



# Bernstein's 32<sup>nd</sup> Annual Strategic Decisions Conference

Bob Patel  
CEO

June 2-3, 2016

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# Cautionary Statement

The statements in this presentation relating to matters that are not historical facts are forward-looking statements. These forward-looking statements are based upon assumptions of management which are believed to be reasonable at the time made and are subject to significant risks and uncertainties. Actual results could differ materially based on factors including, but not limited to, the business cyclicalities of the chemical, polymers and refining industries; the availability, cost and price volatility of raw materials and utilities, particularly the cost of oil, natural gas, and associated natural gas liquids; competitive product and pricing pressures; labor conditions; our ability to attract and retain key personnel; operating interruptions (including leaks, explosions, fires, weather-related incidents, mechanical failure, unscheduled downtime, supplier disruptions, labor shortages, strikes, work stoppages or other labor difficulties, transportation interruptions, spills and releases and other environmental risks); the supply/demand balances for our and our joint ventures' products, and the related effects of industry production capacities and operating rates; our ability to achieve expected cost savings and other synergies; our ability to successfully execute projects and growth strategies; legal and environmental proceedings; tax rulings, consequences or proceedings; technological developments, and our ability to develop new products and process technologies; potential governmental regulatory actions; political unrest and terrorist acts; risks and uncertainties posed by international operations, including foreign currency fluctuations; and our ability to comply with debt covenants and service our debt. Additional factors that could cause results to differ materially from those described in the forward-looking statements can be found in the "Risk Factors" section of our Form 10-K for the year ended December 31, 2015, which can be found at [www.lyondellbasell.com](http://www.lyondellbasell.com) on the Investor Relations page and on the Securities and Exchange Commission's website at [www.sec.gov](http://www.sec.gov).

The illustrative results or returns of growth projects are not in any way intended to be, nor should they be taken as, indicators or guarantees of performance. The assumptions on which they are based are not projections and do not necessarily represent the Company's expectations and future performance. You should not rely on illustrated results or returns or these assumptions as being indicative of our future results or returns.

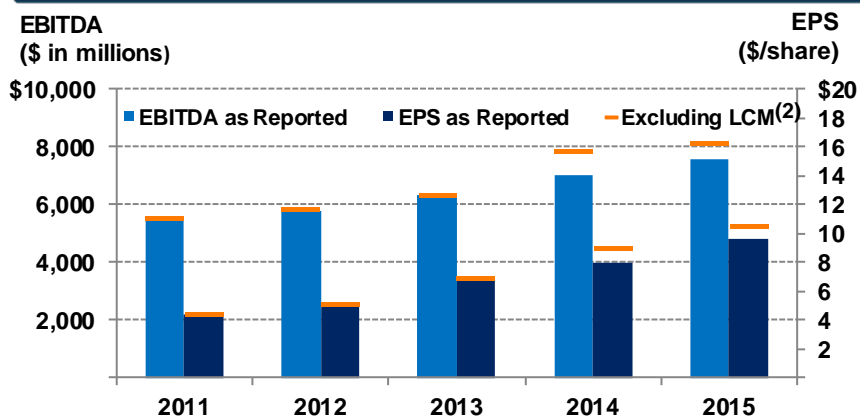
This presentation contains time sensitive information that is accurate only as of the date hereof. Information contained in this presentation is unaudited and is subject to change. We undertake no obligation to update the information presented herein except as required by law.

# World-Class Scale With Leading Positions

## Who We Are

- \$40 billion market capitalization <sup>(1)</sup>
- Global independent chemical company, incorporated under Dutch law
- Executive offices in London, Rotterdam, and Houston
- Products sold in ~100 countries, with 56 manufacturing sites across 18 countries

## EBITDA / EPS Performance



(1) As of December 31, 2015

(2) LCM stands for "lower of cost or market". Further detail regarding LCM adjustments can be found in the Appendix under "Information Related to Financial Measures."

(3) Source: LYB, IHS as of December 31, 2015. Only pro rata ownership of joint venture facilities.

(4) EU includes Central and Western Europe for all products except Technology and R&D which is all of Europe

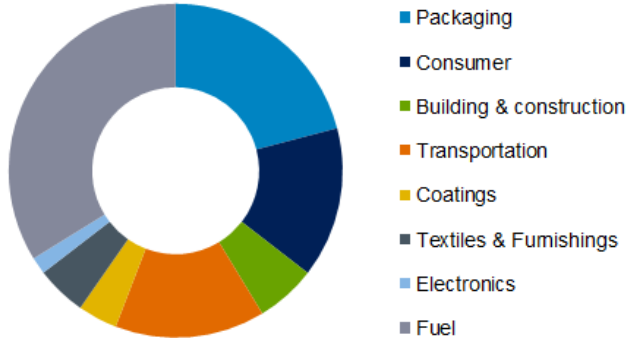
## Our Products <sup>(3)</sup>

## Capacity Position

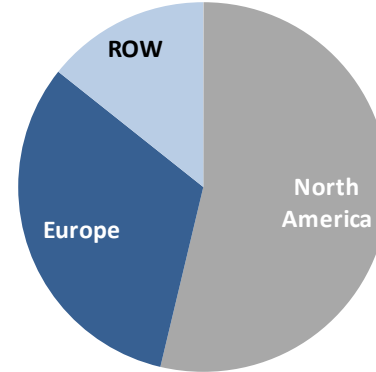
	Global	N Am	EU <sup>(4)</sup>
<b>Chemicals</b>			
Ethylene	#5	#2	#5
Propylene*	#5	#3	#6
Propylene Oxide (PO)	#2	#2	#2
<b>Polymers</b>			
Polyolefins (PE+PP)	#3	#3	#1
Polypropylene	#2	#1	#1
Polyethylene	#6	#3	#1
Polypropylene Compounds	#1	-	-
<b>Fuels</b>			
Oxyfuels	#1	#1	#1
<b>Technology and R&amp;D</b>			
Polyolefin Licensing	#1	#2	#1

\*Excluding Refinery Grade Propylene

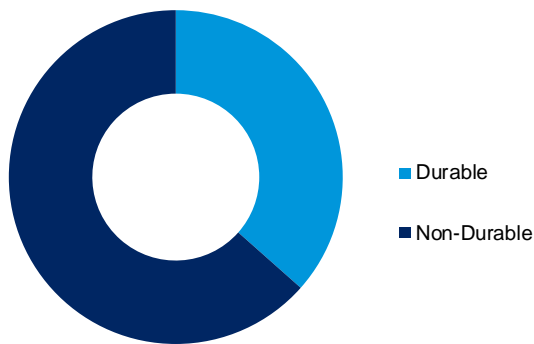
## Revenue by End Use<sup>(1)</sup>



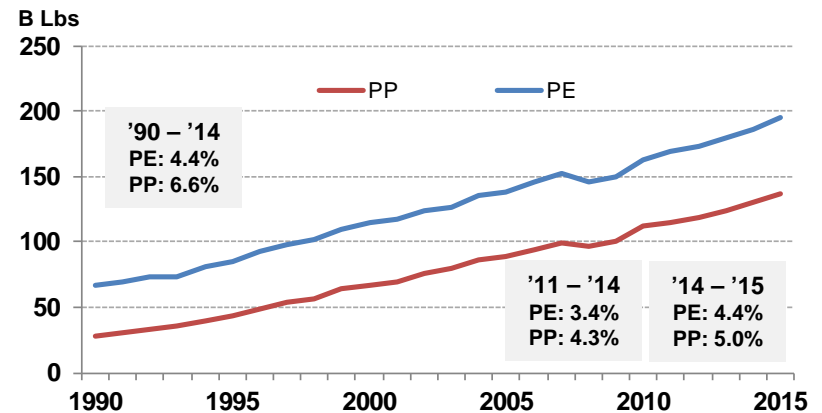
## 2015 Revenue by Geography



## Durable / Non-Durable Revenue<sup>(1)</sup>



## World PE and PP Demand



Source: Internal LYB Estimates and IHS.

(1) Based on 2014 annual revenues. Excludes Technology segment revenues and intersegment eliminations.

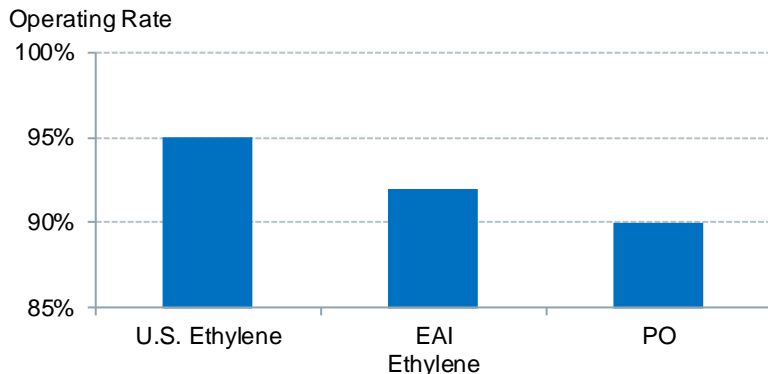
# LYB's Focused Approach is Yielding Results



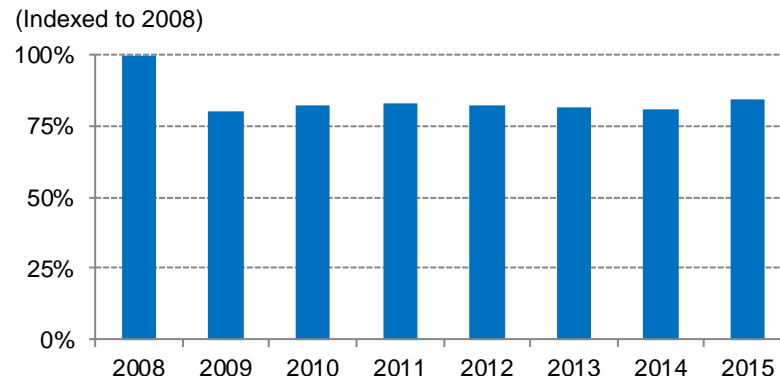
- **Maximize value through a focus on operations**
  - Safe operations → reliable operations → maximum profit
  - The best/most leveraging investment is in your existing assets
- **Cost discipline remains a priority**
  - Most chemical markets are mature
  - Overhead and spending management must be consistent over time
- **Invest in advantaged positions, sustain others**
  - Raw material advantages
  - Technology and structure create areas of differentiation
- **Shareholders own the company**
  - Transparency
  - Shareholder friendly cash deployment policy

# Operating Reliability and Cost Management: Key Priorities and an LYB Advantage

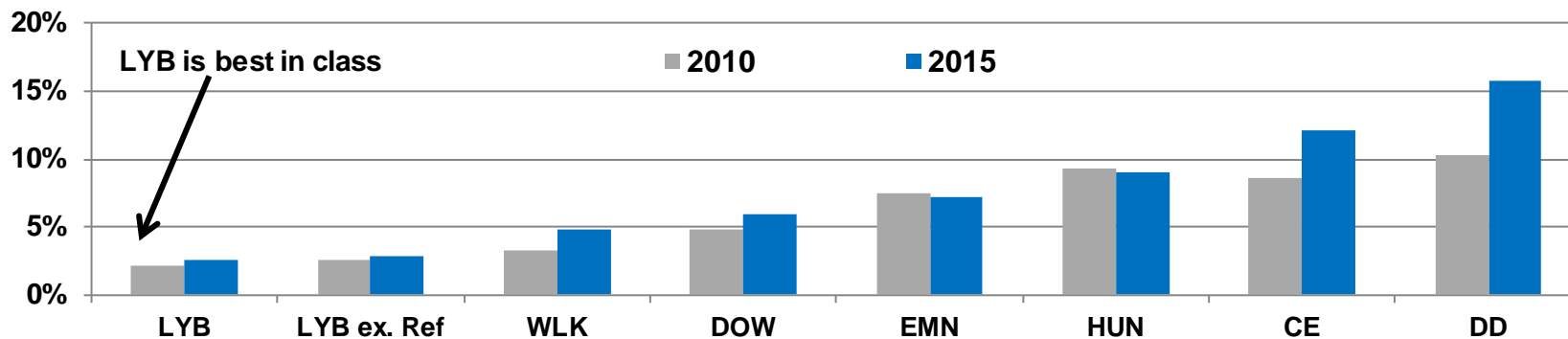
## 2015 LYB Operating Reliability



## Fixed Costs<sup>(1)</sup>



## SG&A as Percent of Revenue – LYB vs. Peer Companies



LYB continues to have intense focus on reliability and cost discipline, resulting in industry leading performance

Source: Capital IQ and LYB. 1) Fixed costs are adjusted for annual bonuses and selected items, and to 2015 FX.



