



Investor Day 2019
The Olin Advantage

February 12, 2019



The Olin Advantage

John Fischer

Chlor Alkali/Vinyls Industry and Investment Outlook – IHS Markit

John Mulholland

Structural Changes in Chlor Alkali Driving Value Creation Opportunities

John Fischer

Chlor Alkali Products and Vinyls Positioned to Benefit from Structural Changes

Jim Varilek

Poised to Capture Value from Growth in Caustic Soda Demand

Damian Gumpel

Coffee/Refreshment Break

Leading Epoxy Platform Extending the Chlorine Envelope

Pat Dawson

Business Operations Drive Reliability and Growth

John Sampson

Solid Foundation and Improving Financial Outlook

Todd Slater

Q&A Panel

Closing Remarks

John Fischer



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In addition to U.S. GAAP financial measures, this presentation includes certain non-GAAP financial measures including EBITDA, and Adjusted EBITDA. These non-GAAP measures are in addition to, not a substitute for or superior to, measures for financial performance prepared in accordance with U.S. GAAP. Definitions of these measures and reconciliation of GAAP to non-GAAP measures are provided in the appendix to this presentation.



The Olin Advantage

John E. Fischer

Chairman, President and CEO



Senior management team committed to delivering significant growth and value creation

Today's Speakers



John E. Fischer
Chairman, President & Chief Executive Officer



James A. Varilek
Executive Vice President & President, Chlor Alkali Products and Vinyls & Services



Damian Gumpel
Vice President, Global Caustic, KOH & Vinyls



Pat D. Dawson
Executive Vice President & President, Epoxy & International



John M. Sampson
Senior Vice President, Business Operations



Todd A. Slater
Vice President & Chief Financial Officer



Valerie Peters
Vice President, Human Resources



John L. McIntosh
Executive Vice President, Chemicals, Synergies & Systems



Brett A. Flaughter
Vice President & President, Winchester



Teresa M. Vermillion
Vice President & Treasurer



Eric A. Blanchard
Vice President, General Counsel & Secretary



Harry G. Thomas
Vice President, Strategy & Growth, Global Chlorinated Organics



R. Nichole Sumner
Vice President & Controller



Successful 2018 driven by solid performance across chemical businesses

No. 1

The World's Chlor Alkali Leader

2018 Adjusted EBITDA*
(in millions)

\$1,265

2018 Free Cash Flow*
(in millions)

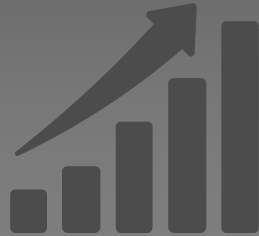
\$587

⁶ *Refer to GAAP to non-GAAP reconciliations



Structural changes in chlor alkali leading to value creation opportunities

Structural changes in chlor alkali sector driving growth opportunities



Strong industry position and leading cost advantage expected to yield significant EBITDA growth over next several years





IHS Markit™

Chlor Alkali/Vinyls Industry and Investment Outlook

John Mulholland

Vice President, Strategy Consulting
Oil Markets, Midstream, Downstream & Chemicals

February 12, 2019

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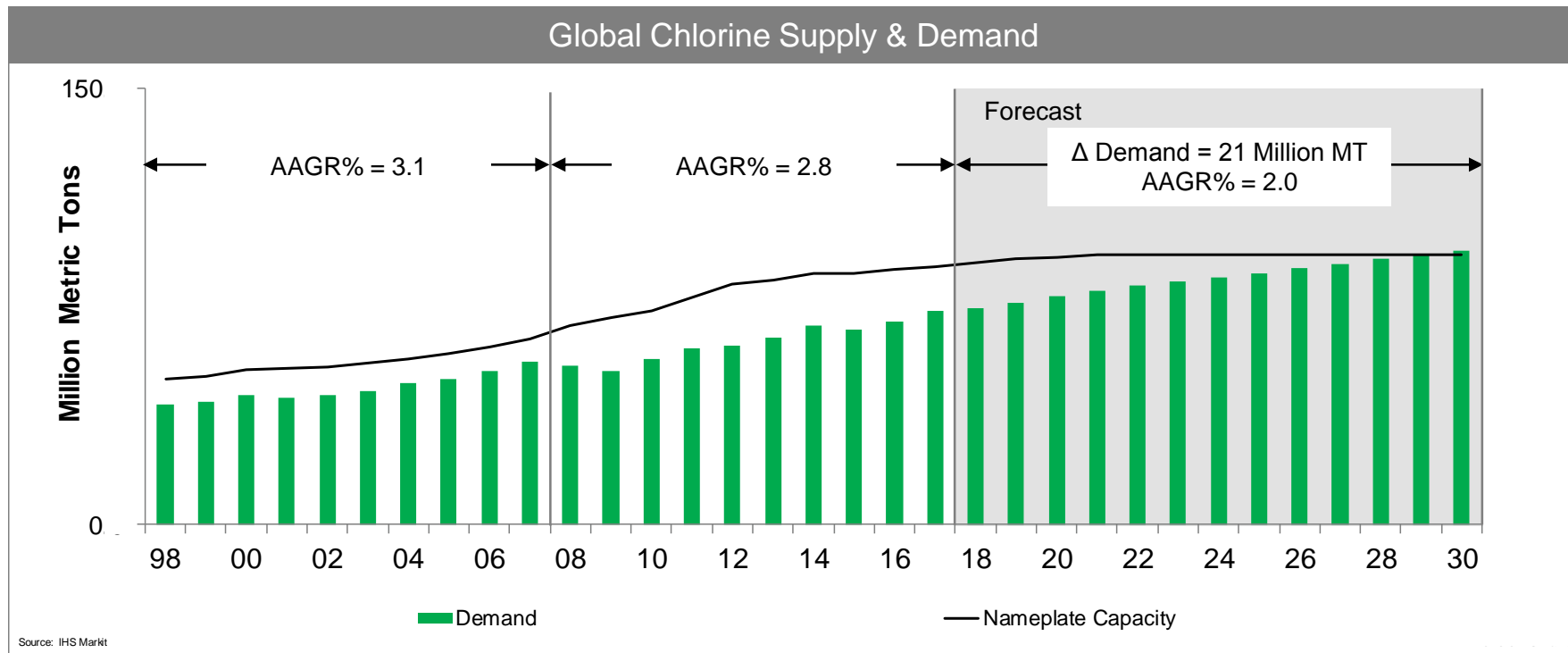
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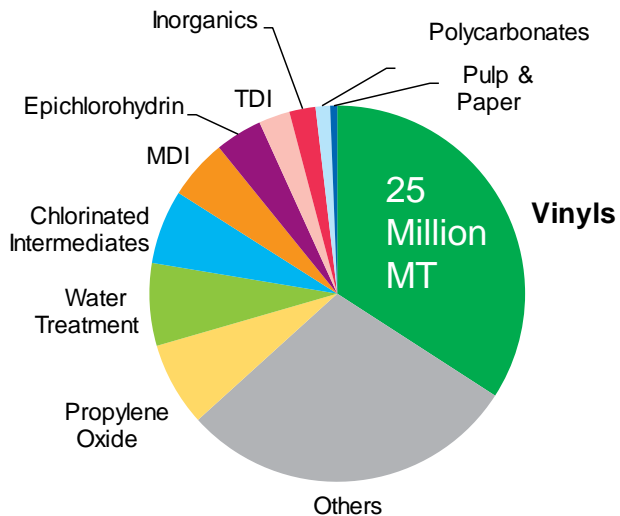
Chlor Alkali/Vinyls Industry Outlook

Chlorine demand is forecast to increase by 21 million metric tons between 2018 and 2030.

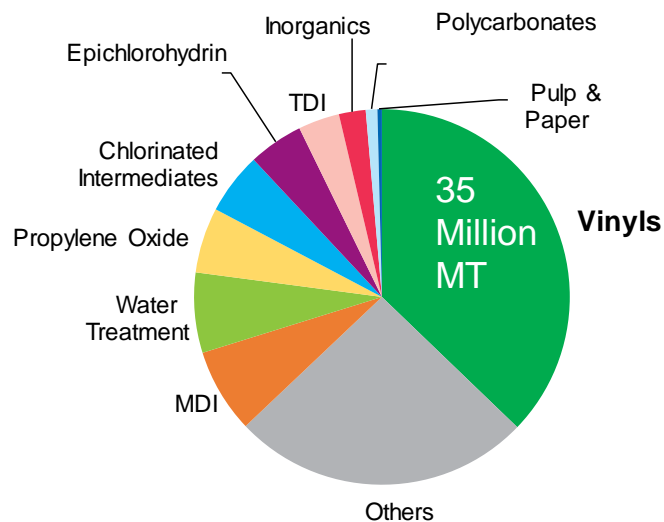


Vinyls will drive approximately half the growth of global chlorine demand through 2030.

Global Chlorine Demand



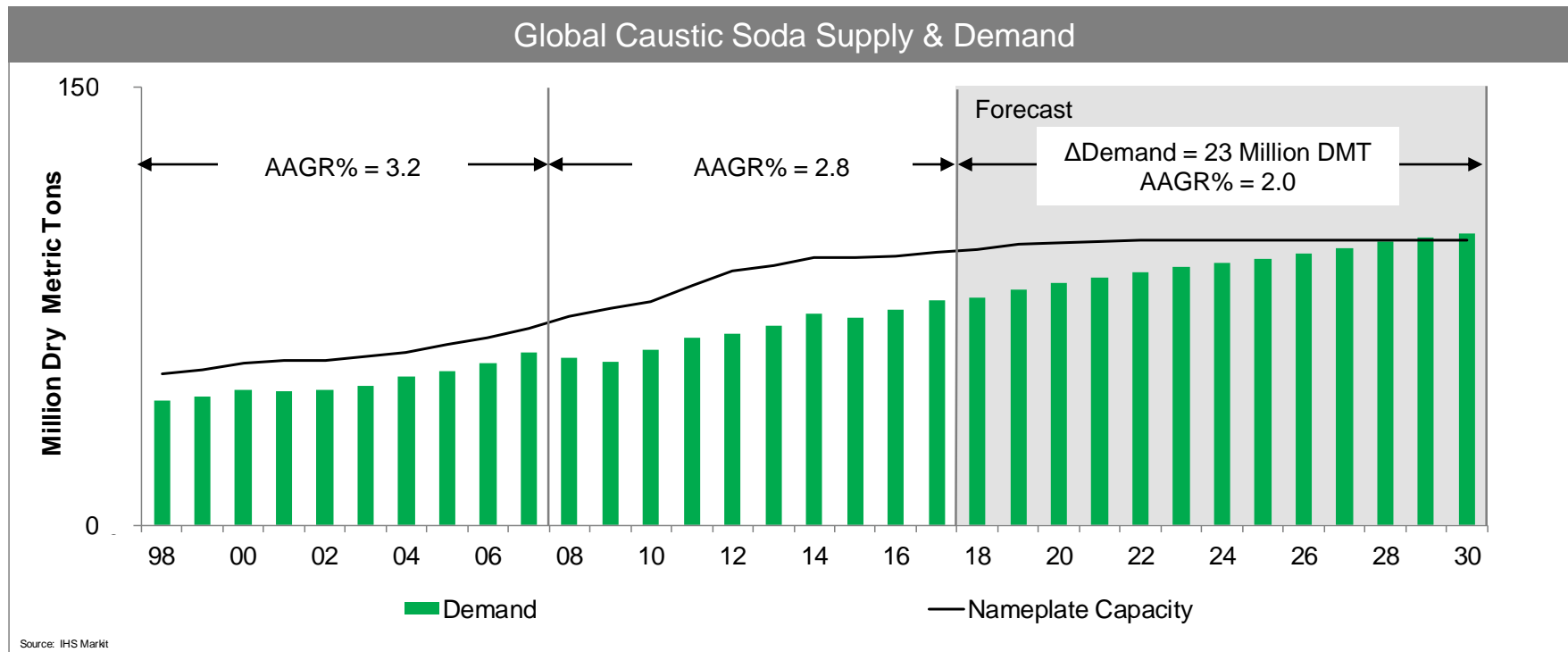
2017



2030

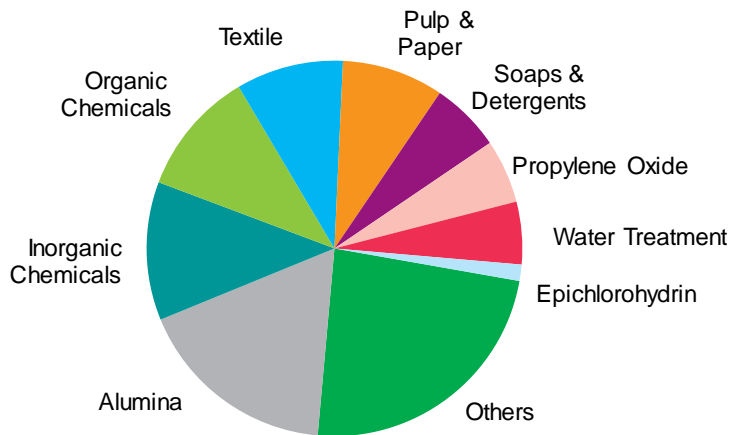
Source: IHS Markit

Global caustic soda demand is forecast to grow 23 million dry metric tons from 2018 to 2030.

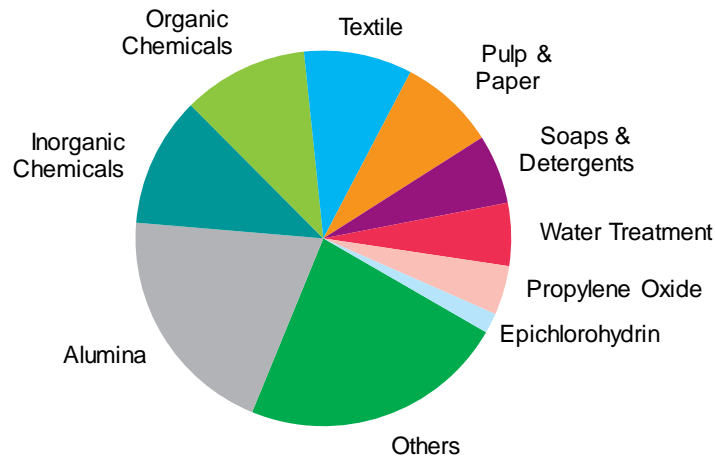


Caustic soda consumption is closely tied to industrial activity and has a consistent demand profile through 2030. Alumina growth will lead consumption with an additional 7million DMT/yr. by 2030.

Global Caustic Demand



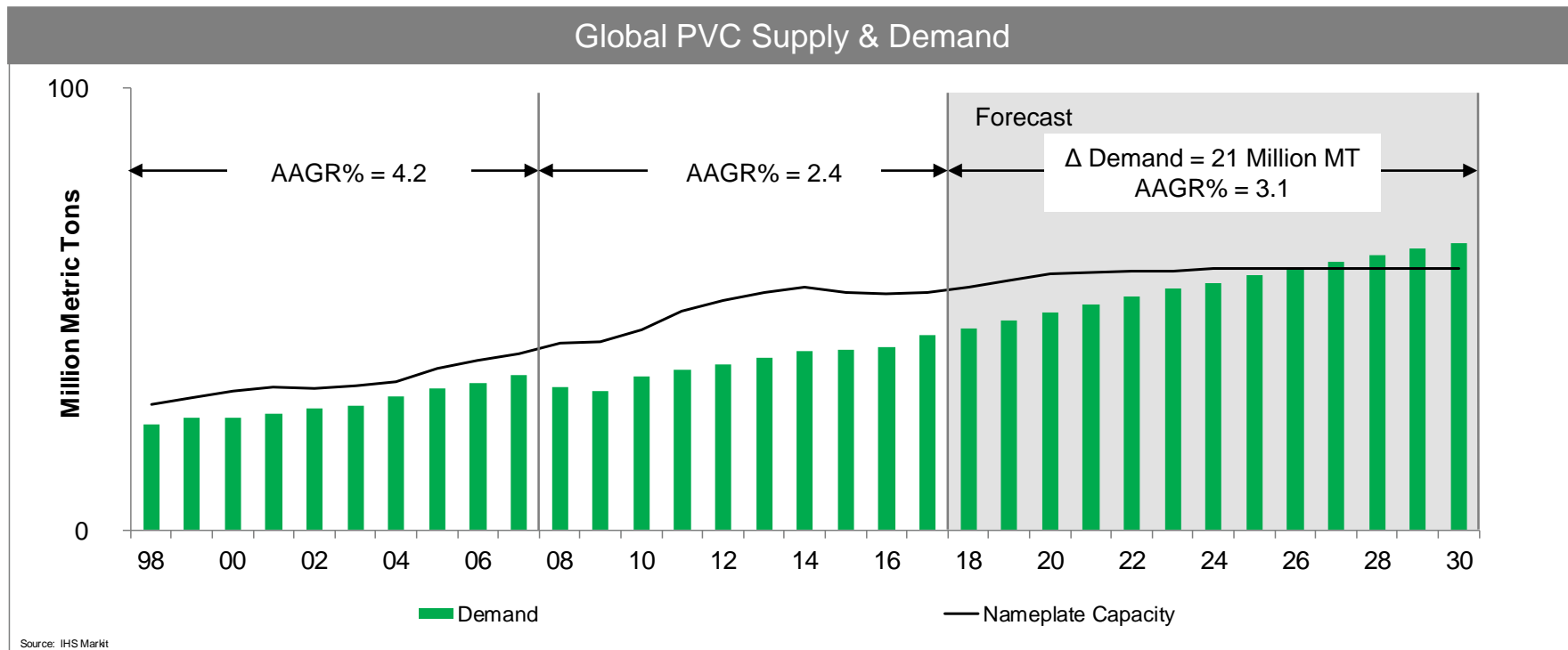
2017



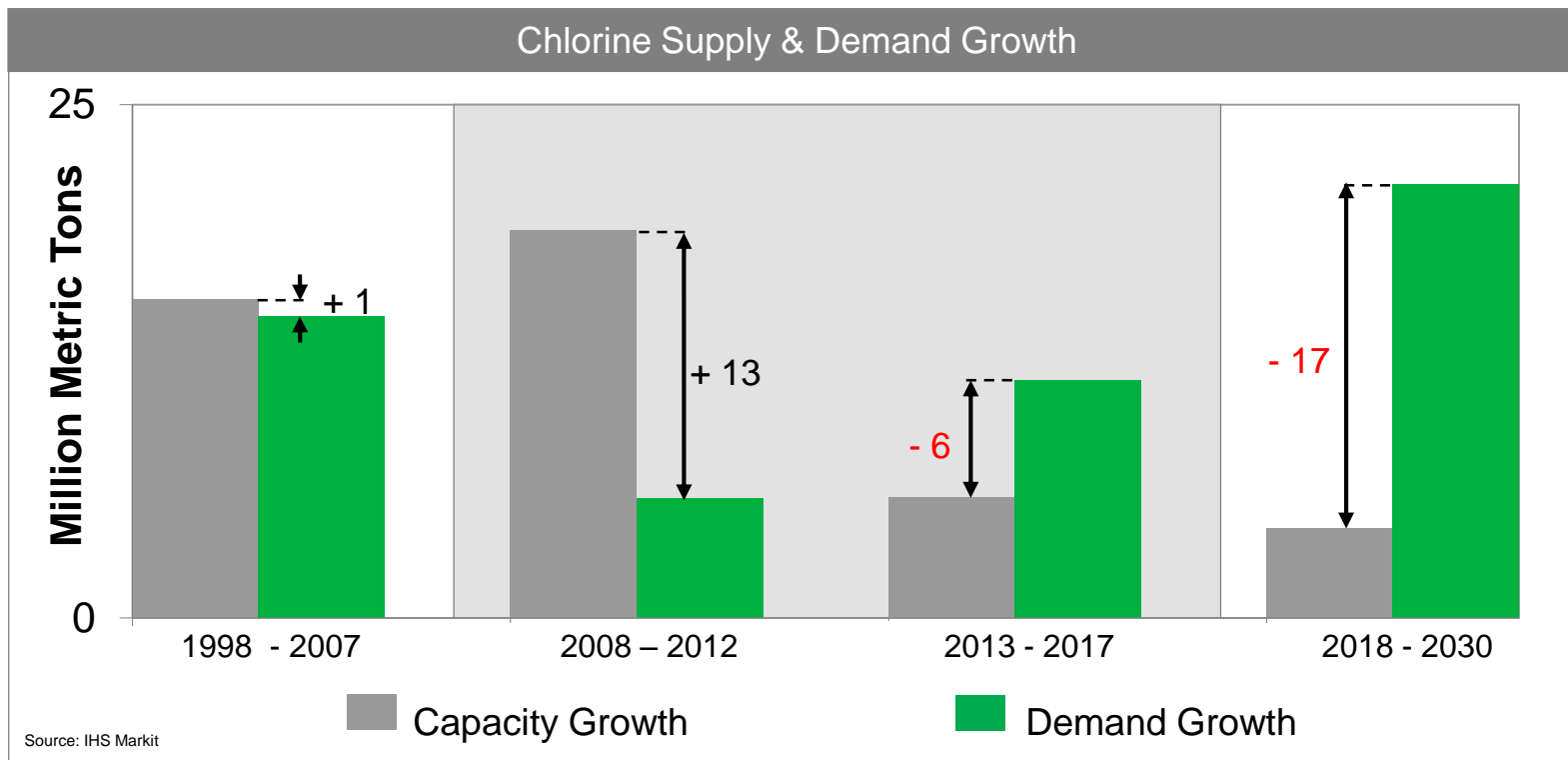
2030

Source: IHS Markit

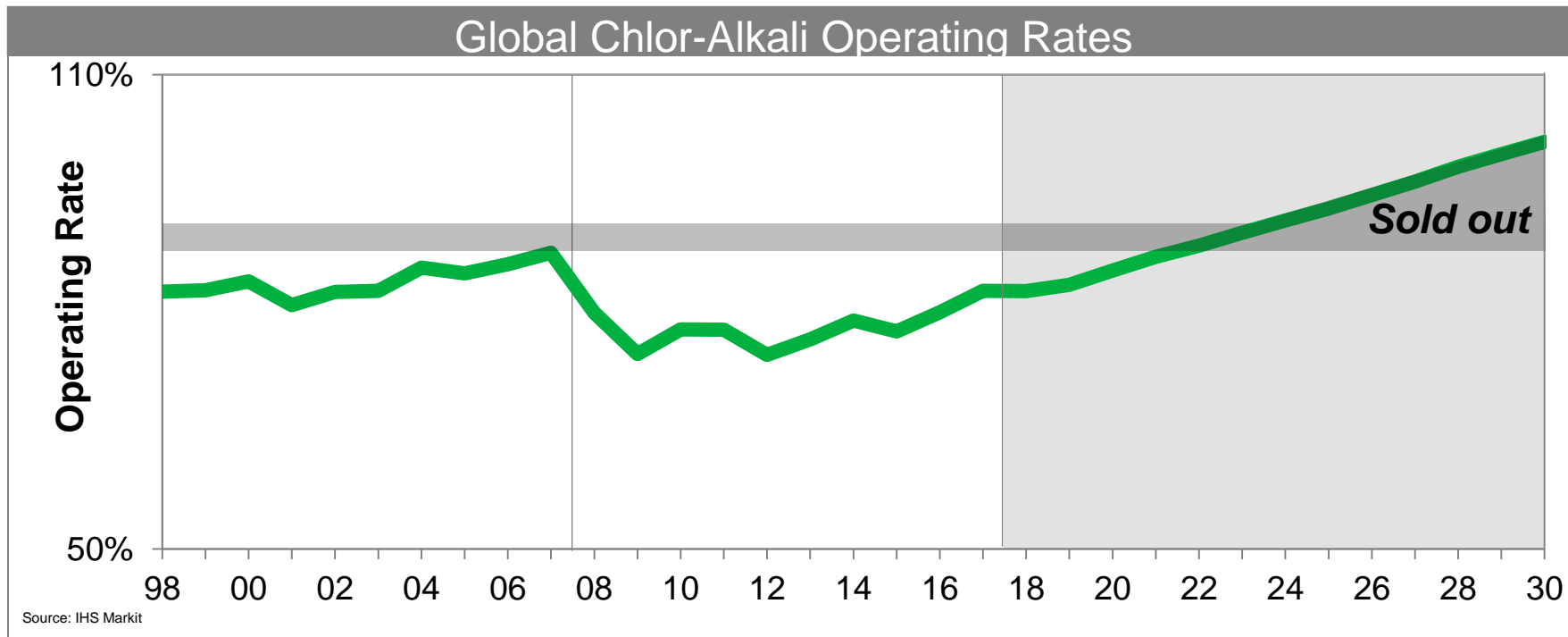
PVC demand is forecast to increase by 21 million metric tons between 2018 and 2030.



