



ROBECOSAM Sustainability Award Industry Leader 2016



Dow Jones Sustainability Indices In Collaboration with RobecoSAM (

Thai Oil Public Company Limited

Presentation to Investors May 2016



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VISION	A LEADING FULLY INTEGRATED REFINING & PETROCHEMICAL COMPANY IN ASIA PACIFIC					
MISSION	 To be in top quartile on performance and return on investment To create a high-performance organization that promotes teamwork, innovation and trust for sustainability To emphasis good Corporate Governance and commit to Corporate Social Responsibility 					
VALUES	Professionalism Ownership & Commitment Social Responsibility Integrity Teamwork & Collaboration					



Corporate Governance Policy

The board of directors, management and all staff shall commit to moral principles, equitable treatment to all stakeholders and perform their duties for the company's interest with dedication, integrity, and transparency.

Roles and Responsibilities for Stakeholders

- Truthfully report company's situation and future trends to all stakeholders equally on a timely manner.
- Shall not exploit the confidential information for the benefit of related parties or personal gains.
- Shall not disclose any confidential information to external parties.



Thaioil Group Sustainable Development





3 consecutive years for

- Member of DJSI Emerging Markets
- Highest Ranked Level in RobecoSAM Gold Class of Global Oil & Gas Companies

& 2 consecutive years for

- No.1 in ENERGY industry around the WORLD (Industry Group Leader)
- No.1 in Oil & Gas Producers Worldwide (Industry Leader)



TOP GROUP BUSINESS OVERVIEW

KEY FINANCIAL HIGHLIGHTS

STRATEGIC INVESTMENT PLANS

MARKET OUTLOOK

APPENDIX

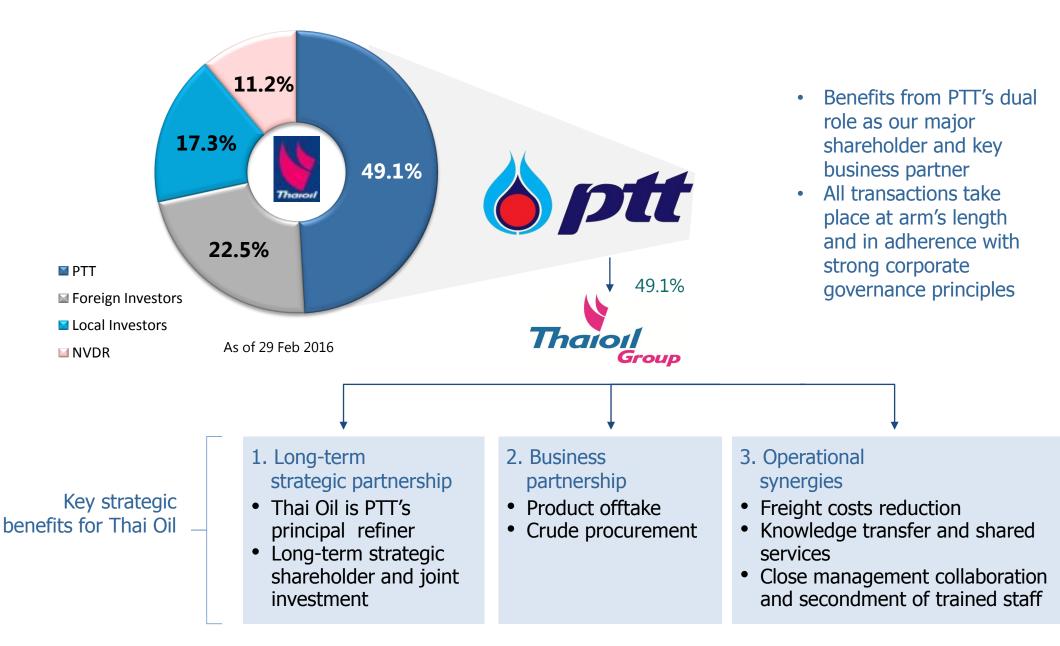


TOP Group Business Overview



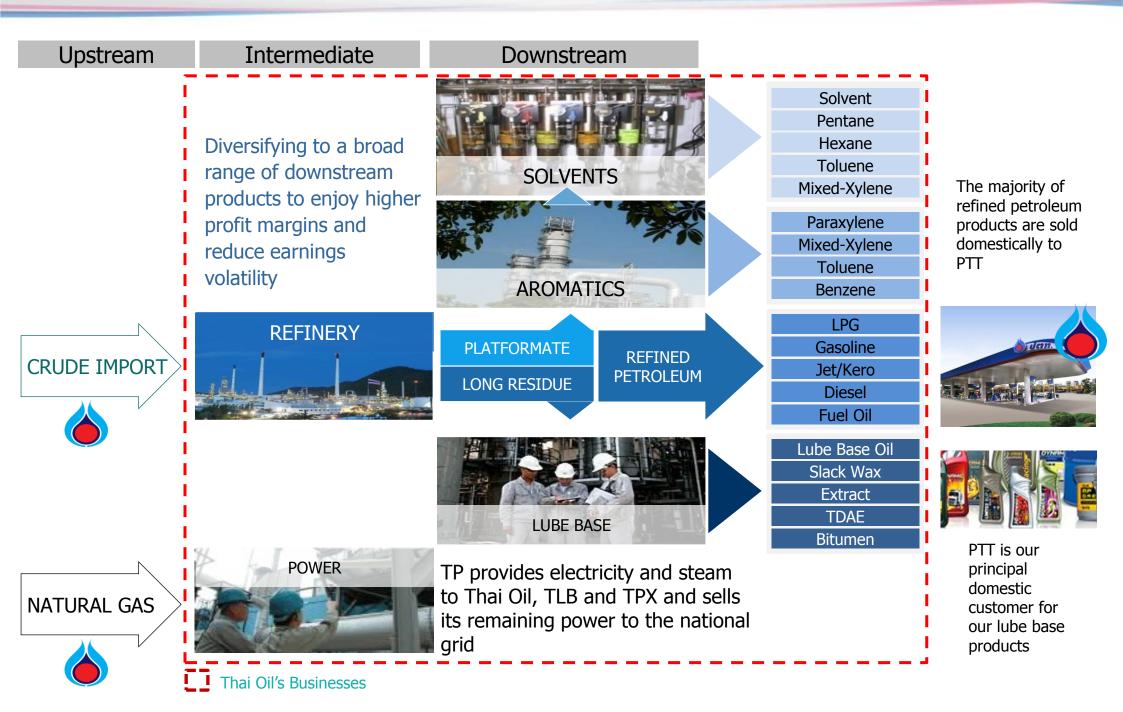


Thai Oil's strong shareholder base



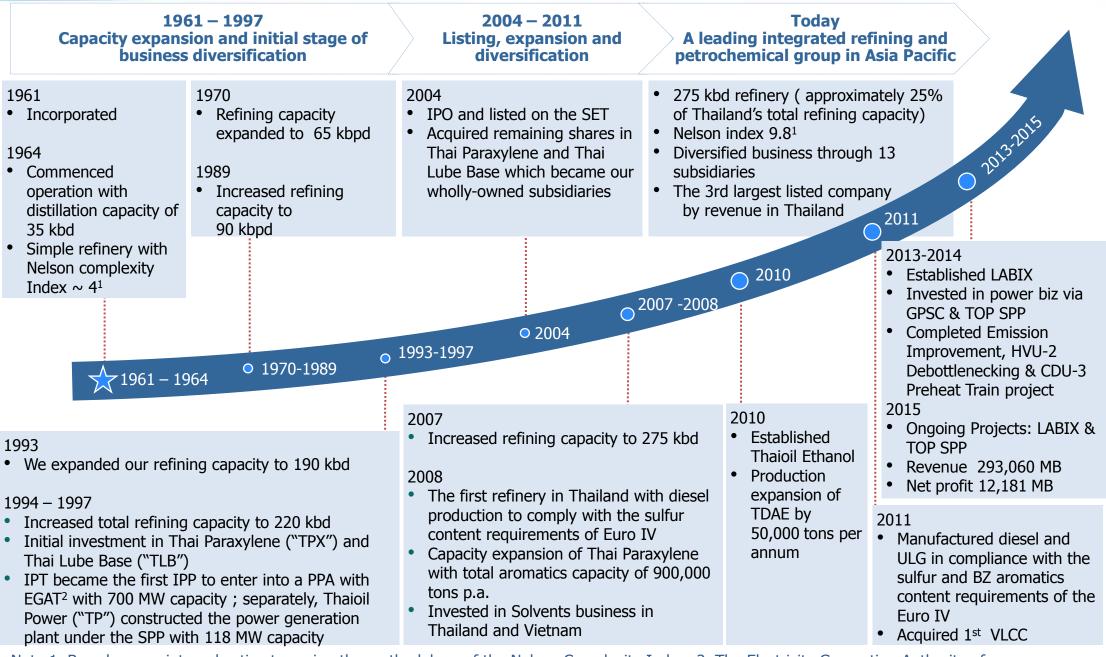
TOP Group Synergy & Strategic Role in PTT Group Value Chain





Key Milestones: 55 Years, A Long Track Record of Success





Note 1. Based on our internal estimates using the methodology of the Nelson Complexity Index 2. The Electricity Generating Authority of Thailand ("EGAT") is the national grid

Thai Oil Group Business Structure



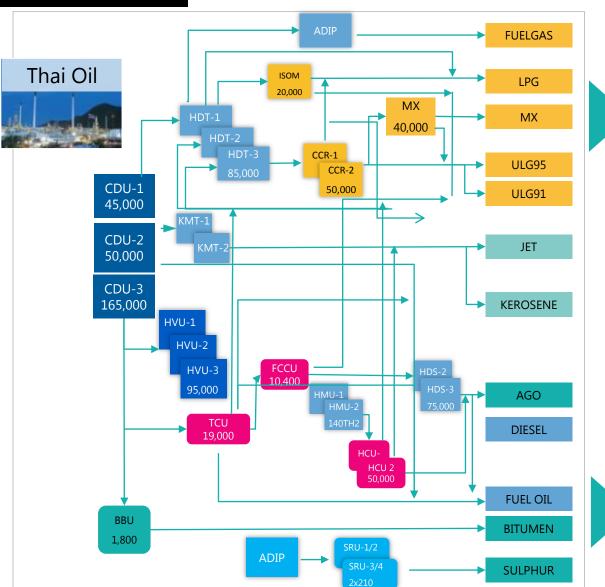


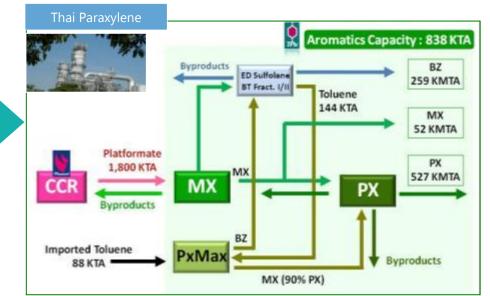
(Avg. from 2006 – Q1/16)

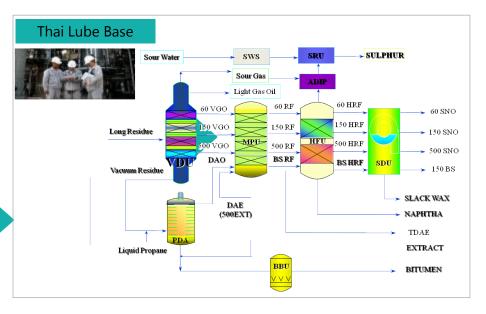
Process Linkage: Beauty of Integration



PROCESS FLOWCHART

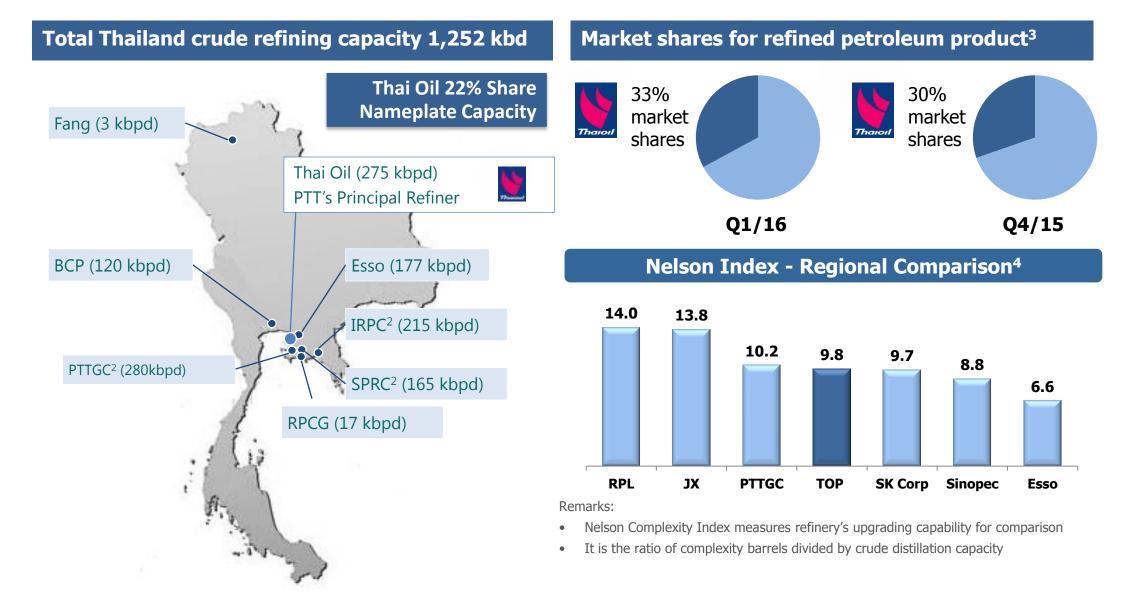






One of Region's Leading Refineries





Note: 1. Source: Energy Policy and Planning Office (EPPO), Ministry of Energy Thailand

- 2. PTT holds a 38.51% interest in IRPC, a 48.9% interest in PTTGC, and a 5.41% interest in SPRC as at 3 Dec 15
- 3. Calculate by total domestic sales of refined petroleum products of Thai Oil divided by total sales of petroleum products in Thailand excl LPG as a feedstock and own used. Source from EPPO
- 4. Source: Worldwide Refinery Survey and Complexity Analysis 2015 from Oil & Gas Journal and company information

Strategic Location with Competitive Advantages in Access to Key Markets

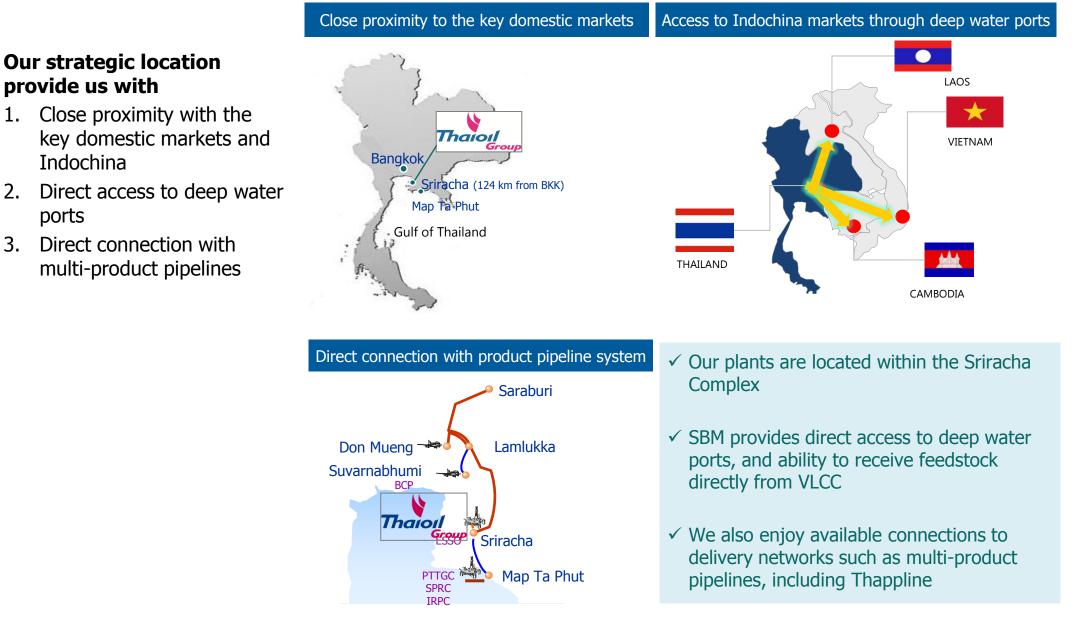
1.