# Each Business is Operated to Maximize Results

<u>Segment</u>	<u>LYB Market Position</u>	<u>Priority</u>	<u>2015 EBITDA (ex. LCM)</u>
Olefins & Polyolefins (O&P) – Americas	<ul style="list-style-type: none"> <li>US Shale NGL advantage</li> <li>Increasing capacity</li> </ul>	Invest	\$3.8 B
Olefins & Polyolefins (O&P) – EAI	<ul style="list-style-type: none"> <li>Commodities – naphtha based, with cyclical upside</li> <li>Advantaged feedstock</li> <li>Differentiated polymers</li> </ul>	Optimize	\$1.9 B
Intermediates & Derivatives (I&D)	<ul style="list-style-type: none"> <li>Proprietary technologies</li> <li>Natural gas advantage</li> </ul>	Invest	\$1.7 B
Refining	<ul style="list-style-type: none"> <li>Large, heavy crude refinery</li> <li>Processing Canadian crude</li> </ul>	Optimize	\$0.5 B
Technology	<ul style="list-style-type: none"> <li>Strong technology position</li> <li>Maintain leadership</li> </ul>	Focus	\$0.2 B <sup>(1)</sup>

(1) The Technology Segment was not impacted by the LCM adjustment.

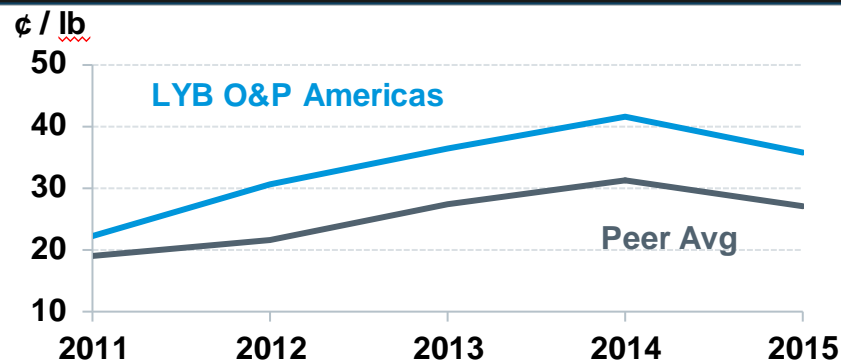
# O&P - Americas and EAI

## Our Strategy is Generating Differential Results

- **Safe & Reliable Operations**
- **Cost Focused**
- **Feedstock Advantaged and Flexibility**
- **Differentiated Products**

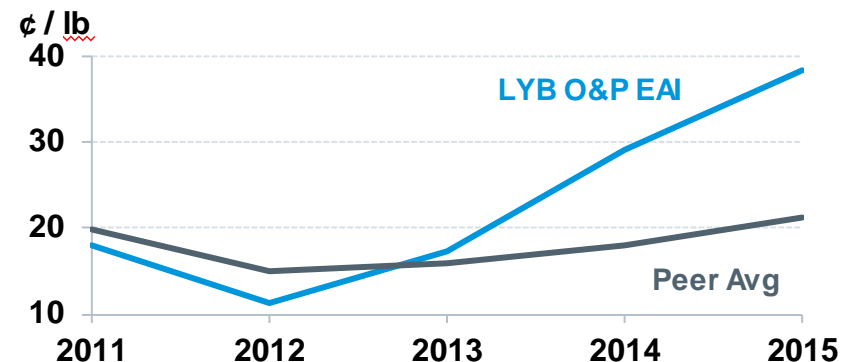
### O&P Americas vs. Americas Peers

EBITDA excluding LCM per Pound of Ethylene Capacity



### O&P EAI vs. EAI Peers

EBITDA excluding LCM per Pound of Ethylene Capacity



Source: Company Filings, Capital IQ, IHS, and LYB Estimates.

Capacities: Ethylene capacities include pro-rata JV capacities and are averages based on company reports and IHS. Dow capacity is global.

Americas EBITDA: CP Chemical is consolidated using: income before taxes + depreciation – equity income. Westlake Olefins is operating income + depreciation. INEOS O&P North America and Dow Performance Plastics EBITDA is as reported before exceptional/extraordinary items. LYB O&P Americas EBITDA excludes the impacts of LCM adjustments.

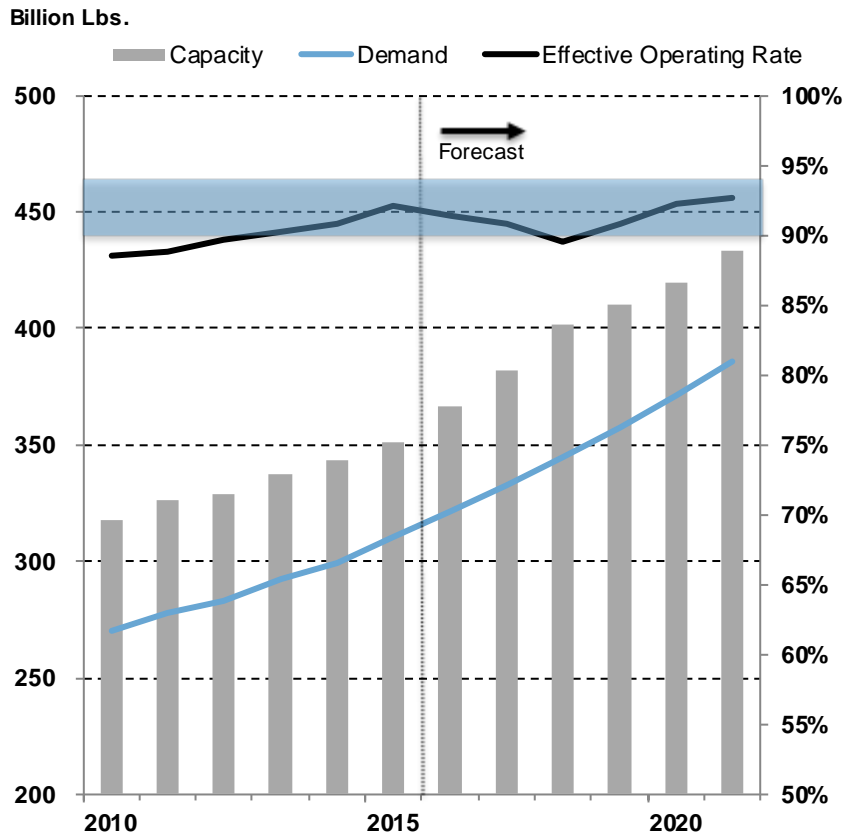
EAI EBITDA: INEOS O&P Europe is as reported EBITDA before exceptional/extraordinary items. Borealis is operating income + depreciation + equity income. LYB O&P EAI EBITDA excludes the impacts of LCM adjustments.



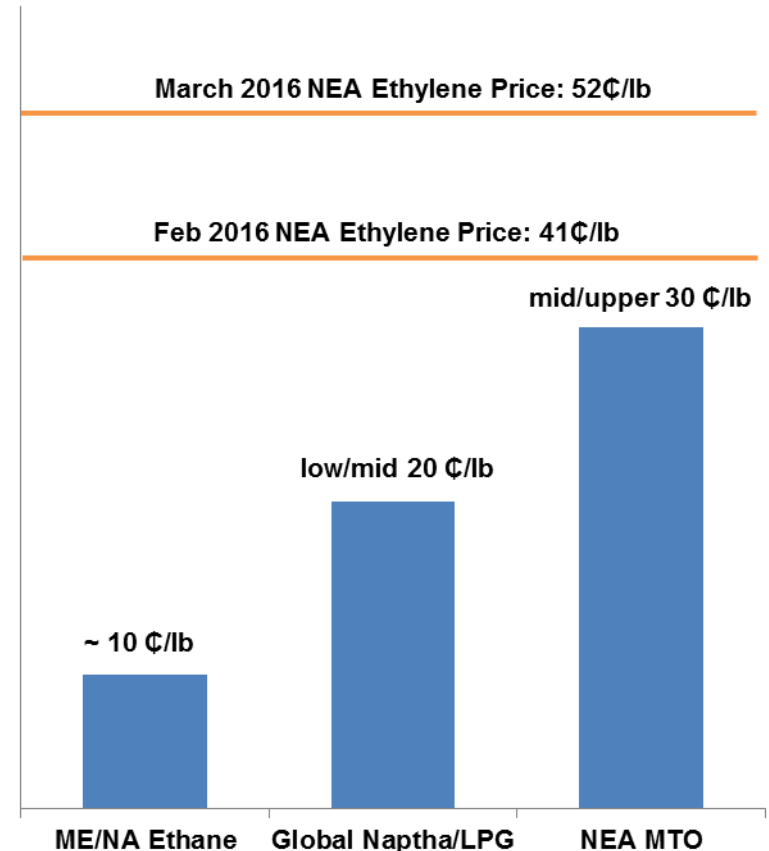
# O&P: Strong Operating Rate and High Cost Supply Sources Support Global Ethylene Industry Pricing



Global Ethylene Supply / Demand <sup>(1)</sup>



March 2016 Global Ethylene Cash Cost and Prices <sup>(2)</sup>



1) Source: IHS 2016 Balance Update

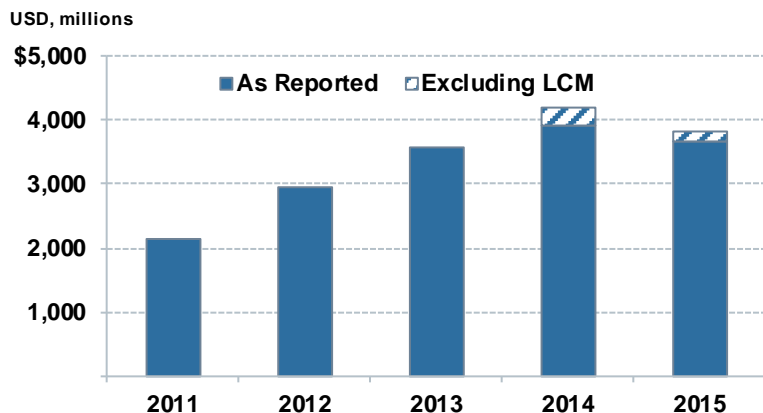
2) Source: IHS and LYB analysis

# O&P Americas

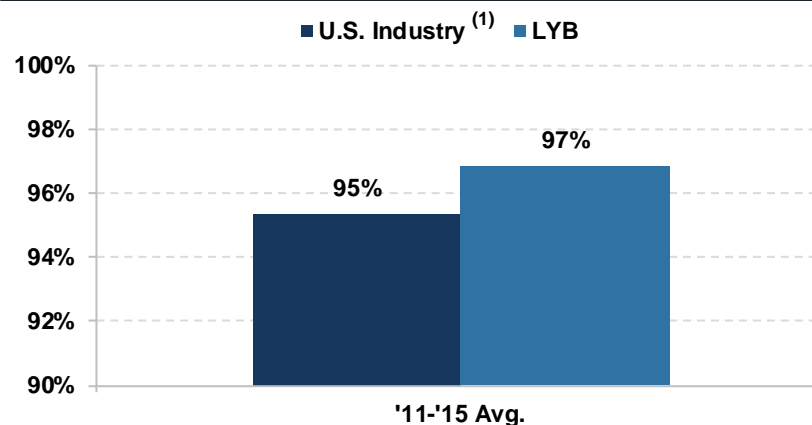
## NGL Advantage with Flexible, Reliable Operations



