



## 2015 Investor Day

April 29, 2015

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### Agenda

7:30	Breakfast	Management Team
8:30	Welcome and Agenda	Doug Pike <i>VP, Investor Relations</i>
8:35	A Strong Foundation: The Right Pieces in the Right Places	Bob Patel <i>CEO</i>
9:05	Out-Sized Performance in Perspective	Sergey Vasnetsov <i>SVP, Strategic Planning and Transactions</i>
9:35	Q&A	Bob Patel and Sergey Vasnetsov
9:50	Break	
10:00	Olefins and Polyolefins Technology	Tim Roberts <i>EVP, Global Olefins and Polyolefins</i>
10:45	Intermediates & Derivatives	Pat Quarles <i>EVP, Intermediates &amp; Derivatives and Supply Chain</i>
11:10	Refining and Projects	Kevin Brown <i>EVP, Refining and Manufacturing</i>
11:30	Concluding Remarks	Bob Patel <i>CEO</i>
12:00	Q&A	Management Team
12:30 – 1:30	Lunch	Management Team

# 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 cyclicality 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 and changes in laws, regulations or treaties, 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, 2014, 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.

Reconciliations and other information concerning our non-GAAP measures can be found in the Appendix to this presentation or on our website at [www.lyb.com/investorrelations](http://www.lyb.com/investorrelations).



## A Strong Foundation: The Right Pieces in the Right Places

Bob Patel

Chief Executive Officer

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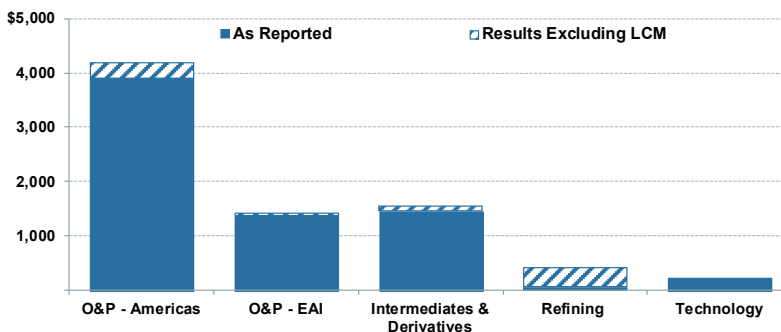
## 2014 Characterized by Record Results

### EBITDA History

<i>(\$ in millions, except per share data)</i>	FY 2013	FY 2014 <sup>(1)</sup> (ex. LCM)	Y-o-Y Growth %
EBITDA	\$6,311	\$7,810	24%
Income from Continuing Operations	\$3,860	\$4,655	21%
Diluted EPS from Continuing Operations	\$6.76	\$8.92	32%

### 2014 Segment EBITDA

USD, millions



(1) LCM stands for "low er of cost or market." An explanation of LCM and why we have excluded it from our financial information in this presentation can be found in the appendix of this presentation under "Information Related to Financial Measures."

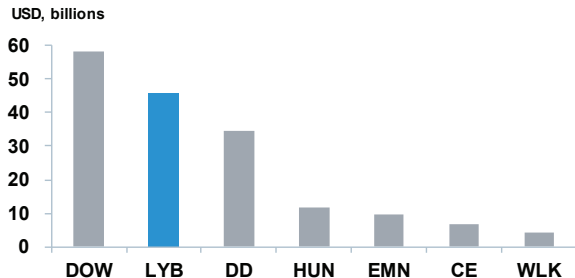
### 2014 Key Achievements

- Record Earnings and Cash Flow
- Repurchased 63 million shares, or 11.5%, for \$5.8 billion
- Increased quarterly per share dividend by 17%
- Paid dividends of \$1.4 billion
- Completed La Porte ethylene expansion

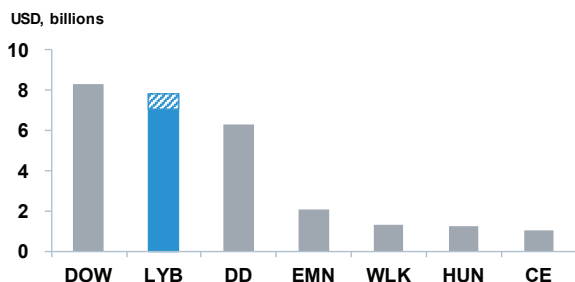
# World-Class Scale with Leading Market Positions



## 2014 LYB vs. Peers (Revenue)



## 2014 LYB vs. Peers (EBITDA)<sup>(1)</sup>



Source: Capital IQ, IHS

(1) LYB EBITDA excludes the LCM impact. Peer group EBITDA is as reported by Capital IQ and could include adjustments and therefore not be on the same basis.

Note: Positions based on LyondellBasell wholly owned capacity and pro rata share of JV capacities as of December 31, 2014.

## Products

### Chemicals

Ethylene	#5
Propylene	#6
Propylene Oxide	#2

### Polymers

Polyolefins (PE + PP)	#3
Polypropylene	#1
Polyethylene	#5
Polypropylene Compounds	#1

### Refining & Oxyfuels

Oxyfuels	#1
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### Technology and R&D

Polyolefins Licensing	#3
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# Progress Since March 2013 Investor Day



FY 2012		FY 2014
\$5.8	<b>EBITDA (\$B)</b> +34%	\$7.8 <sup>(1)</sup>
\$4.96	<b>Diluted EPS</b> +80%	\$8.92 <sup>(1)</sup>
\$1.45 <sup>(2)</sup>	<b>Annual Dividend per Share</b> +86%	\$2.70
575	<b>Shares Outstanding (MM)</b> 91 Million Shares Repurchased \$7.7 billion	487
16.2	<b>Global Ethylene Capacity</b> (B pounds) +6%	17.2
Growth Program Outlined	<b>Completed Growth Projects</b>	Methanol Plant Restarted Matagorda PE Expansion La Porte Ethylene Expansion Europe BD Expansion Midwest C2/PE Expansion

(1) Excludes the impact of the LCM adjustment.

(2) Excludes a special dividend of \$2.75 per share paid on 12/11/12.

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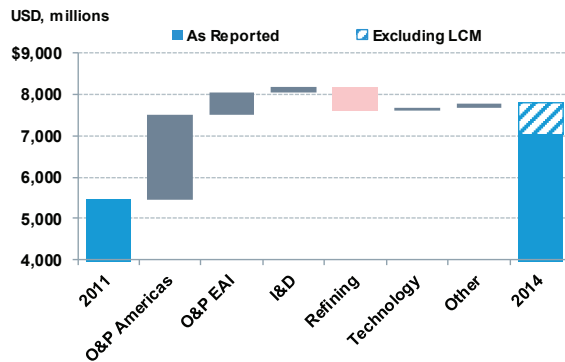
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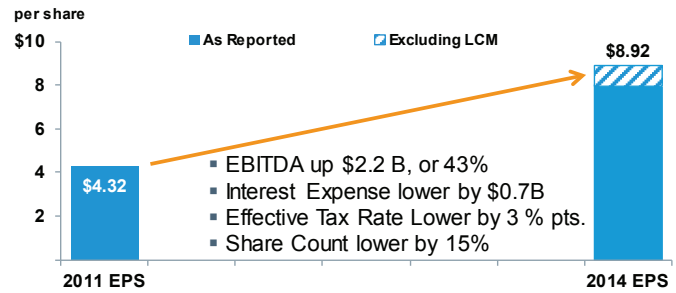
# Segment and Corporate Actions Have Increased EPS



## EBITDA Bridge<sup>(1)</sup> 2011 - 2014



## EPS Bridge<sup>(2)</sup> 2011 - 2014



### Drivers of EBITDA Increase:

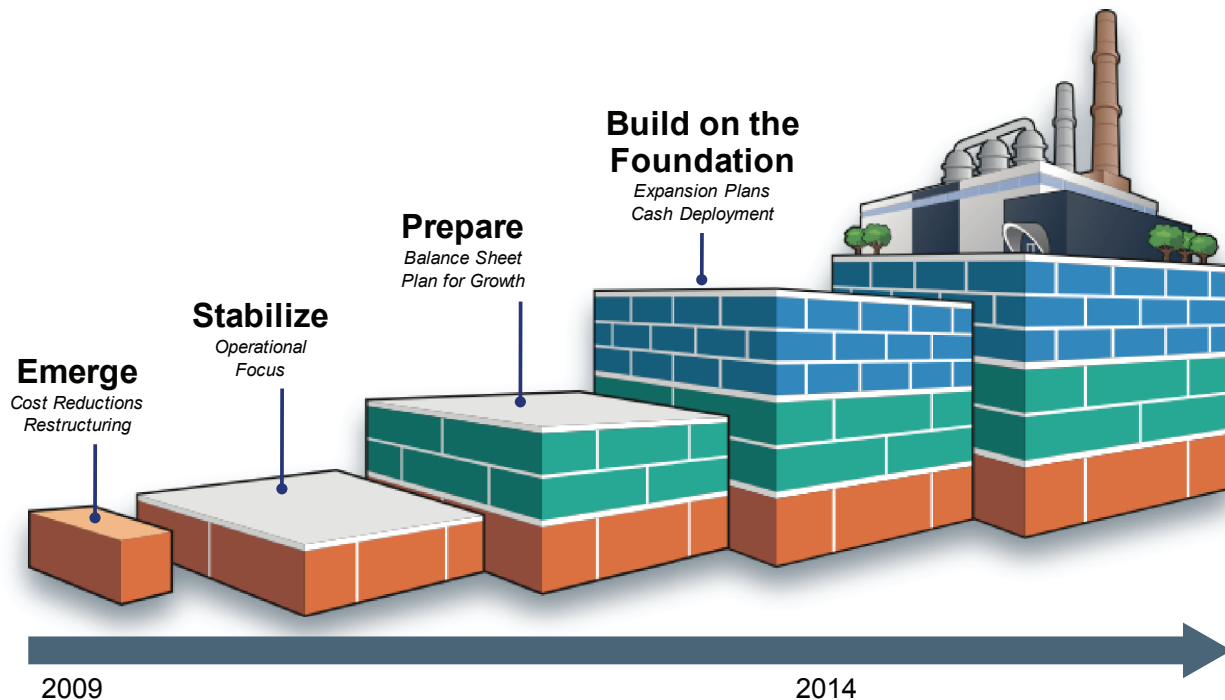
O&P Americas	O&P EAI	I&D	Refining
<ul style="list-style-type: none"> <li>Oil to gas ratio</li> <li>Feedstock Flexibility</li> <li>Capacity Additions</li> <li>Reliability</li> </ul>	<ul style="list-style-type: none"> <li>Feedstock Flexibility</li> <li>Restructuring</li> <li>Reliability + Operating Rates</li> </ul>	<ul style="list-style-type: none"> <li>Methanol Restart</li> <li>Oil to Gas Ratio</li> </ul>	<ul style="list-style-type: none"> <li>2011 crude oil purchasing gains</li> <li>Operating flexibility</li> </ul>

(1) EBITDA excludes the impact of LCM in the year 2014.  
 (2) 2014 EPS is adjusted for the impact of the LCM adjustment.

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# We Have Built a Solid Foundation



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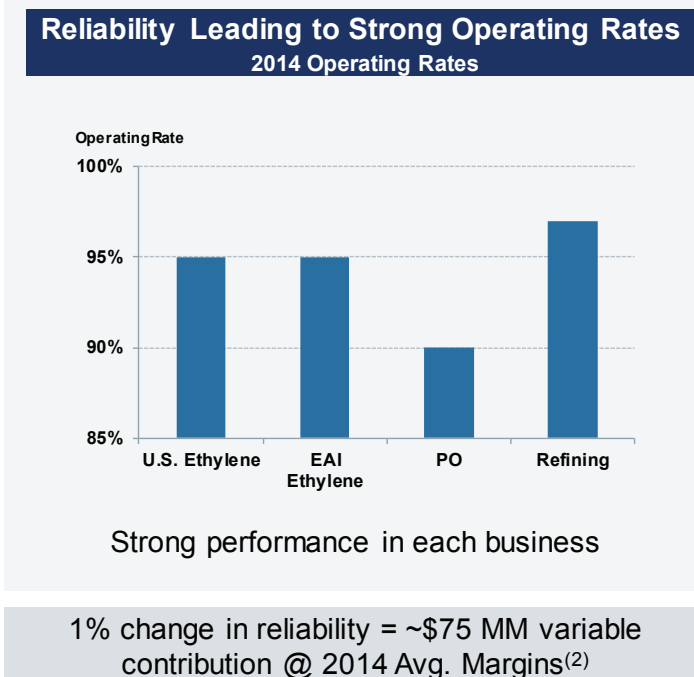
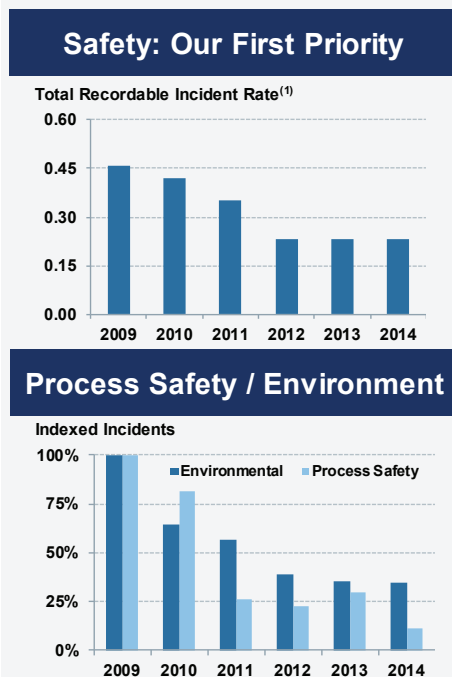


## Foundation Elements



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## Safety, Operational Excellence, and Reliability



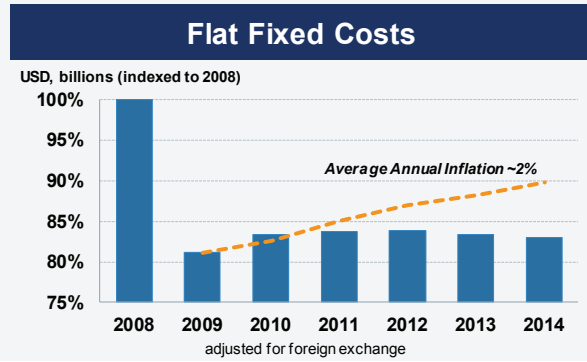
Source: Internal LYB estimates, IHS

(1) Injuries per 200,000 hours. Includes employees and contractors.

(2) Calculated at average 2014 variable margins for U.S. and European ethylene, Propylene Oxide, PO, MTBE, and Refining.



# Industry-Leading Cost Discipline



- Benchmarking focus
- Rigorous cost analysis
- Absorbing inflation: ~\$300 MM in cost offsets since 2009



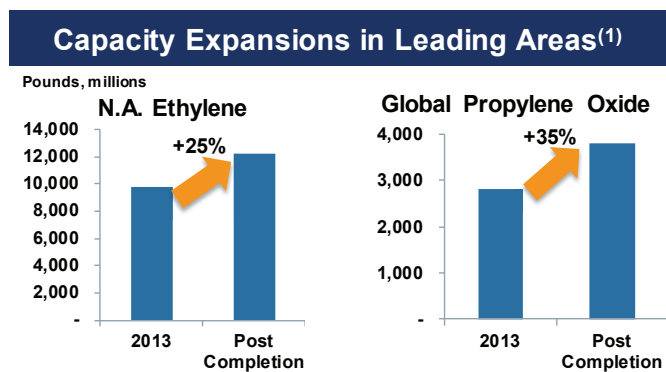
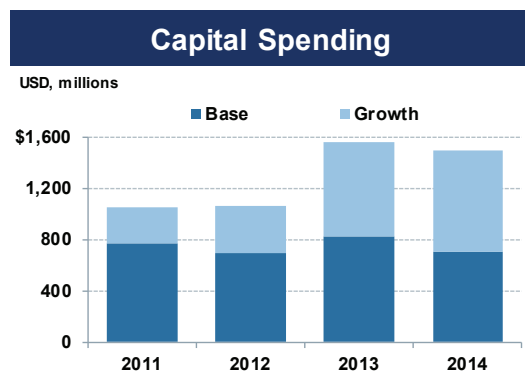
- Efficiency improvements have resulted in lower headcount
- A highly productive team in a performance driven culture

Source: LYB

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# Investing in Areas of Sustainable Strength



Source: LYB La Porte Ethylene Expansion  
 (1) Includes LYB owned capacity, including proportional JV share.



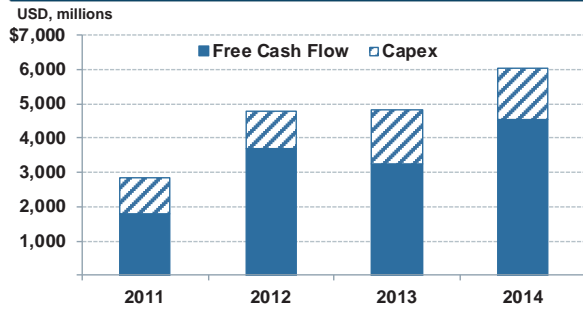
Completed La Porte Ethylene Furnace

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# Solid Financial Foundation

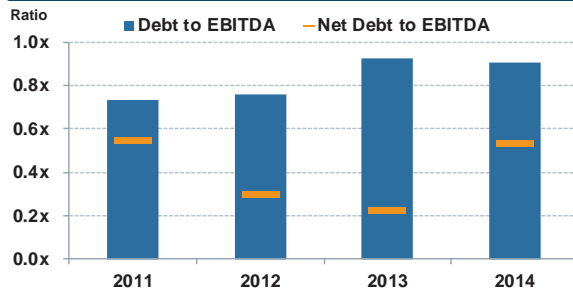


## Cash from Operations

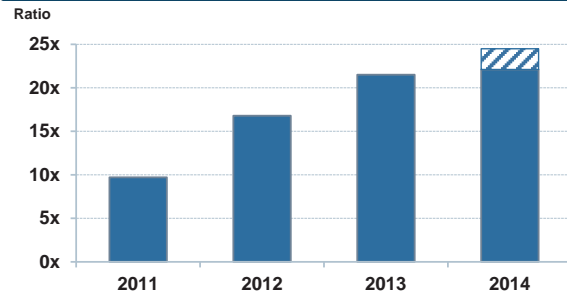


- BBB+ / Baa1 Corporate Rating
- Debt:
  - Avg. Term: 12.6 years
  - Average Coupon: 5.3%
- Industry leading shareholder returns
- Flexibility for the future

## Debt to EBITDA<sup>(1)</sup>



## EBITDA / Net Interest



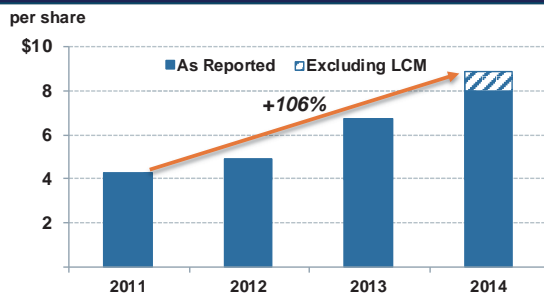
Source: LYB  
 (1) Excludes the impact of the LCM adjustment in 2014.  
 Notes: Free Cash Flow = Net Cash Provided by Operating Activities – Capital Expenditures.

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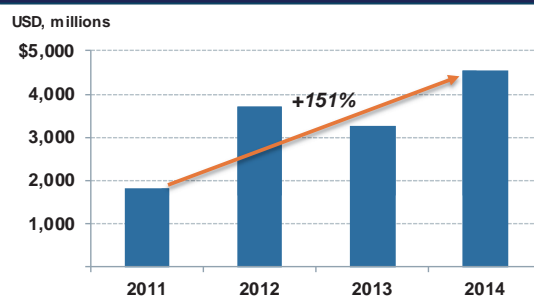
# Efficiently Generating and Deploying Cash



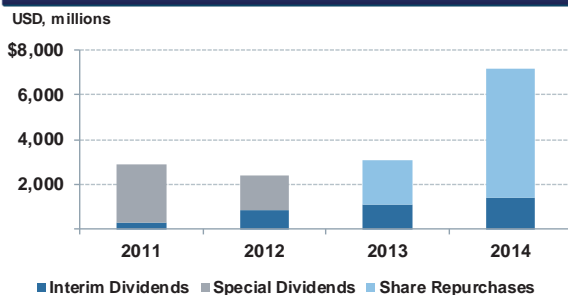
## Earnings Per Share<sup>(1)</sup>



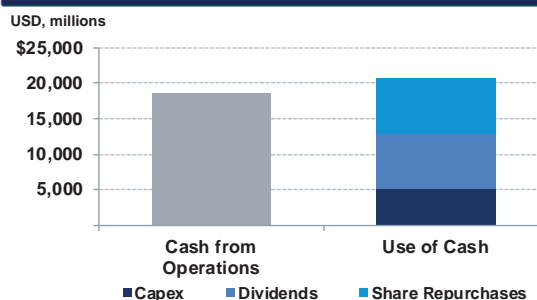
## Free Cash Flow<sup>(2)</sup>



## Dividends and Share Repurchases



## 2011 – 2014 Cash Deployment



(1) Represents diluted earnings per share from continuing operations.  
 (2) Free Cash Flow = Net Cash Provided by Operating Activities – Capital Expenditures.

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# Cash Deployment Hierarchy is Unchanged



	2014	Comments
<b>Foundation</b> Base Capex Interest Expense Interim Dividend	~ \$700 million	<ul style="list-style-type: none"> <li>First priorities for cash</li> </ul>
	~ \$350 million	
	~ \$1.4 billion	<ul style="list-style-type: none"> <li>Fund through the cycle with cash flow from operations</li> </ul>
<b>Discretionary Opportunities</b> Growth Capex Share Repurchases / Special Dividend / Acquisitions	~ \$800 million	<ul style="list-style-type: none"> <li>High-return in advantaged businesses</li> </ul>
	Balance of cash generated ~ \$3 billion	<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

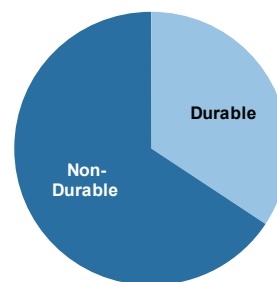
# Geography and End Uses Provide Balance



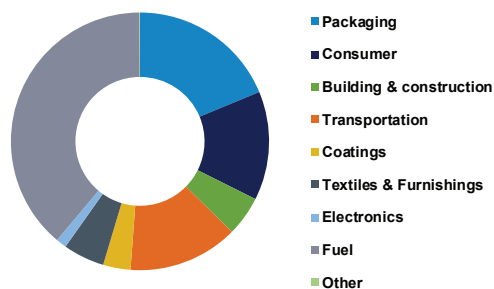
**Geographic Diversity: 2014 Revenue**



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



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



- Earnings weighted toward North America where LYB has advantaged positions
- Revenue weighted toward non-durable goods providing less volatility

Source: Internal LYB Estimates  
(1) Based on 2012 year end revenues.



