

Mexichem®

# Ethylene Cracker Field Trip

DECEMBER 2015

# Forward-Looking Statement

In addition to historical information, this presentation contains "forward-looking" statements that reflect management's expectations for the future. The words "anticipate," "believe," "expect," "hope," "have the intention of," "might," "plan," "should" and similar expressions generally indicate comments on expectations. The final results may be materially different from current expectations due to several factors, which include, but are not limited to, global and local changes in politics, the economy, business, competition, market and regulatory factors, cyclical trends in relevant sectors; as well as other factors that are highlighted under the title "Risk Factors" on the annual report submitted by Mexichem to the Mexican National Banking and Securities Commission (CNBV).

The forward-looking statements included herein represent Mexichem's views as of the date of this press release. Mexichem undertakes no obligation to revise or update publicly any forward-looking statement for any reason unless required by law."

Mexichem has implemented a new Code of Ethics that rules its relationships with its employees, clients, suppliers and general groups. Mexichem's Code of Ethics is available for consulting in the following link:

[http://www.mexichem.com/Codigo\\_de\\_etica.html](http://www.mexichem.com/Codigo_de_etica.html).

Additionally, according to the terms contained in the Securities Exchange Act No 42, Mexichem Audit Committee established a mechanism of contact, which allows that any person that knows the unfulfilment of operational and accounting records guidelines and lack of internal controls of the Code of Ethics, from the Company itself or from the subsidiaries that this controls, file a complaint which is anonymously guaranteed. The whistleblower program is facilitated by a third party. The telephone number in Mexico is 01-800-062-12-03.

The website is: <http://www.ethic-line.com/mexichem> and contact e-mail is: [mexichem@ethic-line.com](mailto:mexichem@ethic-line.com).

Mexichem's Audit Committee will be notified of all complaints for immediate investigation.

## Key Pillars of Mexichem's Strategic Growth Plan

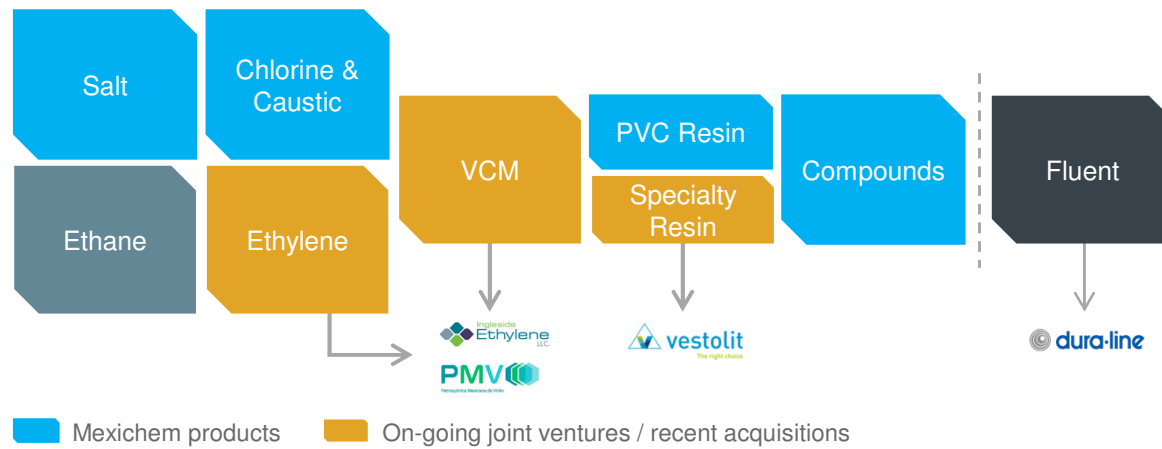
- Substantial Vertical Integration
- Expand Portfolio of Value Added Specialty Products
- Access New End Markets
- Broaden Geographic Footprint

