

EASTMAN

Investing in 2012

How Energy & Environmental Policies Impact Investment Decisions
CIBO Annual Meeting
12 October 2012



Reality Check

Technology tells you what you can do

Economics tells you what you should do

Politics tells you what you will do

Eastman 2011

Eastman FY2011 Results

2011 was a record year, with a double digit increases in sales, earnings, and earnings per share.



(\$ in millions, except EPS)	<u>FY11</u>	<u>FY10</u>	<u>Change</u>
Sales revenue	\$7,178	\$5,842	23 %
Volume effect			7 %
Price effect			14 %
Product mix effect			2 %
Exchange rate effect			-- %
Operating earnings	\$1,013	\$891	
EPS from continuing operations	\$4.56	\$3.48	

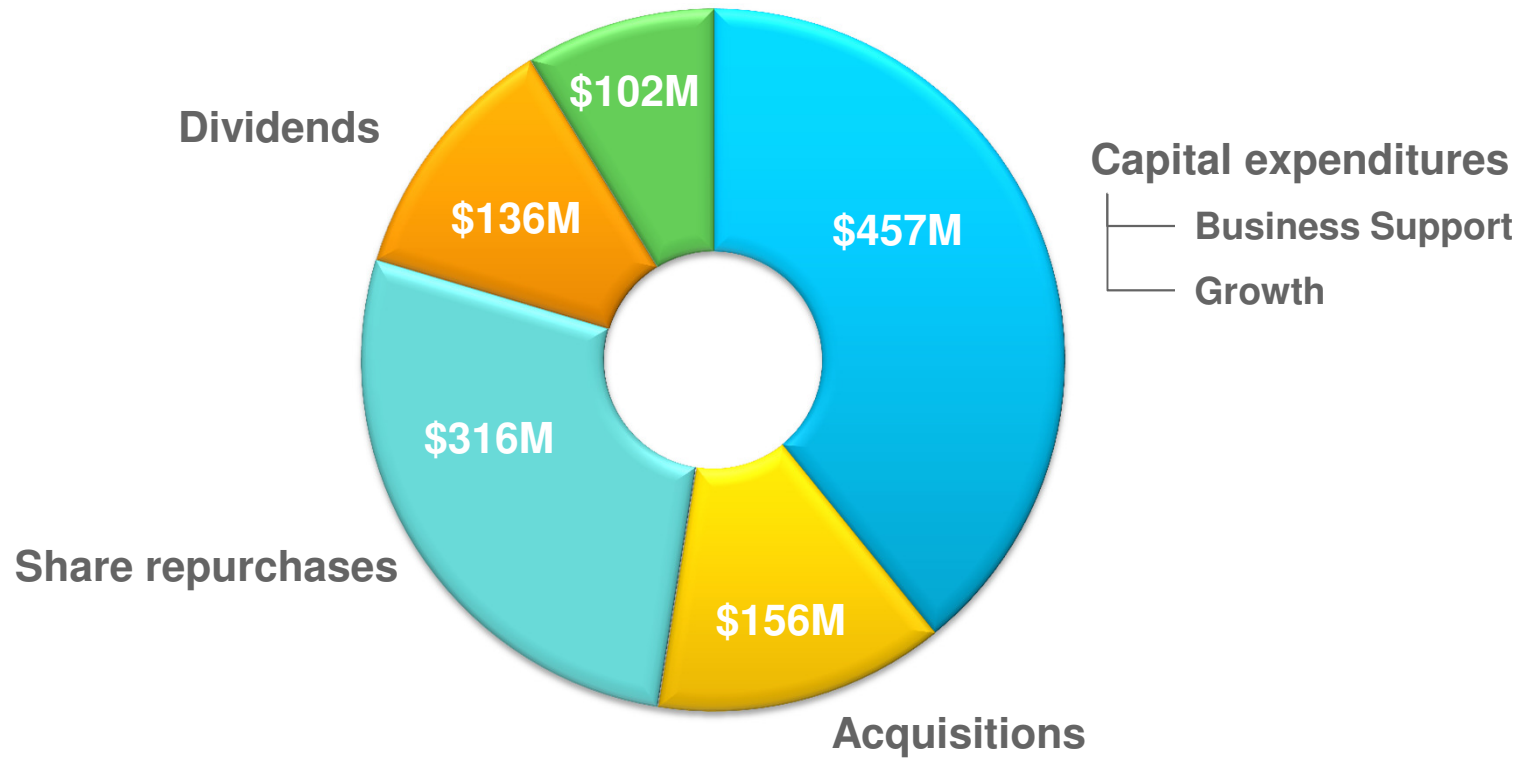


Record sales of ~\$7B, and record earnings of ~\$1B

Eastman's 2011 Capital Allocation

Record earnings resulted in significant cash generation, which was used to return value to shareholders, satisfy pension obligations, and grow through JVA and capital investments.

U.S. pension contributions

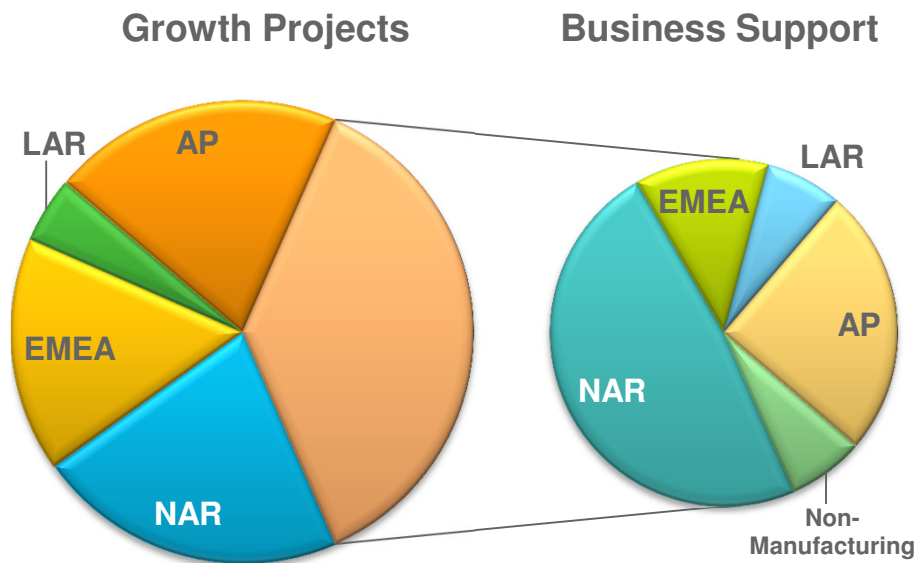


Record earnings of ~\$1B yielded ~ \$460M of capital investment

Capital to Grow the Business

Business support projects compete with growth projects for limited funds. While some business support projects improve the bottom line for Eastman's ~\$20B installed NAR manufacturing base, they do not always grow the top line.