### EBITDA Performance



### Operating Reliability vs. U.S. Industry

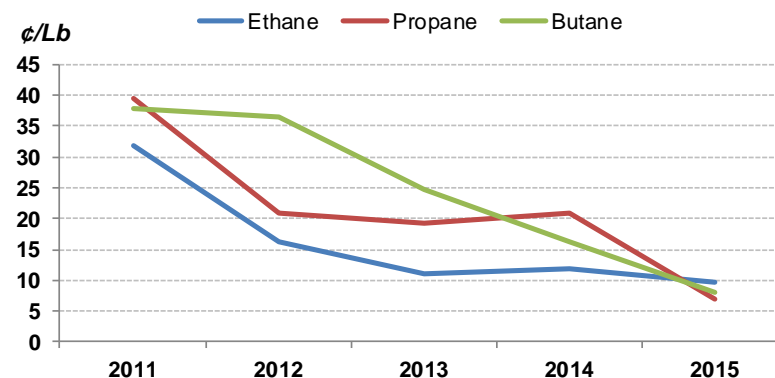


### LYB Flexibility

Maximum % Ethylene from Feedstock

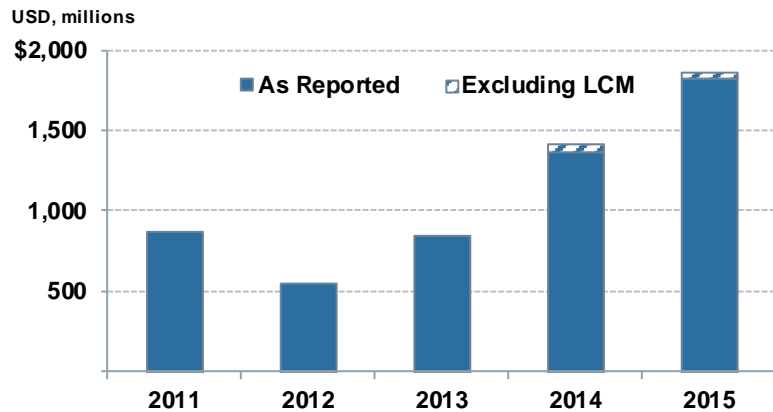
Feed	System
NGL	~90%
Ethane	~80%
Propane	~20%
Butane	~15%
Liquids	~55%
Minimum Liquids	~10%

### Cost of Ethylene Production



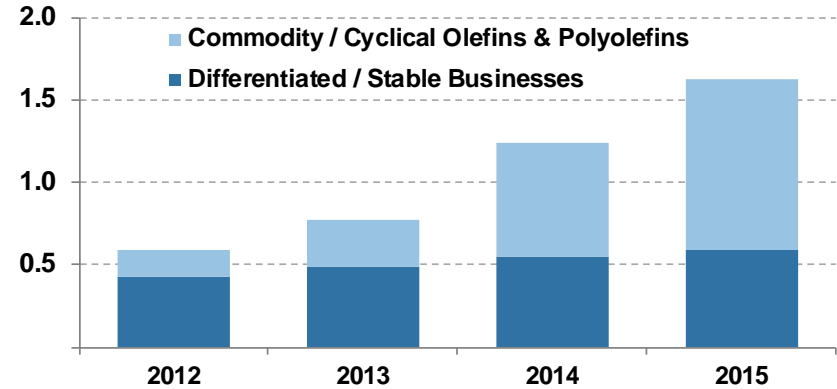
(1) U.S. Industry excluding LYB

### EBITDA Performance

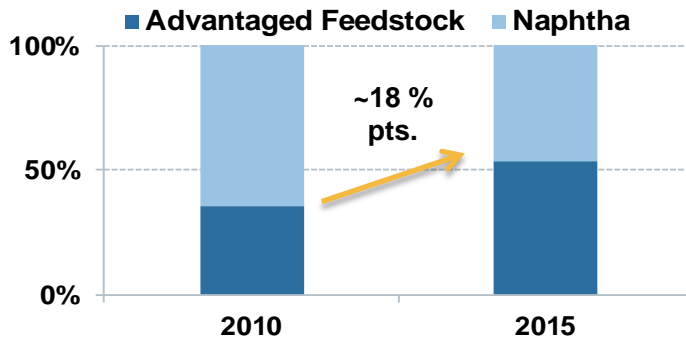


### Indexed O&P EAI EBITDA<sup>(1)</sup>

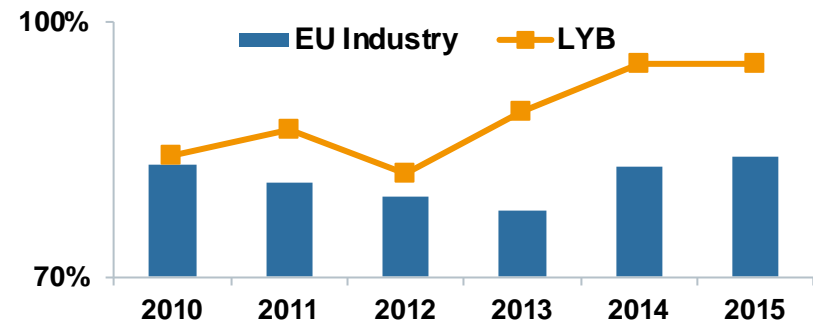
(EBITDA Indexed, Mid-Cycle = 1.0)



### Producing from Advantaged Feedstock



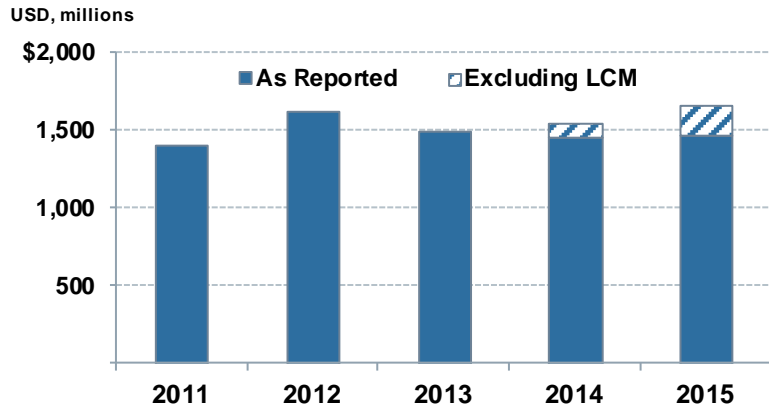
### Western Europe Olefins Operating Rate



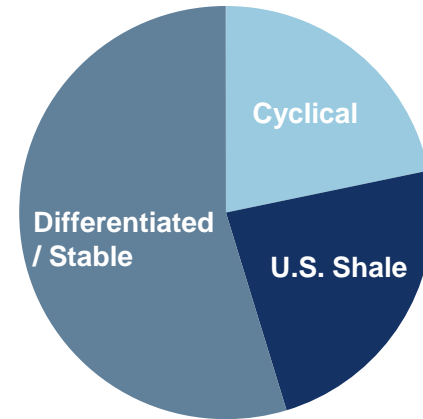
Source: LYB.

(1) O&P EAI trough, mid-cycle and peak EBITDA values are based on LYB estimates. 2014 and 2015 LTM EBITDA excludes the impact of the LCM adjustment.

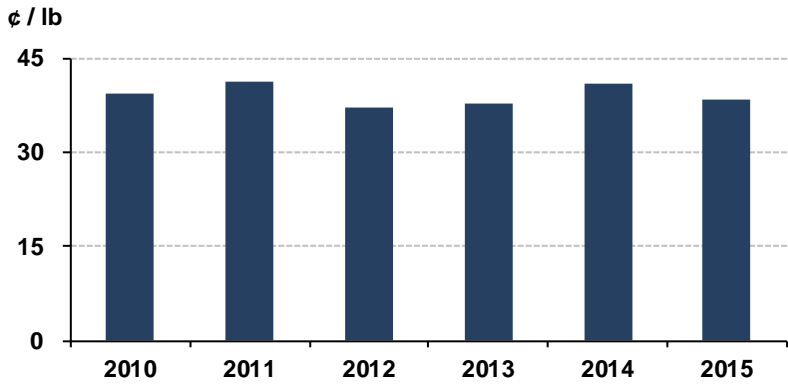
**EBITDA Performance**



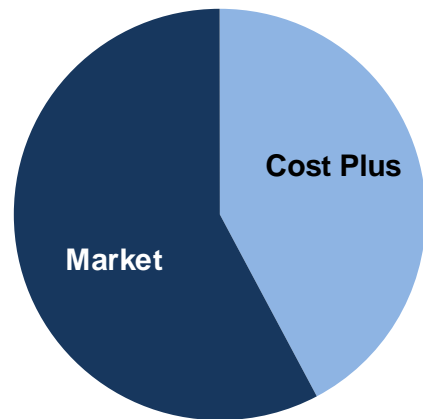
**Differentiated Proprietary Technology (2015 EBITDA)**



**Propylene Glycol Raw Material Margin**



**Contracting Strategy<sup>(1)</sup>**

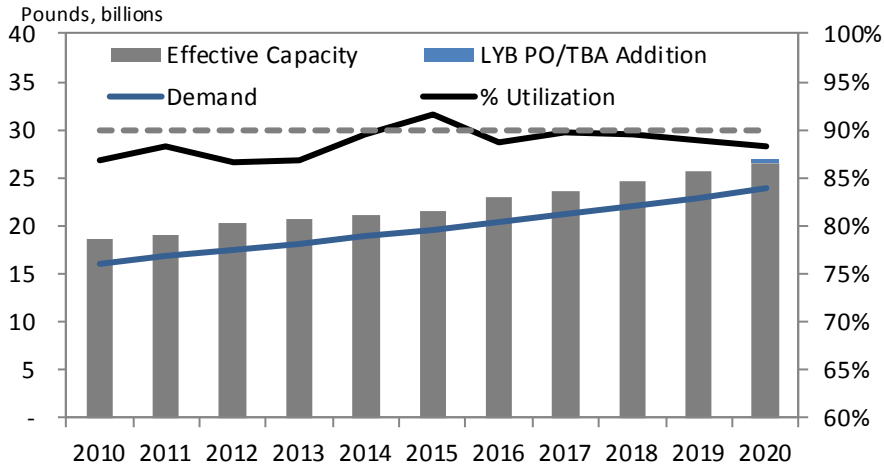


Source: LYB, Chemical Data (PG Raw Material Margin)  
 (1) Internal LYB estimates derived from forecasted third party sales, 2015.