# Portfolio Stability



Portfolio % at 2014 EBITDA	Examples	Near-Term Trend	Mid-Long Term Trend
<p>Cyclical</p>	<ul style="list-style-type: none"> <li>Ethylene (naphtha)</li> <li>PE – Blow molding</li> <li>PP – Homopolymer</li> <li>Refining</li> </ul>	<ul style="list-style-type: none"> <li>Tight polyolefins markets</li> </ul>	
<p>U.S. Shale Advantage</p>	<ul style="list-style-type: none"> <li>Ethylene (ethane)</li> <li>Oxyfuels</li> <li>Methanol</li> </ul>	<ul style="list-style-type: none"> <li>Volatility driven by oil price</li> <li>U.S. remains advantaged</li> </ul>	
<p>Differentiated / Stable</p>	<ul style="list-style-type: none"> <li>Propylene Oxide</li> <li>Differentiated PE/PP</li> <li>Catalloy &amp; PB-1</li> <li>PP Compounds</li> <li>Technology Segment</li> </ul>	<ul style="list-style-type: none"> <li>Steady volumes, robust profit margin, high return on capital</li> </ul>	

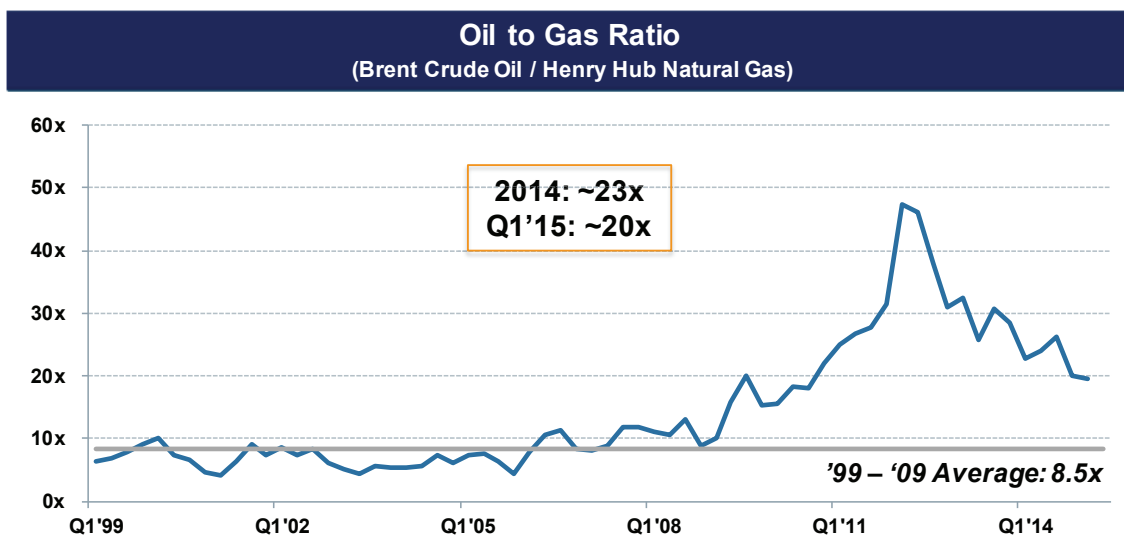
- Differentiated businesses provide a solid foundation
- Cyclical products represent a minority of 2014 earnings

Source: Internal LYB Estimates

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# Oil to Gas Ratio Continues to Benefit North America



- Current oil to gas ratio, while lower, remains significant
- Historic equivalent value of crude oil to gas implies an oil price of ~\$15-30 per barrel

Source: NYMEX and ICE. Data as of 3/31/15.

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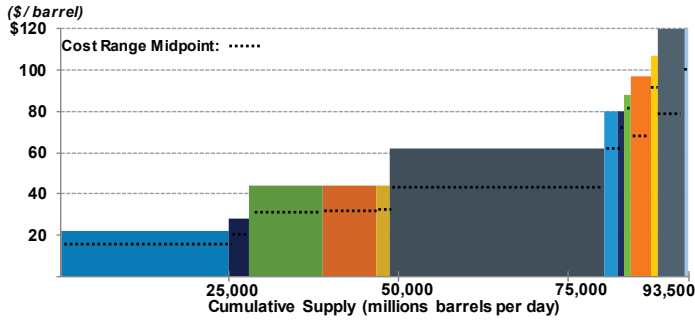
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# Oil Market Outlook: Mid-Long Term Full Costs Will Drive Pricing



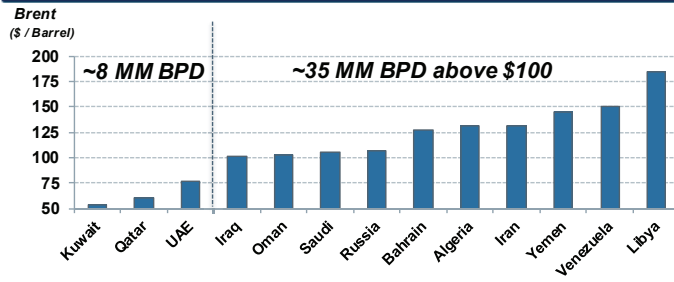
## Cost of Crude Oil Production by Region/Field



## Global Oil Industry (MM BPD)

- Market Size: ~93
- Current S/D Imbalance: 1-2
- Growth Rate: 1-1.5
- Excess Capacity: ~5
- Est. Decline Rate: 5-6

## Breakeven Oil Price to Balance Budgets



Source: IHS, Citi, Internal LYB Estimate

## LYB View

- Near Term: Incremental Production Cost
  - Swing producers drive price: U.S. Shale, Saudi Arabia
- Mid-Long Term: Full Production Cost
  - Upper right side of the curve will drive price

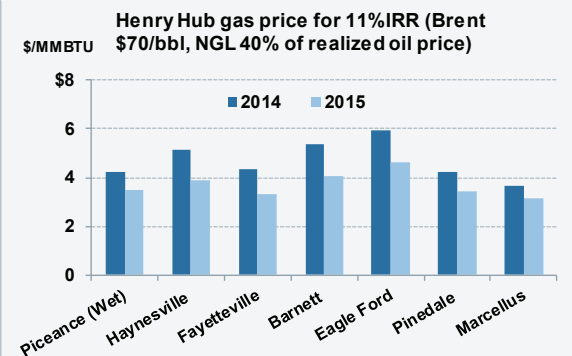
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# Technology Advancements Have Reduced U.S. Natural Gas Production Costs



## Basin Economics



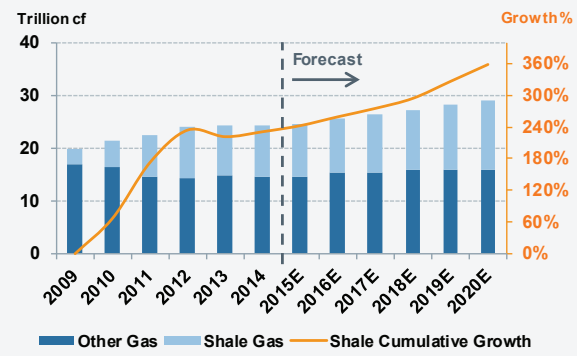
## Eagle Ford Technology Improvement

- Well Spacing ↓ 81%
- Frac Stages ↑ 89%
- Lateral Length ↑ 67%

More production per lease

Source: Goldman Sachs Equity Research, EIA, Enterprise Product Partners L.P.

## Shale Provides ~1/3 of U.S. Natural Gas



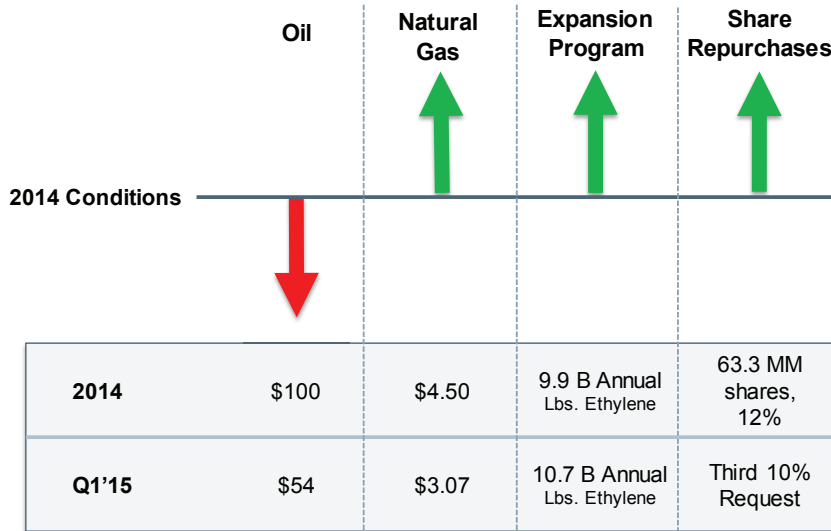
## LYB View

- Prior View:
  - Plenty of natural gas at \$4-5/mmbtu
- Current View:
  - Improvements in technology, infrastructure and cost reductions have lowered the mid to long-term price outlook to \$3-4/mmbtu

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# Strong 2015 EPS Potential Despite Oil Decline



### EPS Stabilizers

- Lower natural gas price
- Growth program and turnaround schedule add an additional 1.3 B pounds of ethylene production capacity
- Share repurchase program
  - Seeking approval from shareholders for a third 10% repurchase program

EPS is supported by our expansion program, low U.S. natural gas prices, and our commitment to share repurchases

Source: LYB, IHS  
Notes: Share repurchase percentage is calculated off of the outstanding shares as of Dec. 31, 2013.

# Each Business is Operated to Maximize Results



Segment	LYB Market Position	Priority	2014 EBITDA (ex. LCM)
Olefins & Polyolefins – Americas	<ul style="list-style-type: none"> <li>NGL advantage</li> <li>Increasing capacity</li> </ul>	Invest	\$4.2 B
Olefins & Polyolefins – 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	\$1.4 B
Intermediates & Derivatives (I&D)	<ul style="list-style-type: none"> <li>Proprietary technologies</li> <li>Natural gas advantage</li> </ul>	Invest	\$1.6 B
Refining	<ul style="list-style-type: none"> <li>Large, heavy crude refinery</li> <li>Processing Canadian crude</li> </ul>	Optimize	\$0.4 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 2014 LCM adjustment.

## In Summary: Our Principal Focus is Consistent



Principal Focus	Priority Uses of Cash
<ul style="list-style-type: none"> <li>▪ Environmental, Health, and Safety Performance: GoalZero</li> <li>▪ Operational Excellence</li> <li>▪ Flexible, Low-cost Operator</li> <li>▪ Capital Discipline</li> <li>▪ Align Pay with Performance</li> <li>▪ Advantaged Growth</li> </ul>	<ul style="list-style-type: none"> <li>▪ Base                             <ul style="list-style-type: none"> <li>– Maintenance Capex</li> <li>– Interest</li> <li>– Dividend</li> </ul> </li> <li>▪ Advantaged organic growth</li> <li>▪ Further Shareholder Returns</li> </ul>
<h3>Consistent Priorities</h3>	<div style="background-color: #1a3d54; color: white; padding: 5px; font-weight: bold;">                     Consideration Given to Opportunities, if:                 </div> <p>On a risk adjusted basis:</p> <ul style="list-style-type: none"> <li>▪ Makes us a better company</li> <li>▪ Our strengths create unique value</li> <li>▪ Can be done without negatively impacting our principal focus</li> </ul>

## Today's Presentations



**Bob Patel**  
*Chief Executive Officer*

- Foundation in place and operating fundamentals unchanged
- Cash deployment priorities are unchanged
- Creating value for the shareholder is our priority
- Oil/gas ratios continue to be favorable to LYB
- Portfolio diversity/balance is probably underappreciated



**Sergey Vassetsov**  
*Senior Vice President  
Strategic Planning & Transactions*

- Outperformed peers in key measures
- Is valuation aligned with performance?
- LYB actions and strategy explained



**Tim Roberts**  
*Executive Vice President  
Global Olefins & Polyolefins*

- Market conditions steady to tightening
- O&P areas of differentiation drive earnings and value
- Growth projects contribute now



**Pat Quarles**  
*Executive Vice President  
Intermediates & Derivatives,  
Supply Chain and Procurement*

- Steady, strong earnings and cash flow
- Portfolio attributes drive balance within the segment
- Significant expansion from the US PO/TBA plant



**Kevin Brown**  
*Executive Vice President  
Manufacturing and Refining*

- Internal actions in-place to manage changing market dynamics
- Focused on operations and cash generation
- Managing our projects effectively



## Outsized Performance in Perspective

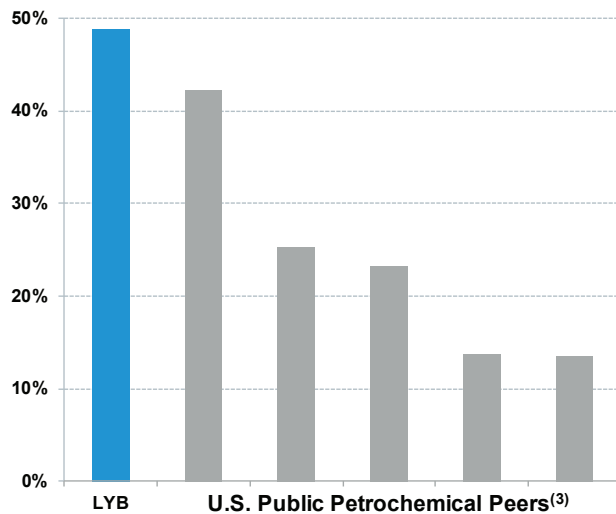
Sergey Vasnetsov  
Senior Vice President

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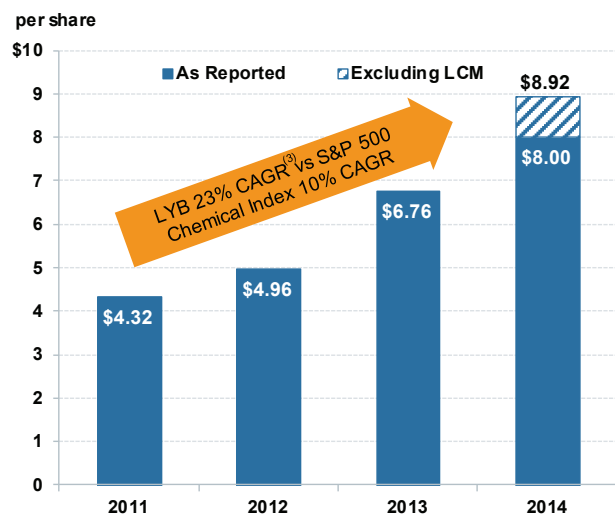
## TSR and EPS Outperformance



Annual Average Total Stock Return  
April 2010 – '14<sup>(1)</sup>



LYB Diluted Earnings Per Share  
2011 – '14<sup>(2)</sup>



Since emergence, LYB has created more value through stock price appreciation and dividends than the comparable U.S. public peer group

Source: Capital IQ, Bloomberg, LYB

(1) Emergence valuation stock price of \$17.61 was used as the starting price for LYB, which was dividend-adjusted to calculate the TSR.

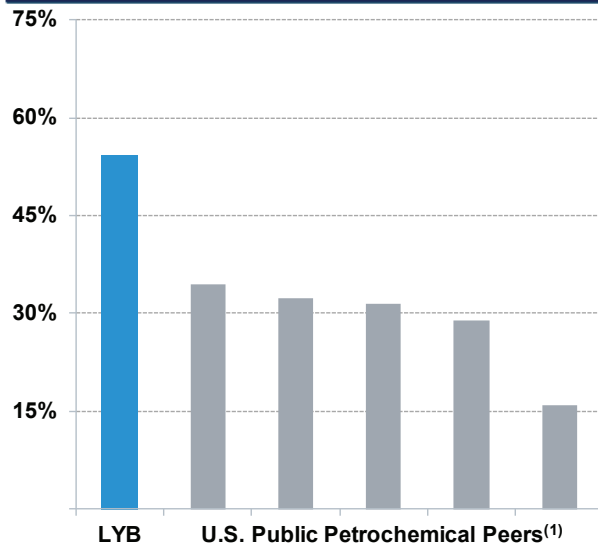
(2) Per share earnings is calculated using Income from Continuing Operations. 2014 excludes the impact of the LCM adjustment.

(3) For definitions please see slide 105. Peer groups can be found on slide 106.

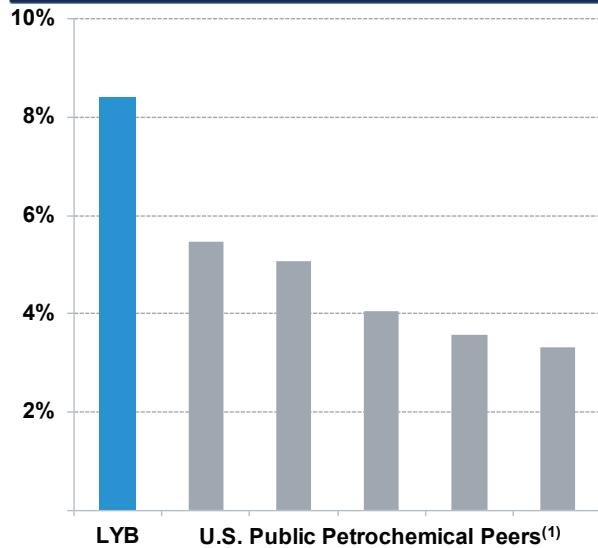


## LYB Delivers More Cash to the Bottom Line

**'11 - '14 Free Cash Flow<sup>(1)</sup> as % of EBITDA<sup>(2)</sup>**



**'11 - '14 Average Annual Free Cash Flow<sup>(1)</sup> as % of 2014 Year-End Market Cap**



LYB free cash flow generation significantly exceeds comparable U.S. public peer group

Source: Company filings, Capital IQ

Notes: LYB calculations are based on as reported line items and using Capital IQ market capitalization. Peer calculations are based on Capital IQ calculated line items.

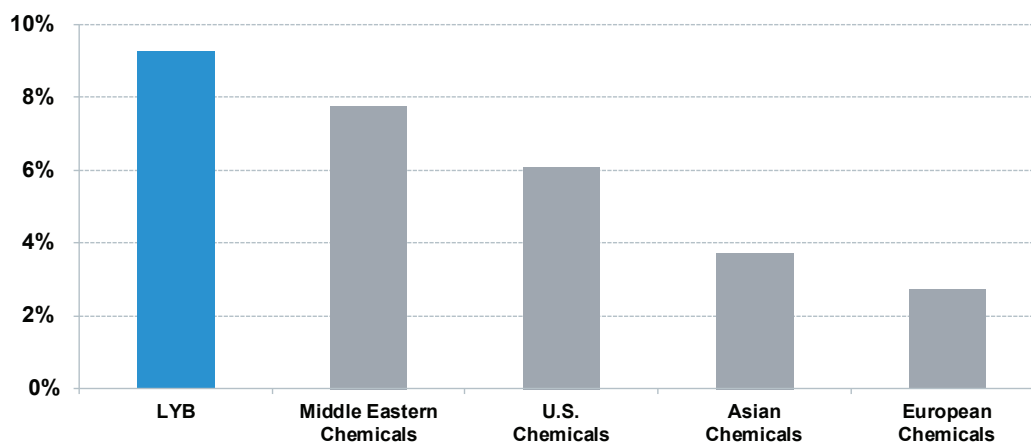
(1) For definitions please see slide 105. Peer groups can be found on slide 106.

(2) For purposes of peer comparison, LYB EBITDA is as reported. Peer EBITDA = Revenue - COGS - SG&A - R&D + D&A + equity income as calculated by Capital IQ.



## Leading Free Cash Flow Yield

**2014 Free Cash Flow Yield %<sup>(1)</sup>**



LYB FCF yield exceeded all regional averages

Source: Capital IQ as of March 31, 2015

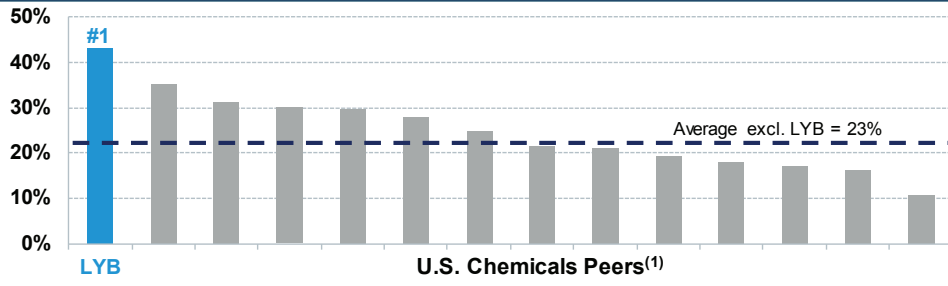
Note: LYB calculations are based on as reported line items and using Capital IQ market capitalization. Peer calculations are based on Capital IQ calculated line items.

(1) For definitions please see slide 105. Peer groups can be found on slide 106.

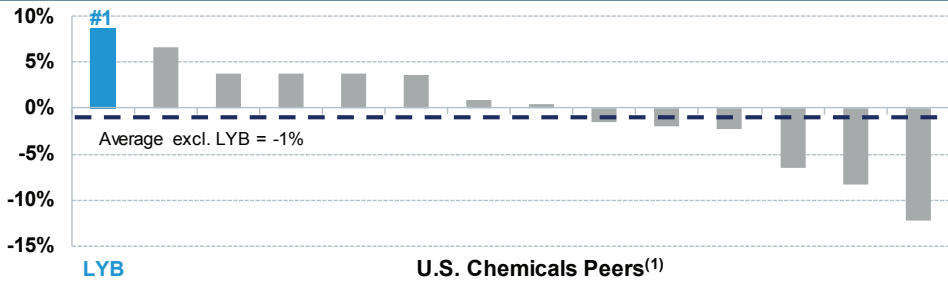
# Delivering Differential Returns on Assets



## 2014 EBITDA<sup>(1)</sup> / Net Operating Assets<sup>(2)</sup>



## 2014 vs 2011 Change in EBITDA<sup>(1)</sup> / Net Operating Assets<sup>(2)</sup>

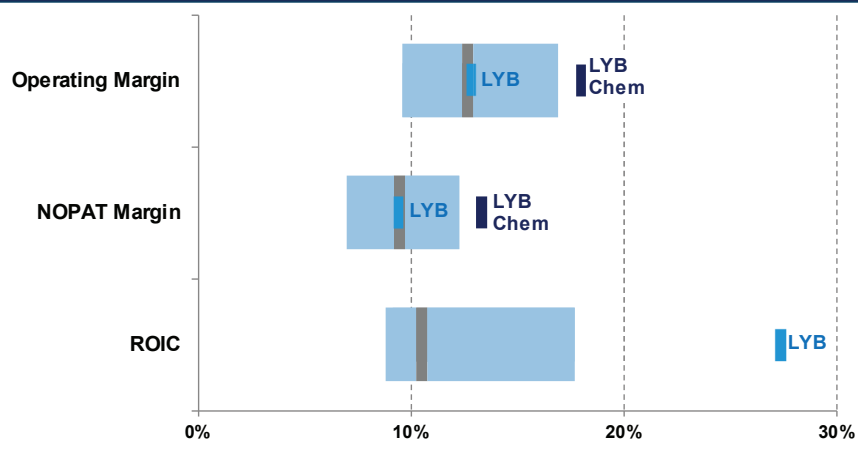


Source: Capital IQ as of March 31, 2015.  
 Notes: LYB calculations are based on as reported line items. Peer calculations are based on Capital IQ calculated line items.  
 (1) For purposes of peer comparison, LYB EBITDA is as reported. Peer EBITDA = Revenue – COGS – SG&A – R&D + D&A + equity income as calculated by Capital IQ.  
 (2) For definitions please see slide 105. Peer groups can be found on slide 106.