# Mexichem's Vertical Integration

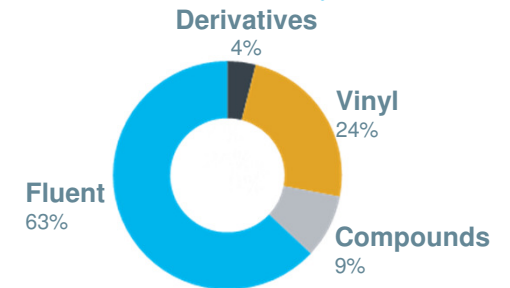
Ensuring Supply and Mitigating Volatility

## Ethylene Chain Overview

- One of the largest PVC resin producers and one of the leading piping players worldwide



LTM 3Q15 Revenues by Product<sup>(1)</sup>

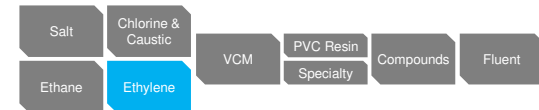


Notes:

1. Includes Inter-division transactions excluding PMV

# Vertical Integration: Ethylene

Ethylene is our Most Important Raw Material



## Ethylene Price Components

December 2014



December 2015



Ethylene Cracker + PMV Joint Venture =

**60% of Mexichem's Ethylene Supply\***

5 \*When fully ramped

## Polyethylene's Cost Structure

### PE Pipe Cost Structure



### PVC's Cost Structure

#### PVC Pipe Cost Structure



#### PVC Resin Cost Structure



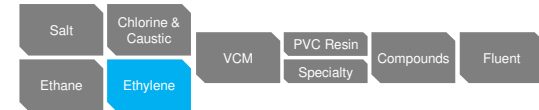
#### VCM Cost Structure



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# Vertical Integration: Ethylene

JV with OxyChem to Build an Ethylene Cracker

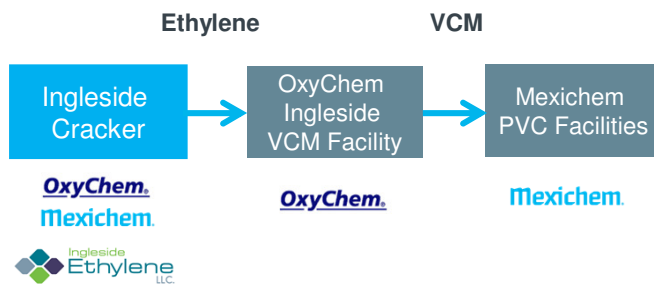


## HIGHLIGHTS

- ~US\$1.5B ethylene cracker
- 550 KTon / yr of ethylene
- Will supply a part of OxyChem's VCM facility
- OxyChem's VCM facility will supply a percentage of Mexichem's PVC facilities