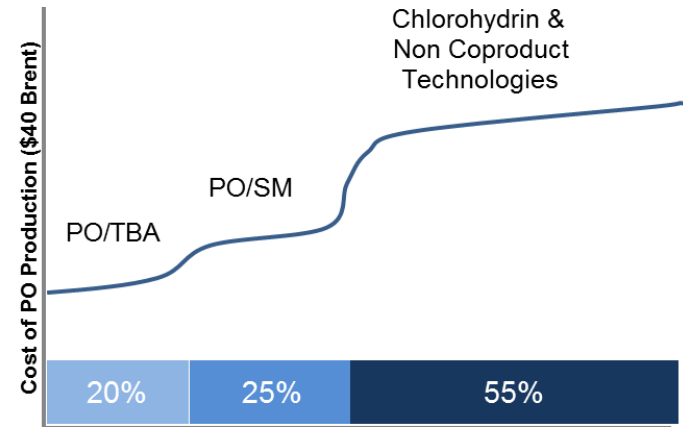
# I&D

## Expanding with Leading Technology

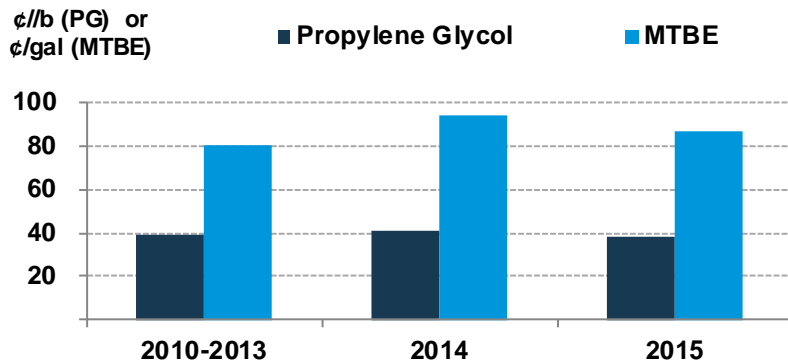
### Global Propylene Oxide (PO) Supply/Demand



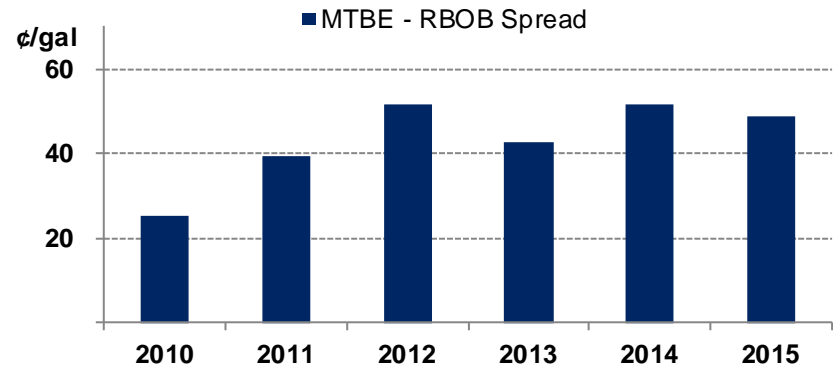
### Propylene Oxide (PO) Cost Curve



### Propylene Glycol and MTBE Raw Material Margins (1)



### MTBE / RBOB Octane Spread (2)



Sources: LYB, IHS. (1) Source: CDI (propylene glycol) and Platts. (2) Source: IHS NWE MTBE spot prices.

# Cash Deployment Hierarchy

		2015	Comments
Foundation	Base Capex	~ \$800 million	<ul style="list-style-type: none"> <li>First priorities for cash</li> </ul>
	Interest Expense	~ \$310 million	
	Interim Dividend	~ \$1.4 billion	<ul style="list-style-type: none"> <li>Fund through the cycle with cash flow from operations</li> </ul>
Discretionary Opportunities	Growth Capex	~ \$600 million	<ul style="list-style-type: none"> <li>High-return in advantaged businesses</li> </ul>
	Share Repurchases / Special Dividend / Acquisitions	Balance of cash generated	<ul style="list-style-type: none"> <li>Discretionary cash returned to shareholders</li> <li>M&amp;A if strategic and meaningfully accretive</li> </ul>

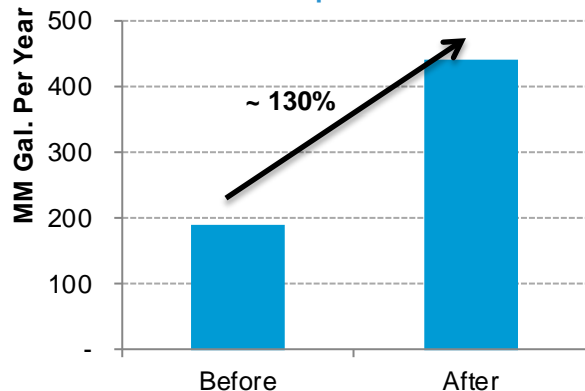
Source: LYB



# Significantly Expanding our Advantaged Positions

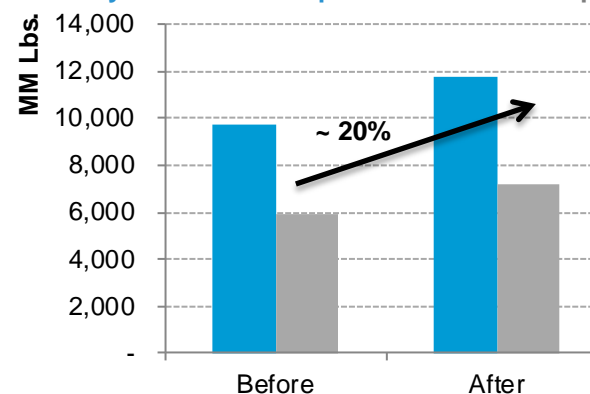
## Methanol

Complete

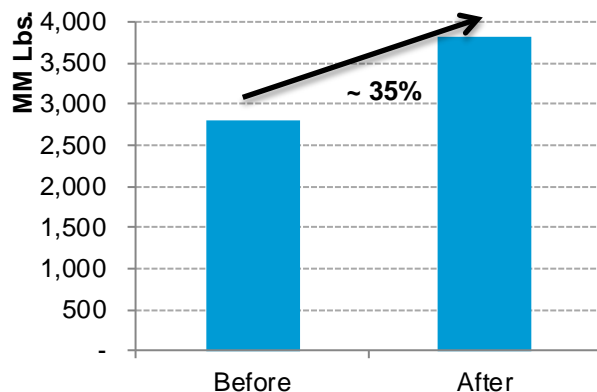


## U.S. Ethylene / Polyethylene

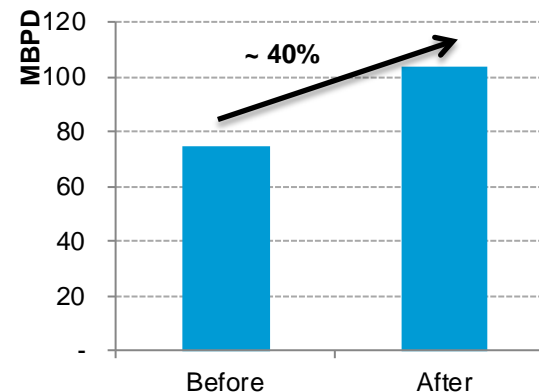
Ethylene ~60% Complete / PE ~20% Complete



## Propylene Oxide



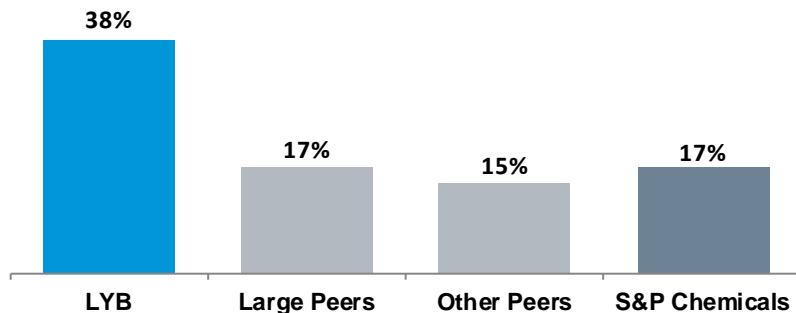
## MTBE Equivalent



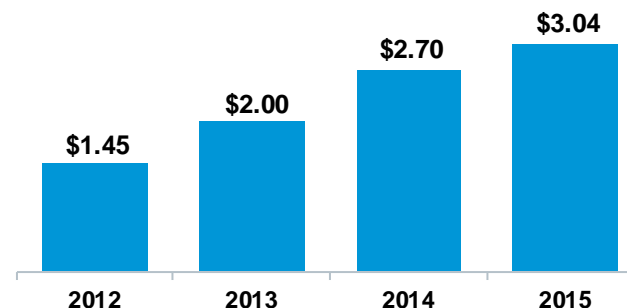
Note: "Before" refers to the capacity prior to the initiation of our growth program in 2013.

# Leading in Dividends and Share Repurchases

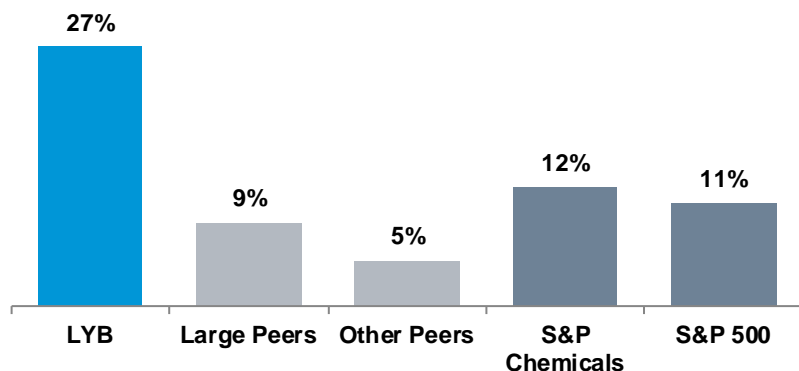
**2011-2015 Free Cash Flow as % Avg. 2015 Enterprise Value <sup>(1)</sup>**



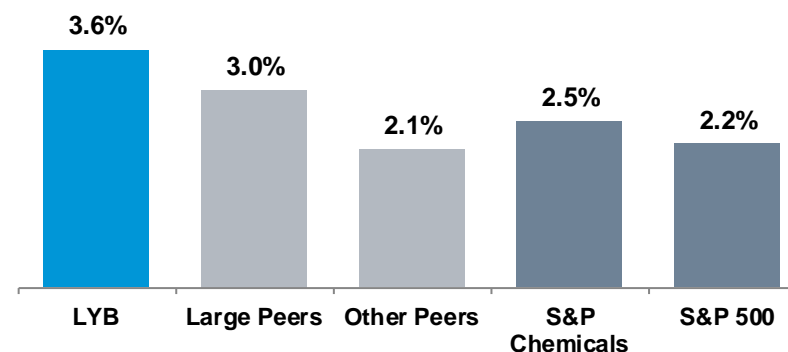
**Growing LYB Annual Dividend (per Share) <sup>(2)</sup>**



**2011-2015 Share Repurchases as % Avg. 2015 Enterprise Value <sup>(3)</sup>**



**Q1'16 Dividend Yield in Top 15% of S&P 500 <sup>(4)</sup>**



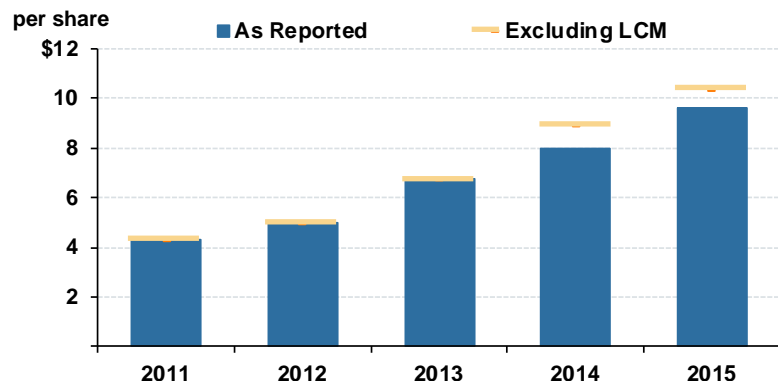
Source: Capital IQ and LYB. For definitions and peer group definitions, please see the Glossary in the Appendix to this presentation.

(1) S&P data calculated based upon individual constituent data as of May 23, 2016 (2) Excludes special dividends paid in 2012 of \$2.75 per share.

