

# *PTT Exploration and Production Public Company Limited*

*dbAccess Global Emerging Markets  
(GEMs) Conference 2015*

*8-9 September 2015*



MEMBER OF  
**Dow Jones  
Sustainability Indices**  
In Collaboration with RobecoSAM



Company Overview



Financial Results



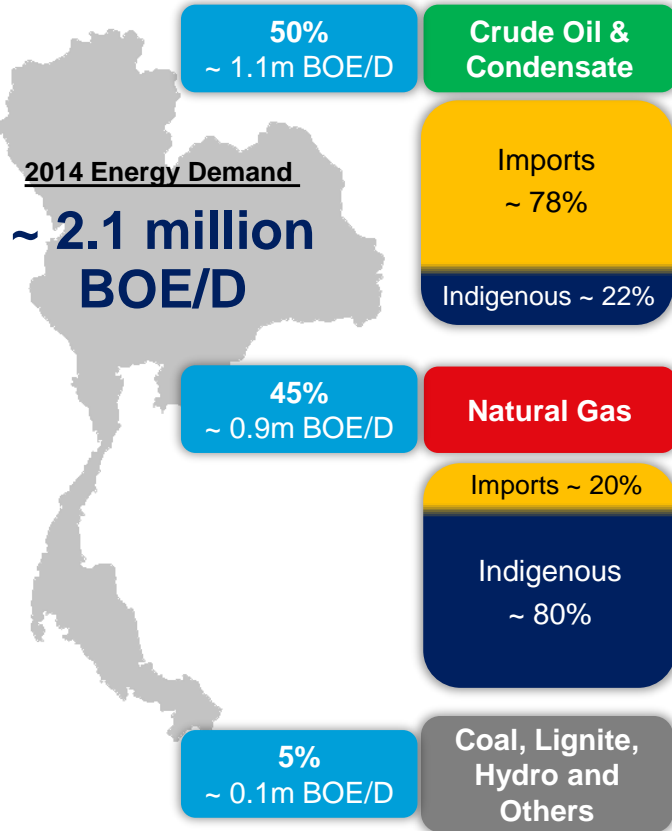
Outlook

# Thailand's Energy Value Chain

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



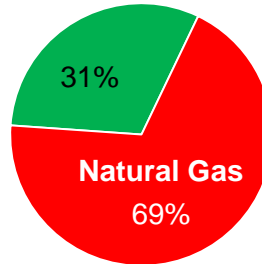
## Energy Demand and Sources



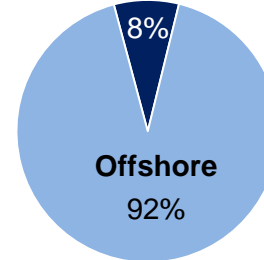
## Thailand Petroleum Production 2014

### % by Petroleum Type and Area

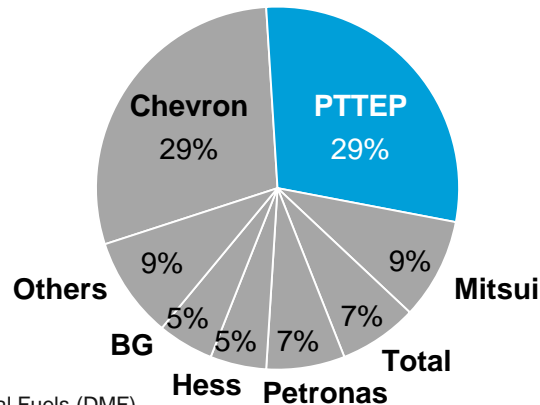
#### Crude and Condensate



#### Onshore



### % Production by Company



## Integration with Midstream and Downstream Value Chain

### Midstream

Transmission Pipelines  
Gas Separation Plants

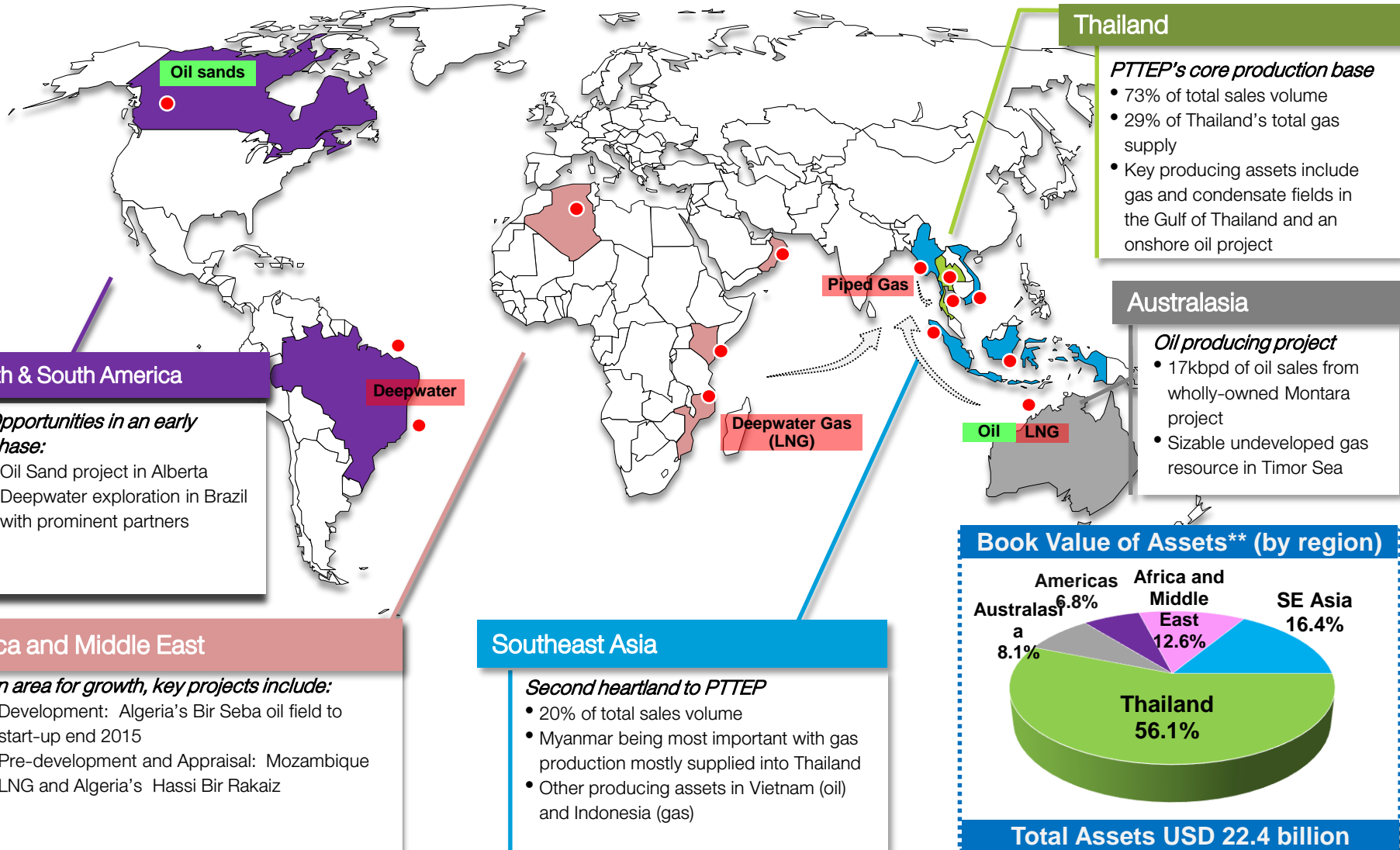
### Downstream & End User Products

Refineries  
Petrochemical Plants  
Power Plants  
Electricity  
Industrial Plants  
Transportation  
Fuels, Lubes, NGV/CNG  
Household Use and Products  
LPG  
Chemical Products

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

# Diversified International Portfolio

Worldwide operations: 39 projects\* in 11 countries



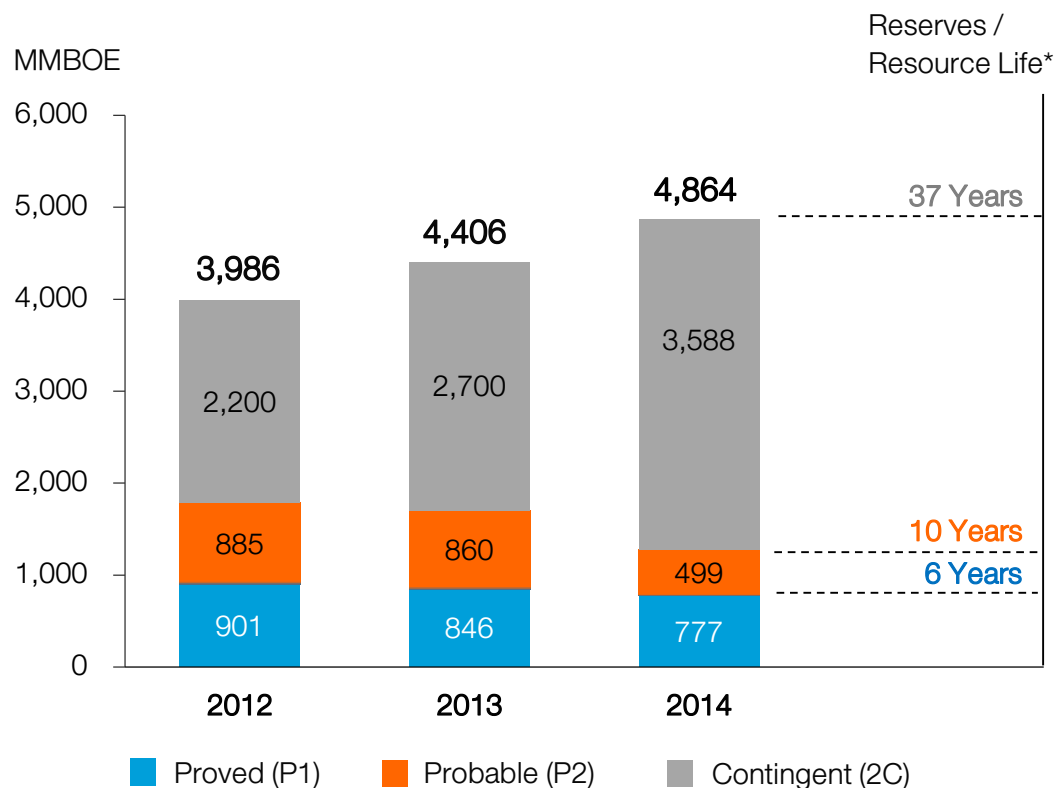
## Notes:

\* Excludes 4 projects that are pending official withdrawal approval

\*\* Information dated as of 30 June 2015

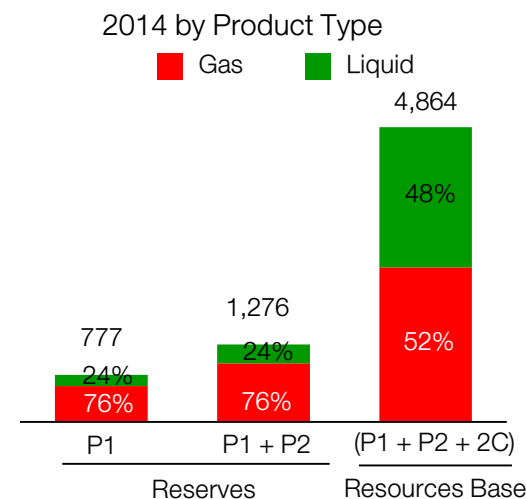
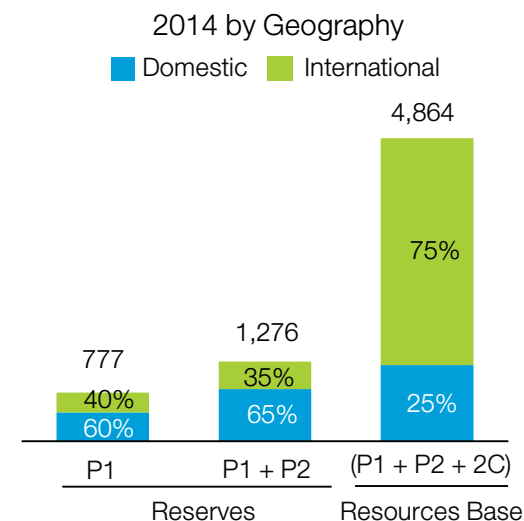
# Reserves and Resources

Target resource turnaround in the near future



5-Year Average Proved Reserves Replacement Ratio (RRR)

2012	2013	2014
0.91x	0.82x	0.45x



\* Based on total production of natural gas, crude oil (including bitumen) and condensate of 359 KBOED for the year ended December 31, 2014



Company Overview



Financial Results



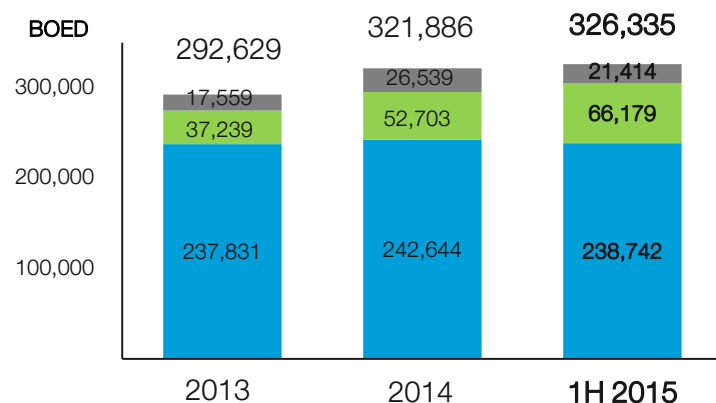
Outlook

# Sales Volume & Unit Costs

Price stability and healthy cash margin amidst volatile environment



## Sales Volume and Price

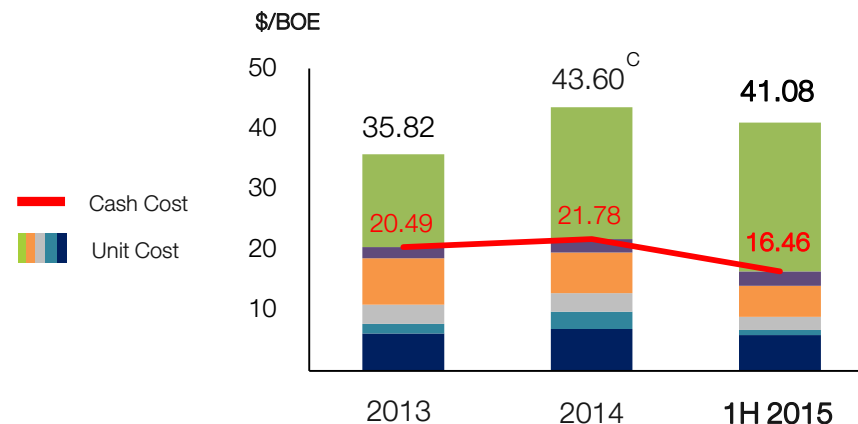


Gas (\$/MMBTU)	7.92 <sup>A</sup>	8.03 <sup>A</sup>	<b>7.66</b>
Liquid (\$/BBL)	100.15	94.91	<b>54.83</b>
Weighted Avg. (\$/BOE)	65.58 <sup>B</sup>	63.38 <sup>B</sup>	<b>48.61</b>
Avg. Dubai (\$/BBL)	105.54	96.60	<b>56.59</b>
Avg. HSFO (\$/BBL) (High Sulphur Fuel Oil)	97.52	86.74	<b>52.67</b>
Volume Mix (Gas:Liquid)	66 : 34	67 : 33	<b>70 : 30</b>
Revenue Mix (Gas:Liquid)	47 : 53	51 : 49	<b>63 : 37</b>

A) If Vietnam 16-1 retroactive sales are excluded, gas price are \$8.01 for 2013 and \$8.07 for 2014

B) If Vietnam 16-1 retroactive sales are excluded, average selling price are \$66.09 for 2013 and \$63.59 for 2014

## Unit Cost



DD&A	15.33	21.82	<b>24.62</b>
Finance Cost	1.88	2.21	<b>2.39</b>
Royalties	7.65	6.69	<b>5.13</b>
G&A	3.17	3.10	<b>2.16</b>
Exploration Exp.	1.61	2.83	<b>0.87</b>
Operating Exp. <sup>D</sup>	6.18	6.95 <sup>C</sup>	<b>5.91</b>
Lifting Cost	4.88	5.26	<b>4.75</b>
Drilling Success Ratio <sup>E</sup>	38 : 55	25 : 43	<b>22 : 27</b>

C) If exclude extra expense from Montara's Development well (H5) :

2014: Operating Exp. : 6.53 \$/BOE / Unit cost : 43.18 \$/BOE

D) Exclude diluent cost for blending bitumen in KKD Oil Sands project

E) Drilling success ratio (successful wells : total wells):

