



September 10, 2013

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# CHEMISTRY & SHALE GAS: FUELING A U.S. MANUFACTURING RENAISSANCE

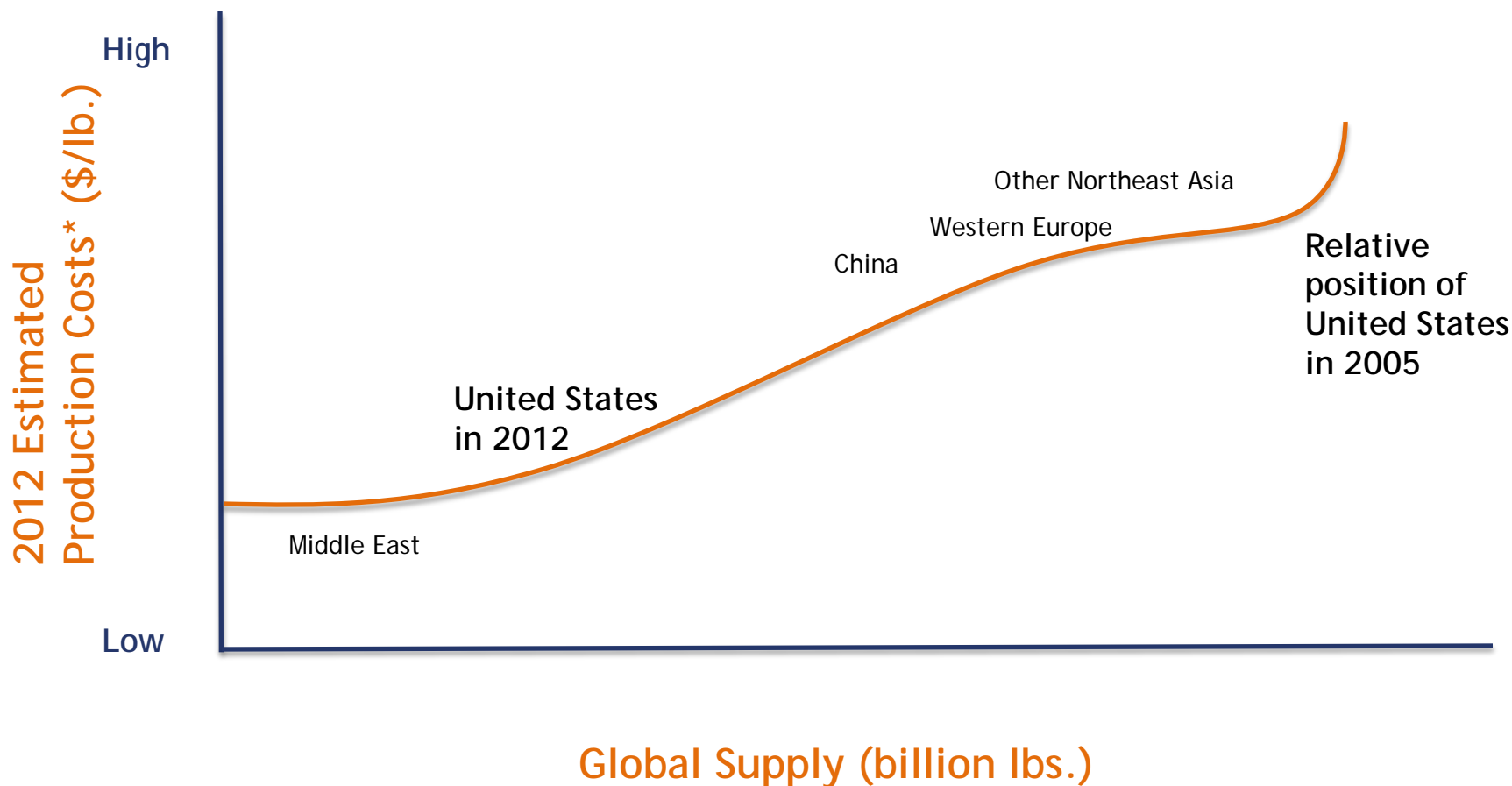
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# Global Ethylene Supply Curve:

