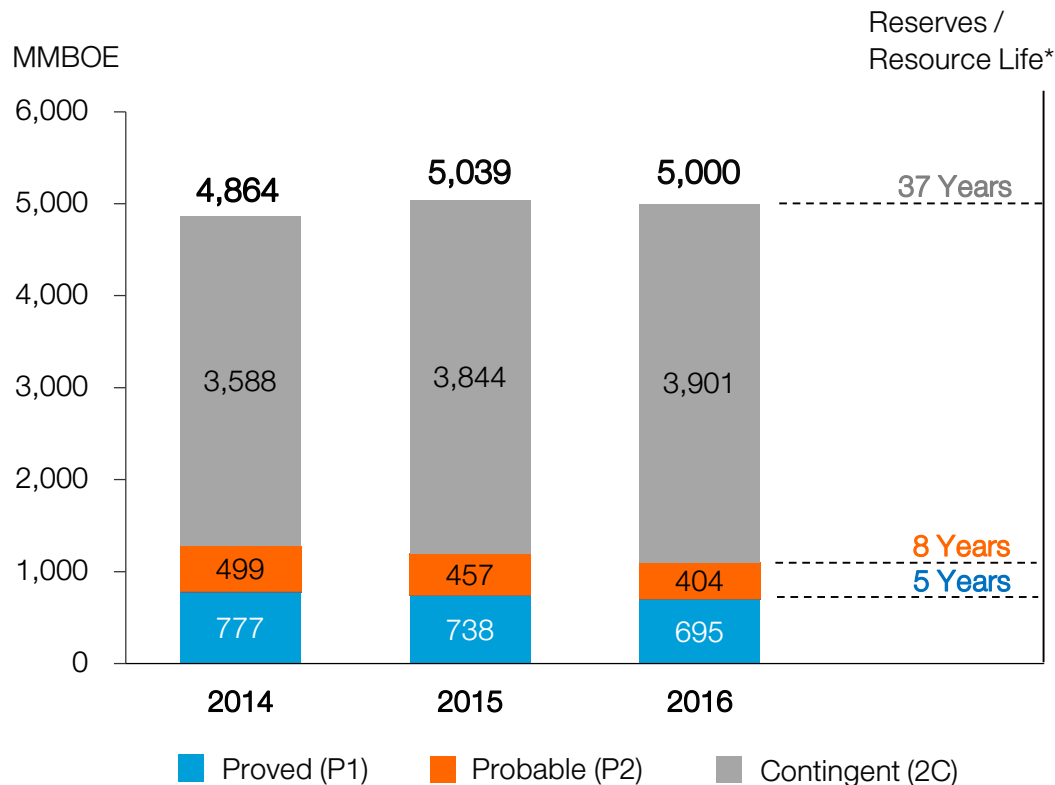
Source: Bank of Thailand, Bloomberg
 Forecast based on Bloomberg Consensus as of 30 October 2017

Thailand's Gas Market

- Slight decline in domestic production and Myanmar piped gas imports while domestic demand remains stable
- Domestic volumes had been pressured by low nomination due to growth in LNG import

Consensus on the exchange rate mostly depends on

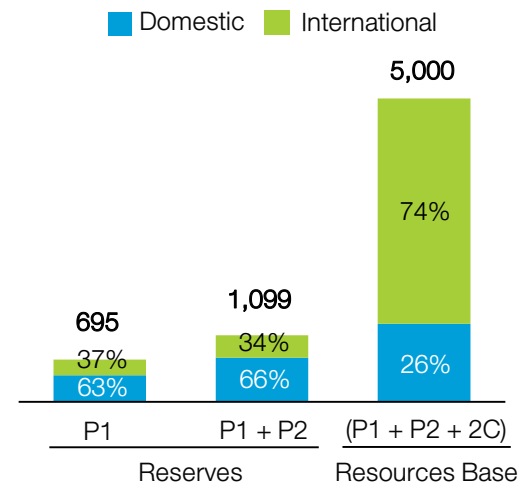
- Determination on ascending interest rate made by FOMC's may lead USD to appreciate against the THB
- Concerns on Trump's Fiscal and Monetary policies