Chlorine demand growth has exceeded capacity growth since 2013 and will accelerate through 2030 if additional capacity is not added.



Global operating rates have improved since 2012 and are projected to reach sold out conditions by 2023.



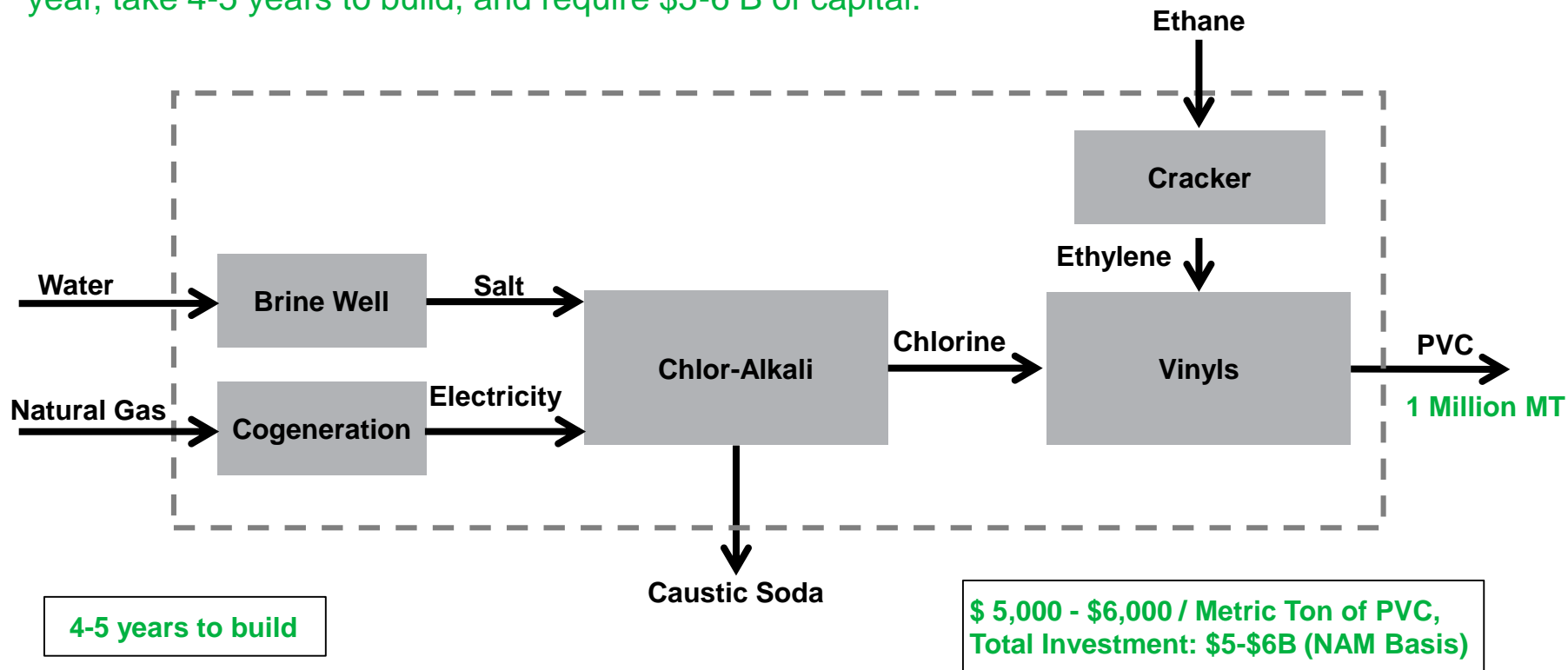
Summary of Industry Outlook

- Chlorine demand is forecast to increase by 21 million metric tons between 2018 and 2030, with approximately half the growth from vinyls.
- Caustic demand is forecast to increase by 23 million metric tons between 2018 and 2030.
- PVC demand is expected to increase by 21 million metric tons between 2018 and 2030.
- Chlorine demand growth has exceeded capacity growth since 2013 and will accelerate through 2030 if additional capacity is not added.
- Global operating rates have improved since 2012 and are projected to reach to reach sold out conditions by 2023.

The outlook for chlorine, caustic and PVC is improving and will require investment.

Chlor Alkali/Vinyls Investment Outlook

A world-scale CA-PVC integrated facility built in NAM would produce 1 million MT of PVC per year, take 4-5 years to build, and require \$5-6 B of capital.



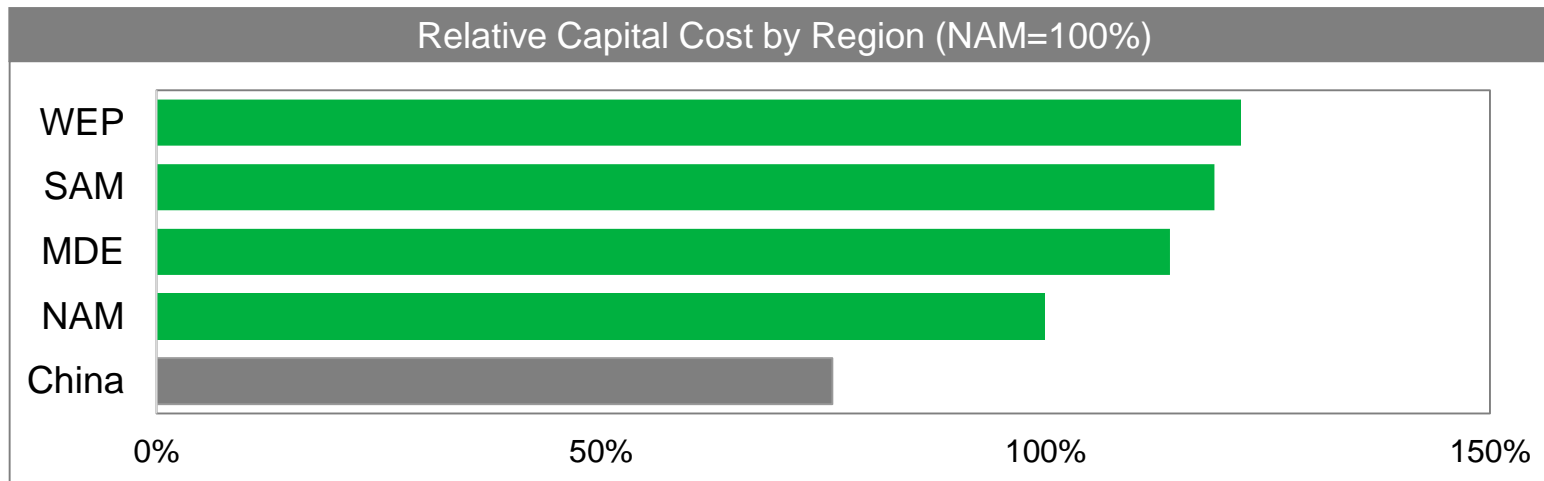
2030 PVC demand growth requires 21 integrated world scale plants, which will also satisfy approximately half of the forecast caustic demand growth.

2018-2030 PVC Demand Growth (MT)	Required World Scale Plants ¹	Capital Required per World Scale Plant (\$US B) ¹	Total Required Expenditure (\$US B)
21 million	21	\$5 - \$6	\$105-126

	Demand (Million MT) ²		
	Chlorine	Caustic	PVC
2018-2030 Demand Growth	21	23	21
Addressed by Required CA-PVC World Scale Plants	10.5	11.5	21
Addressed by Additional Investments	10.5	11.5	0

1. Assumes facility built in USGC
2. Does not include demand for non-PVC chlorine derivatives

From a capital cost perspective, China is the most attractive location followed by North America and the Middle East.



Region

Project Configuration and Cost Differences

NAM, MDE

Ethane-based cracker, brine well

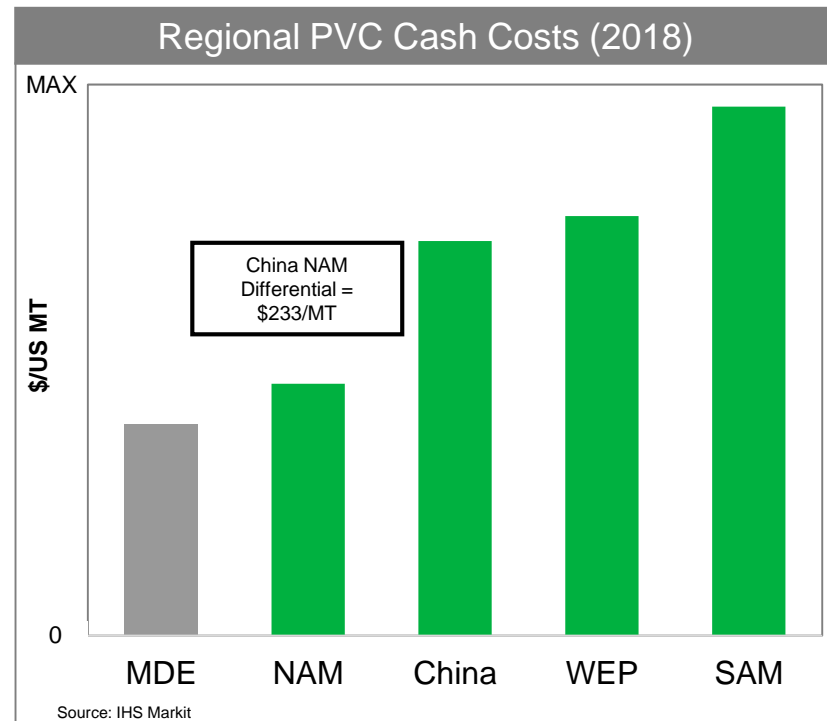
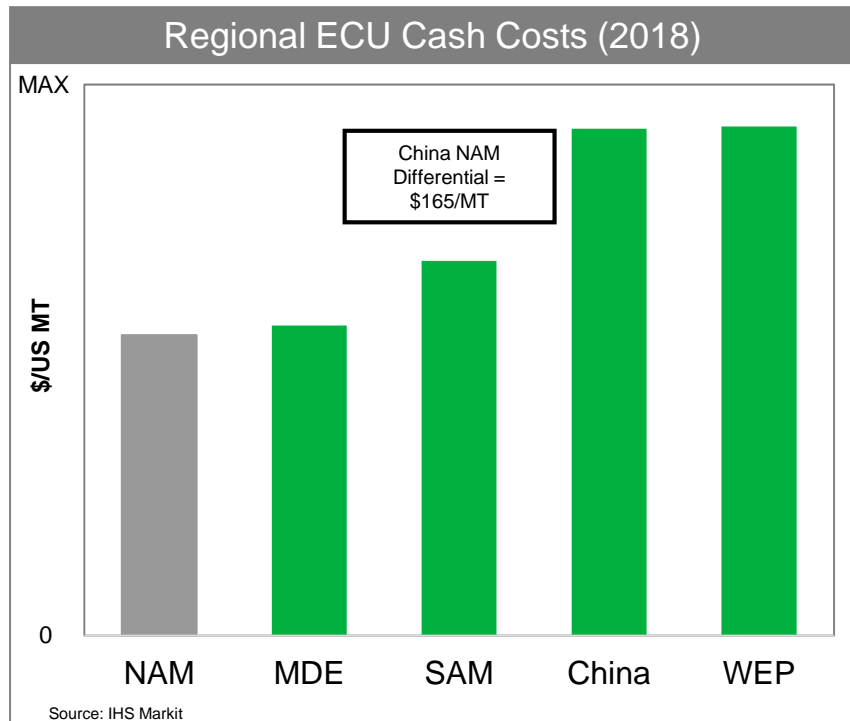
China, WEP, SAM

Naphtha-based cracker, purchased salt

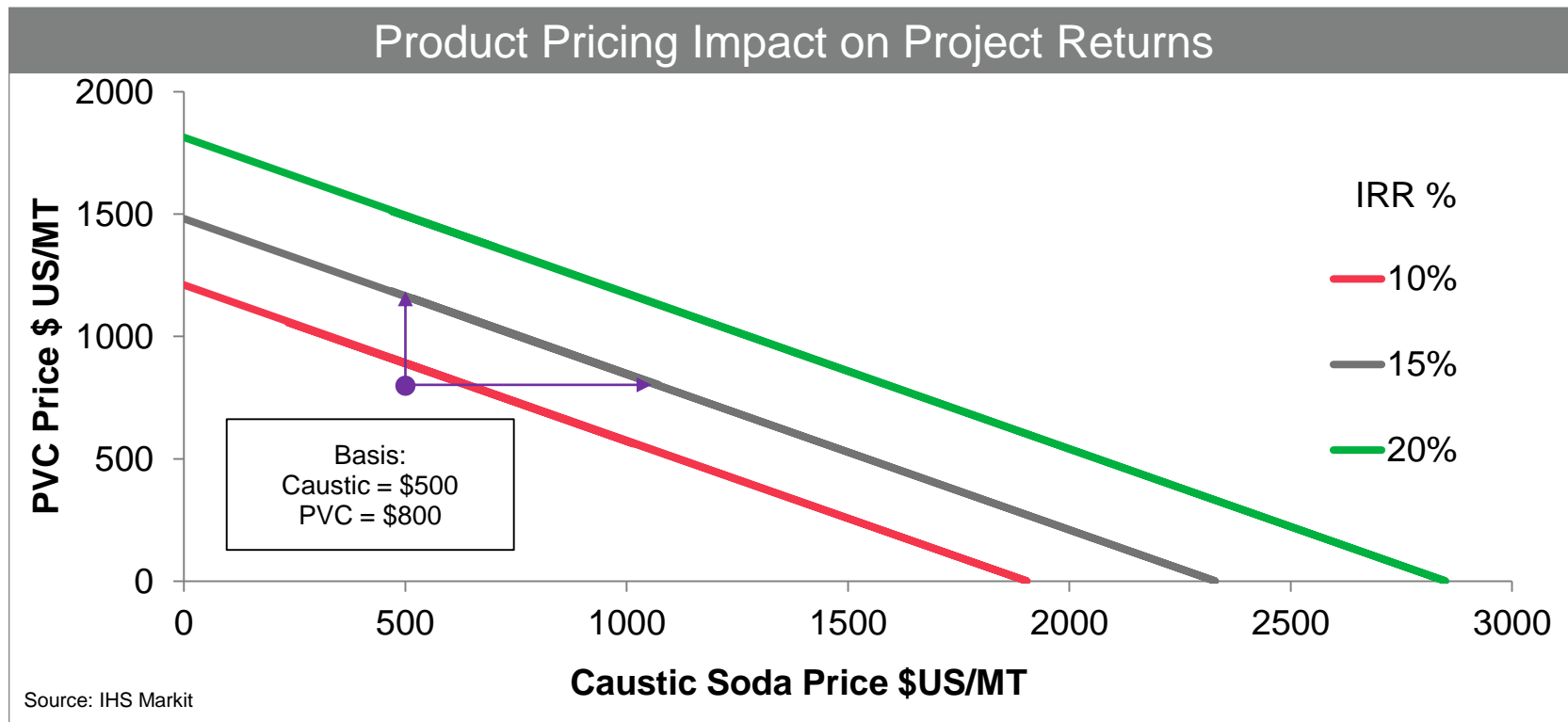
All Regions

Equipment and materials, labor (e.g., skilled labor, project management, engineering), and other (e.g., exchange rates, tariffs, freight and taxes)

From a cash cost perspective, the Middle East and North America are the most attractive locations because of low cost feedstock and fuel.



Using a basis of \$500/MT caustic and \$800/MT PVC, the internal rate of return for a world scale facility is less than 10%. To achieve more attractive returns, product prices must increase.



Summary of Investment Outlook

- The outlook for chlorine, caustic and PVC is improving and will require investment.
- A world-scale CA-PVC integrated facility built in NAM would produce 1 million MT of PVC per year, take 4-5 years to build, and require \$5-6 billion of capital.
- 2030 PVC demand growth requires 21 integrated world scale plants which will also satisfy approximately half of the forecast caustic demand growth.
- From a capital cost perspective, China is the most attractive location followed by North America and the Middle East.
- From a cash cost perspective, the Middle East and North America are the most attractive locations because of low cost feedstock and fuel.
- Using a basis of \$500/MT caustic and \$800/MT PVC, the internal rate of return for a world scale facility is less than 10%. To achieve more attractive returns, product prices must increase.

While the demand growth outlook is healthy, current prices do not justify investment in world scale PVC facilities.



Structural Changes in Chlor Alkali Driving Value Creation Opportunities

John E. Fischer

Chairman, President and CEO

Structural changes in chlor alkali leading to value creation from long-term growth opportunities

Structural changes in chlor alkali sector provides growth opportunities on both sides of ECU (chlorine and caustic soda)



Minimal global capacity additions and announcements to meet growing demand



Large proportion of production by large, integrated producers after major industry consolidation



Energy and ethylene cost advantage for U.S. Gulf Coast producers over global competitors



Increased caustic soda and chlorine derivative exports from the U.S. Gulf Coast



Current industry economics do not support significant near term world-scale chlor alkali capacity investments





Growing leadership position driven by world-scale assets, advantaged cost position, and broad portfolio of chlorine derivatives and outlets

No. 1

The World's Chlorine Leader



The No. 1 global chlor alkali producer with largest chlorine production capacity.



The No. 1 global supplier of epoxy materials.



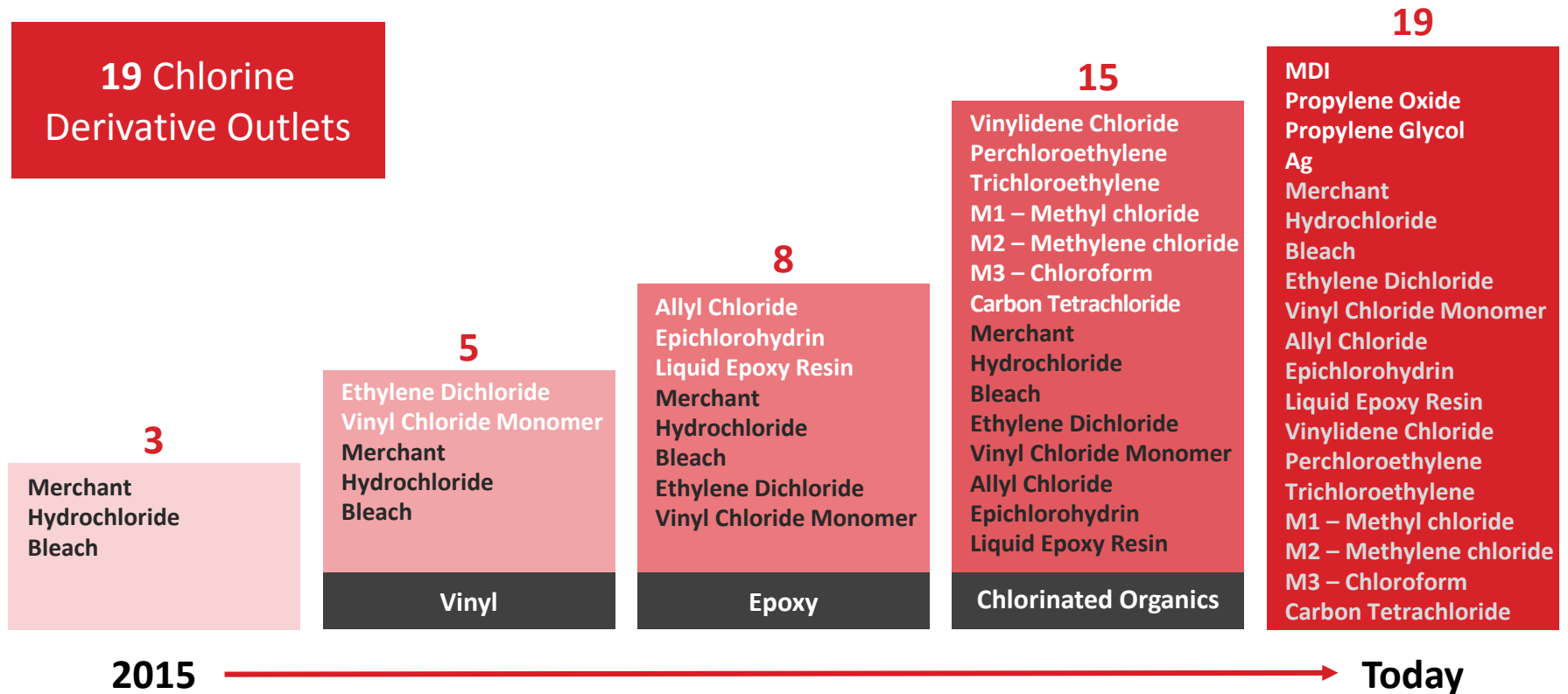
The No. 1 global producer of membrane caustic soda and chlorinated organics.