Capital Allocation (representative)



Business Support Projects

- Manufacturing Support
 - Capital maintenance
 - Process improvement
 - Safety improvements
 - Utilities infrastructure
 - Environmental retrofits
 - Energy efficiency

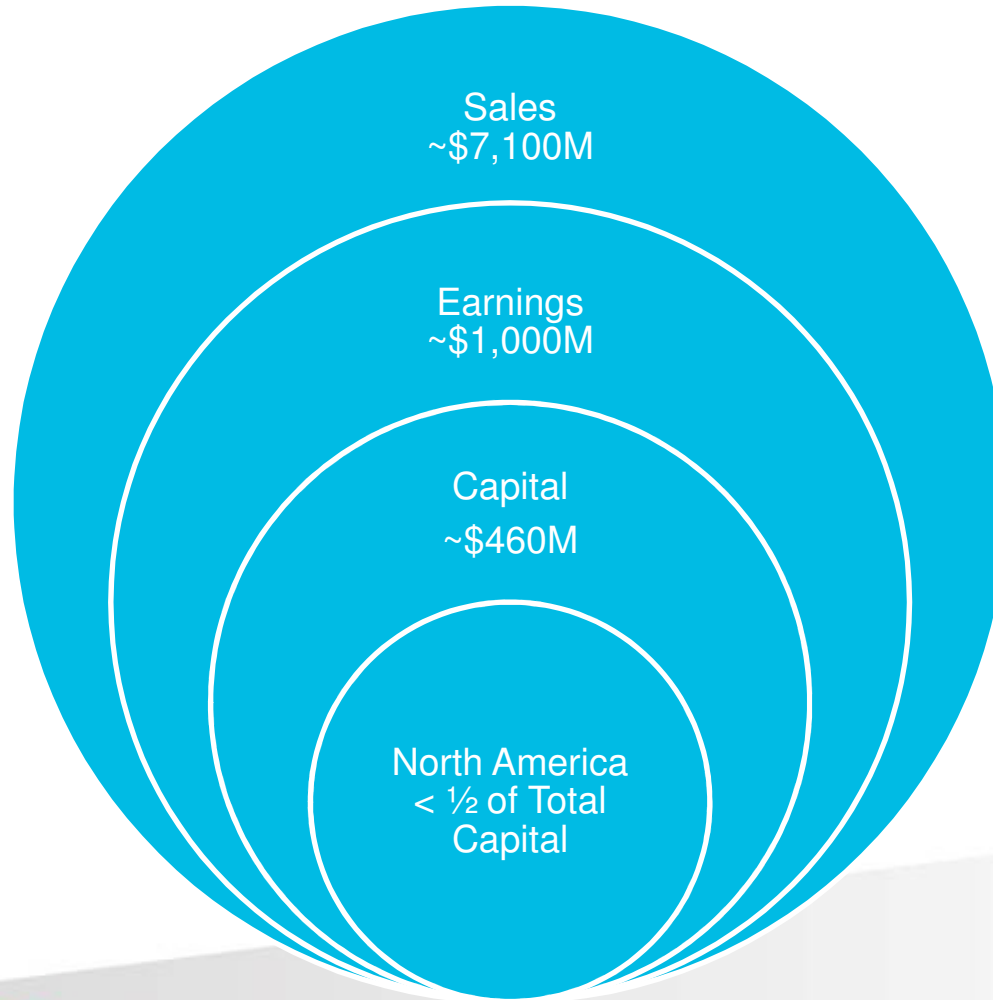
- Non-manufacturing
 - Information Technology
 - Facilities maintenance
 - Logistics infrastructure

Both types of investments are necessary for sustained success, but most projects compete strictly based on their Return on Invested Capital.

How Much Investment Stays in the US?



The funds available to invest in American manufacturing sites - especially for environmental projects with zero return on invested capital - is a smaller than some critics realize, despite the big top-line revenue figures.



Where Should Eastman Invest?



Anniston, AL	Dietenheim, Germany	Jefferson, PA	Longview, TX	Nienburg, Germany	Suzhou, China	Zhejiang, China
Antwerp, Belgium	Dresden, Germany	Jurong Island, Singapore	Madison, WI	Santo Toribio, Mexico	Texas City, TX	Zibo, China
Canoga Park, CA	Franklin, VA	Kashima, Japan	Martinsville, VA	Sao Jose dos Campos, Brazil	Trenton, MI	
Chestertown, MD	Ghent, Belgium	★ Kingsport, TN	Middelburg, The Netherlands	São Paulo Mauá, Brazil	Ulsan, Korea	
Chicago, IL	Hsinchu, Taiwan	Kohtla-Järve, Estonia	Monongahela, PA	Sauget, IL	Uruapan, Mexico	
Chocolate Bayou, TX	Indianapolis, IN	Kuantan, Malaysia	Nanjing, China	Sete, France	Workington, UK	
Columbia, SC	Itupeva, Brazil	Lemoyné, AL	Newport, Wales	Springfield, MA	Wuhan, China	