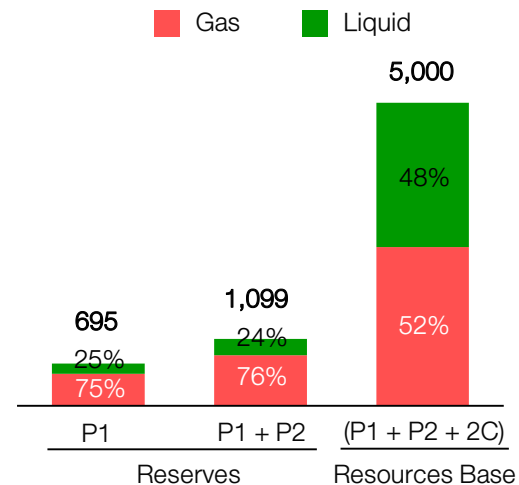
5-Year Average Proved Reserves Replacement Ratio (RRR)

2014	2015	2016
0.45x	0.50x	0.57x

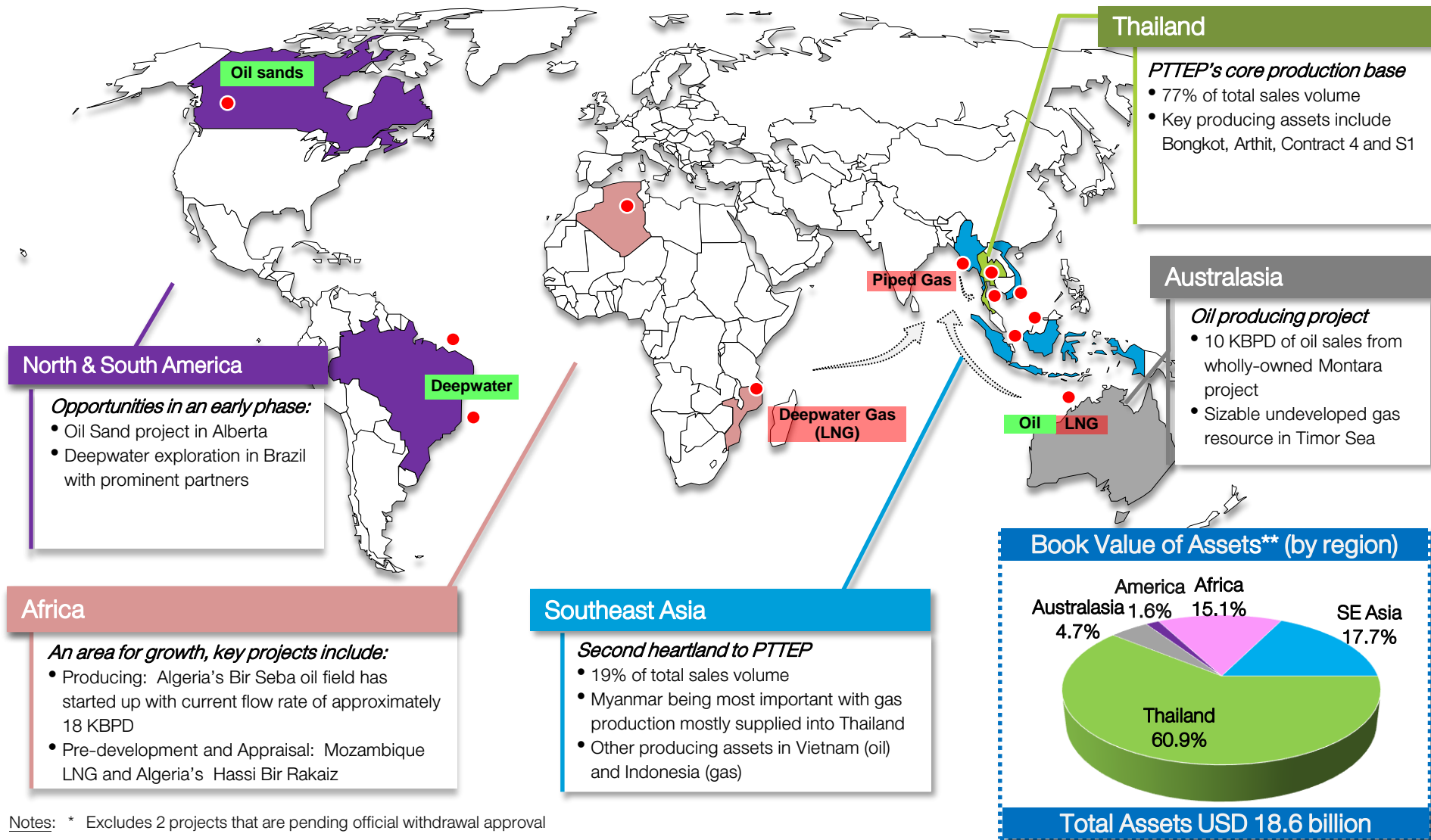
2016 by Geography



2016 by Product Type

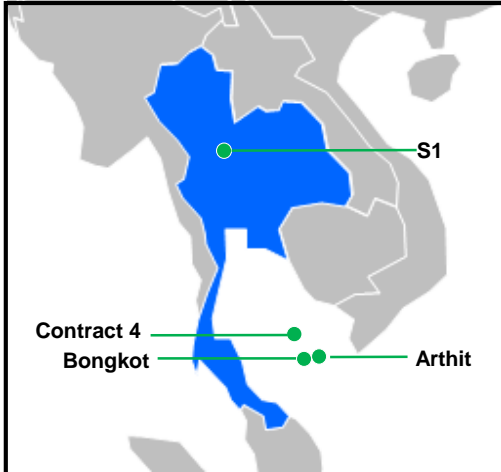


* Based on total production of natural gas, condensate, and crude oil (including LPG) of 368 KBOED for the year ended December 31, 2016



Notes: * Excludes 2 projects that are pending official withdrawal approval