The No. 1 North American seller of chlorine, bleach and hydrochloric acid.



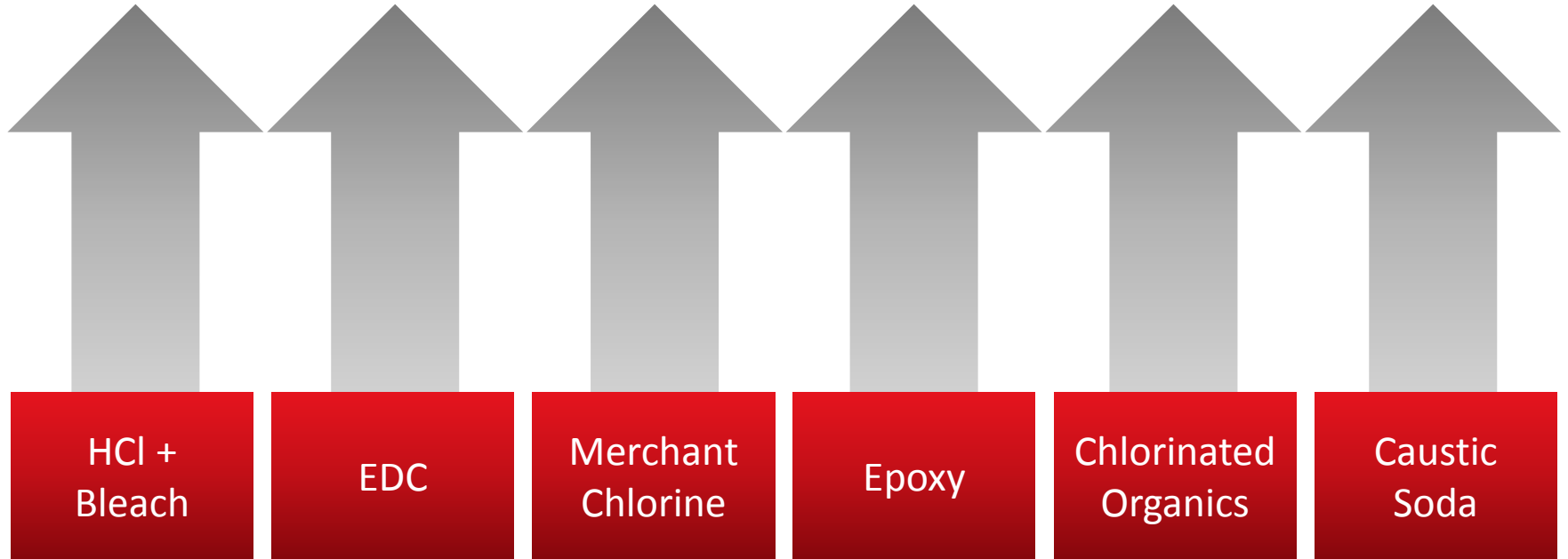
Positioned to capture industry growth with the broadest chlorine derivative portfolio





Opportunities to benefit from price and volume growth

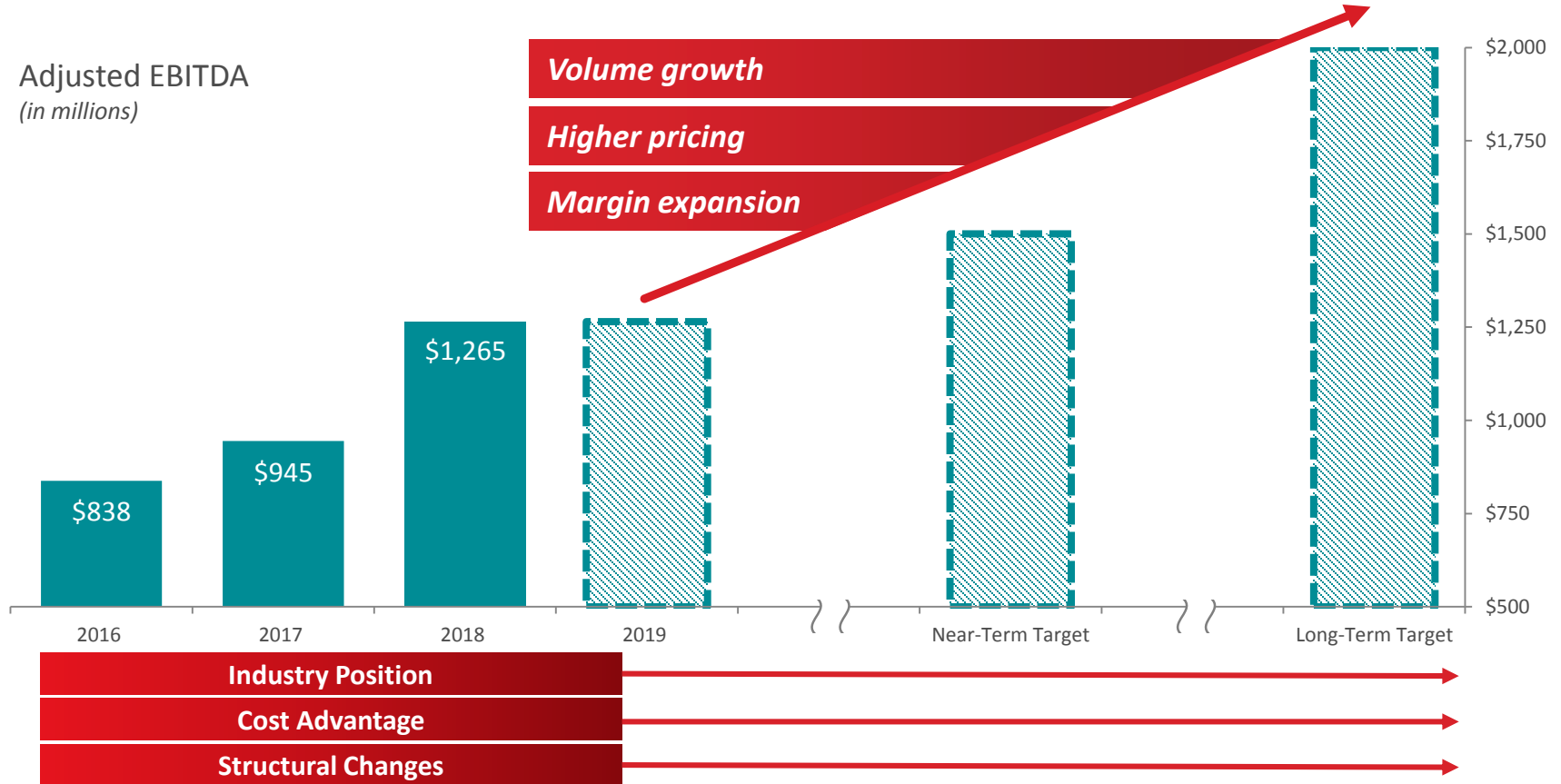
Earnings Expansion





Expect robust earnings expansion driven by industry leading position, advantaged cost structure and structural changes

Adjusted EBITDA
(in millions)



³¹ *Refer to GAAP to non-GAAP reconciliations



Chlor Alkali Products and Vinyls Positioned to Benefit from Structural Changes

James A. Varilek

Executive Vice President and President,
Chlor Alkali Products and Vinyls and Services



Un-matched global chlor alkali portfolio to benefit from healthy demand growth forecasted on both sides of ECU

Largest, low cost global chlor alkali producer:

- #1 chlor alkali producer
- #1 merchant EDC supplier
- #1 chlorinated organics position
- #1 epoxy position
- #1 North American bleach producer
- #1 merchant chlorine supplier



Broadest portfolio of chlorine derivatives with 19 outlets



Seven North American facilities

- 4 regional plants
- 3 world-scale plants located along U.S. Gulf Coast

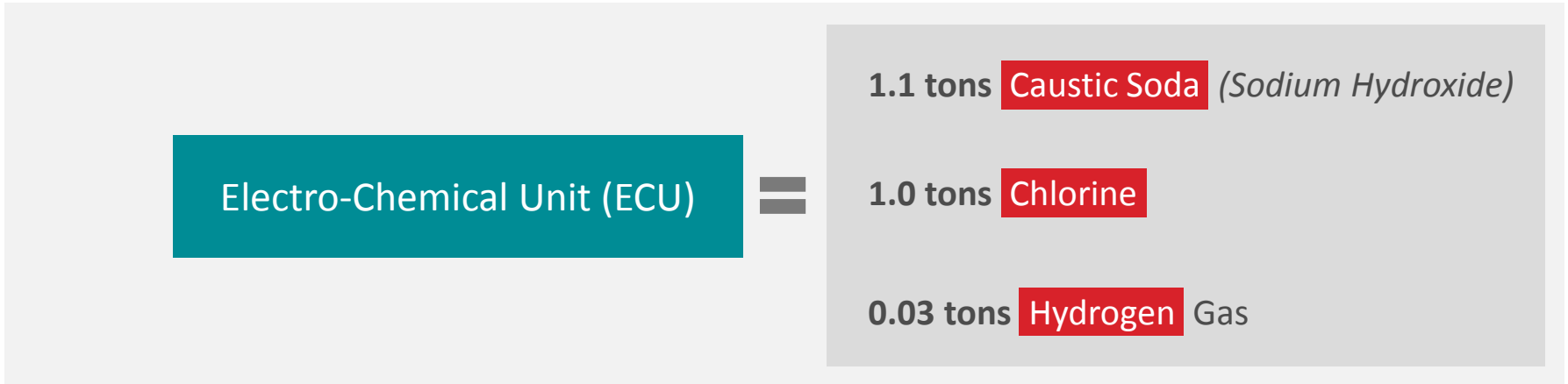


Well-positioned for chlorine derivative and caustic soda growth





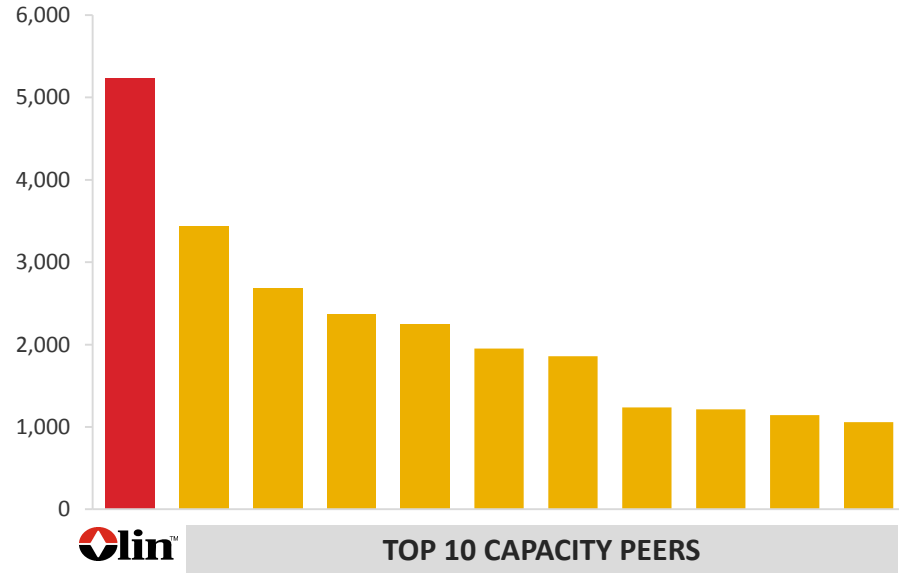
Active and effective management of chlorine and caustic soda – products with different supply and demand dynamics



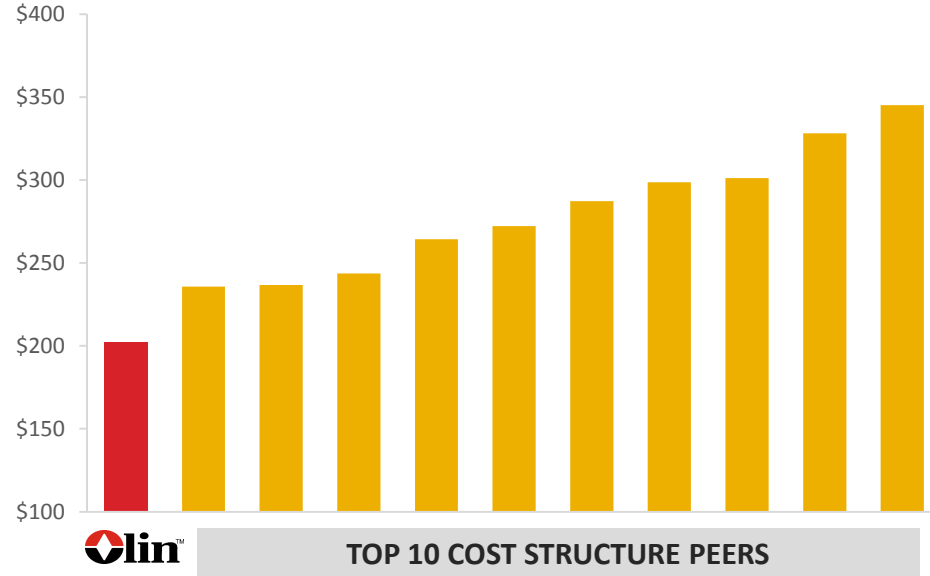


Significant size, scale and industry leading cost structure provide leverage to increasingly attractive chlor alkali market dynamics

Global Chlor Alkali Capacity
(in thousand metric tons)



IHS Estimated Chlor Alkali Cost Structure
(ECU cash costs \$/ton)

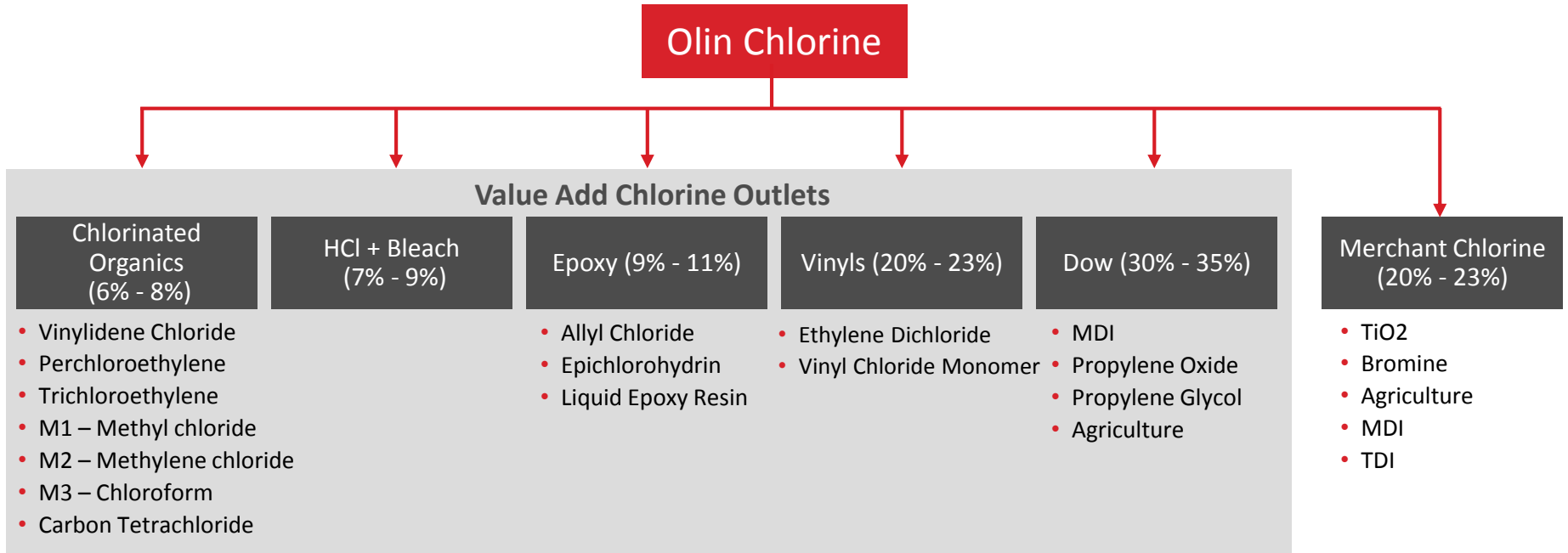


Sources: Tecnon OrbiChem, Olin Estimates

Source: IHS Markit



Strong platform with wide array of chlorine outlets well-positioned to capture future growth from chlorine envelope



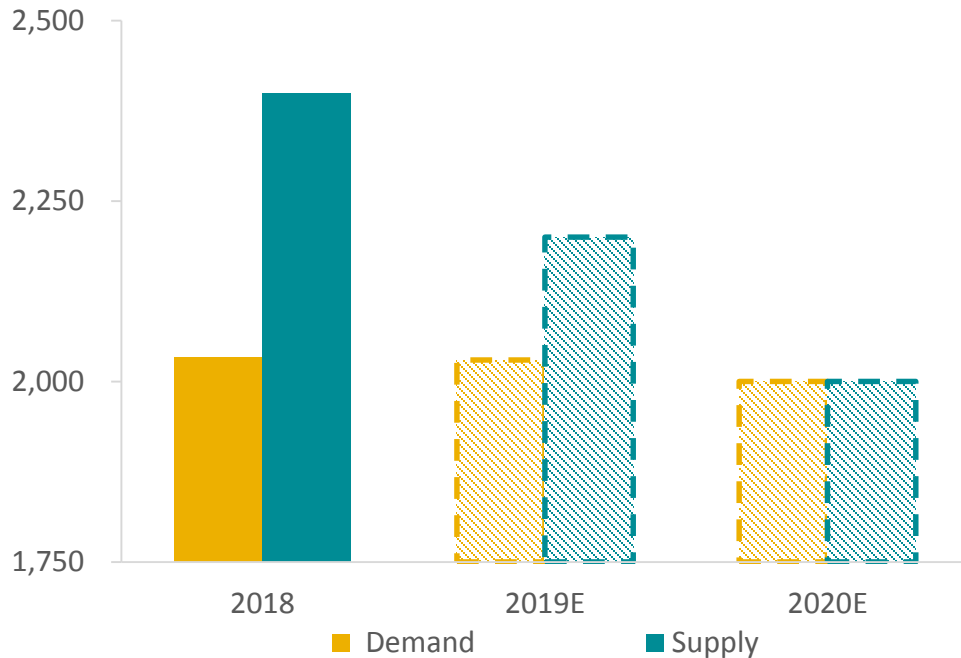
- Highly focused on unlocking additional value of each derivative and higher return opportunities
- Unique combination of global and regional plants with leading world-scale footprint on the U.S. Gulf Coast



Merchant chlorine expected to tighten as chlorine continues shift to integrated derivatives, leading to higher value for chlorine

North America Merchant Railcar Chlorine Supply and Demand

(in thousand tons)

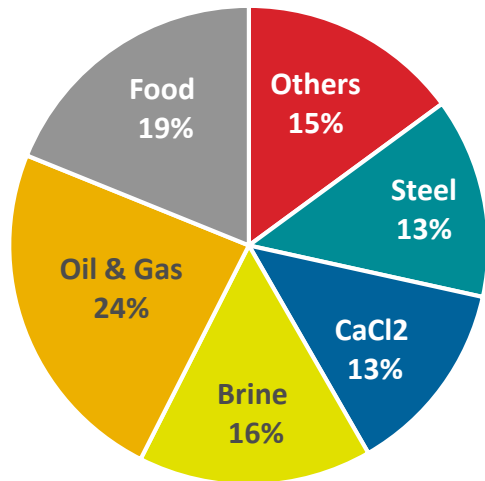


- North American merchant chlorine supply and demand expected to be in balance by 2020
- Improved supply and demand dynamics expected to lead to uplift of chlorine value
- Olin has flexibility to derivatize chlorine to achieve highest value

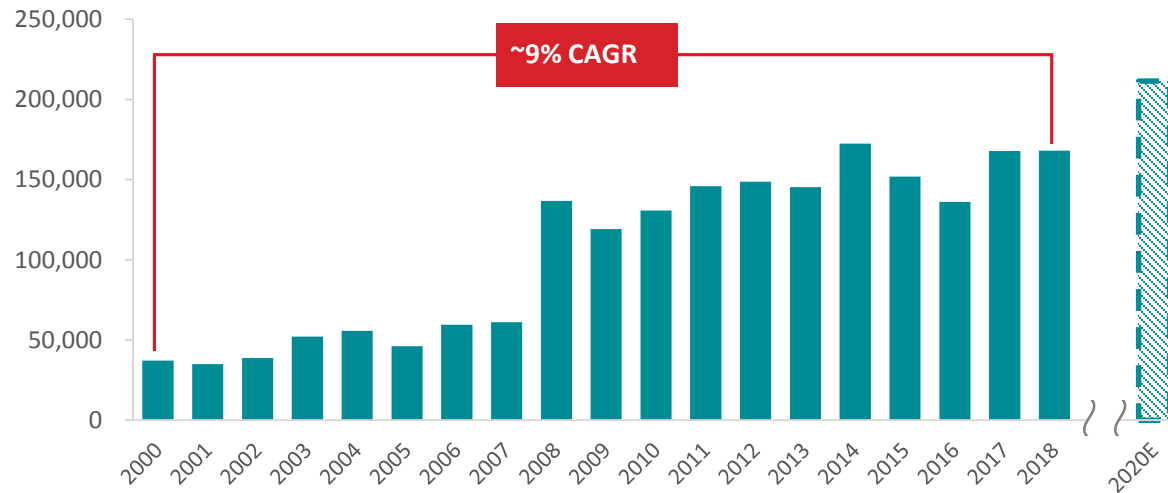


Largest HCl producer in North America positioned to capitalize on growth opportunities

2018 Merchant HCl Industry Demand
(as a percentage of 1.8MM tons)



Olin HCl Volume
(sales volume DST)