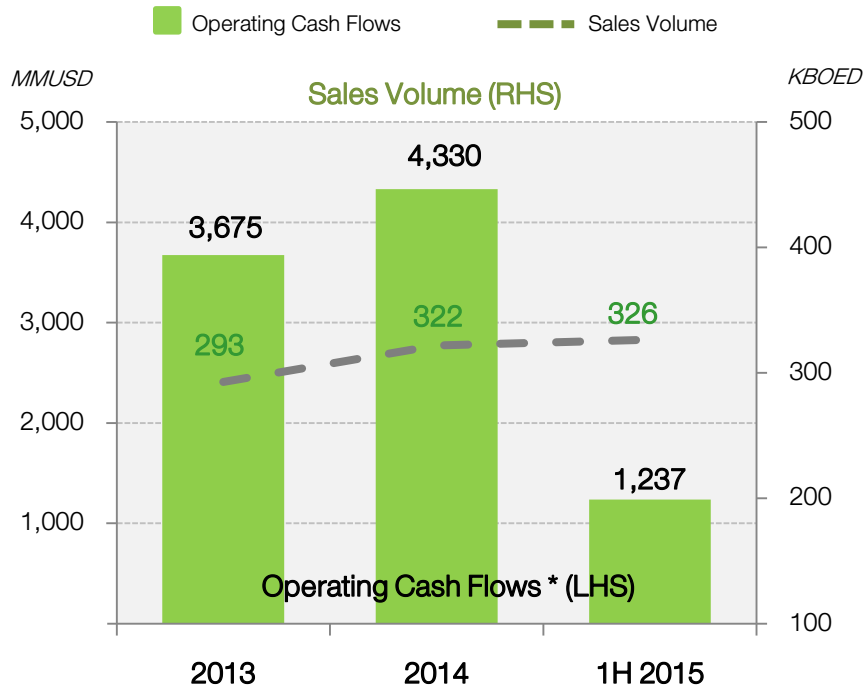
Exploration and Appraisal wells

# Cash Flow Performance

Cash flow remains strong despite weakening NI resulting from non-cash items

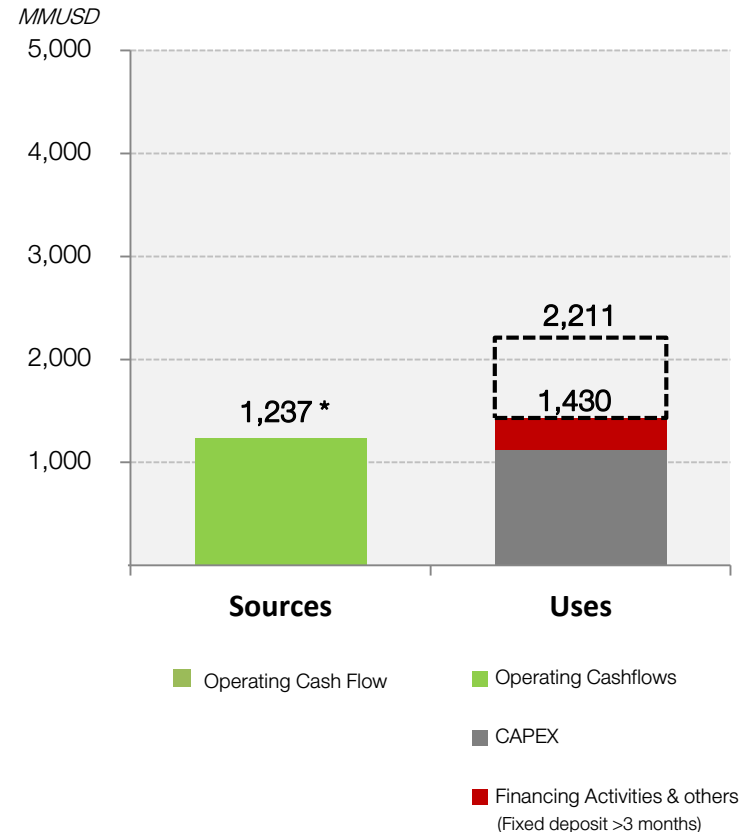


## Cash Flow Performance



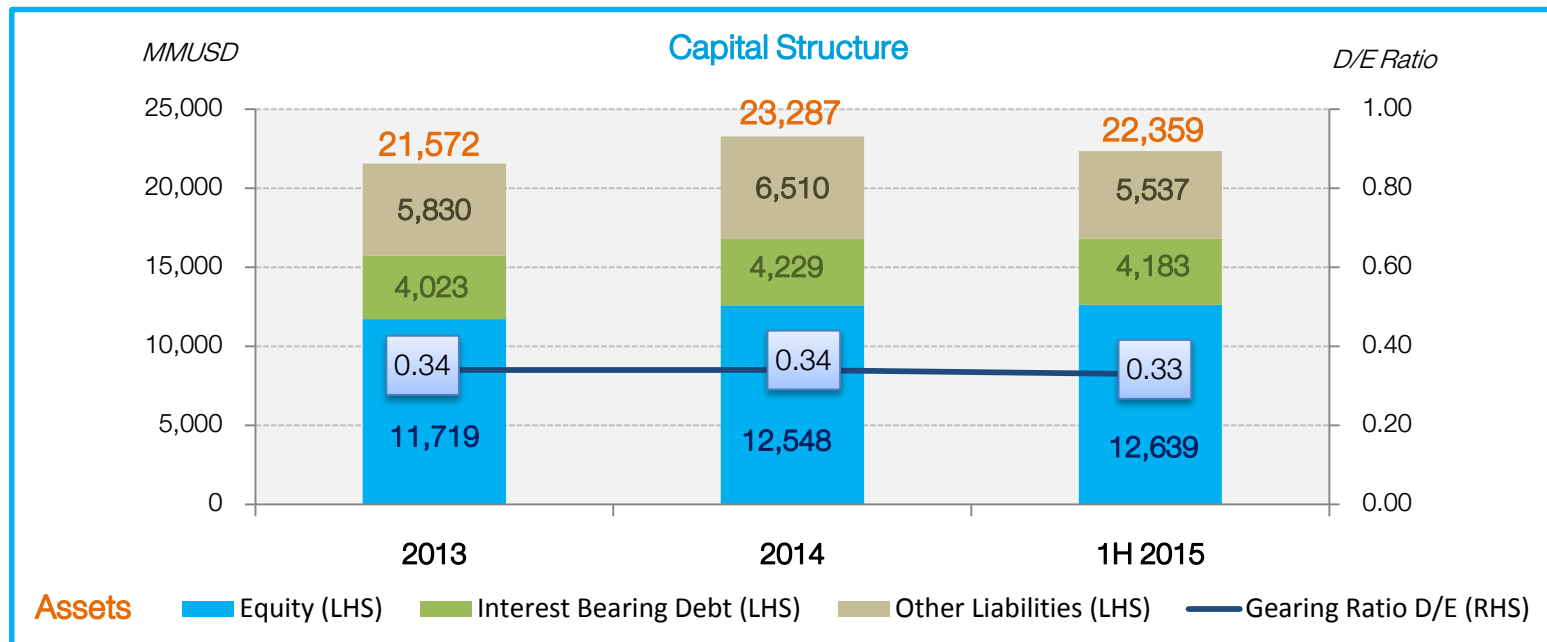
EBITDA Margin	71 %	69 %	72 %
Net Income	1,847	677	299

## Source & Use of Funds in 1H 2015

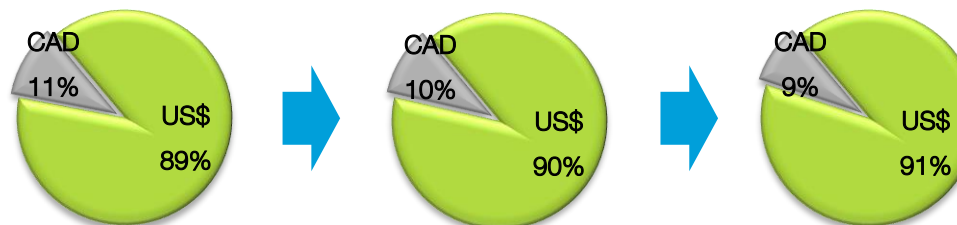


\* Net of adjustment for the effect of exchange rate changes on cash and cash equivalents. Operating cash flows before exchange rate effect adjustment is:

2013 = 3,740 MMUSD ; 2014 = 4,320 MMUSD ; and 1H 2015 = 1,256 MMUSD



### Debt Profile \*



Weighted Average

Cost of Debt \* (%)

[Fixed : Floating]

Average Loan Life \* (Years)

\* Excludes Hybrid bonds

3.99

[75 : 25]

6.81

4.14

[77 : 23]

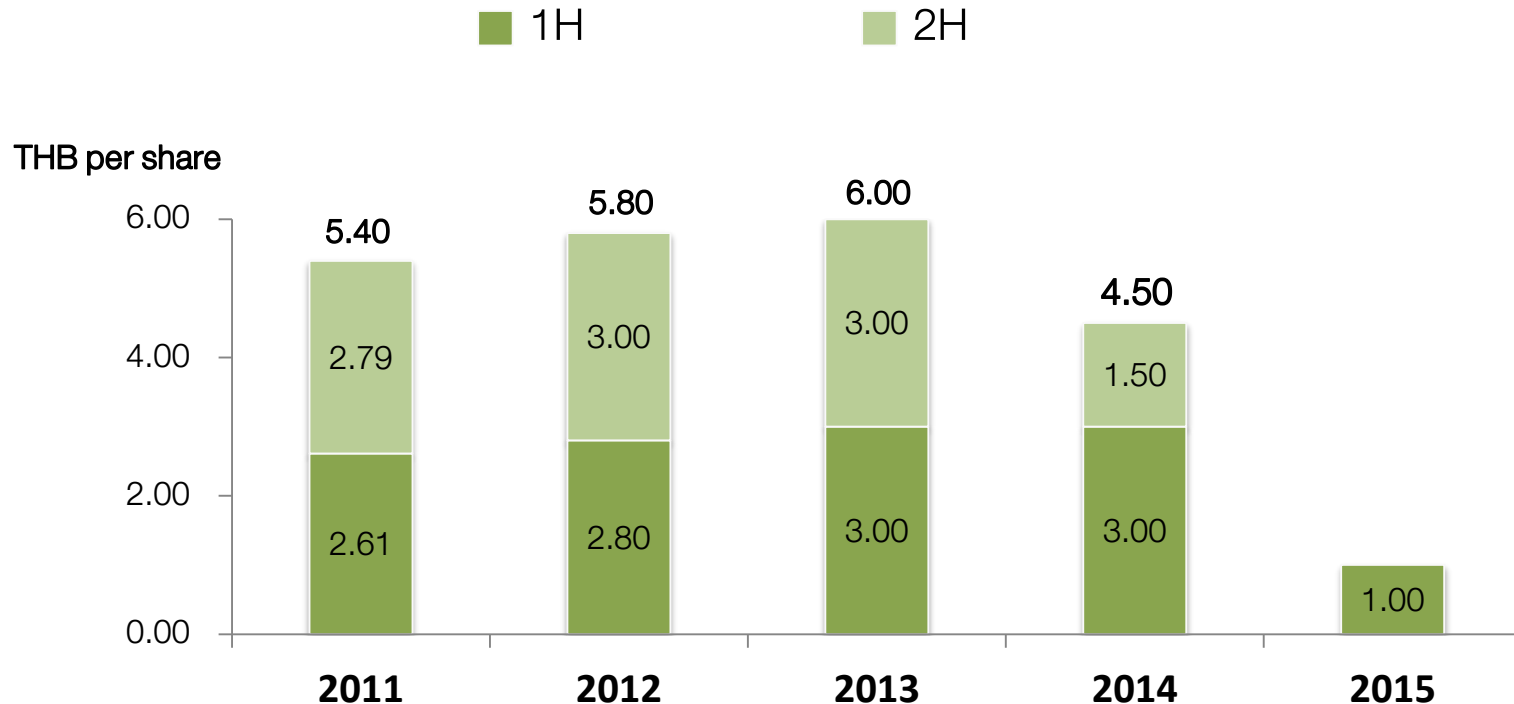
7.05

4.13

[77 : 23]