## Shift in Relative Position of United States (2005-2012)

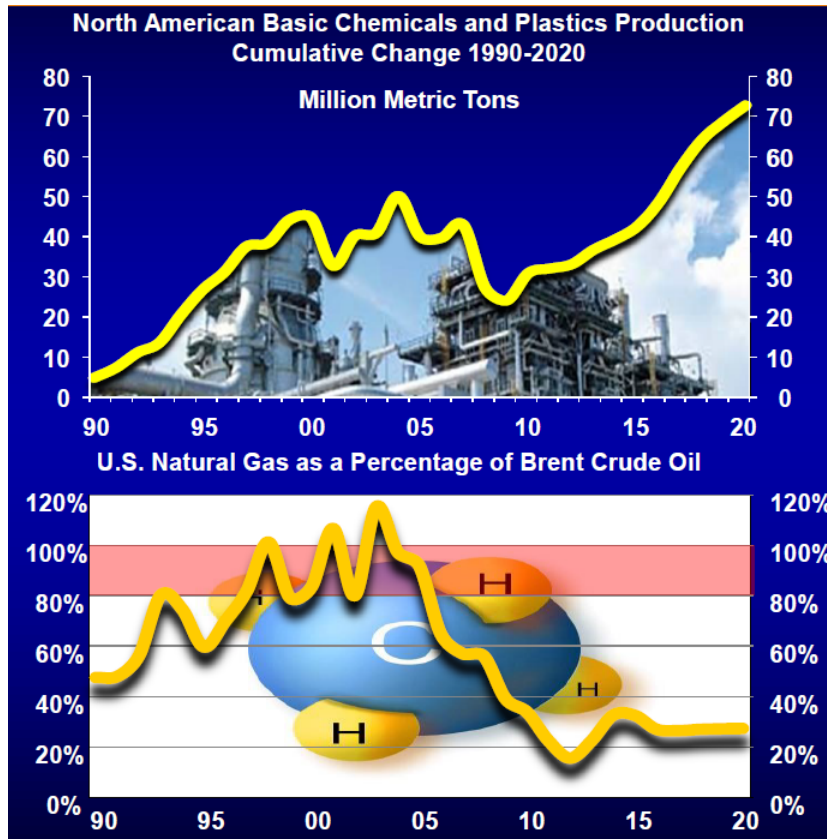
(Petrochemical Production Costs by Country/Region)



\*Based on estimates from best available data

# Shale Boom Driving New US Investment

North American Competitive Advantage Sustained through 2020




- ✓ Affordable, competitively priced natural gas is driving significant new capital investment in the US manufacturing sector
- ✓ Long-term, sustained opportunity in feedstock supply and cost
- ✓ Some of the new capacity is result of new foreign-direct investment in US



Data provided with  
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## U.S. Shale Gas



Manufacturing  
renaissance due to  
increased access to  
natural gas from shale

Downstream partners are  
more competitive than  
ever

## Chemical Investment



More than 100 projects  
announced to date

\$72 billion in potential  
chemical industry  
capital investments  
arising from shale gas