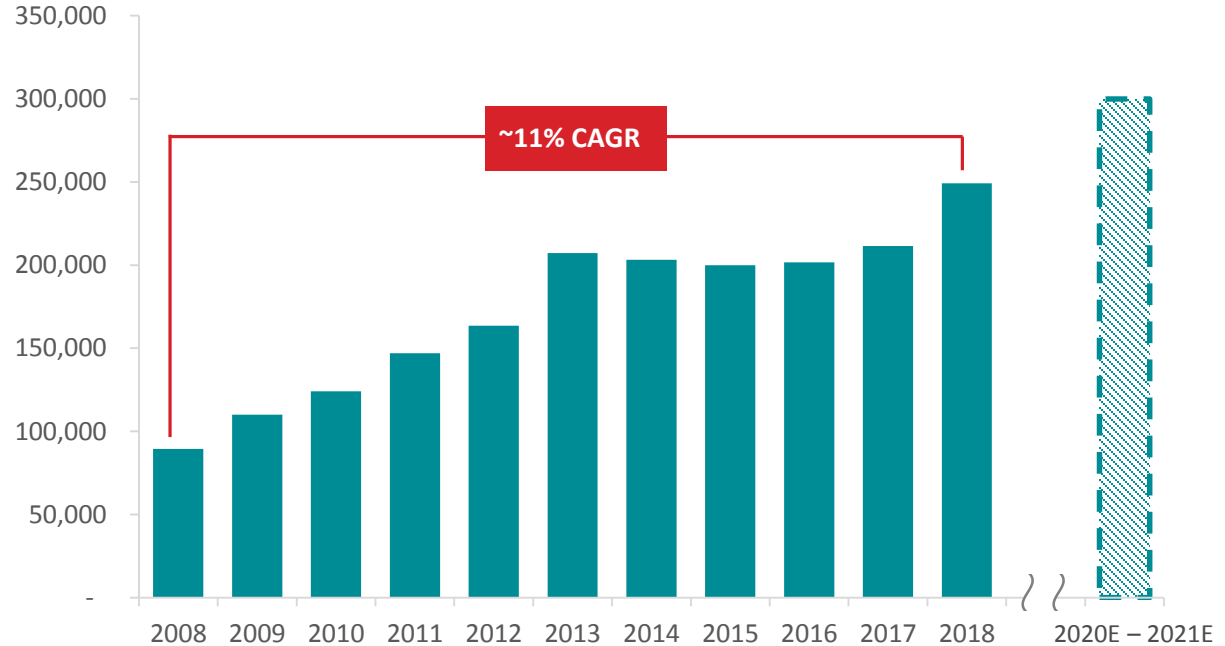


- Oil, natural gas and steel are key drivers of demand growth
- Olin has strategically located assets with facilities in close proximity to demand centers
- Demand is driving increased HCl value
- Olin is adding ~70KT of low-cost capacity to capture growth over the next 1 – 2 years



Largest and lowest cost producer of **bleach** in North America with long-term growth opportunities

Olin Bleach Sales (in short tons)

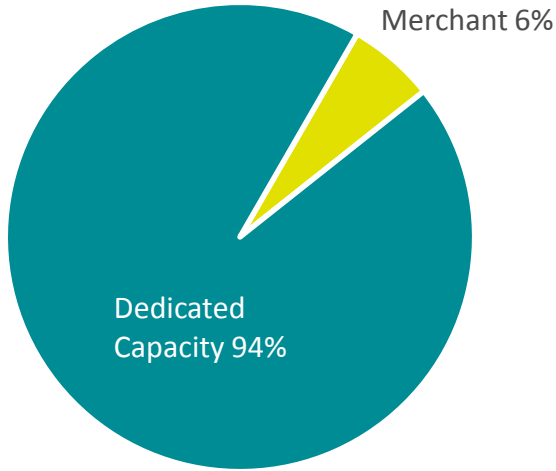


- Ongoing water treatment shift to bleach
- Bleach commands a price premium to the ECU
- Non-integrated bleach producers shifting to buy vs. make
- Olin capacity is 2.5x greater than nearest competitor
- Olin plants provide strategic geographic coverage
- Adding ~60KT at geographically advantaged locations over the next 1 – 2 years



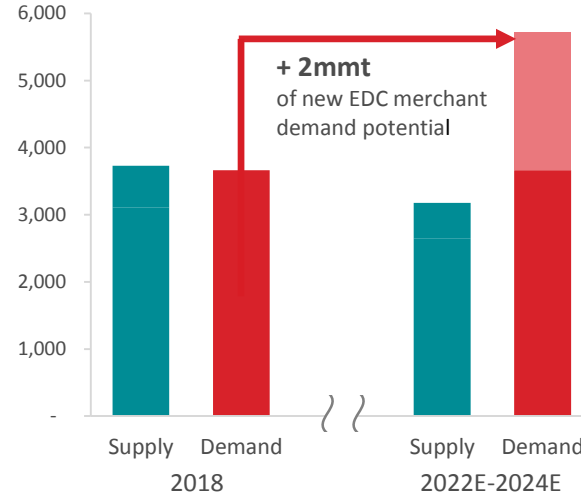
Uniquely positioned to capture EDC demand growth

Global EDC Industry Production
(in thousand tons)



- Vast majority of EDC volume is dedicated, used by integrated producers to make PVC

Merchant EDC Supply and Demand
(in thousand tons)



- Global supply is projected to decline by ~500KT as swing suppliers expand their own PVC capacity
- Extensive demand growth from non-integrated PVC producers

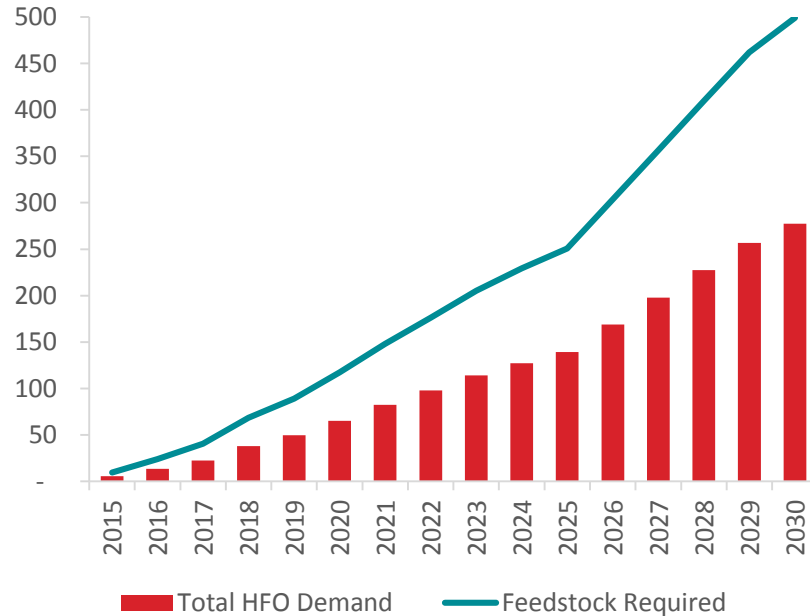
- Olin is the largest global supplier of EDC
- New PVC plants contemplated in Asia are non-integrated
- Estimated new merchant requirements are roughly 2 million tons
- Olin has low cost U.S. Gulf Coast assets integrated to chlorine and ethylene
- Debottlenecking growth opportunities available



Growth of next generation refrigerants driving significant opportunity for **chlorinated organics**

- Solvents and refrigerants are the major outlets for chlorinated organics
- Solvents demand is regional and stable
- Refrigerants demand is global and evolving with significant growth potential
 - New generation of refrigerants projected to grow rapidly
 - Next generation refrigerants require carbon tetrachloride
- Olin has the largest capacity for carbon tetrachloride in the world
- Olin is the only producer with assets on two continents (North America and Europe)

HydroFluoro-Olefin (HFO) Feedstock versus Feedstock Supply
(in thousand tons)

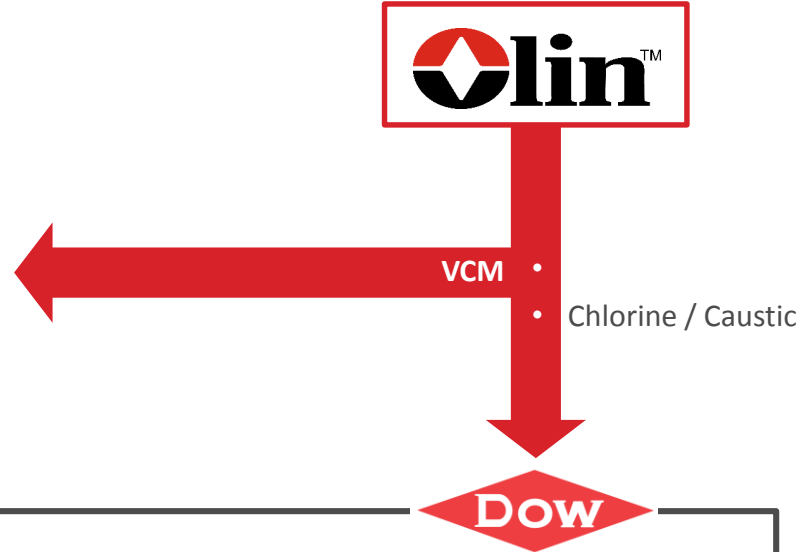




Long-term contracts with largest customer **Dow** continue to deliver value to Olin

Vinyl Chloride Monomer (VCM)

- Olin produces VCM for Dow pipeline customer
- Current Ethylene toll agreement through 2020
- Olin will have a direct, long-term contract with pipeline customer starting in 2021
- Expected incremental annual EBITDA of \$50 million – \$75 million



Long-term contracts through 2025

Approximately 1.5 MMT/year of both chlorine and caustic soda

Cost-plus based

Maintains baseload and integration value for Olin

Debottlenecking expansion opportunities available to augment chlorine capacity by ~20%

A small icon of a network diagram with three nodes and connecting lines, located in the bottom right corner of the header box.

- Low-cost incremental growth across multiple locations
- Targeted to meet increased chlorine derivatives demand
- ~200K tons of expansions expected online in the next 1 – 2 years

Chlorine-derivative growth opportunities

A small icon of a bar chart with four bars of increasing height and an upward-pointing arrow, located in the bottom right corner of the header box.

- Bleach
- HCl
- GCO
- Ethylene dichloride (EDC)
- Epoxies



Un-matched global chlor alkali portfolio to benefit from healthy demand growth forecasted on both sides of ECU

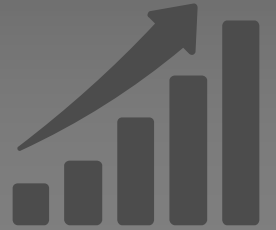
Structural changes underway, driving growth opportunities on both sides of the ECU for Olin



Olin has leadership positions in each chlorine derivative and caustic soda



Olin's chlor alkali platform is well-positioned for growth in the near, intermediate and long term





**Poised to Capture Value from Growth in
Caustic Soda Demand**

Damian Gumpel

Vice President
Global Caustic, KOH & Vinyls



Well-positioned to profitably grow with structural changes

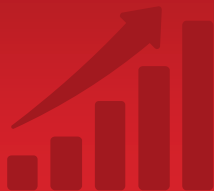
Global supply and demand expected to tighten through 2030



Security of supply commands a premium as caustic demand grows ahead of supply



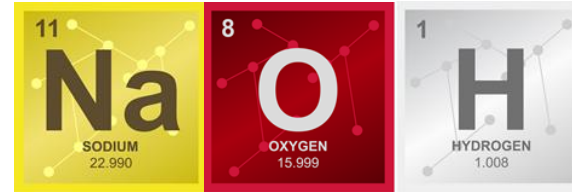
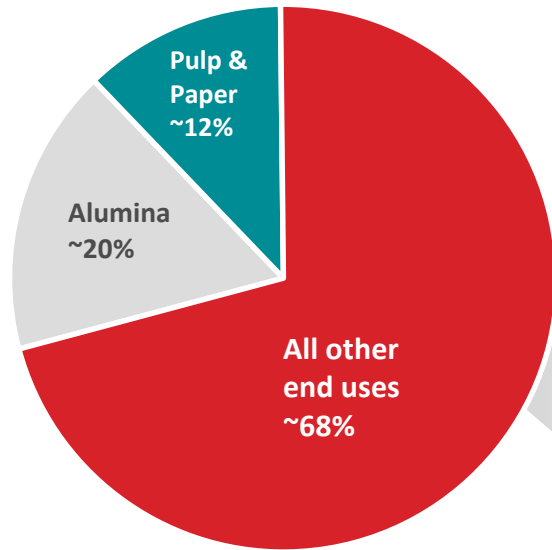
Largest direct caustic soda supplier to growing Americas market with most extensive and growing supply network



Poised to expand caustic margins from both supply and demand fundamentals and Olin capabilities to best serve customers



2018 World Caustic Soda Demand
(as a percentage of total 80MM tons)



Raw Materials

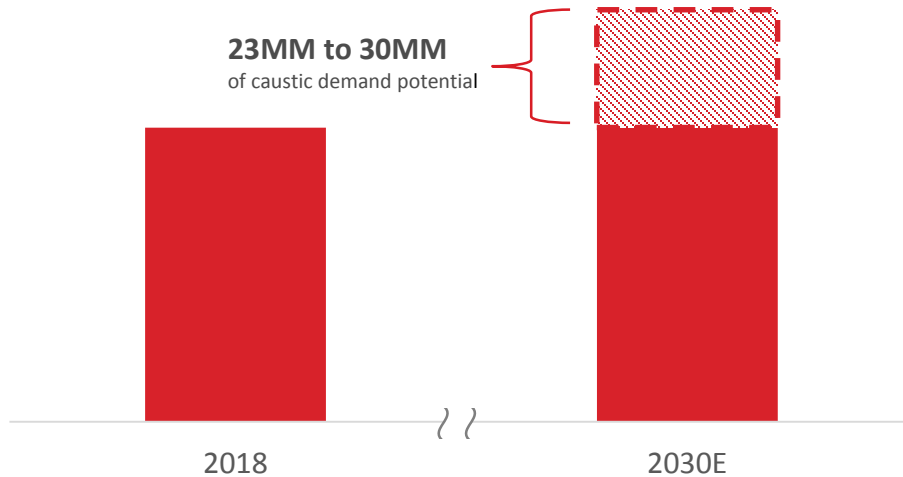
- Sodium lauryl sulfate (soap)
- Sodium cyanide (mining, nylon)
- Super absorbent polymers (diapers)
- Sodium hydrosulfide (pulp, mining)
- Sodium benzoate (food)
- Monosodium glutamate (food)
- Epoxy resins (adhesives)

Processing Aid

- Alumina (infrastructure, construction, consumables)
- Pulp and paper (packaging, paper, print)
- Polycarbonate (electronics)
- Textiles (clothing)

Caustic soda is consumed to make a wide variety of end-uses but is not the primary input

Global Caustic Soda Demand (in dry metric tons)



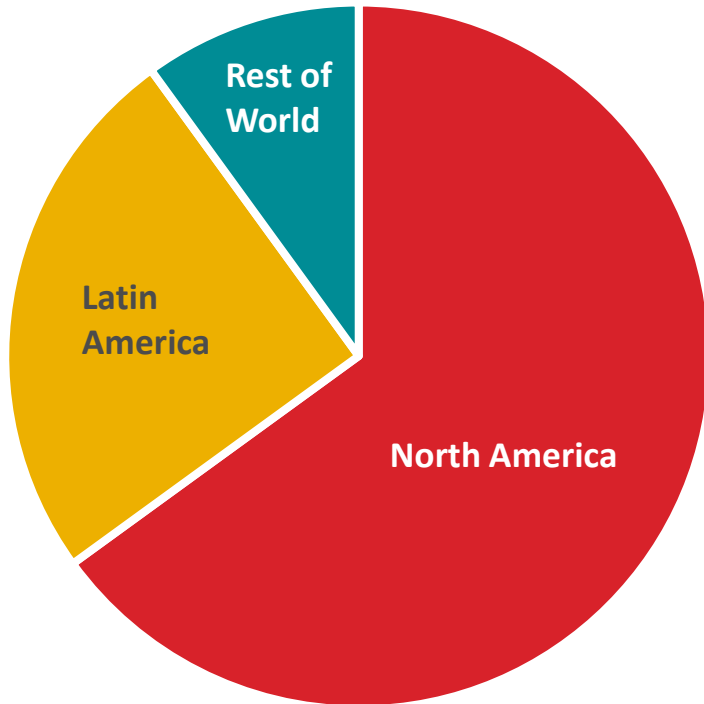
- Steady demand growth tied to consumables, population, and disposable income
 - e.g.: Transportation, food packaging, shipping boxes, soap, textiles, baby diapers
- Demand growth as high as 30MM dry metric tons using 20-year historical growth rate vs. 2%
- Higher caustic soda demand growth vs. chlorine will drive caustic soda prices to incentivize new supply

Security of supply will become a key priority as caustic soda demand exceeds current capacity



Caustic soda leader with opportunities to grow customer direct business

Olin Merchant Caustic Sales by Region
(as a percentage of sales)



- Largest global membrane grade producer
- Largest direct supply network in North America
- Largest in-region supply network in Latin America
- U.S. Gulf Coast membrane and diaphragm export capabilities to the rest of the world



Essential caustic soda supplier to North America with the largest supply network

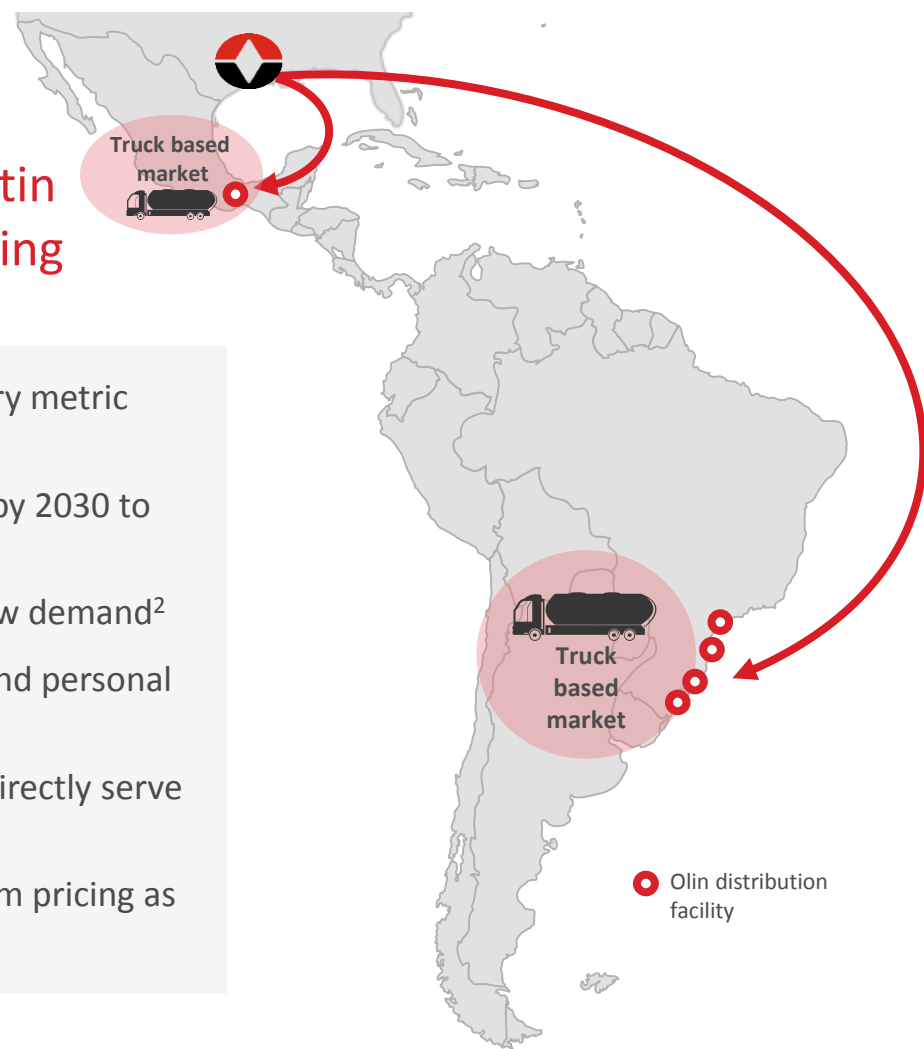


- Largest production and terminal system of any North American producer
- Strategic supplier to key regions and segments:
 - Pulp and paper across Southeast
 - Chemical and general manufacturing in Midwest and Mid-Atlantic
 - Eastern Canada



Strategically positioned to capitalize on Latin American demand growth by directly serving growing regional consumers

- 2018 caustic soda demand ~4MM dry metric tons; 2MM dry metric tons imported (~95% from U.S. Gulf Coast)¹
- Imports expected to grow to 3.5MM dry metric tons/year by 2030 to meet new demand¹
- Membrane forecasted for ~200-300k dry metric tons of new demand²
- Membrane demand growth in pulp and paper and home and personal care is primarily inland and truck-based
- Olin has strong and growing terminal system designed to directly serve growing truck-based segment
- Focused on growing with market and commanding premium pricing as a direct and strategic supplier





Well-positioned to profitably grow with structural changes

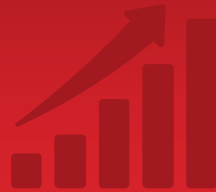
Global supply and demand expected to tighten through 2030



Security of supply commands a premium as caustic demand grows ahead of supply



Largest direct caustic soda supplier to growing Americas market with most extensive and growing supply network



Poised to expand caustic margins from both supply and demand fundamentals and Olin capabilities to best serve customers





Break



**Leading Epoxy Platform
Extending the Chlorine Envelope**

Pat D. Dawson

Executive Vice President and President
Epoxy and International

Epoxy is a critical component of chlorine envelope, consuming 10% of total Olin chlorine produced



