



# Public Company Limited

**Opportunity Day**

**5 March 2014**



**IRPC  
World**

*The 4 great business'...  
Leading to sustainable success*

# Disclaimer

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# Agenda



- I. IRPC in Brief**
- II. 2013 Highlights
- III. Operation & Financial Performance
- IV. Industry Outlook
- V. Strategic Direction

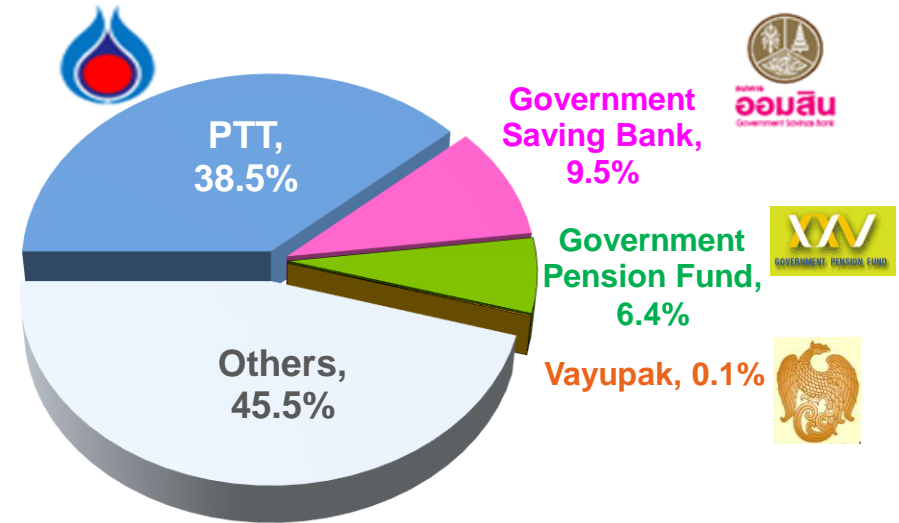
# Introduction to IRPC

## Company Profile

- |      |  |
|------|--|
| 1978 | <ul style="list-style-type: none"> <li>Incorporated as TPI with initial paid-up capital of THB 300 million</li> </ul>  |
| 1995 | <ul style="list-style-type: none"> <li>Listed on SET following an IPO, raising \$367 million</li> </ul>  |
| 1997 | <ul style="list-style-type: none"> <li>Asian crisis began and declaration a debt moratorium</li> </ul>   |
| 2005 | <ul style="list-style-type: none"> <li>Successfully recapitalized and 61.5% of stake were taken by MOF through PTT and other government-related bodies</li> </ul>  |
| 2006 | <ul style="list-style-type: none"> <li>Exited from the rehabilitation in April 2006</li> </ul>   |
| 2013 | <ul style="list-style-type: none"> <li>Registered Capital: 20,475 million shares</li> <li>Paid-up Capital: 20,434 million shares</li> <li>Foreign Limit &lt;=49%</li> <li>Dividend Policy &gt;= 25%</li> <li>Market Cap. THB 66.02 billion (Ranked 38<sup>th</sup>)</li> </ul> |

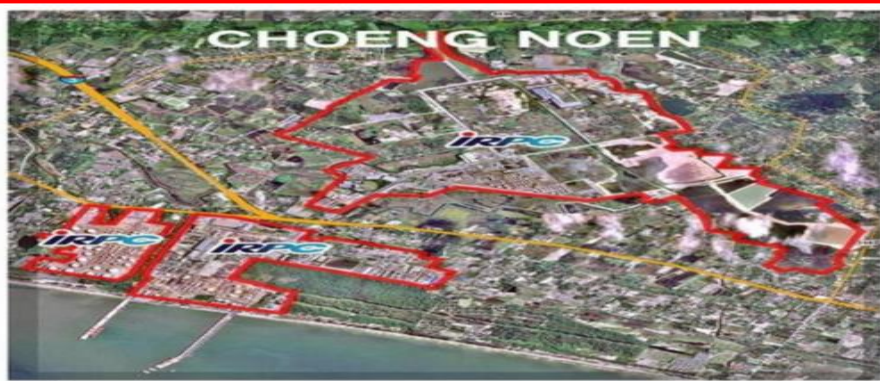
As of 20 February 2014

## Shareholding Structure



As of 6 March 2013





## IRPC Strategic Location



- Fully integrated from upstream to downstream in a single complex
- In the Eastern Seaboard Area of Thailand, 200 Km. from Bangkok and 30 Km. from Map Ta Phut
- Proximity to various transportation routes
  - Deepest sea port in Thailand
  - Major coastal highway (Sukhumvit Road)

# Current Key Assets and Their Contributions

Average net sales 2011 - 2013: THB 267,835 Million

		Revenue/ EBITDA/Asset*	
<b>Refinery</b>		77% 52% 42%	<ul style="list-style-type: none"> <li>Capacity 215 KBD, Thailand 3rd largest oil refinery</li> <li>The largest lube base oils and asphalt production in Thailand with 320 KTA</li> </ul>
<b>Petrochemical</b>		21% 22% 40%	<ul style="list-style-type: none"> <li>Consist of upstream through downstream products:                             <ul style="list-style-type: none"> <li>Olefins: HDPE, PP</li> <li>Styrenics: ABS, PS, EPS</li> <li>Aromatic: Toluene, Mix-xylenes, Benzene</li> </ul> </li> </ul>
<b>Deep Sea Port</b>		0.5% 4% 8%	<p><b>Deep Sea Port</b></p> <ul style="list-style-type: none"> <li>The deepest sea port in Thailand with 2 Jetties: liquid and dry port</li> <li>Accommodate Very Large Crude Carriers (“VLCC”) up to 250 Kdwt</li> </ul> <p><b>Tank farm (299 tanks)</b></p> <ul style="list-style-type: none"> <li>Chemical 140 million liter / Petroleum 2,000 million liter/ Lube Base Oil 300 million liter</li> </ul>
<b>Asset Management</b>		1.5% 22% 10%	<p><b>Power Plant</b></p> <ul style="list-style-type: none"> <li>New 220 Megawatts gas-fired power plant to reduce environmental impact to community</li> <li>Existing 108 Megawatts coal &amp; gas-fired power plant</li> <li>Supply both steam and electricity</li> </ul> <p><b>Land &amp; Estate</b></p> <ul style="list-style-type: none"> <li>Rayong 12,202 Rai / Others 3,559 Rai</li> </ul>

\* Average year 2011 - 2013

# Refinery and Petrochemical Complexes

## CORE BUSINESS

### Refinery



- Crude Distillation Unit 215 KBD
- Reformer 14.4 KBD
- Hydro desulfurizer 24.9 KBD
- Lube Base Unit 33 KBD
- Deep Catalytic Cracking 18 KBD

### Petrochemical



- Propylene 412 KTA
- Ethylene 360 KTA
- ABS/SAN 177 KTA
- PS 100 KTA
- EPS 30 KTA
- HDPE 140 KTA
- PP 475 KTA

## INFRASTRUCTURE

### Utilities



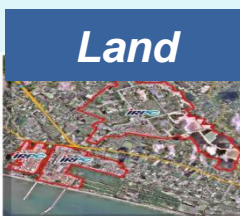
- Power Plant
  - Electricity 342 MW
  - Steam 620 T/hr
- Demin. Water 1,050 m3/hr
- Water Filtration 4,000 m3/hr
- Nitrogen 15,000 Nm3/hr
- Compressed Air 68,450 Nm3/hr

### Port



- Bulk & Container Port 100,000 DWT
- Liquid & Chemical Port 250,000 DWT

### Land



- Total ~ 12,000 rai (4,700 acre)
- Available for sale ~ 7,000 rai (2,700 acre)

### Tank



- Chemical 140 mio.L
- Petroleum 2,000 mio.L
- Lube Base Oil 300 mio.L

## INDIRECT SUPPORT



### IRPC Technological College

- 2,000 Students

# Ideal Assets for Adjacent Business: Land & Port

**5**

**Non-core  
IRPC / IRPC OIL**




**6**

**Others:  
Land, Port & Tank  
*outside Rayong***  
168 rai (66 acre)




**1**

**Eco Industrial Zone**  
(EIZ) 6,062 rai (2,396 acre)  
EIZ 1 ~ 817 rai (323 acre)  
EIZ 2 ~ 530 rai (209 acre)  
EIZ 3 ~ 609 rai (241 acre)  
EIZ 4 ~ 4,106 rai (1,623 acre)