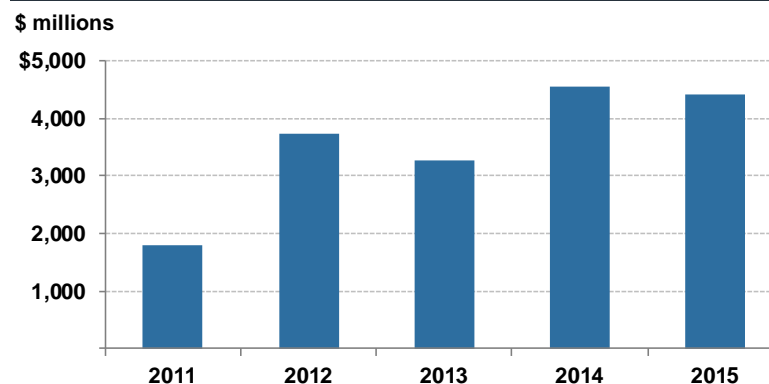
(3) Capital IQ as of December 31, 2015 (4) Capital IQ as of March 31, 2016

# Outperformance Coupled with a Shareholder Friendly Approach

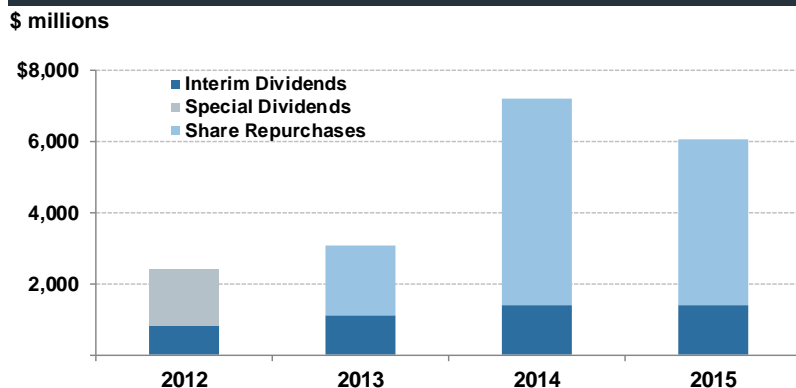
## Diluted Earnings Per Share



## Free Cash Flow



## Dividends and Share Repurchases



## Multiples

Multiples (trailing 12 months as of 12/31/15)	LYB	S&P Chemical Index	S&P 500
EV/EBITDA Excluding LCM <sup>(1)</sup>	5.7x	11.1x	10.5x
P/E <sup>(2)</sup>	8.8x	22.0x	21.6x

Industry leading performance and statistics at a lagging multiple

Source: Capital IQ, Bloomberg, LYB

(1) EV/EBITDA = Enterprise Value / Earnings Before Interest, Taxes and D&A as calculated by Capital IQ and Bloomberg, except for LYB, which is based on EBITDA ex. LCM for the trailing 12 months.

(2) PE = Price to Earnings as calculated by Capital IQ and Bloomberg, except for LYB, which is based on as reported earnings for the trailing 12 months.

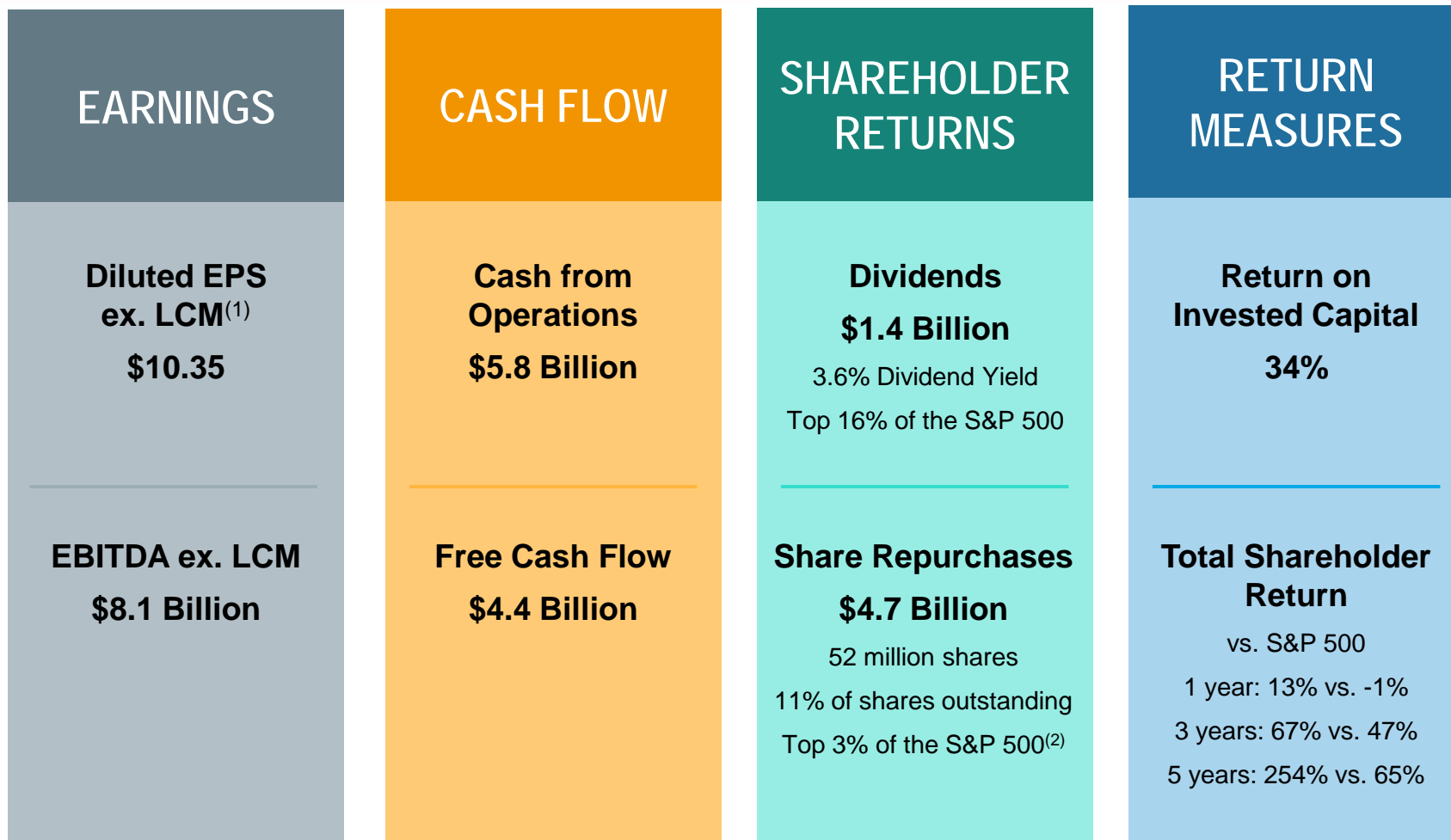
# Appendix



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(1) LCM stands for "lower cost or market". Further detail regarding LCM adjustments can be found under "Information Related to Financial Measures."

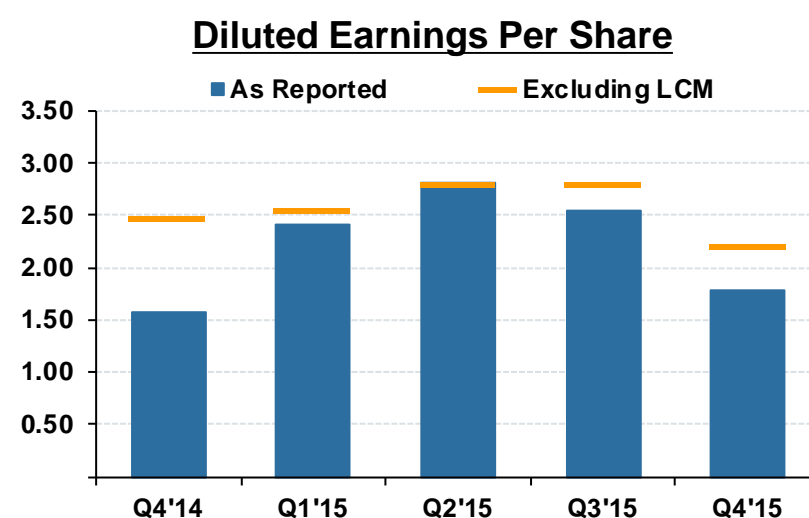
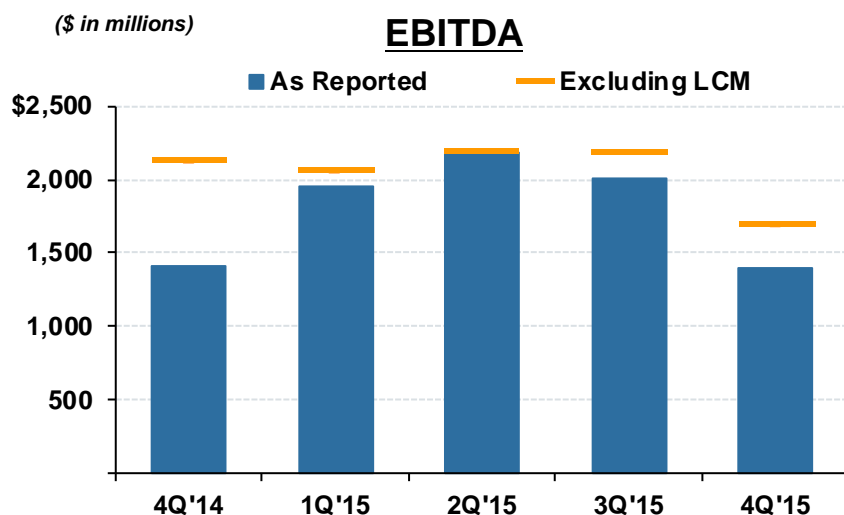
(2) Share repurchases ranked as a percentage of LTM Average Enterprise Value.

# Highlights

<i>(\$ in millions, except per share data)</i>	FY 2013 (As Reported)	FY 2014 (As Reported)	FY 2015 (As Reported)	FY 2014 (ex. LCM) <sup>(1)</sup>	FY 2015 (ex. LCM)
EBITDA	\$6,311	\$7,050	\$7,533	\$7,810	\$8,081
Income from Continuing Operations	\$3,860	\$4,172	\$4,479	\$4,655	\$4,830
Diluted Earnings (\$ / share) from Continuing Operations	\$6.76	\$8.00	\$9.60	\$8.92	\$10.35

## Record Annual EBITDA ex LCM: \$8.1 Billion

## 2015 Diluted EPS Growth ex LCM >15% vs. 2014



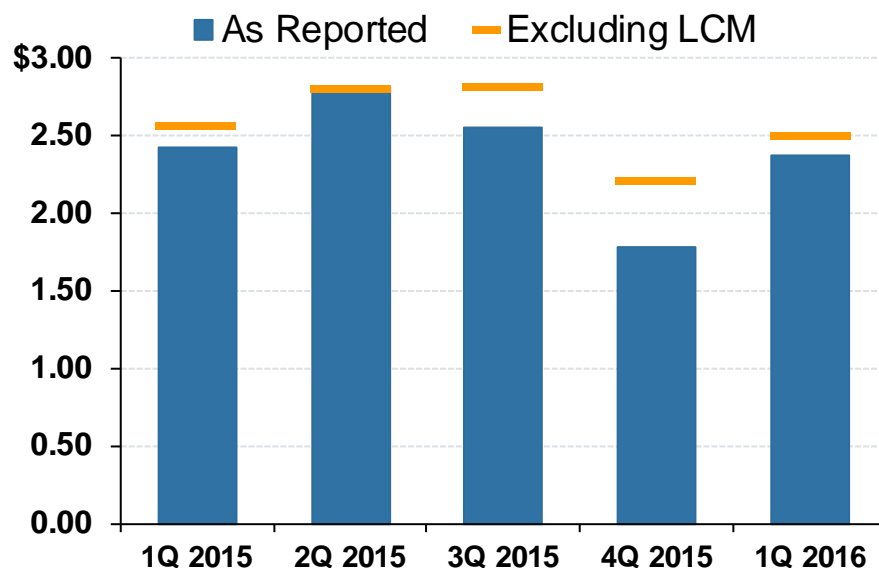
(1) LCM stands for "lower cost or market". Further detail regarding LCM adjustments can be found under "Information Related to Financial Measures."