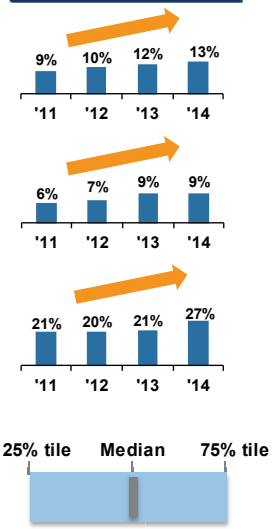
# LYB Leads in Nearly Every Profitability Metric



## 2014 Profitability Metrics vs. U.S. and European Chemicals Peers<sup>(1)</sup>



## LYB Historical Trend



**LYB Chemical exceeds the peer average profitability and growth**

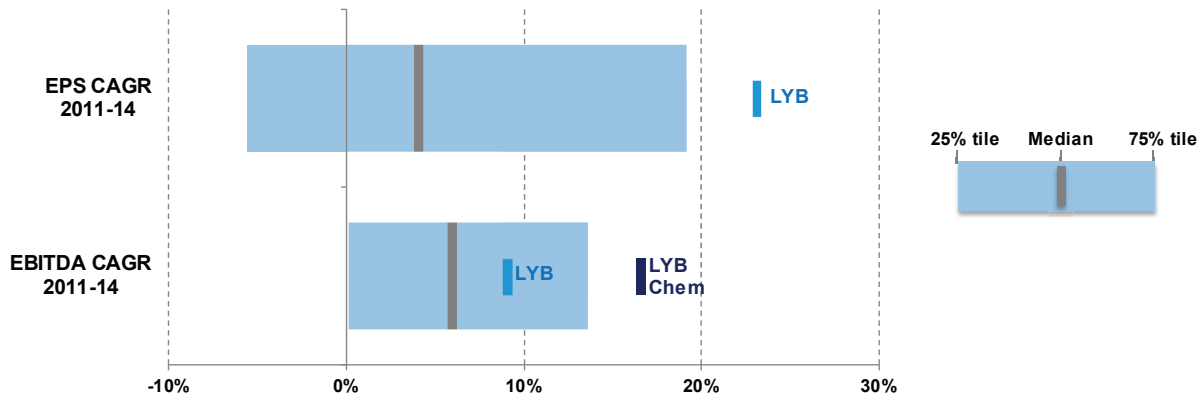
Source: Capital IQ as of March 31, 2015.  
 Notes: LYB calculations are based on as reported line items. Peer calculations are based on Capital IQ calculated line items.  
 LYB Chem excludes Houston refining and uses the same Effective Tax Rate as LYB for NOPAT margin.  
 (1) For definitions please see slide 105. Peer groups can be found on slide 106.





# LYB Grew at a Faster Rate

## Profit Growth Metrics vs. U.S. and European Chemicals Peers<sup>(1)</sup>



LYB Chemical exceeds the peer average profitability and growth

Source: Capital IQ as March 31, 2015

Notes: LYB calculations are based on as reported line items. Peer calculations are based on Capital IQ calculated line items

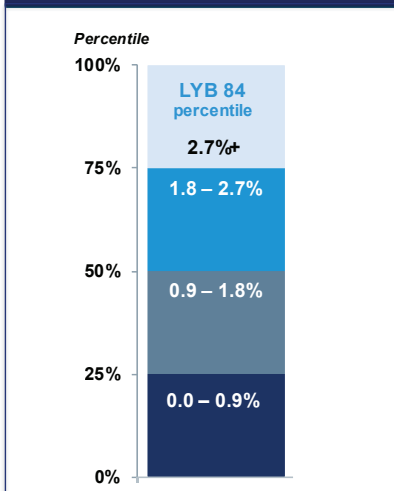
LYB Chem excludes Houston refining; CAGR = compounded annual growth rate; EBITDA = operating income + depreciation and amortization

(1) For definitions please see slide 105. Peer groups can be found on slide 106.

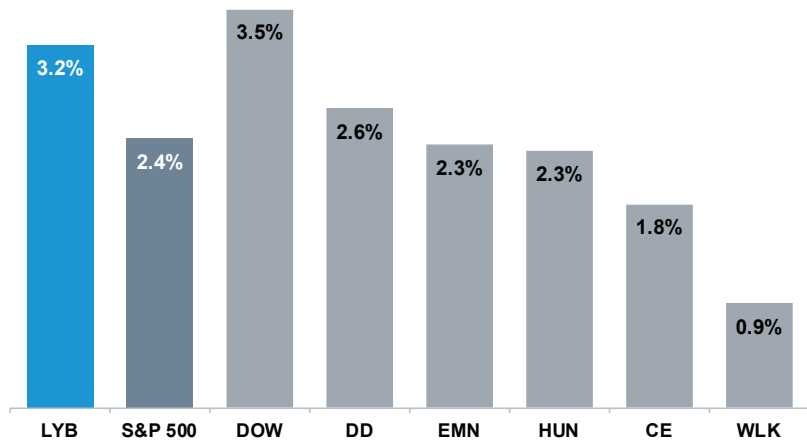


# Top Quartile Dividend Yield

## S&P 500 Dividend Yield Distribution



- Goal: increase the per share dividend over time consistent with long-term business performance trends and share repurchases



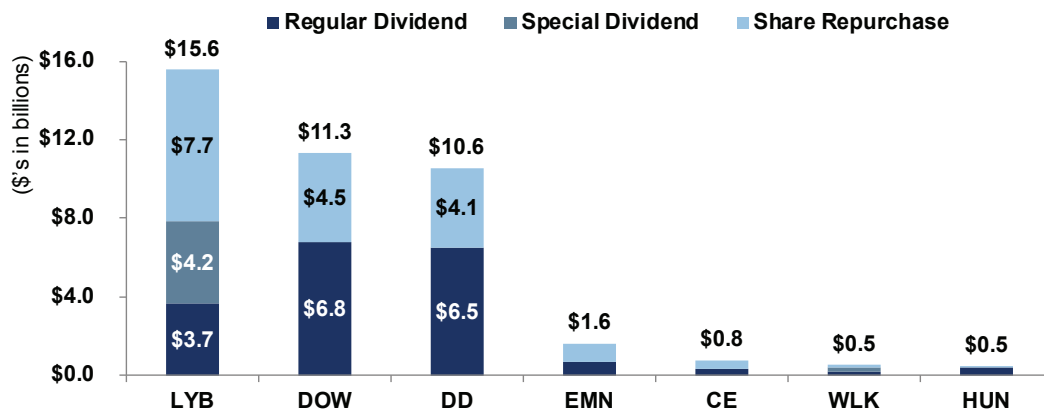
LYB's dividend yield of 3.2% is currently at the 84th percentile of the S&P 500

Source: Bloomberg, Capital IQ. Percentile and Dividend yield data as of 3/31/15.

# Industry-Leading Cash Returns to Shareholders



## 2011-2014 Shareholder Returns of Capital



<b>Per Share Return</b>	<b>\$28.44</b>	<b>\$9.46</b>	<b>\$11.32</b>	<b>\$10.95</b>	<b>\$5.03</b>	<b>\$4.01</b>	<b>\$1.99</b>
- Share Repurchases	\$14.53	\$3.79	\$4.38	\$6.44	\$3.11	\$0.74	\$0.21
- Dividends	\$13.91	\$5.68	\$6.94	\$4.52	\$1.93	\$3.27	\$1.78
<b>% of Market Cap</b>	<b>37%</b>	<b>20%</b>	<b>16%</b>	<b>16%</b>	<b>9%</b>	<b>6%</b>	<b>9%</b>

Source: SEC filings, Capital IQ. Market Cap as of 3/31/15.

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## Views on Strategic Considerations



- The range of LYB's portfolio and skills
- Simplified US cracker project economics
- Share repurchases vs. building grass-roots complex
- Thoughts on MLP

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# LYB's Skills Span a Broad Spectrum of Petrochemicals



	Well Head	Midstream	Refining	Olefins & Aromatics	Intermediates & Polymers	Performance & Eng. Resins	Electronic & Specialty	Bio & Pharma
<b>Products</b>	Crude Oil Natural Gas	Handling Storage Shipping	Gasoline Diesel Fuel Jet Fuel	Ethylene Propylene Butadiene	PE, PP, PO, PVC, Isocyanates, Acetyls	Polycarbonate PP Compounds Catalloy Nylon POM	Seeds Pharmaceuticals Herbicides Fragrances Catalysts	
<b>Industry Characteristics</b>	Capital Intensive Geology	Capital Intensive Pipelines	Capital Intensive Process Industry	Capital Intensive Process Industry	Capital Intensive Process Industry Tech Support	Process Industry Tech Support Design Support	Small Volume Multiple Grades Unique End Use Expertise	R&D Intensive Consumer Safety Long Development Cycle
<b>Success Characteristics</b>	Exploration Development	Logistics Contracting	High Operating Rates/Reliability Lean Cost Structure Process Expertise  Increasing Technical Service Support →				Proprietary Tech. Continuous Innovation	
<b>Example</b>	XOM, CVX, APC	EPD, OKE, KMI, WMB	LYB PSX, VLO	LYB DOW, WLK, INEOS	LYB DOW, EMN, CE, HUN, DD, BASF	LYB CE, DD, SABIC	DD, ALB, IFF	Bayer, MON

We are very comfortable with our current focus on petrochemicals

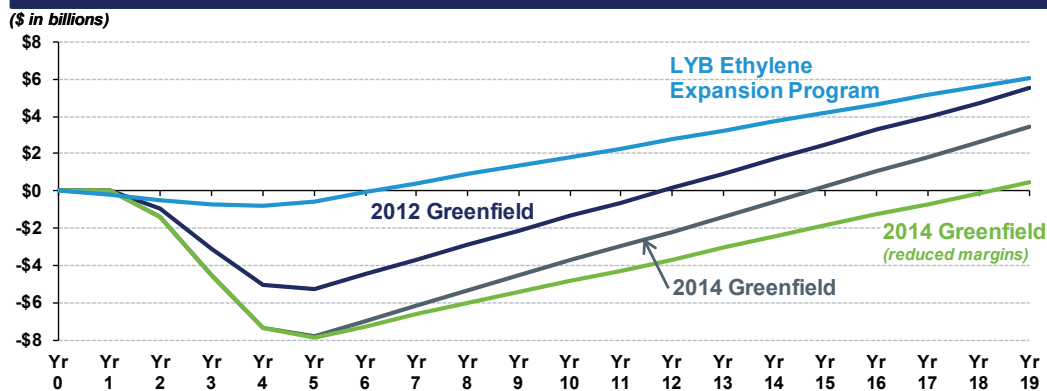
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## Simple Economics of a New U.S. Cracker Complex



### Greenfield vs. Debottleneck Cumulative Cash Flow Profile



Condition <sup>(1)</sup>	Capital (\$ in billions)	Cash Margin <sup>(2)</sup> (¢ / lb.)	IRR % <sup>(3)</sup>
LYB Expansions	\$1.6	30	32%
Greenfield 2012	\$5.5	34	12%
Greenfield 2014	\$8.0	34	8%
Greenfield 2014 (reduced margins)	\$8.0	24	5%

Sources: LYB, IHS

(1) LYB Expansion Program assumes an addition of 2,500 million lbs. of ethylene capacity occurring from years 1 - 6. Greenfields have a 3.3 billion ethylene capacity and derivatives.

(2) Cash margins are average IHS prices for 2011 - 2015 as of March 31, 2015. Debottleneck uses ethylene margins while greenfields use polyethylene chain margins.

(3) IRR assumes a 10% discount rate and a 0% growth rate after year 19 into perpetuity for terminal value and a 0% growth rate.

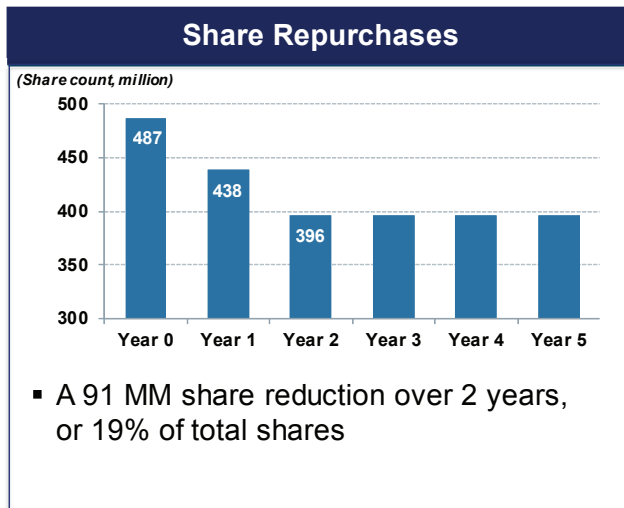
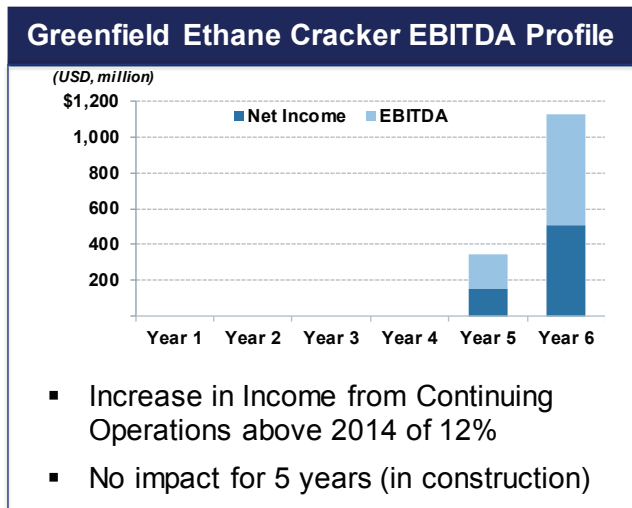
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# Share Repurchase Program vs. Building Grassroots Ethylene Cracker Complex



Hypothetical basis for comparison: \$8 B cracker vs. \$8 B of share repurchases



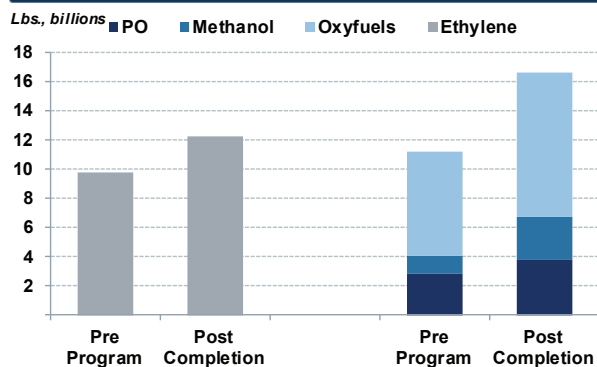
Buybacks benefit shareholders:  
**Now, not 5 years later**  
 Leverages EPS: 19% share count reduction

Sources: LYB, IHS  
 Notes: Greenfield cracker at 3.3 billion ethylene capacity. Shares outstanding as of Dec. 31, 2014 = 487 MM. Cash margins are average IHS prices for 2011 – 2015, as of March 31, 2015. Repurchased shares calculated at \$87.80 (closing price on 03/31/15).

## Benefits of Investing in Advantaged Businesses Amplified by Share Repurchase Program

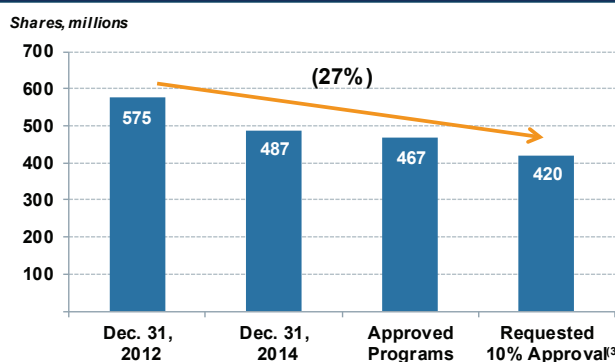


### Expanding in Advantaged Positions



Product	% Increase	Potential EBITDA <sup>(1)</sup> (\$ million/year)
Ethylene	~25%	~\$700 - 900
PO	~35%	~\$700 - 800
Oxyfuel	~40%	
Methanol	~130%	

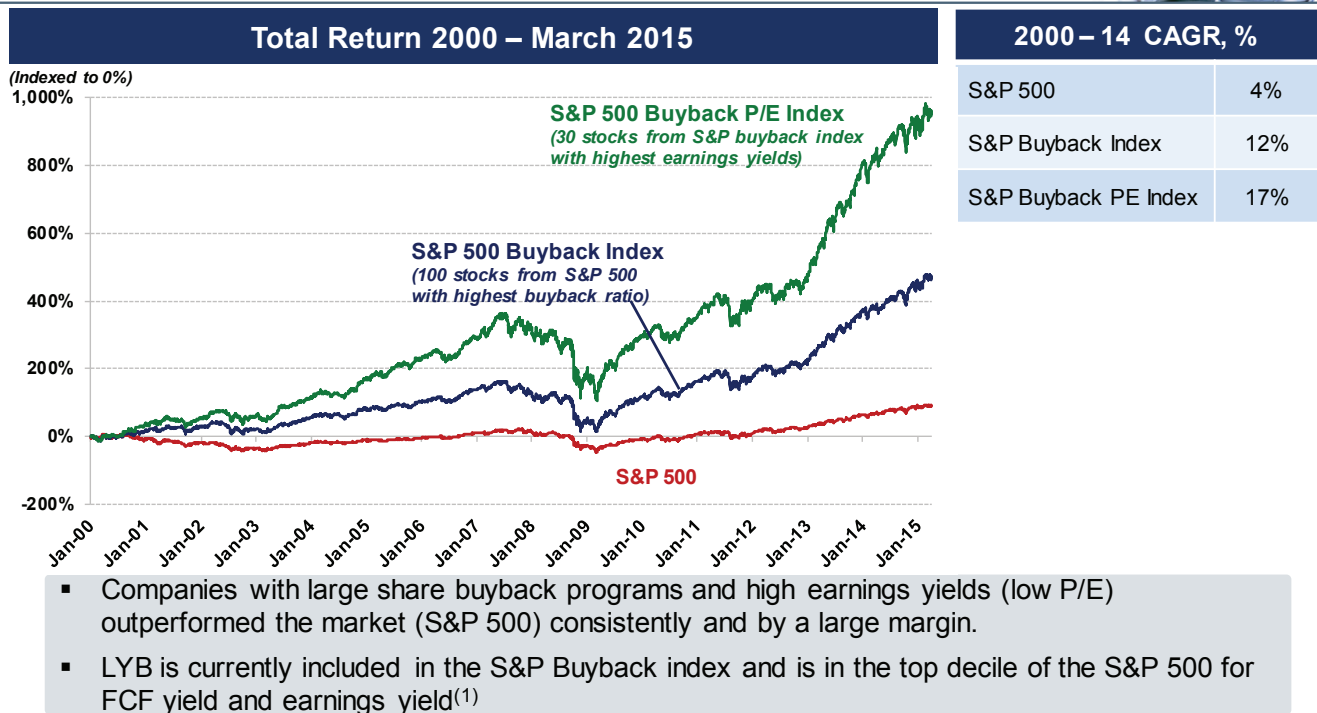
### Share Count<sup>(2)</sup>



The share repurchase program amplifies both the base EPS and expansion projects impact by 27%

Sources: LYB, IHS  
 (1) EBITDA is calculated using average IHS margins from 2011 – 2014.  
 (2) The number of shares ultimately purchased, and the manner and timing will be determined by our Management Board, with prior approval from our Supervisory Board, taking into consideration the prevailing market conditions, available resources and other factors. Approval amount is not necessarily an indication of the number of shares ultimately purchased.  
 (3) We have requested a third 10% share buyback to be voted upon by our shareholders at the upcoming annual meeting on May 6<sup>th</sup>, 2015.

# Share Buyback Drives Stocks Outperformance



Source: Bloomberg, [www.spdji.com](http://www.spdji.com) and Capital IQ as of March 31, 2015.

For more information on the S&P 500 Buyback Index methodology, please refer the S&P 500 Buyback Index Methodology document at [www.spdji.com](http://www.spdji.com).

(1) S&P 500 index constituents as of March 31, 2015. FCF yield and earnings yield are based on 2014 results divided by equity values as of March 31, 2015.

## Current Position on MLP



Benefits	Considerations / Concerns
<ul style="list-style-type: none"> <li>Low cost source of funding for organic &amp; M&amp;A growth programs</li> <li>Monetize assets, but retain control</li> <li>Near-term positive stock response</li> <li>Access to a different investor base willing to pay more for MLP income</li> <li>Value to LYB as the General Partner</li> <li>Asset dropdowns from LYB to MLP could be done at attractive multiples for both parties.</li> </ul>	<ul style="list-style-type: none"> <li>Complexity: both short &amp; long-term</li> <li>Low cost funding readily available in conventional debt markets</li> <li>LYB low tax basis for assets</li> <li>Creates debt-like obligation and L-T growth expectations to fulfill</li> <li>Small MLP scale vs. large LYB</li> <li>Future interest rate sensitivity for MLP valuation</li> <li>Transfer of assets to MLP adds some volatility to LYB earnings</li> </ul>
<ul style="list-style-type: none"> <li>Qualifying assets: U.S. Ethylene, Methanol, Refinery</li> <li>Believe MLP would have to be a fixed payout to provide durable benefit to LYB</li> </ul>	
<ul style="list-style-type: none"> <li>At this time we don't believe the benefits outweigh the considerations</li> <li>Will continue to keep our options open in future, if circumstances change</li> </ul>	

# Outsized Performance in Perspective



## Cash Flow and Shareholder Returns

- 2014 Cash Flow from Operating Activities: \$6.0 B, or 13% of revenue
- 2014 Free Cash Flow<sup>(1)</sup>: \$4.6 B, or 10% of revenue
- Dividend Yield<sup>(2)</sup>: 3.2%
- Share Repurchases: Large and on-going

## Global Product Positions

Product	Capacity	Expansions
N.A. Ethylene	#2	+25%
Propylene Oxide	#2	+35%
MTBE Equivalent	#1	+40%

Multiples (trailing 12 months as of 3/31/15)	LYB	S&P Chemical Index	S&P 500
EV/EBITDA <sup>(3)</sup>	6.4x	11.9x	11.7x
PE <sup>(4)</sup>	15.2x	25.5x	20.8x

- Cash flow, shareholder friendly behavior, and growth at below market multiples
- We like the value – ~18% of outstanding shares purchased<sup>(5)</sup>

Source: Capital IQ, LYB

(1) Free Cash Flow = EBITDA – Capex.