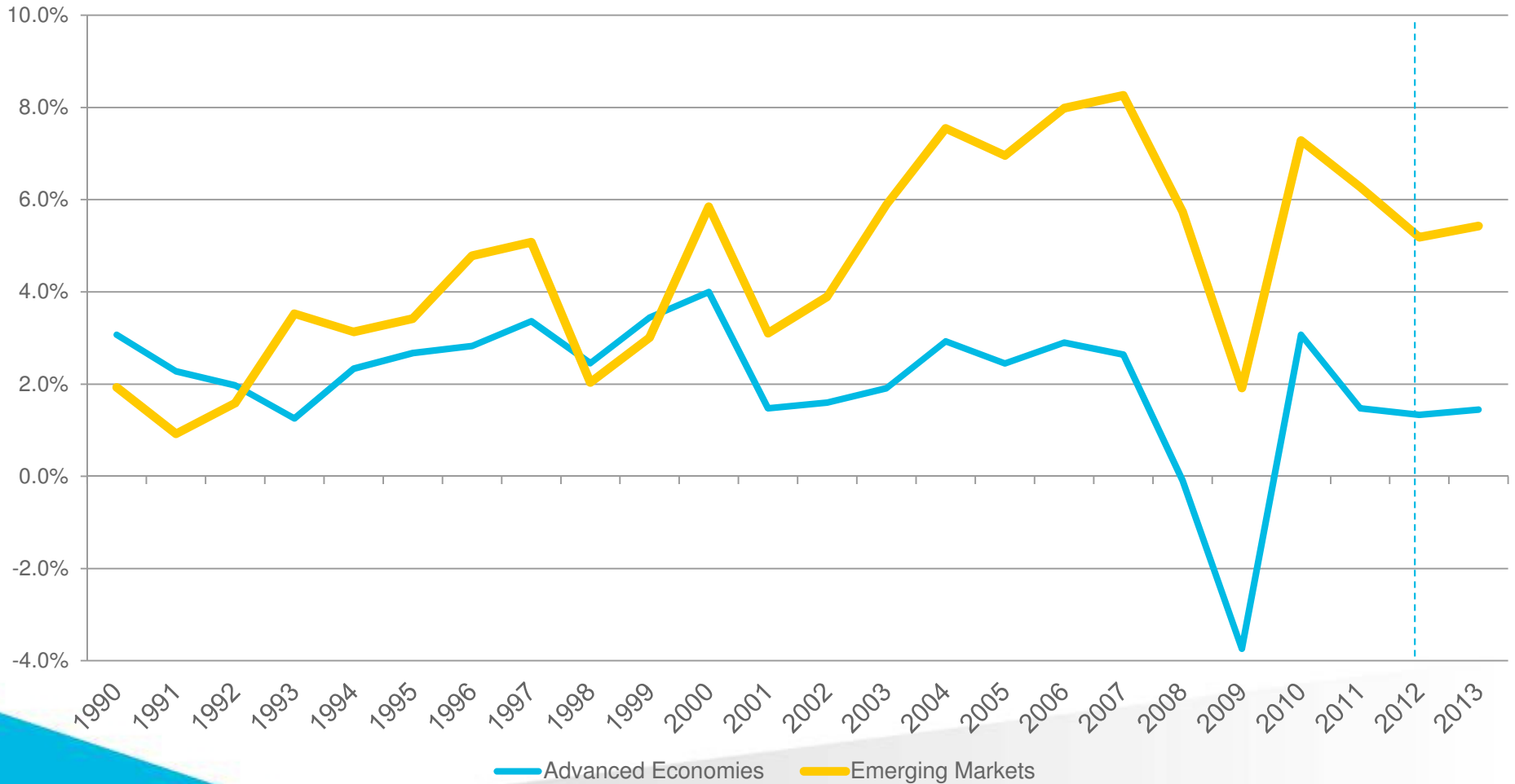
Source: 2012 Corporate Overview.pptx

It's a Two-Speed World Economy

Greatest growth opportunities are in emerging markets, where local or regional manufacturing and talent is valued.

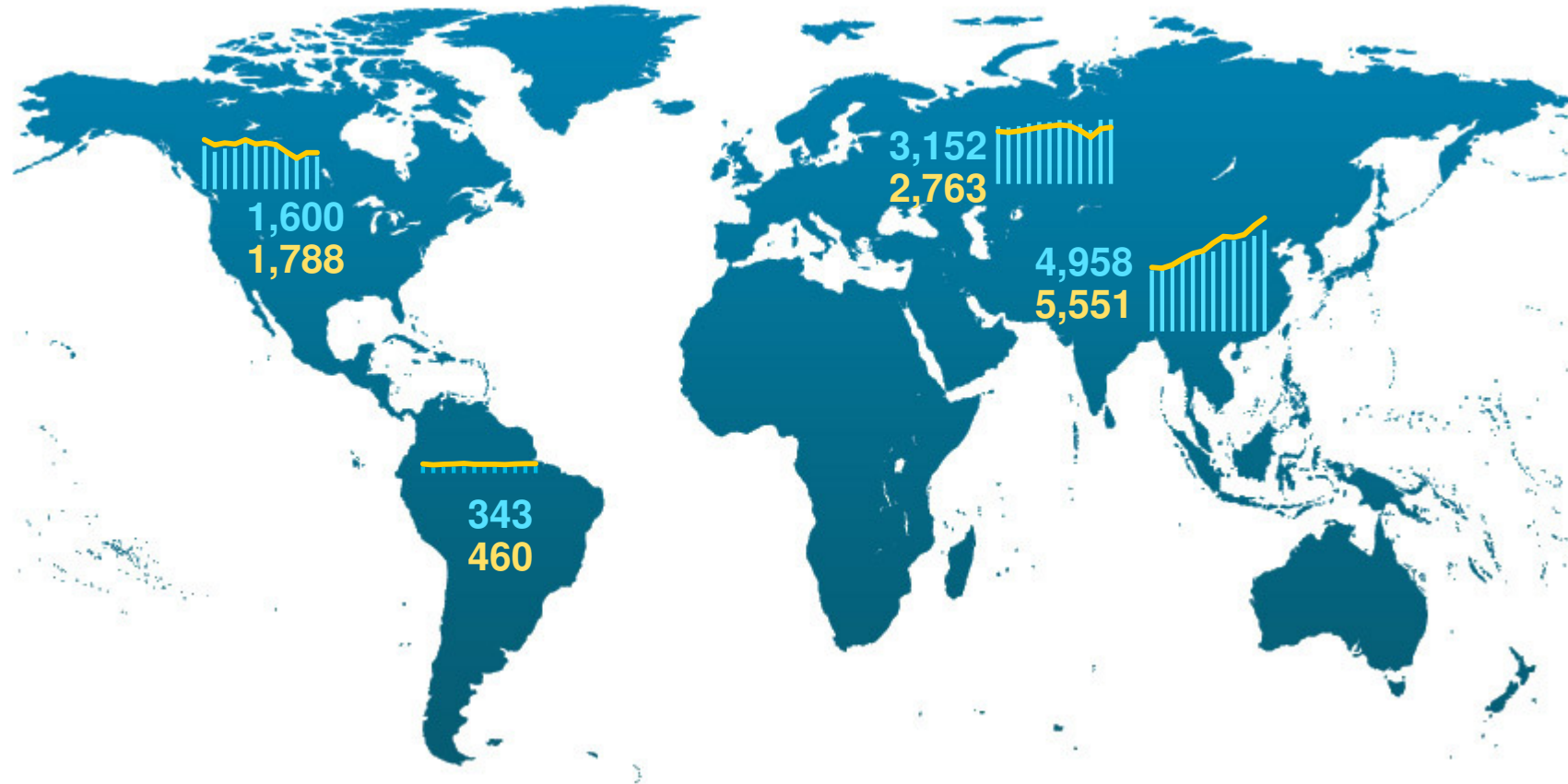
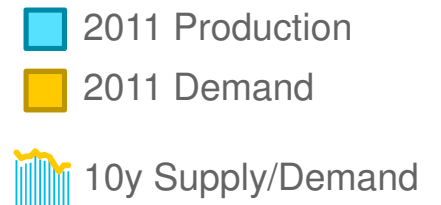