6.58

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



Payout Ratio (%)	40	38	40	82	39
------------------	----	----	----	----	----



Company Overview



Financial Results



Outlook



## Near-term priorities : key objectives



Deliver ~3% sales volume growth

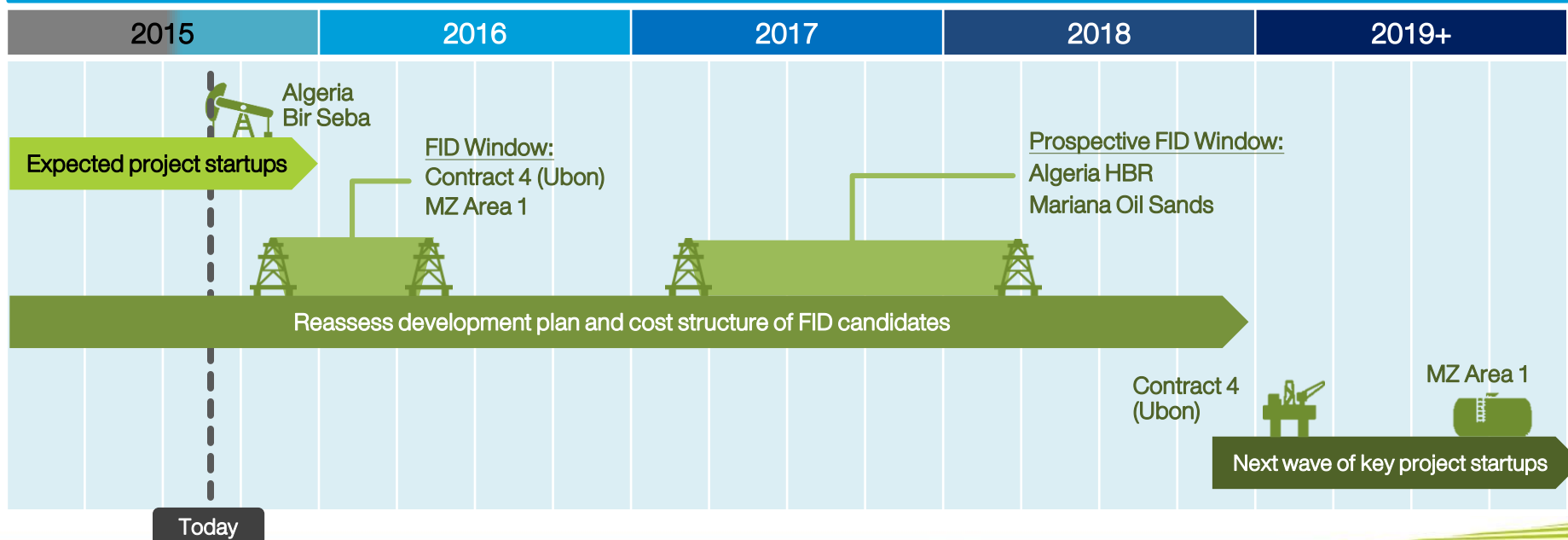


Focus on cost optimization and investment prioritization



Leverage strong balance sheet for value-creating growth opportunity

## Further down horizon : deliver near-term growth and reassess feasibility of medium-long term prospects

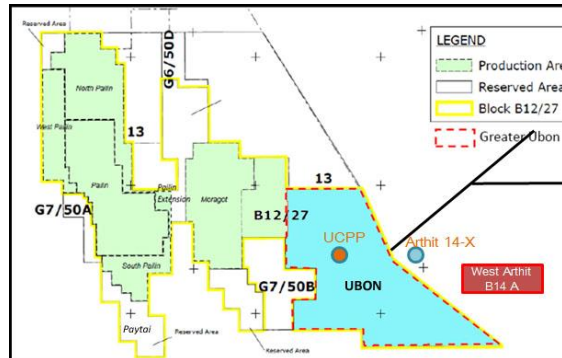


### Algeria Bir Seba



- 35% interest, jointly operated with PetroVietnam, and Sonatrach
- Gross production capacity of 20kbpd
- Progress to start-up:
  - Began commissioning and test-run facilities
  - Start-up on track for late 2015
- Future opportunities include possible expansion at Bir Seba and oil discovery at HBR

### Contract 4 (Ubon)



- 60% interest (operated by Chevron)
- Oil resources in the Gulf of Thailand
- Proposed production capacity in 30kbpd range
- Progress to FID:
  - Finalize remaining commercial agreements

### Mozambique Area 1



- 8.5% interest (operated by Anadarko)
- Key attractions:
  - Massive gas resource
  - Competitive cost profile
- Initial development proposed for 12 MMTPA LNG (2 trains)
- Progress to FID with:
  - Decree law ratified
  - Onshore EPC contractor selected
  - 8MMTPA non-binding HOA signed with Asian buyers

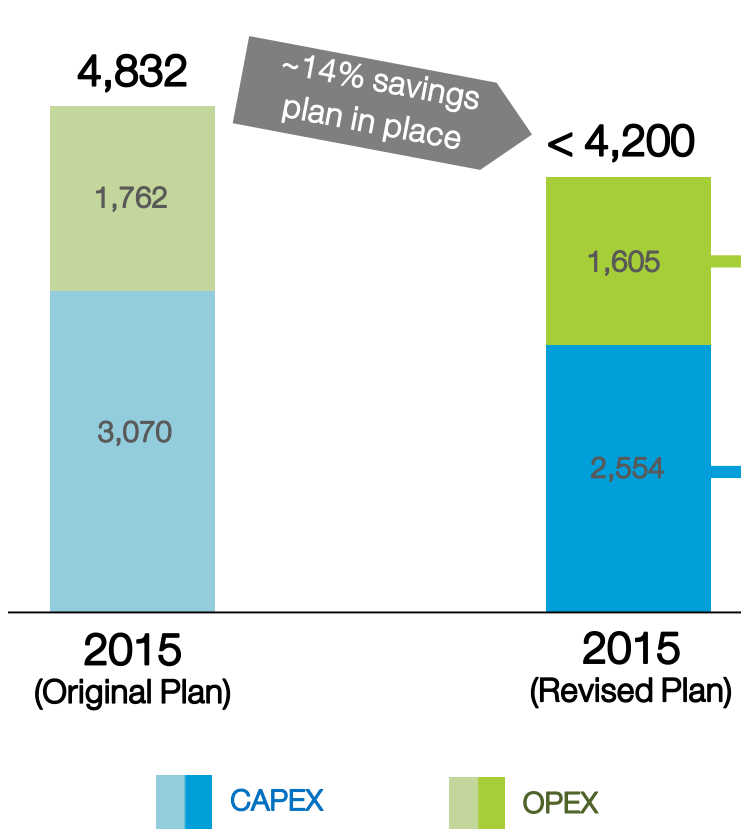
# 2015 Budget Revision

Groundwork set for both short-term and long-term cost performance improvement



>600 MMUSD reduction identified in 2015

Unit : MMUSD



Positive cost reduction trend supported by efficiency improvement through...



## Operating expenditure reduction

Approximately 10% reduction expected through leaner field operations, maintenance activities and G&A expenses



## Offshore drilling in GoT and Myanmar

Expect development well cost reduction in PTTEP-operated projects in the range of 5-25% (depending on the project)



## Facilities cost reduction

Up to 5% reduction (depending on the project) in cost of new wellhead platforms planned



## Exploration prioritization

Reschedule exploration plan to fit risk profile to current environment



## Fundamental change in E&P industry

- U.S. shale output re-shaping balance and dynamics of the oil market
- Expect market forces to rebalance but the path to price recovery is still uncertain
- The uncertainty also presents opportunities for industry's cost adjustment



## Well prepared to weather downturn in oil price

- Cushion from gas-weighted volumes secured through long-term contracts
- Competitive cash cost profile ensures positive operating cash flow
- Strong capital structure with low gearing and high liquidity founded on stringent financial discipline



## Our priorities for 2015

- Target 3% sales volume growth
- Continued focus on cost optimization
- Prioritization of investments in exploration and pre-development portfolios
- Leverage of strong balance sheet for value-accretive M&A opportunities



*Exploring new horizons, we take every step as learning*

For more information, please visit our website at

<http://www.pttep.com>

OR

Contact us via email address at

[IR@pttep.com](mailto:IR@pttep.com)

OR

Call us at +66 2 537 4000

- 
1. Sustainable Development
  2. Thailand Energy Updates
  3. Shareholding Structure
  4. Organization Structure
  5. Key Project Highlights by Region
  6. Project Details
  7. Investment Plan and Sales Volume Guidance
  8. Ratios & Formula

MEMBER OF

**Dow Jones  
Sustainability Indices**

In Collaboration with RobecoSAM

## 2014 DJSI Listed Company

Dow Jones Sustainability World Index  
Oil & Gas Sector



## Certified Member

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



## Proven business integrity

NACC Integrity Awards  
*The National Anti-Corruption Commission*

Thailand's Top Corporate Brand Value  
Industrial Resources Sector  
*Chulalongkorn University*

Best Public Company in Resources Sector  
*Money & Banking Magazine*

## Exemplary social contributor

CSR Excellence Award  
*Ministry of Social Development and Human Security*

Best Strategic Corporate CSR  
*Alpha Southeast Asia Magazine*

Global CSR Award :  
Best Community Program  
*Pinnacle Group International Singapore*

## Green driver to environment

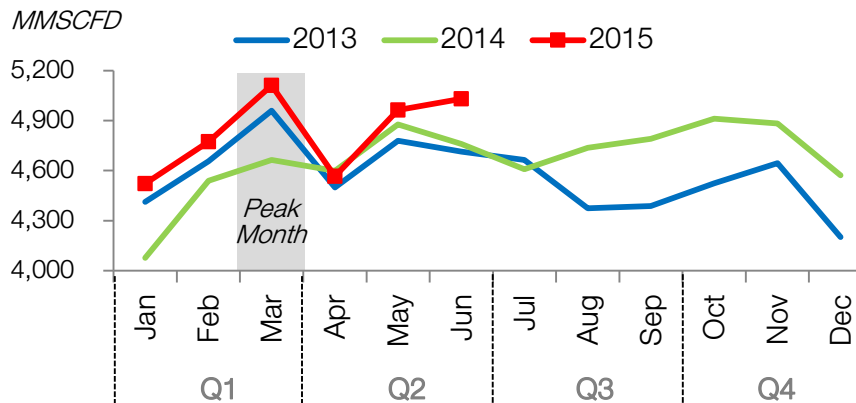
Best Environmental Responsibility  
*Corporate Governance Asia*