Poised to capitalize on improving global supply and demand fundamentals



Largest, most integrated low-cost producer with global reach



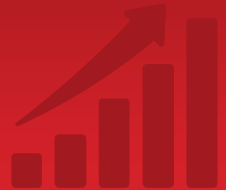
Significant caustic soda liberator



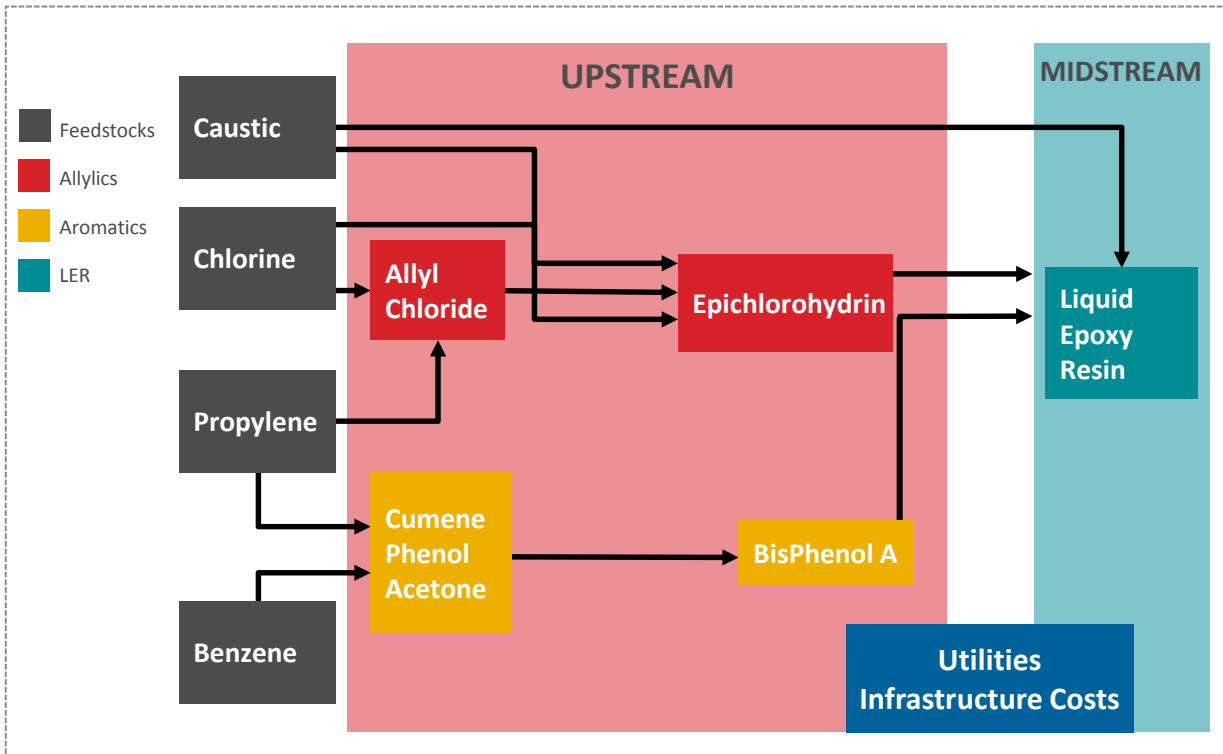
Increased emphasis on “selling up” to improve margin capture



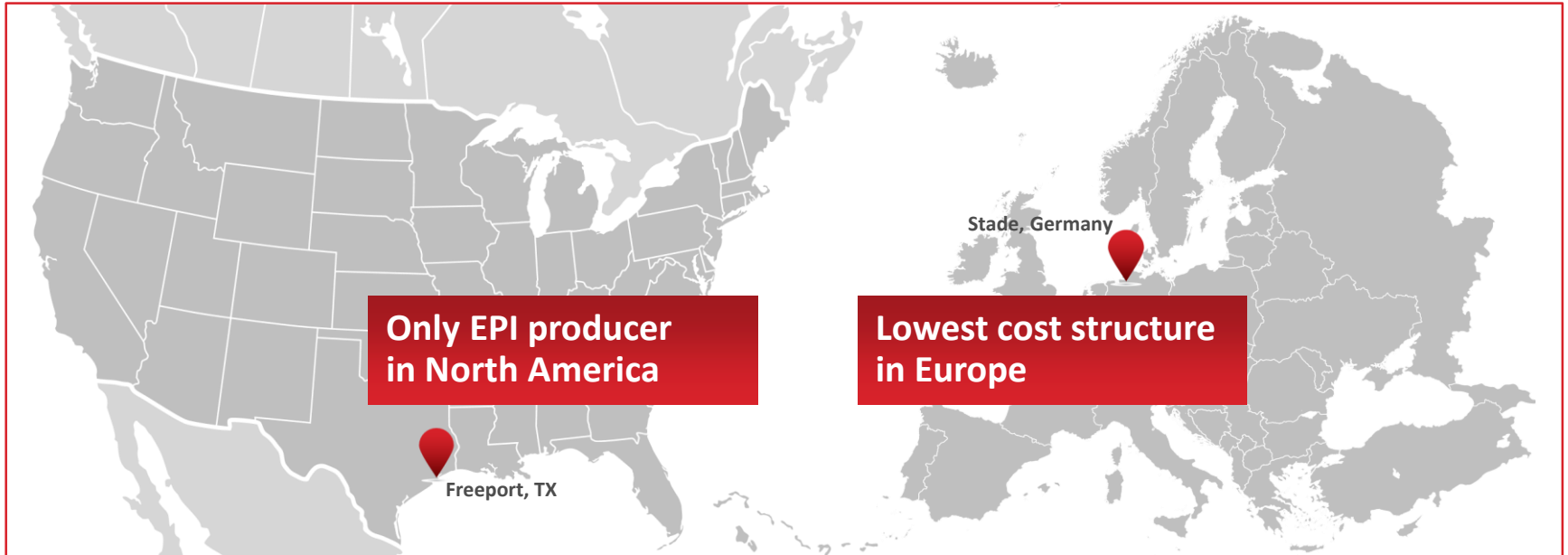
Well-positioned to add low-cost capacity across the epoxy value chain



Two fully integrated, unique and cost advantaged epoxy value chains

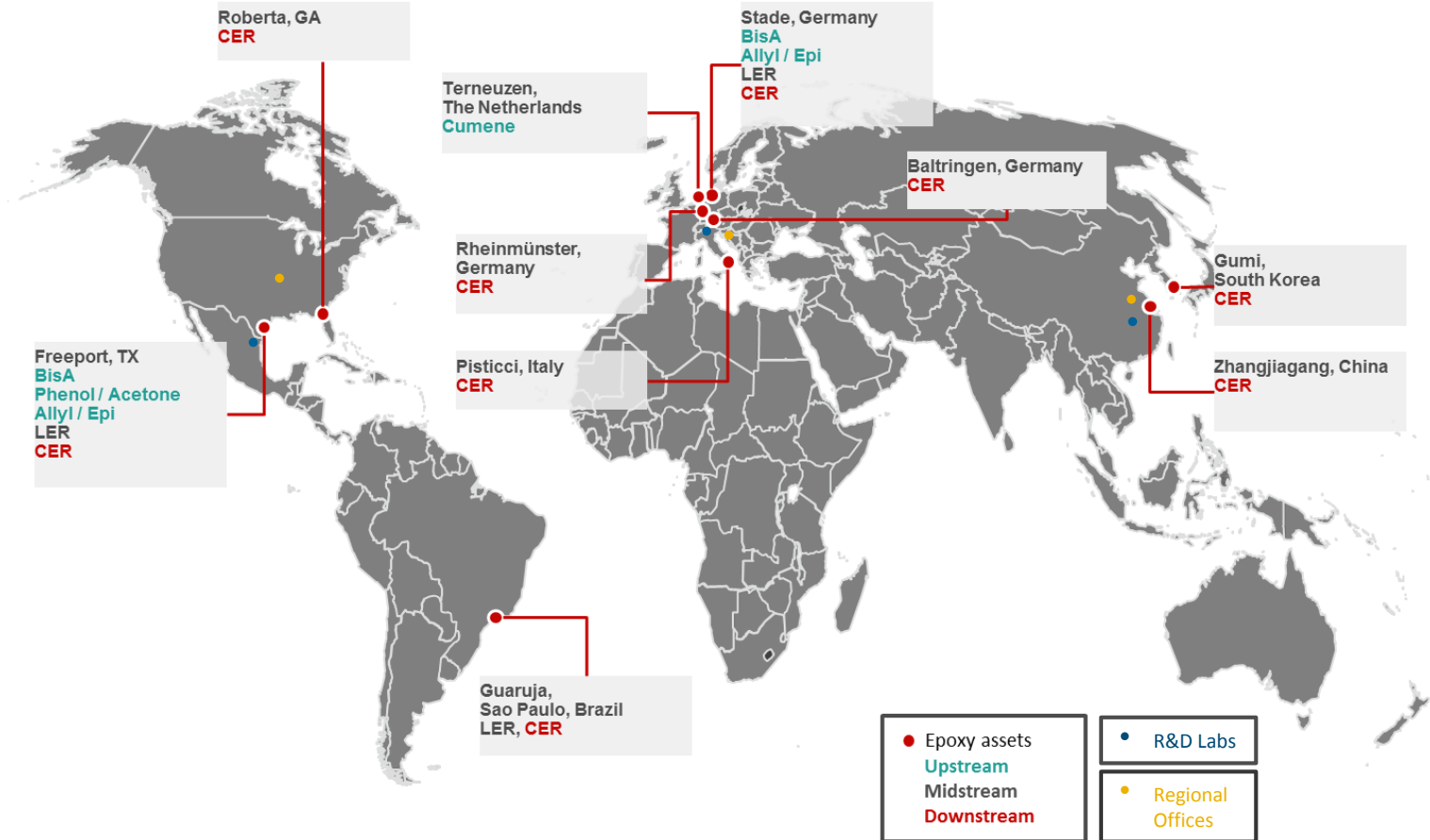


- High barriers to entry:
 - Complex chemistry
 - Complex integration
 - High investment costs
- Greenfield investment to build a fully-integrated world-scale LER asset is ~\$1.5 billion
- Replicating Olin's unique epoxy value chain would require a ~\$3.0 billion to ~\$4.5 billion investment



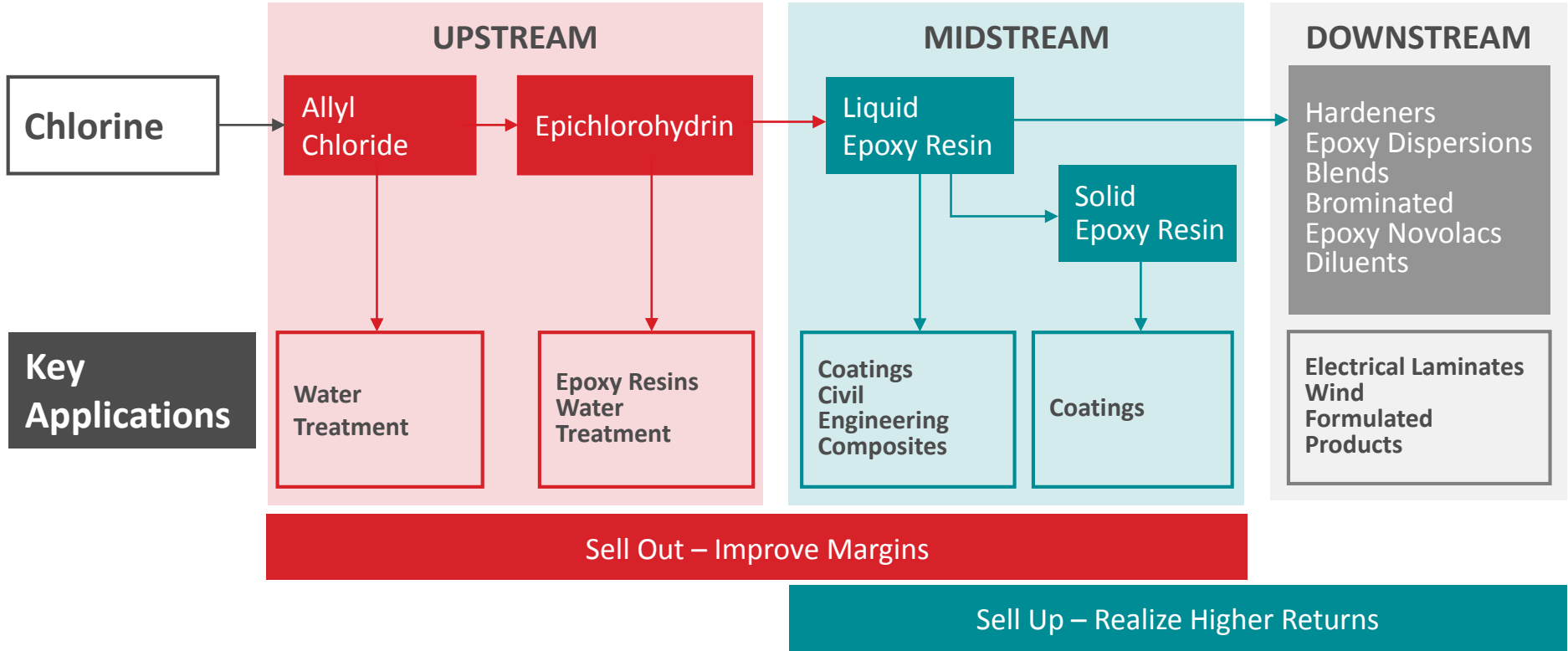
- Olin has low capital cost opportunities to expand
- Freeport, Texas site is the lowest cost producer of EPI and LER in North America and globally
- Stade, Germany site is the lowest cost producer of EPI and LER in Europe

Assets strategically aligned for global reach





Chlorine plays a key role and provides opportunities to drive increasing returns as it moves further down the value chain



Corrosion Protection



Electrical Insulation



Lightweight Strength



Chemical Resistance



Coatings

- Marine/Protective
- Powder
- Automotive
- Metal Coatings
- Packaging

Composites

- Wind
- Aerospace
- Industrial
- Transportation
- Recreational

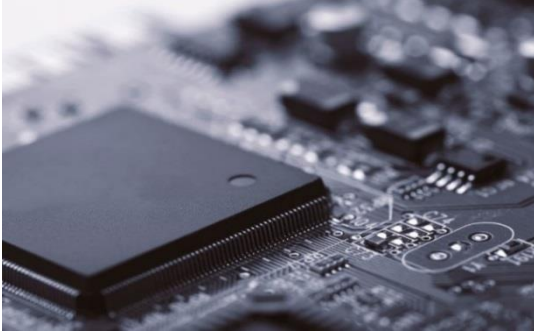
Electronics

- Printed Circuit Boards
- Encapsulation
- Potting Compounds

Civil Engineering

- Airports
- Bridge & Road
- Flooring & Grouting
- Manufacturing
- Port Infrastructure
- Railway
- Water (waste & potable)

Electrical Laminates



Wind



Formulated Products

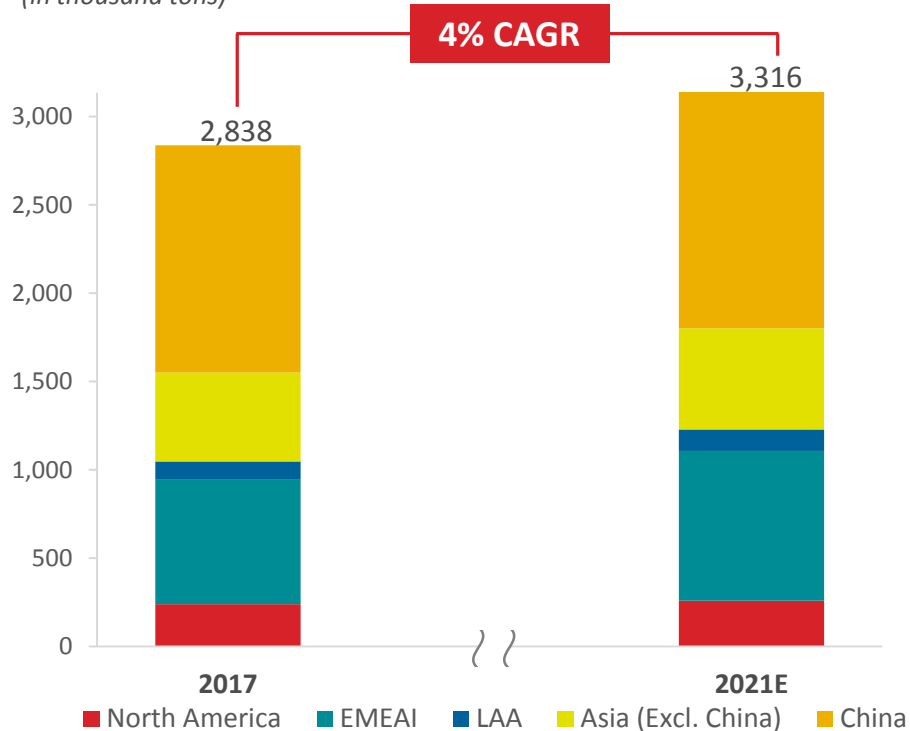


- Downstream has the highest margins and highest growth rates
- Emphasis on high growth products and applications
- Projected to grow at 7% CAGR¹



Global capabilities provide opportunities for growth

Global Epoxy Resin Consumption
(in thousand tons)



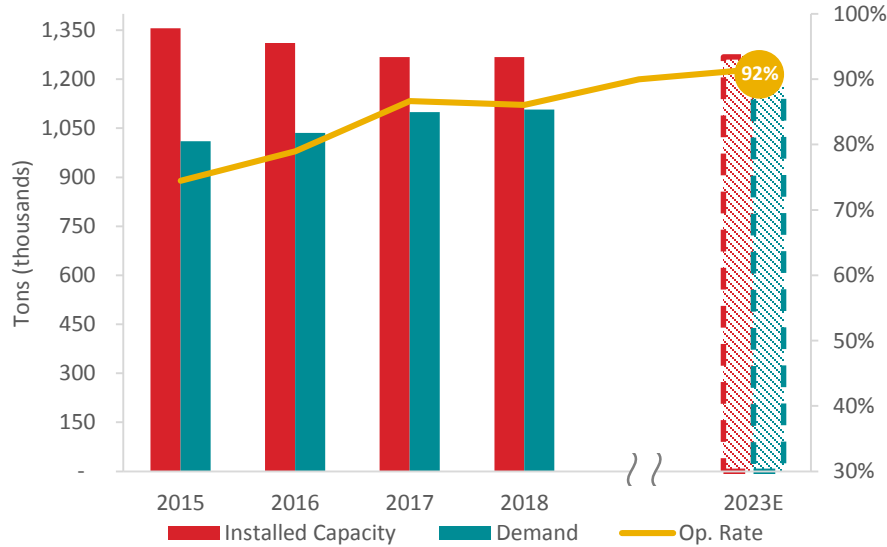
Olin Participation:

- North American assets are leveraged for growth
- European asset has advantaged cost position along with flexibility and scale to sell globally
- Europe growth focused on midstream and downstream businesses
- Asia key for downstream growth, particularly wind and laminates

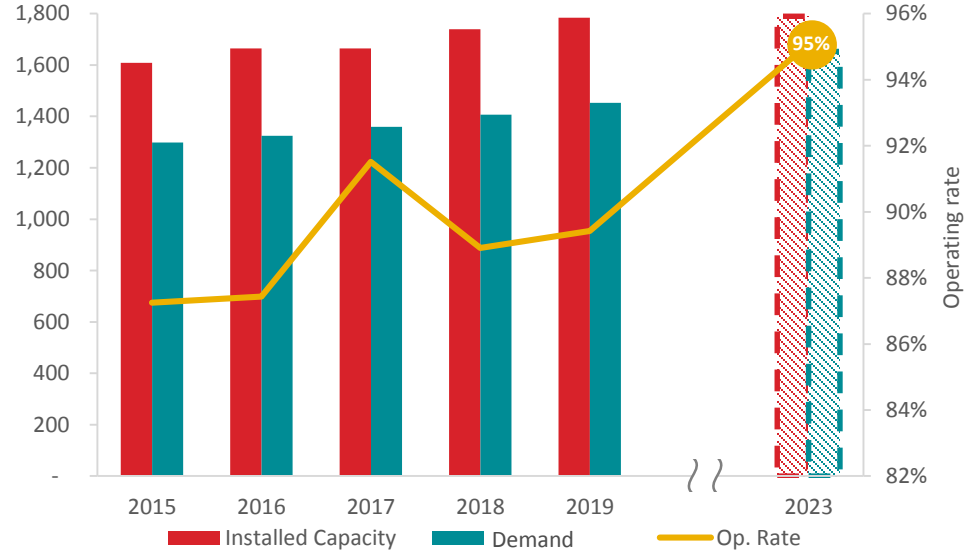


EPI and LER supply and demand projected to be tight by 2021 (excluding China)

Global EPI Supply and Demand (excluding China)



Global LER Supply and Demand (excluding China)

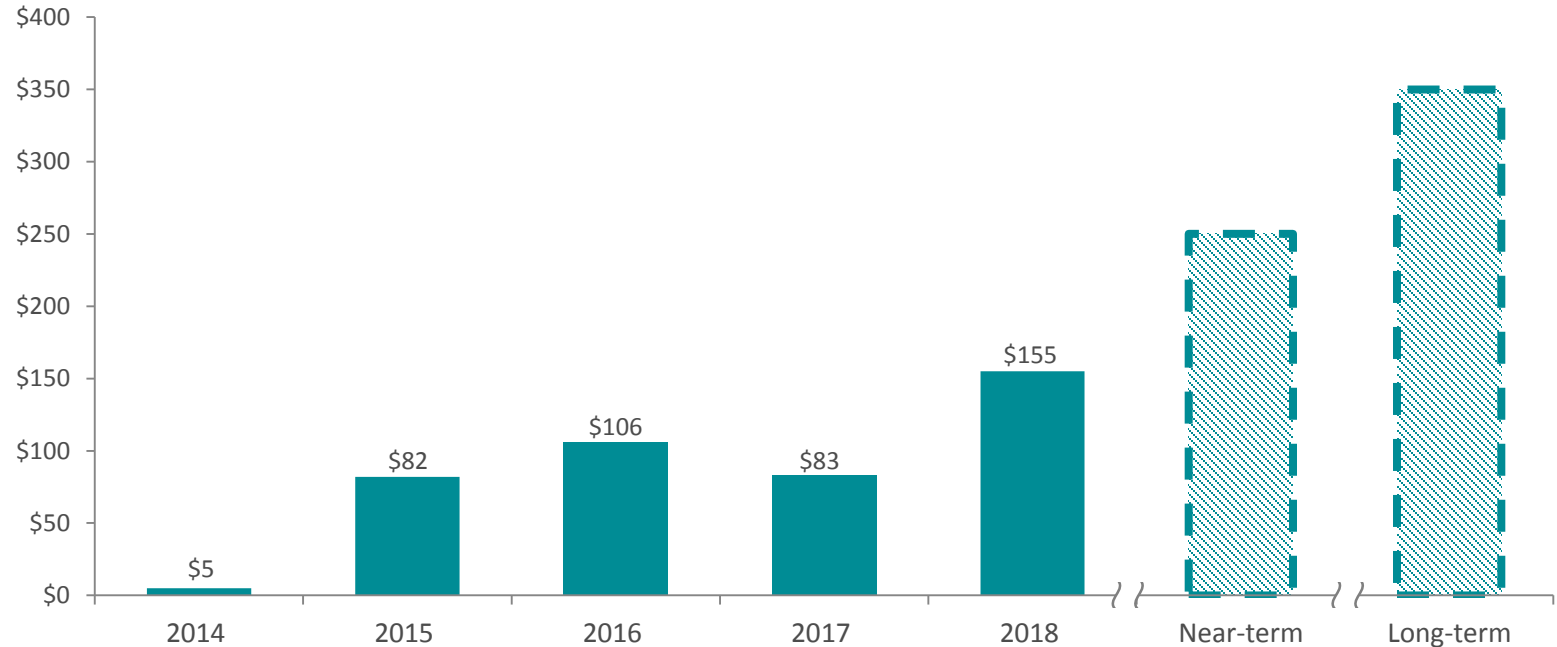


- Current operating rates (excluding China) leave limited room for supply growth
- High-cost EPI and BPA act as deterrent to capacity additions for non-integrated producers
- Near term, Olin has ability to grow EPI and LER capacity through low cost debottlenecking
- Longer-term, Olin has optionality for brownfield investment in EPI and LER capacity