** Information dated as of 30 September 2017 (9M 2017)



● Production / Ramp-up Projects

Bongkot (44.4445% interest)

- Bongkot's natural gas sales volume of 833 MMSCFD in 9M 2017
- Average condensate sales volume was 25 KBPD in 9M 2017

S1 (100% interest)

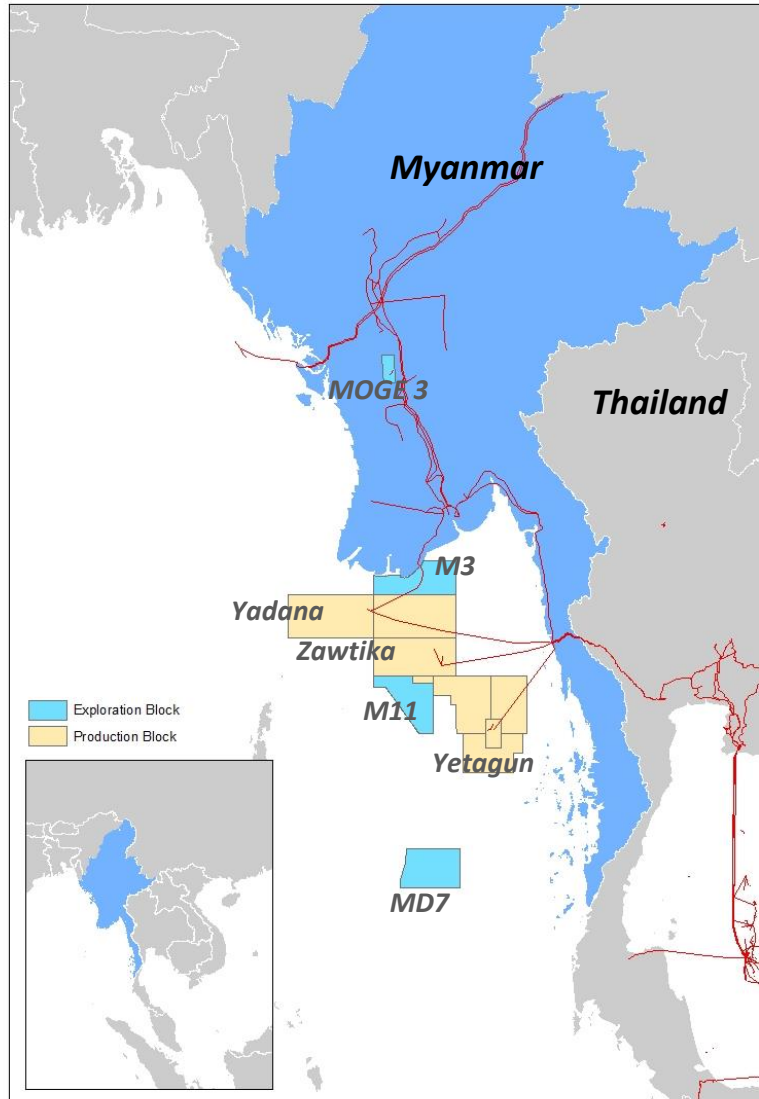
- S1 is the largest onshore crude oil production field in Thailand
- Average crude oil sales volume was 26 KBPD in 9M 2017