2.

3.

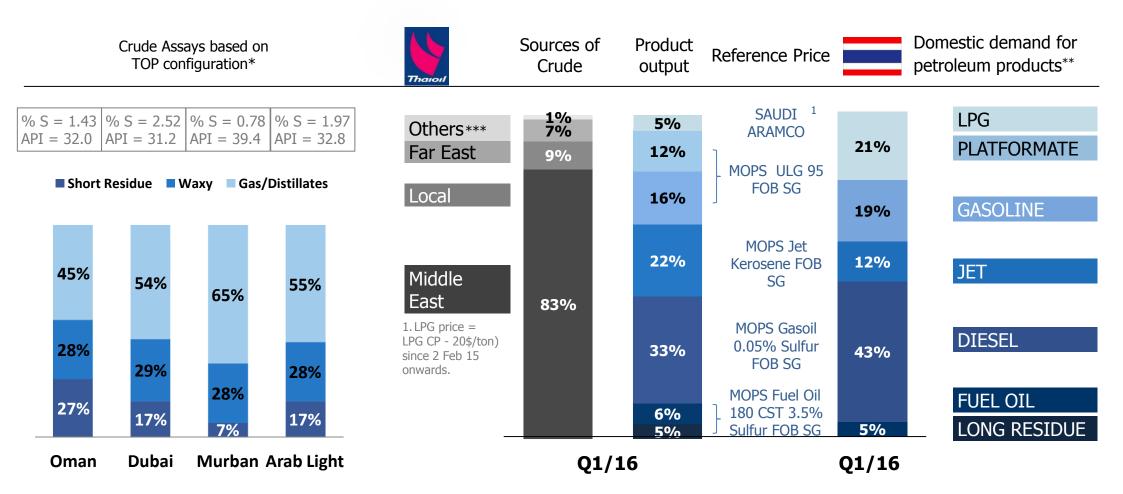
ports





Product pipeline system

Optimized & Flexible Operations...Superior Performance



Thai Oil is able to diversify its type of crude intake and product outputs to maximize demand and margin

*Crude yield as per assay in Spiral as of Feb 2016

**Source: Energy Policy and Planning Office, Ministry of Energy Thailand

*** Including Nigeria, Russia and others

- Flexibility in crude intake allows diversification of crude types to source cheaper crude
 - Flexibility in product outputs by maximizing middle distillates (jet and diesel) by adjusting production mode to capture domestic demand and price premium

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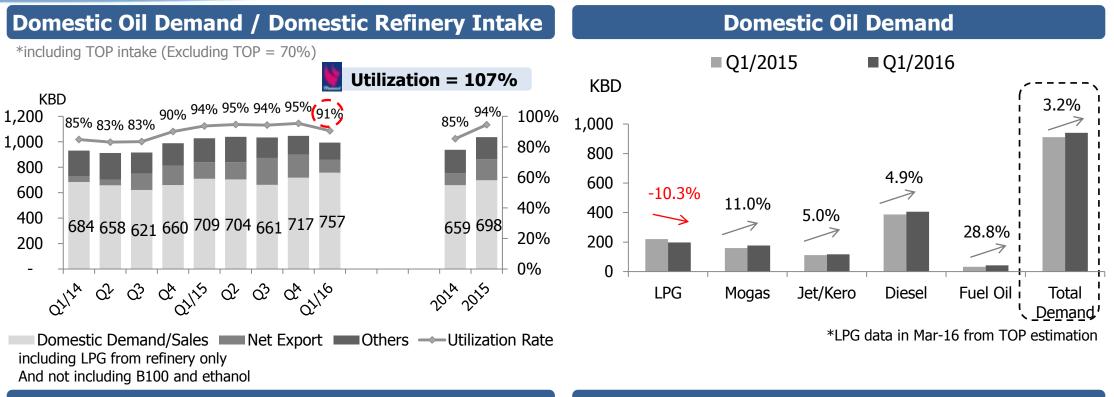
Group

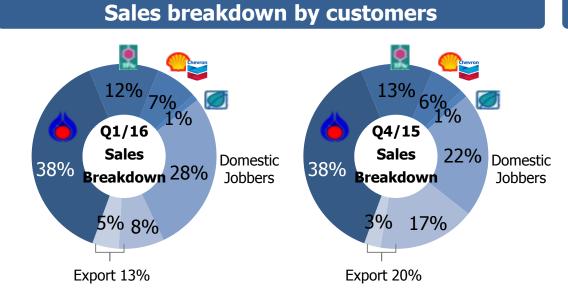
Thaioil

- Maximize Platformate production to capture higher margin on aromatics
- Minimize fuel oil output to avoid lower margin products

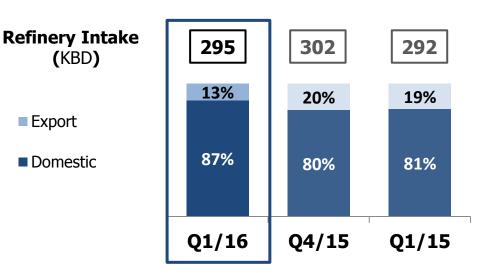
Strong Domestic Sales despite Flatten Local Demand







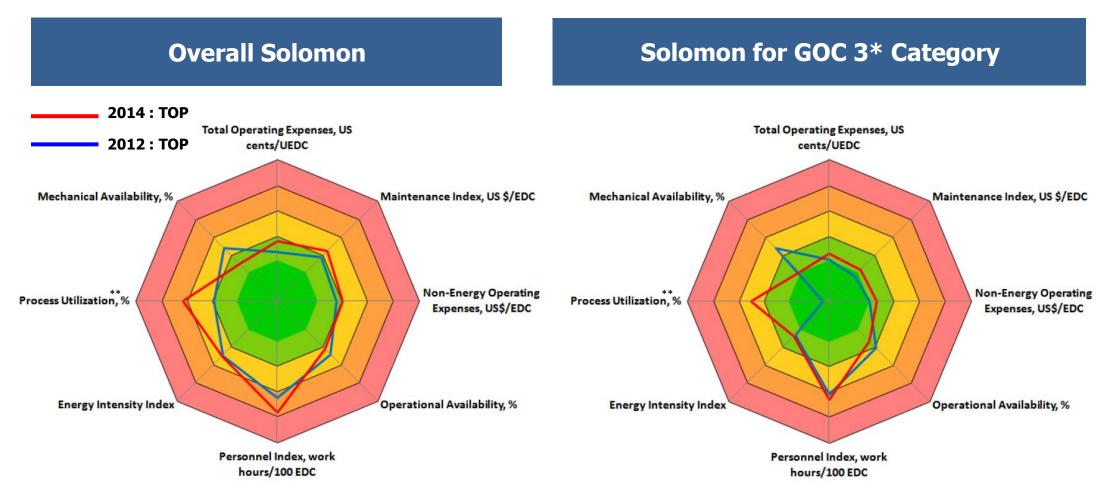
TOP's Domestic & Export Sales



Competitive Performance Benchmarking



Solomon Associates is the independent 3rd party who applies Comparative Performance Analysis methodology to industry peers in the area of reliability, equipment, utilization, operating expense, gross margin and overall performance range and come up with comparative ranking



Remark : *GOC 3 stands for Gas Oil Conversion Group 3, under which refineries in this group have equivalence distillation capacity 1,800 – 2,999 KEDC ** In 2014, Thai Oil had Major turnaround for CDU-3 46 days and 2014FY refinery utilization was at 98%

TOP Group Key Highlights



Thaioil Group	Thailand's largest and one of the region's most advanced and competitive refineries	Diversified earnings through integration with, and significant contribution from, our subsidiaries	
Strategic relationship and operational integration with PTT as the Group's principal refiner	Strategic location with competitive advantages in access to key markets	Industry with high barriers to entry and strong market positioning	
Technological superiority, logistical advantages & cost leadership	Highly experienced management team	Strong financial profile	



Key Financial Highlights

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Key Highlights

Q1/16 Key Market Drivers Highlights

Refinery



- Soften MKT GRM pressured by 1.) lower middle distillate spread as abundant supply amid weak demand during mild winter 2.) higher crude premium
- Weaken Dubai particularly in Jan & Feb, pressured by oversupply situation especially more Iranian export after sanction lifted

Implication

- Soften Mkt GRM at 6.1 \$/bbl (Q4/15 = 8.5 \$/bbl)
- (1.0) \$/bbl inventory loss * (from stock loss (3.3)\$/bbl inQ4/15)*

Aromatic



- Improved PX and BZ spread supported by regional plants outages and strong demand from downstream businesses both PTA and SM due to good margins. Lower energy cost continued to support GIM contribution
- **Strong Aromatic Margins** (**GIM contribution to 1.4 \$/bbl** from 1.3 \$/bbl in Q4/15)

Lube Base



Soften Base oil and Bitumen spread pressured by additional Group II Base oil supply and high Bitumen inventory. However, low energy cost limited downside to GIM contribution Soften Base Oil Margins

(GIM contribution to 0.9 \$/bbl from 1.1 \$/bbl in Q4/15)

Refinery + Aromatics + Lube Base

Remark * Based on refinery intake

\$/BBL	Q1/16	Q4/15
Market GIM	4 8.3	10.7
Inventory Gains / <mark>(Loss)</mark>	(1.0)	(3.2)
Accounting GIM	4 7.3	7.5



Key Highlights

Q1/16 Key Events / Achievements



Key Events / Achievements Q1/16



 High Refinery run at 107% & optimized run for Aromatic & Lube Base at 80% and 88% respectively



Ongoing competitive group cash cost at
 2.0 \$/bbl (lower 0.6 \$/bbl Q/Q)



Higher domestic sales portion of petroleum products at 87% (from 80% in Q4/15)



- Higher contribution from other subsidiaries, particularly power business (~519 MB in Q1/16 vs. ~353 MB in Q4/15)
- Successfully COD
 LAB plants on 25 Feb 16
 1st block of TOP SPP (124MW) on
 1 Apr 16 and 2nd block (115 MW) will be COD on 1 Jun 16

	Thailand	Thai Oil
MOODY'S	Baa1	Baa1
INVESTORS SERVICE	Stable Outlook	Stable Outlook
STANDARD	BBB+	BBB
&POOR'S	Stable Outlook	Stable Outlook
FitchRatings	AAA (Tha) Stable Outlook	AA- (Tha) Stable Outlook

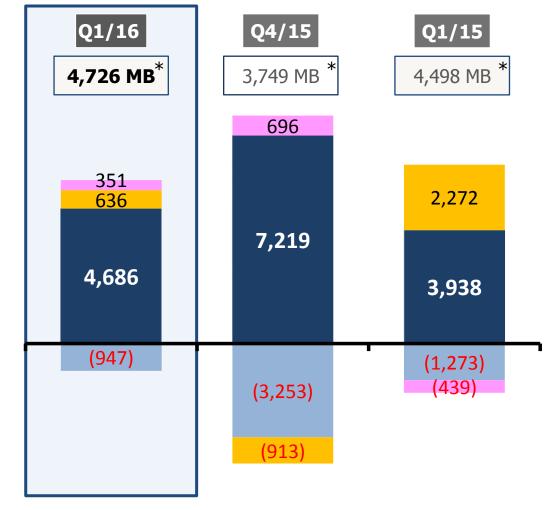
Thai Oil's ratings are affirmed at investment grade with stable outlook supported by

strong operational & financial performance & uplift from PTT

TOP Group Net Profit

Unit : million THB (MB)

- Net Operating Profit (before tax)
- Stock G/(L) (before tax)
- Reversal of NRV/(NRV) (before tax) Others i.e. FX G/(L), Hedging G/(L), tax expense etc.



*redeemed BOI privilege for tax exemption on environmental projects in Q1/16 = 396 MB, Q4/15 = 190 MB , Q1/15 = 716 MB

Integrated Margin & Competitive Cash Cost



Gross Refining Margin (Unit: US\$/bbl) Market GRM Accounting GRM (Market GRM + Stock G/L) 7.8 **5.9**^{6.1} 6.4 6.2 5.7 5.3 **4.5 5.1 4**.3 5.1 **4.1** ^{4.6} 3.4 2.2 1.11.2 2008 2009 2010 2011 2012 2013 2014 2015 Q1/16 **Gross Integrated Margin** (Unit: US\$/bbl) Market GIM Accounting GIM (Market GIM + Stock G/L) ■ TOP ■ TPX ■ TLB 9.3 9.1 8.3 7.9 7.8 1. ^{7.6} 6.9 7.2 0.9 7.3 7.6 1.3 0.7 5.6 **6.3** 6.8 0.9 0.9 6.1 0.9 0.9 0.67.6 1.7 6.0 1.6 5.8 5.9 4.14.9 5.4**1.9** $5.1_{4.3}$ **0.5** 1.1 0.5 0.7 0.1 2009 2010 2011 2012 2013 2014 2015 Q1/16 2008

Refinery's Cash Cost



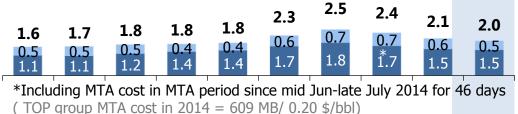
Interest Expense (Net) Operating Cost (excl. one-time nonoperating item)

1.4 0.4 0.9	1.4 0.5 0.9	1.5 0.5 1.0	1.5 0.4 1.1	1.6 0.4 1.2	2.1 0.7 1.4	2.3 0.8 1.5*	1.9 0.6 1.3	1.8 0.6 1.2
*Includ	ing MTA	cost in №	ITA perio	d since r	nid Jun-la	ite July 2	014 for	46 days
(TOP M 2008	TA cost i 2009	in 2014 = 2010	= 436 MB 2011	/ 0.14 \$/ 2012	'bbl) 2013	2014	2015	01/16

Group's Cash Cost

(Unit: US\$/bbl)

Operating Cost Interest Expense (Net) (excl. one-time nonoperating item)

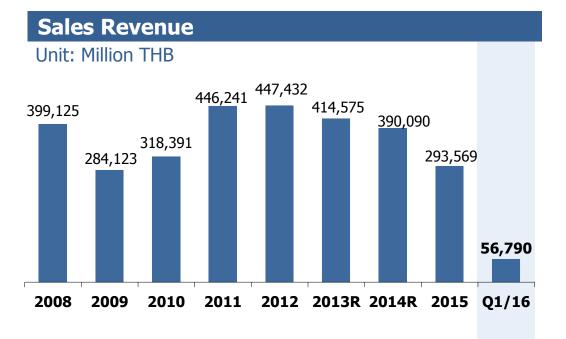


2008 2009 2010 2011 2012 2013 2014 2014 2015 01/16

Financial

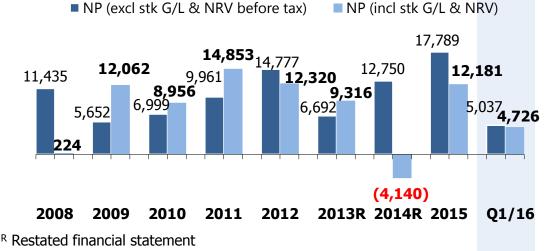
Financial Performance





Net Profit

Unit: Million THB

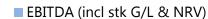


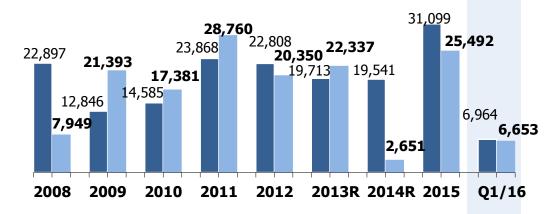
* Free Cash Flow (FCF) = Operating cash flow - CAPEX(PP&E)-Net

EBITDA

Unit: Million THB

EBITDA (excl stk G/L & NRV)





Free Cash Flow* Unit: Million THB 14,035 13,753 16,946 20,878 20,878 7,818 2,157 10,349 13,753 16,946 3,801 5,767 7,818 2008 2009 2010 2011 2012 2013 2014 2015 Q1/16 CAPEX (PP&E)-Net