(2) Dividend yield as of 3/31/15.

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

(4) PE = Price to Earnings as calculated by Capital IQ.

(5) 18% of shares outstanding have been repurchased through March 31, 2015 since the share repurchase program was first authorized in 2013.





## Olefins & Polyolefins Technology

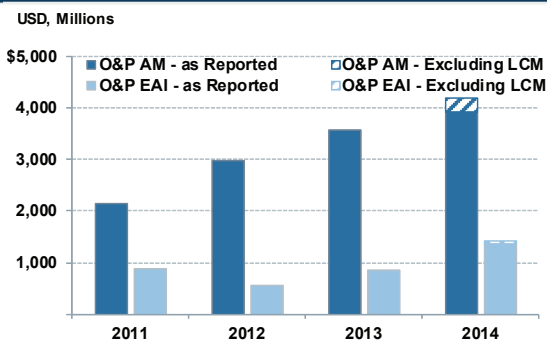
Tim Roberts  
Executive Vice President

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## Olefins & Polyolefins Segments

### EBITDA History



### Key Messages

- N.A. position remains advantaged
- Feedstock flexibility in both regions
- Delivering differential performance
- Investing to grow advantaged U.S. position

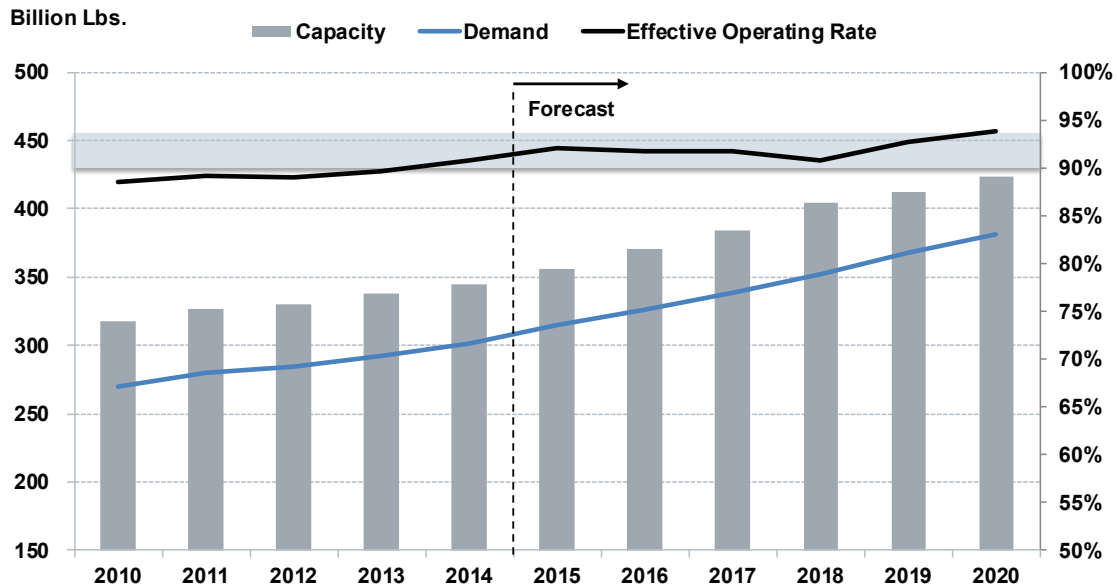
### Position Within the Portfolio

Segment	LYB Market Position	Priority	2014 EBITDA (ex. LCM)
Olefins & Polyolefins – Americas	<ul style="list-style-type: none"> <li>▪ NGL advantage</li> <li>▪ Increasing capacity</li> </ul>	Invest	\$4.2 B
Olefins & Polyolefins – EAI	<ul style="list-style-type: none"> <li>▪ Naptha based, with cyclical upside</li> <li>▪ Process advantaged feedstock</li> <li>▪ Differentiated polymers</li> </ul>	Optimize	\$1.4 B

Source: LYB



# Global Ethylene Supply/Demand Outlook

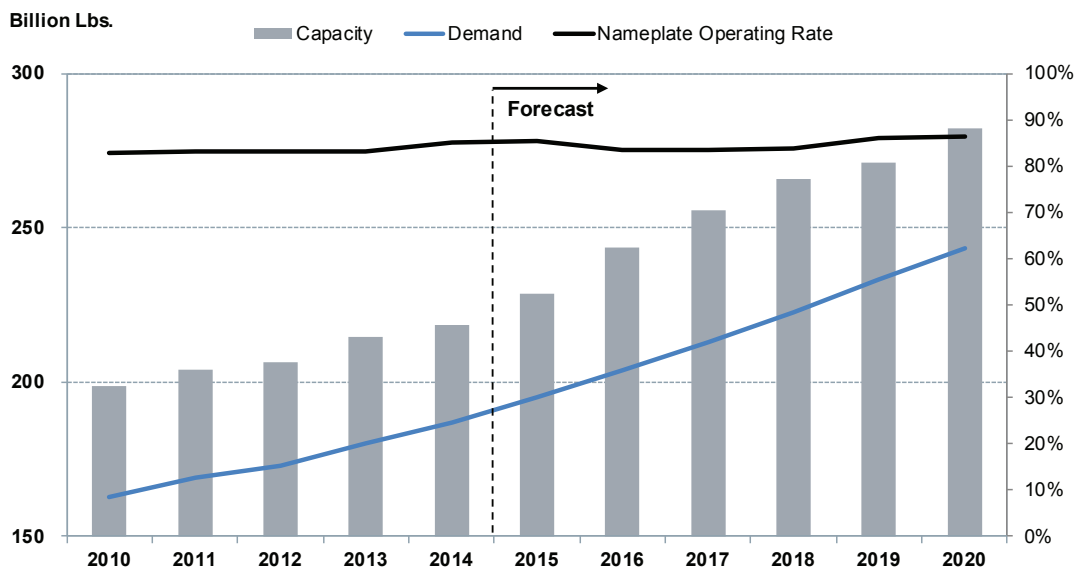


Based on third party consultants and our own outlook, we believe that operating rates will exceed 90% going forward

Source: LYB, IHS  
 Note: Effective Operating Rate is calculated assuming 4% industry downtime.



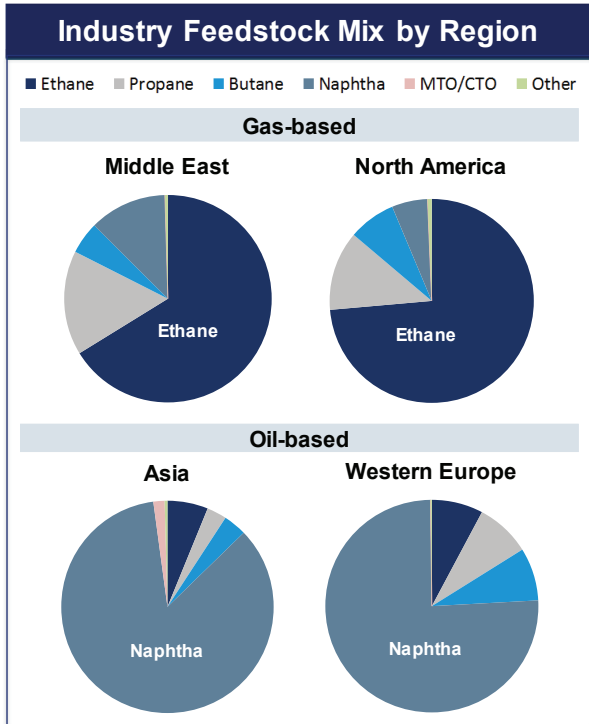
# Global Polyethylene Supply/Demand Outlook



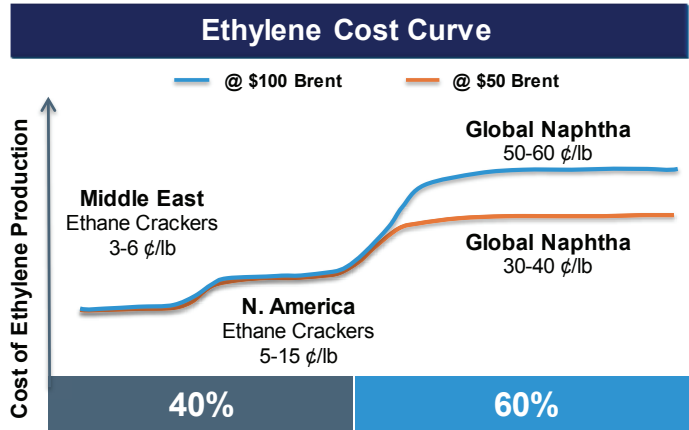
- Operating rates remain in the 85% range
- Rates in the upper 80s to 90% is a tight market

Source: LYB, IHS

# Naphtha Remains the Global Ethylene Price Setter



Source: LYB, IHS



- N.A. position remains highly advantaged
- Feedstock flexibility in EAI allowed LYB to run 53% advantaged feedstock during 2014

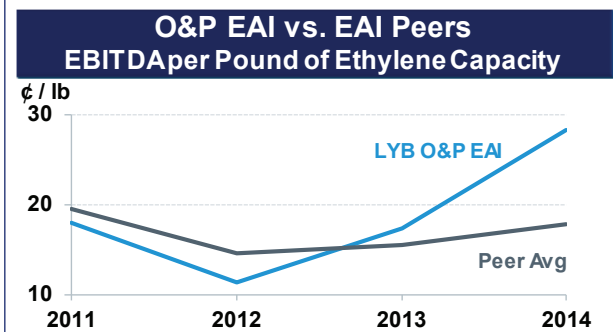
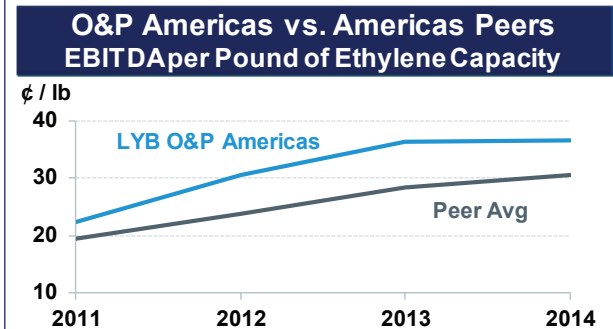
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# Our Strategy is Generating Differential Results



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



Source: Company Filings, Capital IQ, IHS, and LYB Estimates.  
 Capacities: Ethylene capacities include pro-rata JV capacities and are based on company reports and IHS.  
 Americas EBITDA: CP Chemical O&P is income before taxes + depreciation – equity income. Westlake Olefins is operating income + depreciation. INEOS O&P North America is as reported EBITDA before exceptional/extraordinary items. LYB O&P Americas and Dow Performance Plastics EBITDA are as reported not adjusted for extraordinary items.  
 EAI EBITDA: INEOS O&P Europe is as reported EBITDA before exceptional/extraordinary items. Borealis is operating income plus depreciation plus equity income. LYB O&P EAI EBITDA is as reported.

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# O&P Americas

## North American System Scale and Flexibility



### Olefins

- 6 crackers – better than average on U.S. cost curve
- 30% - 90% NGL flexibility
- Full C<sub>4</sub>, C<sub>5</sub>, and aromatics processing
- Pipeline, barge, rail, truck access
- Salt dome storage

### Market Options

- Ethylene options
  - PE: HDPE, LDPE, LLDPE
  - Ethylene Oxide / Ethylene Glycol
  - Vinyl Acetate Monomer
  - Styrene
  - Contract Sales
  - Spot Sales
  - Metathesis: ethylene to propylene
- Propylene options
  - Polypropylene
  - Catalloy
  - Propylene Oxide

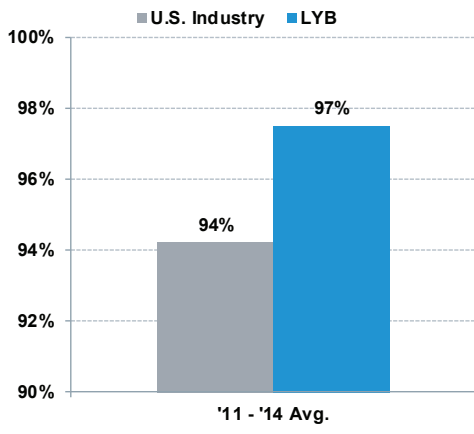
Our operations teams optimize daily to maximize LYB profitability

# O&P Americas

## Reliable Operations and Feedstock Flexible



### 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%

LYB has consistently operated more reliably than the competition

Sources: IHS, LYB. Figures shown represent effective operating rates.  
NGLs = ethane, propane, butane; Liquids = heavier than C<sub>5</sub>.

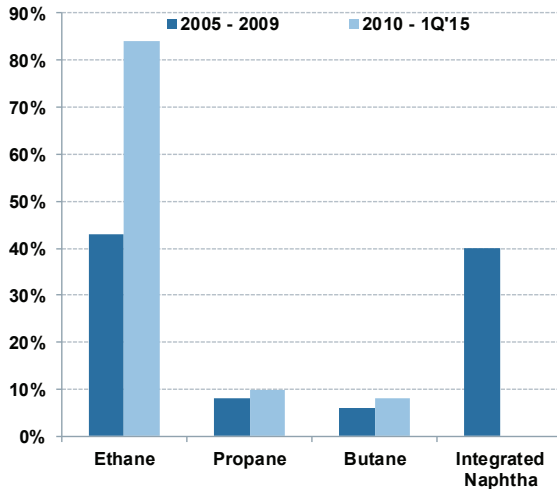
# O&P Americas

## Feedstock and Operational Flexibility



### Favored Olefins Feedstock 2005 – 1Q'15

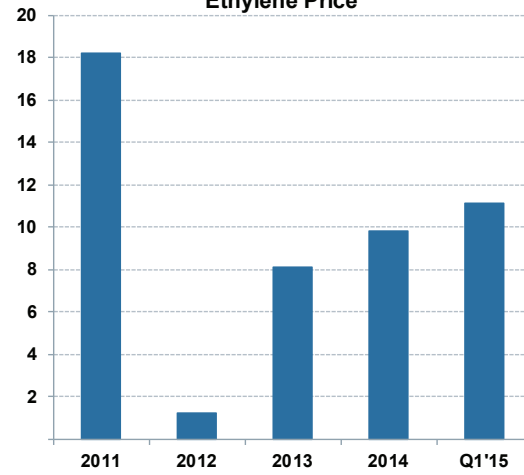
% of time feed is favored



### Metathesis: Ethylene / Propylene Flexibility

¢ per pound

Spot Propylene Price less Spot Ethylene Price



We have flexibility across the feedstock spectrum to take advantage of varied market conditions

Source: IHS, LYB

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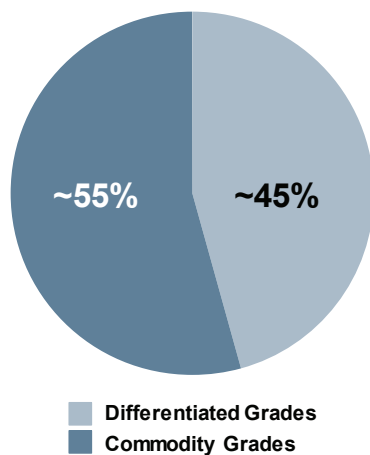
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# O&P Americas

## Differentiation Within Polyolefins

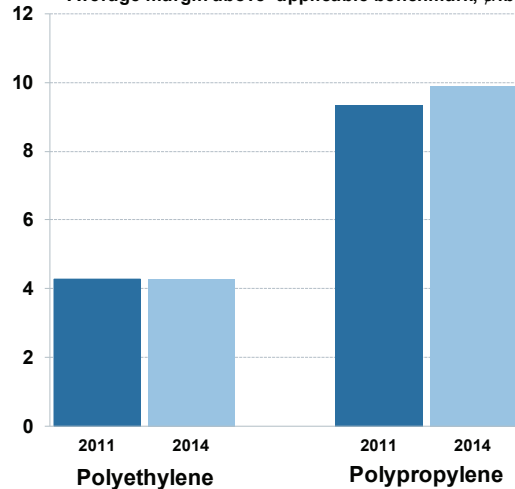


### Polyolefins Product Portfolio



### Steady Upgrade in Differentiated Polyolefins

Average margin above applicable benchmark, ¢/lb



Significant portions of our polymers portfolio deliver margins above commodity benchmarks

Source: LYB

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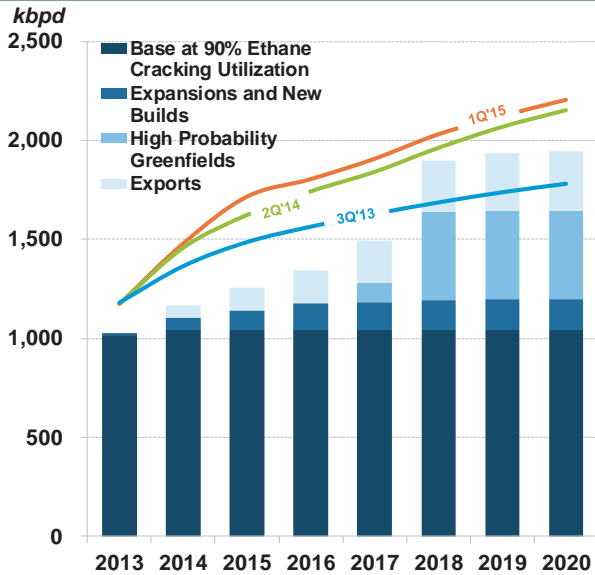
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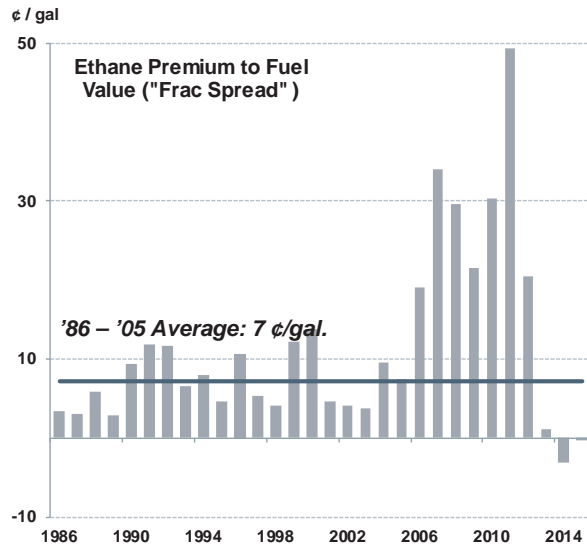
## Feedstock Outlook: U.S. Ethane Supply/Demand



### Ethane Supply / Demand



### Ethane Frac Spread



Ethane is projected to be in plentiful supply for the foreseeable future

Sources: Third Party Industry Consultant, LYB, IHS (Ethane and Natural Gas data used in calculating Frac Spread history).

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# O&P Americas

## U.S. Exports Don't Change the Advantage



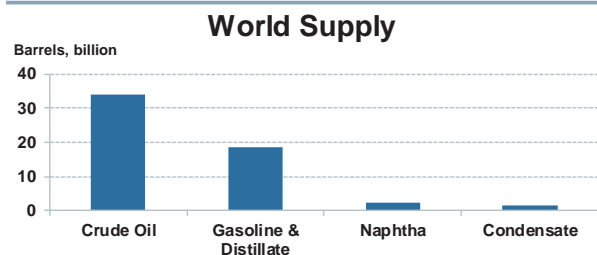
### Ethane Export

- View:
- Limited Market
  - Generally unfavorable economics
- Logic:
- Export costs
    - Shipping – between LNG and propane
    - Capital – storage, ships
  - Compete with other NGLs
  - Naphtha plans require modification
  - High cost consumer of ethane
  - Need coastal access
  - Instead, PE could be shipped for 6-8¢/lb

Not pursuing for our European crackers

### Condensate Export

- View:
- Modest impact
- Logic:
- North American 2013-14 discounts \$10-\$15/bbl vs. naphtha
  - Shipping cost – \$5/bbl
  - Gasoline use
    - Blend with high octane stream
    - Reform to increase octane



Source: LYB, IHS, EIA

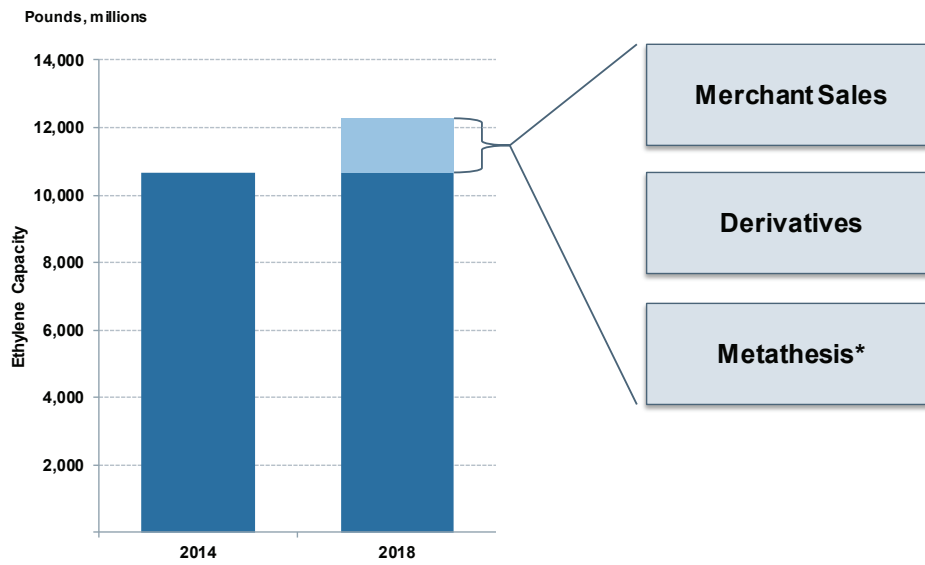
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# O&P Americas

## LYB North America Ethylene Balance



Several options for ethylene utilization – pursuing value

\*currently integrated within LYB  
 Notes: 2014 ethylene capacity is based on year end 2014 capacity. 2018 includes two Channelview ethylene expansions and an ethylene expansion at Corpus Christi.