Arthit (80% interest)

- Average sales volume in 9M 2017 was 215 MMSCFD of natural gas and 9.8 KBPD of condensates

Contract 4 (60% interest)

- Acquired from Hess Corporation in 2014.
- The Contract 4 project had an average sales rate of 330 MMSCFD for natural gas and 15 KBPD for condensate in 9M 2017



- 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 305 MMSCFD in 9M 2017.
- 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



Vietnam 16-1



● Production / Ramp-up Projects

Natuna Sea A

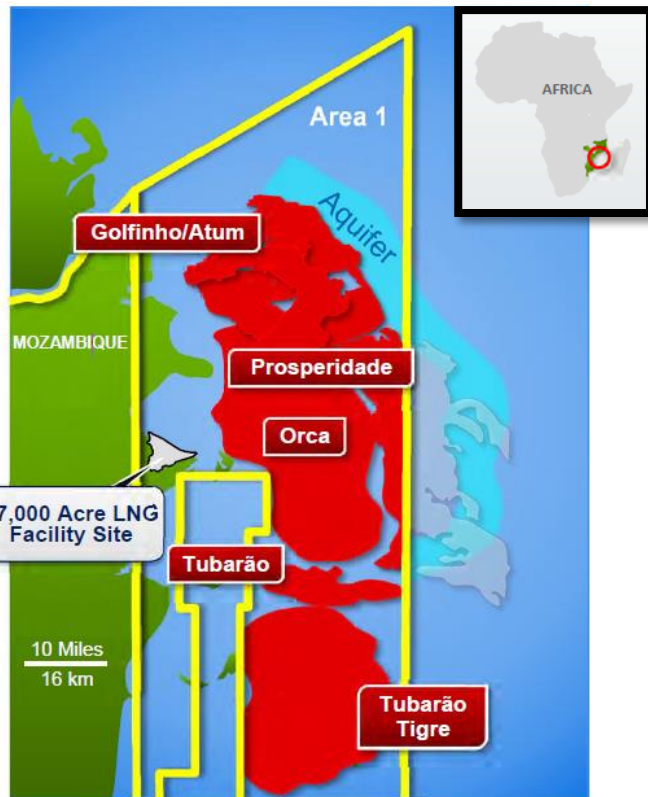


Vietnam 16-1 (28.5% interest)

- Average crude oil sales volume of 21 KBPD in 9M 2017
- Commissioned production platform in the H5 area to support current production level

Natuna Sea A (11.5% interest)