6,284	1,300	3,187	3,850	6,103	12,33 0	18,66 6	10,83 0	1,946

Financial

Q1/16 TOP Group Strong Financial Position & Financial Ratios



	Statements of Fi	nancial Position		Consolidated Long-Te	rm D	ebt as at 31	. Mar 16 ¹⁾
(Unit: mill	lion THB)			Total Long-Term Debt		Net	Debt
Cash & ST investmen	20.004	202,684 60,041 26,138	Trade Payable / Others	74,915 million THB (US\$ 2,116 million equivalence)	•	(US\$ 4	million THB 51 million ivalence)
Current Assets	^{37,361} 75,093	38,245 74,915	LT Debt ¹⁾	US\$ Bond & US\$ Loan		e (Million)	6 (35.41 THB/US\$) Portion 55%
Non-Curre Assets	nt 101,676 97,009	104,398 <mark>101,631</mark>	Equities	THB Bond THB Loan	TH	SD 1,156 B 25,500 IB 8,502	34% 11%
	31 Dec 15	31 Mar 16		Interest Rate		Port	tion
ROE	13.2%	12.5%*		Float		12	%
ROIC	12.6%	13.3%*		Fixed TOP avg.debt life	88% 12.8 Yrs		-

¹⁾ Including current portion of Long-Term Debt

Financial Ratios						
Net Debt / adj. EBITDA** Net Debt / Equity					quity	
1.7	0.7	0.6	0.4	0.2	0.2	
31-Dec-14	31-Dec-14 31-Dec-15 31-Mar-16 31-Dec-14 31-Dec-15 31-Mar-16					

* Based on actual performance in the past 12 months ** Annualized EBITDA (excl stock gain/loss & Reversal of NRV/(NRV))

STANDARD M **Fitch**Ratings &POOR'S **Moody's Investors Service** BBB AA- (tha) Baa1 Stable Outlook Stable Outlook Stable Outlook

Cost of Debt

***Calculated by interest expense net off interest income as per FS as at 31 Mar 16

3.77%

4.80%

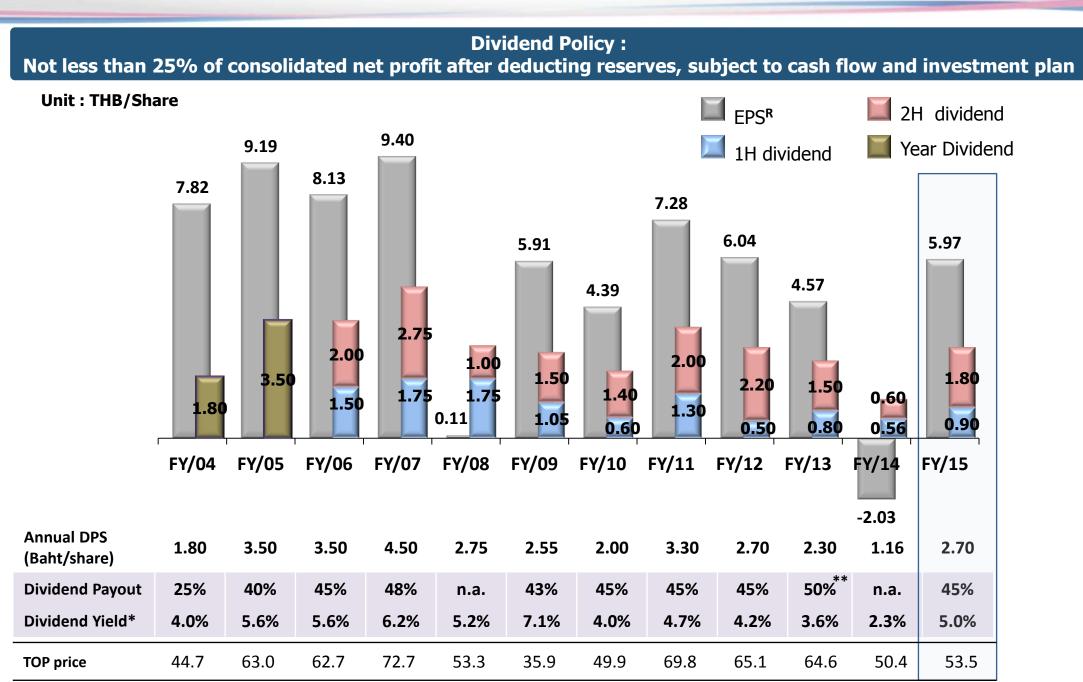
TOP Group (Net***)

TOP Group (Gross)

Financial

2015 Dividend Payment





^R Based on restated financial statement

* Based on average TOP share price in each year ** Dividend payout before restated = 45%



Strategic Investment Plans



Way Forward

Broadening Growth, Capturing Step Out, Pursuing Sustainability





Thaioil Group Investment Matrix







Myanmar, Vietnam, Indonesia

New Geography

Core Business Growth Integrated Refinery Solvent, Marine, Power, Ethanol

Refinery



Integrated Downstream

(B2B, B2C/retail, logistics, trading)

Specialties

New Business (Technology driven)

Downstream



Updated CAPEX plan

Strategic Investment Plan



\$363m

CAPEX Plan (Unit US\$ million)					R	Remaining capital		
	Projects	COD	Total Project Cost			investm	ent	
Our CAPEX			(2011-2018)	2015	2016	2017	2018	
investments will cover improvements	Reliability, efficiency and flexibility improvement	2013-2018	353	21	60	5	4	
in plants reliability, efficiency &	Environmental and fuel efficiency improvement	2013-2015	269*	5	8			
flexibility,	CDU-3 preheat train	2014	68	4	3			
environmental & fuel	Benzene Derivatives - LAB	2016	300	74	48			
efficiency improvement as well	Power – 2 SPPs	2016	380	146	59			
as value chain	Solvent expansion – SAKC	2014	64	10				
enhancement	Marine fleets expansion	2014/15	56	15				
	Facility Improvement							
Thai Oil has	- Lorry Expansion	2017	51	3	46	2		
sufficient internal	- Jetty 7&8 / Improvement	2018	129		20	73	35	
cash flow to fund	Total		1,670	278	244	80	39	
this investment plan	Notes: Excluding approximately 40 M\$/year for	r annual maintenanc	e		Ĺ			

*anticipated to receive BOI for environmental projects

Update as of Apr 2016

Ongoing Project Update

Key Project Completion / Progress Update



Project	Detail / Progress						
Linear Alkyl Benzene (LAB) • CAPEX = 400 M\$ Operate on 25 Feb 16	 Successfully COD on 25 Feb 2016 On technical aspect, plant is successfully test run and capable to run up to 120% (at 120 KTA) On commercial aspect, trial cargo has been delivered to customers for quality testing 	<image/>					

Project	Detail / Progress				
TOP SPP	 Successfully COD 1st block of TOP SPP (124MW) on 1 Apr 2016 				
(2 blocks of SPP)	• 2 nd block (115 MW):				
• CAPEX = 380 M\$ • COD = Q2 2016	• Trial run in late Apr 2016				
C	• Will be COD on 1 Jun 2016				
	• Overall progress at 99.9%				

Project Update

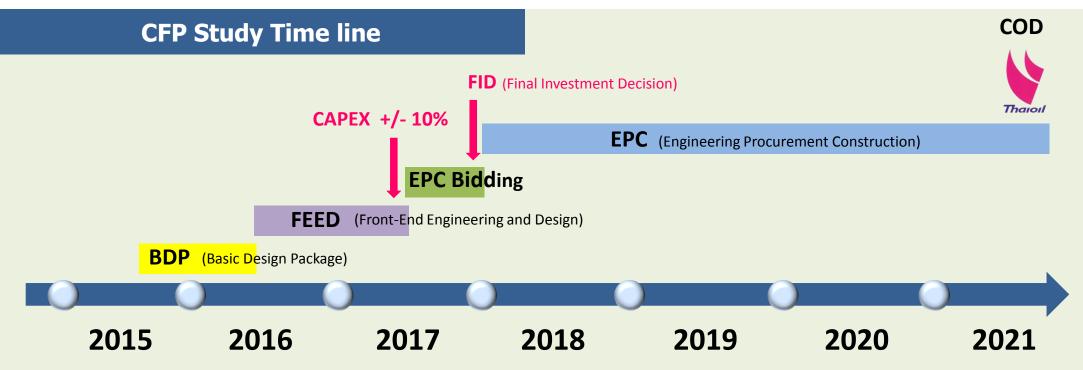
Study Project : Clean Fuel Project (CFP)





Main objectives of CFP

- Enhance competitive advantage of the refinery and maintain 1st quartile performer
- Enhance capability to upgrade lower value product into higher value product and ability to process heavier (cheaper) crude oil





2H-16 & 2016 MARKET OUTLOOK

- Crude Oil
- Petroleum Products
- Aromatics
- Base Oil & Bitumen
- LAB



CRUDE OIL

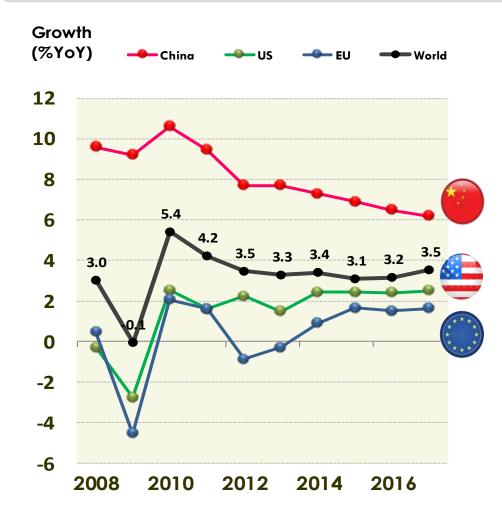
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Macroeconomics & Crude Prices

2016 Global GDP Growth by IMF



IMF estimated the 2016's Global GDP growth at 3.2%



TERNATION P	2015	20	16	2017		
MOLETARY FUT	Apr-16 ⁽¹⁾	Apr-16 ⁽¹⁾ Jan-16 ⁽²⁾		Jan-16 ⁽²⁾	Apr-16 ⁽¹⁾	
USA	2.4%	2.6%	2.4%	2.6%	2.5%	
EU	1.6%	1.7%	1.5%	1.7%	1.6%	
China	6.9%	6.3%	6.5%	6.0%	6.2%	
Japan	0.5%	1.0%	0.5%	0.3%	-0.1%	
India	7.3%	7.5%	7.5%	7.5%	7.5%	
ASEAN-5 ⁽⁵⁾	4.7%	4.9%	4.8%	4.9%	5.1%	
Thailand	2.8% ⁽³⁾	3.5% ⁽⁴⁾	3.1% ⁽³⁾	N/A	3.3% ⁽³⁾	
World	3.1%	3.4%	3.2%	3.6%	3.5%	

Sources:

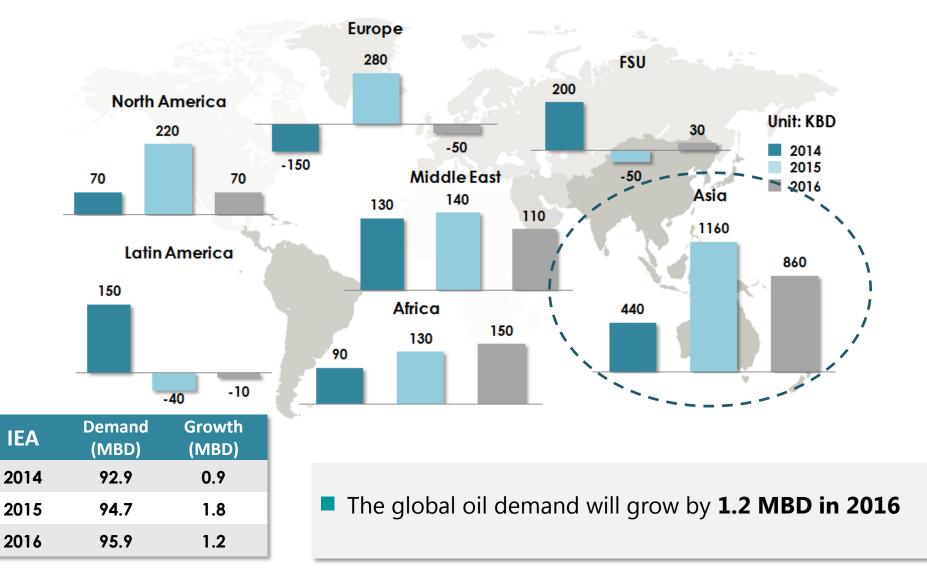
IMF Apr'16 (2) IMF Jan'15
 BOT Mar, 2016 (4) BOT Dec, 2015
 ASEAN-5 includes Thailand, Malaysia, Indonesia, Vietnam, Philippines

Macroeconomics & Crude Prices

Global Oil Demand Growth Projection







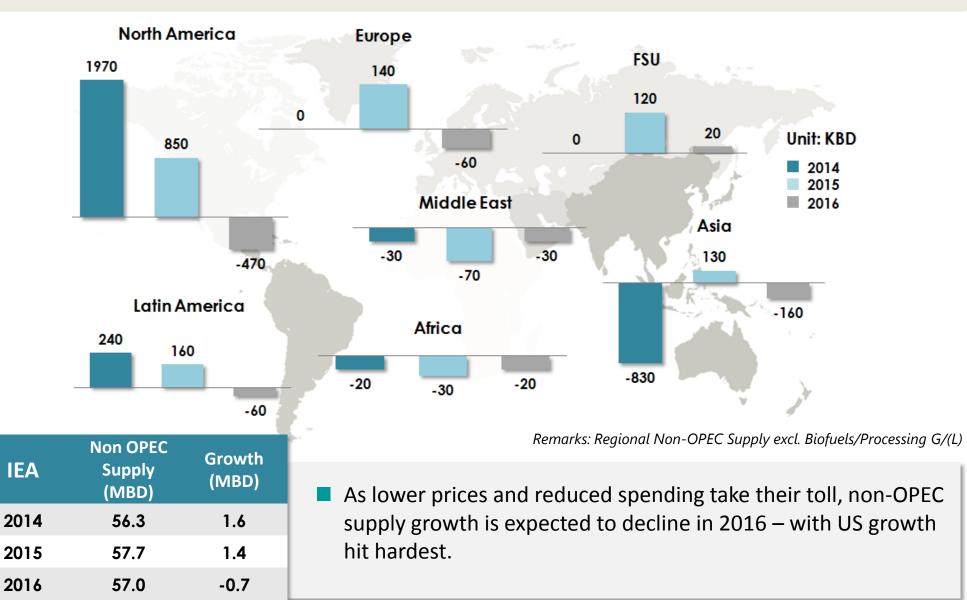
Source: IEA, Oil Market Report Apr 2016

Macroeconomics & Crude Prices

Non-OPEC Supply Growth Projection



IEA estimated 2016's Non-OPEC oil supply growth to contract by 700 KBD

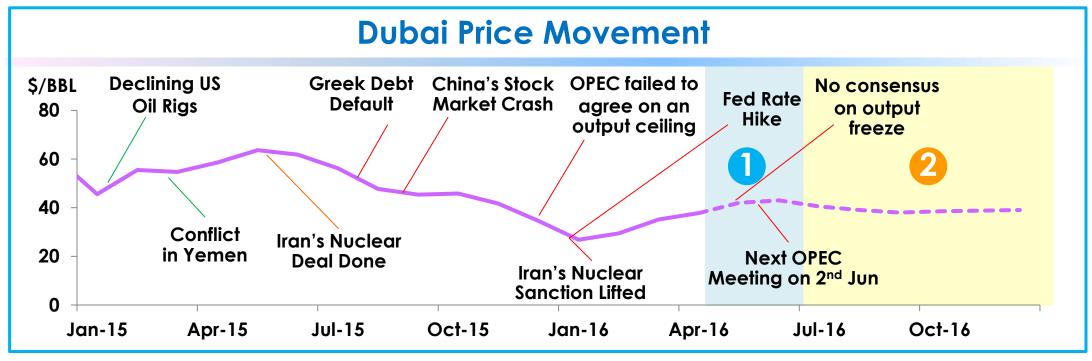


Source: IEA, Oil Market Report Apr 2016

Refinery

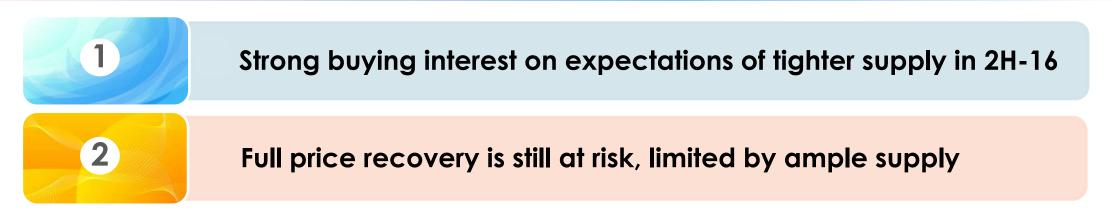
Crude Oil Market: Oil Market Rebalance is Still at Risk