# ETHYLENE CHAIN



# NATURAL GAS



**\$72B** in new investment

**\$55B** chemical industry investments



## 662K direct & indirect jobs



Plastics/  
Rubber  
Products



Fabricated  
Metals



Chemicals



Glass



Foundries



Paper



Aluminum



Iron/Steel

## Tax Treatment

Minimize cost and reduce complexity for businesses

Consider accelerated depreciation in tax policy

## Permitting

Timely approval of new construction permits for projects and investments

# Policies Needed to Realize Potential

## Infrastructure

Ensure reliable infrastructure to transport natural gas supplies

## State Regulations

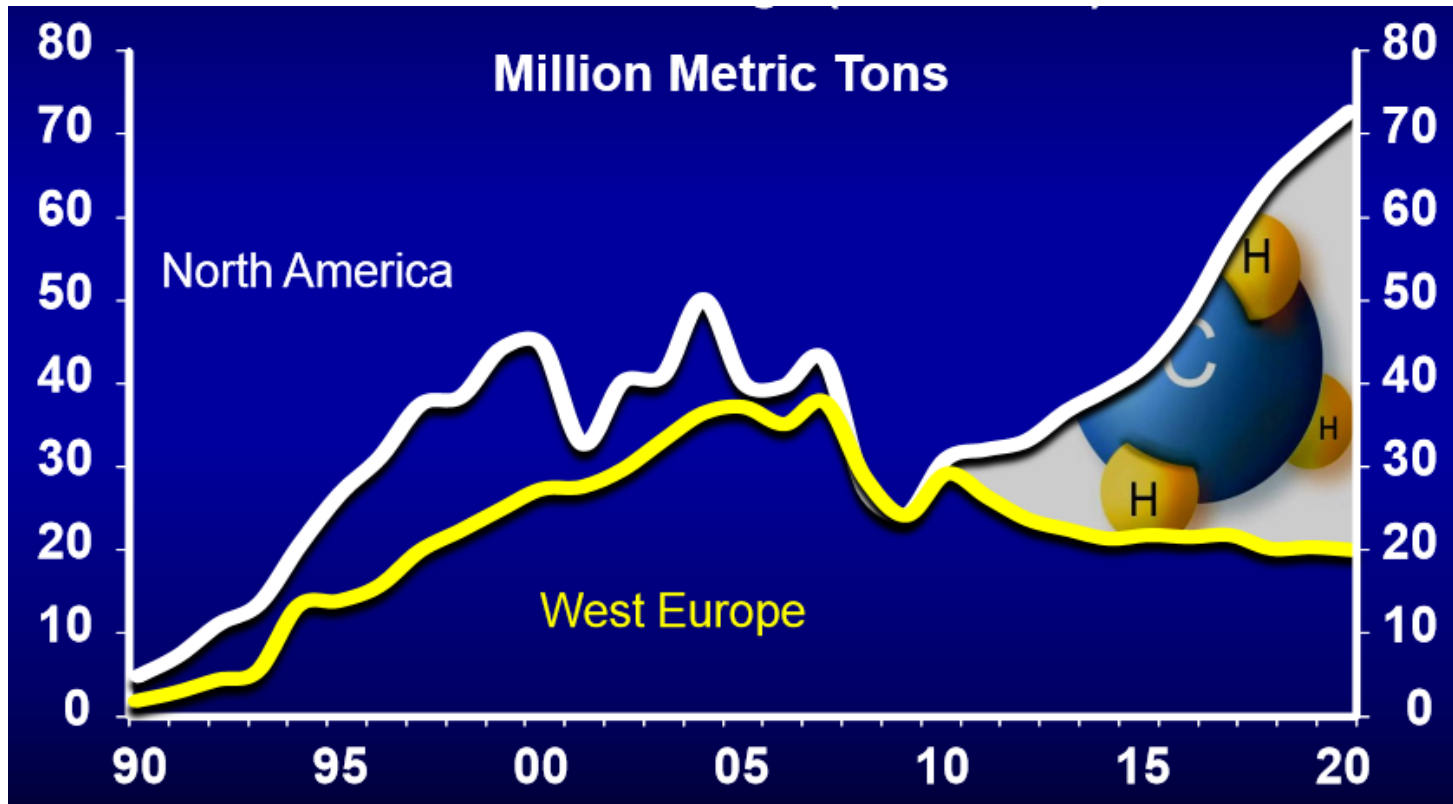
Implementation of responsible state-based regulations that avoid undue restrictions on natural gas supplies



# Global Chemical Production:

## Growing Competitive Advantage for the United States

(N. America and Western Europe Production of Basic Chemicals /Plastics; 1990 base)



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# Fueling Export Growth

American Chemistry

- \$189 billion in annual exports
- 12% of all U.S. exports
- 200,000 chemistry jobs are export dependent

58 billion in additional jobs and  
export growth potential



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