- Average sales volume of natural gas was 221 MMSCFD in 9M 2017



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

- ✓ Secured more than 8 MMTPA of non-binding HOAs

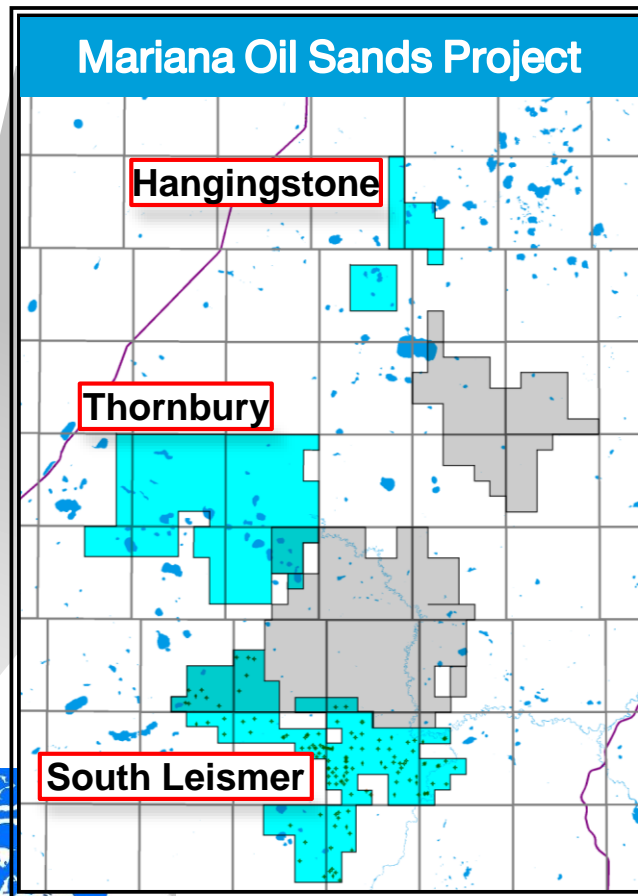
Regulatory

- ✓ Received approval on marine concession
- ✓ Resettlement plan to begin in Q4 2017