*Q2TD (as of 9th May): \$39.7/BBL

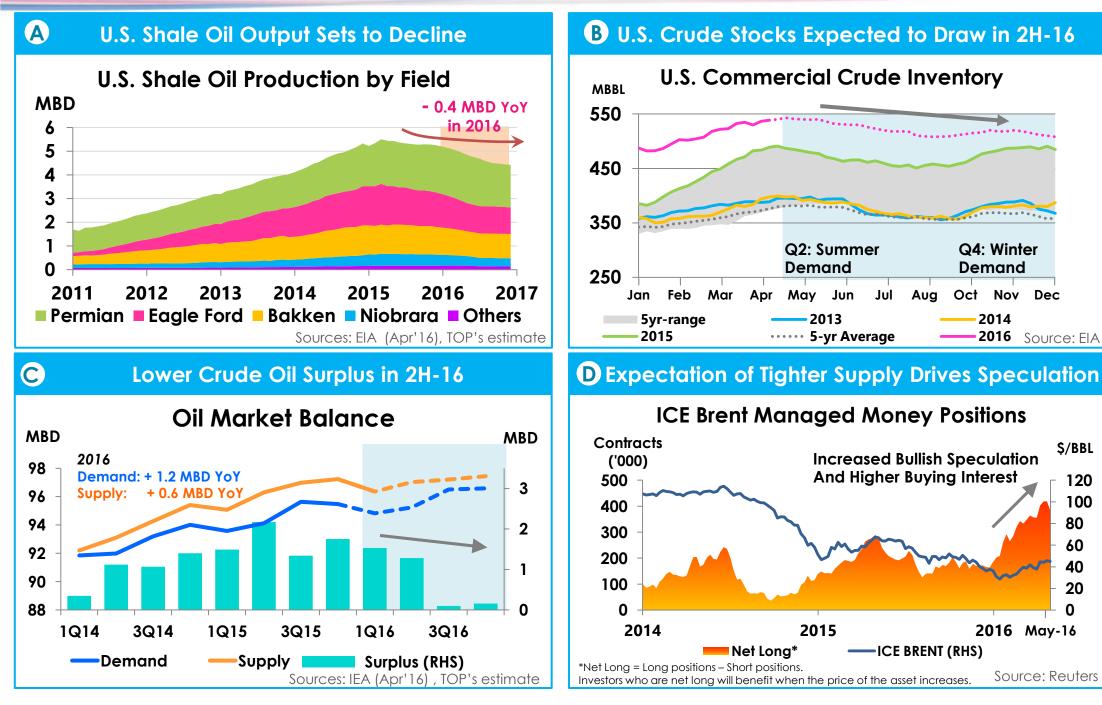
Key Highlights:



Refinery **Strong Buying Interest On Expectations of Tighter Supply in 2H-16**

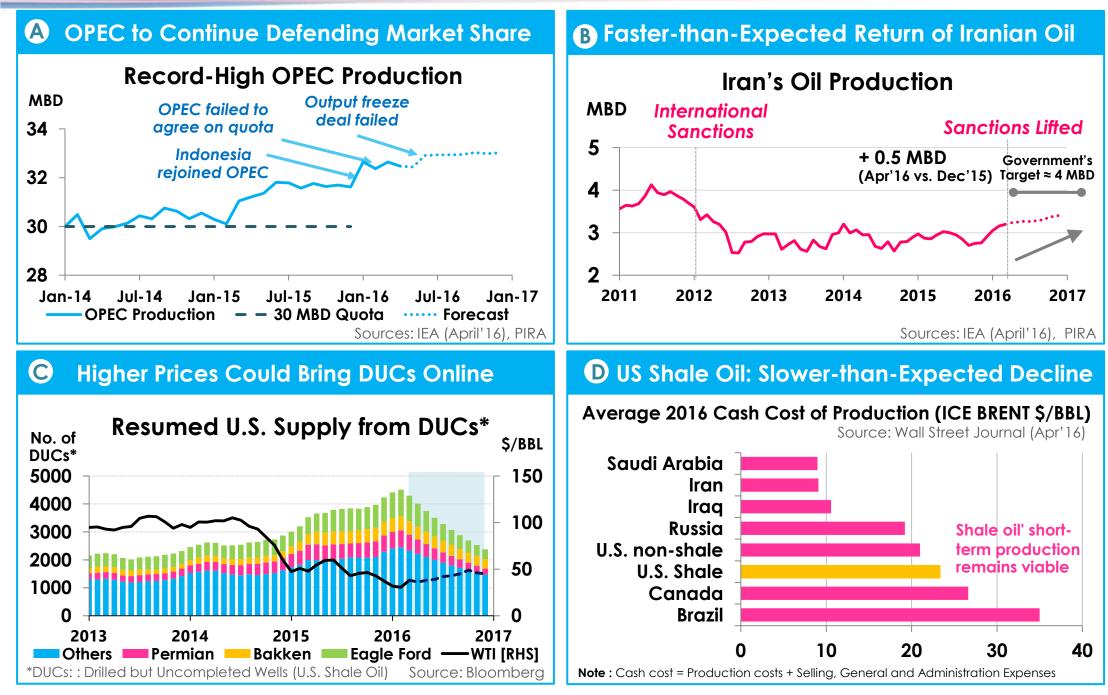


\$/BBL



2 Full Price Recovery is Still At Risk, Limited By Ample Supply





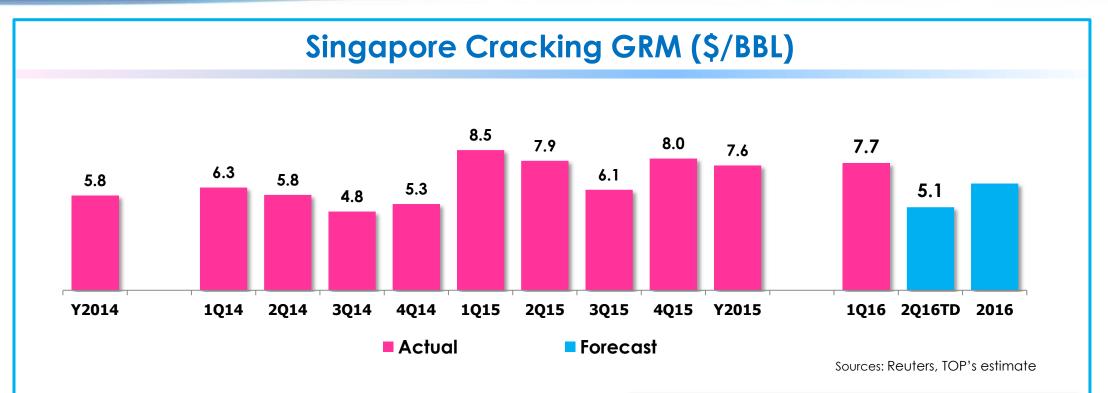


PETROLEUM PRODUCTS

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Steady Refinery Margin in 2H-16 on Recovered Middle Distillate Cracks



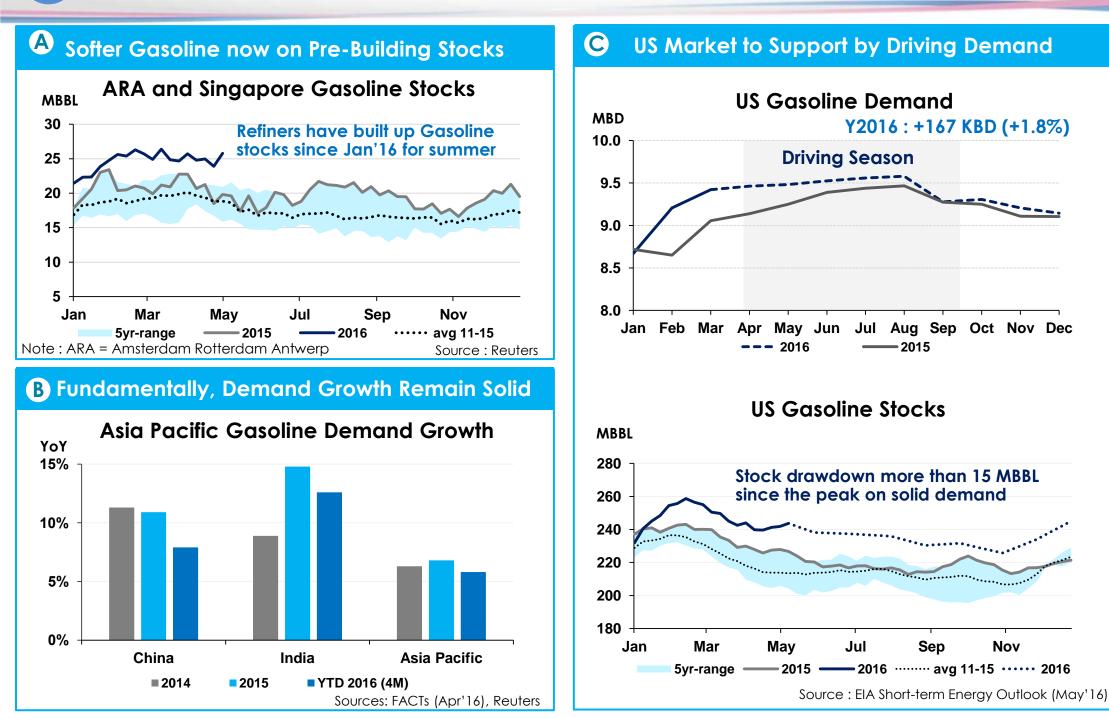


(\$/BBL)	Q4-15	2015	Q1-16	Q2TD-16*	2H-16(F)**	Key Highlights in 2H-16
ULG95-DB	18.7	18.3	18.8	15.3	\leftrightarrow	1 Stable gasoline cracks on summer
JET-DB	14.1	13.9	11.7	10.3	1	demand
GO-DB	13.8	13.7	9.6	9.1		2 Middle distillate cracks hit the
HSFO-DB	(6.5)	(5.0)	(5.2)	(8.7)	Ļ	bottom in Q3/16 and recover in Q4/16 on cold weather
Remarks: *Q2TL	D-16 as of 9	9 May 16, *	**Compared	d to 1H-16		

Refinery

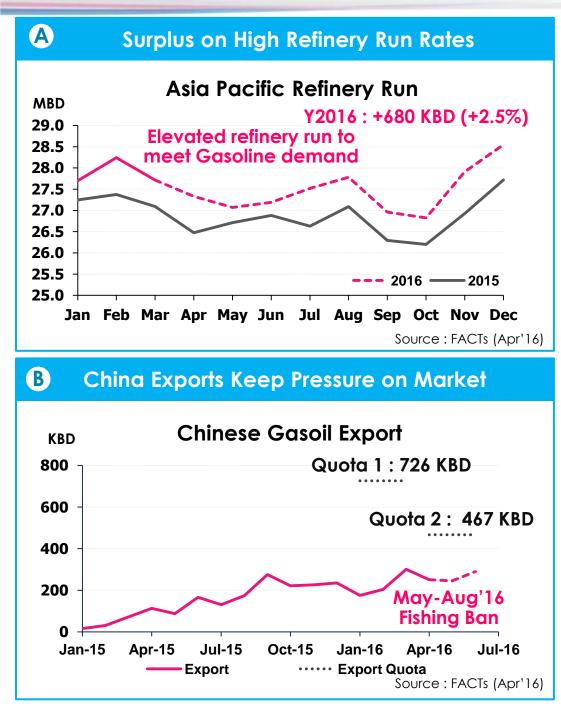
Stable Gasoline Cracks on Summer Demand





Middle Distillate Cracks Hit the Bottom in Q3/16 and Will Recover in Q4/16 on Cold Weather

C

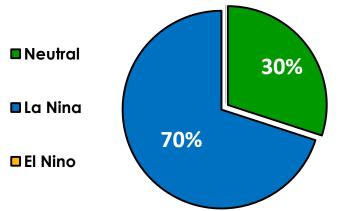


70 percent of La Nina in Q4/16

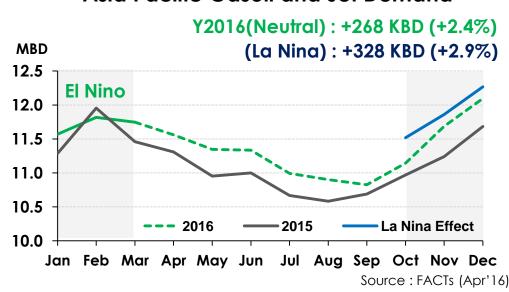


Thaioil

Group

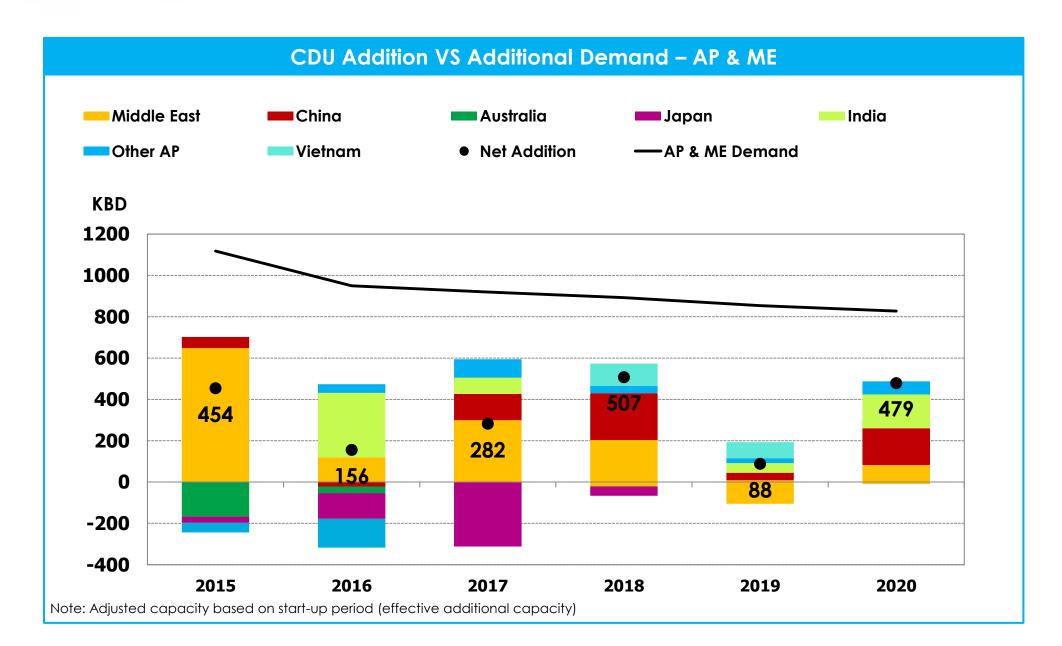


Sources : National Oceanic and Atmospheric Administration (May'16), PIRA



Asia Pacific Gasoil and Jet Demand

Demand Growth Better than Supply Growth on Refinery Closures and Project Delays in China



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Group

Thaioil

Thailand's Oil Demand

Thailand's Oil Demand in 2016



Thailand Petrol	eum Deman	d Growth	
Year on Year	Y 2015 ^(B)	YTD 3M 2016 ^(B) (vs. 3M 2015)	Y 2016 ^(C)
Mogas ^(A)	+13.3%	+11.0%	+7.1%
Jet/Kero	+9.7%	+4.9%	+4.4%
Diesel ^(A)	+4.0%	+4.9%	+2.2%
Fuel Oil	-1.4%	+28.4%	+14.7%
Total	+6.6%	+7.4%	+4.4%
GDP	+2.8%	N.A.	+3.1% ^(D)

Thailand's oil demand growth at 4.4% YoY in 2016

- Gasoline and Diesel demand in 2016 are supported by low oil prices and improved Thai economy.
- Robust tourism sector pushes Jet demand to grow persistently.