Real GDP, Percent Change



Global Trade Flows

Analysis of global supply / demand balance for xxxxxxx



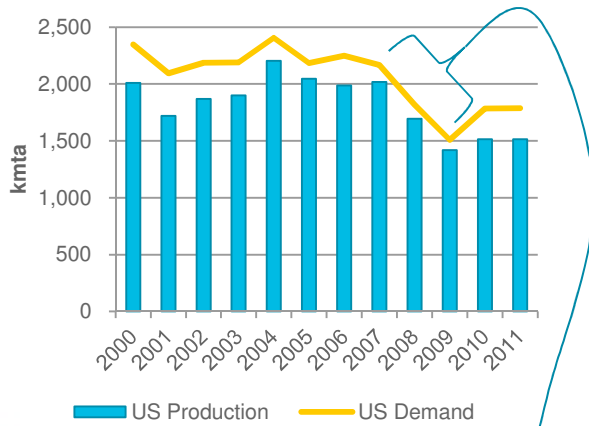
North America, Asia Pacific and Latin America are structurally short, with strong demand growth in Asia. Western Europe and the Middle East are traditional exporters.

Global Trade Flows: A Closer Look

US production is in decline, while demand in China is outpacing supply. Western Europe and the Middle East are the main exporters.

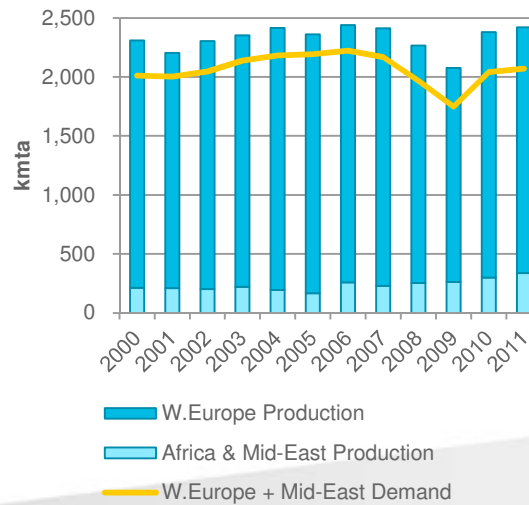


United States

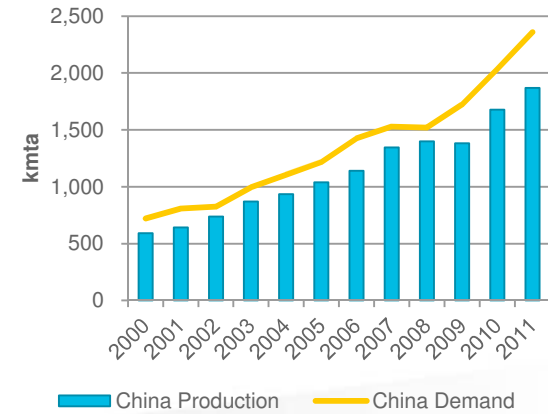


Note: Production is sensitive to recession

Western Europe & Middle East

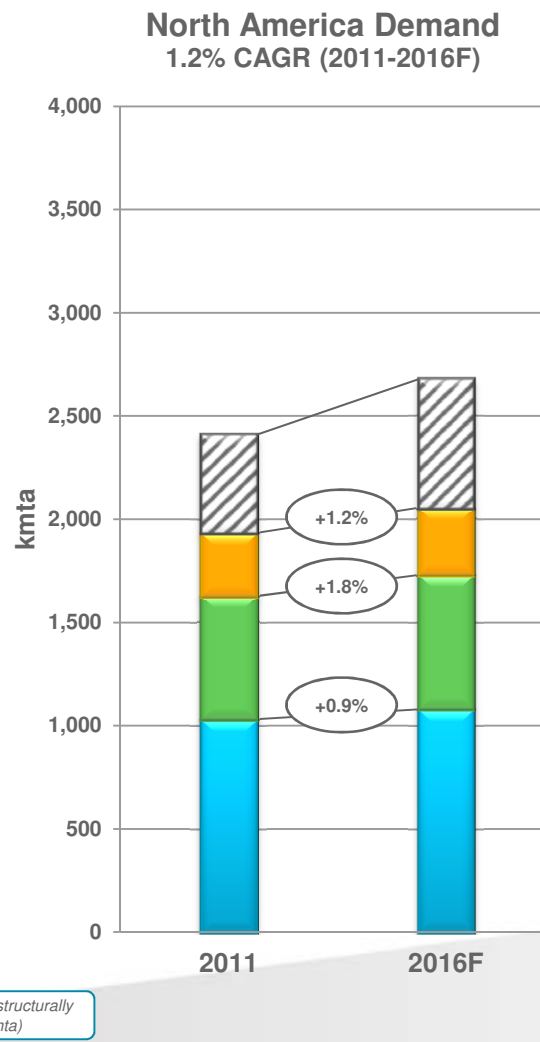
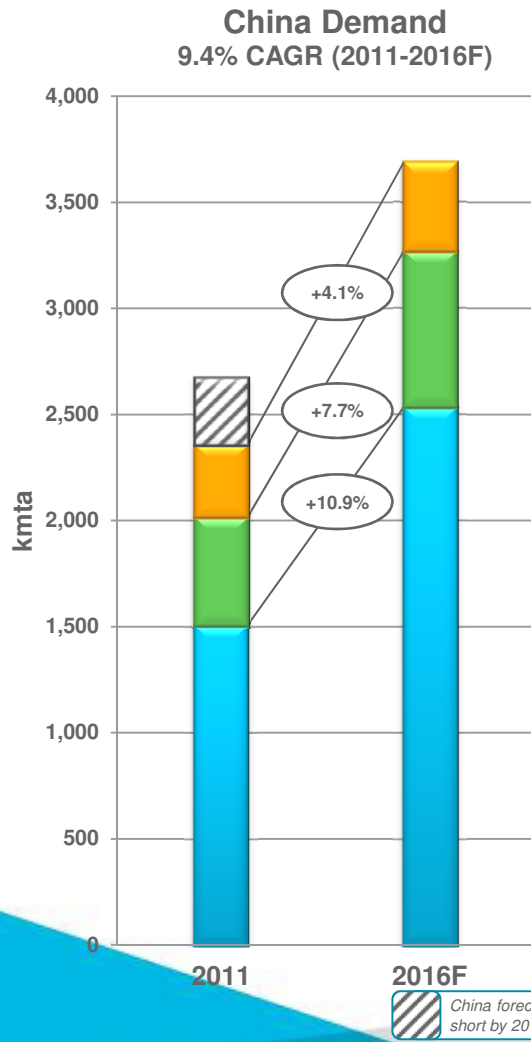