# 1Q 2016 Highlights

(\$ in millions, except per share data)	As Reported			Excluding LCM <sup>(1)</sup>		
	1Q15	4Q15	1Q16	1Q15	4Q15	1Q16
EBITDA	\$1,952	\$1,394	\$1,807	\$2,044	\$1,678	\$1,875
Income from Continuing Operations	\$1,167	\$797	\$1,030	\$1,225	\$982	\$1,077
Diluted Earnings (\$ / share) from Continuing Operations	\$2.42	\$1.78	\$2.37	\$2.54	\$2.20	\$2.48

## Strong EPS Performance



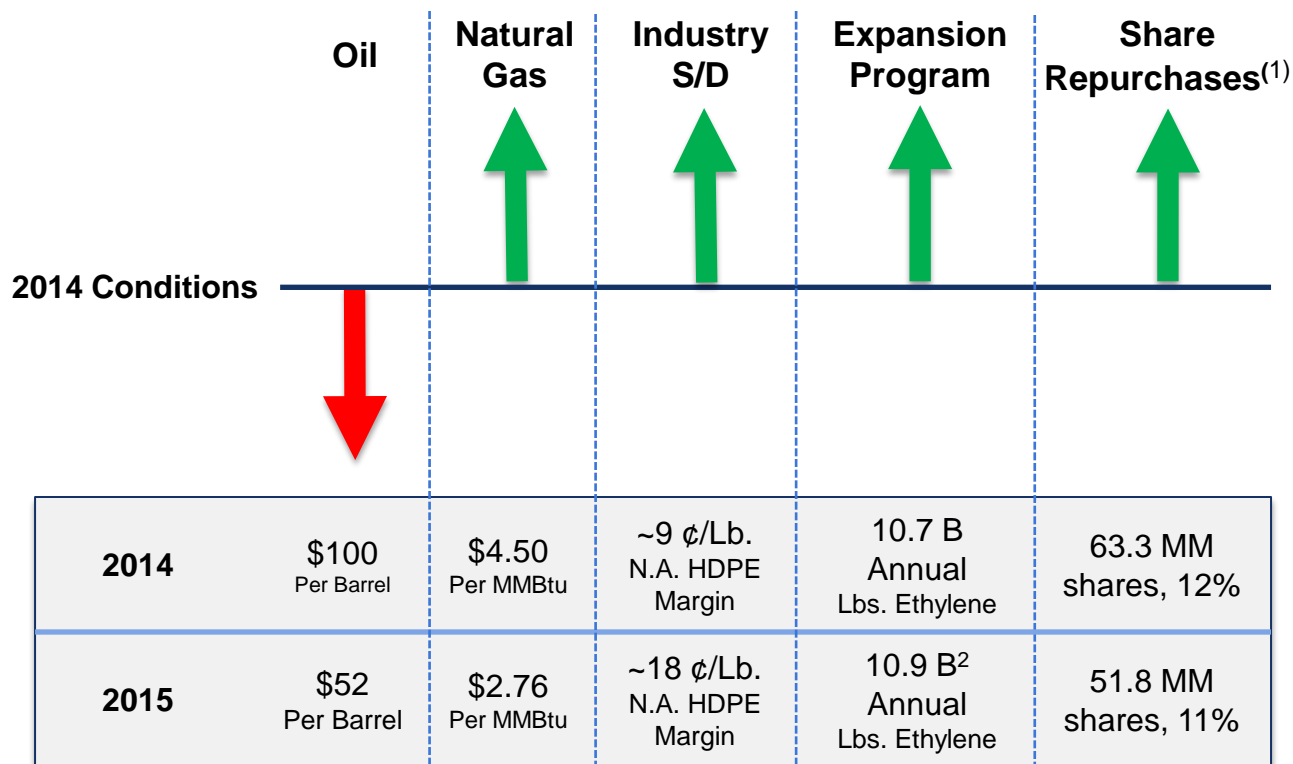
## Highlights

- Polyolefins capturing strong O&P chain margins
- Improving seasonal markets
- Completed refinery turnaround
- Completed sale of Argentine subsidiary Petroken with gain of \$78 million; Completed second India PP compounding acquisition (Zylog) during early April
- Issued €750 million six-year euro bonds at 1.875% rate
- \$1.3 billion in 1Q16 share repurchases and dividends

(1) LCM stands for "lower cost or market". Further detail regarding LCM adjustments can be found under "Information Related to Financial Measures."

Note: All results include \$78 million after-tax gain on sale of Petroken: \$57 million gain for O&P Americas for polypropylene assets and \$21 million gain for O&P EAI for compounding assets.

# Strong 2015 EPS Despite Oil Decline



EPS is supported by low U.S. natural gas prices, tightened market conditions, our expansion program, and share repurchases

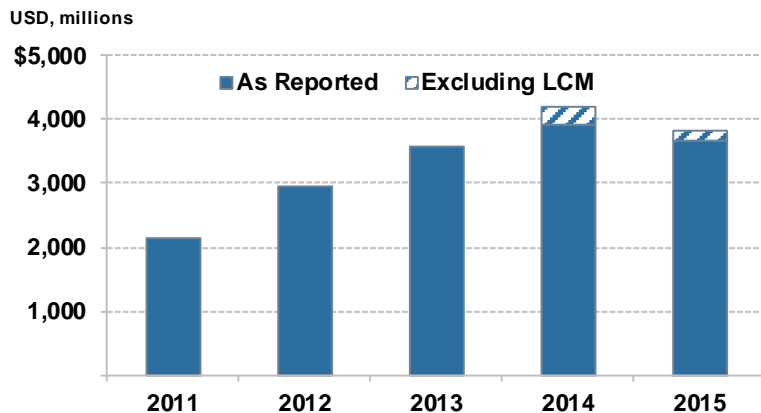
Source: LYB, IHS as of year end 2015.

(1) Share repurchase percentage is calculated off of the outstanding shares as of Dec. 31, 2013 and 2014, respectively.

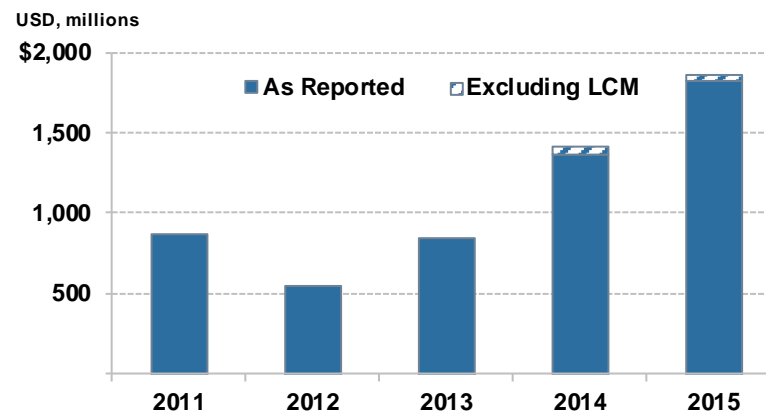
(2) Capacity for 2015 includes the full annual capacity addition of 250 MM pounds completed at our Channelview site during 2015.

# A High Performing Portfolio: EBITDA Across Time

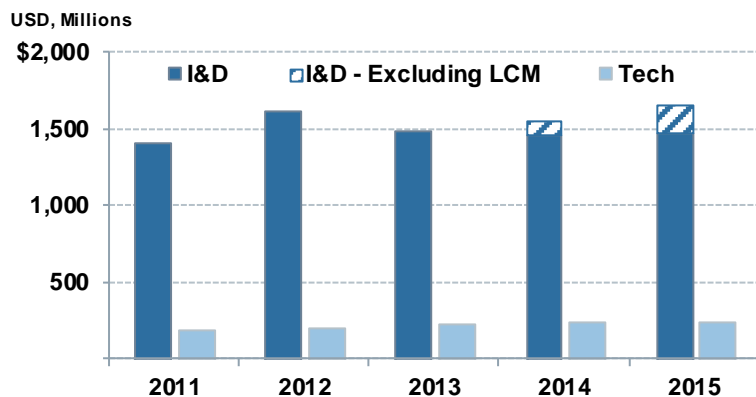
## Olefins & Polyolefins - Americas



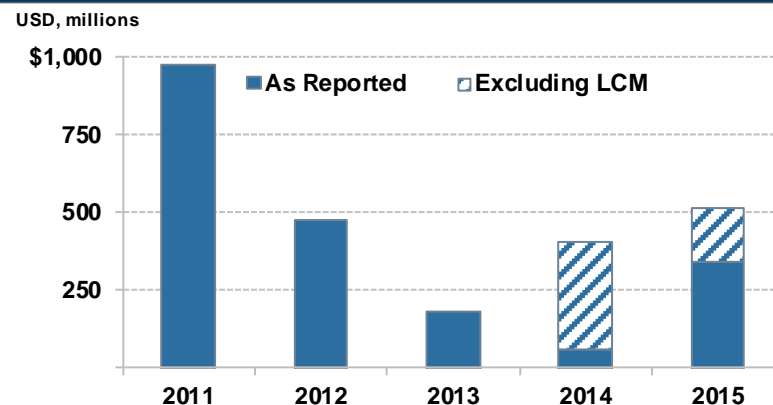
## Olefins & Polyolefins - EAI



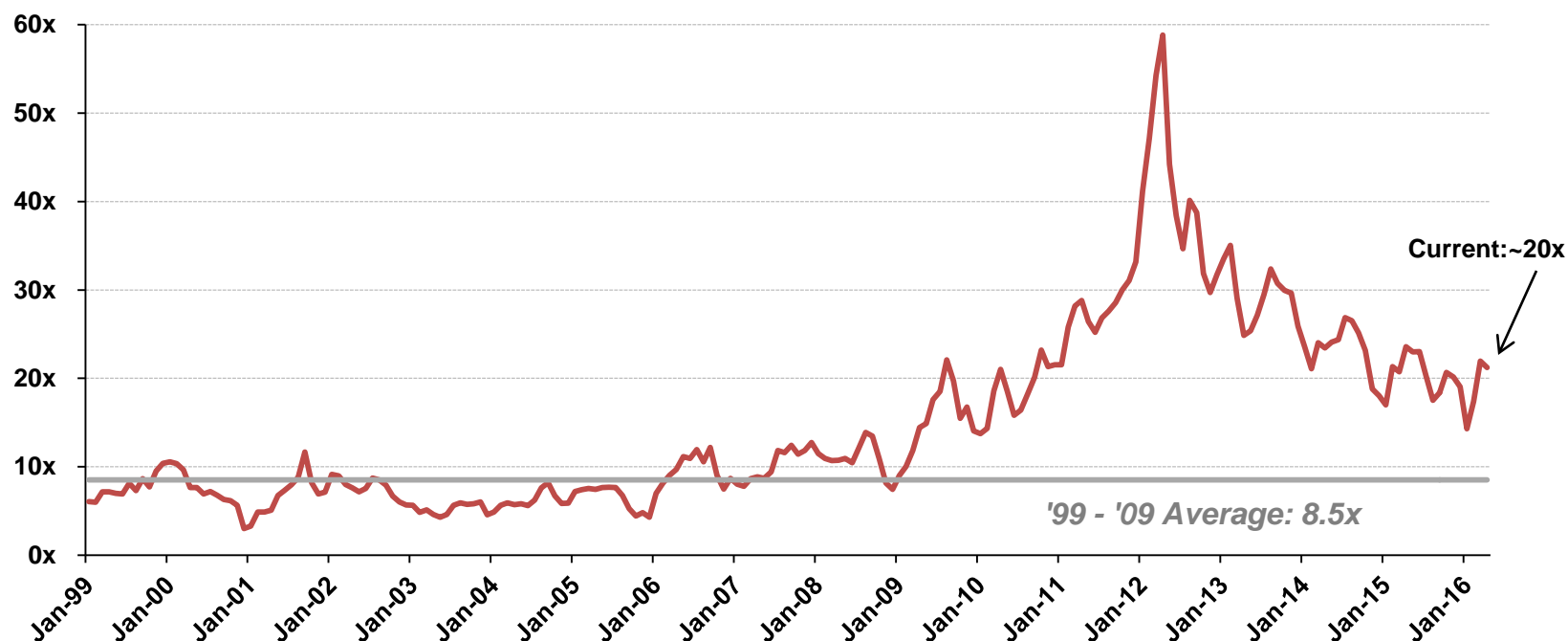
## Intermediates and Derivatives and Technology



## Refining



## Historic Oil/Gas Ratio



- Current oil to gas ratio remains healthy and well above the pre-shale average
- Historic equivalent value of crude oil to gas implies a price of ~ \$15-20 per barrel

Source: NYMEX, ICE.