**2**

**Ban Khai  
Rayong**  
2,207 rai (873 acre)



**3**

**Wang Chan  
Rayong**  
565 rai (223 acre)



**4**

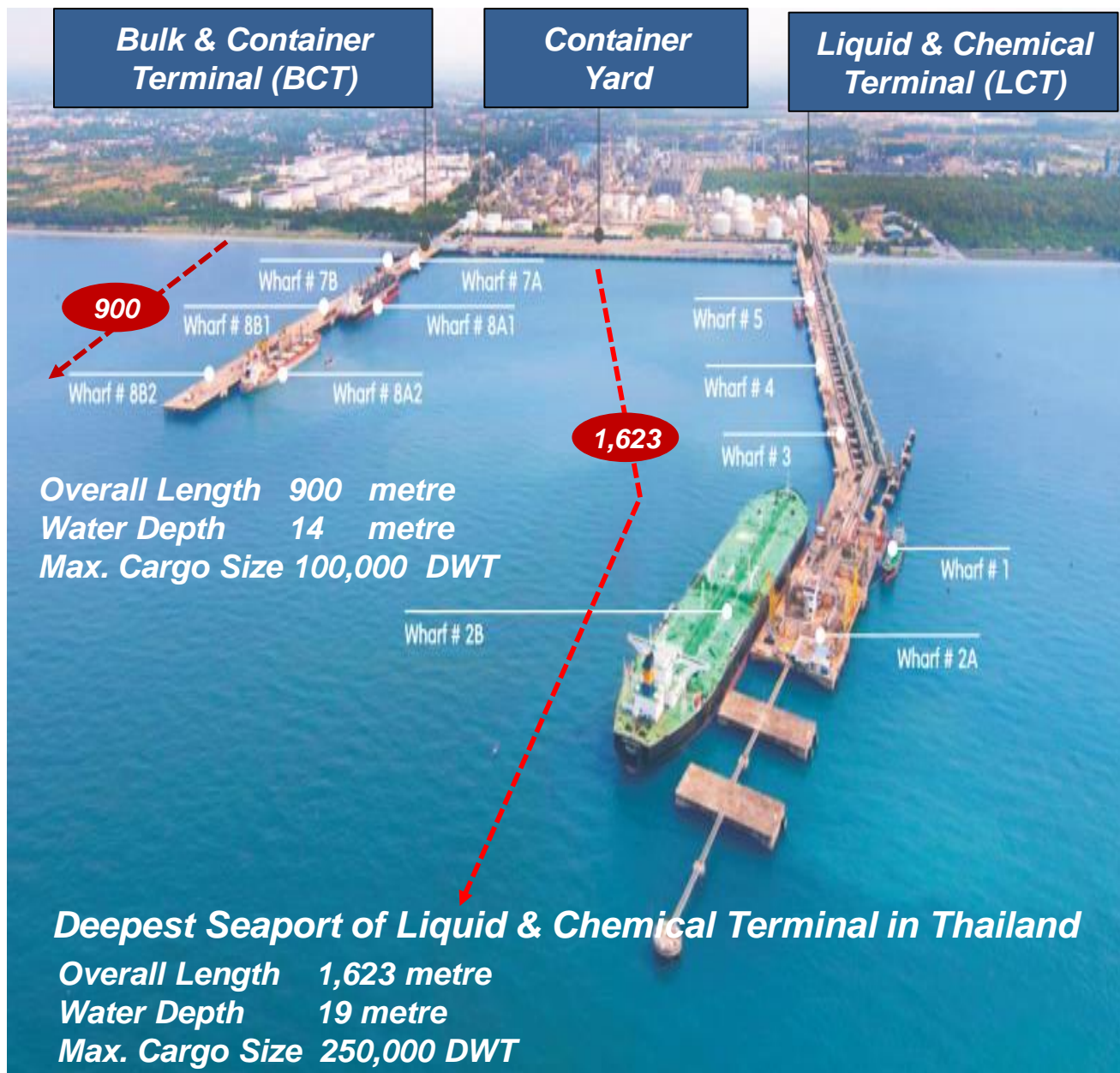
**Jana  
Songkla**  
2,569 rai (1,016 acre)



**Total ~ 12,000 rai**

Conversion ratio 2.529 rai : 1 acre

# Ideal Assets for Adjacent Business: Land & Port



**Bulk & Container Terminal (BCT)**

**Container Yard**

**Liquid & Chemical Terminal (LCT)**

Wharf # 882, Wharf # 881, Wharf # 7B, Wharf # 7A, Wharf # 8A2, Wharf # 8A1, Wharf # 5, Wharf # 4, Wharf # 3, Wharf # 1, Wharf # 2A, Wharf # 2B

**900**

**1,623**

**Overall Length 900 metre**  
**Water Depth 14 metre**  
**Max. Cargo Size 100,000 DWT**

**Deepest Seaport of Liquid & Chemical Terminal in Thailand**

**Overall Length 1,623 metre**  
**Water Depth 19 metre**  
**Max. Cargo Size 250,000 DWT**

## Tank Rental Service (299 tanks)

### 1 Rayong depot (257)



### 2 Ayutthaya Depot (23)



### 3 Prapadang Depot (14)



### 4 Chumphon Depot (5)



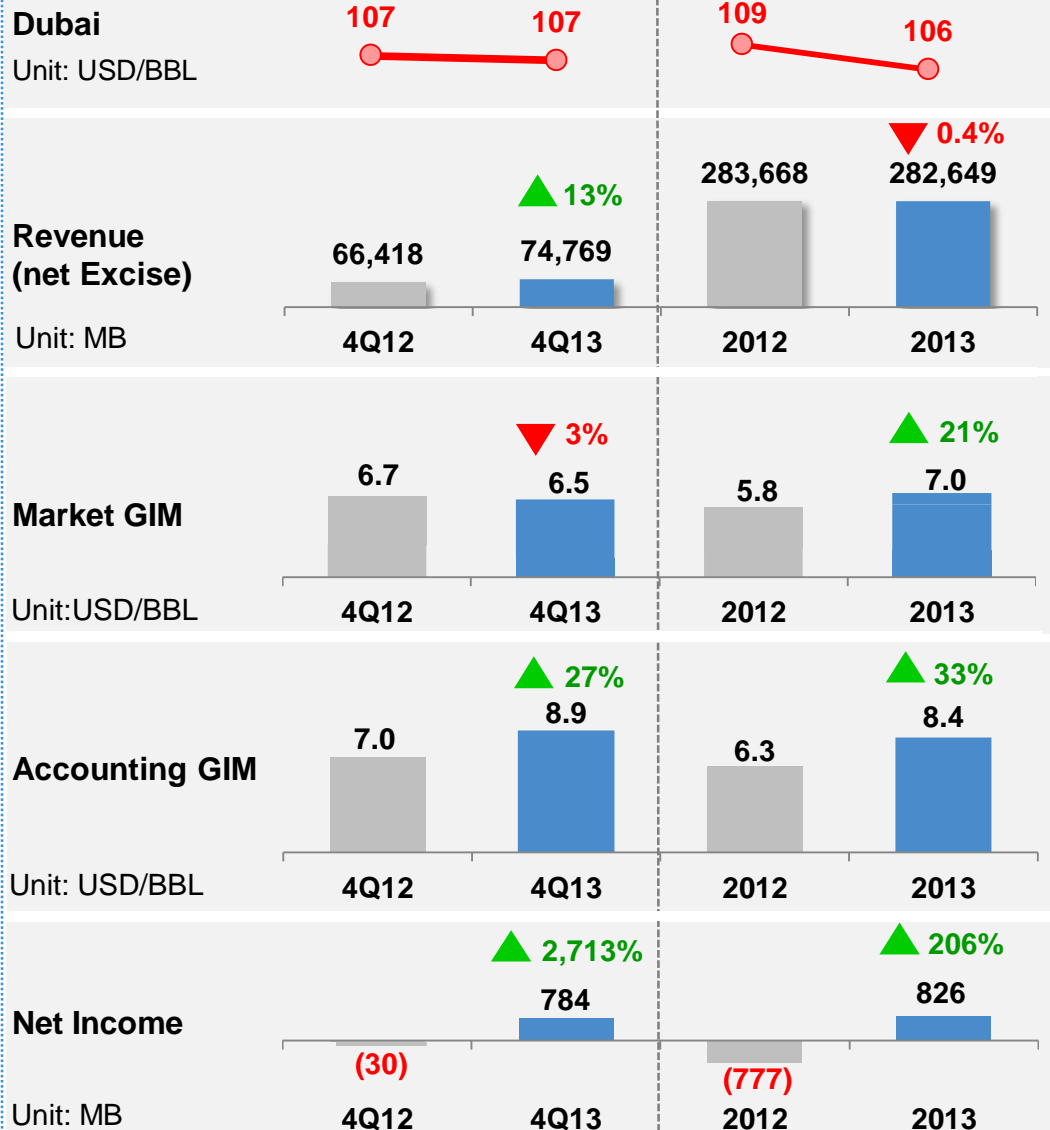


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## Overview of Business



1. In 2013, average Dubai price dropped to \$106/bbl from \$109/bbl in 2012 largely influenced by US budget and debt ceiling battle, Shale Oil production, and easing of geopolitical tensions.

2. Net sales were 282,649 MB, slightly declining from 2012, by 0.4%, due to a decrease of 6.7% in the product prices and an increase of 6.3% in the sales volume.

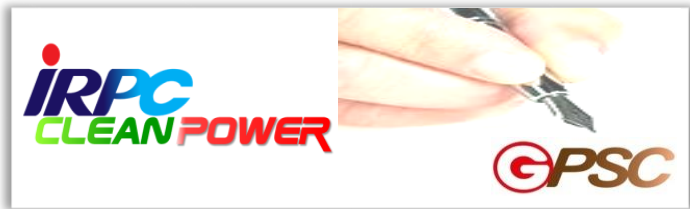
3. The Market GIM was \$7.0/bbl increasing from \$5.8/bbl in 2012 caused by the use of domestic crude and better petrochemical product spreads.

The Accounting GIM in 2013 rose to \$8.4/bbl from \$6.3/bbl in 2012.

4. Net profit was 826 MB in 2013, compared to net losses of 777 MB in 2012.

# 2013 Highlights

## Asset Utilization Enhancement

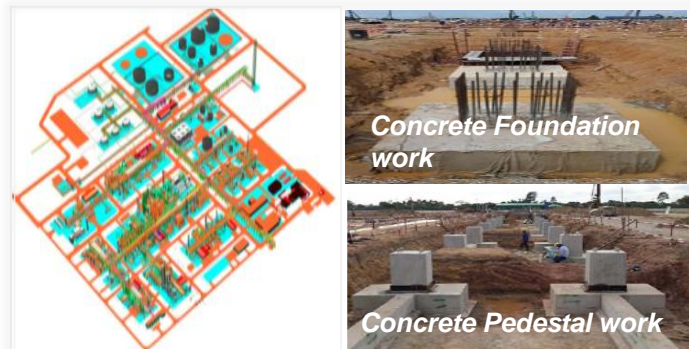


1. In November 2013, ~ 3,312 Rai of land located in Wang Chan district, Rayong province was sold for 596 MB.
2. In December 2013, 51% of total share in IRPC Clean Power Company Limited was purchased by Global Power Synergy Company Limited for 709 MB.

## Projects

### UHV Project

Progress: 52% Under construction,  
piling and foundation



1. As of 31 December 2013, 59% overall progress of Phoenix Projects
2. UHV: 52%; Construction phase started; COD expected in 3Q15



# Outstanding Achievement in 2013

## Operation



- Continuously implemented **Zero Unplanned Shutdown” & “Operational Excellence”** program with collaboration in PTT Group
- Increased plants efficiency & no serious injures throughout the year 2013
- Developed **BHD**, a premium-grade bio-diesel
- Installed Mercury Removal Unit, enable IRPC to process higher mercury crude
- Managed Hydrocarbon Loss: Save 594 MB per year from hydrocarbon loss dropping from 0.86% to 0.53%

## Marketing



- Penetrated into **ASEAN** market to get ready for AEC
- Increased sales to ASEAN countries from 15% in 2012 to 20% in 2013
- Expanded **“IRON System”** to more than 80% of customers to improve customer ordering system
- Collaborated with financial institutions to implement **“E-Supply Chain”**, reducing risk of payment error from customers

## Investment



- **Multi Product Pipeline** (Diesel 10KBD, Jet 15KBD) between PTTGC and IRPC allowed the two companies to exchange streams to create more synergy.
- EBSM Upgrading for **ABS Specialties** project increased production capacity of styrene monomer (SM) from 200 KTA to 260 KTA.
- Oil Depot and Lube Blending expansion increased **lube blending capacity** from 1 million litres/month to 6 million litres/month.