Joint research project with HITZ for CO2 to  
methane conversion

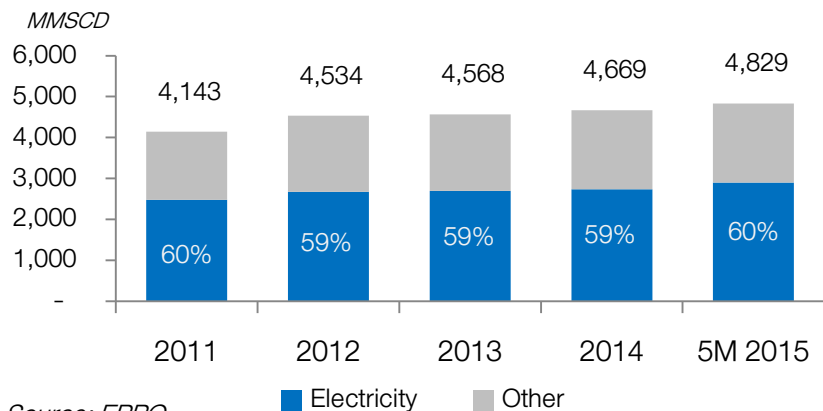
Participation in Thailand Voluntary Emission  
Reduction Program (T-VER)

### Thai Economy and Gas Demand

#### Monthly Gas Consumption by Year



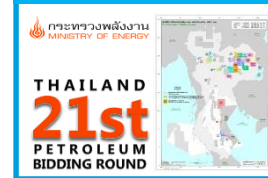
#### Annual Gas Consumption by Use



Source: EPPO

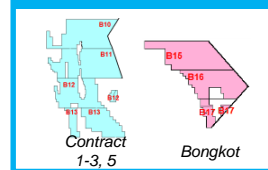
### Thai Upstream Energy Reform

#### 21st Bidding Round



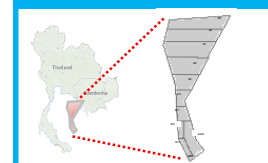
- Bidding round process could be resumed after amendments to Petroleum Act is finalized

#### Expiring Concessions



- NEPC announced basic principles to concession renewal
- Target for definitive solution within 2017
- Gas supply stability continues to be key consideration

#### Thai-Cambodian OCA



- Discussion resumes at the Government level to seek resolution on OCA

Source: MOE, DMF

# Integral support from major shareholder

PTTEP leverages its relationships with PTT Plc. and the Thai Government



## Ownership Structure



Government of  
Thailand

66.0%<sup>2</sup>



Thailand's national energy company

65.3%<sup>1</sup>



Notes:

1 Ownership as of 7 August 2015

2 51.1% is directly held by the Government of Thailand (Ministry of Finance), with the remaining 14.9% held by the state-controlled Vayupak Fund I

## Oil & Gas exploration and production Flagship of PTT



**PTTEP supplies more than 80% of sales volume to PTT, a financially strong corporate and Thailand's main provider of natural gas**

- PTTEP is engaged in long-term gas off-take agreements (generally 25 to 30 years) with PTT, a major source of PTTEP's stable revenue stream

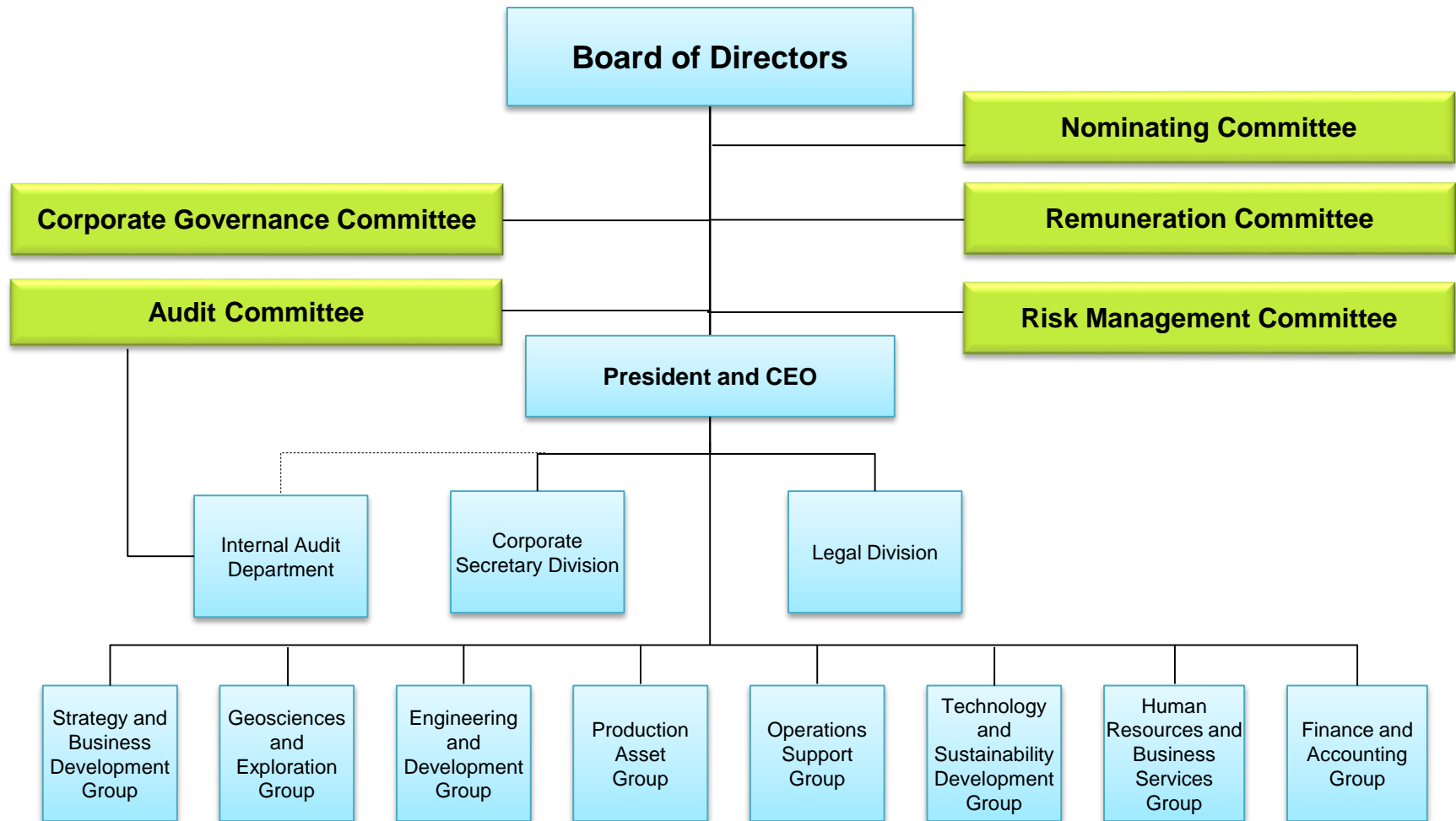


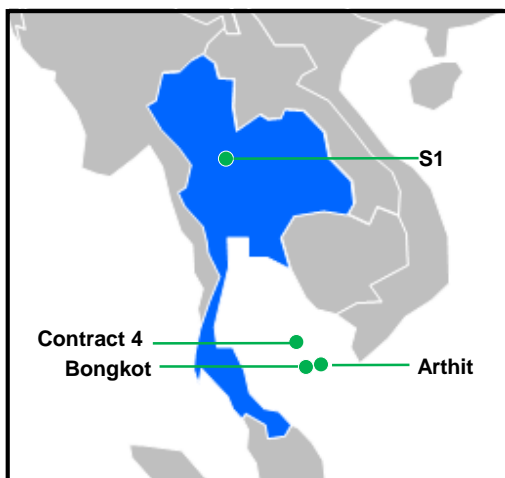
**Synergies between PTTEP and PTT in the natural gas value chain**

- PTTEP provides PTT with access to gas production
- PTT provides leverage and support for PTTEP's relationships with other government bodies and agencies
- The relationship with PTT provides PTTEP with a competitive position to offer integrated solutions to counterparties

## Credit Ratings on par with Sovereign Rating

	PTTEP	Thailand
Moody's	Baa1	Baa1
S&P's	BBB+	BBB+
JCR	A-	A-
TRIS	AAA	N/A





● Production / Ramp-up Projects

### Bongkot (44.4% interest)

- Bongkot's production capacity of close to 1 Bcf/d represents approximately 20% of Thailand's natural gas supply
- Average natural gas sales volume from the Bongkot fields was 892 MMSCFD in 1H 2015
- Average condensate sales volume was 28.8 KBPD in 1H 2015