## STATUS UPDATE

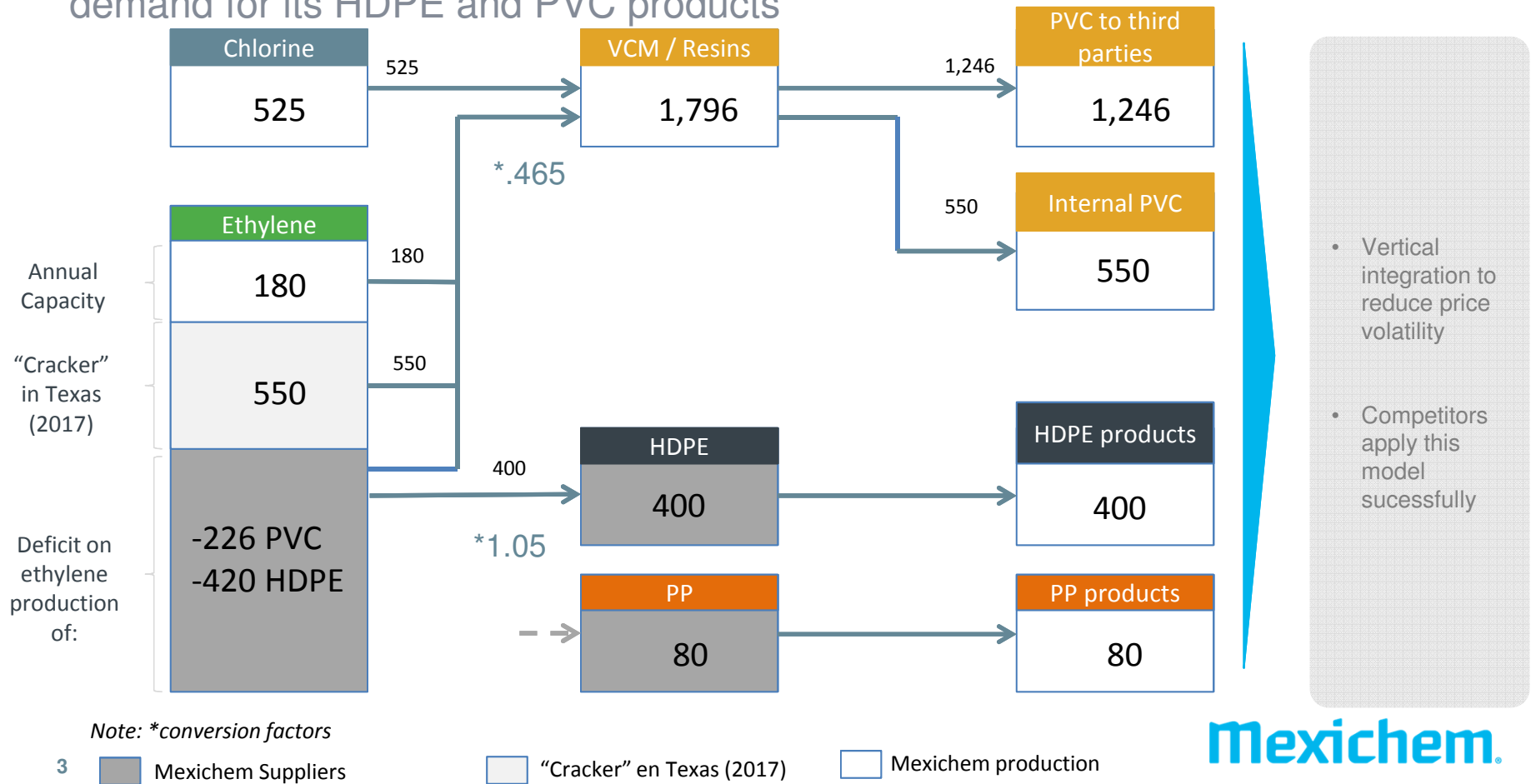
- Mexichem investment: ~US\$750MM
  - Equity contribution of US\$438 MM
  - Actual investment in the asset as of Sept 2015: US\$422 MM
- Expected operation: early 2017
- Construction on schedule and on budget
  - US\$1.2B plant construction costs under contract
  - 100% of equipment ordered



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# Vertical Integration: Ethylene

Mexichem's high direct/indirect ethylene consumption would guarantee demand for its HDPE and PVC products



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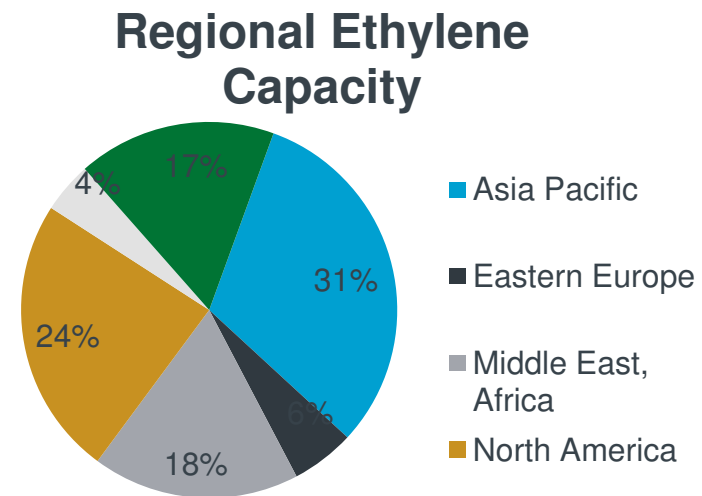
TOUR