Financing

- ✓ On-going negotiation for project financing

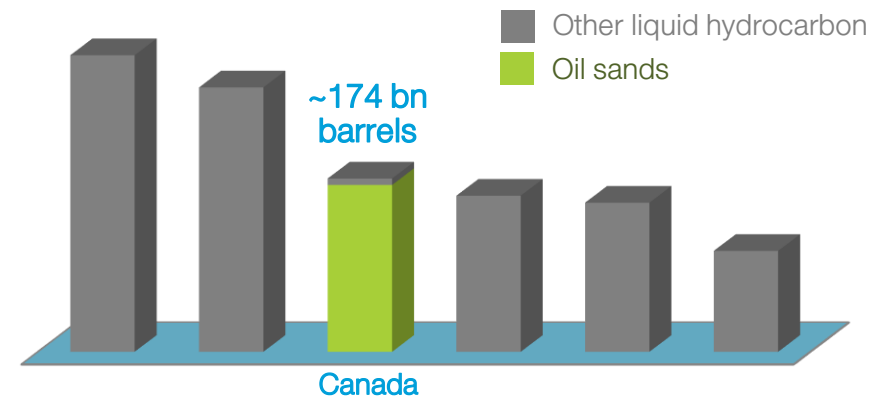
Onwards to initial phase of 12 MMTPA



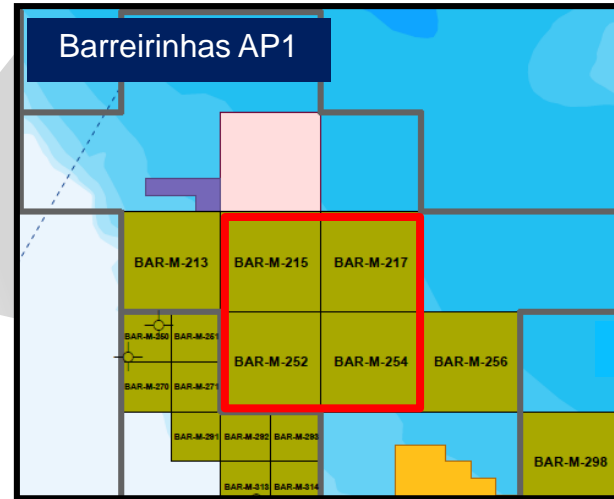
Project Overview

- 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

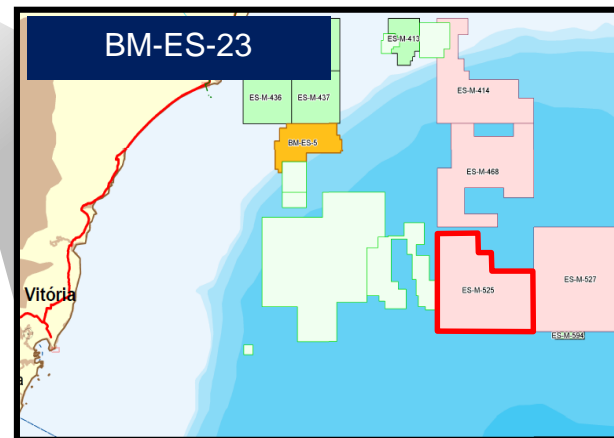
Approximately 96% of the reserves in Canada, the world's 3rd largest oil reserves, is oil sands



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



- 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%)



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>JX Nippon</div> <div>PTT Global LNG</div> </div>	<div> <div>80%</div> <div>10%</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	Status*	PTTEP's Share	Partners (as of Q3 2017)	9M 2017 Average Sales Volume **		2017 Key Activities
					Gas	Oil and Other	
Production Phase							
Thailand and JDA							
1	Arthit	OP	80%	Chevron MOECO 16% 4%	215 MMSCFD	Condensate: 9.8 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">Subsurface study
3	B8/32 & 9A		25%	Chevron MOECO KrisEnergy PSTL 51.66% 16.71% 4.63% 2%	97 MMSCFD	Crude: 27 k BPD	<ul style="list-style-type: none">Drill development wellsPerform waterflood activities
4	Bongkot	OP	44.4445%	TOTAL Shell 33.3333% 22.2222%	833 MMSCFD	Condensate: 25 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%	548 MMSCFD	Crude: 21 k BPD Condensate: 20 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%	330 MMSCFD	Condensate: 15 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%	9.1 MMSCFD	-	
8	G4/43		21.375%	Chevron MOECO PSTL 51% 21.25% 6.375%	2.3 MMSCFD	Crude: 6.2 k BPD	<ul style="list-style-type: none">Drill development wellsPerform waterflood activities
9	G4/48		5%	Chevron MOECO 71.25% 23.75%	6.0 MMSCFD	Crude: 1.4 k BPD	
10	L53/43 & L54/43	OP	100%		-	Crude: 664 BPD	<ul style="list-style-type: none">Drill exploration / appraisal / development wells
11	PTTEP1	OP	100%		-	Crude: 278 BPD	<ul style="list-style-type: none">Drill development wellsPerform waterflood activities