# O&P – EAI

## European Business Environment and Our Response



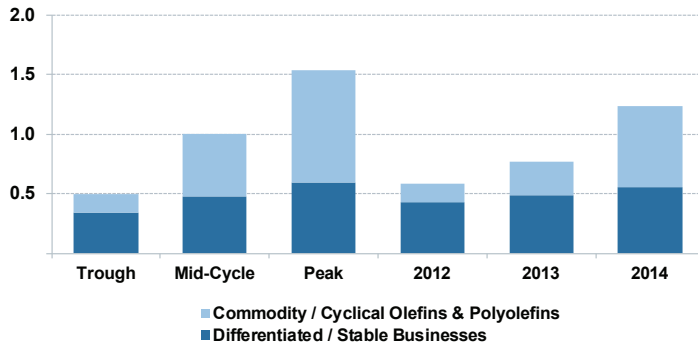
Business Environment	Our Response
<ul style="list-style-type: none"> <li>Slow growth for the EU petrochemicals sector</li> <li>Europe remains a high-cost production region</li> <li>Benefits from a sophisticated end-use polyolefin mix</li> <li>A lower oil price and weakening Euro helps support the European petrochemical industry</li> </ul>	<ul style="list-style-type: none"> <li>Focus areas are operational excellence, cost and capital discipline</li> <li>Utilize advantaged local feedstocks</li> <li>Operate above industry rates</li> <li>Upgrade customer and end market mix</li> <li>Restructure business processes to improve agility and flexibility</li> </ul>

Operate to deliver sustainable differential performance



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

(EBITDA Indexed, Mid-Cycle = 1.0)



Commodity Products	Stable/Specialty Businesses
EU Olefins	Catalloy
EU Polyethylene	Polybutene-1
EU Polypropylene	PP compounds
	Joint Ventures

- Differentiated businesses and JVs provide stable base of earnings
- Feedstock flexibility and higher than industry operating rates have been primary source of outperformance for EU olefins and polyolefins

Source: LYB

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

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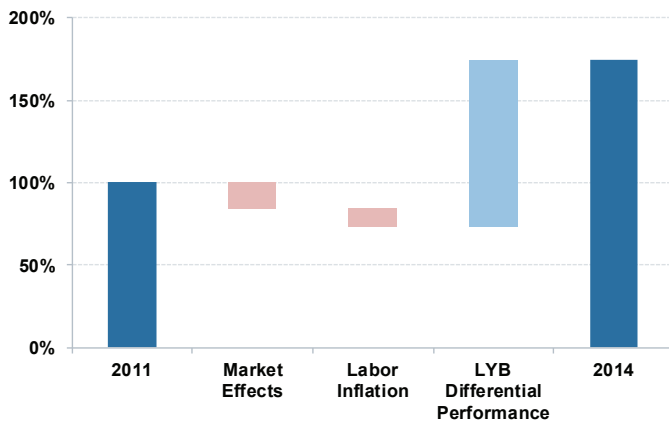
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## Efficiency Gains Offset Past Poor European Industry Environment

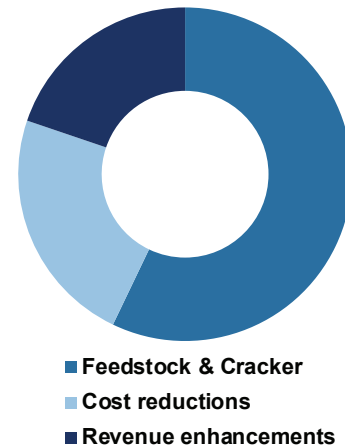


### European Olefins & Polyolefins EBITDA Bridge

Indexed EBITDA, 2011 = 100%



### LYB Differential Performance



- Significant progress through restructuring and operating flexibility
- LYB actions have provided good profitability in a challenging market

Source: LYB and third party consultants.

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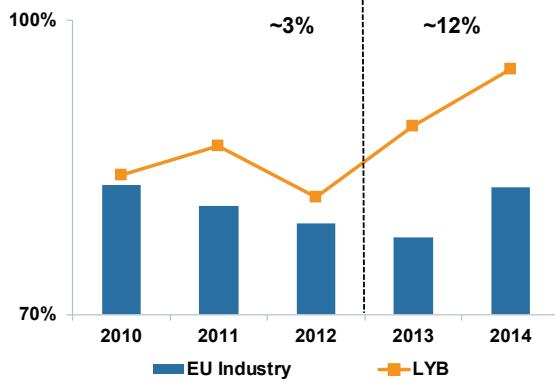
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# O&P – EAI

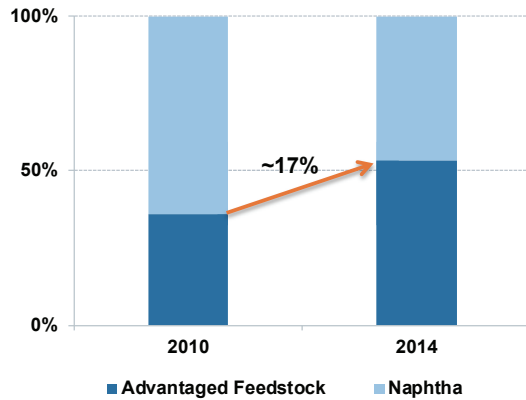
## European LYB Olefins Differential Performance



### Western Europe Olefins Operating Rate



### LYB Advantaged Raw Materials



- LYB continues capturing value through both:
  - Above industry operating rates ~\$70 MM at 2014 conditions
  - Processing cost advantaged raw materials ~\$220 MM at 2014 conditions

Source: LYB, IHS

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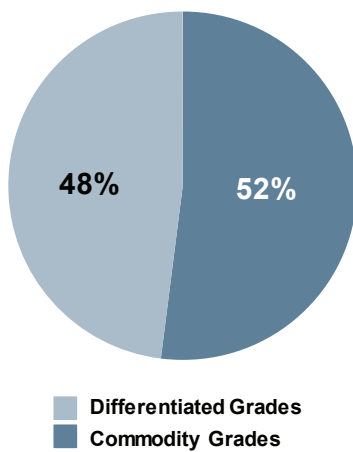
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# O&P – EAI

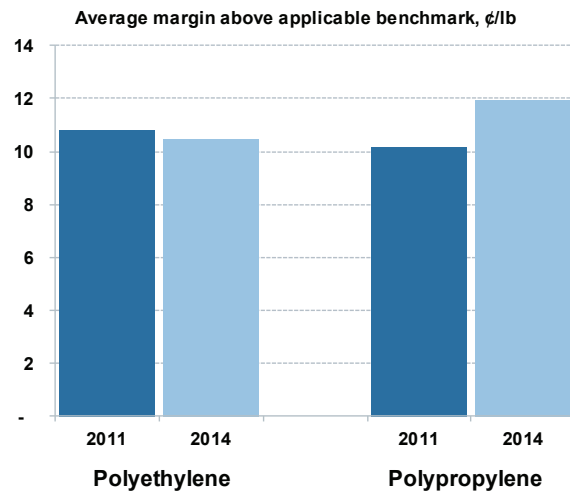
## Differentiation Within Europe Polyolefins



### Polyolefins Product Portfolio



### Steady Upgrade in Differentiated Polyolefins



Significant portions of our polymers portfolio deliver margins above commodity benchmarks

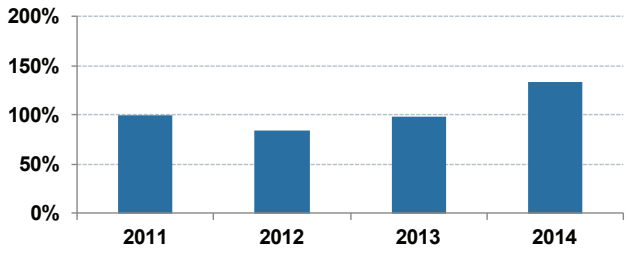
Source: LYB

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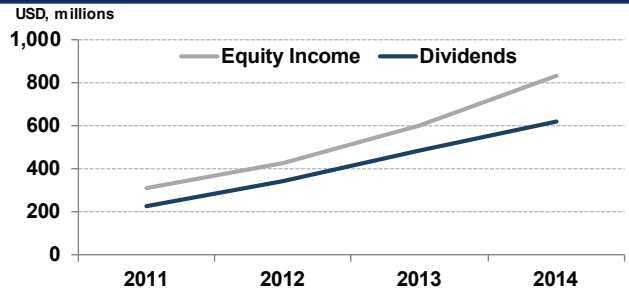


**Indexed JV/Intl Mkt EBITDA (2011=100)**



- Participate in Asia/ME markets through an advantaged JV asset footprint
- Significant JV capacities<sup>(1)</sup>
  - 5.5 B lbs. olefins
  - 10.3 B lbs. PE & PP
  - 0.4 B lbs. compounding
- JV revenues:
  - \$7.2 B
  - LYB share 34%
- JV's are generating a significant source of after-tax earnings and free cash flow

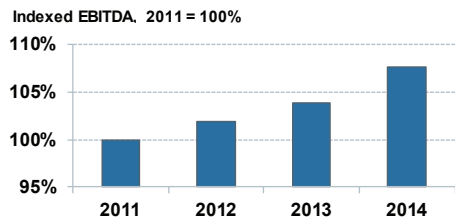
**Cumulative JV Equity Income and Dividends**



Source: LYB  
 (1) Represents total joint venture annual nameplate capacity.  
 (2) LYB revenues are pro-rata from total JV annual revenues.



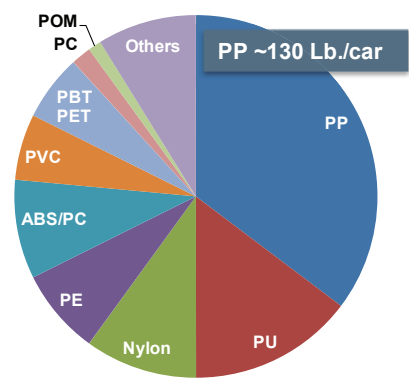
**EBITDA Trend**



**PP Compounds**

- Market positions of 25-50% regionally
- ~2.2B pounds sold in 2014, generating revenue of ~\$2.3B, or ~25 Lb. for every car produced in the world
- Interior / Exterior / Under-hood

**Thermoplastics: ~375 Lb./ car**



**Global Presence – PP Compounds (LYB)**



Source: LYB, A2MAC1



Project	Scope (MM lbs.)	Investment (\$ million)	Timing	Potential EBITDA (\$ million / year)	
				2011 – 2014 Avg. Margins	Q1'15 Margins
Increase Ethane Capabilities	500	~\$25	2012	\$80 – 100	\$10 – 30
Midwest Ethylene / PE	120	~\$25	2013	\$30 – 40	\$20 – 30
EU Butadiene Expansion <sup>(2)</sup>	155	~\$100	Q2 2013	\$40 – 50	\$40 – 50
Matagorda PE	220	~\$20	Q2 2014	\$5 – 10	\$30 – 40
La Porte Ethylene	800	~\$500	Q3 2014	\$220 – 280	\$170 – 230
Channelview Ethylene I	250	~\$200	Q2 2015	\$70 – 90	\$50 – 70
Corpus Christi Ethylene	800	~\$600	Q2 2016	\$220 – 280	\$170 – 230
Channelview Ethylene II	550	~\$300	2017 – 18	\$150 – 190	\$120 – 160
PE / Metathesis Capacity	~1,000	TBD	TBD	TBD	TBD

- A 2.5 Billion pound ethylene expansion program
- Potential EBITDA @ 2011-2014 benchmark margins: ~ \$800 – 1,050 MM
- Potential EBITDA for projects not yet operating: ~ \$450 – 550 MM<sup>(1)</sup>

Source: LYB Analysis, IHS (benchmark prices)

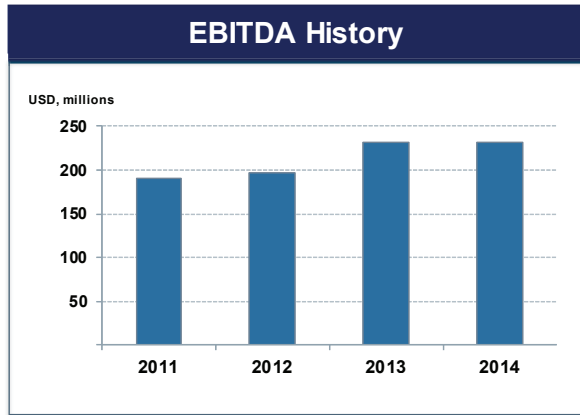
(1) Based on 2011-2014 benchmark prices.

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



## O&P Summary

- Forecasted ethylene chain operating rates increase vs. 2010-14
  - In range of potential tight supply / demand and cyclical upturn
  - Capacity additions in 2017-18 cause temporary “bumps in the road” but not a “detour”
- Industry environment and LYB portfolio generate more stability than may be appreciated
- LYB expansion plans are on track



### Key Messages

- Stable Earnings History
- Leading Global Market Position
- ~45% EBITDA Margin<sup>(1)</sup>
- Focused Research Program

### Position Within the Portfolio

<u>Segment</u>	<u>LYB Market Position</u>	<u>Priority</u>	<u>2014 EBITDA</u>
Technology	<ul style="list-style-type: none"> <li>▪ Strong technology position</li> <li>▪ Maintain leadership</li> </ul>	Focus	\$0.2 B

Note: EBITDA margin as of 2014 full year results. The Technology segment EBITDA was not impacted by the 2014 LCM adjustment.  
 (1) For definitions please see slide 105.





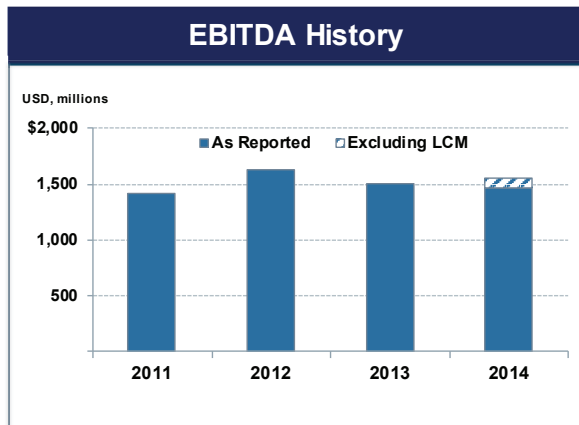
## Intermediates and Derivatives

Pat Quarles  
Executive Vice President

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## Intermediates and Derivatives



## Key Messages

- Stable earnings history
- Technology and raw material advantaged
- Grow propylene oxide position

## Position Within the Portfolio

Segment	LYB Market Position	Priority	2014 EBITDA (ex. LCM)
Intermediates & Derivatives (I&D)	<ul style="list-style-type: none"> <li>▪ Proprietary technologies</li> <li>▪ Natural gas advantage</li> </ul>	Invest	\$1.6 B

Source: LYB

# Robust and Diversified Portfolio



## Intermediates & Derivatives

2014 Revenue \$10.1 B  
2014 EBITDA<sup>(1)</sup> \$ 1.6 B

Propylene Oxide & Derivatives	Oxyfuels	TBA & Intermediates	Acetyls	Ethylene Oxide & Derivatives	Styrene
<u>Capacity<sup>(2)</sup>:</u> 2.8 billion lbs. Propylene Oxide	<u>Capacity:</u> 75 MBPD	<u>Capacity:</u> 1.4 billion lbs. High Purity Isobutylene	<u>Capacity:</u> 440 million gallons Methanol 1.2 billion lbs. Acetic Acid	<u>Capacity:</u> 0.9 billion lbs. Ethylene Oxide equivalent	<u>Capacity<sup>(2)</sup>:</u> 3.1 billion lbs. Styrene Monomer



Source: LYB

(1) 2014 EBITDA excludes LCM inventory adjustment.

(2) Includes pro-rata share of joint ventures as of December 31, 2014.

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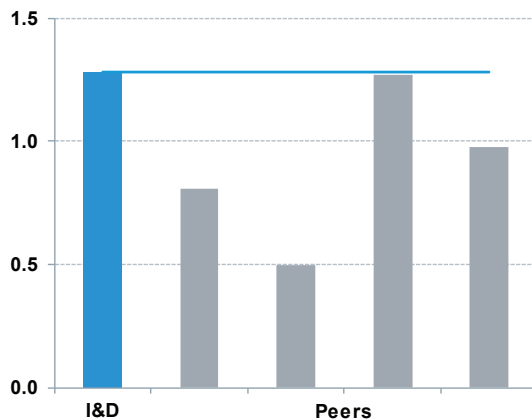
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## Leading Scale

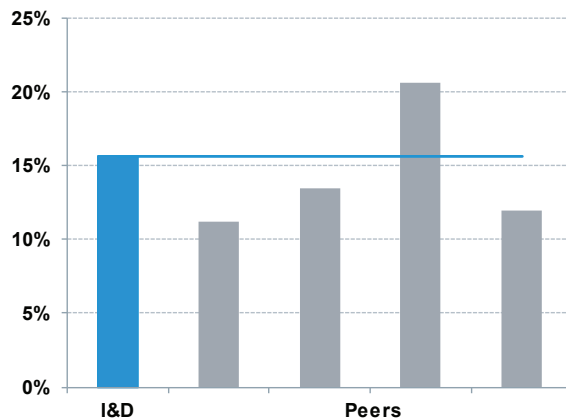


### 2011 – 2014 Avg. EBITDA – Capex<sup>(1)</sup>

USD, billions



### 2011 – 2014 Avg. EBITDA Margin<sup>(1)</sup>



Very competitive positioning relative to our peers

Source: LYB, Capital IQ

(1) EBITDA is as reported by Capital IQ or in Company Filings and could include adjustments and therefore not be on the same basis. I&D EBITDA excludes the LCM impact. One peer did not restate financial information back to 2011 following a reorg and therefore the average for this peer was based on the average of 2012 – 2014.

Notes: Peers include Celanese, Dow Performance Materials and Chemicals, Eastman and Huntsman. EBITDA Margin = EBITDA / Revenue.

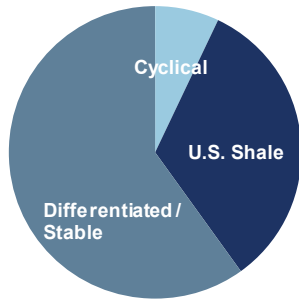
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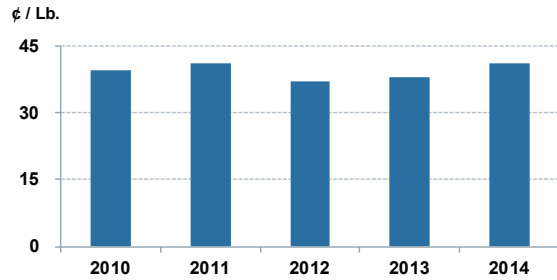
# Segment Diversity: a Platform for Stable Profitability



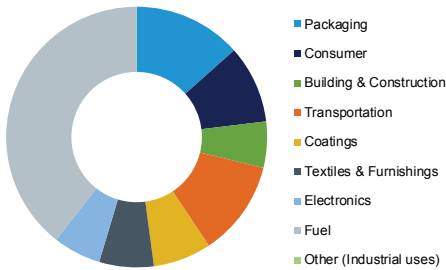
## Differentiated Proprietary Technology (2014 EBITDA)



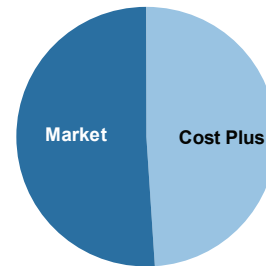
## Propylene Glycol Raw Material Margin



## Diverse End Uses<sup>(1)</sup>



## Contracting Strategy



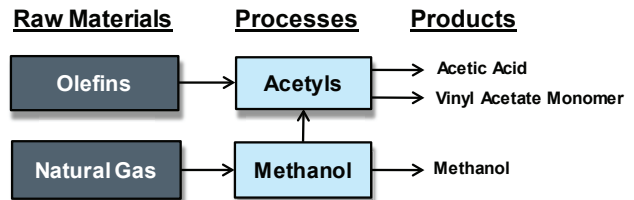
Source: LYB, Chemical Data (PG Raw Material Margin)  
 (1) Internal LYB estimates derived from third party sales and estimated end uses, 2012.

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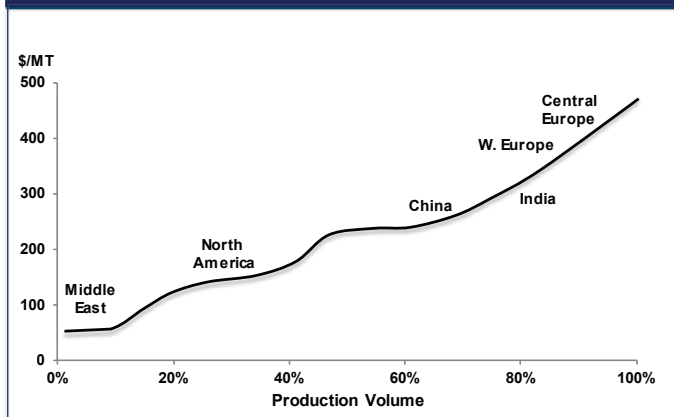
# LYB Acetyls Benefits from Shale Gas



- Access to low cost Natural Gas creates value
- LYB has proprietary technology in Acetic Acid & Vinyl Acetate Monomer
- Fully integrated system
- LYB has portfolio agility to maximize the value of methanol into ethers, acetyls or the merchant market
- U.S. to remain a net importer of methanol in the near to mid-term



## Global Methanol Cost Curve



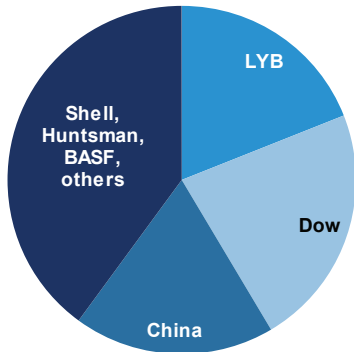
Source: LYB

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# LYB Practices the Leading Technologies

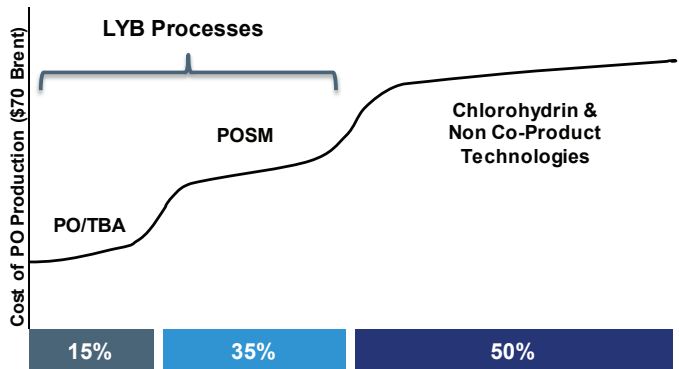


## Global PO Capacity<sup>(1)</sup>



Total Global Capacity: ~21 B Lbs.