DECEMBER 2015



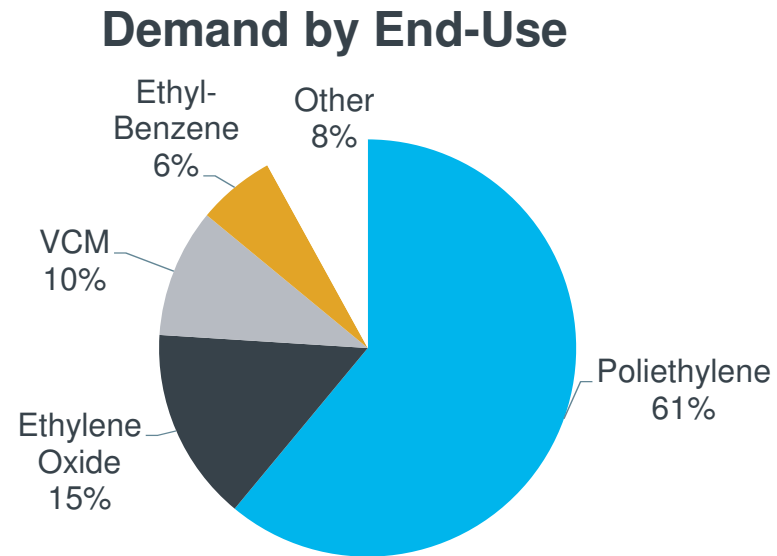
# The Ethylene Market

Regional Ethylene Capacity	
Region	Capacity (000's Tons)
Asia Pacific	45,701
Eastern Europe	7,971
Middle East, Africa	26,007
North America	35,036
South America	6,384
Western Europe	24,918
<b>Total</b>	<b>146,017</b>



Source: IHS

Global Demand for Ethylene in 2014 was 139 Million Tons; Polyethylene Accounted for 61%



Source: IHS

# North American Ethylene Capacity Growth (14-20)

Completed of Firm Projects ( ' 000 Metric Tons)



North American ethylene capacity will increase to from 35 to 45 million metric tons by 2020 or 34%, driven by low-cost ethane feedstock