### S1 (100% interest)

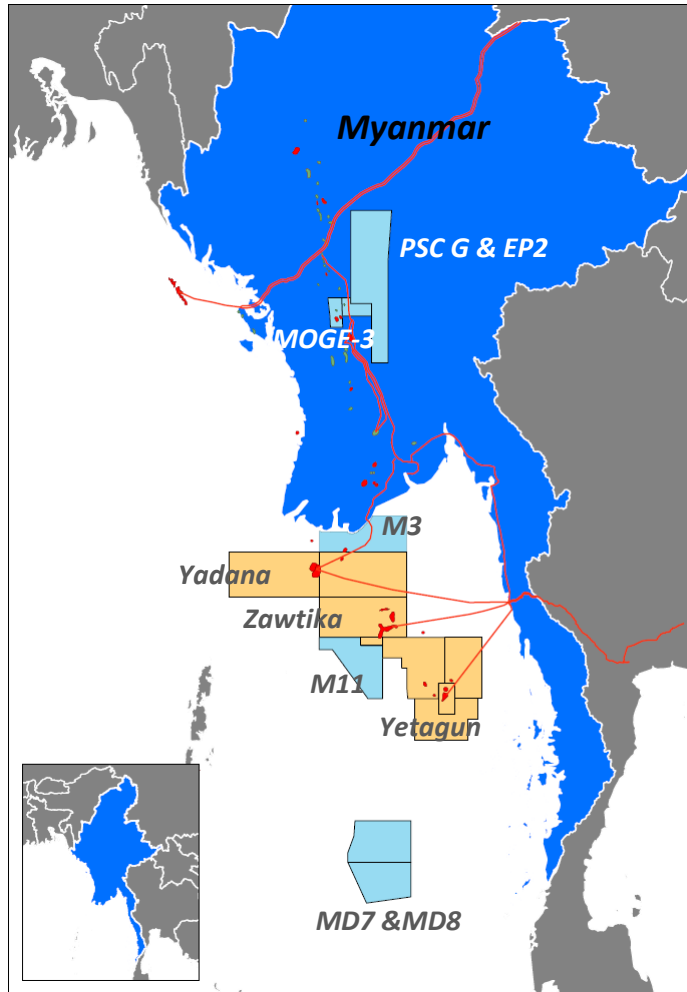
- S1 is the largest onshore crude oil production field in Thailand
- Average crude oil sales volume was 27.8 KBPD in 1H 2015

### Arthit (80% interest)

- Average sales volume in 1H 2015 was 203 MMSCFD of natural gas and 8.9 KBPD of condensates

### Acquisition of Hess Assets in Thailand

- PTTEP successfully acquired Hess Corporation's working interests in the Contract 4 project and Sinphuhorm project, and now holds 60% working interest in the Contract 4 project and 55% working interest in the Sinphuhorm project. PTTEP has also become the operator of the Sinphuhorm project
- The Contract 4 project had an average sales rate of 310 MMSCD for natural gas and 13.5 KBPD for condensate in 1H 2015



Exploration block
  Production block

- Participation in three producing gas fields which supply gas to both Thailand and Myanmar: Yadana, Yetagun, Zawtika,
- Successful exploration and development of the Zawtika gas field. Current operations delivering stable gas supply of 300 MMSCFD,
- Significant exploration acreage both onshore and offshore, in the Moattama Basin.

Project Status		
<b>Producing</b> <ul style="list-style-type: none"> <li>• Yadana (25.5% WI)</li> <li>• Yetagun (19.31784% WI)</li> <li>• Zawtika (80% WI)</li> </ul>	<b>Appraisal &amp; Develop</b> <ul style="list-style-type: none"> <li>• M3 (80% WI)</li> </ul>	<b>Exploration</b> <ul style="list-style-type: none"> <li>• PSC G &amp; EP2 (70% WI)</li> <li>• MOGE-3 (85% WI)</li> <li>• M11 (100% WI)*</li> <li>• MD7 &amp; MD8 (100% WI)</li> </ul>

Note: WI – working interest



### Vietnam 16-1 (28.5% interest)

- Average crude oil sales volume of 31.3 KBPD in 1H 2015
- Currently in the process to install a production platform in the H5 area to support current production level

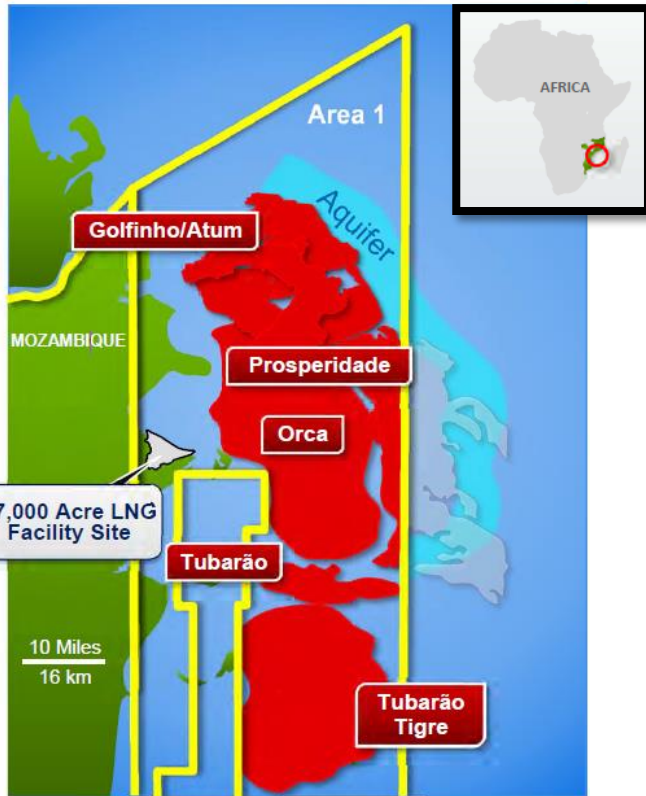
### Natuna Sea A (11.5% interest)

- Average sales volume of natural gas was 197 MMSCFD, and average sales volume of crude oil was 853 BPD in 1H 2015



● Production / Ramp-up Projects

Source : Premier Oil



## Location and Cost Advantage

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

Source: Anadarko

*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

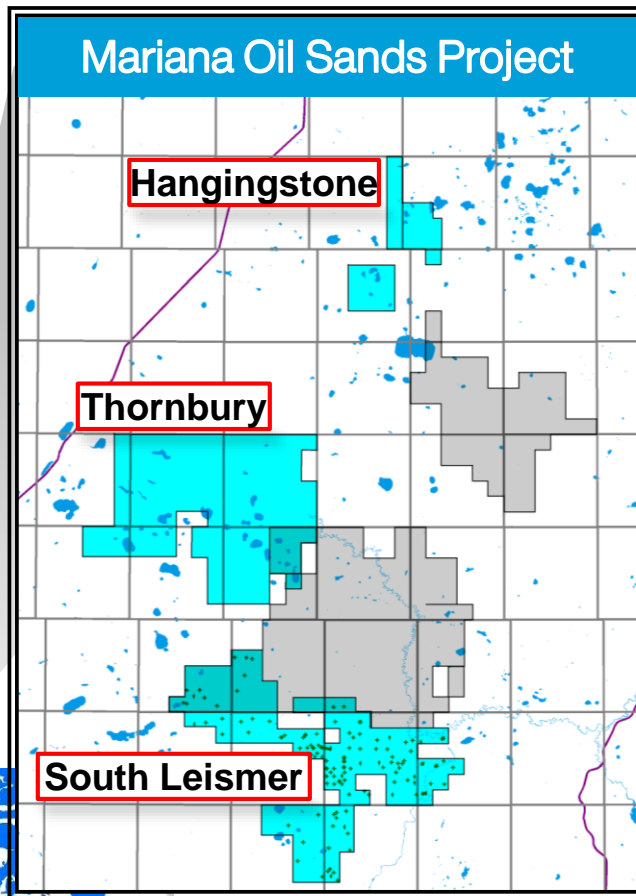
### Regulatory

- ✓ Decree law ratified
- ✓ Substantial engagement with government to progress on remaining agreements and approvals to support investment

### Financing

- ✓ Positive indications on project financing

**Onwards to initial phase of 12 MMTPA**



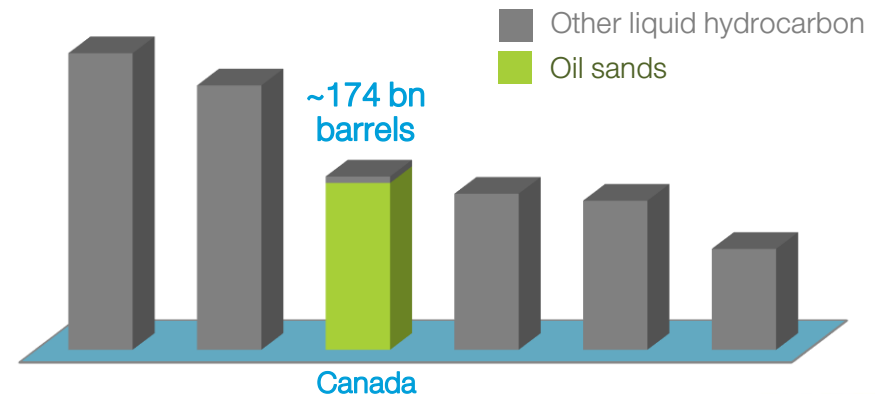
### Key activities

- Completed the Winter Delineation Program and continue to assess development potential of the Thornbury field.
- Submitted the development proposal for Thornbury Phase 1 to the government of Alberta.