## Innovation



- More than **160** of innovation works in 2013. Here is just few examples of our unlimited creativities.
- |  |  |
|--|--|
| 1) PE Compound for “Geo-membrane”                  | 7) Wood Plastic Composite (WPC)  |
| 2) PP for High Speed Raffia                        | 8) Advanced HA2PO Catalyst for Ultra High Molecular Weight Polyethylene (UHMWPE) Production    |
| 3) PP Compound for Synthetic Rattan Fire Retardant | 9) Anti-dripping genX (non PFOA) graft latex   |
| 4) Low Gas Emission Reinforcement PP               | 10) High gloss stability by using EBS in HG730 to increase process ability and gloss stability |
| 5) Halogen Free HIPS/PP for Electronic Application | 11) High stiffness and high clarify PP Extrusion PP 1150H                                      |
| 6) Polyethylene Catalyst Development               | 12) High flow high clarify Random Polypropylene 3342S  |

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II. 2013 Highlights

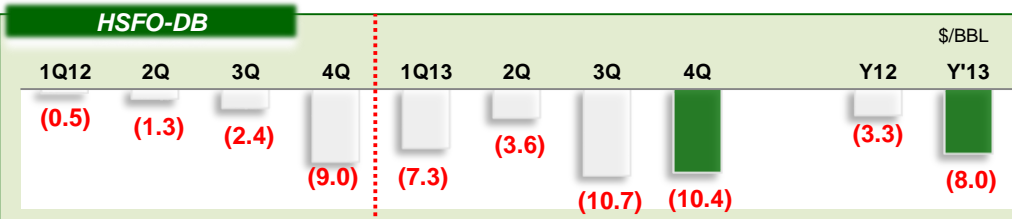
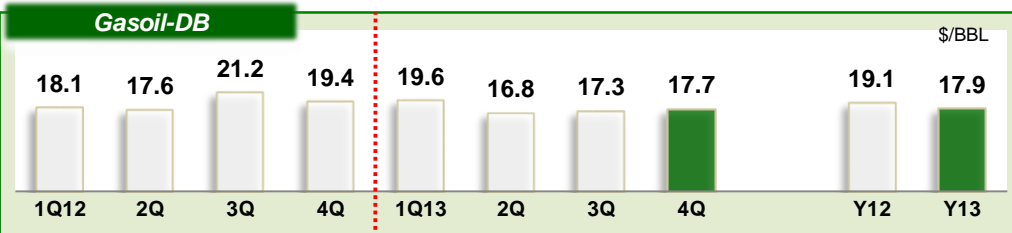
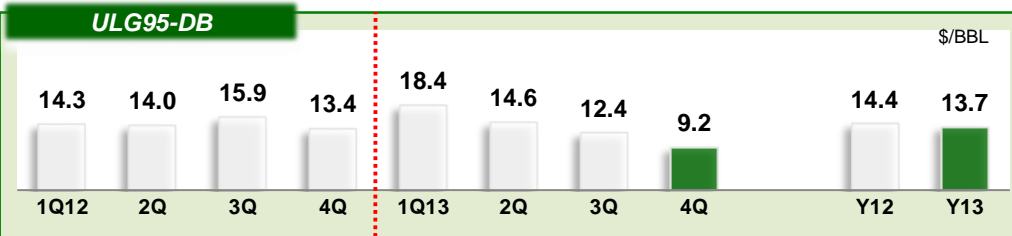
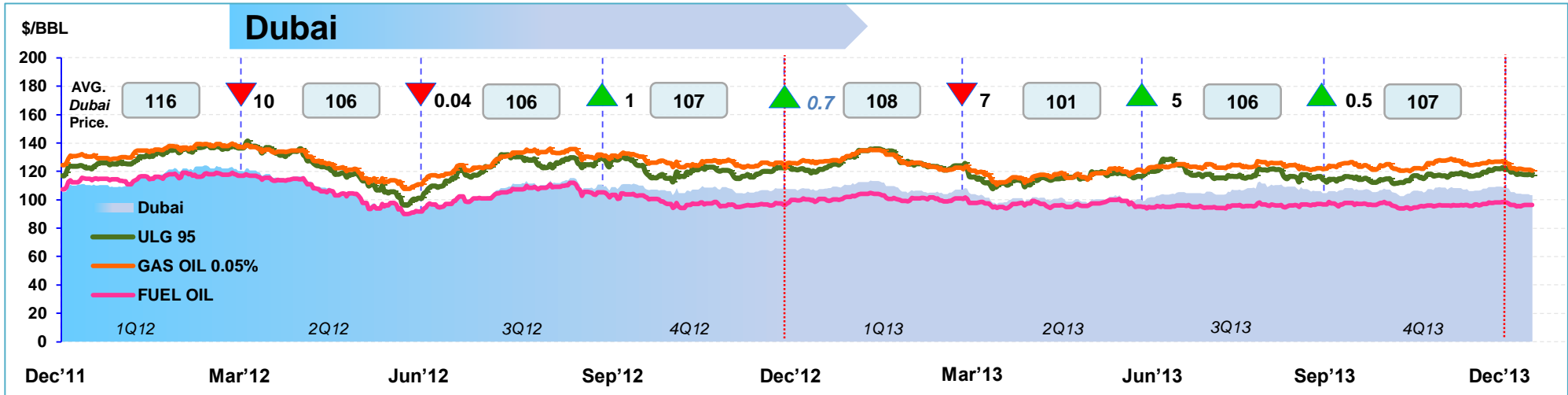


**III. Operation & Financial Performance**

IV. Industry Outlook

V. Strategic Direction

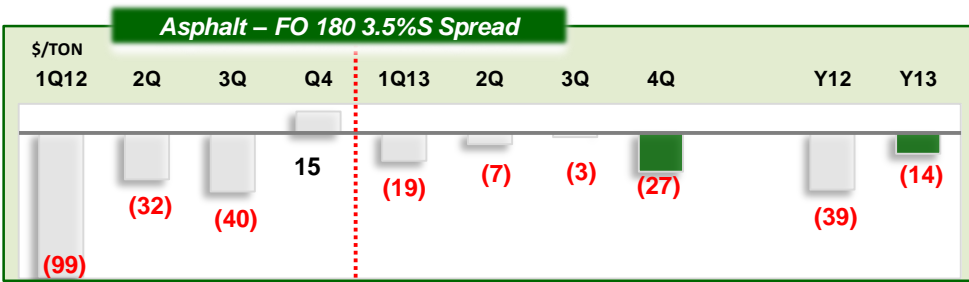
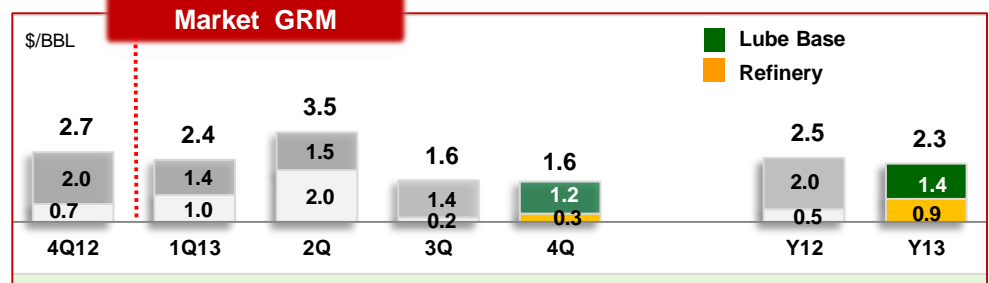
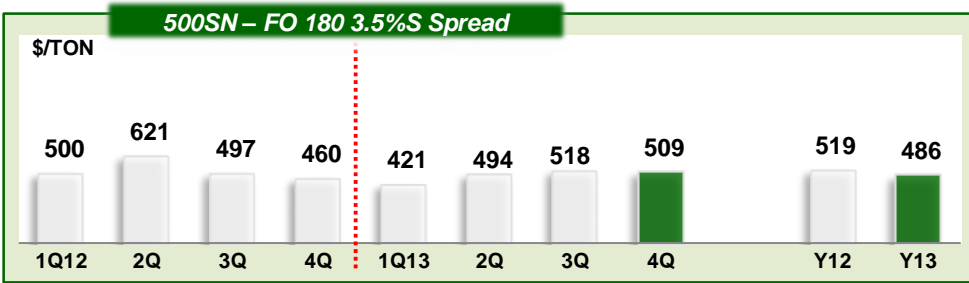
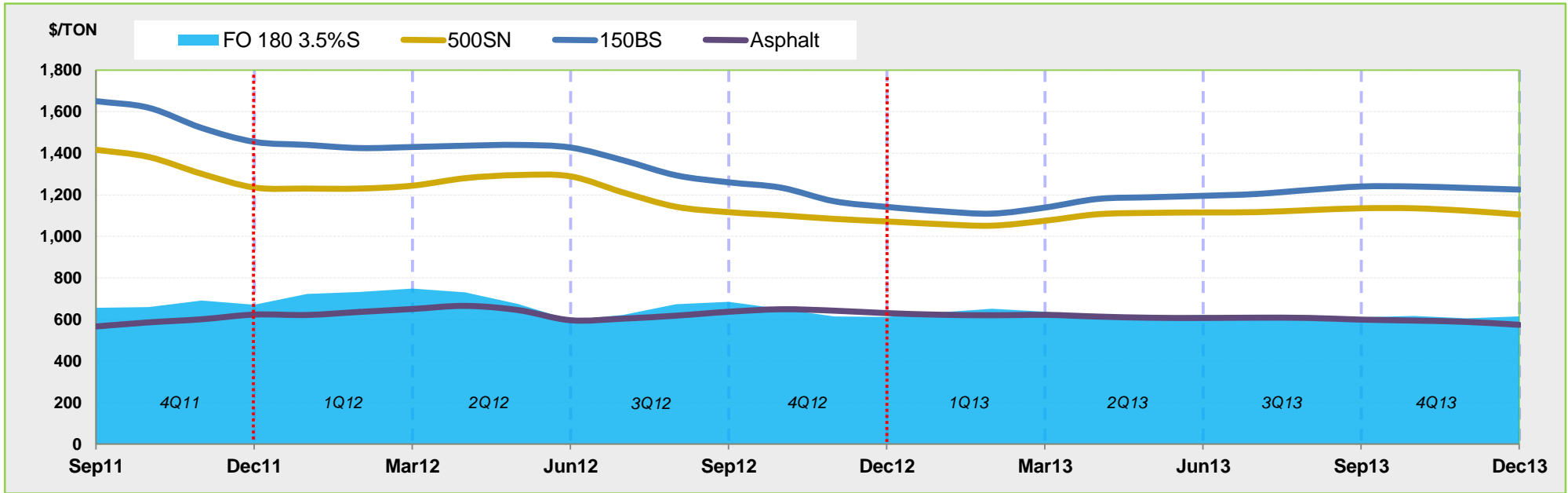
# Mixed Performance of Petroleum Spread



- Crude oil price was relatively elevated in 4Q13 supported by decline in the US crude inventory, extended political turmoil, but faced downward pressure from QE3 tapering.
- ULG spread declined because of weaker demand from Indonesia and Vietnam, and an increase in the supply from refineries in Taiwan and China.
- Gasoil spread rose from the previous quarter due to a rise in the seasonal demand from Asia, ME and Africa combined with a decline in the exports from India due to the unplanned shutdown.
- FO spread remained unfavorable since the demand from marine logistic sector continued to be weak.