Greenfield    Brownfield

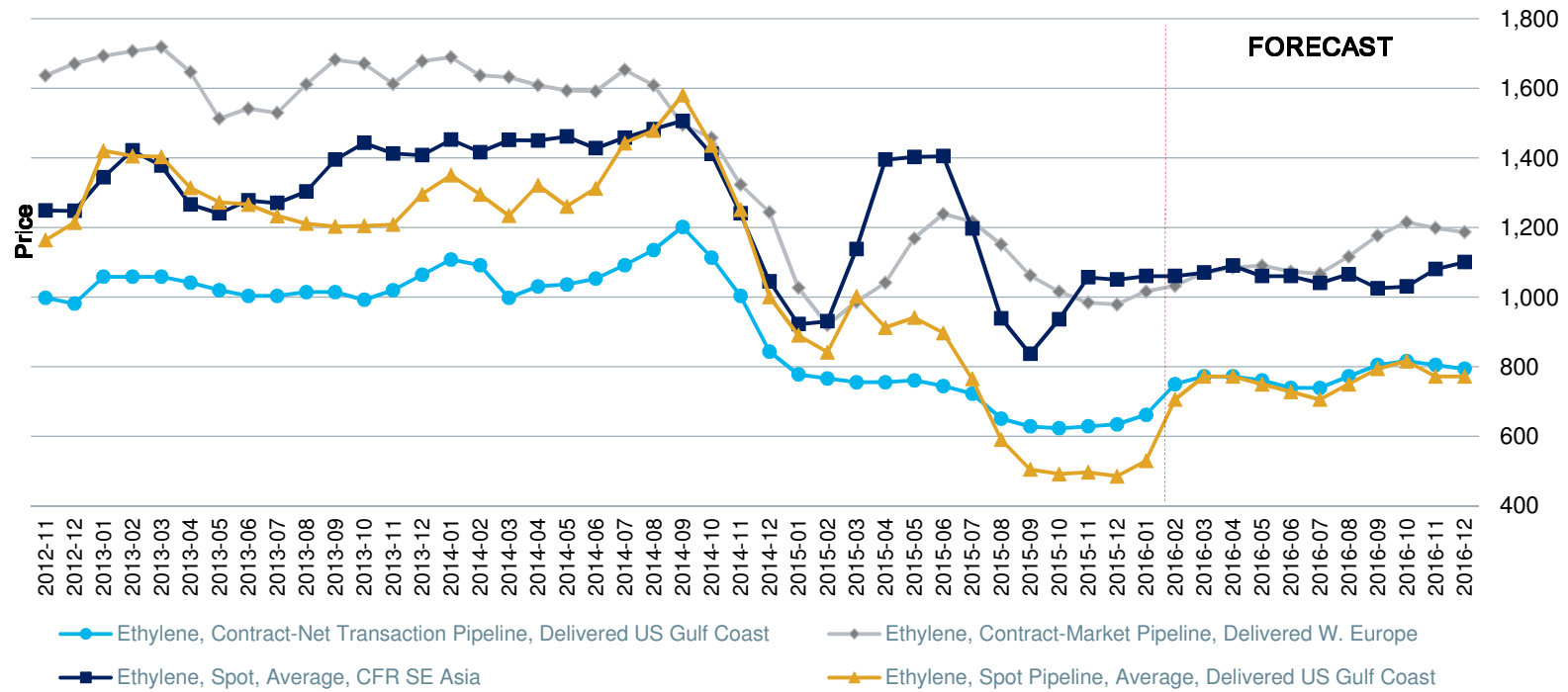
<u>Company</u>	<u>Location</u>	<u>Total Growth</u>
BASF/Total	Port Arthur, TX	128
<b>Chevron Phillips</b>	<b>Cedar Bayou, TX</b>	<b>1500</b>
<b>Dow</b>	<b>Freeport, TX</b>	<b>1500</b>
Dow	Plaquemine, LA	250
Eastman	Longview, TX	17
Equistar	Various sites	1112
<b>ExxonMobil</b>	<b>Baytown, TX</b>	<b>1500</b>
Flint Hills	Port Arthur, TX	100
<b>Formosa</b>	<b>Point Comfort, TX</b>	<b>1150</b>
Indorama	Lake Charles, LA	370
<b>Oxy/Mexichem</b>	<b>Ingleside, TX</b>	<b>550</b>
<b>Shin-Etsu</b>	<b>Plaquemine, LA</b>	<b>500</b>
<b>Sasol</b>	<b>Lake Charles, LA</b>	<b>1550</b>
Westlake	KY and LA sites	216
Williams	Geismar, LA	258
<b>Braskem Idesa</b>	<b>Mexico</b>	<b>1000</b>
Nova	Sarnia	168
<b>Total Additions</b>		<b>11,869</b>