### The Asset Swap

- The Partnership Unit Redemption Agreement (PURA) came into effect on 28 May 2014.
- Following such date, PTTEP Canada Limited now owns and operates 100% of the Thornbury, Hangingstone and South Leismer areas, and has received from Statoil Canada a total of 419 million US dollars

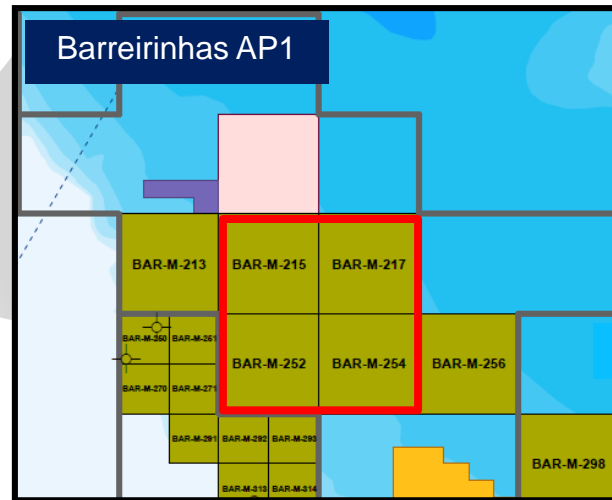
Approximately 96% of the reserves in Canada, the world's 3<sup>rd</sup> largest oil reserves, is oil sands



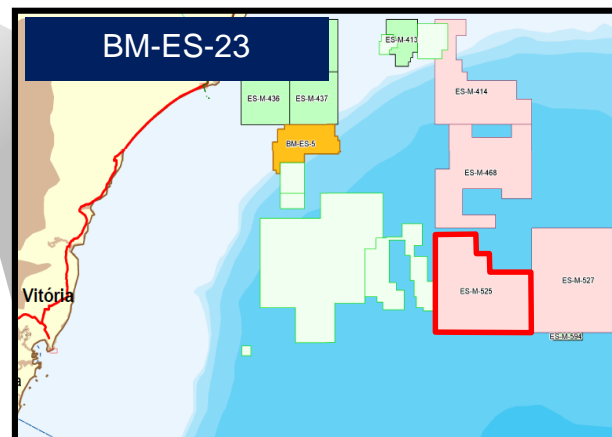
Source: Company data, BP Statistical Review of World Energy 2014

# America : Brazil Deepwater

Entry into high potential petroleum province at exploration phase



- Farm-in 25% from BG Group in 2014
- Operated by BG Group (75% interest)
- Four offshore exploration blocks: BAR-M-215, BAR-M-217, BAR-M-252 and BAR-M-254
- Currently preparing for seismic acquisition and conducting G&G studies



- Acquired 20% interest from Shell in Q3 2014
- Partnered with Petrobras (65%, operator) and INPEX (15%)
- Planned for 1 exploration well in 2015

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

# Project Information 1/4

## Production Phase: Thailand and JDA



	Project	Status*	PTTEP's Share	Partners (as of Q2 2015)		6M 2015 Average Sales Volume **		2015 Key Activities
						Gas	Oil and Other	
Production Phase								
Thailand and JDA								
1	Arthit	OP	80%	Chevron MOECO	16% 4%	203 MMSCFD	Condensate: 8.9 k BPD	<ul style="list-style-type: none"><li>Ensure gas deliverability level at DCQ***</li><li>Drill Exploration / Appraisal wells/ Development wells</li><li>Install wellhead platforms</li></ul>
2	B6/27	OP	100%***			N/A	N/A	<ul style="list-style-type: none"><li>Evaluate further potential of reservoir</li></ul>
3	B8/32 & 9A		25%	Chevron MOECO KrisEnergy PSTL	51.66% 16.71% 4.63% 2%	92 MMSCFD	Crude: 26 k BPD	<ul style="list-style-type: none"><li>Drill development wells</li></ul>
4	Bongkot	OP	44.4445 %	TOTAL British Gas	33.3333% 22.2222%	892 MMSCFD	Condensate: 28.8 k BPD	<ul style="list-style-type: none"><li>Ensure gas deliverability level at DCQ****</li><li>Drill Exploration / Appraisal / Development wells</li><li>Install wellhead platforms</li></ul>
5	Contract 3 (Formerly Unocal III)		5%	Chevron MOECO	71.25% 23.75%	558 MMSCFD	Crude: 20.2 k BPD Condensate: 20.5 k BPD	<ul style="list-style-type: none"><li>Drill Exploration / Appraisal / Development wells</li><li>Install wellhead platforms</li></ul>
6	Contract 4 (Formerly Pailin)		60%	Chevron MOECO	35% 5%	310 MMSCFD	Condensate: 13.5 k BPD	<ul style="list-style-type: none"><li>Ensure gas deliverability level at DCQ****</li><li>Drill Exploration / Appraisal / Development wells</li><li>Install wellhead platforms</li><li>Review development plan of Ubon field</li></ul>
7	E5		20%	ExxonMobil	80%	12 MMSCFD	-	
8	G4/43		21.375%	Chevron MOECO PSTL	51% 21.25% 6.375%	3 MMSCFD	Crude: 6.7 k BPD	<ul style="list-style-type: none"><li>Drill Exploration / Development wells</li><li>Install wellhead platform</li></ul>
9	G4/48		5%	Chevron MOECO	71.25% 23.75%	5.5 MMSCFD	Crude: 797 BPD	
10	L53/43 & L54/43	OP	100%			-	Crude: 147 BPD	<ul style="list-style-type: none"><li>Drill Exploration Wells</li></ul>
11	PTTEP1	OP	100%			-	Crude: 347 BPD	<ul style="list-style-type: none"><li>Drill Appraisal / Development wells</li><li>Perform waterflood activities</li></ul>
12	S1	OP	100%			27 MMSCFD	Crude: 27.8 k BPD	<ul style="list-style-type: none"><li>Continue Exploration appraisal and development activities</li></ul>
13	Sinphuhorm	OP	55%	Apico ExxonMobil	35% 10%	124 MMSCFD	Condensate: 480 BPD	<ul style="list-style-type: none"><li>Drill development wells</li></ul>
14	MTJDA	JOC	50%	Petronas-Carigali	50%	320 MMSCFD	Condensate: 6.7 k BPD	<ul style="list-style-type: none"><li>Drill Exploration / Appraisal / Development wells</li><li>Install wellhead platforms</li></ul>
15	L22/43	OP	100%			-	Crude: 71 BPD	<ul style="list-style-type: none"><li>Drill Exploration / Appraisal / Development wells</li></ul>

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

\*\* Sales volume stated at 100% basis.

\*\*\* New participating interest subject to government approval

\*\*\*\*DCQ = Daily Contractual Quantity

	Project	Status*	PTTEP's Share	Partners (as of Q2 2015)	6M 2015 Average Sales Volume **		2015 Key Activities
					Gas	Oil and Other	
Production Phase							
Overseas							
16	Oman 44	OP	100%		21 MMSCFD	Condensate: 554 BPD	<ul style="list-style-type: none"><li>Drill Exploration / Appraisal / Development wells</li><li>Maintain production rate</li></ul>
17	Vietnam 9-2	JOC	25%	PetroVietnam 50% SOCO 25%	13 MMSCFD	Crude: 5 k BPD	<ul style="list-style-type: none"><li>Drill development wells</li><li>Explore new reservoirs</li></ul>
18	Yadana		25.5%	TOTAL 31.24% Chevron 28.26% MOGE 15%	774 MMSCFD	-	<ul style="list-style-type: none"><li>Drill Exploration / Appraisal wells</li></ul>
19	Yetagun		19.3178 %	Petronas-Carigali 30.00140% MOGE 20.4541% Nippon Oil 19.3178% PC Myanmar(HK) 10.90878%	310 MMSCFD	Condensate: 5.8 k BPD	<ul style="list-style-type: none"><li>Reservoir Management</li><li>Well Intervention</li></ul>
20	Vietnam 16-1	JOC	28.5%	PetroVietnam 41% SOCO 28.5% OPECO 2%	16 MMSCFD	Crude: 31.3 K BPD	<ul style="list-style-type: none"><li>Drill development wells</li><li>Complete H5 development project</li></ul>
21	PTTEP Australasia (PTTEP AA)	OP	20%-100% (varied by permits)		-	Crude: 17 k BPD	<ul style="list-style-type: none"><li>Drill an exploration well</li><li>Assess resource potential of exploration permits</li></ul>
22	Natuna Sea A		11.5%	Premier Oil 28.67% KUFPEC 33.33% Petronas 15% Pertamina 11.5%	197 MMSCFD	Crude: 853 BPD	<ul style="list-style-type: none"><li>Drill Exploration / Appraisal / Development wells</li><li>Maximize gas exports</li></ul>
23	Zawtika (M9 & a part of M11)	OP	80%	MOGE 20%	292 MMSCFD	-	<ul style="list-style-type: none"><li>Maintain production rate</li><li>Drill Exploration / Appraisal wells</li><li>Install wellhead platforms</li></ul>

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

\*\* Sales volume stated at 100% basis

	Project	Status*	PTTEP's Share	Partners (as of Q2 2015)	2015 Key Activities
Development Phase :					
Overseas					
24	Algeria 433a & 416b (Bir Seba)	JOC	35%	PetroVietnam Sonatrach	40% 25% <ul style="list-style-type: none"><li>Continue Engineering, Procurement &amp; Construction (EPC) work</li><li>First oil expected in 2H of 2015</li></ul>

	Project	Status*	PTTEP's Share	Partners (as of Q2 2015)	2015 Key Activities
Exploration Phase					
Thailand and JDA					
25	G9/43	OP	100%		<ul style="list-style-type: none"><li>Acquire 3D seismic</li><li>Drill Exploration / Appraisal wells</li></ul>
26	L28/48	OP	70%	Resourceful Petroleum (Thailand) 30%	<ul style="list-style-type: none"><li>In process of plug and abandon (P&amp;A) Ratana-1 and Ratana-2 well</li><li>G&amp;G Studies</li></ul>
Overseas					
27	Myanmar M3	OP	80%	MOECO 20%	<ul style="list-style-type: none"><li>Drill 5 appraisal wells</li><li>Conduct Pre development Study</li></ul>
28	Mozambique Rovuma Offshore Area 1		8.5%	Anadarko, Mitsui, 26.5%,20% ENH, Bharat Petroleum, 15%,10%, BREML, OVL 10%,10%	<ul style="list-style-type: none"><li>Drill Appraisal wells for reserves certification</li><li>Prepare for Final Investment Decision (FID)</li></ul>
29	Algeria Hassi Bir Rekaiz	OP	24.5%	CNOOC 24.5% Sonatrach 51%	<ul style="list-style-type: none"><li>Drill Appraisal wells</li></ul>