## PO Cost Curve



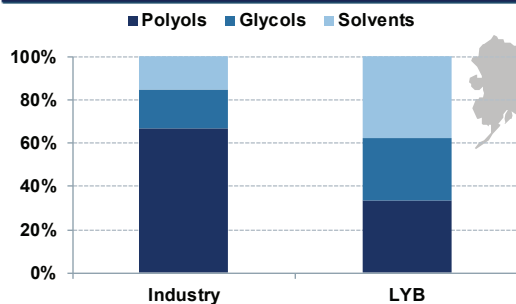
- LYB's PO production capacity is approximately a 50/50 split between PO/TBA and POSM technologies, the two lowest cost technologies
- LYB capacity represents about ~45% of the low-cost PO/TBA and POSM capacity

Sources: LYB, IHS  
 (1) LYB includes 100% of owned and operated capacity, including joint ventures.

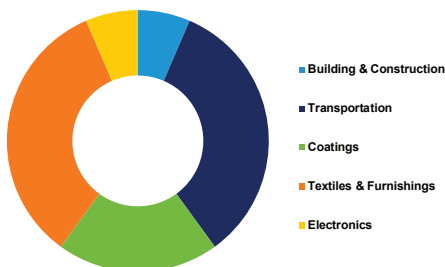
# LYB has PO Derivative & Geographical Diversity



## PO Volume by Derivative Market



## Diverse End Uses of PO<sup>(1)</sup>



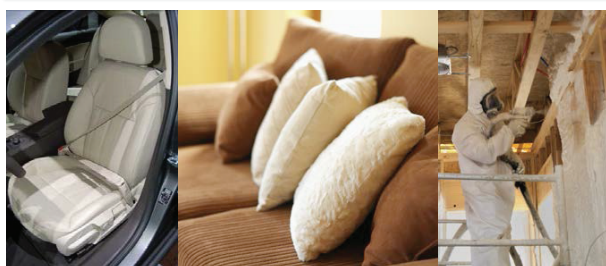
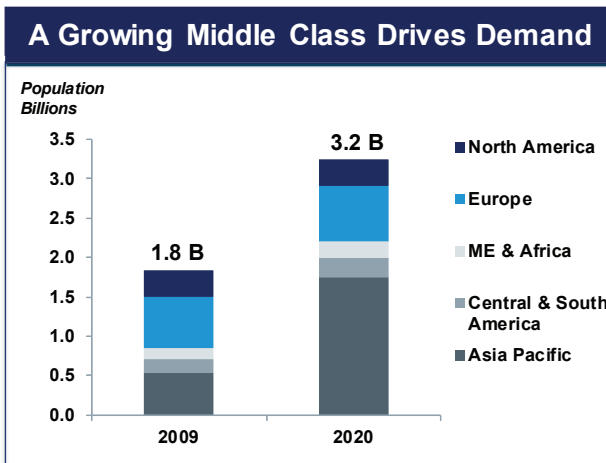
- LYB's PO profitability is based on advantaged & proprietary technology
- Profit stability is enabled by both derivative & geographical diversification with portfolio agility

Source: LYB, IHS  
 (1) End uses based on LYB estimates using data from year-end 2012.

# Middle Class Expansion Drives Propylene Oxide Demand

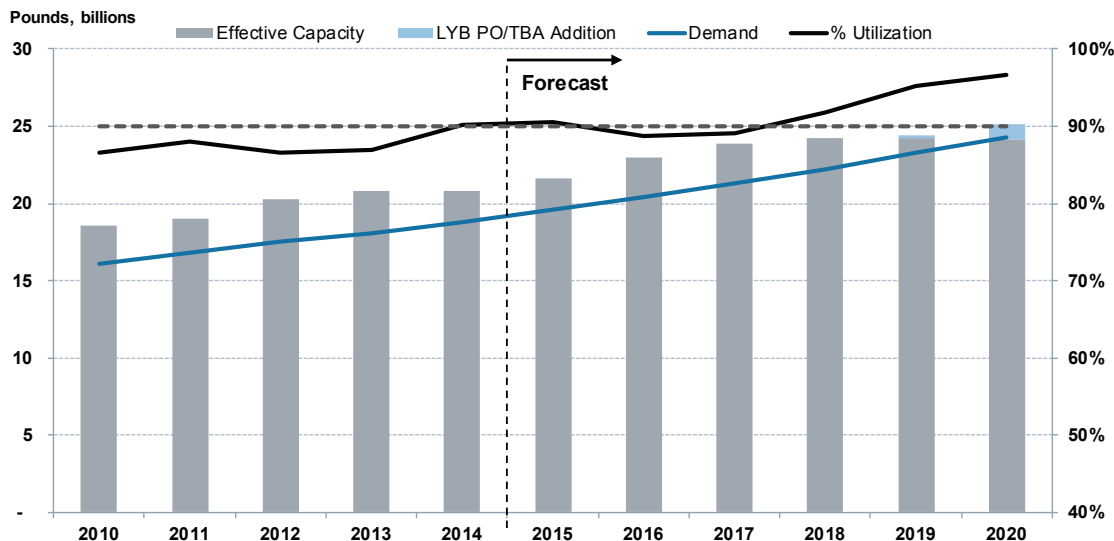


- Over the next decade, the “middle class” is expected to grow from 35% to ~40% of the global population
- The area of focus for tomorrow’s “middle class” is in Asia Pacific
  - Expected to account for ~90%+ of global Middle class growth 2015-2030
- Typical “middle class” expenditures include:
  - Cars
  - Housing
  - Furnishing



Source: Wolfensohn Center for Development/Brookings Institute

# Global Propylene Oxide Supply & Demand



- Worldwide propylene oxide demand growth is equivalent to one new world scale plant a year
- Utilization at 90% is near an effective limit

Source: IHS, LYB estimates

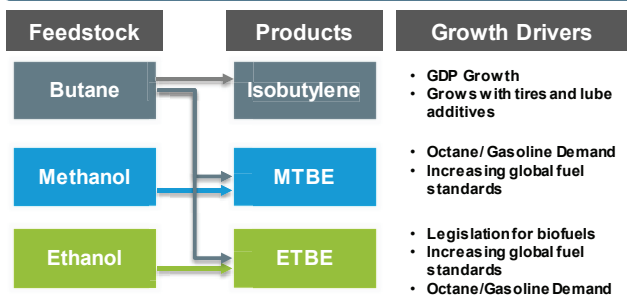


## Co-Products Add Significant Value

### Tertiary Butyl Alcohol (TBA) is a co-product of PO production

- TBA is a precursor for:
  1. Oxyfuels (MTBE and ETBE)
  2. Isobutylene
- Oxyfuels are high octane gasoline blending components.
- ETBE is a bio alternative
- Isobutylene is used in the manufacture of synthetic rubber and lubricant additives

### LYB Upgrades Low Cost Feedstock into Premium Gasoline Blending Components



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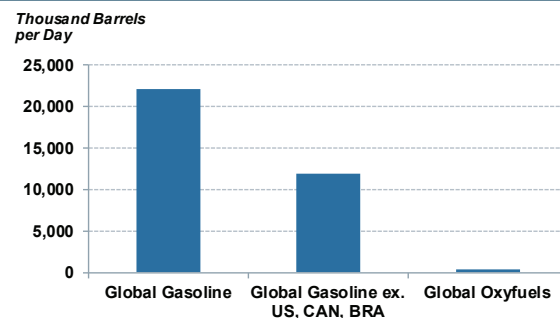


## Oxyfuel Demand

- Oxyfuels benefit from high octane value, low vapor pressure, and low sulfur content
- Oxyfuel demand is a function of fuel quality improvements with growth in gasoline consumption
  - Emerging markets, lead removal and air quality
  - Mature markets, NOX and sulfur emission reductions
  - Growing supply of low octane, high vapor pressure components
- Mid-term growth potential estimated to be > 28 MBPD

Fuel	Octane (R+M)/2	Vapor Pressure (RVP)	Sulfur (PPM)
Gasoline	87-93	7 - 13	10 - 30
MTBE	110	8	< 10
ETBE	111	4	< 10
Naphtha	70 - 75	8-12	30 - 100

### Global Gasoline and Oxyfuel Demand



Source: IHS, EIA

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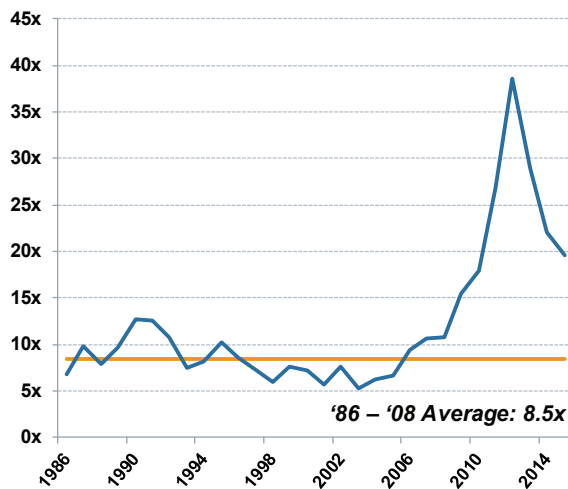
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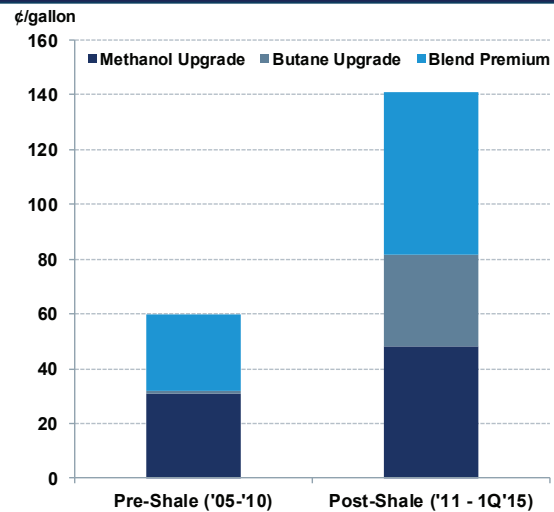
# Oxyfuel Profitability



## Oil to Gas Ratio



## U.S. MTBE Upgrade Value



MTBE profitability expands with the gas to liquid spread and octane demand

Source: LYB, IHS

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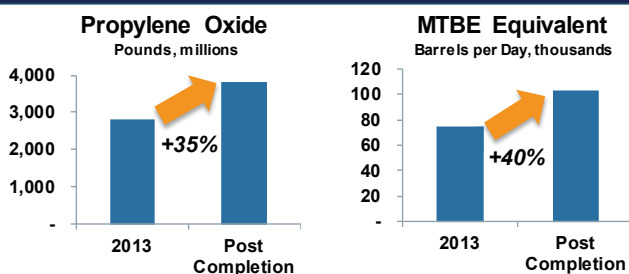
# Planned U.S. Gulf Coast PO/TBA Plant



- Capacity:
  - ~1.0 Billion lbs. PO
  - ~29 M BPD Oxyfuel equivalent
- Expected start-up: 2019
- Status:
  - Detailed engineering, site selection and permitting considerations are well underway



## Capacity Increase



Source: LYB

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# Intermediates and Derivatives Summary

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- The I&D segment has been a strong and stable generator of earnings and cash flow
  - LYB enjoys proprietary technology, advantaged feedstock with derivative and geographic diversity.
  - The diversity and agility create a platform for segment profit stability
- Acetyls well positioned due to U.S. natural gas and ethylene integration
- PO demand is driven by middle class expansion. Oxyfuel demand is driven by fuel quality improvement with gasoline consumption.
  - Combined PO and Oxyfuel growth is equivalent to one world scale plant annually
- LYB has announced plans for a new US GC PO/TBA plant with a potential start-up in 2019



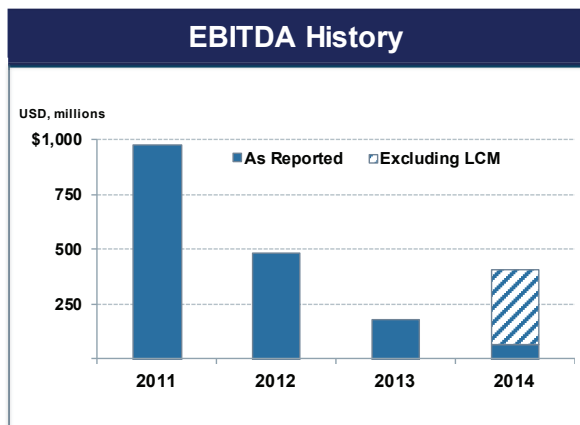
## Refining and Global Projects

Kevin Brown  
Executive Vice President

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## Refining



### Key Messages

- Expanded processing and logistics flexibility to process a broader range of crude oil
- Continuous focus on safety, reliability, yield improvements, and cost discipline
- Heavy crude refining generates positive cash flow and provides sustainable value
- 2011 - 2014 EBITDA<sup>(1)</sup> less Capital Expenditure = ~\$1.4 billion

### Position Within the Portfolio

Segment	LYB Market Position	Priority	2014 EBITDA (ex. LCM)
Refining	<ul style="list-style-type: none"> <li>Large, heavy crude refinery</li> <li>Adding more Canadian crude</li> </ul>	Optimize	\$0.4 B

Source: LYB  
(1) EBITDA excludes the impact of LCM adjustments.

# Response to Market Trends



## Market Trends

- Canadian heavy crude and U.S. crude oil growth provide an advantage for U.S. refiners
- Growing supplies of heavy Latin American crudes must compete for declining share of U.S. imports
- Global refined product demand creates export opportunities



## Response

- Focusing on operations
  - Expanding operating windows (more sulfur capacity, increased light ends recovery)
  - Capital and cost discipline, improving reliability
- Diversifying our crude supply
  - Secured lowest cost pipeline space to deliver tar sands oils to Houston
  - Replaced Venezuelan supply with other Latin American barrels
- Expanding product export capability

Business focused on maximizing free cash flow

# Evolution of Crude Selection at Houston Refinery

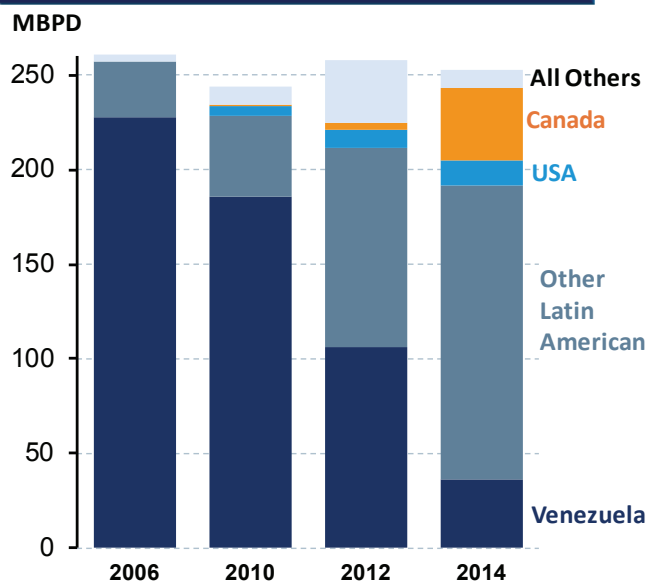


## A Crude Selection Story

- Venezuela crude supply contract ended in mid -2011
- Initially replaced with other south American crudes
- Expanded use of advantaged domestic, Canadian, and other Latin American crudes
- Demonstrated capability to shift among crude oils, whether light or heavy, sour or sweet

# Crudes Processed	API Gravity	Sulfur Content
+ 120%	+ 2.7 pts.	+ 13%

## Flexible, Evolving Crude Slate



Source: LYB



	Plan	Execute			Benefit
	2011 & earlier	2012	2013	2014	2015 & beyond
Crude logistics capability	Pipeline commitments	Conway, OK → Houston	Connections to West Texas production		Alberta → Houston
Light-ends processing		Expanded during turnaround			
Sulfur processing		Increased capacity via low cost oxygen enrichment			
Coking capacity		Larger coke drums installed during turnaround			
Cost reductions	✓	✓	✓	✓	✓

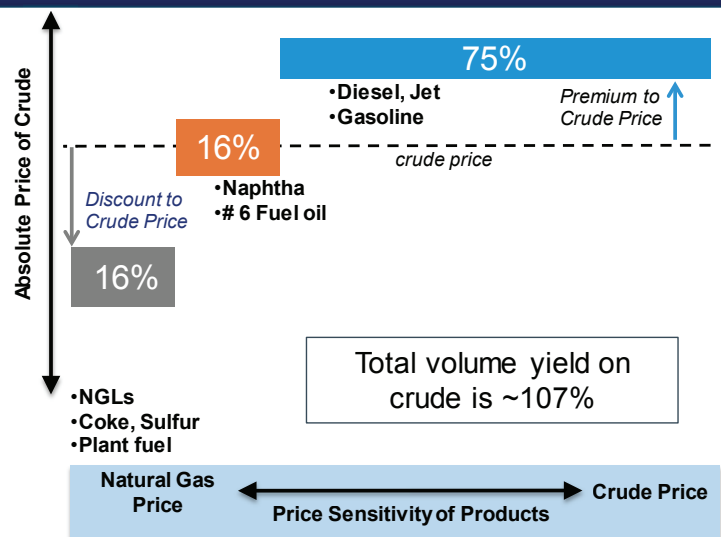
Source: LYB

## Crude Yields and By-Products



- The yields on a barrel of crude fall into three general categories:
  - Clean Products (highest value)
  - By-Products with crude-related pricing
  - By-Products with fuel-value pricing
- The 2-1-1 crack relates to clean fuels only and requires RIN cost.
- Higher crude / low natural gas price magnifies unfavorable by-product impact on refining margins.

### Houston Refinery: Key Yields and Pricing Relationships

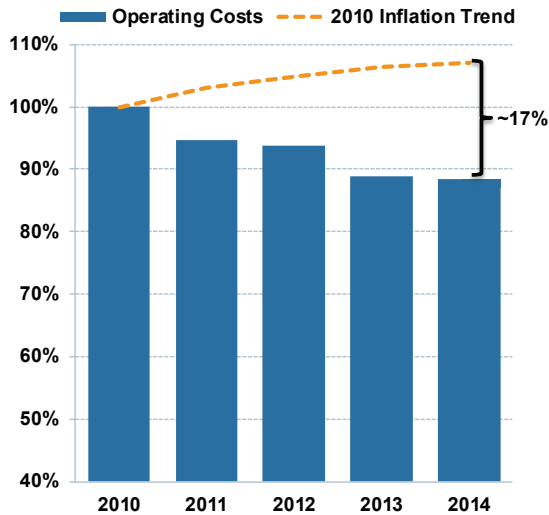


Source: LYB

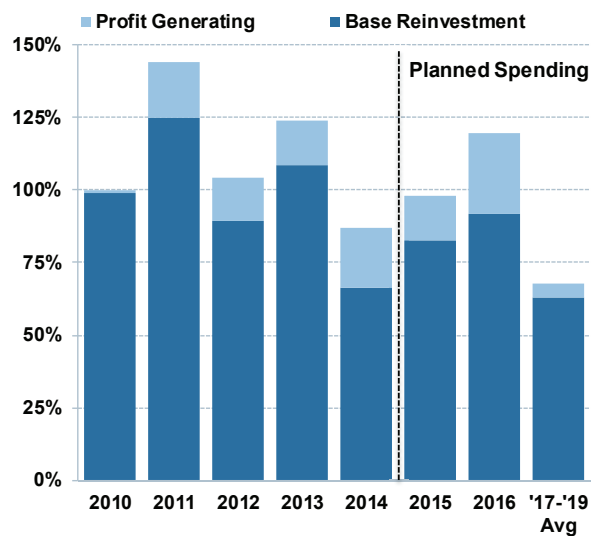


## Focus on Cost and Capital Discipline

### Indexed Manufacturing Operating Cost<sup>(1)</sup>



### Indexed Capital Expense & 5-year Plan<sup>(2)</sup>



2011 – 2014 EBITDA less Capital Expenditure excluding LCM = ~\$1.4 billion

1) Manufacturing operating cost per refinery throughput indexed to 2010 dollars.  
2) Capital Expense indexed to 2010 Capital Expense.

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## Regulatory Update

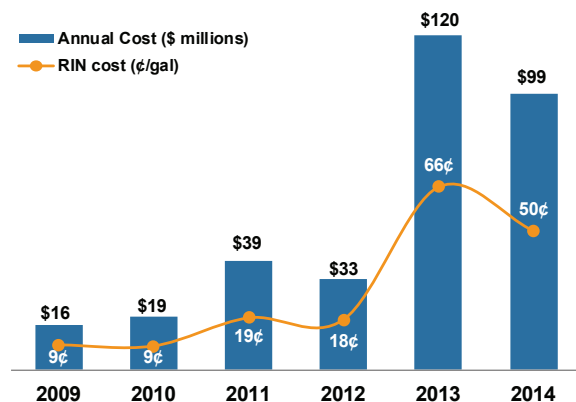
### Renewable Fuel Standard (RFS) compliance achieved by:

- RIN purchases
- Renewable diesel production
- Gasoline and diesel exports (RIN exempt)

### Tier 3 Gasoline Regulation

- U.S. nationwide gasoline sulfur specification dropping from 30-ppm (Tier 2) to 10-ppm
- Tier 3 investment expected to be about \$50 million
- Expanding product export capability

### Annual RIN Costs



Source: LYB

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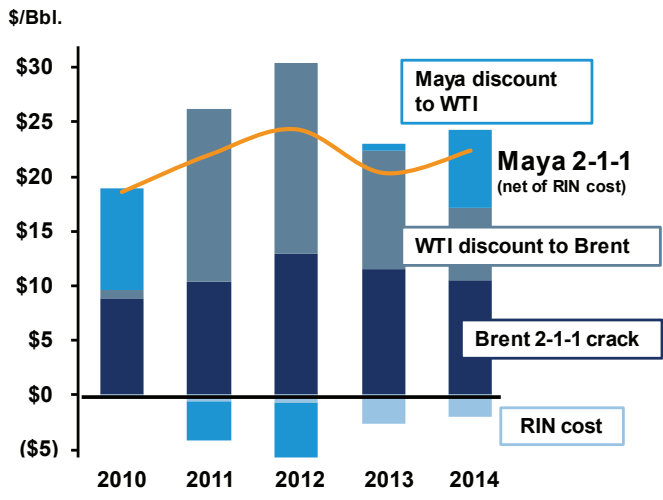
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# Summary

## Market Influence: Maya 2-1-1 Spreads



## Our Focus

- Safe, reliable operations
- Expanded acquisition / delivery logistics / processing capability for discounted heavy crude oils
- Maximize premium product yields & upgrade sales realizations
- Relentless cost containment
- Disciplined capital spending

- Gulf Coast refining margins supported by growth of cost advantaged North American crude oil supplies and growing domestic and export product demand
- We expect our focus areas to generate sustainable value.