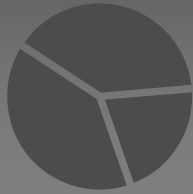


Expect continued improvement in Epoxy segment earnings over the longer term as industry fundamentals continue to strengthen

Adjusted EBITDA*
(in millions)



Epoxy is a critical component of chlorine envelope, consuming 10% of total Olin chlorine produced



Poised to capitalize on improving global supply and demand fundamentals



Largest, most integrated low-cost producer with global reach



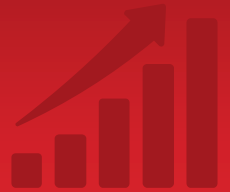
Significant caustic soda liberator



Increased emphasis on “selling up” to improve margin capture



Well-positioned to add low-cost capacity across the epoxy value chain





**Business Operations Drive
Reliability and Growth**

John M. Sampson

Senior Vice President
Business Operations



Business operations drive reliability and growth

Focus on maintaining industry-leading cost position



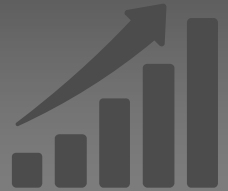
Targeted approach to reliability



Leverage broad chlorine envelope and invest prudently in assets and high return growth projects



Positioned to increase chlorine and chlorine derivative capacity within the existing operating portfolio as demand strengthens

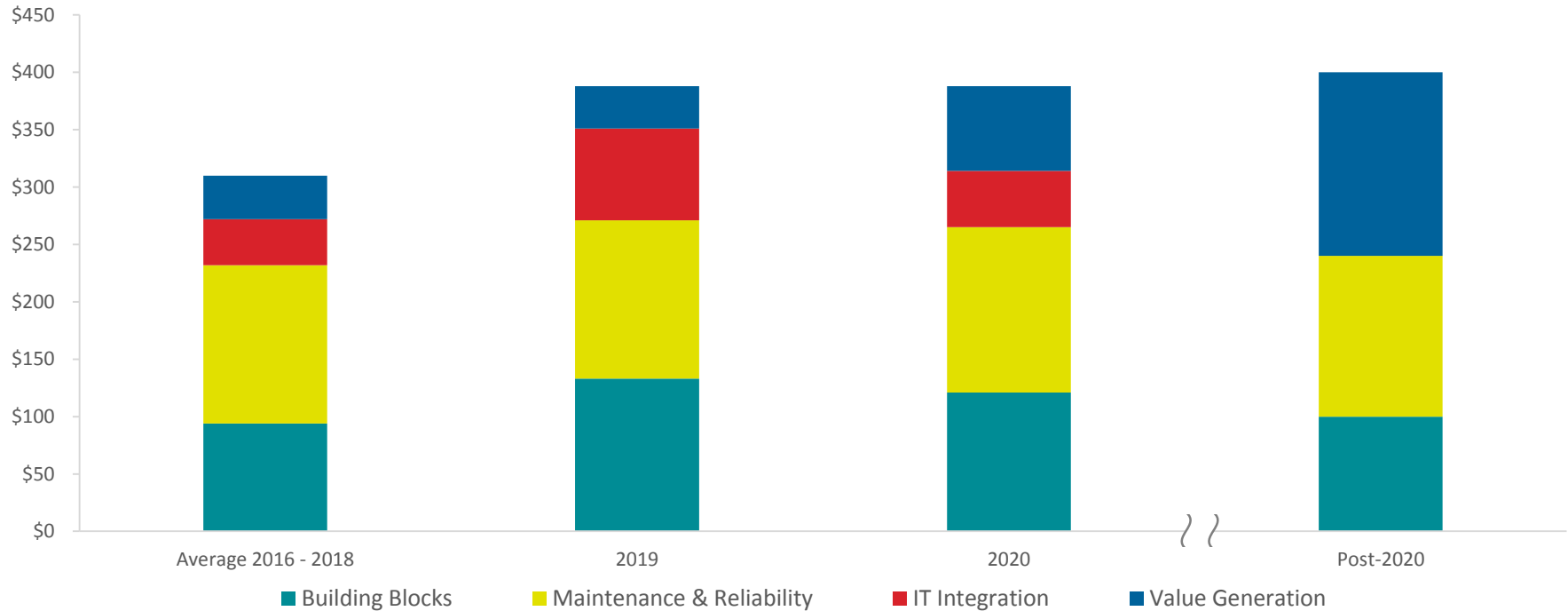


	STRATEGIC CATEGORY	FUNDING FOCUS
VALUE PRESERVATION	Building Blocks	<ul style="list-style-type: none"> • Improve and secure basic operations: <ul style="list-style-type: none"> - Brine supply - Electrolysis cells - Energy (power supply, rectifiers, major turbine overhauls)
	Maintenance & Reliability	<ul style="list-style-type: none"> • Safely and reliably operate existing assets: <ul style="list-style-type: none"> - Replacement of equipment, piping systems - Reliability improvements projects - Capital associated with turnarounds - Enhance cost position
VALUE GENERATION	Growth	<ul style="list-style-type: none"> • Expand existing production capabilities <ul style="list-style-type: none"> - Adding cost advantaged increments - Potential brownfield expansion as demand warrants



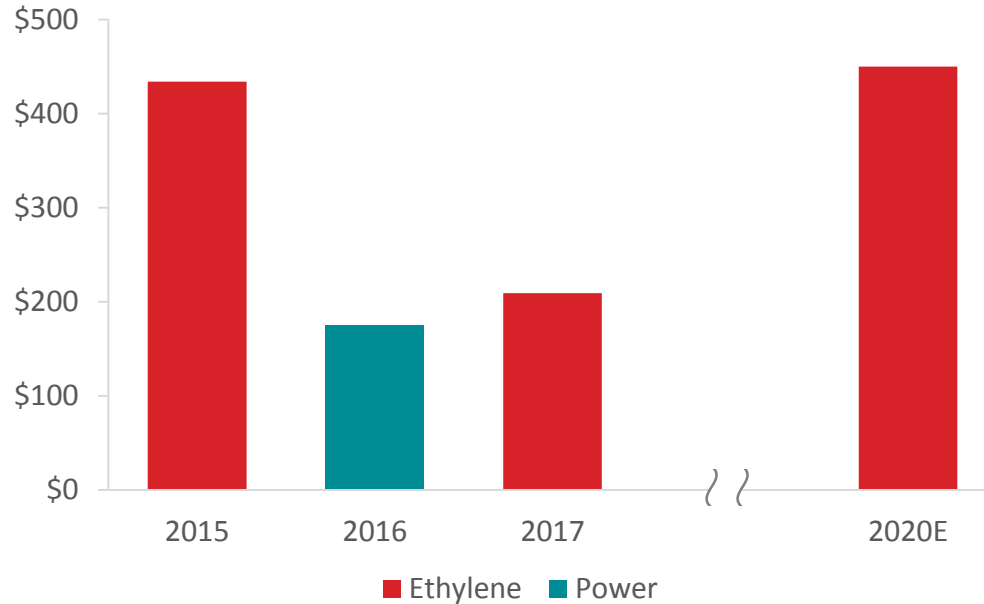
Long-term capital spending plan increasingly focused on growth opportunities within existing asset base, while maintaining high levels of asset reliability

Chemical Spending Plan
(in millions)



Investments in power and ethylene enhance low-cost position

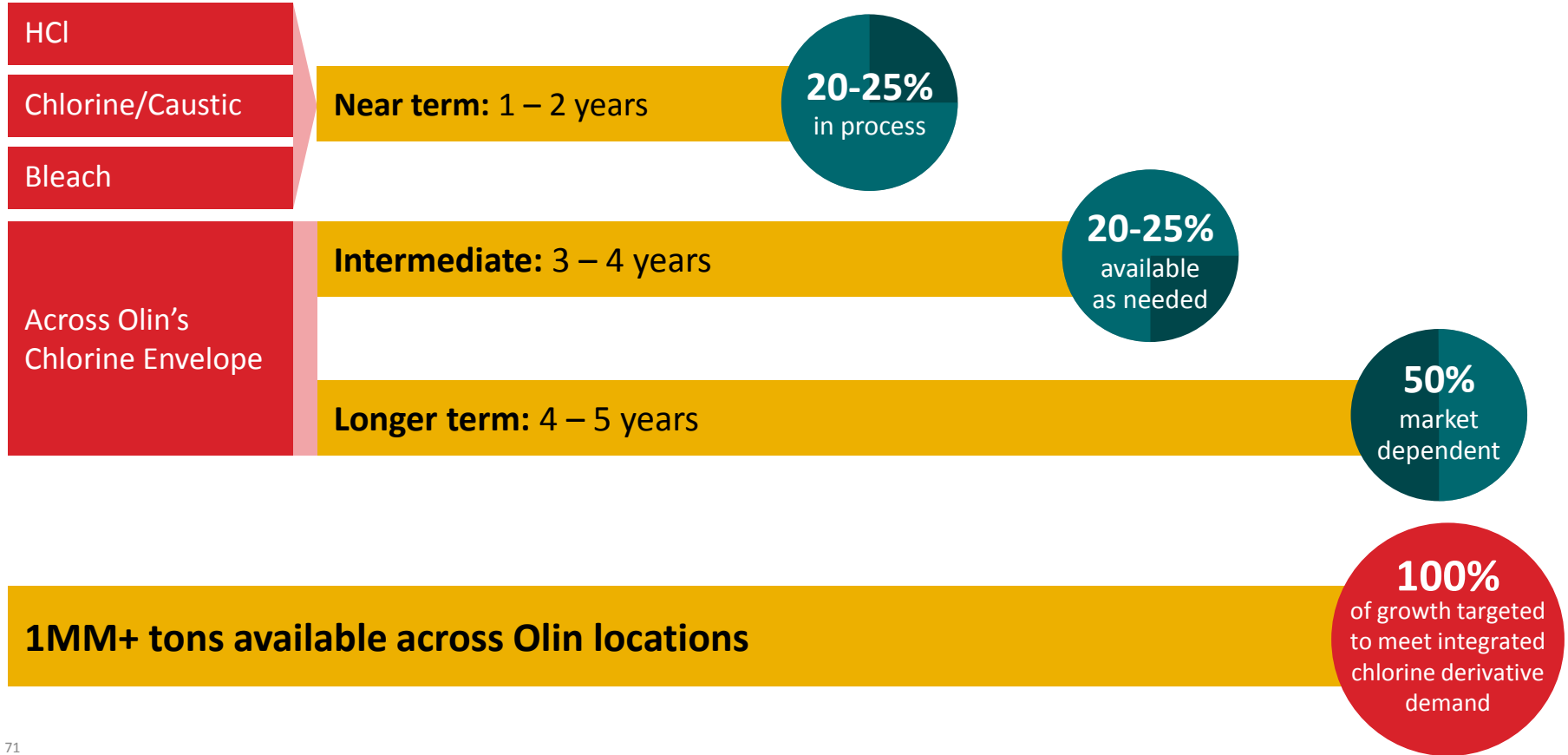
Investments in Power and Ethylene
(in millions)



- Ethylene investments
 - 20-year agreements
 - Ethane cost-based arrangements
 - Savings of ~\$180 million in first three years vs. market-based ethylene
- Low-cost power investments
 - 20-year agreements
 - Freeport, Texas and Plaquemine, Louisiana facilities



Low-cost growth available to capitalize on structural change





Business operations drive reliability and growth

Focus on maintaining industry-leading cost position



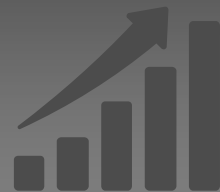
Targeted approach to reliability



Leverage broad chlorine envelope and invest prudently in assets and high return growth projects



Positioned to increase chlorine and chlorine derivative capacity within the existing operating portfolio as demand strengthens





Solid Foundation and Improving Financial Outlook

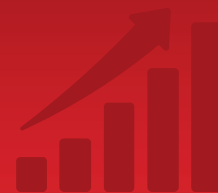
Todd A. Slater

Vice President and Chief Financial Officer

Significant financial improvement
over the past three years



Strong outlook for long-term
earnings expansion



Expected increase in levels of
cash flow going forward



Balanced and disciplined
approach to capital allocation

- Strategically invest in our businesses
- Deleverage the balance sheet
- Return cash to shareholders





Financial results have improved significantly over last three years

Revenue
(in millions)

\$5,551 \$6,268 \$6,946

2016

2017

2018

+25%

Adjusted EBITDA
(in millions)

\$838 \$945 \$1,265

2016

2017

2018

+50%

Free Cash Flow
(in millions)

\$376 \$383 \$587

2016

2017

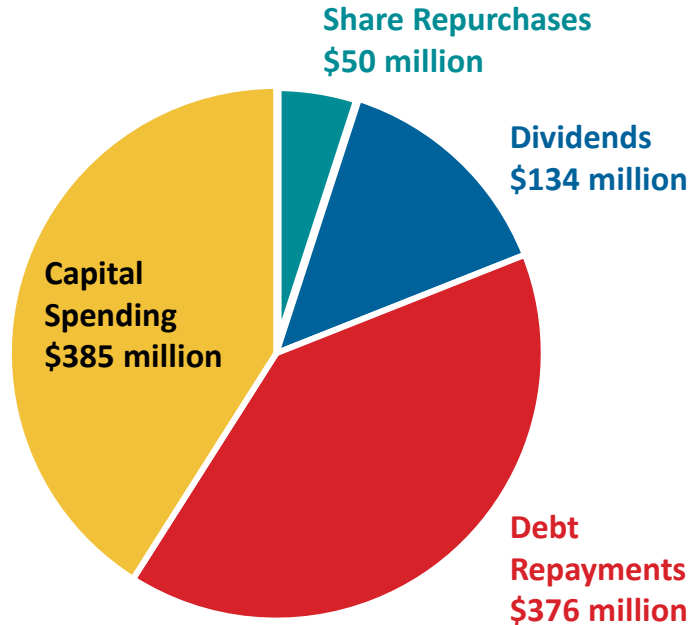
2018

+56%

Prudent and consistent approach to capital allocation

Capital Allocation 2018

(in millions)



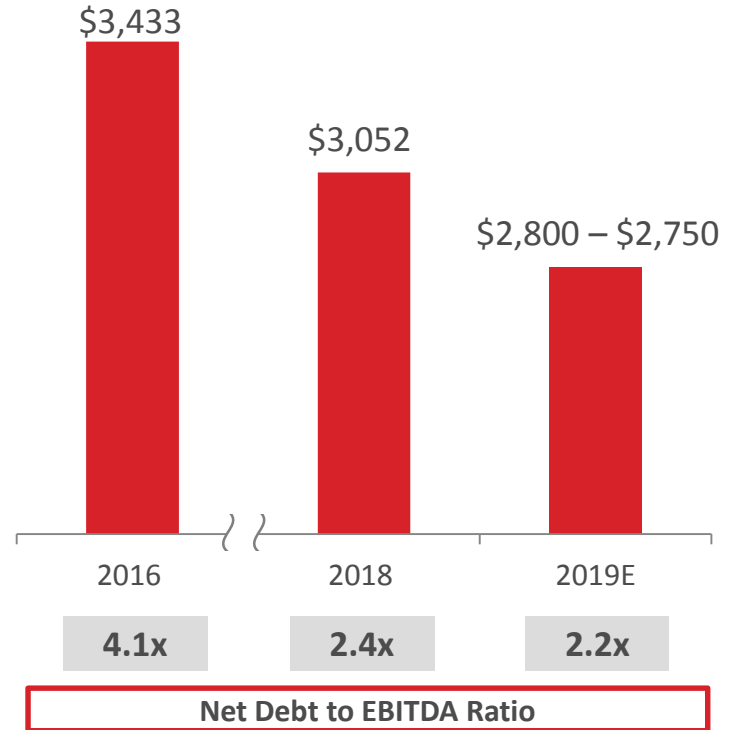
- Capital investment
 - Sustain and enhance businesses
 - Long-term cost-based ethylene supply contracts
 - Organic growth projects
- Optimizing balance sheet
 - Commitment to conservative financial policies
 - Manageable towers of debt with staggered maturities
 - Focus on operating with investment grade metrics
 - Major refinancing opportunity in 2020
- Return cash to shareholders
 - Over 92 years of uninterrupted quarterly dividends
 - Opportunistic share repurchase program



Balance sheet optimization underway

- Refinancing in 2017 and 2018 lowered debt towers and extended maturities to 2030
- Repaid \$440 million of debt since the acquisition
- Expecting to prepay \$250 million to \$300 million of debt in 2019
- Focus on operating with investment grade metrics

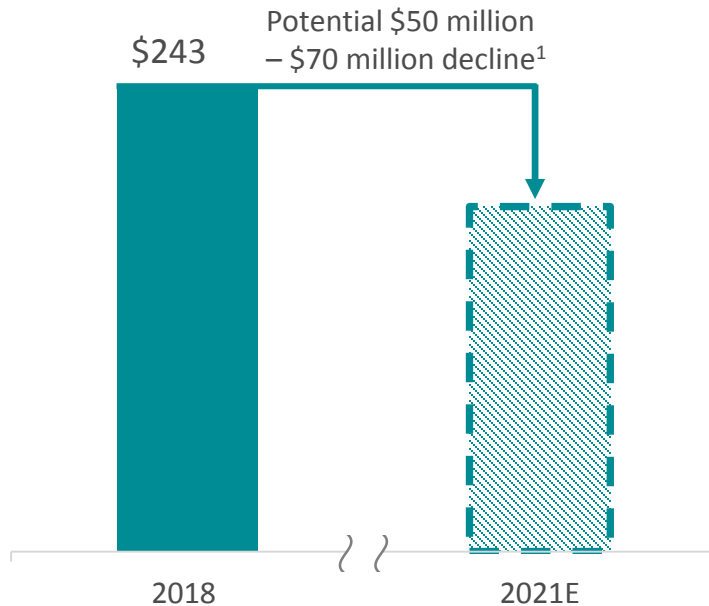
Net Debt
(in millions)





Significant interest expense savings expected through refinancing acquisition-related bonds

Total Annual Interest Expense
(in millions)

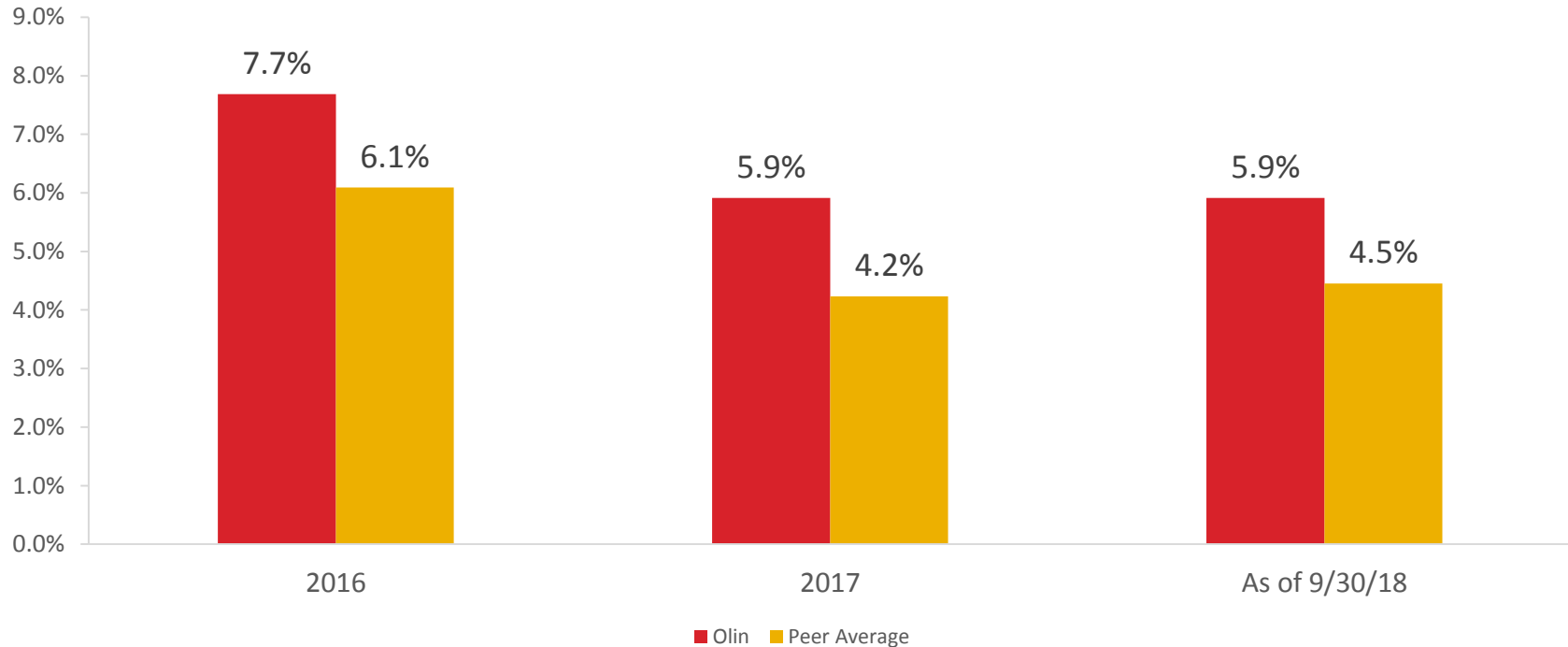


- Expect to call \$1.2 billion of 10.00% and 9.75% bonds issued for Dow debt exchange in October 2020
- Interest expense should decline by \$50 million – \$70 million¹ annually beginning in 2021
- With lower targeted aggregate debt levels and improving debt metrics, reduction could be greater still