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

	Project	Status*	PTTEP's Share	Partners (as of Q2 2015)	2015 Key Activities
<b>Exploration Phase (con't)</b>					
<b>Overseas (con't)</b>					
30	Myanmar M11	OP	100%**		
31	Vietnam B & 48/95		8.5%	PVN 42.38% MOECO 25.62% PVEP 23.5	• Negotiate a GSA with the Vietnamese government
32	Vietnam 52/97		7%	PVN 43.4% PVEP 30% MOECO 19.6%	• Negotiate a GSA with the Vietnamese government
33	Myanmar PSC-G and EP-2	OP	70%	Win Precious Resources 10% MOECO 10% Palang Sophon Offshore 10%	• Drill 4 exploration wells (2 wells in PSC G & 2 wells in EP 2)
34	Kenya L5, L7 Kenya L11A, L11B, L12		10% 10%	Anadarko, Total 50%,40% Anadarko, Total, ENI 50%,30%,10%	• Conduct G&G Studies
35	Myanmar MD 7 and MD 8	OP	100%		• Acquire 3D seismic
36	Mariana Oil Sands	OP	100%		• Conduct Winter Delineation Program • Prepare regulatory application to submit to the government of Alberta for Thornbury Phase 1 development
37	Barreirinhas AP1		25%	BG Brasil 75%	• Prepare EIA in preparation for 3D seismic survey
38	MOGE 3	OP	85%	Palang Sophon Offshore 10% Win Precious Resources 5%	• Submit EIA in preparation for 2D&3D seismic survey
39	Brazil BM-ES-23		20%	Petrobras 65% INPEX 15%	• Drill 2 exploration wells

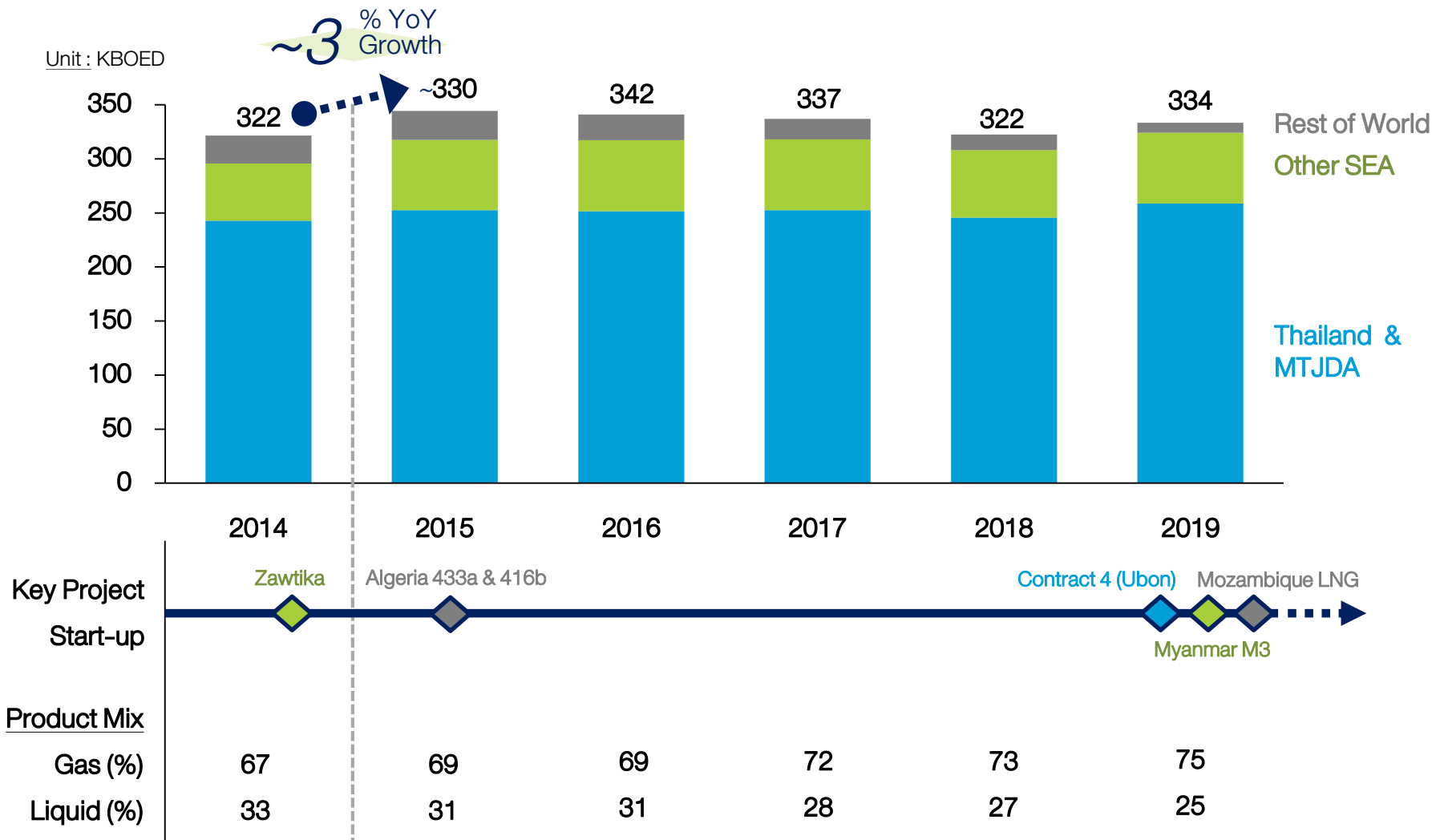
Remarks: 39 projects exclude 4 projects that are pending official withdrawal approval

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

\*\* New participating interest subject to government approval

# Sales Volume Profile

Thailand and SE Asia continue to be the strong production base



Note : \* closing forecast

# Investment Plan

2015 investment plan (as announced in Dec 2014)

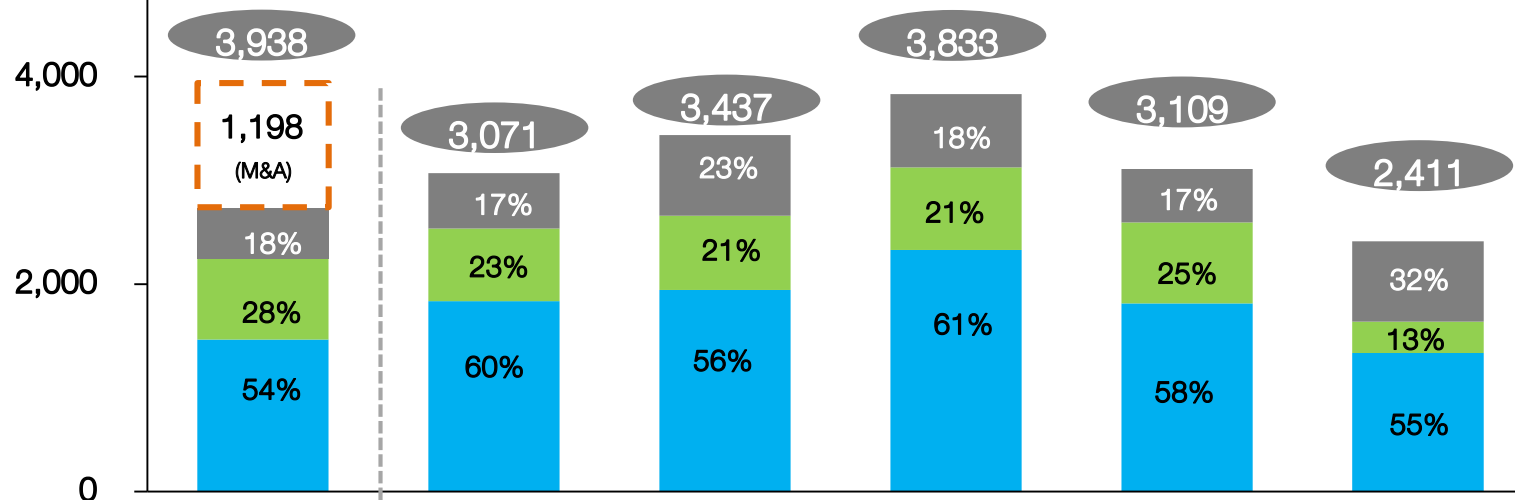
## Capex by Region

- Thailand
- Southeast Asia
- Others
- TOTAL**

## 2015 - 2019

~ 9.3 bn USD  
 ~ 3.3 bn USD  
 ~ 3.3 bn USD  
**~ 15.9 bn USD**

Unit : MMUSD



## CAPEX by Activity Type

	2014	2015	2016	2017	2018	2019
Exploration	14%	18%	11%	14%	8%	3%
Development	56%	82%	89%	86%	92%	97%
Investments (M&A)	30%					

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)	$(\text{Operating Exp.} + \text{Exploration Exp.} + \text{SG\&A} + \text{Royalty \& SRB} + \text{Interest Expense}) / \text{Sales Volume}$
Unit Cost (\$/BOE)	$(\text{Operating Exp.} + \text{Exploration Expense} + \text{SG\&A} + \text{Royalty} + \text{DD\&A}) / \text{Sales Volume}$
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	$\text{Number of wells with petroleum discovery} / \text{Total number of exploration and appraisal wells}$
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	$\text{EBITDA} / \text{Sales Revenue}$
Total Interest Bearing Debt	$\text{Short-term loans from financial institution} + \text{Current portion of long-term debts} + \text{Bonds} + \text{Long-term loans from financial institution}$
Total Debt to Equity Ratio	$\text{Total interest bearing debt} / \text{Shareholders' equity}$
Total Debt to EBITDA Ratio	$\text{Total interest bearing debt} / \text{Trailing-12-month EBITDA}$
Dividend Payout Ratio	$\text{Dividend Payment} / \text{Net Profit}$