Source: LYB

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# Update on Olefins Expansion Projects

### La Porte

- 800 MM pounds per year
- Complete Sept 2014
- Final cost: \$500 million



### Channelview

- 250 MM pounds per year
- ~90% complete
- Startup June 2015
- Est. cost: ~\$200 million



### Corpus Christi

- 800 MM pounds per year
- ~40% complete
- Startup Q2 2016
- Est. cost: ~\$600 million



Source: LYB

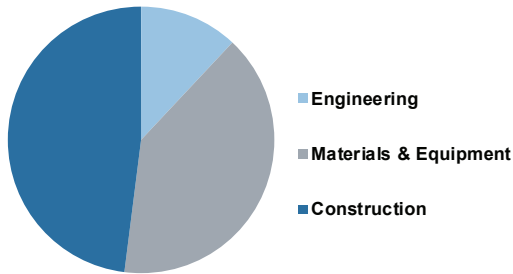
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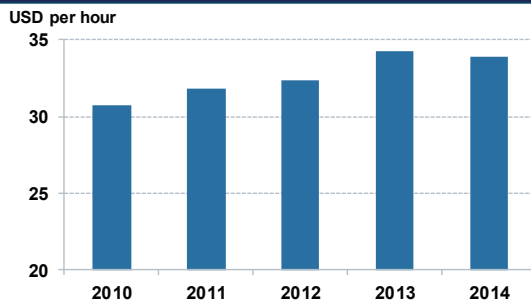
# Project Costs

## Greenfield Ethylene Cracker Costs



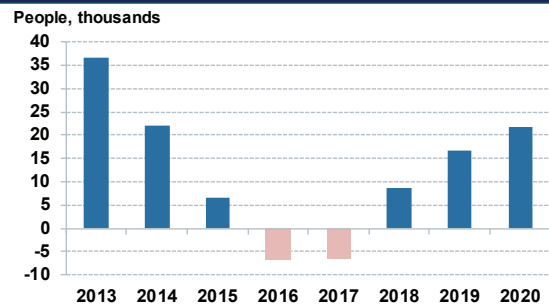
- Recent shale field activity declines beginning to stabilize markets
- Engineering costs: labor shortages and inexperienced staffs
- Skilled labor: years of significant wage increases
- Peak industrial labor demand in 2016 - 17

## Houston Area Welding Costs<sup>(1)</sup>



Source: Industrial Info Resources  
 (1) This information represents the hourly wage of combo-pipe welders in the Houston market

## Industrial Construction Labor Balance



# Summary



## Refining

- Now positioned to maximize value within our existing system
  - Reliability investments now largely completed
  - Modifications made to expand operating window
  - Industry infrastructure advanced to provide supply flexibility
- Generated EBITDA<sup>(1)</sup> less capital of \$1.4 billion during the period 2011-2014

## Projects

- Current projects benefitting from prior experience
- Projects proceeding as planned
- Reduced oil field activity is beginning to soften construction pressure but costs continue to escalate, although at a slower pace

(1) Excludes the impact of the 2014 LCM adjustments



## A Strong Foundation: The Right Pieces in the Right Places

Bob Patel  
Chief Executive Officer

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### In Summary: Our Principal Focus is Consistent

#### Principal Focus

- Environmental, Health, and Safety Performance: GoalZero
- Operational Excellence
- Flexible, Low-cost Operator
- Capital Discipline
- Align Pay with Performance
- Advantaged Growth

**Consistent Priorities**

#### Priority Uses of Cash

- Base
  - Maintenance Capex
  - Interest
  - Dividend
- Advantaged organic growth
- Further shareholder returns

#### Consideration Given to Opportunities, if:

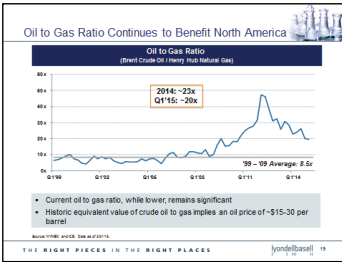
On a risk adjusted basis:

- Makes us a better company
- Our strengths create unique value
- Can be done without negatively impacting our principal focus

# The Right Pieces...Outperforming



## The Right Pieces in the Right Places



### Oil to Gas Ratio Favorable

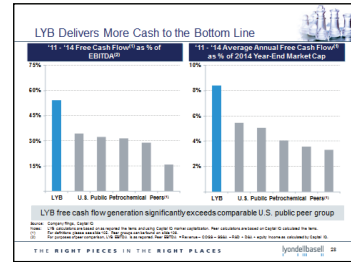
### Progress Since March 2013 Investor Day

FY 2012	EBITDA (\$B)	FY 2014
\$5.8	+54%	\$7.8 <sup>(1)</sup>
\$4.96	Diluted EPS +93%	\$8.92 <sup>(1)</sup>
\$1.45 <sup>(2)</sup>	Annual Dividend per Share +95%	\$2.70
575	Shares Outstanding (MM) \$1 billion share repurchased \$2.2 billion	487
16.2	Global Ethylene Capacity (B pounds) +52%	17.2
Growth Program Outlined		
Completed Growth Projects		

Source: LDB

### Strong Performance

## Outperformance in Perspective



### Cash Generation

### Portfolio Stability

Portfolio % at 2014 EBITDA	Examples	Near-Term Trend	Mid-Long Term Trend
60%	<ul style="list-style-type: none"> <li>Ethylene (majority)</li> <li>PE - Stone Island</li> <li>PP - Hoeschtcelanese</li> <li>Acrylics</li> </ul>	Tight polyolefins markets	↑
20%	<ul style="list-style-type: none"> <li>Ethylene (majority)</li> <li>PE</li> <li>Methacrylates</li> </ul>	Volatility driven by oil prices	→
20%	<ul style="list-style-type: none"> <li>Propylene Oxide</li> <li>Differentiated PEPP</li> <li>Carboxylic Acids</li> <li>PP Copolymers</li> <li>Technology Segment</li> </ul>	Steady volumes, robust profit margin, high return on capital	→

Differentiated businesses provide a solid foundation  
Cyclical products represent a minority of 2014 earnings

Source: Internal LDB

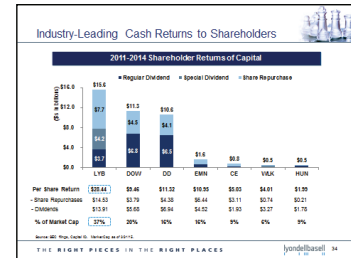
### Portfolio Stability

### Cash Deployment Hierarchy is Unchanged

	2014	Comments
Foundation	<ul style="list-style-type: none"> <li>Base Capex - \$700 million</li> <li>Interest Expense - \$350 million</li> </ul>	<ul style="list-style-type: none"> <li>First priorities for cash</li> </ul>
	Interim Dividend - \$1.4 billion	Fund through the cycle with cash flow from operations
	Grow in Capex - \$800 million	High-return in advantaged businesses
Discretionary Opportunities	Share Repurchases / Special Dividend / Acquisitions - \$3 billion	<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: LDB

### Cash Deployment Unchanged

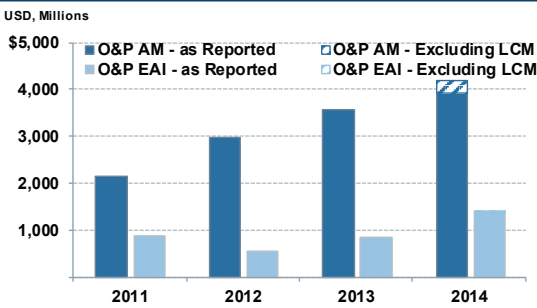


### Returning Cash to Shareholders

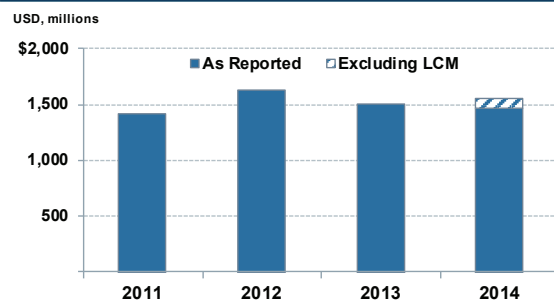
# A High Performing Portfolio: EBITDA Across Time



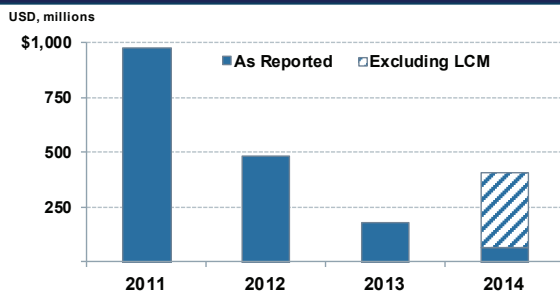
## Olefins & Polyolefins Segments



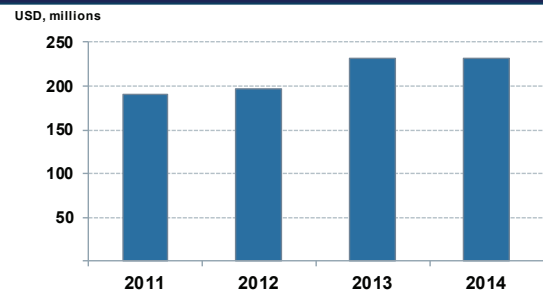
## Intermediates & Derivatives



## Refining



## Technology



# Each Business is Operated to Maximize Results



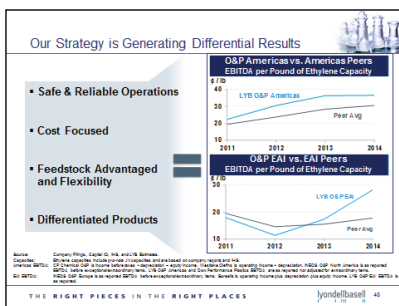
Segment	LYB Market Position	Priority	2014 EBITDA (ex. LCM)
Olefins & Polyolefins – Americas	<ul style="list-style-type: none"> <li>NGL advantage</li> <li>Increasing capacity</li> </ul>	Invest	\$4.2 B
Olefins & Polyolefins – EAI	<ul style="list-style-type: none"> <li>Commodities – naphtha based, with cyclical upside</li> <li>Advantaged feedstock</li> <li>Differentiated polymers</li> </ul>	Optimize	\$1.4 B
Intermediates & Derivatives (I&D)	<ul style="list-style-type: none"> <li>Proprietary technologies</li> <li>Natural gas advantage</li> </ul>	Invest	\$1.6 B
Refining	<ul style="list-style-type: none"> <li>Large, heavy crude refinery</li> <li>Processing Canadian crude</li> </ul>	Optimize	\$0.4 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 2014 LCM adjustment.

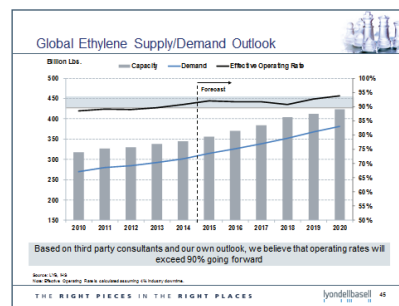
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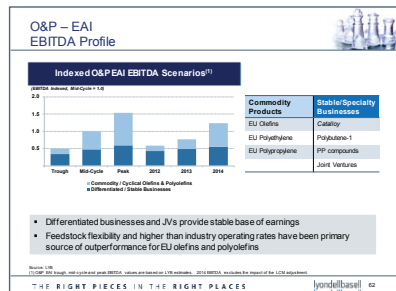
## Olefins and Polyolefins Segments: Differential Results and Position



### Differential Results



### Favorable Ethylene Supply and Demand



### Differential and Stable Base

**Project Status**

Project	Scope (MM lbs/yr)	Investment (\$ million)	Timing	Potential EBITDA (\$ million / year)	
				2011 – 2014 Avg. Margins	Q1'15 Margins
Increase Ethane Capacity	500	~\$25	2012	\$50 – 100	\$10 – 50
Midwest Ethylene / PE	120	~\$25	2013	\$30 – 40	\$20 – 30
EU Butadiene Expansion <sup>(2)</sup>	185	~\$100	Q2 2015	\$40 – 50	\$40 – 50
Matagorda PE	220	~\$20	Q2 2014	\$5 – 10	\$30 – 40
La Porte Ethylene	800	~\$500	Q2 2014	\$200 – 250	\$170 – 220
Channeway Ethylene I	250	~\$200	Q2 2015	\$70 – 90	\$60 – 70
Corpus Christi Ethylene	800	~\$600	Q2 2016	\$220 – 280	\$170 – 230
Channeway Ethylene II	550	~\$300	2017 – 18	\$150 – 190	\$120 – 160
PE / Metathesis Capacity	~1,000	TBD	TBD	TBD	TBD

- A2.5 Billion pound ethylene expansion program
- Potential EBITDA: @ 2011-2014 benchmark margins: ~\$800 – 1,050 MM
- Potential EBITDA: for projects not yet operating: ~\$450 – \$50 MM<sup>(3)</sup>

### Growing Advantaged Positions

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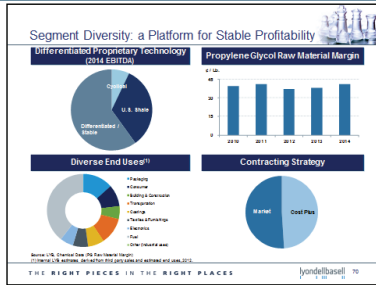
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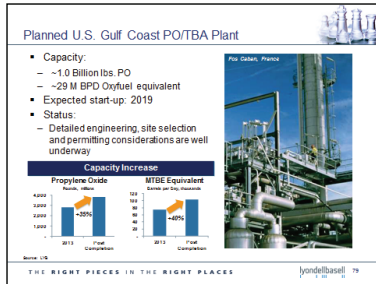
# I&D, Refining and Technology



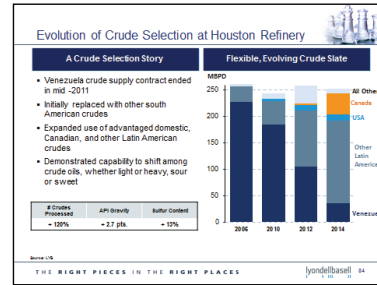
## Intermediates and Derivatives



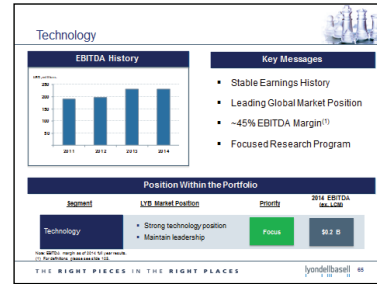
### Segment Diversity and Stability



### Growing PO and Oxyfuels



### Refining: Pieces in Place to Perform

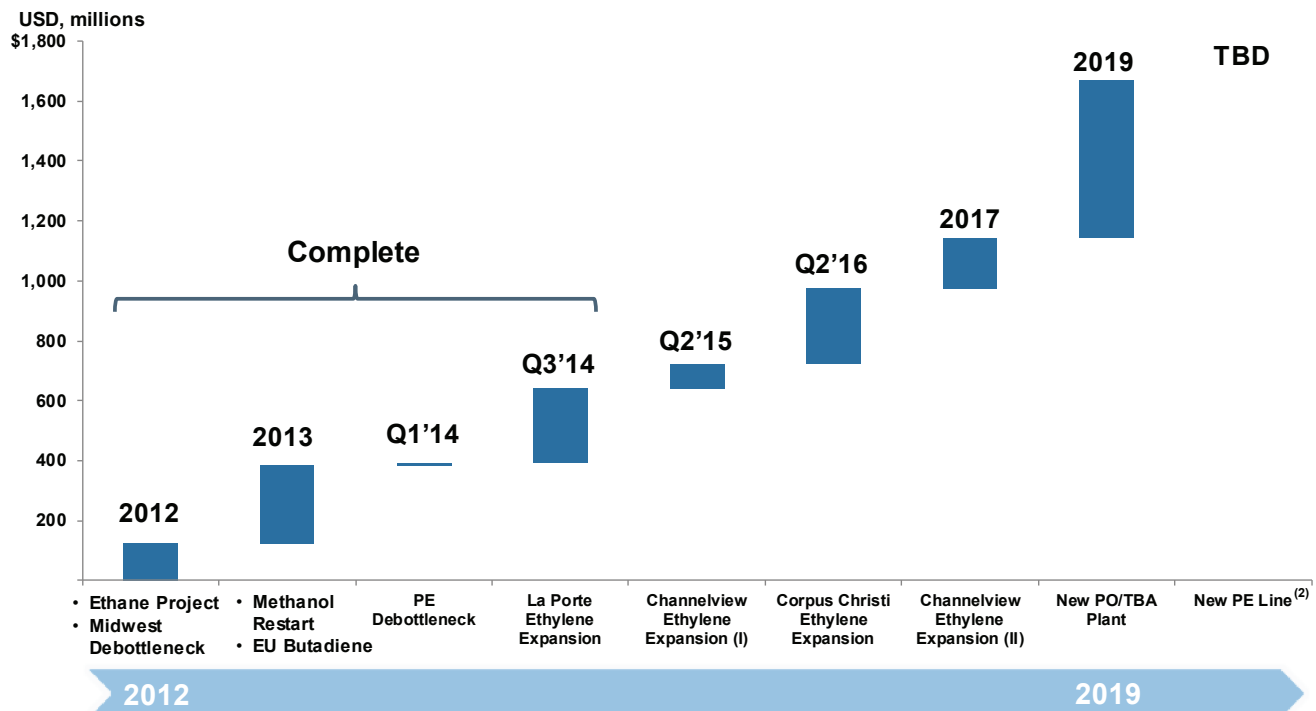


### Technology: Steady and High Margin

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# Projects are Moving Forward: Largest Gains Ahead



(1) Annual potential value represents the potential earnings impact based on 2011 – 2014 average industry benchmark margins.

(2) We are re-evaluating future capital plans related to our new Gulf Coast polyethylene facility, based on the changes in the energy prices, and rising construction costs in the Gulf Coast.

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## Status of Growth Projects



Project	Scope (million Lbs.)	Start-up	Cost (\$ million)	Potential EBITDA <sup>(1)</sup> (\$ million / year)	
				2011-14 Avg. Margins	Q1' 15 Margins
Increase Ethane Capability	500	2012	~\$25	\$80 – 100	\$10 – 30
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	\$200 – 230	\$190 – 220
PE Debottleneck	220	Early 2014	~\$20	\$5 – 10	\$30 – 40
La Porte Expansion	800	Mid 2014	~\$500	\$220 – 280	\$170 – 230
Channelview Expansion (I)	250	Mid 2015	~\$200	\$70 – 90	\$50 – 70
Corpus Christi Expansion	800	Early 2016	~\$600	\$220 – 280	\$170 – 230
Channelview Expansion (II)	550	2017	~\$300	\$150 – 190	\$120 – 160
New PO/TBA Plant	1,000 PO 29 MBPD Oxyfuels	2019	TBD	\$500 – 550	\$380 – 430
PE / Metathesis Capacity	~1,000	TBD	TBD	TBD	TBD
<b>Total</b>			<b>~\$1,950</b>	<b>\$1,515 – 1,820</b>	<b>\$1,180 – 1,490</b>

Source: LYB, Chemical Data and IHS.

(1) Potential EBITDA assumes 100% utilization and is based on third party consultant industry margins for Q1 2015, and 2011-2014 average as of April 13, 2015.

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

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## The Right Pieces in the Right Places



Continuity	Our Priorities and Focus are Unchanged
Performance	Leading the Industry
Cash Generation	Leading our Peers
Shareholder Friendly	Consistent Policy
Opportunities Now and Ahead	Projects Coming Online
Advantaged Positions	Favorable Oil to Gas Environment
Differentiation and Balance	Polymers Mix and I&D Technology
Strong Operations	Consistently Reliable
Transparent and Open	This is Your Company

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# Q&A

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## Appendix

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## Glossary

- **CAGR:** Compound Annual Growth Rate =  $(\text{Ending Value} / \text{Beginning Value})^{(1 / \# \text{ of Years})} - 1$  [27]
- **Capital:** Total Debt + Total Equity [31]
- **D&A:** Depreciation and Amortization [28, 30]
- **Dividend Yield:** Annual Dividends per Share / Price Per Share [33, 42]
- **\*EBITDA:** Earnings before Interest, Taxes and Depreciation and Amortization = Revenue - COGS - SG&A - R&D + D&A + Equity Income [28, 30]
- **\*EBITDA Margin:** EBITDA / Revenue [69]
- **Effective tax rate** = Provision for Income Taxes / Income Before Taxes [8, 31]
- **\*Enterprise Value** = Market Value of Common Stock + Market Value of Preferred Equity + Market Value of Debt + Minority Interest - Cash and Investments [42]
- **\*Free Cash Flow** = Cash from Operations - Capital Expenditures [28, 29]
- **\*Free Cash Flow Yield** =  $(\text{Cash from Operations} - \text{Capital Expenditures}) / \text{Market Capitalization}$  [29]
- **\*Net Operating Assets** = Year-end Accounts Receivable + Goodwill + Long Term Investments + Inventory + Net PP&E - Accounts Payable [30]
- **\*Net Debt** = Current Maturities of Long-Term Debt + Short-Term Debt + Long-Term Debt – Cash and Cash Equivalents – Short-Term Securities [14]
- **\*NOPAT:** Net Operating Profit After Taxes = Operating Income x  $(1 - \text{Effective Tax Rate})$  [31]
- **\*NOPAT Margin:** Net Operating Profit After Taxes / Revenue [31]
- **Operating Income** = Revenue - COGS - SG&A - R&D
- **\*Operating Margin:** Operating Income (as defined above) / Revenue [31]
- **R&D:** Research and Development [28, 30]
- **ROIC:** Return on Invested Capital = NOPAT / Capital [31]
- **SG&A:** Sales, General and Administrative [28, 30]

\* See reconciliations in the Appendix

## Peer Groups



- **Americas Peers:** CP Chemical O&P segment, Dow Performance Plastics segment, INEOS O&P North America segment and Westlake Olefins segment. [48]
- **Asian Chemicals:** Asahi Kasei, Formosa Petrochemical, Formosa Plastics, LG Chem, Lotte Chemical, Mitsubishi Chemical, Nan Ya Plastics, Petronas Chemicals, PTT Global Chemical, Showa Denko, Sinopec Shanghai Petrochemical and Sumco [29]
- **EAI Peers:** Borealis and INEOS O&P Europe segment. [48]
- **European Chemicals:** Air Liquide, Arkema, BASF, Clariant, Evonik, Lanxess, Linde and Solvay [29, 31, 32]
- **Middle Eastern Chemicals:** Advanced Petrochemical, Alujain, Chemanol, Industries Qatar, Nama, Petrochem, Petro Rabigh, Tasnee, SABIC, Sahara, Saudi Kayan, Sipchem, SIIG and Yansab [29]
- **U.S. Chemicals:** Airgas, Air Products, Axiall, Celanese, Cytac, Dow, DuPont, Eastman, Huntsman, Monsanto, PPG, Praxair and Westlake [29, 30, 31, 32]
- **U.S. Public Petrochemical Peers:** Celanese, Dow, Eastman, Huntsman and Westlake [27, 28]

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## Information Related to Financial Measures



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 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 the LCM rule, consistent with GAAP. 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 alternative to operating cash flows as a measure of our liquidity. We have also presented financial information herein exclusive of adjustments for LCM.