Note: Starting Jan-13 onward Gas oil 0.05% is used instead of Gas oil 0.5%.  
For comparison purpose, historical data is re-stated based on Gas oil 0.05%

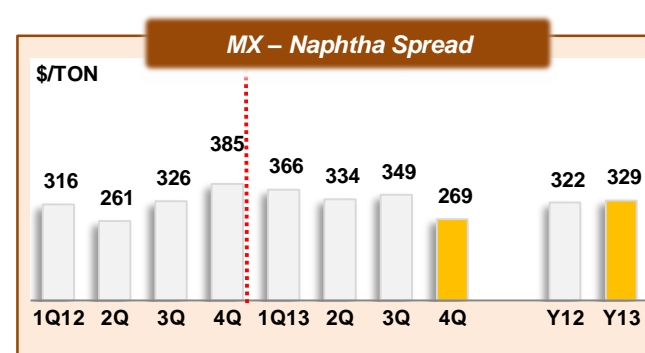
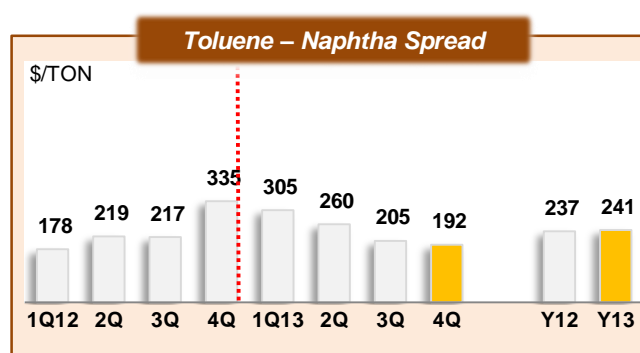
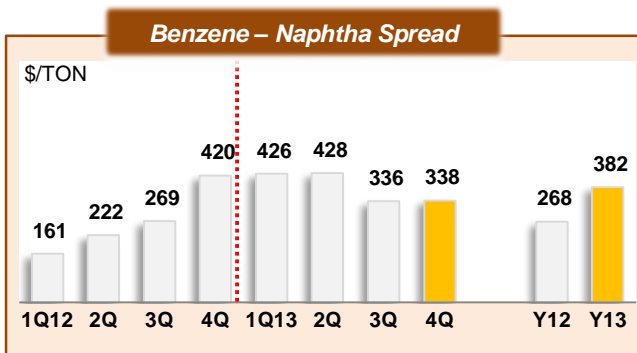
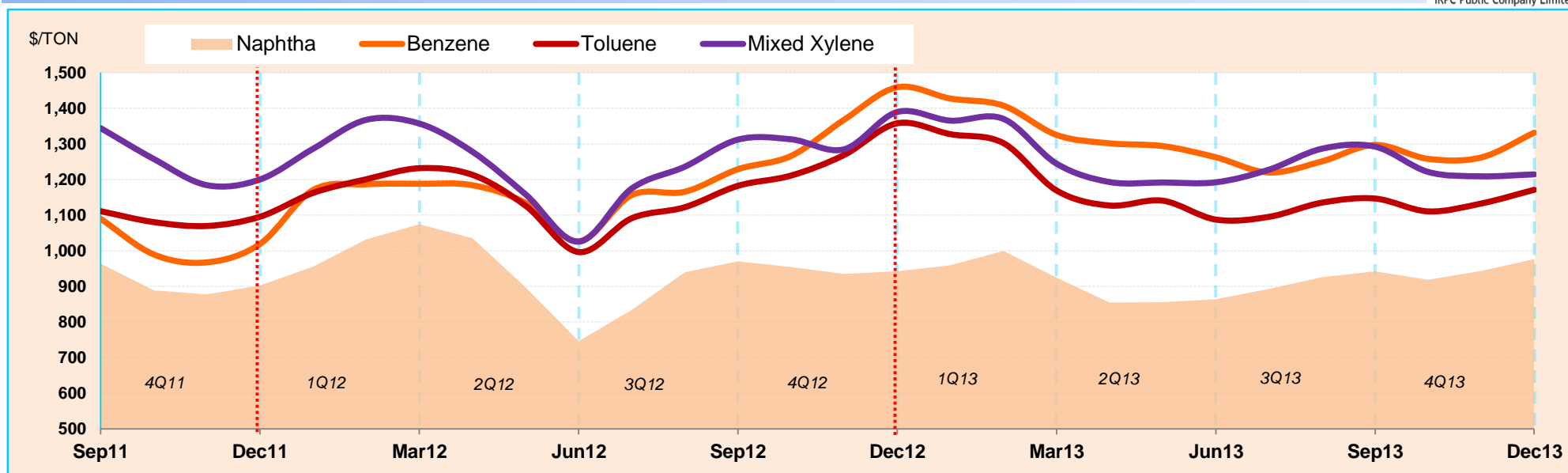
# Sliding Lube Base Oil Spreads



- Lube base oil spread was stable as the demand was seasonally sluggish towards the end of year. Moreover, there was an increase in the export of from Russia to Asia.
- Asphalt spread declined significantly because of a demand decrease from Indonesia, Malaysia, and Vietnam.

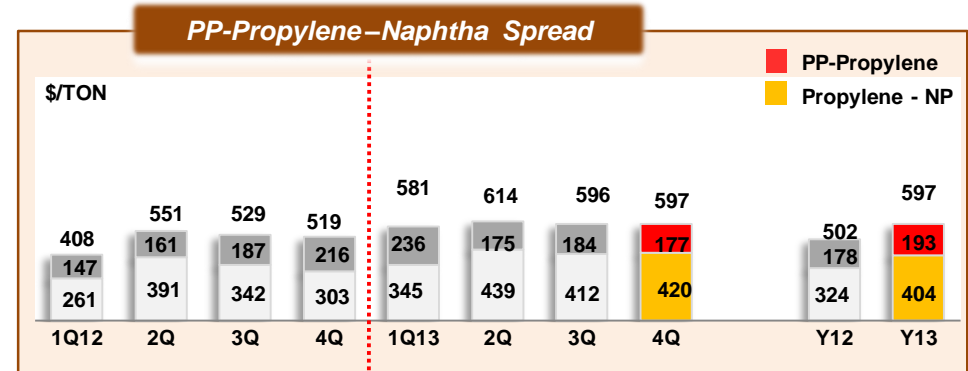
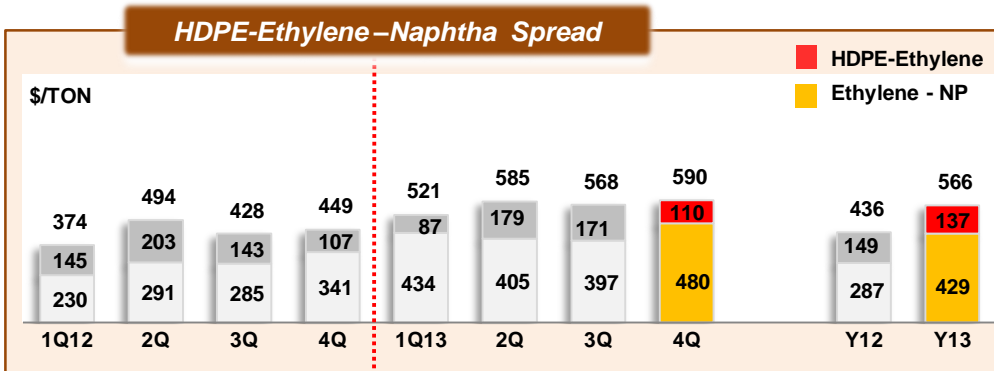
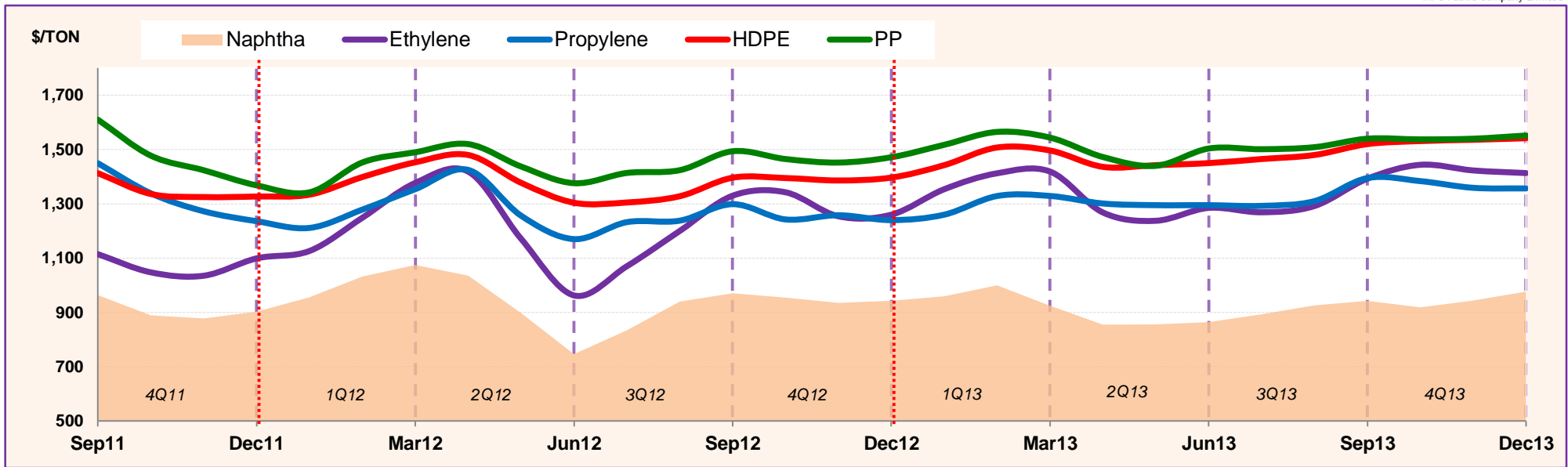