Free cash flow yield 150 basis points better than the broader chemical sector

Free Cash Flow Yield



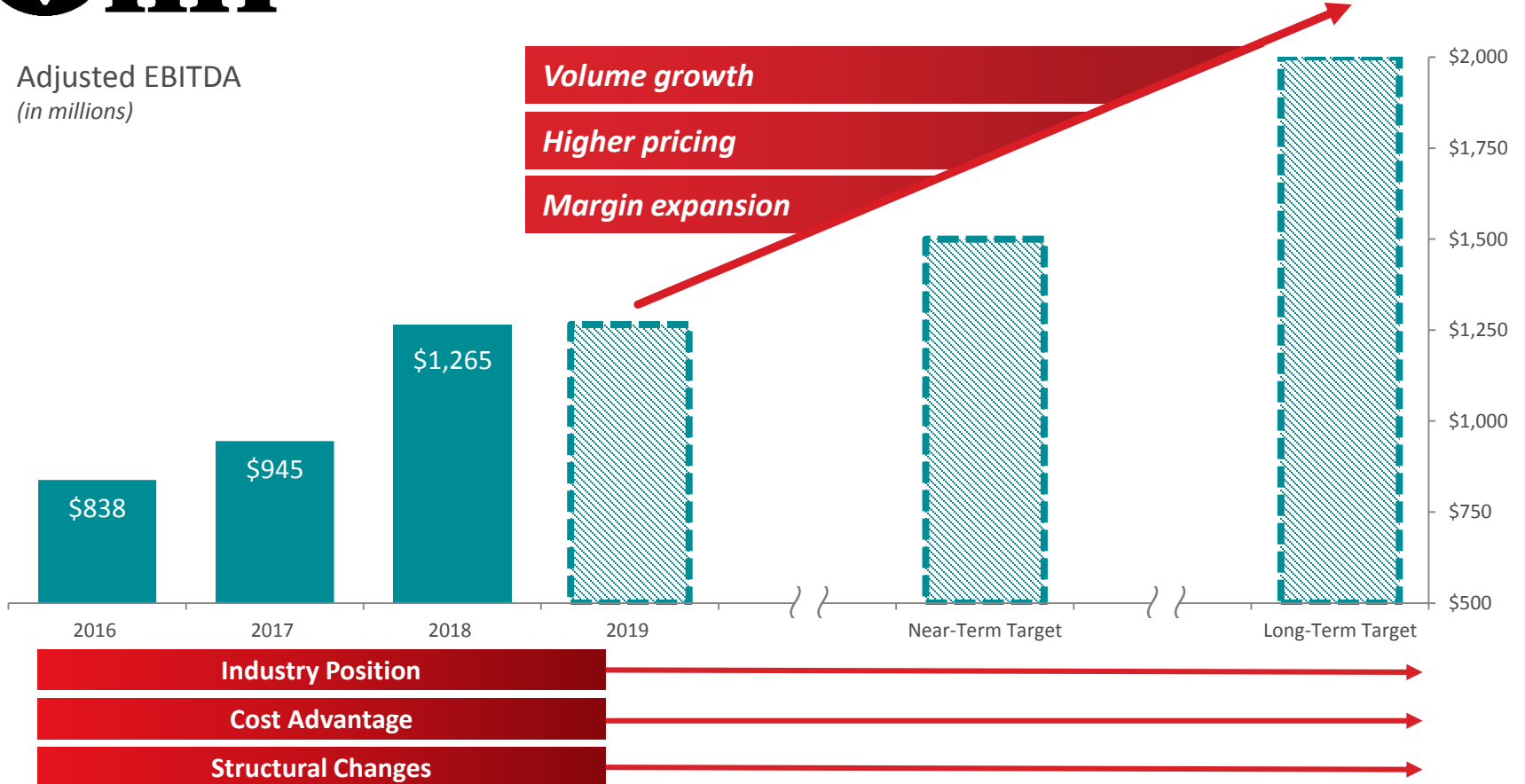
Source: FactSet

Peers include IPHS, RYAM, KRA, ASIX, TROX, FOE, KRO, IOSP, CMP, OEC, SCL, GCP, MTX, FUL, POL, KWR, CBT, UNVR, PAH, NGVT, VVV, MEOH, GRA, ASH, HUN, CC, AXTA



Focused on improving adjusted EBITDA generation

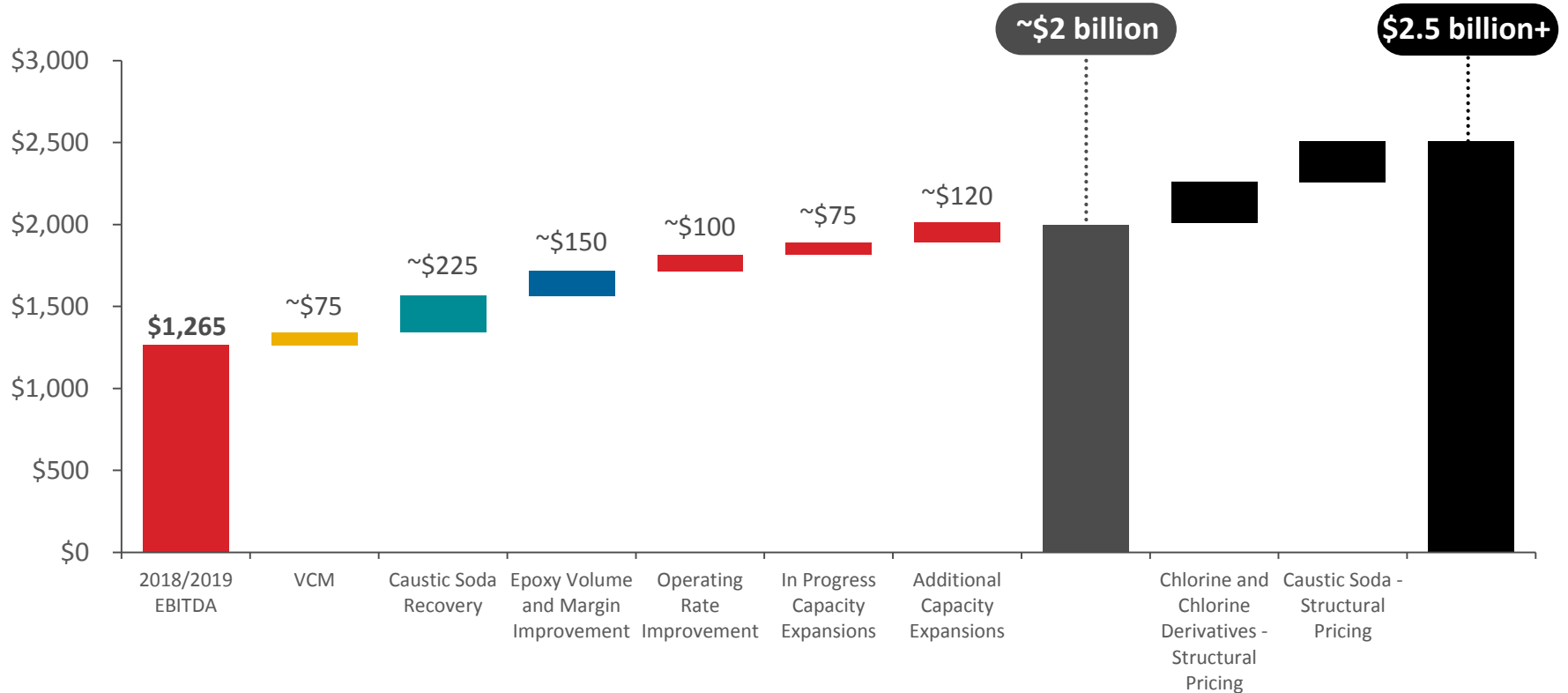
Adjusted EBITDA
(in millions)





Path to \$2 billion and beyond

Adjusted EBITDA
(in millions)



Significant financial improvement
over the past three years



Strong outlook for long-term
earnings expansion



Expected increase in levels of
cash flow going forward



Balanced and disciplined
approach to capital allocation

- Strategically invest in our businesses
- Deleverage the balance sheet
- Return cash to shareholders





Question & Answer Panel



Closing Remarks

John E. Fischer

Chairman, President and CEO



Value creation strategy well-defined and underscored by structural changes and clear operational and financial plans

Grow industry-leading positions in core business segments

- Chlor Alkali
- Caustic Soda
- Epoxy



Capture expanding margin opportunities associated with structural changes in the chlor alkali sector

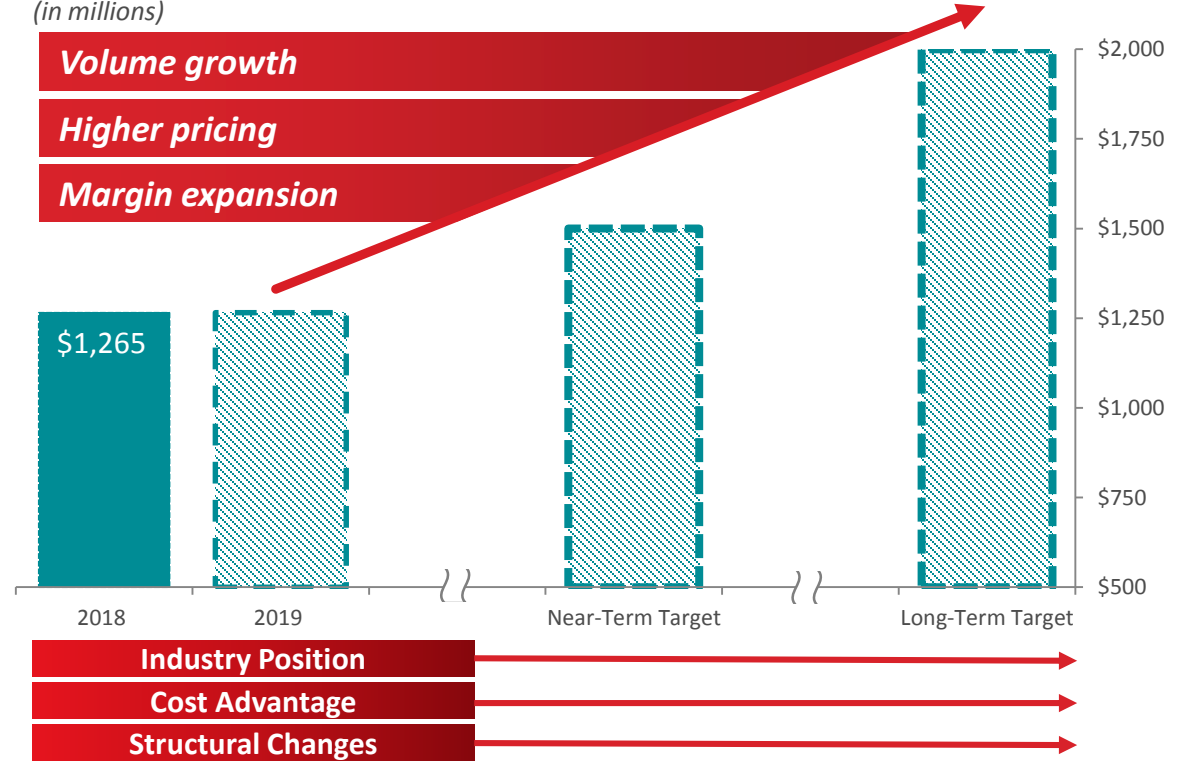


Leverage unparalleled chlorine envelope to generate strong and increasing levels of free cash flow



Adjusted EBITDA

(in millions)



*Refer to GAAP to non-GAAP reconciliations



Appendix



Non-GAAP Financial Measures – Adjusted EBITDA ^(a)

Olin's definition of Adjusted EBITDA (Earnings before interest, taxes, depreciation, and amortization) is net income (loss) plus an add-back for depreciation and amortization, interest expense (income), income tax expense (benefit), other expense (income), restructuring charges, acquisition-related costs and certain other non-recurring items. Adjusted EBITDA is a non-GAAP financial measure. Management believes that this measure is meaningful to investors as a supplemental financial measure to assess the financial performance without regard to financing methods, capital structures, taxes or historical cost basis. The use of non-GAAP financial measures is not intended to replace any measures of performance determined in accordance with GAAP and Adjusted EBITDA presented may not be comparable to similarly titled measures of other companies. Reconciliation of forward-looking non-GAAP financial measures to the most directly comparable GAAP financial measures are omitted from this release because Olin is unable to provide such reconciliations without the use of unreasonable efforts. This inability results from the inherent difficulty in forecasting generally and quantifying certain projected amounts that are necessary for such reconciliations. In particular, sufficient information is not available to calculate certain adjustments required for such reconciliations, including interest expense (income), income tax expense (benefit), other expense (income), restructuring charges and acquisition-related costs. Because of our inability to calculate such adjustments, forward-looking net income guidance is also omitted from this release. We expect these adjustments to have a potentially significant impact on our future GAAP financial results.

(In millions)	Years Ended December 31,		
	2018	2017	2016
Reconciliation of Net Income to Adjusted EBITDA:			
Net Income	\$ 327.9	\$ 549.5	\$ (3.9)
Add Back:			
Interest Expense	243.2	217.4	191.9
Interest Income	(1.6)	(1.8)	(3.4)
Income Tax Provision (Benefit) (b)	109.4	(432.3)	(30.3)
Depreciation and Amortization	601.4	558.9	533.5
EBITDA	1,280.3	891.7	687.8
Add Back:			
Restructuring Charges (c)	21.9	37.6	112.9
Acquisition-related Costs (d)	1.0	12.8	48.8
Environmental Recoveries, Net (e)	(89.5)	-	-
Information Technology Integration Project (f)	36.5	5.3	-
Certain Non-recurring Items (g)	15.2	(3.3)	(11.0)
Adjusted EBITDA	\$ 1,265.4	\$ 944.1	\$ 838.5

(a) Unaudited.

(b) Income tax provision (benefit) for the year ended December 31, 2017 reflects the tax benefit of \$437.9 million from the Tax Cuts & Jobs Act.

(c) Restructuring charges for the years ended December 31, 2018, 2017 and 2016 were primarily associated with the 2016 closure of 433,000 tons of chlor alkali capacity across three separate Olin locations. Restructuring charges for the year ended December 31, 2018 also included costs associated with permanently closing the ammunition assembly operations at the Geelong, Australia facility.

(d) Acquisition-related costs for the years ended December 31, 2018, 2017 and 2016 were associated with our integration of the Acquired Business.

(e) Environmental recoveries, net for the year ended December 31, 2018 included insurance recoveries for environmental costs incurred and expensed in prior periods of \$111.0 million. The recoveries are reduced by \$21.5 million of legal costs incurred during the year ended December 31, 2018 associated with the environmental recovery actions.

(f) Information technology integration project charges for the years ended December 31, 2018 and 2017 were associated with the implementation of new enterprise resource planning, manufacturing, and engineering systems, and related infrastructure costs.

(g) Certain non-recurring items for the year ended December 31, 2018 included a \$1.7 million loss on the sale of land, a \$21.5 million non-cash impairment charge associated with our investment in non-consolidated affiliates and an \$8.0 million insurance recovery associated with a second quarter 2017 business interruption at our Freeport, Texas vinyl chloride monomer facility. Certain non-recurring items for the year ended December 31, 2017 included a gain of \$3.3 million on the sale of a former manufacturing facility. Certain non-recurring items for the year ended December 31, 2016 included an \$11.0 million insurance recovery for property damage and business interruption related to a 2008 chlor alkali facility incident.



Non-GAAP Financial Measures by Segment ^(a)

(In millions)	Year Ended December 31, 2018				
	Income (loss) before Taxes	Non-Recurring Item (b)	Depreciation and Amortization	Adjusted EBITDA	
Chlor Alkali Products and Vinyls	\$ 637.1	\$21.5	\$ 473.1	\$	1,131.7
Epoxy	52.8	-	102.4		155.2
Winchester	38.4	-	20.0		58.4

(In millions)	Year Ended December 31, 2017				
	Income (loss) before Taxes	Non-Recurring Item	Depreciation and Amortization	Adjusted EBITDA	
Chlor Alkali Products and Vinyls	\$ 405.8	-	\$ 432.2	\$	838.0
Epoxy	(11.8)	-	94.3		82.5
Winchester	72.4	-	19.5		91.9

(In millions)	Year Ended December 31, 2016				
	Income (loss) before Taxes	Non-Recurring Item	Depreciation and Amortization	Adjusted EBITDA	
Chlor Alkali Products and Vinyls	\$ 224.9	-	\$ 418.1	\$	643.0
Epoxy	15.4	-	90.0		105.4
Winchester	120.9	-	18.5		139.4

(a) unaudited

(b) Certain non-recurring items for the year ended December 31, 2018 included a \$21.5 million pretax non-cash impairment charge associated with our investments in non-consolidated affiliates. Earnings (losses) of non-consolidated affiliates are included in the Chlor Alkali Products and Vinyls segment results consistent with management's monitoring of the operating segments.



Non-GAAP Financial Measures – Free Cash Flow ^(a)

Olin's definition of Free Cash Flow is the total of net cash provided or required by operating activities less capital expenditures and adjusted for other non-cash items, operating activities which are not direct financing activities, or other cash timing adjustments. Free Cash Flow does not represent the residual cash flow available for discretionary expenditures. Free Cash Flow is a non-GAAP financial measure. Management believes that this measure is meaningful to investors as a supplemental liquidity measure and that it is useful to investors and management as a measure of the ability of our business to generate cash. Once business needs and obligations are met, this cash can be used to reinvest in the company for future growth or to return to our shareowners through debt repayments, dividend payments or share repurchases. The use of non-GAAP financial measures is not intended to replace any measures of performance or liquidity determined in accordance with GAAP and Free Cash Flow presented may not be comparable to similarly titled measures of other companies. Free Cash Flow is typically derived directly from the Company's consolidated statements of cash flows; however, it may be adjusted for items that affect comparability between periods.

(In millions)	Years Ended			
	2018	2017	2016	
Reconciliation of Net Operating Activities to Free Cash Flows:				
Net Operating Activities	\$ 907.8	\$ 648.8	\$ 603.2	
Capital Expenditures	(385.2)	(294.3)	(278.0)	
Restructuring (b)	4.2	(6.8)	6.0	(a) Unaudited.
Interest (b)	34.4	16.5	(8.9)	(b) Restructuring and interest reconciling items represent the difference between cash paid and the amount incurred and expensed for each of the respective periods presented.
Losses (Earnings) of Non-consolidated Affiliates (c)	19.7	(1.8)	7.1	(c) Losses (earnings) of non-consolidated affiliates for the year ended December 31, 2017 included a \$21.5 million pretax non-cash impairment charge associated with our investments in non-consolidated affiliates. Losses (earnings) of non-consolidated affiliates for the year ended December 31, 2016 included \$8.8 million from the October 2013 sale of a bleach joint venture.
Stock-based Compensation	(12.0)	(9.1)	(7.5)	
Qualified Pension Plan Income and Contributions	17.6	28.6	44.8	
Other Adjustments	1.0	(0.4)	8.4	
Free Cash Flows	\$ 587.5	\$ 381.5	\$ 375.1	(d) Certain Non-recurring Item include cash restructuring expenditures, information technology integration project charges, acquisition-related costs, environmental recoveries, net, non-environmental insurance recoveries and loss (gain) on the sale of property, plant and equipment.
Adjusted EBITDA	\$ 1,265.4	\$ 944.1	\$ 838.5	
Capital Expenditures	(385.2)	(294.3)	(278.0)	
Working Capital Change	(71.6)	9.8	80.9	
Taxes Paid	(52.9)	(18.0)	2.6	
Interest Paid	(208.8)	(200.9)	(200.8)	
Certain Non-recurring Items (d)	40.6	(59.2)	(68.1)	
Free Cash Flows	\$ 587.5	\$ 381.5	\$ 375.1	



Non-GAAP Financial Measures – Net Debt to Adjusted EBITDA ^(a)

Olin's definition of Net Debt to Adjusted EBITDA is Net Debt divided by Adjusted EBITDA. Net Debt at the end of any reporting period is defined as our current installments of long-term debt plus long-term debt less our cash and cash equivalents. Adjusted EBITDA (Earnings before interest, taxes, depreciation, and amortization) is net income (loss) plus an add-back for depreciation and amortization, interest expense (income), income tax expense (benefit), other expense (income), restructuring charges, acquisition-related costs and certain other non-recurring items. Net Debt to Adjusted EBITDA is a non-GAAP financial measure. Management believes that this measure is meaningful to investors as a measure of our ability to manage our indebtedness. The use of non-GAAP financial measures is not intended to replace any measures of indebtedness or liquidity determined in accordance with GAAP and Net Debt or Net Debt to Adjusted EBITDA presented may not be comparable to similarly titled measures of other companies.