# Status of Growth Projects

	Project	Scope (million Lbs.)	Start-up	Cost (\$ million)	Potential EBITDA <sup>(1)</sup> (\$ million / year)	
					2011-15 Avg. Margins	2015 Margins
<b>COMPLETED</b>	Increase Ethane Capability	500	2012	~\$25	\$60 – 80	\$30 – 50
	Midwest Ethylene / PE	120	2012	~\$25	\$30 – 40	\$20 – 30
	EU Butadiene Expansion <sup>(2)</sup>	155	Mid 2013	~\$100	\$40 – 50	\$40 – 50
	Methanol Restart	250 MM Gal.	Dec. 2013	~\$180	\$210 – 230	\$170 – 190
	Matagorda PE Debottleneck	220	Early 2014	~\$20	\$5 – 10	\$40 – 50
	La Porte Ethylene Expansion	800	Mid 2014	~\$500	\$190 – 250	\$150 – 220
	Channelview Ethylene Expansion (I)	250	Mid 2015	~\$200	\$60 – 80	\$50 – 70
	<b>Completed Projects</b>			<b>~\$1,050</b>	<b>\$595 – 740</b>	<b>\$500 – 660</b>
<b>PROGRESSING</b>	Corpus Christi Ethylene Expansion	800	Q3 2016	In Progress	\$190 – 250	\$150 – 220
	New PO/TBA Plant	1,000 PO 29 MBPD Oxyfuels	2020	In Progress	\$500 – 550	\$450 – 500
	PE Capacity	1000	2019 / 2020	In Progress	\$25 – 75	\$150 - 200
	<b>Remaining Projects</b>				<b>\$715 – 875</b>	<b>\$750 – 920</b>
	<b>Total</b>				<b>\$1,310 – 1,615</b>	<b>\$1,250 – 1,580</b>

Source: LYB, Chemical Data and IHS.

(1) Potential EBITDA assumes 100% utilization and is based on third party consultant industry margins for 2015, and 2011-2015 average as of January 13, 2016.

(2) The EU Butadiene expansion benefits from a fixed margin and thus the potential EBITDA benefit has not changed.

This presentation makes reference to certain “non-GAAP” financial measures as defined in Regulation G of the U.S. Securities Exchange Act of 1934, as amended. The non-GAAP measures we have presented include income from continuing operations excluding LCM, diluted earnings per share excluding LCM, EBITDA and EBITDA excluding LCM. LCM stands for “lower of cost or market,” which is an accounting rule consistent with GAAP related to the valuation of inventory. Our inventories are stated at the lower of cost or market. Cost is determined using the last-in, first-out (“LIFO”) inventory valuation methodology, which means that the most recently incurred costs are charged to cost of sales and inventories are valued at the earliest acquisition costs. Market is determined based on an assessment of the current estimated replacement cost and selling price of the inventory. In periods where the market price of our inventory declines substantially, cost values of inventory may be higher than the market value, which results in us writing down the value of inventory to market value in accordance with the LCM rule, consistent with GAAP. This adjustment is related to our use of LIFO accounting and the recent decline in pricing for many of our raw material and finished goods inventories. We report our financial results in accordance with U.S. generally accepted accounting principles, but believe that certain non-GAAP financial measures, such as EBITDA and earnings and EBITDA excluding LCM, provide useful supplemental information to investors regarding the underlying business trends and performance of the company's ongoing operations and are useful for period-over-period comparisons of such operations. Non-GAAP financial measures should be considered as a supplement to, and not as a substitute for, or superior to, the financial measures prepared in accordance with GAAP.

EBITDA, as presented herein, may not be comparable to a similarly titled measure reported by other companies due to differences in the way the measure is calculated. We calculate EBITDA as income from continuing operations plus interest expense (net), provision for (benefit from) income taxes, and depreciation & amortization. EBITDA should not be considered an alternative to profit or operating profit for any period as an indicator of our performance, or as an alternative to operating cash flows as a measure of our liquidity. We have also presented financial information herein exclusive of adjustments for LCM.

While we also believe that free cash flow is a measure commonly used by investors. Free cash flow, as presented herein, may not be comparable to similarly titled measures reported by other companies due to differences in the way the measures are calculated. For purposes of this presentation, free cash flow means net cash provided by operating activities minus capital expenditures.

Reconciliations for our non-GAAP measures can be found on the following slides.



- **COGS:** Cost of Goods Sold
- **D&A:** Depreciation and Amortization
- **EBITDA (as used for peers):** Earnings before Interest, Taxes and Depreciation and Amortization = Revenue - COGS - SG&A - R&D + D&A + Equity Income
- **EV:** Enterprise Value calculated using the average daily closing share price for the last 12 months ended December 31, 2015 multiplied by the common shares outstanding as of December 31, 2015.
- **Free Cash Flow** = Cash from Operations – Capital Expenditures
- **R&D:** Research and Development
- **SG&A:** Sales, General and Administrative

## Peer Groups

- **Americas Peers:** Dow, CP Chemical, Ineos and Westlake
- **EAI Peers:** Borealis and Ineos
- **Large Peers:** Dow, DuPont
- **Other Peers:** Celanese, Eastman, Huntsman and Westlake
- **Peer Companies:** Celanese, Dow, DuPont, Eastman, Huntsman and Westlake
- **U.S. Public Petrochemical Peers:** Celanese, Dow, Eastman, Huntsman and Westlake

\* See reconciliations at end of presentation.

# EBITDA Excluding LCM Adjustments 2011 - 2015



## Reconciliation of EBITDA Excluding LCM Adjustments to EBITDA - 2011 Through 2015

For the Twelve Months Ended December 31,

**In Million of Dollars**

### EBITDA Excluding LCM Adjustments:

	2011	2012	2013	2014	2015
Olefins & Polyolefins - Americas	\$ 2,137	\$ 2,968	\$ 3,573	\$ 4,190	\$ 3,821
Olefins & Polyolefins - EAI	865	548	839	1,410	1,855
Intermediates & Derivatives	1,410	1,621	1,492	1,552	1,656
Refining	977	481	182	409	519
Technology	191	197	232	232	243
Other	(111)	(7)	(7)	17	(13)
Total	5,469	5,808	6,311	7,810	8,081

**Less:**

### LCM Adjustments:

Olefins & Polyolefins - Americas	-	-	-	279	160
Olefins & Polyolefins - EAI	-	-	-	44	30
Intermediates & Derivatives	-	-	-	93	181
Refining	-	-	-	344	177
Technology	-	-	-	-	-
Other	-	-	-	-	-
Total	-	-	-	760	548

### EBITDA:

Olefins & Polyolefins - Americas	2,137	2,968	3,573	3,911	3,661
Olefins & Polyolefins - EAI	865	548	839	1,366	1,825
Intermediates & Derivatives	1,410	1,621	1,492	1,459	1,475
Refining	977	481	182	65	342
Technology	191	197	232	232	243
Other	(111)	(7)	(7)	17	(13)
Total	\$ 5,469	\$ 5,808	\$ 6,311	\$ 7,050	\$ 7,533

# Net Income to EBITDA

## 2011 - 2015



### Reconciliation of Net Income to EBITDA

<u>In Million of Dollars</u>	For the Twelve Months Ended December 31,				
	2011	2012	2013	2014	2015
Net Income	\$ 2,140	\$ 2,834	\$ 3,853	\$ 4,168	\$ 4,474
(Income) Loss from Discontinued Operations	332	24	7	4	5
LCM Adjustments, After Tax	-	-	-	483	351
Income from Continuing Operations Excluding LCM Adjustments	2,472	2,858	3,860	4,655	4,830
Less:					
LCM Adjustments, After Tax	-	-	-	(483)	(351)
Income from Continuing Operations	2,472	2,858	3,860	4,172	4,479
Provision for Income Taxes	1,059	1,327	1,136	1,540	1,730
Depreciation and Amortization	931	983	1,021	1,019	1,047
Interest expense, net	1,007	640	294	319	277
Add:					
LCM Adjustments, Before Tax	-	-	-	760	548
EBITDA Excluding LCM Adjustments	5,469	5,808	6,311	7,810	8,081
Less:					
LCM Adjustments, Before Tax	-	-	-	760	548
EBITDA	\$ 5,469	\$ 5,808	\$ 6,311	\$ 7,050	\$ 7,533

# EBITDA Excluding LCM Adjustments to Reported EBITDA



## Reconciliation of EBITDA Excluding LCM Adjustments to EBITDA

In Millions of Dollars	Three Months Ended				Year Ended	Three Months Ended				Year Ended	Three Months Ended
	March 31, 2014	June 30, 2014	September 30, 2014	December 31, 2014	December 31, 2014	March 31, 2015	June 30, 2015	September 30, 2015	December 31, 2015	December 31, 2015	March 31, 2016
<b>EBITDA Excluding LCM Adjustments:</b>											
Olefins & Polyolefins - Americas	\$ 736	\$ 978	\$ 1,202	\$ 1,274	\$ 4,190	\$ 1,074	\$ 993	\$ 920	\$ 834	\$ 3,821	\$ 878
Olefins & Polyolefins - EAI	356	319	343	392	1,410	357	492	555	451	1,855	549
Intermediates & Derivatives	375	430	383	364	1,552	381	483	506	286	1,656	354
Refining	129	137	110	33	409	154	154	143	68	519	14
Technology	76	71	41	44	232	76	57	45	65	243	83
Other	(4)	6	1	14	17	2	(2)	13	(26)	(13)	(3)
Total	1,668	1,941	2,080	2,121	7,810	2,044	2,177	2,182	1,678	8,081	1,875
<b>Less:</b>											
<b>LCM Adjustments:</b>											
Olefins & Polyolefins - Americas	-	-	45	234	279	43	(21)	79	59	160	-
Olefins & Polyolefins - EAI	-	-	-	44	44	-	-	6	24	30	40
Intermediates & Derivatives	-	-	-	93	93	44	17	46	74	181	28
Refining	-	-	-	344	344	5	(5)	50	127	177	-
Technology	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	45	715	760	92	(9)	181	284	548	68
<b>EBITDA:</b>											
Olefins & Polyolefins - Americas	736	978	1,157	1,040	3,911	1,031	1,014	841	775	3,661	878
Olefins & Polyolefins - EAI	356	319	343	348	1,366	357	492	549	427	1,825	509
Intermediates & Derivatives	375	430	383	271	1,459	337	466	460	212	1,475	326
Refining	129	137	110	(311)	65	149	159	93	(59)	342	14
Technology	76	71	41	44	232	76	57	45	65	243	83
Other	(4)	6	1	14	17	2	(2)	13	(26)	(13)	(3)
Total	\$ 1,668	\$ 1,941	\$ 2,035	\$ 1,406	\$ 7,050	\$ 1,952	\$ 2,186	\$ 2,001	\$ 1,394	\$ 7,533	\$ 1,807