# Weaker Aromatics Spread



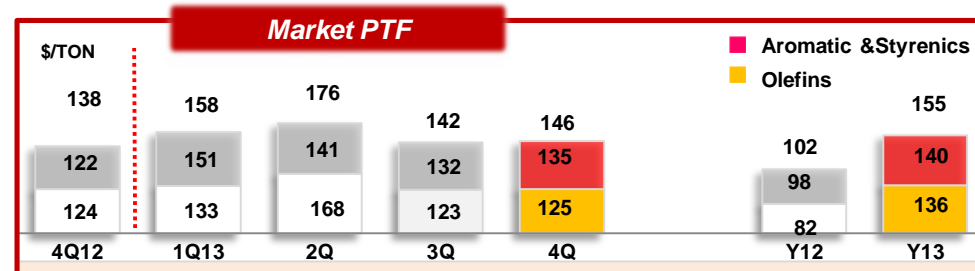
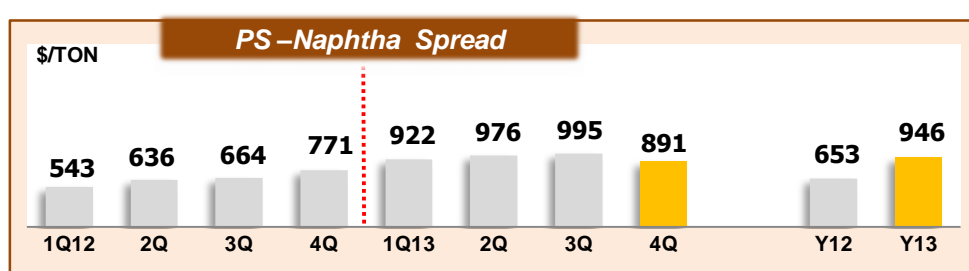
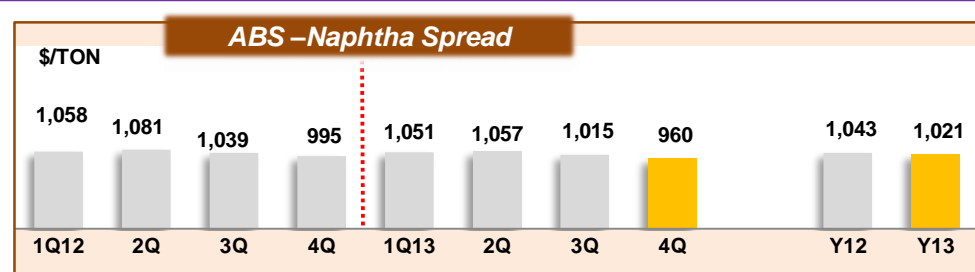
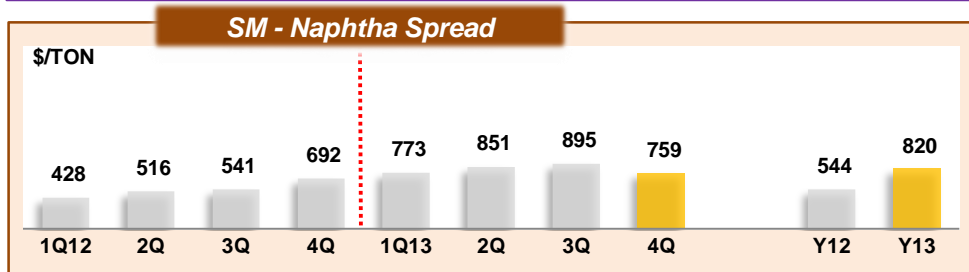
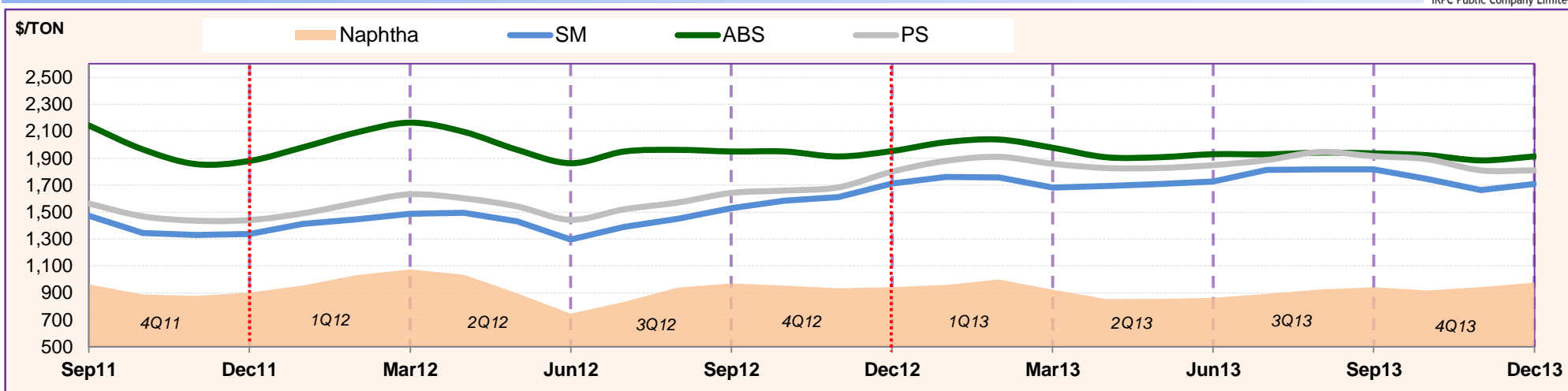
- Toluene spread weakened as the demand from gasoline blending remained weak. Moreover, the demand for toluene as a feedstock in China and India also dropped.
- Mixed-xylene significantly deteriorated due to a decrease in the demand for polyester, thereby adversely affecting the demand for paraxylene and mixed-xylene.

# Rising Olefin Spread



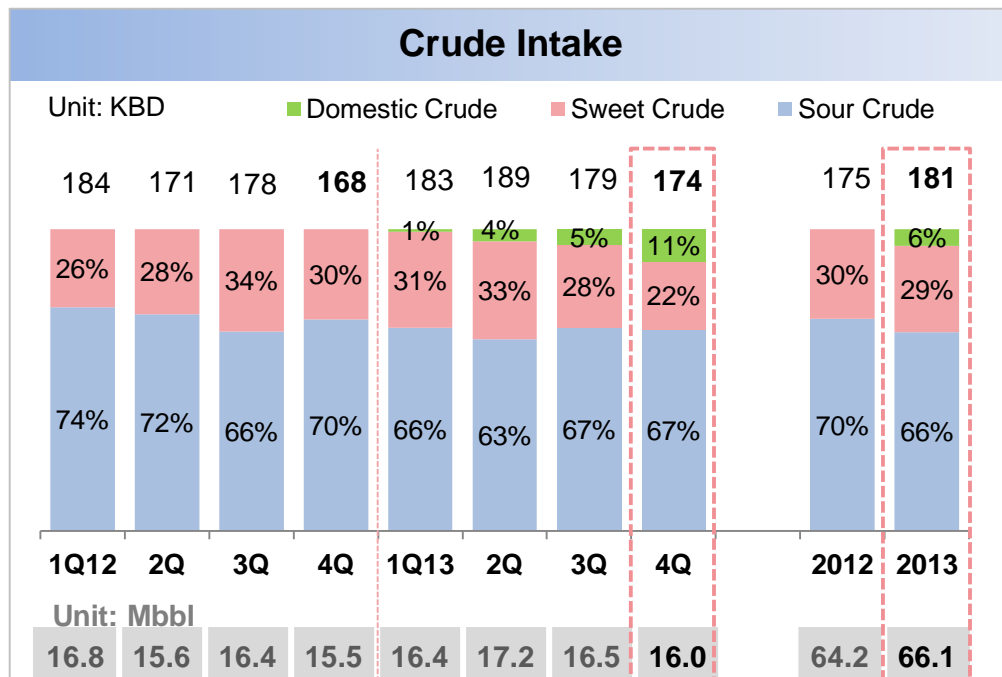
- Polyolefin spreads were solid. The prices of HDPE and PP continued to surge on cost push pressure. Moreover, supply from ME to Asia decreased due to disrupted production.

# Declining Styrenics Spread

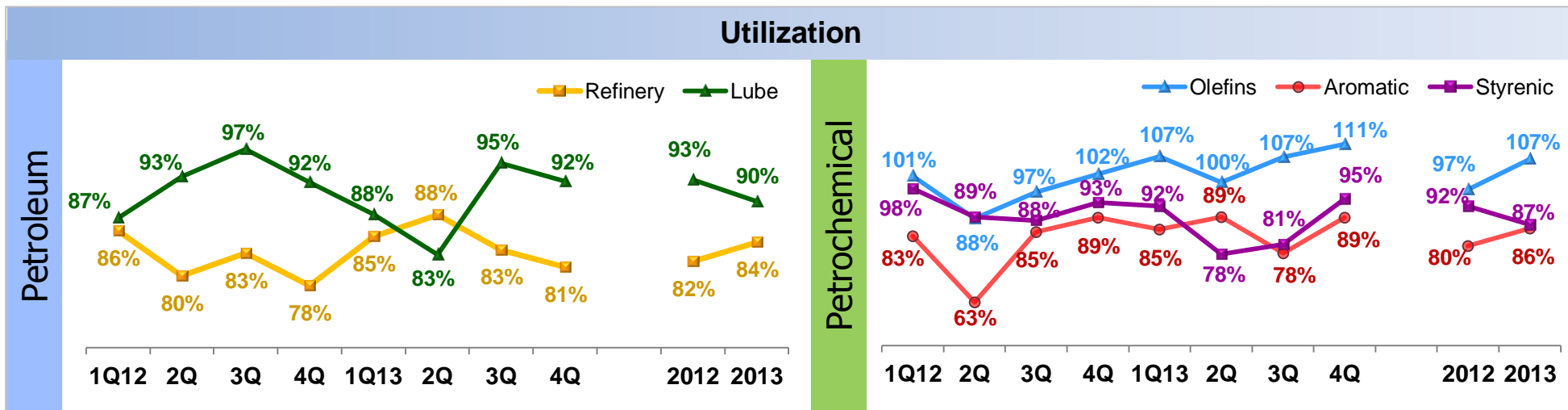


- PS spread retreated since PS price declined in line with the styrene monomer, driven by SM plants returning from unplanned shutdown. Moreover, the PS demand also declined seasonally.
- ABS spread fell because of a drop in the ABS price, which was in turn caused by its weak demand, while naphtha price rose.