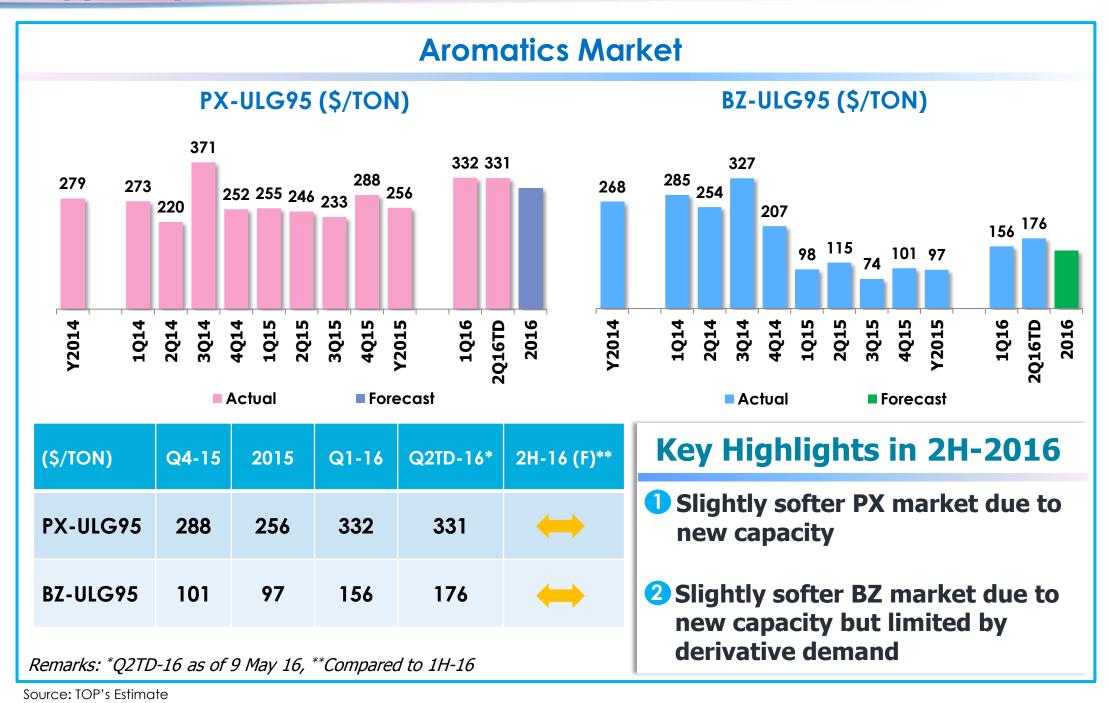
Remarks: (A) Mogas and Diesel includes Ethanol and Biodiesel, respectively

- (B) DOEB
- (C) PTT Estimation (as of Mar 2016)
- (D) BOT Estimation (BOT Monetary Report as of Mar 2016)



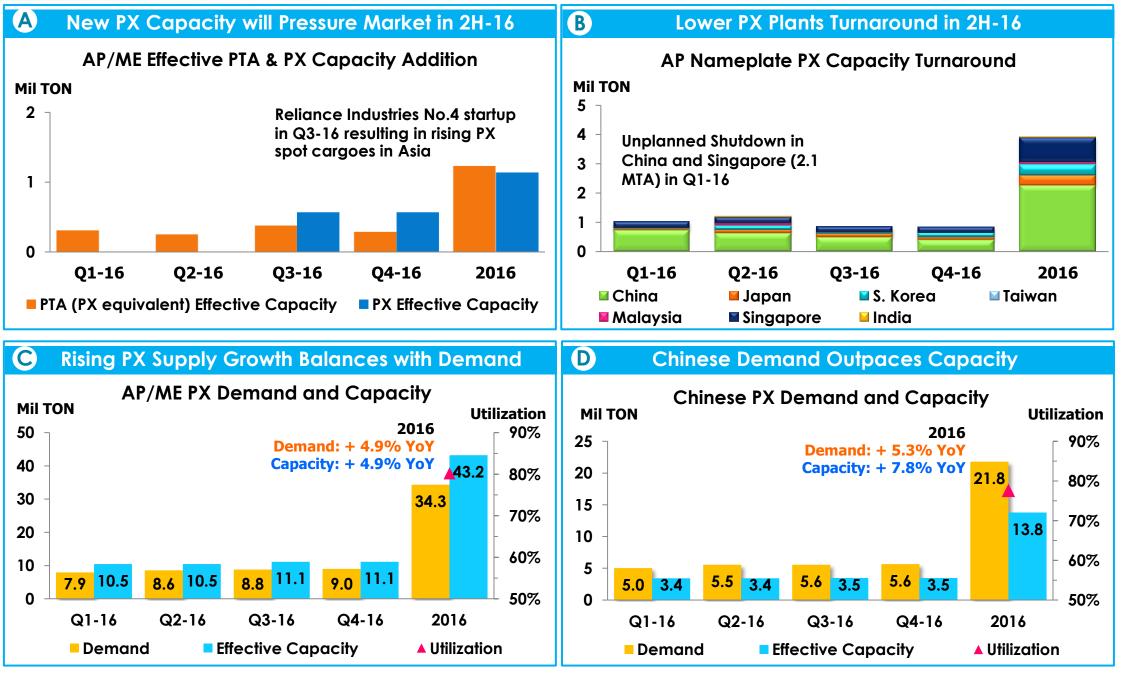
AROMATICS

•47-Slightly Softer Aromatics Market on New Capacity in 2H-16 Thatout Group **Capped by New Derivative Demand**



Slightly Softer PX Market due to New Capacity



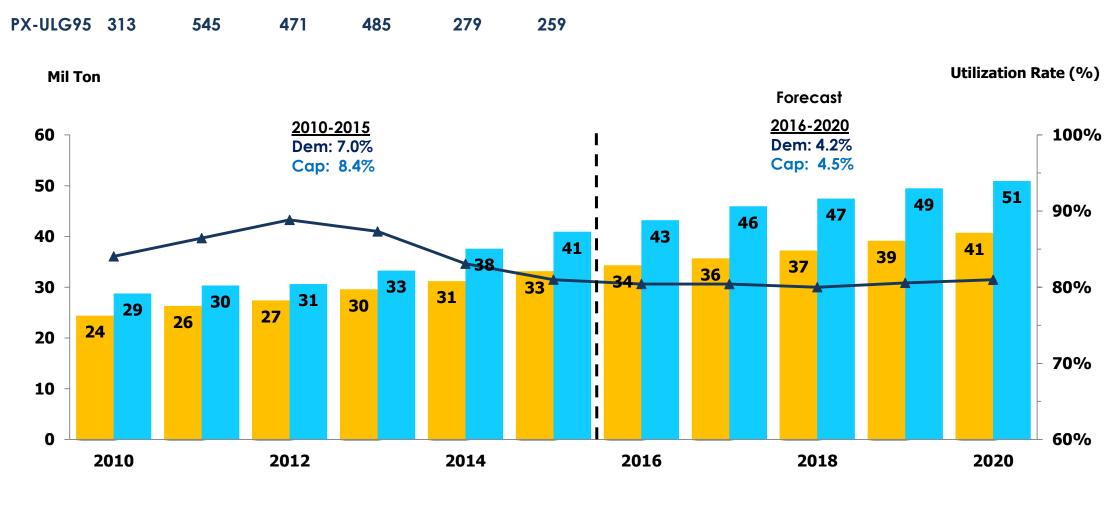


Sources: PCI (Feb'16), HIS (Mar'16)

AP/ME PX Demand and Capacity Outlook

Demand

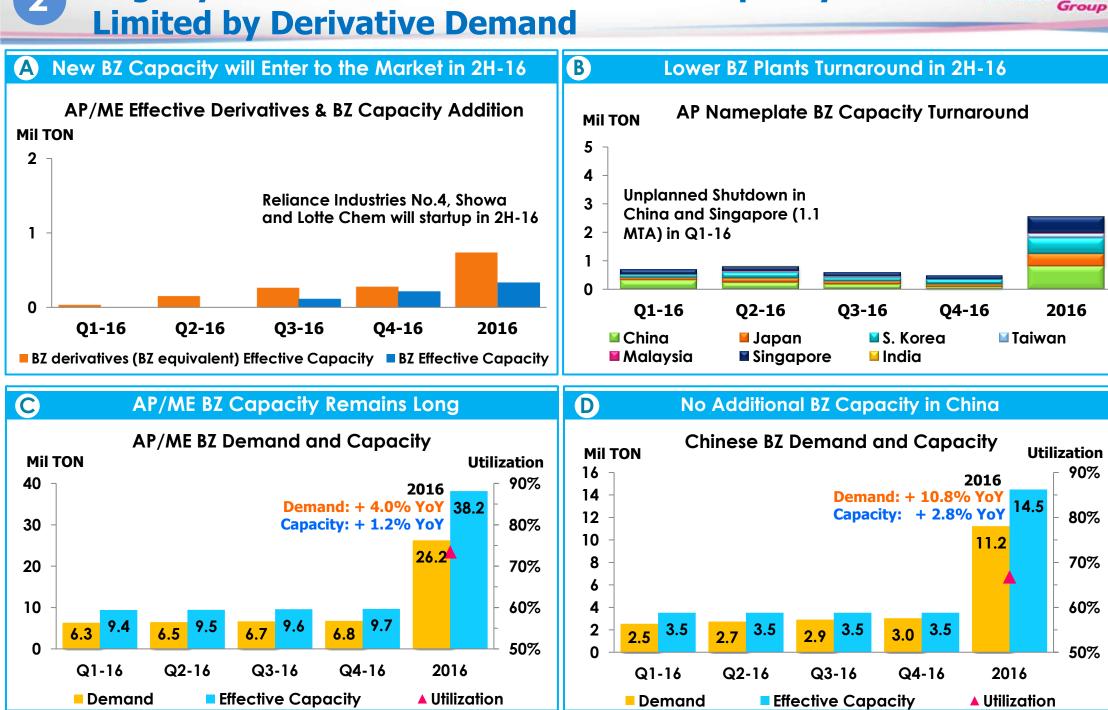




Slightly Softer BZ Market due to New Capacity but Limited by Derivative Demand

-50-

Thaioil

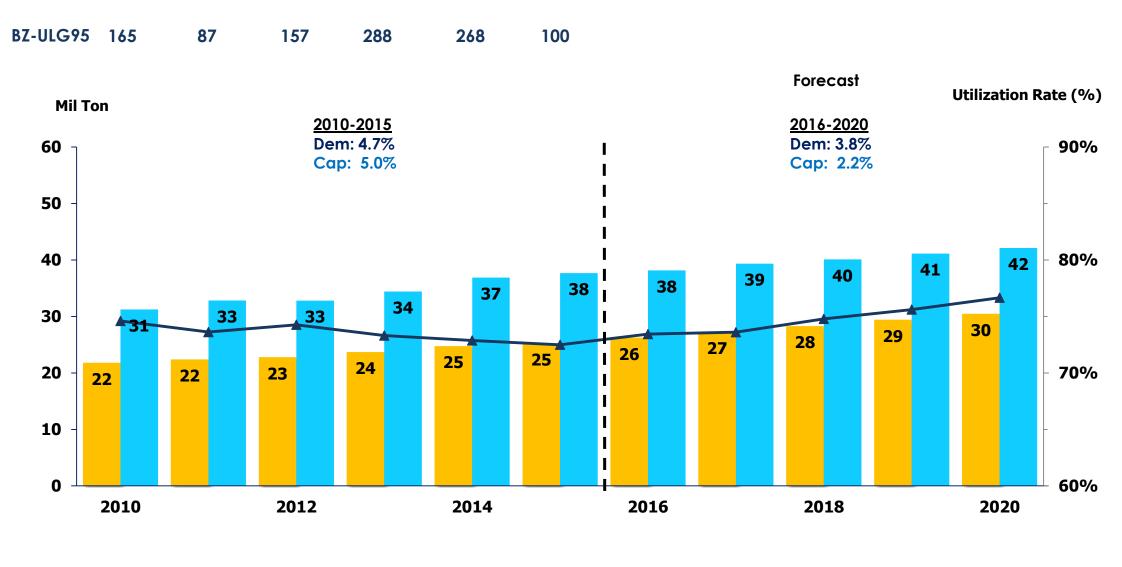


Source: HIS (Mar'16)

Aromatics

AP/ME BZ Demand and Capacity Outlook





Demand Effective Capacity 🚽 Utilization Rate (%)

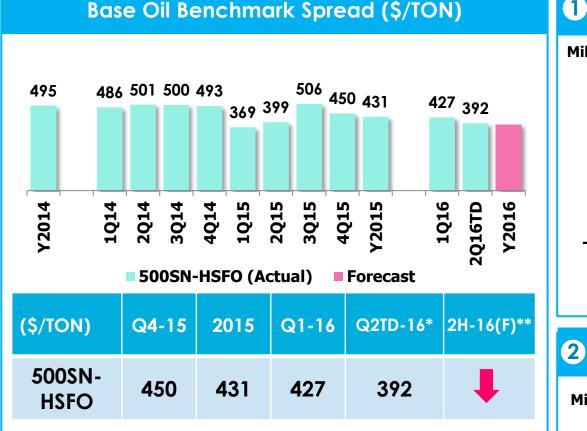


BASE OIL & BITUMEN

-52-

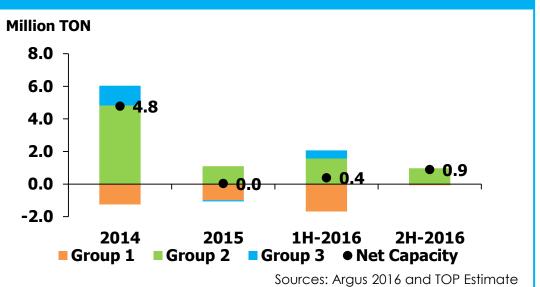
Base Oil & Bitumen Soft Base Oil Spread in 2H-16 due to Weak Demand amid Additional Supply



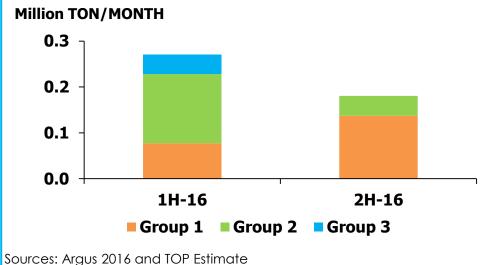


Global Additional Nameplate Capacity

(1)



Asian Pacific Plant Maintenance in 2016



Remarks: *As of 9 May 16, **Compared to 1H-16

Key Highlights in 2H-16

- New Gr.II planned to start up in 2H to (1) pressure market
- **(2)** Regional Gr.I plant maintenance in 2H to limit spot supply especially for heavy viscosity grades

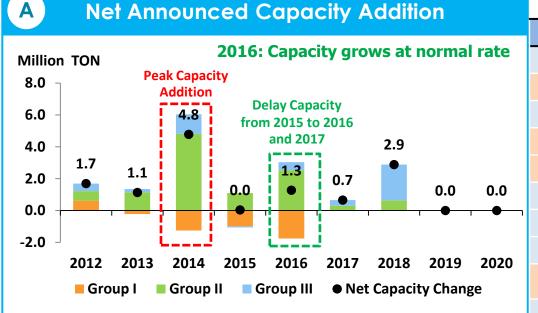
Sources: ICIS Publication and TOP's Estimate