China



Regional Demand

Strong forecasted growth in China (9.4% CAGR) contrasts with sub-GDP growth in North America (1.2% CAGR).



Investment Choices

Reasons to Choose North America

- Existing sites & infrastructure
- Vertically integrated sites
- Trained workforce
- Low-cost NG
 - Feedstock + Energy
 - Pipeline infrastructure

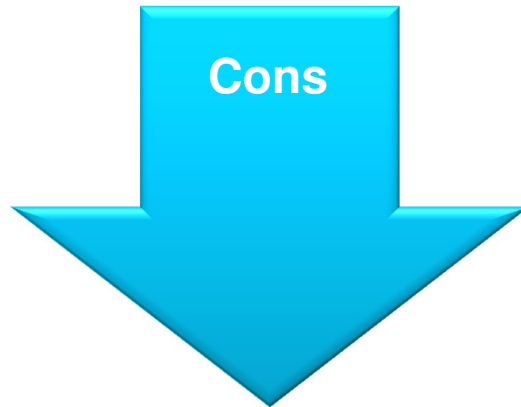
Reasons to Choose Asia Pacific

- Closer to market
 - Preference for local manufacturing
 - Strategic advantage of developing local talent
- Lower capital costs
- Lower logistics costs
- Lower duty
- Lower tax rates on earnings

Why invest in the US?

Why Invest in the US?

The case for investing in the US is mixed, given the regulatory headwinds in the US and the growth in emerging markets.



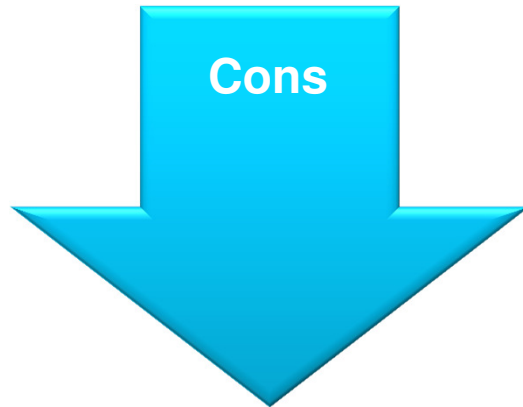
- High Corporate Tax Rate
- Duties on Exported Goods
- Health Care Costs
- Regulatory Burdens, especially for existing solid-fuel units
 - Clean Air Act
 - GHG
 - Clean Water Act
 - RCRA
- Logistics Costs
- High capital costs

- Vertically integrated sites
 - Only advantaged at larger sites
- Existing energy infrastructure
 - Pipelines, HV transmission lines, RR
 - Only true at largest US sites
- Trained workforce
- **Low-cost NG**
 - Feedstock + Energy



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Cons

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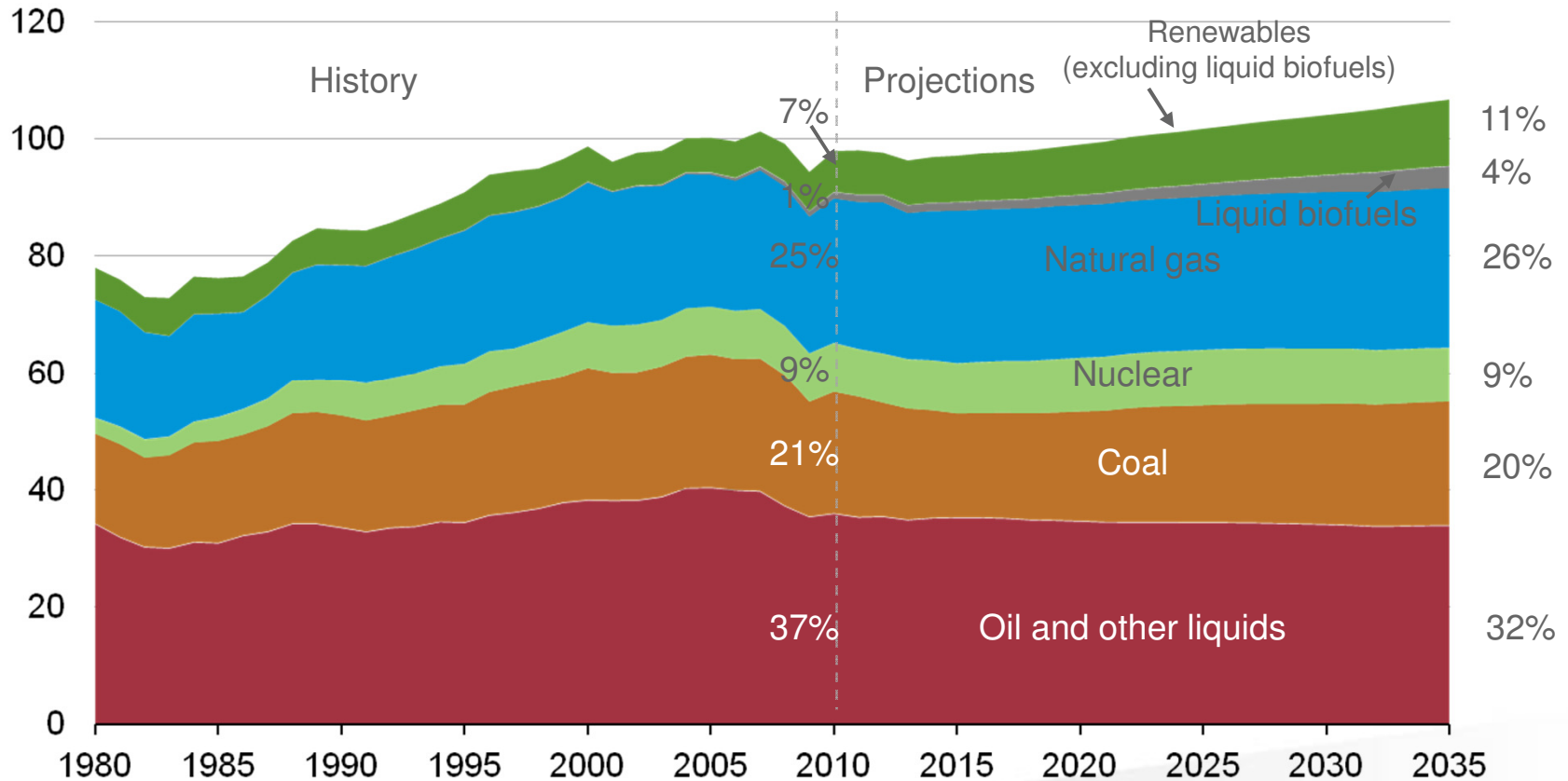
Pros