12	S1	OP	100%		21 MMSCFD	Crude: 26 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%	81 MMSCFD	Condensate: 264 BPD	<ul style="list-style-type: none">Drill development wells
14	MTJDA	JOC	50%	Petronas-Carigali 50%	235 MMSCFD	Condensate: 6.0 k BPD	<ul style="list-style-type: none">Drill development wellsInstall wellhead platforms
15	L22/43	OP	100%		-	Crude: 164 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	Status*	PTTEP's Share	Partners <i>(as of Q3 2017)</i>	9M 2017 Average Sales Volume **		2017 Key Activities
					Gas	Oil and Other	
Production Phase							
Overseas							
16	Vietnam 9-2	JOC	25%	PetroVietnam 50% SOCO 25%	12 MMSCFD	Crude: 4.1 k BPD	<ul style="list-style-type: none">• Maintain production operation• Perform reservoir management
17	Yadana		25.5%	TOTAL 31.24% Chevron 28.26% MOGE 15%	754 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 (Hong Kong) 10.90878%	219 MMSCFD	Condensate: 5.7 k BPD	<ul style="list-style-type: none">• Drill appraisal / development wells• Perform reservoir Management
19	Vietnam 16-1	JOC	28.5%	PetroVietnam 41% SOCO 28.5% OPECO 2%	-	Crude: 21 k BPD	<ul style="list-style-type: none">• Drill development wells• Maintain production operation
20	PTTEP Australasia (PTTEP AA)	OP	90%-100% (varied by permits)		-	Crude: 10 k BPD	<ul style="list-style-type: none">• Drill development well in Montara• Maintain production operation• Acquire 3D seismic reprocessing
21	Natuna Sea A		11.5%	Premier Oil 28.67% KUFPEC 33.33% Petronas 15% Pertamina 11.5%	221 MMSCFD	Crude: 1.3 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%	305 MMSCFD	-	<ul style="list-style-type: none">• Maintain production rate• Drill development wells• Install wellhead platforms
23	Algeria 433a & 416b (Bir Seba)	JOC	35%	PetroVietnam 40% Sonatrach 25%	-	Crude: 2.9 k BPD <i>(net entitlement)</i>	<ul style="list-style-type: none">• Maintain production operation• Review field development plan for possible capacity expansion