Base Oil & Bitumen

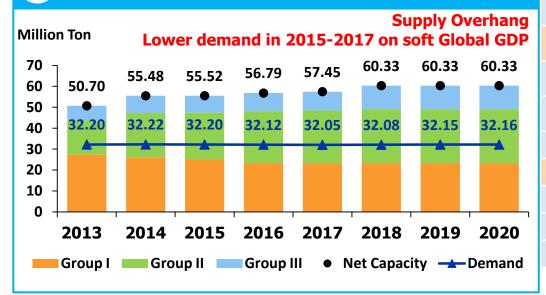
B

Soft Base Oil Spread in 2H 2016 due to Weak Demand amid Addition Supply





Global Nameplate Capacity vs Demand



Туре	Company	Location	Group	Capacity
New	Sinopec Maoming	China	Gr.II	250
Closure	Shandong Quinyuan	China	Gr.I+	-400
New	Shandong Quinyuan	China	Gr.II	600
Closure	Nynas	Germany	Gr.I	-170
Closure	КРС	Netherlands	Gr.I	-235
New	Adnoc (Ruwais) Del	ayedUAE	Gr.II	120
New		UAL	Gr.III	500
New	CNOOC Taizhou	China	Gr.II	600
Closure	Exxon Mobil (Beaumont)	US	Gr.I	-510
-		Saudi Arabia	Gr.II	715
		US	Gr.I (BS)	150
New	VN Oil	Vietnam	Gr.II	50
Closure	Rosneft (Novokuibyshevsk)	Russia	Gr.I	-224
Conversion	(Novokuibyshevsk)	Russia	Gr.II	200
New	Paijin Northern asphalt	China	Naphthanics	300
New	Puralube	Germany	Gr.III	50
Closure	Puralube	Germany	Gr.II	-50
New	Slaveft (Yaroslavl)	Russia	Gr.III	100
Expansion	Neste	Finland	Gr.III	200
New	Petrobras (Comperj)	Brazil	Gr.II	355
	New Closure New Closure New New New Closure New New Closure New New <td< td=""><td>NewSinopec MaomingClosureShandong QuinyuanNewShandong QuinyuanClosureNynasClosureKPCNewAdnoc (Ruwais) Del Adnoc (Ruwais) Del (RowNewAdnoc (Ruwais) Del Adnoc (Ruwais) Del (Rosneft (Beaumont)NewExxon Mobil (Beaumont)NewDelayedLuberef from NewQ1 to 2 Ergon RefiningNewVN OilClosureRosneft (Novokuibyshevsk) Paijin Northern asphaltNewPuralubeNewSlaveft (Yaroslavl)NewSlaveft (Yaroslavl)</td><td>NewSinopec MaomingChinaClosureShandong QuinyuanChinaNewShandong QuinyuanChinaClosureNynasGermanyClosureKPCNetherlandsNewAdnoc (Ruwais)Delayed UAENewAdnoc (Ruwais)Delayed UAENewAdnoc (Ruwais)Delayed UAENewCNOOC TaizhouChinaClosureExxon Mobil (Beaumont)USNewDelayedLuberef from ArabiaSaudi ArabiaNewQ1 to Q3Ergon RefiningUSNewVN OilVietnamClosureRosneft (Novokuibyshevsk)RussiaNewPaijin Northern asphaltChinaNewSlaveft (Yaroslavl)RussiaNewSlaveft (Yaroslavl)RussiaNewSlaveft (Yaroslavl)Finland</td><td>NewSinopec MaomingChinaGr.IIClosureShandong QuinyuanChinaGr.I.+NewShandong QuinyuanChinaGr.I.1ClosureNynasGermanyGr.IClosureKPCNetherlandsGr.INewAdnoc (Ruwais Delayed UAEGr.IIINewAdnoc (Ruwais Delayed UAEGr.IIINewAdnoc (Ruwais Delayed UAEGr.IIINewAdnoc (Ruwais Delayed UAEGr.IIINewCNOOC TaizhouChinaGr.IIINewCNOOC TaizhouChinaGr.IIClosureExxon Mobil (Beaumont)USGr.INewDelayedLuberefSaudi ArabiaGr.IINew01 to Q3Ergon RefiningUSGr.I (BS)NewVN OilVietnamGr.IIClosureRosneft (Novokuibyshevsk)RussiaGr.IINewPaijin Northern asphaltChinaNaphthanicsNewPuralubeGermanyGr.IIINewSlaveft (Yaroslavl)RussiaGr.IIINewSlaveft (Yaroslavl)RussiaGr.IIINewSlaveft (Yaroslavl)RussiaGr.III</td></td<>	NewSinopec MaomingClosureShandong QuinyuanNewShandong QuinyuanClosureNynasClosureKPCNewAdnoc (Ruwais) Del Adnoc (Ruwais) Del (RowNewAdnoc (Ruwais) Del Adnoc (Ruwais) Del (Rosneft (Beaumont)NewExxon Mobil (Beaumont)NewDelayedLuberef from NewQ1 to 2 Ergon RefiningNewVN OilClosureRosneft (Novokuibyshevsk) Paijin Northern asphaltNewPuralubeNewSlaveft (Yaroslavl)NewSlaveft (Yaroslavl)	NewSinopec MaomingChinaClosureShandong QuinyuanChinaNewShandong QuinyuanChinaClosureNynasGermanyClosureKPCNetherlandsNewAdnoc (Ruwais)Delayed UAENewAdnoc (Ruwais)Delayed UAENewAdnoc (Ruwais)Delayed UAENewCNOOC TaizhouChinaClosureExxon Mobil (Beaumont)USNewDelayedLuberef from ArabiaSaudi ArabiaNewQ1 to Q3Ergon RefiningUSNewVN OilVietnamClosureRosneft (Novokuibyshevsk)RussiaNewPaijin Northern asphaltChinaNewSlaveft (Yaroslavl)RussiaNewSlaveft (Yaroslavl)RussiaNewSlaveft (Yaroslavl)Finland	NewSinopec MaomingChinaGr.IIClosureShandong QuinyuanChinaGr.I.+NewShandong QuinyuanChinaGr.I.1ClosureNynasGermanyGr.IClosureKPCNetherlandsGr.INewAdnoc (Ruwais Delayed UAEGr.IIINewAdnoc (Ruwais Delayed UAEGr.IIINewAdnoc (Ruwais Delayed UAEGr.IIINewAdnoc (Ruwais Delayed UAEGr.IIINewCNOOC TaizhouChinaGr.IIINewCNOOC TaizhouChinaGr.IIClosureExxon Mobil (Beaumont)USGr.INewDelayedLuberefSaudi ArabiaGr.IINew01 to Q3Ergon RefiningUSGr.I (BS)NewVN OilVietnamGr.IIClosureRosneft (Novokuibyshevsk)RussiaGr.IINewPaijin Northern asphaltChinaNaphthanicsNewPuralubeGermanyGr.IIINewSlaveft (Yaroslavl)RussiaGr.IIINewSlaveft (Yaroslavl)RussiaGr.IIINewSlaveft (Yaroslavl)RussiaGr.III

Source: Argus Report 2012-2016, ICIS Base Oil London Conference in 2016 and TOP Estimate

Base Oil & Bitumen

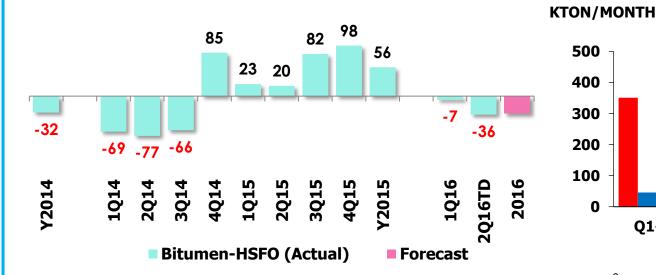
Lower Bitumen Spread in 2H-16

on Lull Seasonal Demand amid High Inventories

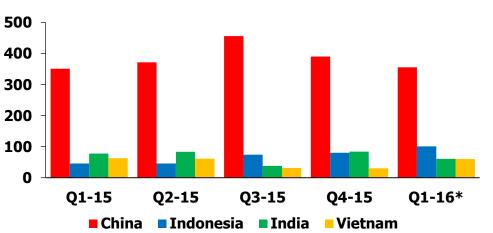


Bitumen Market





Average Import Volume of Major Asian Players



Source: Bitumart Report (2015-2016) *Remarks: YTD2016 as of Jan-16

Bitumen- HSFO 98 56 (7) (36)	Ļ

Remarks: *As of 9 May 16, **Compared to 1H-16

Sources: ICIS Publication, TOP's Estimate

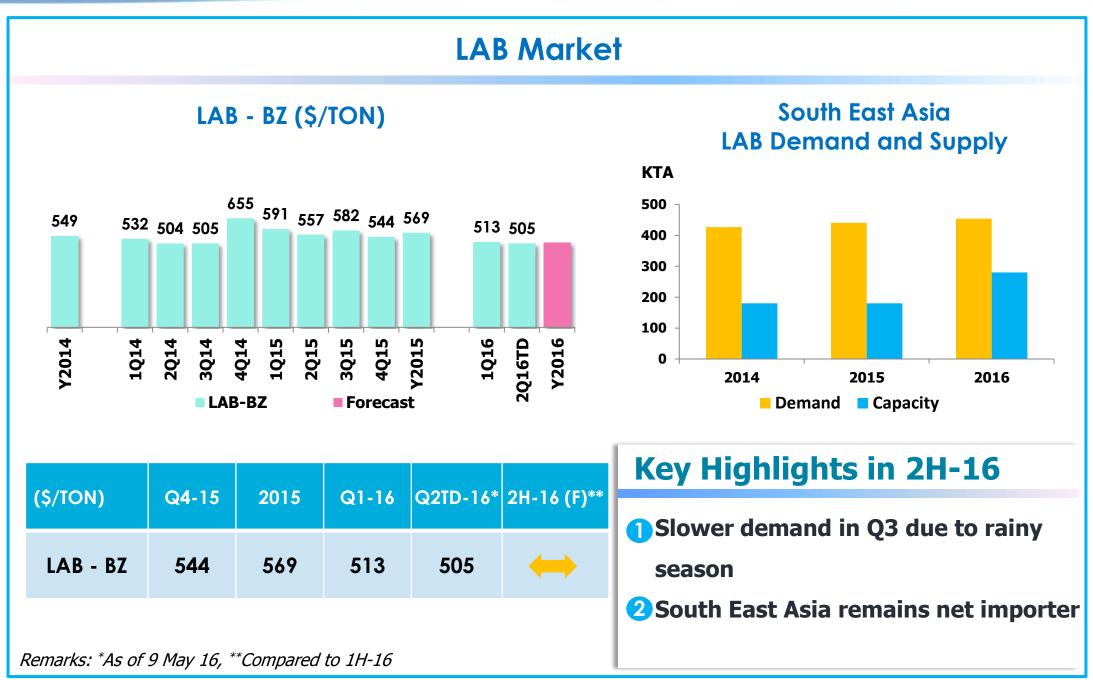
Key Highlights in 2H-16

- Rainy season in Q3 limits paving demand
- Accumulated imports since Q4-15 limit import interest especially from Vietnam and Indonesia





Steady LAB Spread in 2H-16 on Stable LAB market



IN -57-

Group

Thaioil

Source: ICIS Publication (2013-2015), TOP's Estimate



CONCLUSION

-58-

Conclusion

2H-16 Market Outlook Conclusion

Cracks

Refinery

Aromatics

Lube Base

LAB

DETERGENT

(vs. 1H-16)



Slightly softer Aromatics market on new capacity capped by new derivative demand

Soft Base oil spread on new Gr.II Base Oil plants

Soft Bitumen spread pressured by accumulated inventories in Vietnam and Indonesia

Steady LAB Spread on stable LAB market



APPENDIX

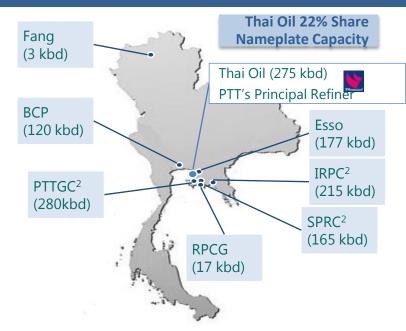
- Q1/16 Performance analysis
- CDU Addition VS Additional Demand AP & ME
- World GRM / Inventories
- Thailand petroleum demand by products

Refining

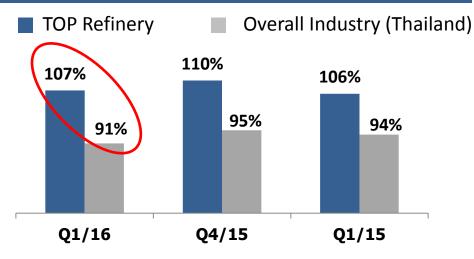
Thailand Leading Refinery : Superior Utilization/ Commercial



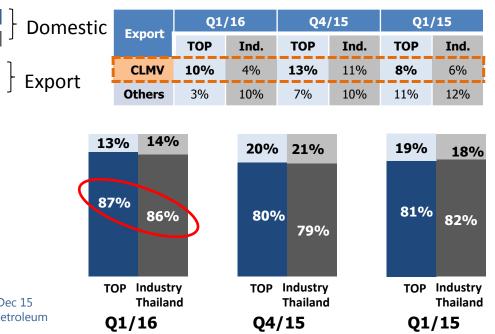
Total Thailand Crude Refining Capacity 1,252 kbd¹



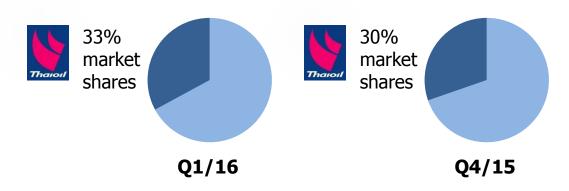
TOP's Refinery Utilization vs. Industry⁴



TOP's Domestic Sale vs Industry⁴



Market Shares for Refined Petroleum Product³



Note: 1. Source: Energy Policy and Planning Office (EPPO), Ministry of Energy Thailand

PTT holds a 38.51% interest in IRPC, a 48.9% interest in PTTGC, and a 5.41% interest in SPRC as at 3 Dec 15
 Calculate by total domestic sales of refined petroleum products of Thai Oil divided by total sales of petroleum

products in Thailand excl LPG as a feedstock and own used. Source from EPPO

4. Source: Department of Energy Business, Ministry of Energy

Refining

Q1/16: Soften GRM Pressured by Declined Middle Distillate



Dubai Crude Price & Key Petroleum Product Spreads										
			20	15	2016	2015				
\$/bbl		Q1	Q2	Q3	Q4	Q1 Q2TD*	FY15			
DUBAI (DB)		51.9	61.3	49.7	40.7	↓ 30.4 39.7	50.9			
ULG95 - DB		15.3	19.8	19.3	18.7	↔18.8 15.3	18.3			
JET - DB		17.1	13.5	10.9	14.1	↓ 11.7 10.4	13.9			
GO - DB		16.3	13.7	10.8	13.8	↓ 9.6 9.1	13.7			
HSFO - DB		(1.8)	(3.5)	(8.1)	(6.5)	▲ (5.2) (8.7)	(5.0)			
Dubai Price (US\$/bbl)	80 - 60 - 40 - 20 -	55 55 46		48 45	35	27 29 ³⁵ ³⁹ ⁴²	* As of 9 May 1			
		Jan Feb Mar		Jul Aug Sep 915	UCT NOV DEC	Jan Feb Mar ^I Apr May 2016				

	(Gross Refinery Margins - GRM								
		2015								
\$/bbl	Q1	Q2	Q 3	Q4	Q1					
Market GRM	8.8	7.4	6.6	8.5	6.1					
Stock G/(L)	(1.5)	2.5	(4.9)	(3.3)	(1.0)					
Accounting GRM	7.3	9.9	1.7	5.2	5.1					

Refinery Utilization							
Q1/16	Q4/15	Q1/15					
107%	110%	106%					

% MB Intake/OSP*							
51%/	50%/	51%/					
3.3	2.0	1.1					

*Murban OSP over Dubai (\$/bbl)

Market GRM Highlight

- Soften middle distillate spread as surplus in market and high inventory
- Higher MB Premium pressured GRM

Performance Highlight

+ **High run at 107% in Q1** to capture domestic market

2015

FY15

7.8

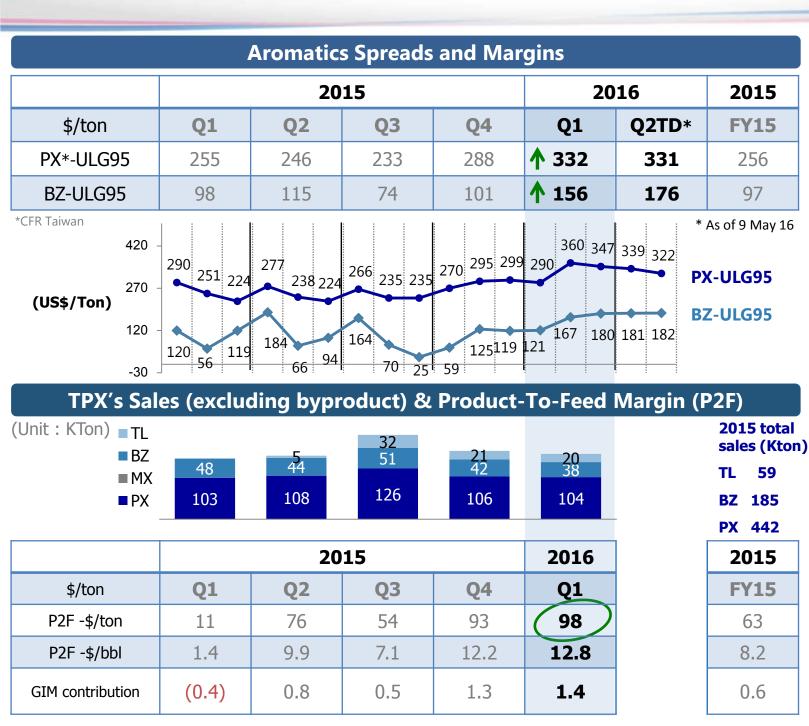
(1.9)

5.9

- + Higher domestic sales of petroleum products at 87% contributed good margins
- + Lower fuel & loss tracking DB price