Descriptions of and reconciliations for our non-GAAP measures can be found in this Appendix or on our website at [www.lyb.com/investorrelations](http://www.lyb.com/investorrelations).

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# EBITDA Excluding LCM Adjustments



## Reconciliation of EBITDA Excluding LCM Adjustments to EBITDA - 2011 Through 2014

In Million of Dollars	For the Twelve Months Ended December 31,				Incremental Change from 2011
	2011	2012	2013	2014	
<b>EBITDA Excluding LCM Adjustments:</b>					
Olefins & Polyolefins - Americas	\$ 2,137	\$ 2,968	\$ 3,573	\$ 4,190	\$ 2,053
Olefins & Polyolefins - EAI	865	548	839	1,410	545
Intermediates & Derivatives	1,410	1,621	1,492	1,552	142
Refining	977	481	182	409	(568)
Technology	191	197	232	232	41
Other	(111)	(7)	(7)	17	128
Total	5,469	5,808	6,311	7,810	2,341
<b>Less:</b>					
<b>LCM Adjustments:</b>					
Olefins & Polyolefins - Americas	-	-	-	279	279
Olefins & Polyolefins - EAI	-	-	-	44	44
Intermediates & Derivatives	-	-	-	93	93
Refining	-	-	-	344	344
Technology	-	-	-	-	-
Other	-	-	-	-	-
Total	-	-	-	760	760
<b>EBITDA:</b>					
Olefins & Polyolefins - Americas	2,137	2,968	3,573	3,911	1,774
Olefins & Polyolefins - EAI	865	548	839	1,366	501
Intermediates & Derivatives	1,410	1,621	1,492	1,459	49
Refining	977	481	182	65	(912)
Technology	191	197	232	232	41
Other	(111)	(7)	(7)	17	128
Total	\$ 5,469	\$ 5,808	\$ 6,311	\$ 7,050	\$ 1,581

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# Last Twelve Months EBITDA



## Reconciliation of Last Twelve Months (LTM) EBITDA Excluding LCM Adjustments to LTM EBITDA

In Million of Dollars	Year Ended	Three Months Ended		Last Twelve Months
	December 31,	March 31,	March 31	March 31
	2014	2014	2015	2015
<b>EBITDA Excluding LCM Adjustments:</b>				
Olefins & Polyolefins - Americas	\$ 4,190	\$ (736)	\$ 1,074	\$ 4,528
Olefins & Polyolefins - EAI	1,410	(356)	357	1,411
Intermediates & Derivatives	1,552	(375)	381	1,558
Refining	409	(129)	154	434
Technology	232	(76)	76	232
Other	17	4	2	23
Total	7,810	(1,668)	2,044	8,186
<b>Less:</b>				
<b>LCM Adjustments:</b>				
Olefins & Polyolefins - Americas	279	-	43	322
Olefins & Polyolefins - EAI	44	-	-	44
Intermediates & Derivatives	93	-	44	137
Refining	344	-	5	349
Technology	-	-	-	-
Other	-	-	-	-
Total	760	-	92	852
<b>EBITDA:</b>				
Olefins & Polyolefins - Americas	3,911	(736)	1,031	4,206
Olefins & Polyolefins - EAI	1,366	(356)	357	1,367
Intermediates & Derivatives	1,459	(375)	337	1,421
Refining	65	(129)	149	85
Technology	232	(76)	76	232
Other	17	4	2	23
Total	\$ 7,050	\$ (1,668)	\$ 1,952	\$ 7,334

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# Net Income to EBITDA



## Reconciliation of Net Income to EBITDA

In Million of Dollars	For the Twelve Months Ended December 31,				Three Months Ended			Last Twelve Months
	2011	2012	2013	2014	2014	March 31, 2014	March 31, 2015	March 31, 2015
	Net Income Attributable to the Company Shareholders	\$ 2,147	\$ 2,848	\$ 3,857	\$ 4,174	\$ 4,174	\$ (945)	\$ 1,166
Net Loss Attributable to Non-Controlling Interests	(7)	(14)	(4)	(6)	(6)	1	(2)	(7)
(Income) Loss from Discontinued Operations	332	24	7	4	4	1	3	8
LCM Adjustments, After Tax	-	-	-	483	483	-	58	541
Income from Continuing Operations Excluding LCM Adjustments	2,472	2,858	3,860	4,655	4,655	(943)	1,225	4,937
Less:								
LCM Adjustments, After Tax	-	-	-	(483)	(483)	-	(58)	(541)
Income from Continuing Operations	2,472	2,858	3,860	4,172	4,172	(943)	1,167	4,396
Provision for Income Taxes	1,059	1,327	1,136	1,540	1,540	(383)	440	1,597
Depreciation and Amortization	931	983	1,021	1,019	1,019	(256)	287	1,050
Interest expense, net	1,007	640	294	319	319	(86)	58	291
Add:								
LCM Adjustments, Before Tax	-	-	-	760	760	-	92	852
EBITDA Excluding LCM Adjustments	5,469	5,808	6,311	7,810	7,810	(1,668)	2,044	8,186
Less:								
LCM Adjustments, Before Tax	-	-	-	760	760	-	92	852
EBITDA	\$ 5,469	\$ 5,808	\$ 6,311	\$ 7,050	\$ 7,050	\$ (1,668)	\$ 1,952	\$ 7,334

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# 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
Diluted Earnings Per Share from Continuing Operations Excluding LCM Adjustments	\$ 4.32	\$ 4.96	\$ 6.76	\$ 8.92
Less:				
LCM Adjustments	-	-	-	0.92
Diluted Earnings Per Share from Continuing Operations	\$ 4.32	\$ 4.96	\$ 6.76	\$ 8.00

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# Free Cash Flow to Net Cash and as a Percent of EBITDA



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

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

## Reconciliation of Free Cash Flow as a Percent of EBITDA - 2011 Through 2014

<u>In Million of Dollars</u>	For the Years Ended December 31,				Average
	2011	2012	2013	2014	2011 - 2014
Net Cash Provided by Operating Activities	\$ 2,860	\$ 4,787	\$ 4,835	\$ 6,048	\$ 4,633
Less:					
Capital Expenditures	1,050	1,060	1,561	1,499	1,293
Free Cash Flow	\$ 1,810	\$ 3,727	\$ 3,274	\$ 4,549	\$ 3,340
EBITDA	\$ 5,469	\$ 5,808	\$ 6,311	\$ 7,050	\$ 6,160
Free Cash Flow as a Percent of EBITDA	33%	64%	52%	65%	54%

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# Free Cash Flow as a Percent of 2014 Market Capitalization



## Reconciliation of Free Cash Flow as a Percent of 2014 Market Capitalization - 2011 Through 2014

<u>In Million of Dollars</u>	For the Years Ended December 31,				Average
	2011	2012	2013	2014	2011 - 2014
Net Cash Provided by Operating Activities	\$ 2,860	\$ 4,787	\$ 4,835	\$ 6,048	\$ 4,633
Less:					
Capital Expenditures	1,050	1,060	1,561	1,499	1,293
Free Cash Flow	\$ 1,810	\$ 3,727	\$ 3,274	\$ 4,549	\$ 3,340
Market Capitalization at December 31, 2014					\$ 39,748
Average 2014 Market Capitalization				\$ 49,123	
Free Cash Flow as a Percent of Market Capitalization				9%	8%

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## Ratio of Total Debt to EBITDA



### Reconciliation of Ratio of Total Debt to EBITDA and EBITDA Excluding LCM

<b>In Million of Dollars</b>	<b>For the Twelve Months Ended December 31,</b>			
	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Current Maturities of Long-Term Debt	\$ 4	\$ 1	\$ 1	\$ 4
Short-Term Debt	48	95	58	346
Long-Term Debt	3,980	4,304	5,776	6,757
Total Debt	4,032	4,400	5,835	7,107
Divided by:				
EBITDA	5,469	5,808	6,311	7,050
Ratio of Total Debt to EBITDA	0.7x	0.8x	0.9x	1.0x
LCM Adjustment	-	-	-	760
EBITDA excluding LCM	\$ 5,469	\$ 5,808	\$ 6,311	\$ 7,810
Ratio of Total Debt to EBITDA excluding LCM	0.7x	0.8x	0.9x	0.9x

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## Ratio of Net Debt to EBITDA



### Reconciliation of Ratio of Net Debt to EBITDA and EBITDA Excluding LCM

<b>In Million of Dollars</b>	<b>For the Twelve Months Ended December 31,</b>			
	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Current Maturities of Long-Term Debt	\$ 4	\$ 1	\$ 1	\$ 4
Short-Term Debt	48	95	58	346
Long-Term Debt	3,980	4,304	5,776	6,757
Total Debt	4,032	4,400	5,835	7,107
Less:				
Cash and cash equivalents	1,065	2,732	4,450	1,031
Short-Term Securities	-	-	-	1,943
	1,065	2,732	4,450	2,974
Net Debt	2,967	1,668	1,385	4,133
Divided by:				
EBITDA	5,469	5,808	6,311	7,050
Add:				
LCM Adjustment	-	-	-	760
EBITDA Excluding LCM	\$ 5,469	\$ 5,808	\$ 6,311	\$ 7,810
Ratio of Net Debt to EBITDA	0.54x	0.29x	0.22x	0.59x
Ratio of Net Debt to EBITDA Excluding LCM	0.54x	0.29x	0.22x	0.53x

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## Ratio of EBITDA to Net Interest Expense



### Reconciliation of Ratio of EBITDA and EBITDA Excluding LCM to Net Interest Expense

<u>In Million of Dollars</u>	<u>For the Twelve Months Ended December 31,</u>			
	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
EBITDA	\$ 5,469	\$ 5,808	\$ 6,311	\$ 7,050
LCM Adjustment	-	-	-	760
EBITDA excluding LCM	5,469	5,808	6,311	7,810
Divided by:				
Interest expense	1,044	655	309	352
Interest income	37	15	15	33
Net interest expense	1,007	640	294	319
Less:				
Premiums and charges related to prepayments of debt	443	294	-	-
Adjusted net interest expense	\$ 564	\$ 346	\$ 294	\$ 319
Ratio of EBITDA to Net Interest Expense	9.7x	16.8x	21.5x	22.1x
Ratio of EBITDA excluding LCM to Net Interest Expense	9.7x	16.8x	21.5x	24.5x

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## Ratio of EBITDA to Net Operating Assets



### Reconciliation of Ratio of EBITDA to Net Operating Assets

<u>In Million of Dollars</u>	<u>For the Years Ended December 31,</u>				<u>2011 vs 2014</u>
	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	
EBITDA	\$ 5,469	\$ 5,808	\$ 6,311	\$ 7,050	
Accounts Receivable	3,778	3,904	4,030	3,448	
Goodwill	585	591	605	566	
Investments and Long-Term Receivables	2,043	2,363	2,114	2,064	
Inventory	5,499	5,075	5,279	4,517	
Property, Plant and Equipment, Net	7,333	7,696	8,457	8,758	
	19,238	19,629	20,485	19,353	
Less:					
Accounts Payable	3,414	3,285	3,572	3,064	
Net Operating Assets	\$ 15,824	\$ 16,344	\$ 16,913	\$ 16,289	
Ratio of EBITDA to Net Operating Assets	34.6%			43.3%	8.7%

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# EBITDA per Pound of Ethylene Capacity



## Reconciliation of EBITDA per Pound of Ethylene Capacity

In Million of Dollars Unless Otherwise Indicated	For the Years Ended December 31,			
	2011	2012	2013	2014
EBITDA:				
O&P–Americas	\$ 2,137	\$ 2,968	\$ 3,573	\$ 3,911
O&P–EAI	865	548	839	1,366
Annual Ethylene Capacity (Millions of Pounds):				
O&P–Americas	9,590	9,750	9,870	10,670
O&P–EAI	4,829	4,829	4,829	4,829
EBITDA per Pounds of Ethylene Capacity:				
O&P–Americas	22.3¢	30.4¢	36.2¢	36.7¢
O&P–EAI	17.9¢	11.3¢	17.4¢	28.3¢

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# Refining: EBITDA ex. LCM less Capital Expenditures Technology: EBITDA Margin



## Reconciliation of Refining Segment EBITDA Excluding LCM in Excess of Capital Expenditures

In Million of Dollars	For the Years Ended December 31,				
	2011	2012	2013	2014	2011 - 2014
EBITDA excluding LCM	\$ 977	\$ 481	\$ 182	\$ 409	\$ 2,049
Less:					
Capital Expenditures	224	136	209	123	692
EBITDA excluding LCM in Excess of Capital Expenditures	\$ 753	\$ 345	\$ (27)	\$ 286	\$ 1,357

## Reconciliation of 2014 EBITDA Margin for the Technology Segment

In Million of Dollars	For the Year Ended December 31,
	2014
EBITDA	\$ 232
Divided by:	
Revenue	497
EBITDA Margin	47%

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# Intermediates & Derivatives: EBITDA ex. LCM less Capital Expenditures; Average EBITDA Excluding LCM Margin



## Reconciliation of Intermediates & Derivatives Segment EBITDA Excluding LCM in Excess of Capital Expenditures

In Million of Dollars	For the Years Ended December 31,				Average
	2011	2012	2013	2014	2011 - 2014
EBITDA excluding LCM	\$ 1,410	\$ 1,621	\$ 1,492	\$ 1,552	\$ 1,519
Less:					
Capital Expenditures	101	159	443	241	236
EBITDA excluding LCM in Excess of Capital Expenditures	\$ 1,309	\$ 1,462	\$ 1,049	\$ 1,311	\$ 1,283

## Reconciliation of Intermediates & Derivatives Segment Average EBITDA Excluding LCM Margin

In Million of Dollars	For the Years Ended December 31,				Average
	2011	2012	2013	2014	2011 - 2014
EBITDA excluding LCM	\$ 1,410	\$ 1,621	\$ 1,492	\$ 1,552	\$ 1,519
Divided by:					
Revenues	9,500	9,658	9,472	10,130	9,690
EBITDA excluding LCM Margin	15%	17%	16%	15%	16%

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# LYB and LYB Chem Operating Margin and NOPAT Margin



## Calculation of 2014 LYB and LYB Chem Operating Margin

In Million of Dollars	LYB	Less:	
		Refining Segment	LYB Chem
Revenues	\$ 45,608	\$ 11,710	\$ 33,898
Operating Income	5,736	(106)	5,842
Operating Margin	12.6%		17.2%

## Calculation of LYB and LYB Chem NOPAT Margins

In Million of Dollars	For the Year Ended December 31, 2014			
	LYB Effective Income Tax Rate	Less:		LYB Chem
		LYB	Refining Segment	
Revenues		\$ 45,608	\$ 11,710	\$ 33,898
Operating Income		5,736	(106)	5,842
Income from Continuing Operations Before Income Taxes		\$ 5,712		
Provision for Income Taxes		1,540		
Effective Income Tax Rate		27%		27%
Net Operating Profit After Tax (NOPAT)		4,190		4,267
Divided by:				
Revenues		45,608		33,898
NOPAT Margin		9.2%		12.6%

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# LYB Return on Invested Capital and Enterprise Value to EBITDA



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

	<b>For the Year Ended December 31, 2014</b>
<b><u>In Million of Dollars</u></b>	
Operating Income	\$ 5,736
Effective Income Tax Rate	27%
Net Operating Profit After Tax (NOPAT)	4,190
Divided by:	
Total Capital:	
Total Equity	8,344
Current Maturities of Long-Term Debt	4
Short-Term Debt	346
Long-Term Debt	<u>6,757</u>
	<u>15,451</u>
Return on Invested Capital	<u>27.1%</u>

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

<b><u>In Million of Dollars except for common shares outstanding</u></b>	
Common Shares Outstanding, March 31, 2015	475,379,537
Multiplied by:	
Closing Share Price, March 31, 2015	<u>\$ 87.80</u>
Market Capitalization	\$ 41,738
Add:	
Current Maturities of Long-Term Debt	4
Short-Term Debt	514
Long-Term Debt	7,749
Less:	
Cash	1,616
Short-Term Investments	<u>1,478</u>
Net Debt	5,173
Non-Controlling Interests	<u>28</u>
Enterprise Value	46,939
Divided by:	
Last 12 Months EBITDA	<u>7,334</u>
Ratio of Enterprise Value to EBITDA	<u>6.4</u>



## **Bhavesh V. (Bob) Patel**

Chief Executive Officer  
Chairman, Management Board



Bhavesh V. (Bob) Patel is chief executive officer of LyondellBasell, a position he assumed on January 12, 2015.

Patel joined LyondellBasell in March 2010 as senior vice president, Olefins & Polyolefins (O&P) – Americas, where he successfully restructured the business to take advantage of the shale gas expansion in the U.S. In November 2010, he was named senior vice president, O&P – Europe, Asia and International (O&P EAI).

Patel was promoted to executive vice president of O&P EAI in October 2013 and given additional responsibility for the Company's manufacturing operations outside of the Americas. As executive vice president, Patel led the Company's outperformance of its peers in Europe and Asia by streamlining operations, shifting to advantaged feedstocks and operating plants more reliably.

In April of 2014, Patel was appointed by shareholders to the Company's Management Board and became its chairman when he assumed the role of CEO in early 2015. The Company's Management Board is responsible for overall management of the Company and the implementation of corporate strategy.

Prior to joining LyondellBasell, Patel was general manager, olefins and natural gas liquids for Chevron Phillips Chemical Company, where he was responsible for all aspects of one of the company's largest business lines. He also served as general manager, Asia-Pacific region, based in Singapore, where he led all of the company's activities in the region. Prior to Chevron Phillips Chemical, Patel joined Chevron Corporation in 1990, where he worked for it and its affiliates for over 20 years.

Patel serves on the executive committee and the board of directors of the American Chemistry Council.

Patel received a Bachelor of Science degree in chemical engineering from Ohio State University. He also holds a Masters in Business Administration from Temple University.



## **Sergey Vasnetesov**

Senior Vice President  
Strategic Planning  
and Transactions



Sergey Vasnetesov is senior vice president, strategic planning and transactions for LyondellBasell, one of the world's largest plastics, chemicals and refining companies.

Vasnetesov has a broad and deep knowledge of the global chemicals industry. Prior to joining LyondellBasell in August 2010, he served as managing director and head of the global chemical research group for Barclays Capital.

Vasnetesov began his industrial career as a senior chemist at Union Carbide's corporate polyolefin catalysts research and development center in Bound Brook, N.J. He then transitioned to investment banking, serving over 14 years as a senior research analyst for the global petrochemical industry. For nine consecutive years, he was recognized as one of the top industry analysts by Institutional Investor Magazine.

Vasnetesov graduated with a Master of Science degree in kinetics and catalysis from the University of Novosibirsk in Russia and also was a George Soros Scholar at Oxford University (UK). He later earned a master's in business administration (MBA) in finance from Rutgers University. He is based in Houston, Texas.





## **Tim Roberts**

### Executive Vice President Global Olefins and Polyolefins



Timothy (Tim) Roberts is executive vice president of the Olefins and Polyolefins – Global (O&P – Global) segment for LyondellBasell, one of the world’s largest plastics, chemicals and refining companies.

Roberts is responsible for the company’s olefins and polyolefins businesses and joint ventures worldwide. The O&P – Global segment produces and markets ethylene and its co-products, polyethylene, polypropylene and Catalloy process resins.

Roberts was named executive vice president of O&P – Global in January 2015. He has been a member of the Company’s Management Board since April 2014, and had previously served as executive vice president O&P – Americas. He joined LyondellBasell in June 2011 as senior vice president of O&P – Americas. Prior to joining the Company, Roberts was vice president of planning and development for Chevron Phillips Chemical. He previously served as president and CEO of Americas Styrenics LLC, a joint venture between The Dow Chemical Company and Chevron Phillips Chemical.

Roberts worked for Chevron Phillips, its predecessors and joint ventures for more than 20 years. During that time he held a number of management positions with increasing responsibilities including general manager of styrenics and specialty chemicals, director of capital projects and country manager in Qatar.

Roberts received his Bachelor of Science degree from Ball State University. He is based in Houston, Texas.



## Pat Quarles

Executive Vice President  
I&D, Supply Chain, and  
Procurement



Patrick (Pat) Quarles is executive vice president of the Intermediates and Derivatives (I&D) segment and the Supply Chain and Procurement functions for LyondellBasell, one of the world's largest plastics, chemicals and refining companies. The I&D segment produces propylene oxide and its co-products and derivatives, acetyls, ethylene oxide and its derivatives, and oxyfuels.

Quarles was named executive vice president I&D, Supply Chain and Procurement in January 2015 and has been a member of the Company's Management Board since April 2014. He had previously served as senior vice president – I&D since 2009.

Quarles started his career with ARCO/Union Carbide in 1990 and has held various positions in sales, marketing and business management. Prior to 2008, Quarles was vice president of performance chemicals for Lyondell, with global responsibilities for the solvents, chemical C4's, acetyls and butanediol businesses. He also previously served as director of business performance and analysis and director of investor relations for Lyondell.

Quarles earned a Bachelor of Science degree in mechanical engineering from Clemson University in 1989 and a Master of Management degree from The J. L. Kellogg Graduate School of Business at Northwestern University in 1995. He is based in Houston, Texas.



## **Kevin Brown**

Executive Vice President  
Manufacturing and  
Refining



Kevin W. Brown is executive vice president of Manufacturing and Refining for LyondellBasell, one of the world's largest plastics, chemicals and refining companies. He is responsible for all of the Company's manufacturing sites worldwide, as well as for leading the company's refining business, global engineering services and global projects.

Brown was named executive vice president – Manufacturing and Refining in January 2015. Prior to this role, he had served as senior vice president – Refining since 2009.

Prior to joining LyondellBasell in October 2009, Brown was executive vice president, operations for Sinclair Oil Corporation, and also served on the company's board of directors. In this position, he had responsibility for the corporation's refining, pipeline, terminal and trucking divisions. Additionally, he directed the corporate environmental, engineering, health and safety function; crude oil supply department; the process and planning department and the oil corporation's downstream construction activities. He was previously the operations manager and refinery manager of Sinclair's Tulsa refinery. Brown began his career with Texaco's refining operations in Louisiana and Texas.

Brown currently serves on the executive committee of the American Fuel & Petrochemical Manufacturers (AFPM) and was previously chairman and vice chairman of the association. He is a member of the Arkansas Academy of Chemical Engineers and the University of Arkansas' Dean's Advisory Council and serves on the university's Campaign Arkansas.

Brown received a Bachelor of Science degree in chemical engineering from the University of Arkansas. He is based in Houston, Texas.