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

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

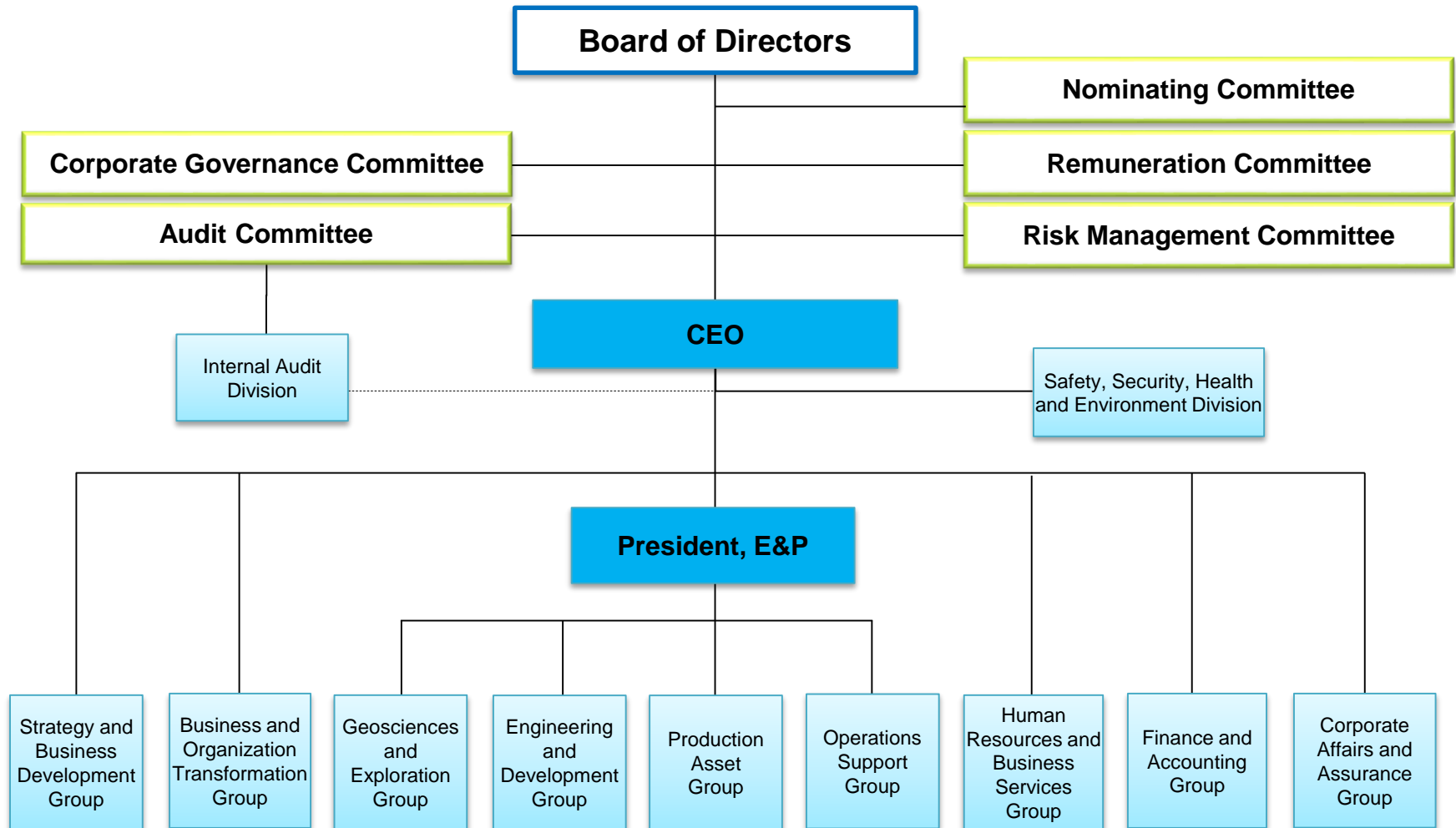
*** DCQ = Daily Contractual Quantity



	Project	Status*	PTTEP's Share	Partners (as of Q3 2017)	2017 Key Activities
Exploration Phase					
Thailand and JDA					
24	G9/43	OP	100%		
Overseas					
25	Myanmar M3	OP	80%	MOECO 20%	<ul style="list-style-type: none"> Assess resource potential and commercial feasibility
26	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"> 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%	<ul style="list-style-type: none"> Conduct pre-development study and prepare project development plan
28	Myanmar M11	OP	100%		<ul style="list-style-type: none"> Acquire 3D seismic
29	Vietnam B & 48/95		8.5%	PVN 65.88% MOECO 25.62%	<ul style="list-style-type: none"> Negotiate a GSA with the Vietnamese government
30	Vietnam 52/97		7%	PVN 73.4% MOECO 19.6%	<ul style="list-style-type: none"> Negotiate a GSA with the Vietnamese government
31	Myanmar MD-7	OP	50%	TOTAL 50%	<ul style="list-style-type: none"> Assess resource potential
32	Mariana Oil Sands	OP	100%		<ul style="list-style-type: none"> Assess development approach and cost reduction opportunity
33	Barreirinhas AP1		25%	Shell Brasil 65% Mitsui E&P Brasil 10%	<ul style="list-style-type: none"> Acquire 3D seismic
34	Myanmar MOGE 3	OP	75%	Palang Sophon 10% MOECO 10% WinPreciousResources 5%	<ul style="list-style-type: none"> Acquire 2D and 3D seismic
35	Brazil BM-ES-23		20%	Petrobras 65% INPEX 15%	<ul style="list-style-type: none"> Assess petroleum potential
36	Sarawak SK410B	OP	42.5%	KUFPEC 42.5% PSCB 15%	<ul style="list-style-type: none"> Acquire 3D seismic

Remarks: 36 projects exclude 2 projects that are pending official withdrawal approval

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





Ratio	Formula
Lifting Cost (\$/BOE)	$(\text{Operating Exp.} - \text{Transportation Cost} - \text{Stock Variation} - \text{Other expense not related to lifting}) / \text{Production Volume}$
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	$(\text{Trailing-12-month net income} + \text{Trailing-12-month Interest Expenses \& Amortization Bond Issuing Cost}) / (\text{Average shareholders' equity and average total debt between the beginning and the end of the 12-month period})$
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	$\text{Trailing-12-month EBITDA} / \text{Trailing-12-month Interest Expenses \& Amortization of Bond Issuing Cost}$