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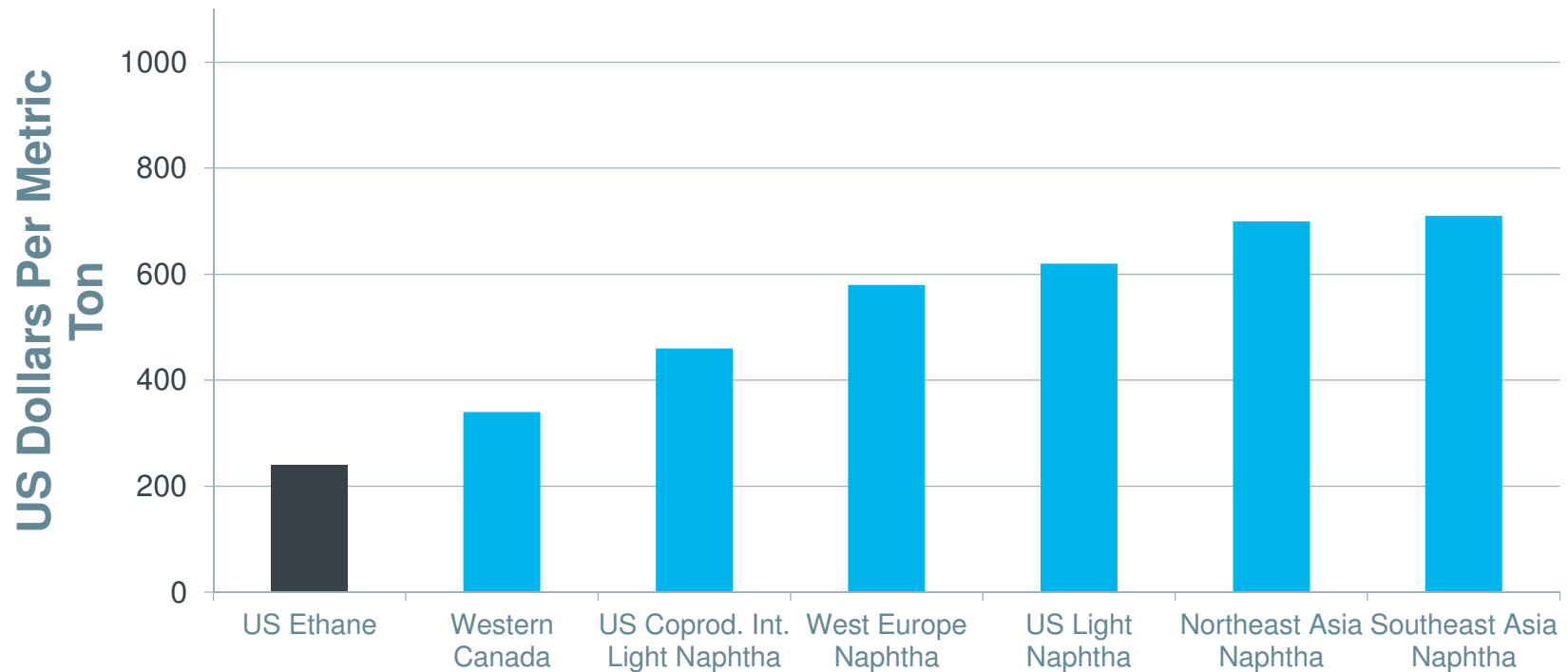
# Ethylene Prices Worldwide

Monthly World Ethylene Price – US\$ per Metric Ton

Last Update Date -27/11 /2015



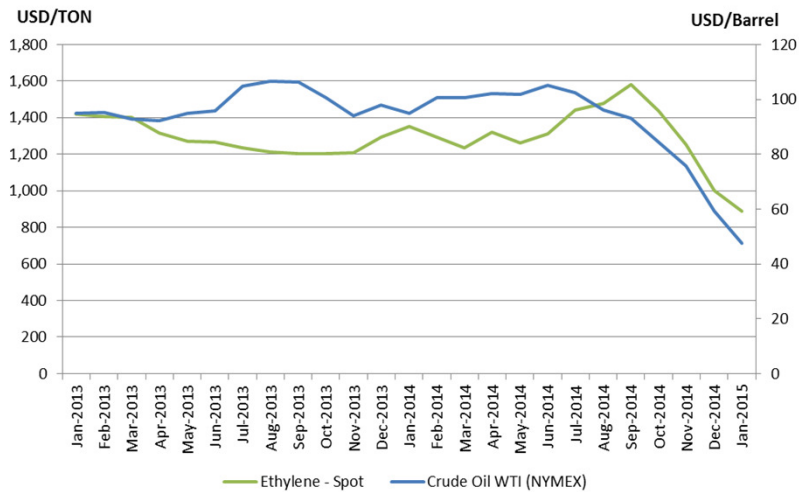
# Worldwide Cash Costs: Amid Oil Price Declines, North America Is The Most Profitable Region to Produce Ethylene