DOE EIA's Annual Energy Outlook 2012



Energy use grows slowly over the projection in response to a slow and extended economic recovery and improving energy efficiency

- U.S. primary energy consumption
- quadrillion Btu per year

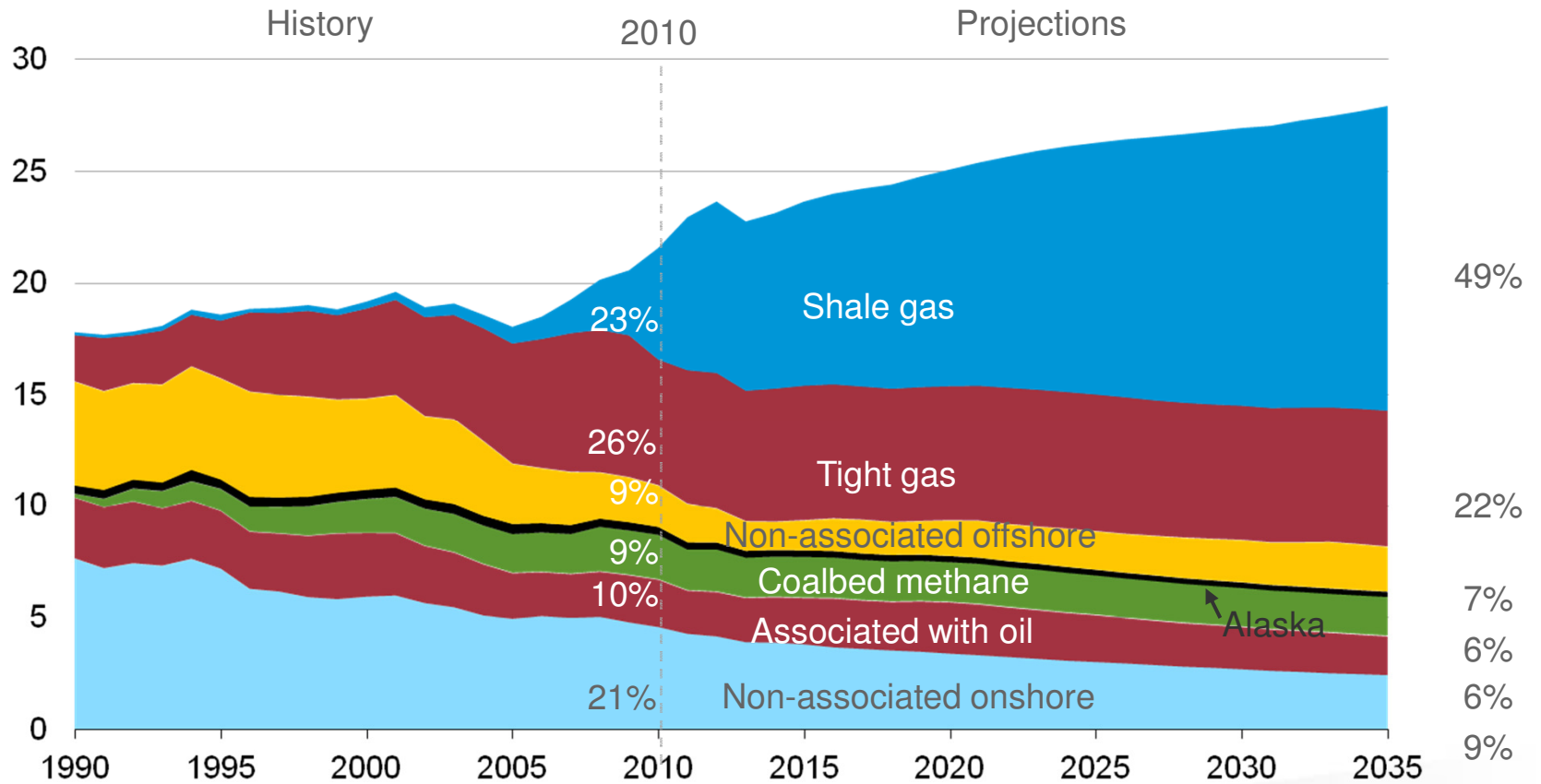


DOE EIA's Annual Energy Outlook 2012



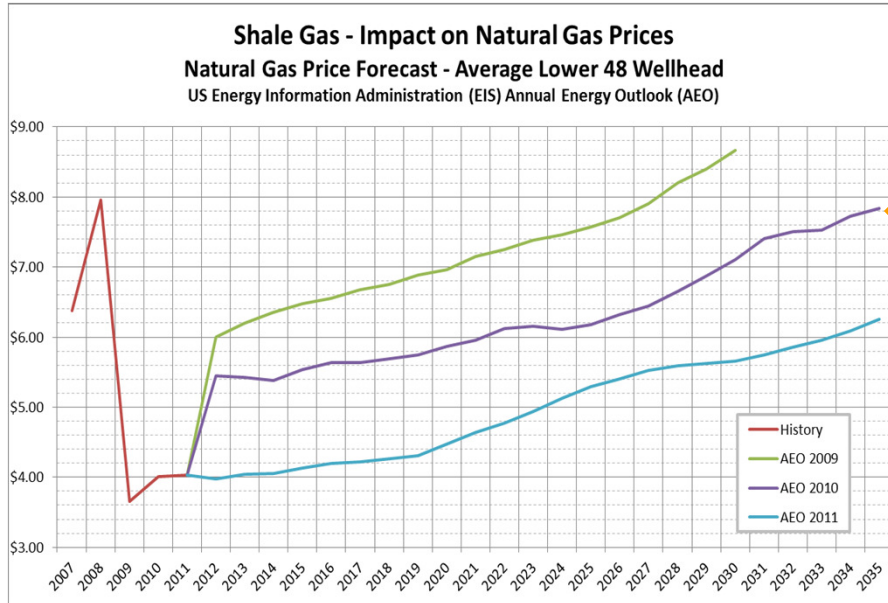
Shale gas offsets declines in other U.S. natural gas production sources

- U.S. dry gas production
- trillion cubic feet per year



Why Natural Gas?

Natural gas trends suggest a structural shift in supply, with possible long-term pricing advantage compared to other regions of the world.

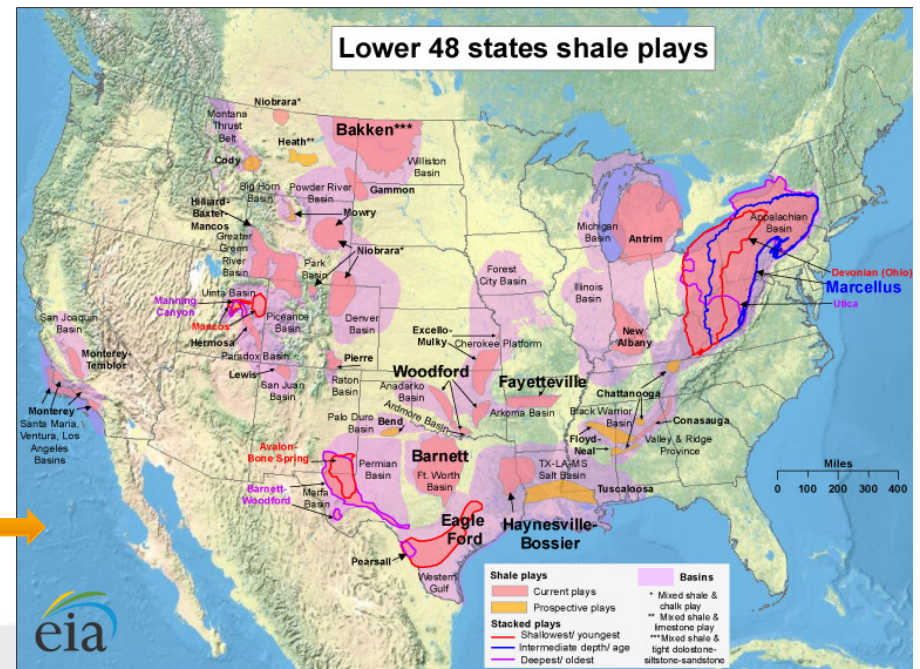


Shale gas expanding supply and increasing drilling productivity continues to drive down pricing price forecasts

Long-term natural gas price forecasts have declined significantly each of the last few years.

U.S. Shale gas supply is extensive with new supply being brought online.

Kingsport is positioned between major shale gas supplies that are interconnected by a major pipeline serving our area.



Source: Energy Information Administration based on data from various published studies. Updated: May 9, 2011

Risk Adjusted Hurdle Rate: Coal vs. NG

Assessing risk factors beyond the standard Weighted Average Cost of Capital (WACC) yields a Risk Adjusted Hurdle Rate (RAHR).



Industry Structure +xx%
+5 to +10%

Coal Industry

- Logistics costs & reliability limit the mining regions we can source from
- Declining CAPP mine productivity, due to:
 - Shrinking seams
 - EPA regulation of runoff
 - MSHA regulation of mining
- Increased pricing pressure from metallurgical coal market

Natural Gas Industry

- Trend of increasing NG productivity (fracking)
- NAR NG supply exceeds demand
- High CapEx + long lead time will dampen influence of LNG exports
- Spread of fracking technology will reduce arbitrage opportunity between NAR and EUR/AP