# Net Income to EBITDA



## Reconciliation of Net Income To EBITDA

	Three Months Ended				Year Ended	Three Months Ended				Year Ended	Three Months Ended
	March 31, 2014	June 30, 2014	September 30, 2014	December 31, 2014	December 31, 2014	March 31, 2015	June 30, 2015	September 30, 2015	December 31, 2015	December 31, 2015	March 31, 2016
<b><u>In Millions of Dollars</u></b>											
Net Income	\$ 944	\$ 1,176	\$ 1,257	\$ 791	\$ 4,168	\$ 1,164	\$ 1,329	\$ 1,186	\$ 795	\$ 4,474	\$ 1,030
(Income) Loss from Discontinued Operations	(1)	(3)	3	5	4	3	(3)	3	2	5	0
LCM Adjustments, After Tax	-	-	28	455	483	58	(6)	114	185	351	47
Income from Continuing Operations Excluding LCM Adjustments	943	1,173	1,288	1,251	4,655	1,225	1,320	1,303	982	4,830	1,077
Less:											
LCM Adjustments, After Tax	-	-	(28)	(455)	(483)	(58)	6	(114)	(185)	(351)	(47)
Income from Continuing Operations	943	1,173	1,260	796	4,172	1,167	1,326	1,189	797	4,479	1,030
Provision for Income Taxes	383	425	434	298	1,540	440	541	487	262	1,730	432
Depreciation and Amortization	256	254	262	247	1,019	287	247	248	265	1,047	268
Interest expense, net	86	89	79	65	319	58	72	77	70	277	77
Add:											
LCM Adjustments, Pre Tax	-	-	45	715	760	92	(9)	181	284	548	68
EBITDA Excluding LCM Adjustments	1,668	1,941	2,080	2,121	7,810	2,044	2,177	2,182	1,678	8,081	1,875
Less:											
LCM Adjustments, Pre Tax	-	-	(45)	(715)	(760)	(92)	9	(181)	(284)	(548)	(68)
EBITDA	\$ 1,668	\$ 1,941	\$ 2,035	\$ 1,406	\$ 7,050	\$ 1,952	\$ 2,186	\$ 2,001	\$ 1,394	\$ 7,533	\$ 1,807

# Diluted EPS from Continuing Operations ex. LCM to Diluted EPS from Continuing Operations



## Reconciliation of Diluted EPS from Continuing Operations Excluding LCM Adjustments to Diluted EPS from Continuing Operations

	For the Twelve Months Ended December 31,				
	2011	2012	2013	2014	2015
Diluted Earnings Per Share from Continuing Operations Excluding LCM Adjustments	\$ 4.32	\$ 4.96	\$ 6.76	\$ 8.92	\$ 10.35
Less:					
LCM Adjustments	-	-	-	0.92	0.75
Diluted Earnings Per Share from Continuing Operations	<u>\$ 4.32</u>	<u>\$ 4.96</u>	<u>\$ 6.76</u>	<u>\$ 8.00</u>	<u>\$ 9.60</u>

## Reconciliation of Diluted EPS from Continuing Operations Excluding LCM Adjustments to Diluted EPS from Continuing Operations

	Three Months Ended					
	December 31, 2014	March 31, 2015	June 30, 2015	September 30, 2015	December 31, 2015	March 31, 2016
Diluted Earnings Per Share Excluding LCM Adjustments	\$ 2.48	\$ 2.54	\$ 2.79	\$ 2.80	\$ 2.20	\$ 2.48
Less:						
LCM Adjustments	0.91	0.12	(0.02)	0.25	0.42	0.11
Diluted Earnings Per Share	<u>\$ 1.57</u>	<u>\$ 2.42</u>	<u>\$ 2.81</u>	<u>\$ 2.55</u>	<u>\$ 1.78</u>	<u>\$ 2.37</u>



# Free Cash Flow to Net Cash Provided by Operating Activities

## Reconciliation of Free Cash Flow to Net Cash Provided by Operating Activities

---

<u>In Million of Dollars</u>	For the Years Ended December 31,				
	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Free Cash Flow	\$ 1,810	\$ 3,727	\$ 3,274	\$ 4,549	\$ 4,402
Add:					
Capital Expenditures	1,050	1,060	1,561	1,499	1,440
Net Cash Provided by Operating Activities	<u>\$ 2,860</u>	<u>\$ 4,787</u>	<u>\$ 4,835</u>	<u>\$ 6,048</u>	<u>\$ 5,842</u>

---

# LYB Enterprise Value to EBITDA

## Calculation of Ratio of LYB Enterprise Value (EV) to EBITDA Excluding LCM

### In Million of Dollars except for common shares outstanding

Common Shares Outstanding, December 31, 2015	440,150,069
Multiplied by:	
Average Daily Closing Share Price, LTM December 31, 2015	<u>\$ 91.47</u>
Market Capitalization	\$ 40,261
Add:	
Current Maturities of Long-Term Debt	4
Short-Term Debt	353
Long-Term Debt	7,671
Less:	
Cash	924
Short-Term Investments	<u>1,064</u>
Net Debt	6,040
Non-Controlling Interests	<u>24</u>
Enterprise Value	\$ 46,325
Divided by:	
2015 EBITDA Excluding LCM	<u>\$ 8,081</u>
Ratio of Enterprise Value to EBITDA Excluding LCM	<u><u>5.7</u></u>

# Average Free Cash Flow as a Percent of EBITDA

## Reconciliation of Average Free Cash Flow (2011 through 2015) as a Percent of EBITDA Excluding LCM Adjustments

<b>In Million of Dollars</b>	<b>For the Years Ended December 31,</b>					<b>Average</b>
	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2011 - 2015</b>
Net Cash Provided by Operating Activities	\$ 2,860	\$ 4,787	\$ 4,835	\$ 6,048	\$ 5,842	\$ 4,874
Less:						
Capital Expenditures	1,050	1,060	1,561	1,499	1,440	1,322
Free Cash Flow	<u>\$ 1,810</u>	<u>\$ 3,727</u>	<u>\$ 3,274</u>	<u>\$ 4,549</u>	<u>\$ 4,402</u>	<u>\$ 3,552</u>
 EBITDA ex LCM	 <u>\$ 5,469</u>	 <u>\$ 5,808</u>	 <u>\$ 6,311</u>	 <u>\$ 7,810</u>	 <u>\$ 8,081</u>	 <u>\$ 6,696</u>
Free Cash Flow as a Percent of EBITDA	<u>33%</u>	<u>64%</u>	<u>52%</u>	<u>58%</u>	<u>54%</u>	<u>53%</u>

# Free Cash Flow to Average Enterprise Value

## Calculation of Ratio of Free Cash Flow to Average Enterprise Value (EV)

### In Million of Dollars except for common shares outstanding

Free Cash Flow (2011-2015) \$ 17,762

### Average 2015 Enterprise Value

Common Shares Outstanding, December 31, 2015 440,150,069

Multiplied by:

Average Daily Closing Share Price, 2015 91.47

Market Capitalization \$ 40,261

Add:

Current Maturities of Long-Term Debt 4

Short-Term Debt 353

Long-Term Debt 7,671

Less:

Cash 924

Short-Term Investments 1,064

Net Debt 6,040

Non-Controlling Interests 24

Enterprise Value \$ 46,325

Ratio of Free Cash Flow to Average Enterprise Value 38%

# Free Cash Flow as a Percent of Market Capitalization



## Reconciliation of Free Cash Flow as a Percent of Market Capitalization - 2011 Through 2015

	For the Years Ended December 31,					Average
	2011	2012	2013	2014	2015	2011 - 2015
<b>In Million of Dollars</b>						
Net Cash Provided by Operating Activities	\$ 2,860	\$ 4,787	\$ 4,835	\$ 6,048	\$ 5,842	\$ 4,874
Less:						
Capital Expenditures	1,050	1,060	1,561	1,499	1,440	1,322
Free Cash Flow	<u>\$ 1,810</u>	<u>\$ 3,727</u>	<u>\$ 3,274</u>	<u>\$ 4,549</u>	<u>\$ 4,402</u>	<u>\$ 3,552</u>
Market Capitalization at December 31, 2015						<u>\$ 40,261</u>
Free Cash Flow as a Percent of Market Capitalization						<u>9%</u>

# Return on Invested Capital

## Calculation of LYB Return on Invested Capital (ROIC)

<u>In Million of Dollars</u>	<u>Years Ended December 31,</u>	
	<u>2014</u>	<u>2015</u>
Income from Continuing Operations		\$ 4,479
Add:		
Interest Expense, Net		277
Effective Tax Rate		27.9%
Interest Expense, Net, After Tax		200
Adjusted Income from Continuing Operations		4,679
Divided by:		
Average Invested Capital:		
Property, Plant & Equipment, Net	\$ 8,758	8,991
Current Assets	11,645	9,789
Less:		
Current Liabilities	5,437	4,349
Cash and Cash Equivalents	1,031	924
	\$ 13,935	13,507
Average Invested Capital		\$ 13,721
Return on Invested Capital		34%

# Dividends and Share Repurchases

## Schedule of Spending for Dividends and Share Repurchases

<u>In Millions of Dollars</u>	<u>Years Ended December 31,</u>			
	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Interim Dividends	\$ 833	\$ 1,127	\$ 1,403	\$ 1,410
Special Dividends	1,582	-	-	-
Total Dividends	2,415	1,127	1,403	1,410
Repurchases of Ordinary Shares	-	1,949	5,788	4,656
Total	<u>\$ 2,415</u>	<u>\$ 3,076</u>	<u>\$ 7,191</u>	<u>\$ 6,066</u>

# Ratio of Shareholder Returns of Capital to Average Enterprise Value



## Calculation of Ratio of Shareholder Returns of Capital (2011 - 2015) to Average Enterprise Value (EV)

### In Million of Dollars except for share data

#### Shareholder Returns of Capital (2011 - 2015)

Share Repurchases	\$	12,393
Special Dividends		4,162
Interim/Regular Dividends		<u>5,086</u>
		21,641

#### Average 2015 Enterprise Value

Common Shares Outstanding, December 31, 2015		440,150,069
Multiplied by:		
Average Daily Closing Share Price, 2015		<u>91.47</u>
Market Capitalization	\$	40,261
Add:		
Current Maturities of Long-Term Debt		4
Short-Term Debt		353
Long-Term Debt		7,671
Less:		
Cash		924
Short-Term Investments		<u>1,064</u>
Net Debt		6,040
Non-Controlling Interests		<u>24</u>
Enterprise Value	\$	<u>46,325</u>

#### Ratio of Shareholder Returns of Capital (2011 - 2015) to Average Enterprise Value

Share Repurchases		27%
Special Dividends		9%
Interim/Regular Dividends		<u>11%</u>
Total		<u>47%</u>



# EBITDA Excluding LCM per Average Pound of Ethylene Capacity



## Reconciliation of EBITDA Excluding LCM per Average Pound of Ethylene Capacity

<u>In Million of Dollars Unless Otherwise Indicated</u>	For the Years Ended December 31,				
	2011	2012	2013	2014	2015
EBITDA Excluding LCM:					
O&P–Americas	\$ 2,137	\$ 2,968	\$ 3,573	\$ 4,190	\$ 3,821
O&P–EAI	865	548	839	1,410	1,855
Average Annual Ethylene Capacity (Millions of Pounds):					
O&P–Americas	9,590	9,750	9,780	10,070	10,733
O&P–EAI	4,829	4,829	4,829	4,829	4,829
EBITDA Excluding LCM per Average Pound of Ethylene Capacity:					
O&P–Americas	22.3¢	30.4¢	36.5¢	41.6¢	35.6¢
O&P–EAI	17.9¢	11.3¢	17.4¢	29.2¢	38.4¢