Q1/16: Higher Margins Supported by Supply Outages





Aromatics Production Q1/16 Q4/15 Q1/15 80% 85% 66%

Market Highlight

+ Improved PX/BZ margins

driven by lower supply as unplanned shut down in China(PX 1.6MTA, BZ 0.5 MTA) & in SG (PX 0.5MTA, BZ 0.6 MTA) and higher demand from new PTA plant in China (2.2MTA) & good SM margins

Performance Highlight

+ **Optimized run between aromatics & refinery** to maximize group margins

+ Improved P2F supported by higher spreads

+ Lower utility cost tracking drop in oil price help further support GIM contribution

Lube Base Oil

64-Q1/16: Lower Base Oil Margins Pressured by Concern on New Supply Theory Group

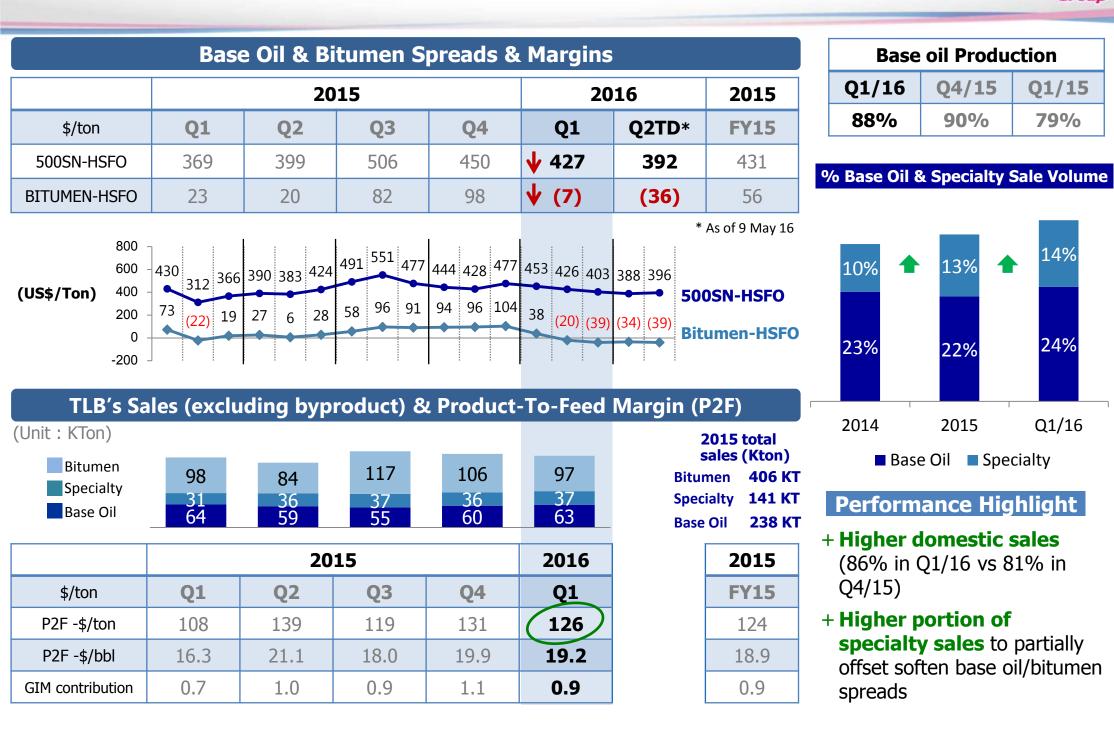
Q1/15

79%

14%

24%

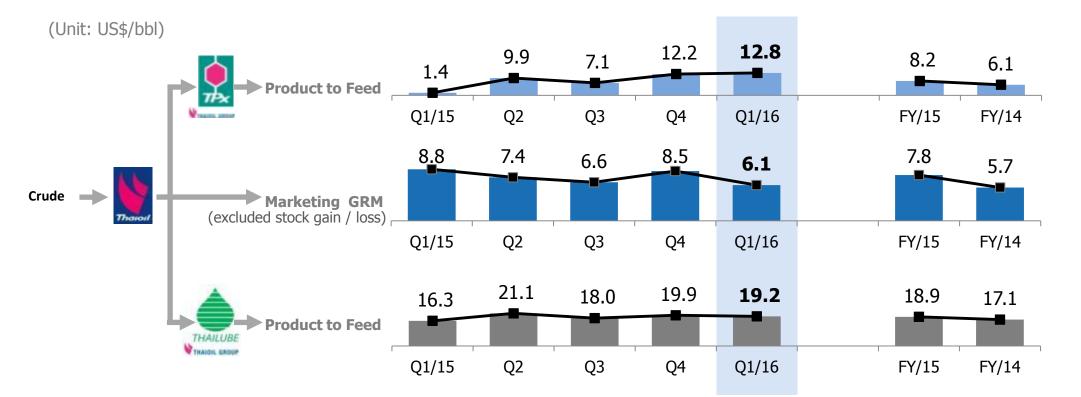
Q1/16

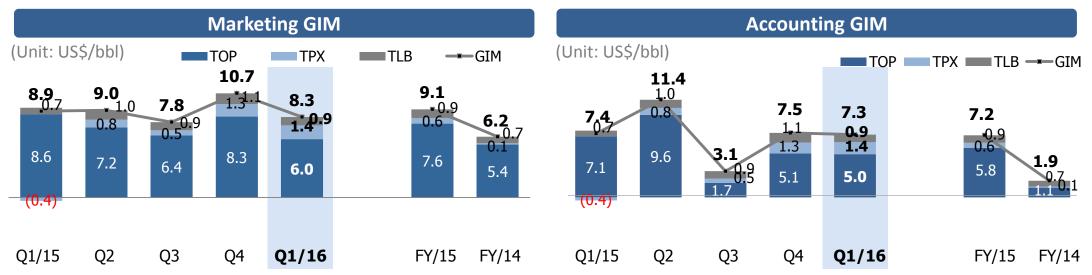


Performance Breakdown

Beauty of Integration...Sustainable GIM

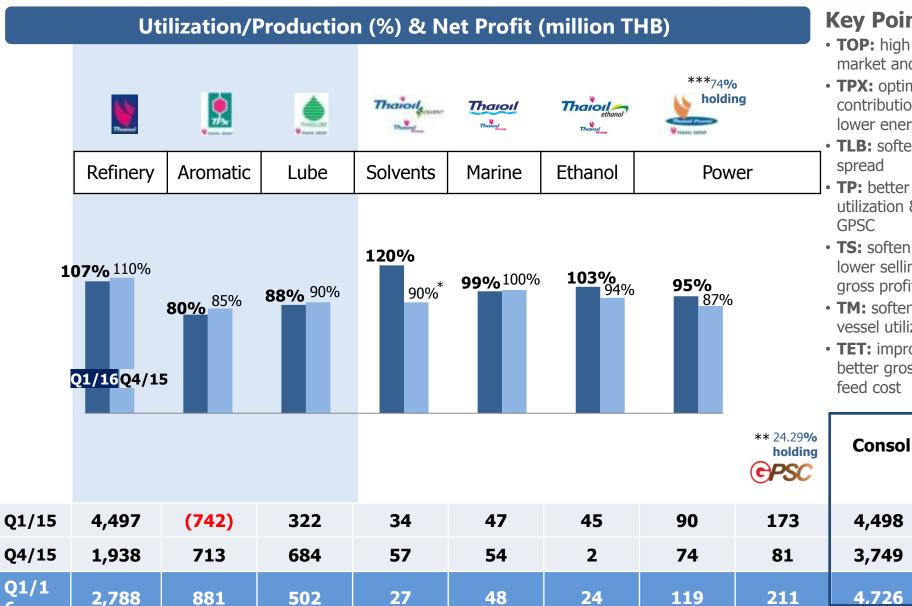






Q1/16: Performance Breakdown





Key Points

- **TOP:** high run to capture domestic market and good GRM
- **TPX:** optimized run and improved contribution from higher spread & lower energy cost
- **TLB:** soften contribution from lower spread
- **TP:** better contribution as higher utilization & more contribution from GPSC
- **TS:** soften contribution pressured by lower selling price per unit & weaken gross profit margin
- TM: soften contribution as lower vessel utilization especially from TMS
- TET: improved production rate and better gross profit margin from lower feed cost

Reversal

of NRV/

999

(4, 166)

(311)

(NRV)

StkG/(L)& Consol Excl

Stock G/(L)

NRV/(NRV)

3,499

7,915

5,037

& Reversal of

*Since Q3/14 onwards, 2014 SAKC capacity = 141 KTA / 2013 SAKC capacity = 76 KTA

6

** Apply on an equity accounted basis in the consolidated financial statement. (GPSC has been held by TOP 8.9% and TP 20.8% since 18 May 15)

***TP performance are based on TOP's equity portion (excluding shares of profit from the investment in GPSC). TOP hold TP 74% since 4 Dec 12

Q1/16 TOP Group Consolidated P&L



(million THB)	<u>Q1/16</u>	<u>Q4/15</u>	<u>QoQ+/(-)</u>	<u>Q1/15</u>	<u>YoY+/(-)</u>
Sales Revenue	56,790	68,446	(11,656)	71,366	(14,576)
Hedging Gain	27	1,053	(1,026)	76	(49)
EBITDA	↑ 6,653	6,348	305	6,209	444
EBITDA excl. Stk G/(L) & Reversal of NRV/(NRV)	6,964	10,514	(3,550)	5,210	1,754
Financial Charges	(805)	(659)	(146)	(956)	151
FX G/(L) & CCS	687	318	369	676	11
(Tax Expense)/Reversal of income tax	(363)	(566)	203	(354)	(9)
Net Profit / (Loss)	↑ 4,726	3,749	977	4,498	228
EPS (THB/Share)	2.32	1.84	0.48	2.20	0.12
Stock G/(L)&Reversal of NRV/(NRV)	(311)	(4,166)	3,855	999	(1,310)
Net Profit/ (Loss) excl. Stk G/(L) and Reversal of NRV/(NRV)	5,037	7,915	(2,878)	3,499	1,538
THB/US\$ - average	35.81	35.99	(0.18)	32.79	3.02
THB/US\$ - ending	35.41	36.25	(0.84)	32.70	2.71
Effective Tax Rate (%) *	7%	13%	(6%)	7%	0%

*redeemed BOI privilege for tax exemption on environmental projects in Q1/16 = 396 MB, Q4/15 = 190 MB, Q1/15 = 716 MB

Q1/16 TOP Group Consolidated Cash Flow



(Unit: Million THB)				(Unit: Million THB)		
Operating Cash Flow				Investments		
	<u>Q1/16</u>	<u>Q1/15</u>			<u>Q1/16</u>	<u>Q1/15</u>
Operating Cash Flow	9,763	9,413		Investments	(18,725)	(7,746)
Net income & non-cash adj.	6,378	4,232	+	ST investments	(16,293)	(5,128)
Change in working capital	3,385	5,181		CAPEX (PP&E) & other	(2,432)	(2,618)
5 5 1		,				
				Financing		
				Financing	(12)	141
Free Creb Flour	(0.063)	1.667		Loans proceeding	1,653	1,721
Free Cash Flow	(8,962)	1,667	+	Loans repayment	(164)	(137)
				Interest	(1,501)	(1,443)
		•				
Beginn	-	Chang		Effect of FCD	Ending	
cash 35,76	35,764 +		4) 🌲	+ (406) =	26,384	
S/T investment 17,36	4	16,29	3 🕇		33,657	
53,12	29				60,041	

Refinery

69-Demand Growth Outpacing Supply Due to Refinery Closures That

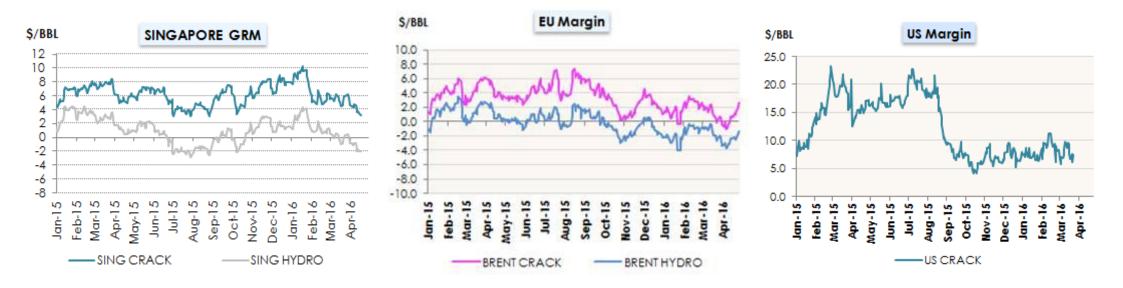
DU Additio	n VS Ac	ditiona	al Dema	and – A	AP & ME	Start-up period)	Country	Nameplate (KBD)	Company
			ME Additional Demand			UAE	417	Ruwais	
Middle East Australia	t			 China Japan Vietnam 		Q2-15	China	70	Local Rizhao Lanqiao
Australia India			-			Q3-15	China	30	Sinopec Jiujang
Other AP			 Net Addition 		Q4-15	China	140	CNOOC/Ningbo Daxie	
(BD						Q1-16	India	300	IOC Paradip
200						Q2-16	China	60	CNOOC Taizhou
							Qatar	136	Ras Laffan
L000							Iran	112	Bandar Abbas - PGSOC/1
800						Q3-16	India	112	BPCL Kochi
600 454			507		479		South Korea	102	Hyundai Lotte
400		282	0			Q4-16	China	260	CNPC/SA Anning
	156	202				Q1-17	China	200	CNOOC Huizhou
200	•			88		Closures			
				•		Q2-15	Australia	-95	BP Bulwer
0						Q4-15	China	-308	Local refineries
-200							Japan	-93	Nansei Sekiyu KK
							Taiwan	-186	CPC Corporation
-400						Q3-16	Japan	-93	Cosmo oil
2015 Note: Adjusted a	2016	2017	2018	2019	2020		Japan	-33	Idemitsu Chiba
(Effective	additional	capacity)	i-op period			Q4-16	China	-374	Local refineries

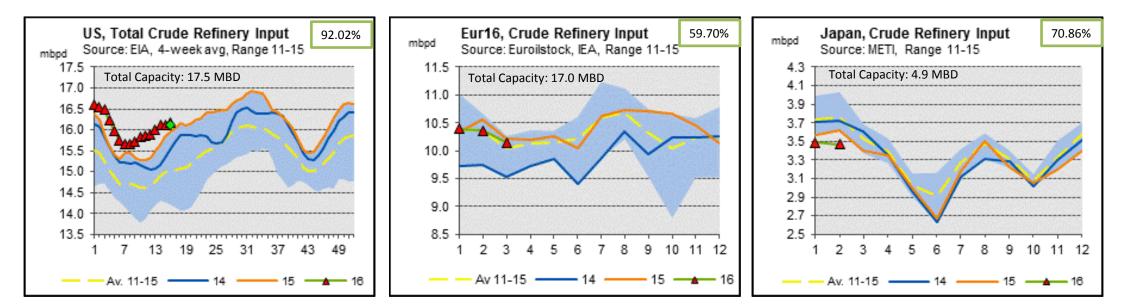
Sources: FACTs Semi Annual Reports, Spring 2016, Reuters, Bloomberg, TOP's estimate