(In millions)	Years Ended December 31,		
	2018	2017	2016
Current installments of long-term debt	\$ 125.9	\$ 0.7	\$ 80.5
Long-term debt	3,104.4	3,611.3	3,537.1
Less: Cash and cash equivalents	(178.8)	(218.4)	(184.5)
Net debt	\$ 3,051.5	\$ 3,393.6	\$ 3,433.1
Adjusted EBITDA	\$ 1,265.4	\$ 944.1	\$ 838.5
Net debt to Adjusted EBITDA	2.4	3.6	4.1



Full year 2019 adjusted EBITDA expected to be comparable to record full year 2018

Adjusted EBITDA
(in millions)



2018

2019 Forecast

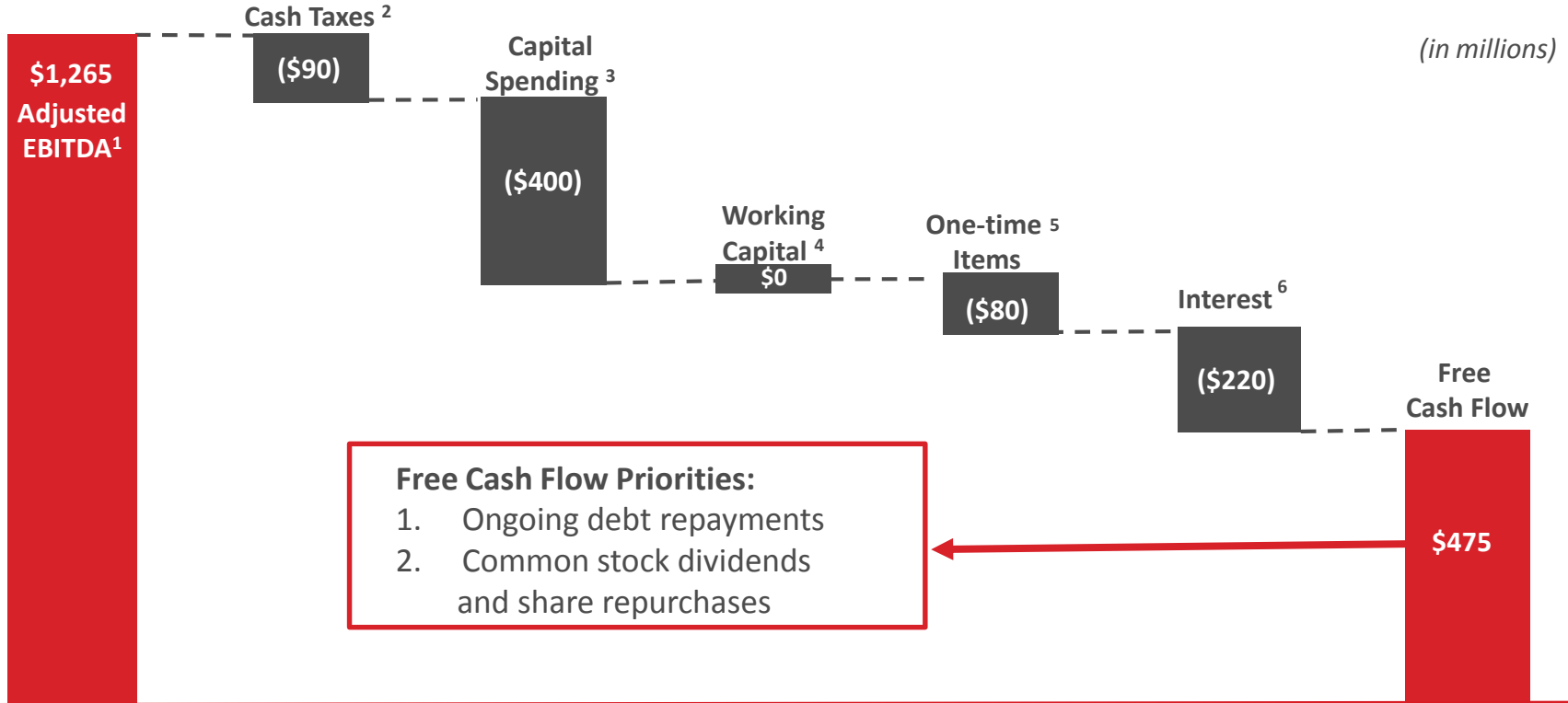
2019 Forecast Assumptions:

- + Higher chlorine, EDC and chlorine derivative pricing
- + Lower turnaround costs of ~ \$35 million
- + Higher Epoxy volumes and lower raw material costs
- Lower average domestic and export caustic soda pricing
- Increased freight costs



2019 Cash flow forecast

Debt reduction remains top priority for free cash flow



1: Olin's estimated 2019 Adjusted EBITDA forecast of \$1.265 billion

2: Estimated using the cash tax rate of 25%

3: Represents the mid-point of management's annual capital spending estimate range of \$375 million to \$425 million, which includes \$80 million associated with the information technology project

4: Estimated working capital is expected to be flat

5: One-time items include the information technology integration project costs and cash restructuring charges

6: Cash interest expense is calculated based on Olin's capital structure and assuming current interest rates



Chlor alkali annual EBITDA sensitivity

Price Driver	Price Change	Annual EBITDA Impact (in millions)
Chlorine	\$10/ton	\$10
Caustic	\$10/ton	\$30
EDC	\$.01/pound	\$20
Cost Driver	Price Change	Annual EBITDA Impact (in millions)
Natural Gas	\$1/mmBtu	\$45 to \$55
Ethane	\$.01/gallon	\$3



Olin caustic soda price realization

Fundamental Principle

- A \$10 per ton change in Olin's caustic soda selling price changes annual Adjusted EBITDA by approximately \$30 million

Export Sales

- Typically range between 20% and 25% of caustic sales
- Sold on a combination of negotiated sales and export index price
- Realization of index price changes are typically 90% to 100%
- Changes in export index prices are typically realized on a 30 to 60 day lag

Domestic Sales

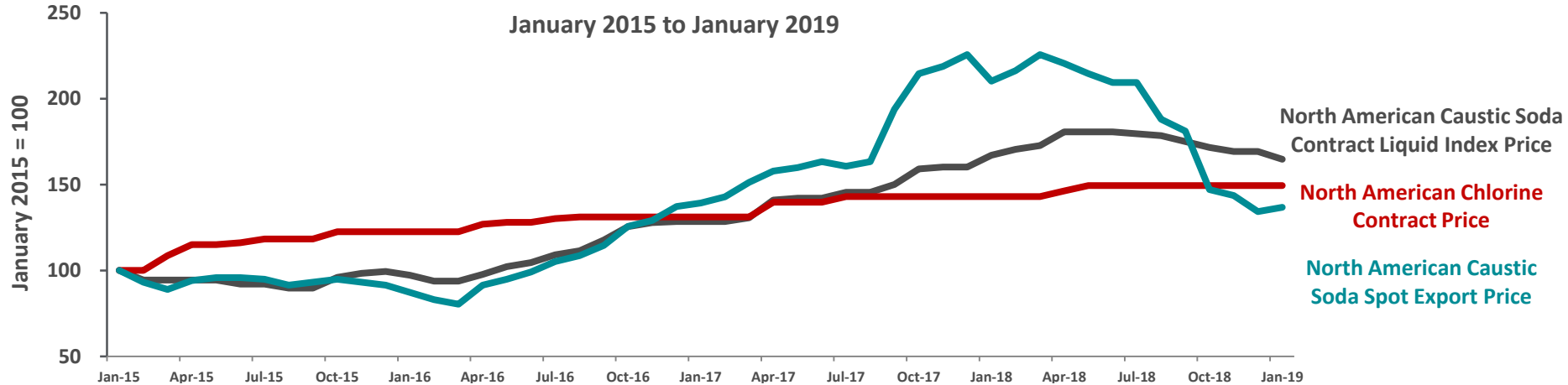
- Contracts are made up of a combination of negotiated and index-based pricing terms
- Index price changes typically occur 30 to 60 days post our price nomination
- Realization of index price changes are typically 70% to 100%
- Overall price realization lags index price changes by 0 to 90 days



Chlor alkali products and vinyls Industry conditions

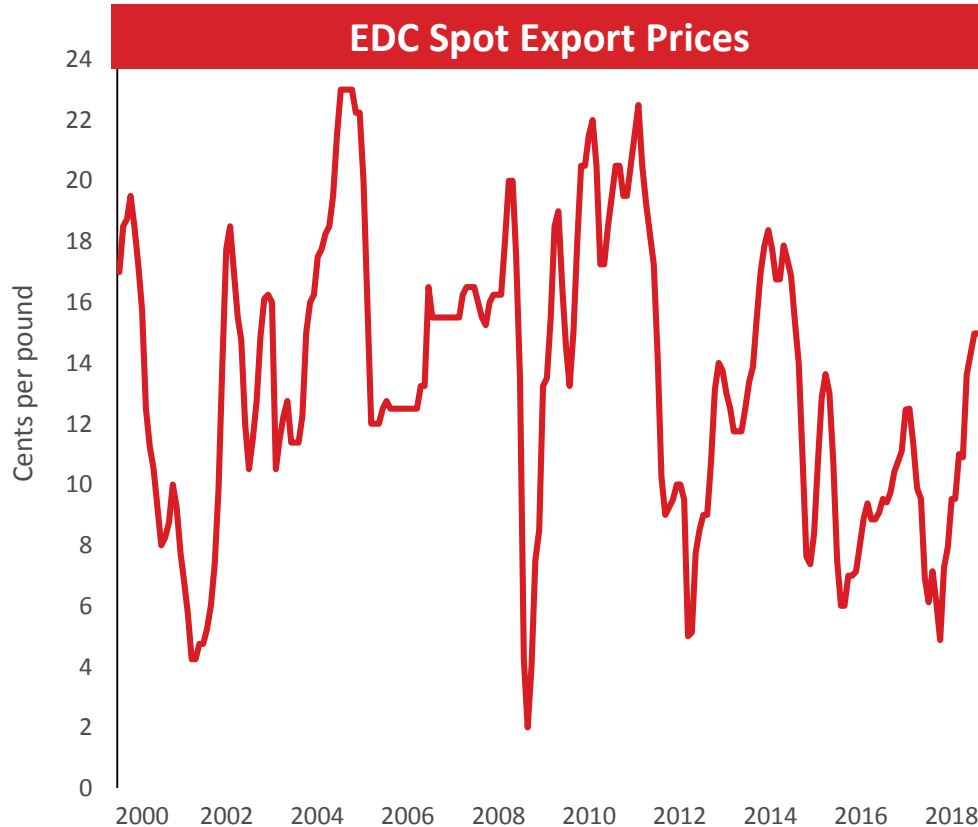
- Seen signs of stabilization in export caustic soda pricing
- Expect domestic and export caustic soda prices to improve from current levels in 2019
- Expect improvement in chlorine pricing in 2019
- Structural supply and demand fundamentals in the chlor alkali industry remain positive

Caustic Soda and Chlorine Prices



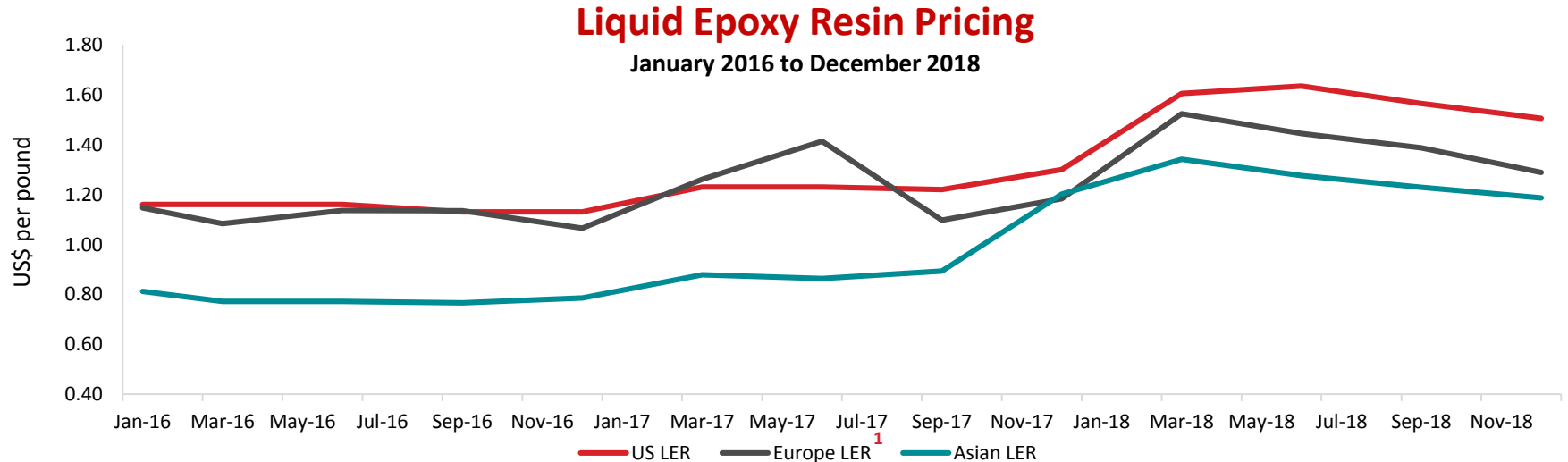


EDC pricing history 2000 – December 2018



- Pricing has recovered from the 5 year lows experienced in December 2017
- Full year 2018 USGC pricing has improved approximately 3 cents, or 30% over full-year 2017 pricing
- A 1 cent change in Olin's EDC price changes annual Adjusted EBITDA by \$20 million

- Global liquid epoxy resin pricing declined in 4Q18 as raw material costs, particularly benzene and propylene, declined
- Full year 2018 liquid epoxy resin prices were up year-over-year
 - North America up approximately 30%
 - Europe up nearly 15%
 - Asia up approximately 35%

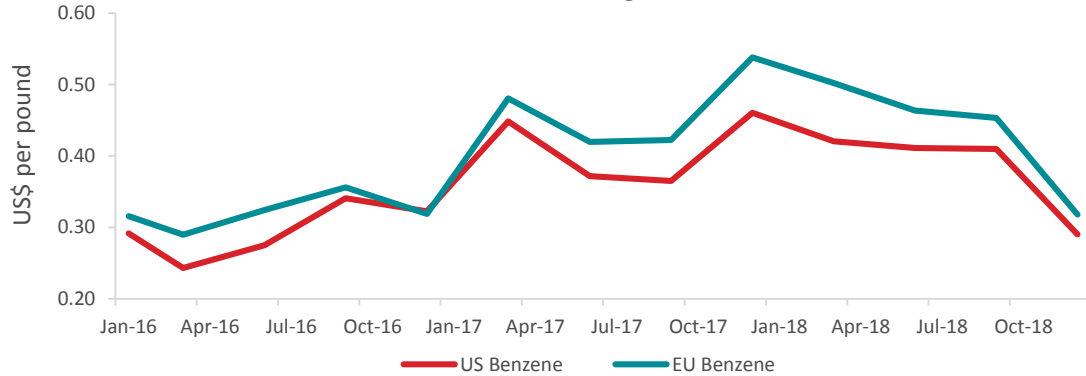


⁹⁷ 1: European liquid epoxy resin (LER) prices reflect a non-market adjustment made in the third quarter of 2017.

Raw Material Costs - Benzene & Propylene Pricing

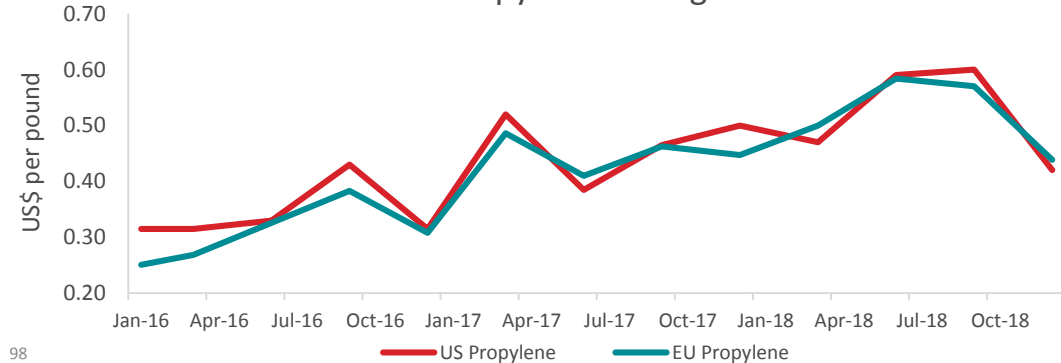
January 2016 to December 2018

Benzene Pricing



January 2016 to December 2018

Propylene Pricing

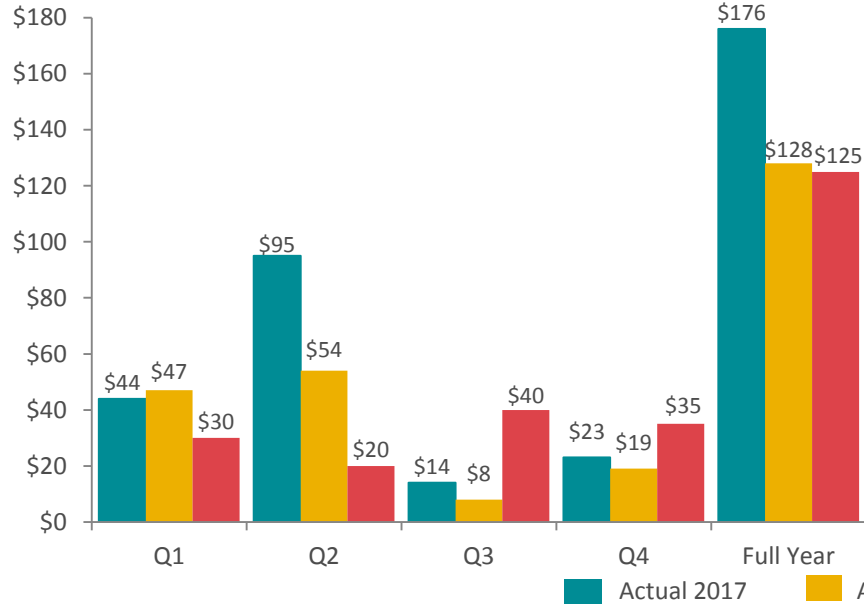


- Sequentially, U.S. and European benzene and propylene prices declined
- 4Q18 U.S. and European benzene prices have moved lower year-over-year
- U.S and European propylene 4Q18 prices were marginally higher than 4Q17

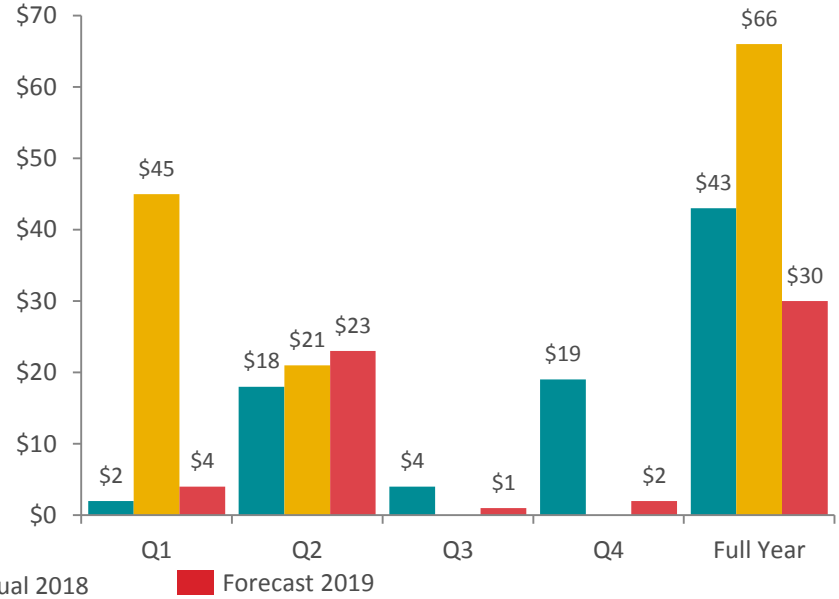


Maintenance Turnaround Costs¹

Chlor Alkali Products & Vinyls
(in millions)



Epoxy
(in millions)



- Full year 2019 turnaround schedule will vary from the historic quarterly cadence
- Expect a heavier turnaround schedule in 2H19 due to aligning with planned customer outages
- Full year 2019 turnaround costs expected to be approximately \$30 to \$40 million lower than 2018 – primarily in the Epoxy segment

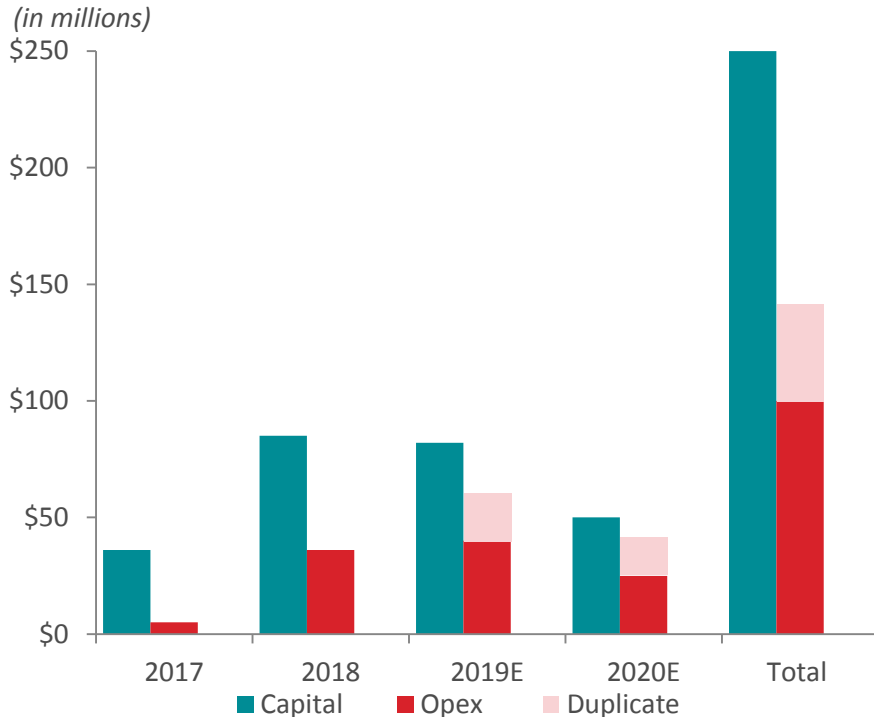
⁹⁹ 1: Maintenance turnaround costs include maintenance costs and lost volume penalties associated with unabsorbed fixed manufacturing costs from lost sales associated with the turnarounds and outages.



2019 forecast assumptions

(in millions)

Line Item	Forecast	Key Elements
Capital Spending	375 to 425	Annual spending for maintenance capital of \$225M to \$275M, IT project spending of approximately \$80M and other projects
Depreciation & Amortization	590 to 610	Forecast levels are comparable to 2018 expense
Non-operating Pension Income	15 to 20	Lower than 2018 income levels by approximately \$5 million
Environmental Expense	15 to 20	A more historic expense level, about \$10 million higher than 2018
Other Corporate	100 to 110	Forecast is an increase from 2018 levels primarily reflecting higher stock-based compensation costs
Restructuring & IT Project Costs	80	Information technology integration project and restructuring costs
Book Effective Tax Rate	25%	Comparable with 2018 book effective tax rate
Cash Tax Rate	25%	Higher than 2018 as Olin exhausted the tax credit carryforwards that were created with the 2015 acquisition and began paying U. S. federal taxes late 2018



- During 2017 began implementing new enterprise resource planning, manufacturing and engineering systems, and related IT infrastructure
- Objective to standardize business processes, while maximizing costs effectiveness, efficiency and control across the global chemical operations
- Expected completion by end of 2020
- Project required due to expiration of IT transition service agreement with Dow
- Expect annual cost savings of ~\$50 million beginning in 2021
- Adjusted EBITDA excludes project related operational charges and duplicative costs