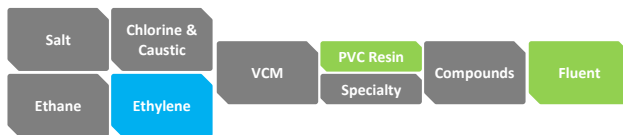
Source: IHS Chemical

# Mexichem: Systemic Resilience to Market Swings

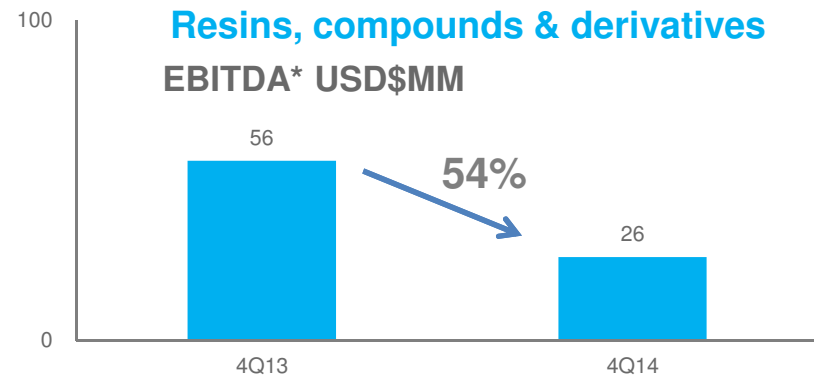
Vertical Integration – 4Q14 Impact of Precipitous Declines in Ethylene and Oil Prices