# Increased Domestic Crude Intake

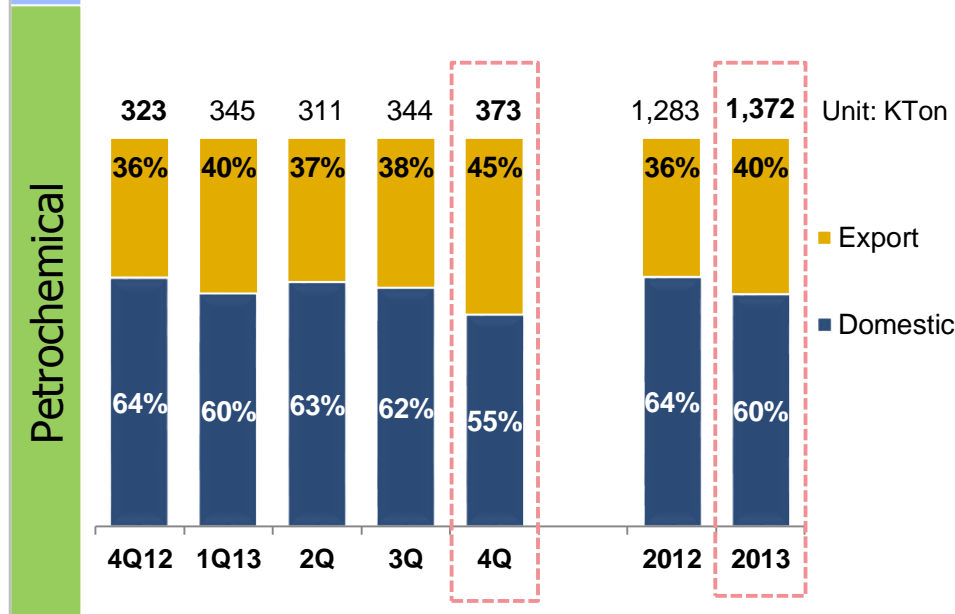
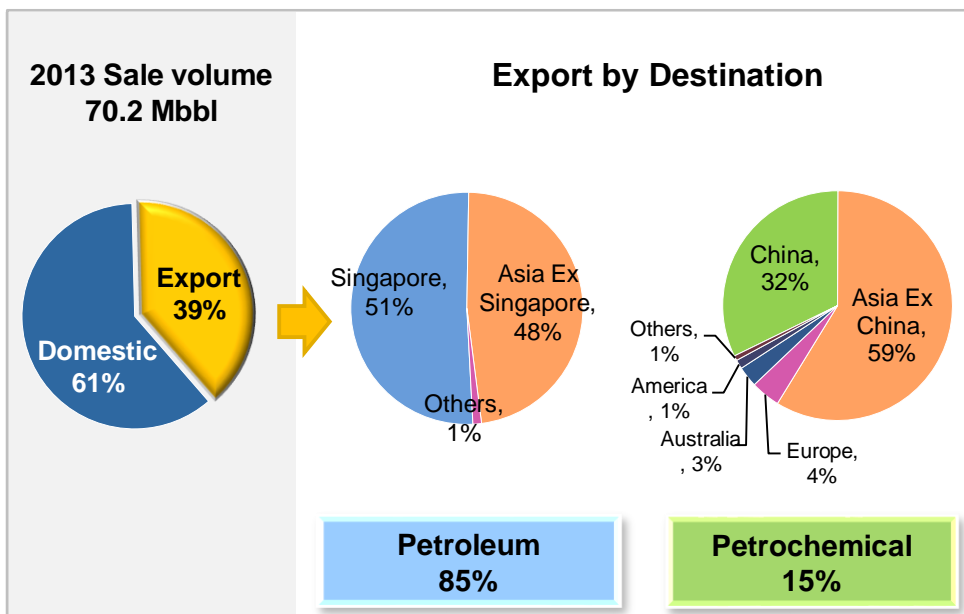
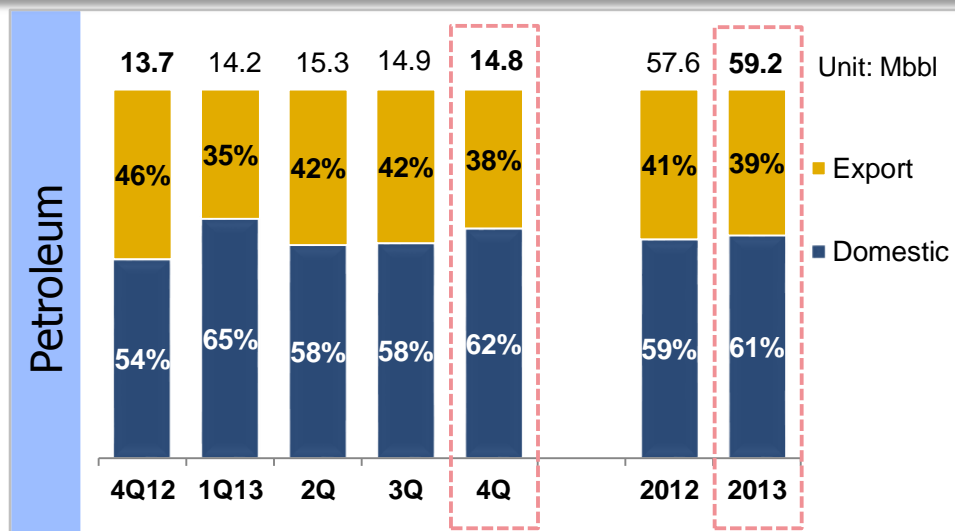
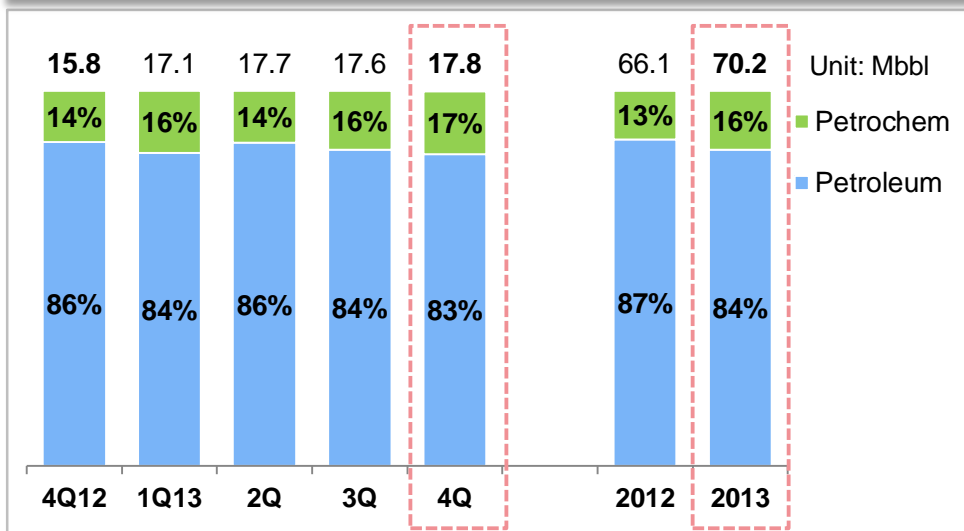


- Crude intake rose to 181 KBD, up 3%.
- Domestic crude intake amounted to 10 KBD or 6%.
- Lube utilization rate was 90%, down 3% due to maintenance shutdown in 2Q13.
- Aromatic utilization rate was 86%, up 7%.
- Styrenic utilization rate was 87%, down 5% because of a shutdown in the EBSM unit due to tie-in of expanded plant facility in 3Q13.