World GRM

Asian Margin Vs. US-EU margin



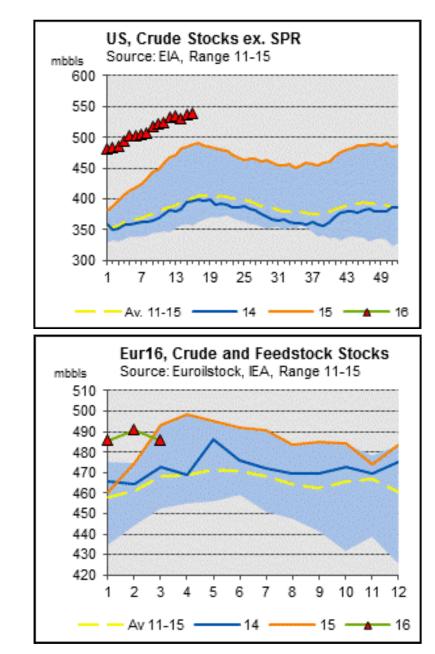


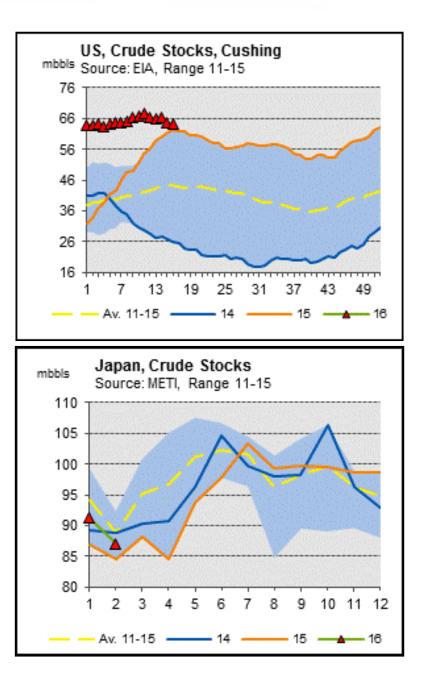


Inventories

Crude Inventory





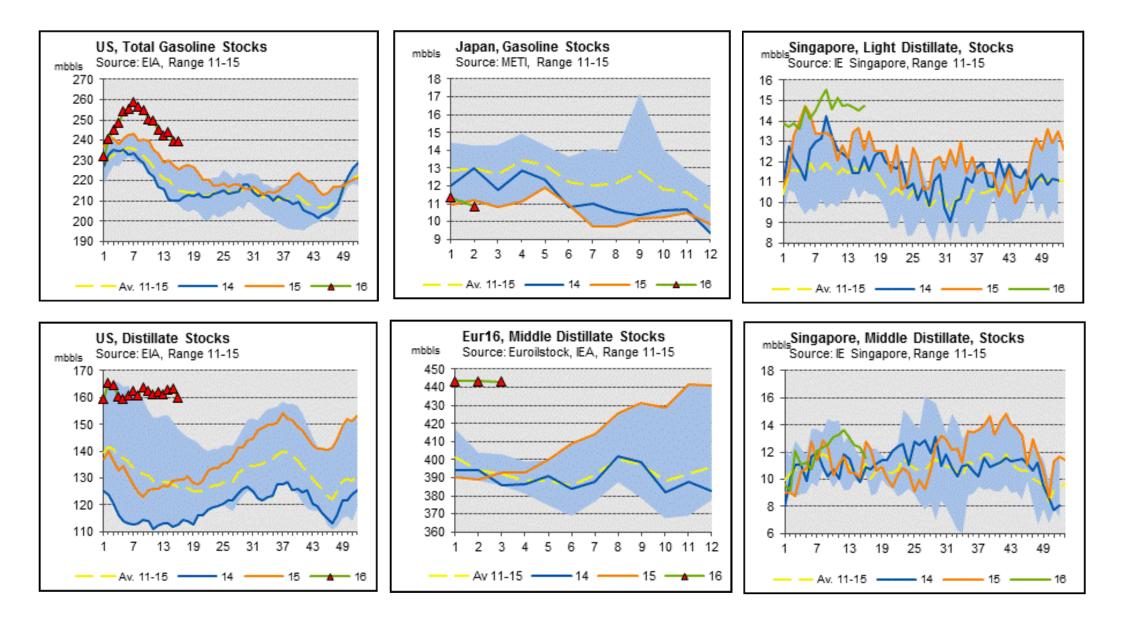


Source: Norwegian Energy

Inventories

Global Distillate Inventory

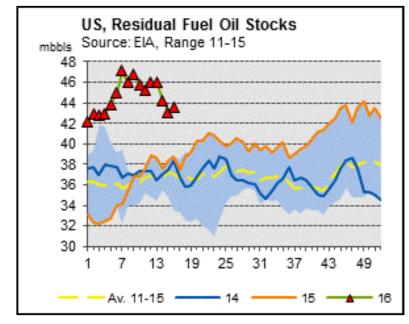


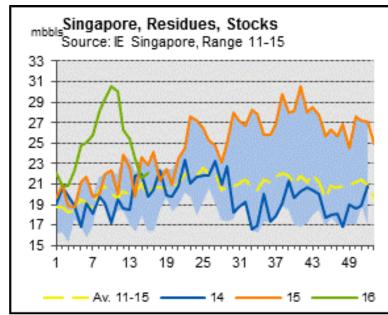


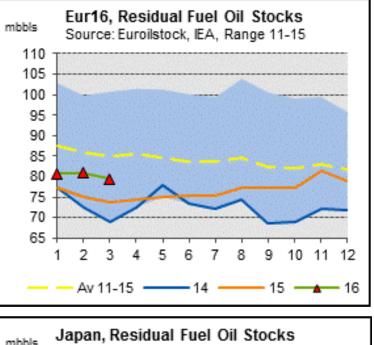
Inventories

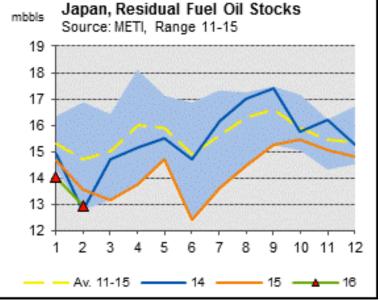
Fuel Oil Inventory









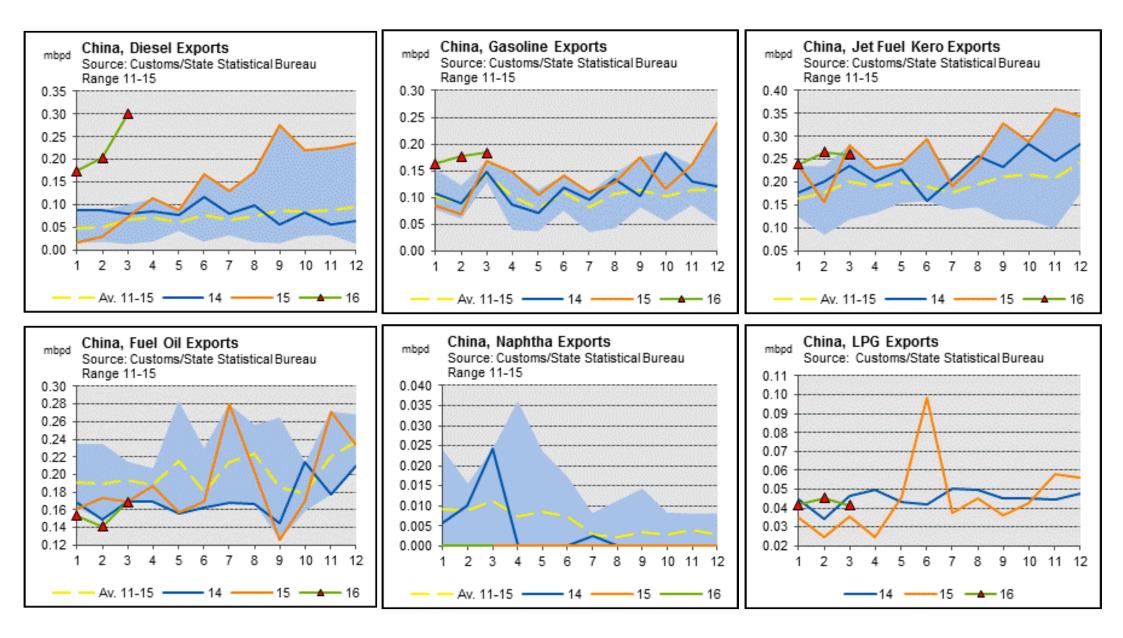


Source: Norwegian Energy

China Export

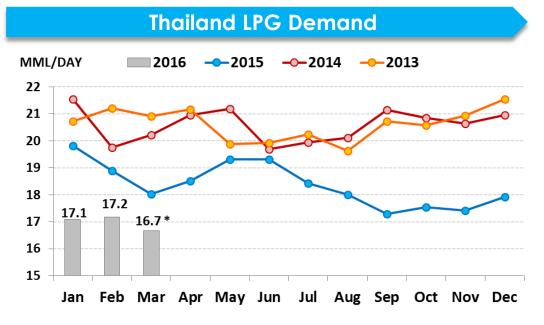
China's Product Export



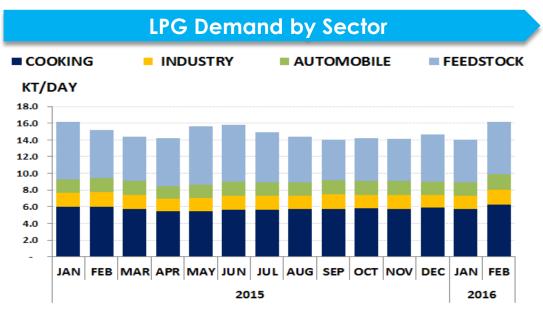


Domestic LPG Demand





Remark : LPG demand includes Petrochemical and own used consumption



LPG Demand Highlight

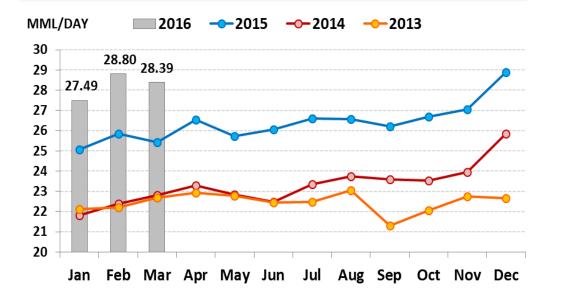
 In Q1/2016, LPG demand fell significantly by 10.3%YoY on account of lower usages in all sectors. Most of the decline came from petrochemical sector which its feedstock switching from LPG to Naphtha leading to 20.9%YoY drop in this sector. Furthermore, LPG demand in automobile fell harshly by 16.2%, as a result of fuel switching from LPG to Mogas due to lower price of Mogas.

Outlook for 2016

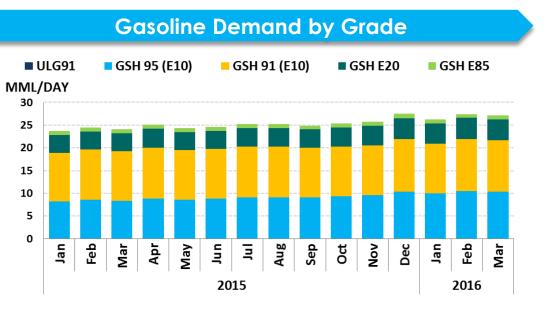
- LPG demand is expected to dropped by 2.9% YoY pressured by the expectation of more fuel switching from LPG to Mogas, due to low oil price.
- However, the slowdown of LPG demand was expected to be limited by higher usage in industry sector as lower price compared to previous year.

Domestic Gasoline Demand





Thailand Gasoline Demand



GASOLINE Demand Highlight

- In Q1/2016, Mogas demand jumped sharply by 11.0%YoY to an average 28.22 mml/day. This was mainly due to lower retail prices and higher number of passenger cars since the end of the last year, as a result of avoiding new tax implementation. In fact, the gasohol portion increase significantly to 95.3% of total gasoline as a result of lower proportion of ULG95 from 5.4% to 4.7%, according to more attractive price gap of ULG95 and GSH.
- The level of domestic ethanol demand, in Jan-16, rose significantly by 8.7% YoY from 3.46 mml/day to 3.76 mml/day following the rising of Mogas demand. Additionally, this was also because of higher demand in GSH-91, GSH-95, and E20 backed by increasing in the number of new registered personal car and E20 gas station.

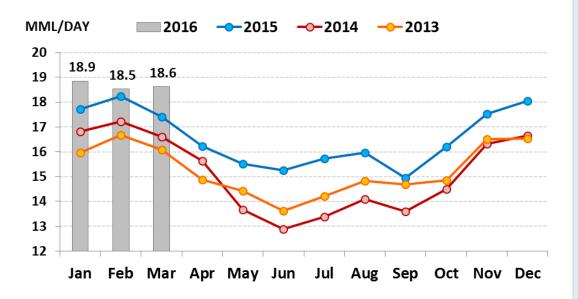
Outlook for 2016

Mogas consumption is predicted to grow by 7.1%
 YoY supported by low level of retail price, higher passenger cars and Thai economic recovery.

Domestic Jet Demand



Thailand JET-A1 Demand



JET-A1 demand and # of flights

Relationship between aircraft movement and JP-1 demand

600 72,000 550 68,000 500 64,000 450 60,000 month # of aircraft 400 56,000 350 / mm 52,000 Flights (lhs) 300 48,000 JP 1 Demand 44,000 250 Jan NoV Mar Ň Mav 2013 2014 2015 2016

JET Demand Highlight

 In Q1/2016, Jet consumption increased significantly by 5.0% over the corresponding period last year mainly owning to booming tourism industry. The expansion in tourism sector was a result of the 31.2%YoY and 8.6%YoY increasing number of Chinese and European tourists, pushing the number of flight movements higher both international and domestic aircrafts.

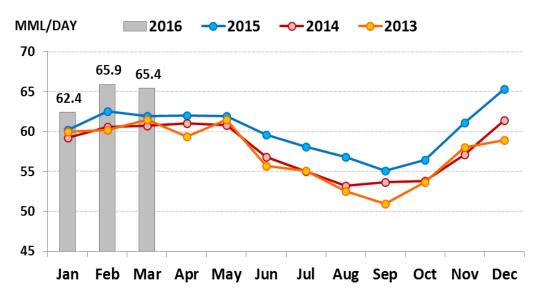
Outlook for 2016

• Jet demand growth is expected to grow by 4.4%YoY as a result of rapid tourist number growth, especially from China and ASEAN.

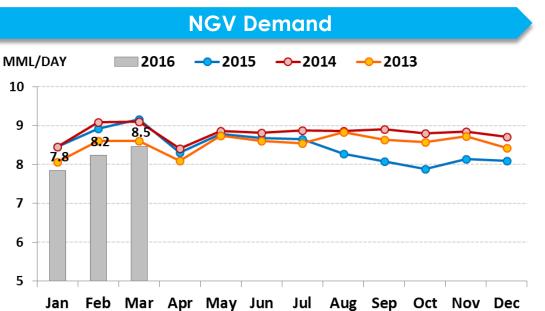
Source: DOEB, AOT, Department of Tourism (As of May 2016)

Domestic Gasoil and NGV Demand





Thailand Gasoil Demand



Diesel Demand Highlight

In Q1/2016, Diesel demand rose gradually by 4.9% YoY as relatively low retail prices boosted the consumption amidst higher number of accumulated commercial vehicles. Nevertheless, demand growth was curbed by the lowest level of export activity, as a result of decelerated global economy.

Outlook for 2016

 Diesel demand in 2016 is expected to expand by 2.2% YoY supported by reducing retail price and Thailand economic improvement.

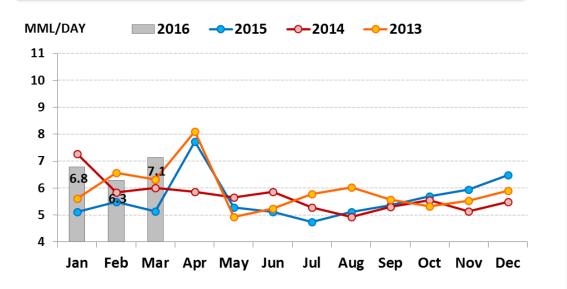
NGV Demand Highlight

 In Q1/2016, NGV demand declined significantly by 7.5%YoY. This was mainly because of higher NGV retail price, which has increased to hit the record high at 13.5 baht/kg, and lower oil prices which reduced the fuel switching from old cars.

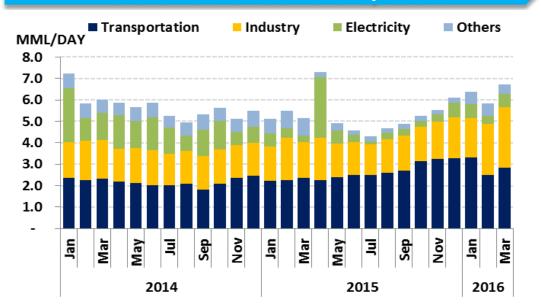
Domestic Fuel Oil Demand



Thailand Fuel Oil Demand



Thailand Fuel Oil Demand by Sector



FUEL OIL Demand Highlight

 In Q1/2016, Fuel Oil consumption jumped rapidly by 28.8%YoY, as a result of sharply increase by 27.3%YoY in transportation demand. Last year, transport activity in Thai fishery was pressured by EU warning of the concerning in illegal, unreported and unregulated fishing (IUU) of Thai seafood industry. Furthermore, the demand in industrial sector also increased by 35.0%YoY, as a result of lower price of fuel oil.

Outlook for 2016

• Fuel oil demand is expected to rise by 14.7%YoY, as a result of higher transportation sector from lower price and reviving in industrial sector.

Source: DOEB (As of May 2016)



Thank You

Any queries, please contact:



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