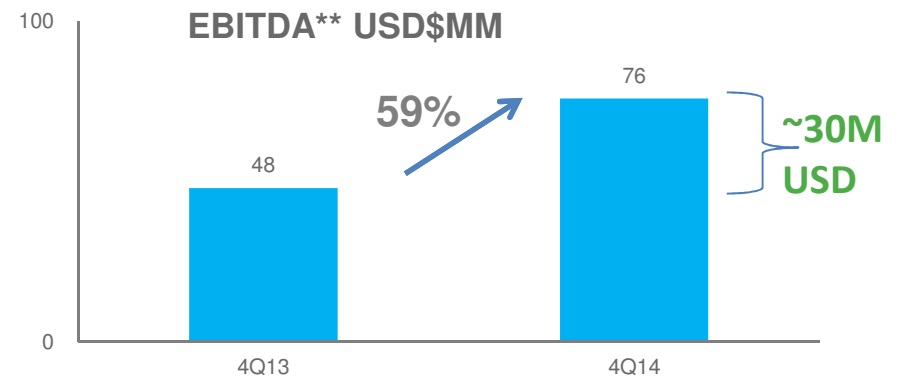
Source: IHS



## Vinyl

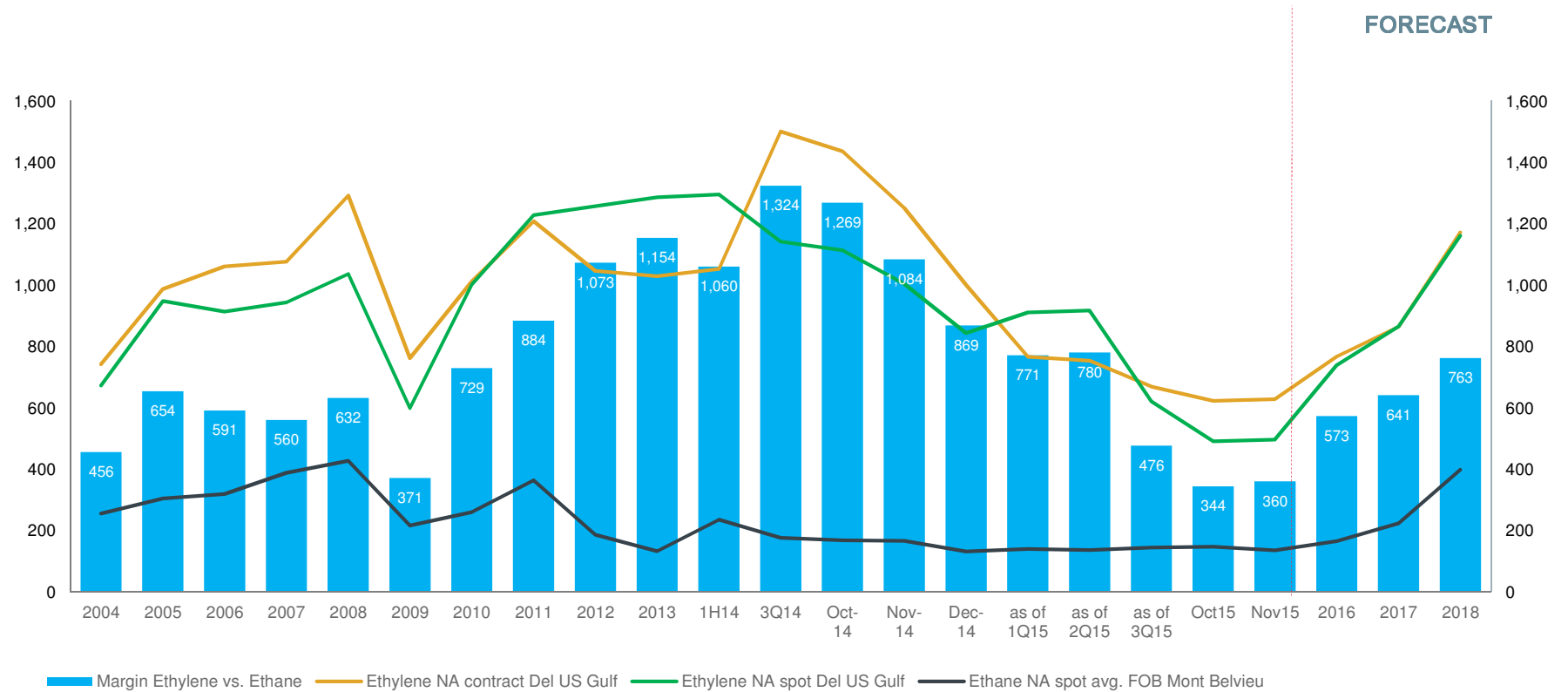
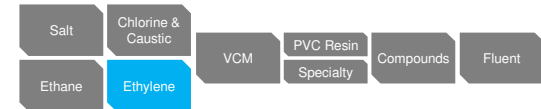


## Fluent



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# Vertical Integration: Ethylene



## Cracker CapEx: Mexichem's 50% stake

CapEx 2013: US\$23 MM

CapEx 2014: US\$165 MM

CapEx 2015: US\$340 MM

CapEx 2016\*: US\$191 MM

CapEx 2017\*: US\$ 31 MM

**TOTAL= US\$750 MM** \* estimated

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## Key Takeaways

- The Ethylene project is almost complete, on time and budget
- Will significantly enhance Mexichem's position as a low cost PVC producer
- The project is expected to materially increase the Vinyl's segment EBITDA over the long term
- Project CapEx will decline substantially beginning in 2016.

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THE END

Thank you for attending!