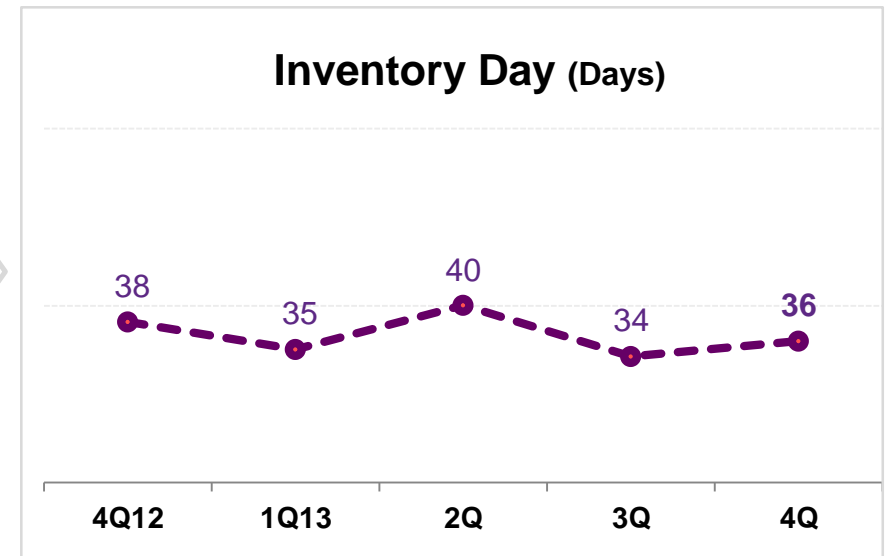
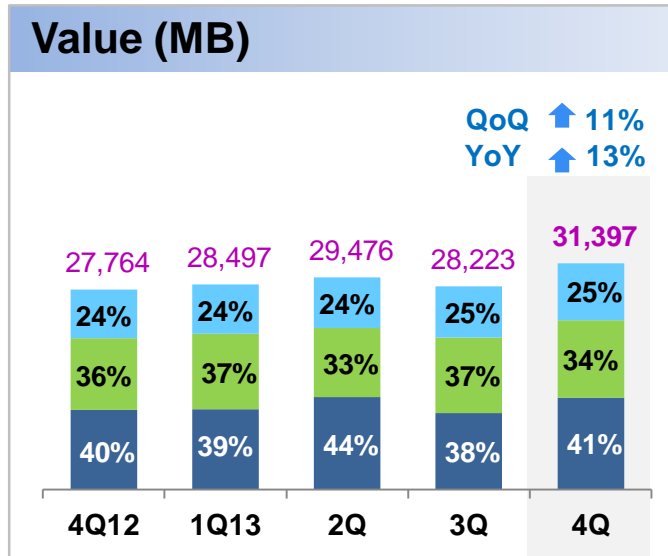
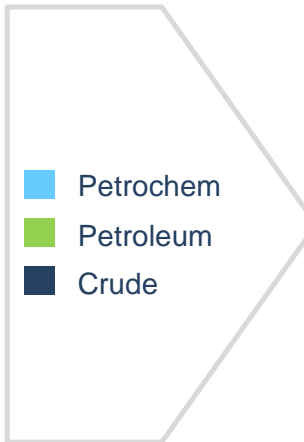
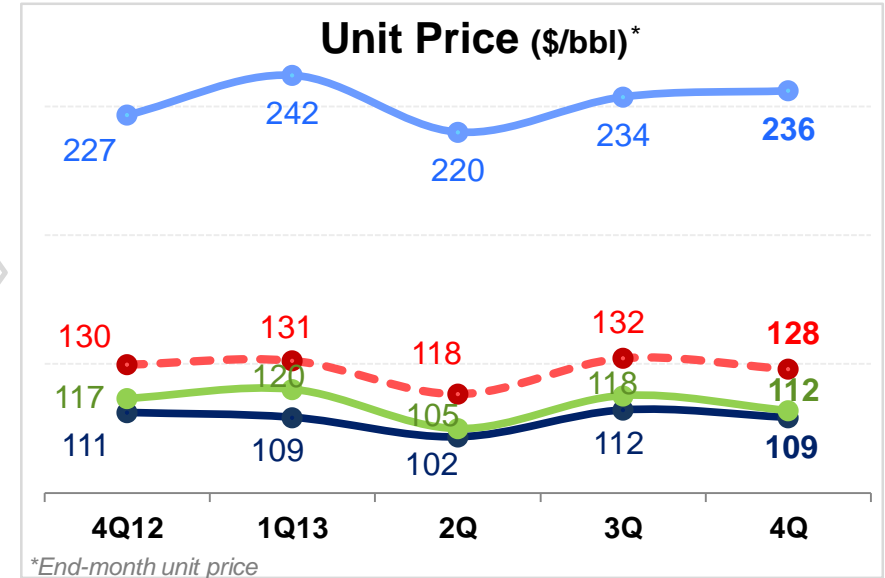
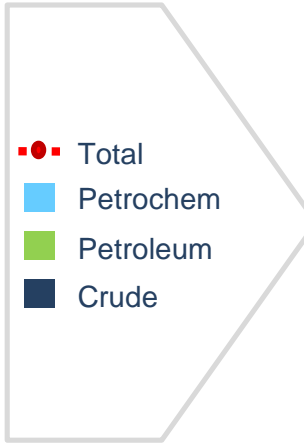
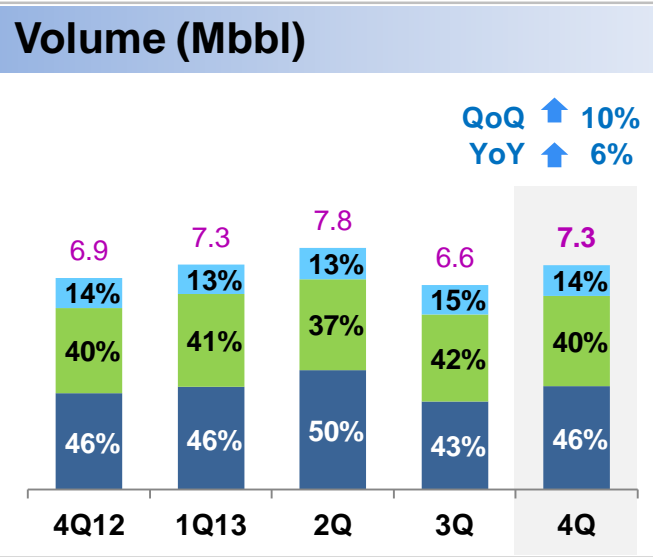


# Focus on Domestic Market

## Sales Volume Structure

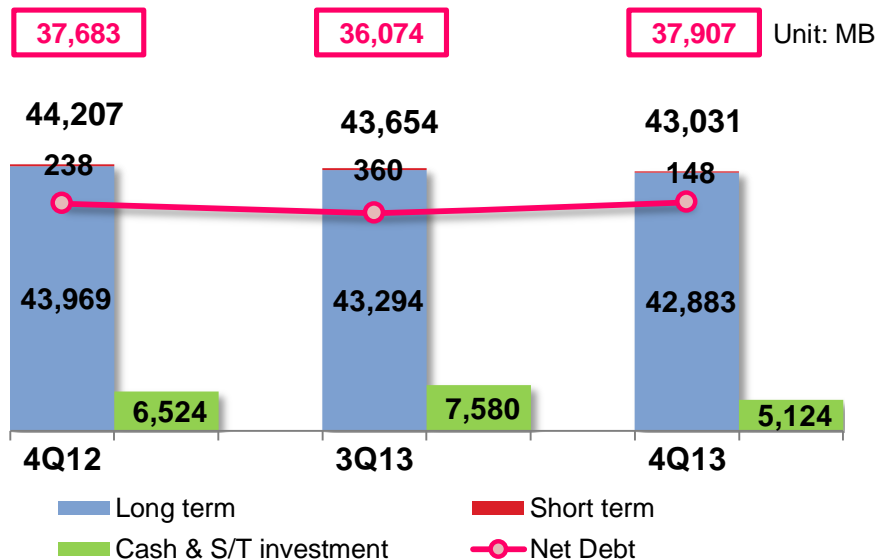


# Maintain Efficient Inventory Turnover in 2013



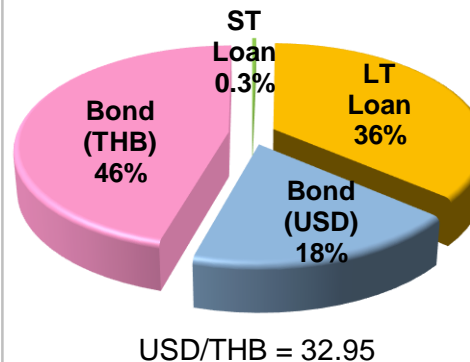
# 4Q13 Debt Portfolio

## Debt Profile



## Debt Structure

As of December 31, 2013



Net Debt = 37,907 MB

### Debt (MB)

ST Loan	148
LT Loan	15,426
Bond (USD)	7,827
Bond (THB)	19,630
<b>Total</b>	<b>43,031</b>

### Interest Rate (%)

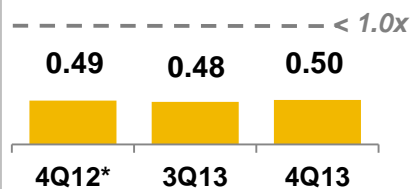
Float	33
Fixed	67

### Currency (%)

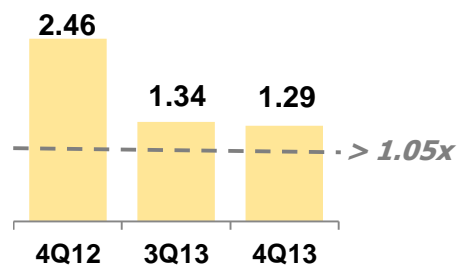
THB	41
USD	59

## Financial Ratios

### Net D/E



### CA/CL



\*4Q12 Change Effect from Deferred Tax

## Credit Ratings

**MOODY'S**

“Ba1”

Negative outlook

**STANDARD & POOR'S**  
RATINGS SERVICES

“BB+”

Stable outlook

**FitchRatings**

“A- (tha)”

Negative outlook

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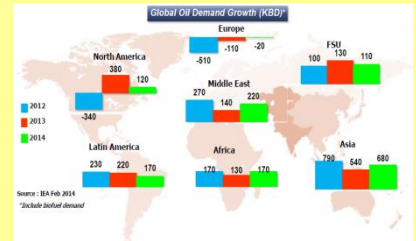
# Crude Oil and Petroleum Products Outlook

Key Products	Price (2013)	Spread (2013)	2014 Outlook
<u>Refinery</u>	(\$/bbl)	(\$/bbl)	
Dubai	106		↔
ULG95	119.2	13.7	↔
GAS OIL 0.05%	123.4	17.9	↗
FO	97.5	(8.0)	↗

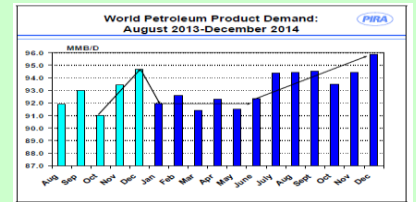
<u>Lube Base Oil</u>	(\$/T)	(\$/T)	
500 SN	1,105	486	↔
150 BS	1,191	572	↔

## Driving Determinants

- Global oil demand grows by 1.31 MBD but supply disruption in ME may be eased but by no means certain. The crude oil price is expected to be above \$100 per barrel.



- Slightly Petroleum product cracks improve, led by middle distillate and fuel oil driven by the demand from transportation activities.



- Stable lube base oil market is expected in 2014 as the additional supply will be alleviated by scheduled shutdown throughout the year.

2014 Shutdown Schedule		
Company	Capacity (KT/Year)	Timing
ADNOC	100	H1 2014
Chevron	1,200	Q1 2014
Sinopec	240	Mar-14
SK Lubricant	660	H2 2014

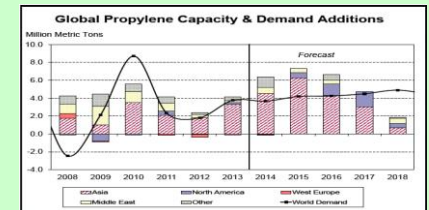
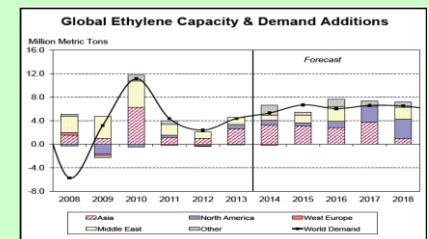
# Petrochemical Products Outlook

Key Products	Price (2013)	Spread (2013)	2014 Outlook
<u>Olefins</u>	(\$/T)	(\$/T)	
Ethylene	1,351	429	↑
HDPE	1,487	566	↗
Propylene	1,325	404	↗
PP	1,518	597	↗

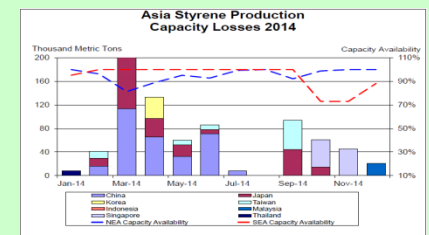
<u>Styrenics</u>	(\$/T)	(\$/T)	
PS	1,868	946	↗
ABS	1,942	1,021	↗

## Driving Determinants

- There is optimistic outlook for PE. Demand growth continues while at the same time tight supply is expected caused by heavy scheduled turnaround this year.
- Propylene supply is expected to be tight. The price is expected to be elevated since supply from on-purpose propylene is costly.



- High PS price is expected. Global demand outpaces supply growth.
- Improving market for ABS, as the economic recovery in EU and US will increase the demand of automobile and electronics.



# Agenda

- I. IRPC in Brief
- II. 2013 Highlights
- III. Operation & Financial Performance
- IV. Industry Outlook
- V. Strategic Direction**



## Phoenix + : 2010 Onwards



- Transformation to support high value added product growth
  - **CHP I**
  - **PRP**
  - **EBSM**
  - **UHV**
- Quick specialty capacity expansion/ Grade shifts
  - **TDAE**
  - **ABS6/SAN3**
  - **HDPE-Pipe Grade**
  - **UHMWPE**

**Structural Changes for Specialty Growth**

## Delta: 2014 Onwards



- Margin Improvement Initiatives
  - **Operational Excellence**
  - **Commercial Excellence**
  - **HR Excellence**
- Acceleration of Assets Utilization
  - **EIZ**
  - **Bankai**
  - **Dry port**
- Domestic crude use up to 35,000 Barrel per day

**Quick Win Initiatives for Cost Reduction Margin Enhancement**

## Post-Phoenix: 2015 Onwards



- Adding up more value to petrochemical feedstock from UHV project
- Shifting product portfolio to be specialty player through PTT Group Partnership strategy
  - **PP compound**
  - **Polyol**
  - **AA/ SAP**
  - **PX**
  - **SM**

**Specialty Growth and Move away from heavy - asset company by investing through JV**

# Strategic Initiatives: UHV

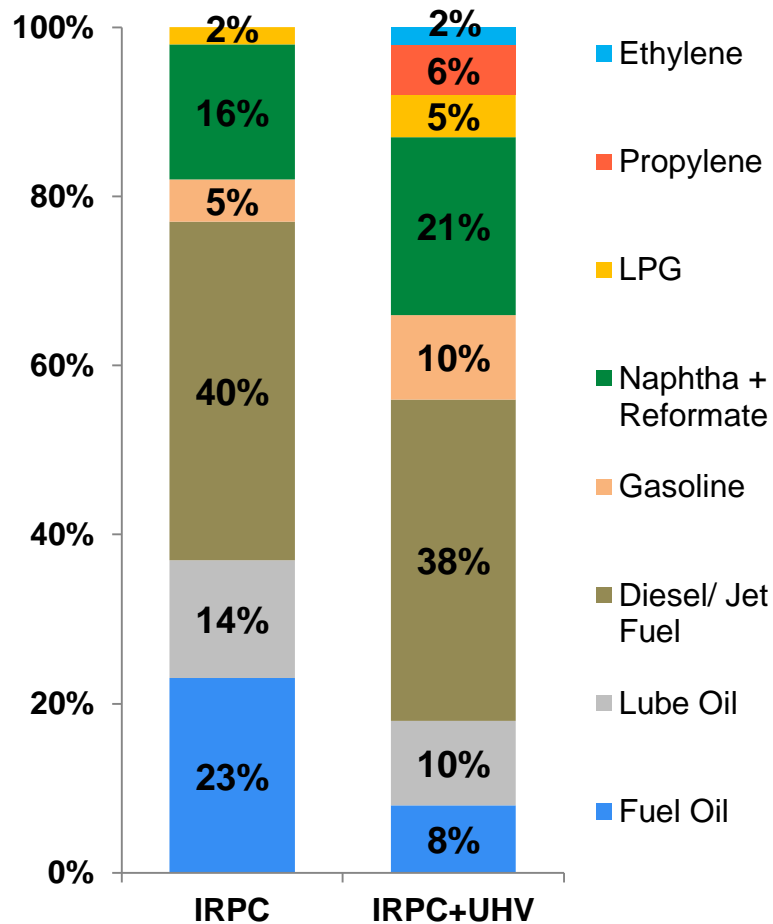
## Phoenix + Structural Changes for Specialty Growth

## Delta Margin Improvement Initiatives

## Post-Phoenix Specialty Growth through JV

### UHV Project

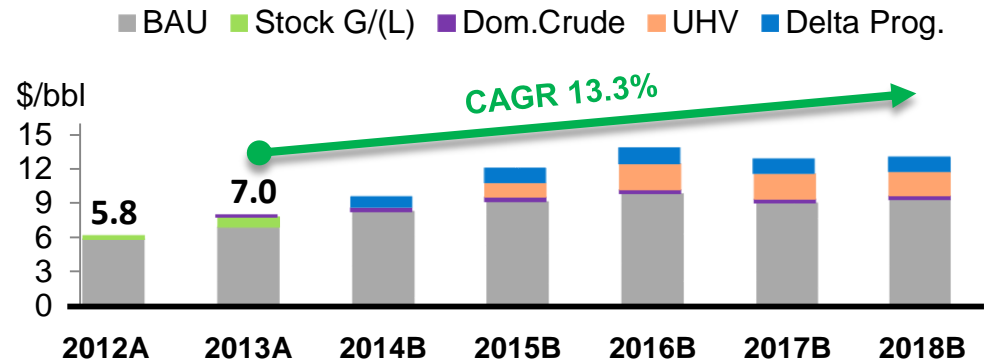
#### Product Yield



### Benefit

- Increase propylene yield 320 KTA
- Heavy and cheaper crude processing
- COD : 3Q15

### Market GIM (\$/BBL)



# Strategic Initiatives: Delta

**Phoenix +**  
Structural Changes for Specialty Growth

**Delta**  
Margin Improvement Initiatives

**Post-Phoenix**  
Specialty Growth through JV

- PTT Group Operational Excellence Management System (OEMS) Embedment
- Value Chain Management – LP Upgrading, Production Planning & Schedule Optimization
- Yield Process & Energy Optimization
- Utility System Optimization
- Reliability & Asset Integrity improvement
- QSHE

- Marketing & Sales Excellence
- Procurement Excellence
- Price Volatility Management
- Accounting & Financial Excellence



- Talent Management
- Career Path Development
- Succession Plan

## Phoenix +

Structural Changes for Specialty Growth

## Delta

Margin Improvement Initiatives

## Post-Phoenix

Specialty Growth through JV

1



### ***Operational Excellence***

- US37M Target (incl. Overhead Cost Mgt.)
- 7 Workstreams
- KBC Support

2



### ***Commercial Excellence***

- US20M Target
- Workstreams TBC
- McKinsey Support

3



### ***HR Excellence***

- US10M Target
- 5 Workstreams
- Workstreams TBC

# Strategic Initiatives: Post-Phoenix

**Phoenix +**  
Structural Changes for Specialty Growth

**Delta**  
Margin Improvement Initiatives

**Post-Phoenix**  
Specialty Growth through JV

- On-going & Approved Project
- Study Project

		2014	2015	2016	2017	2018	
<b>Phoenix +</b>	UHV		320 KTA				} <b>38,400 MB</b>
	HDPE Pipe	120 KTA					
	UHMWPE	16 KTA					
	ACB	4 KTA					
	CC & C		2.8 – 5.6 KTA				
<b>Post Phoenix</b>	PP Expansion			+160 KTA			} <b>65,000 MB</b>
	PX				PX 1,214 KTA BZ 372 KTA		
	SM					350 KTA	
	PPC				120 KTA		
	Polyol				100 KTA		
	AA/ SAP			AA 100KTA,	SAP 80KTA		
	BHD				+2 mil.L/M		



# Strategic Initiatives: Post-Phoenix

## 2013

- Crude Run 181 KBD **84%**
- Nelson Complexity Index **6.6**
- Portfolio of Revenue:  
Petroleum/Petrochemical & Others **76% / 24%**



- ## 2015
- ✓ Crude Run 215 KBD **100%**
  - ✓ Nelson Complexity Index **8.6**
  - ✓ More stable portfolio of Revenue:  
Petroleum/Petrochemical & Others **59% / 41%**



### Quick Win Initiatives

- DELTA Initiative Implementation
- Domestic crude usage up to 35KBD
- Assets Management (Bankai/EIZ)



### Completed Project during 2011-13

- CHP I: Electricity +220MW, Steam +430T/h
- PRP +100KTA of Propylene
- EURO IV: Gasoline 15KBD, Diesel 10KBD, Jet 15KBD
- TDAE +28KTA, 150BS +25KTA
- Lube Blending +60m.Ltrs./year
- EBSM +60KTA, ABS/SAN +60KTA

### UHV Completion

- Increase product value by converting fuel oil to petrochemical products
- Running at full capacity of 215 KBD

### New investments through JV

- Specialty focus and Moving away from heavy-asset company

# Q & A



- ✓ *Environment*
- ✓ *Social*
- ✓ *Education & Sports*
- ✓ *Labor & Human Rights*
- ✓ *Religion*
- ✓ *Public Health*

The future begins now **creating shared value**

# Thank You



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