Corporate Weighted Average Cost of Capital xx%

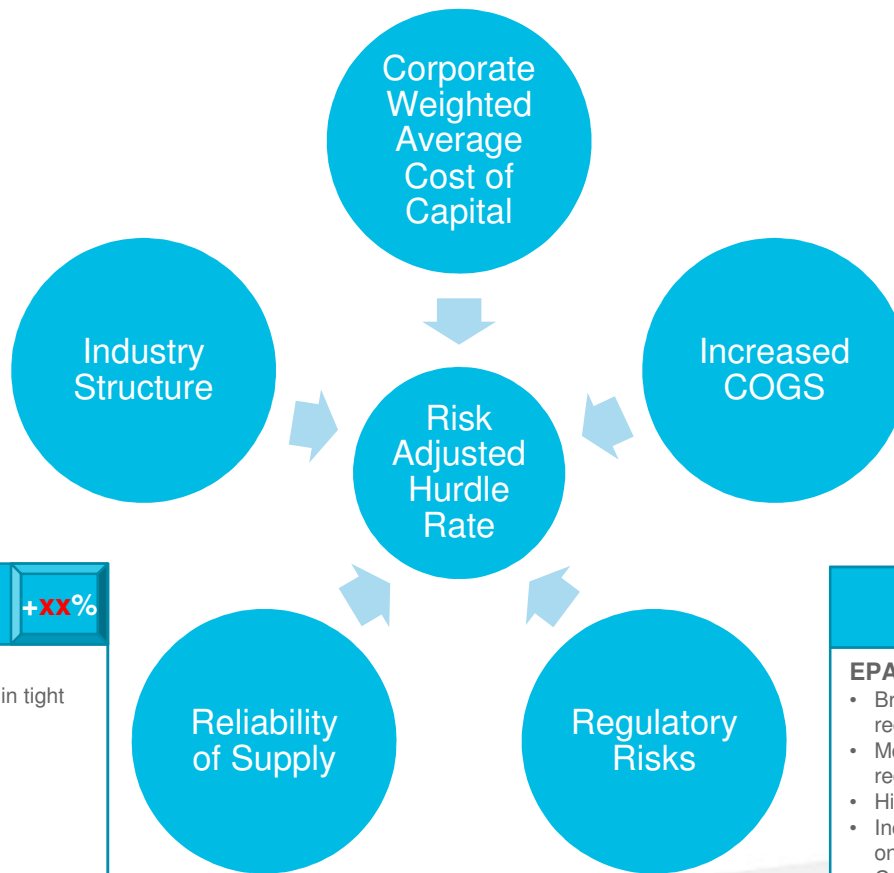
Increased COGS +xx%
-5% to +15%

Coal + Emissions Controls

- Additional pollution control equipment increases direct costs
 - Parasitic electricity consumed
 - Increased maintenance
 - Additional operations labor
- Greater complexity increases probability & magnitude of steam interruptions
 - Additional points of failure
 - Failure of common systems impacts multiple boilers

Natural Gas

- Cost of NG transportation
- Reduced overall system complexity
 - Less parasitic electricity consumed
 - Reduced maintenance
- Increased fuel burn to achieve rates
 - Lower combustion efficiency
 - More Btu's required per lb of steam
- Increased fuel cost
 - Higher delivered \$ per MMBtu



Reliability of Supply +xx%
+2 to +5%

Coal

- Track record of supplier reliability, especially in tight markets
- Track record of railroad reliability, due to:
 - Overbooking in tight markets
 - Layoffs in down markets
 - Age of infrastructure

Natural Gas

- Track record of interstate pipeline reliability
- Multiple pipelines can mitigate risk of pipeline interruption, but at a cost
- Multiple NG suppliers feeding into pipeline from multiple locations increases procurement flexibility

Regulatory Risks +xx%
+5 to +10%

EPA Regulations

- Broad trend of ever-increasing stringency of regulations
- More types of emissions from coal units subject to regulation
- Higher capital costs imposed on coal facilities
- Increased operating costs for emissions controls on coal units
- Costs imposed on NG production

Other Regulations

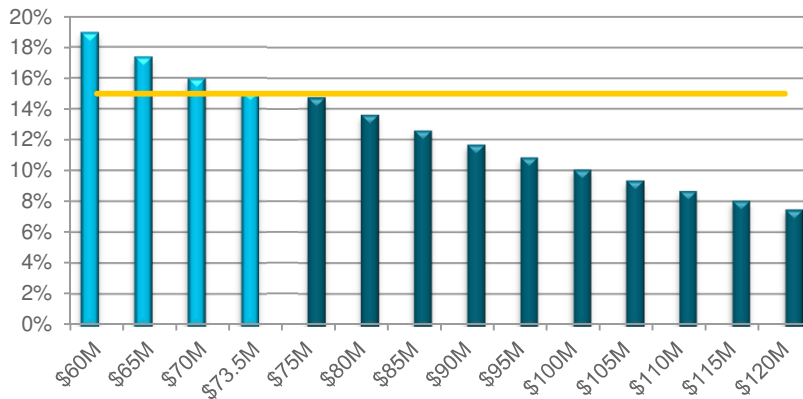
- DOE regulation / approval of LNG exports
- FERC / NERC regulation of electricity export

Is an Investment in the US Justified?

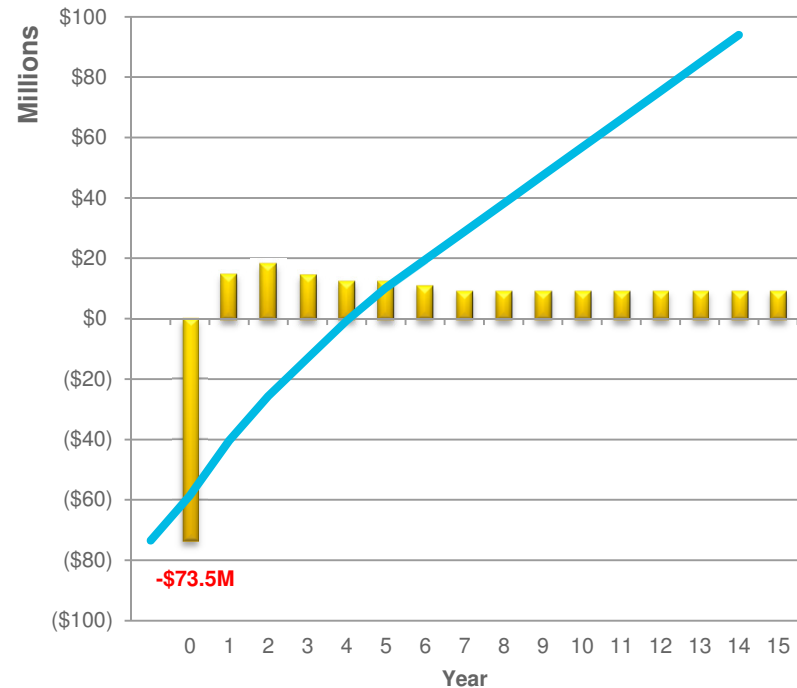
Investments are evaluated based on a risk-adjusted hurdle rate to capture the true cost of doing business in the US.



Simple Return on Investment



Simplified Cash Flow Model for Hypothetical \$73.5M Project Earning \$15M in Revenue



Simplifying Assumptions

- Capital invested in year 0
- 15y project life
- 38% tax rate
- MACRS-5 depreciation
- \$15M annual revenue

A \$73.5M investment is justified for a 15% risk-adjusted hurdle rate.

Reality Check

Technology tells you what you can do

Economics tells you what you should do

Politics tells you what you will do

Are these Macro-trends good or bad?

Several broad trends are driving major changes in how American manufacturers view energy and environmental stewardship. Where you stand is largely a function of what part of the American economy you occupy.

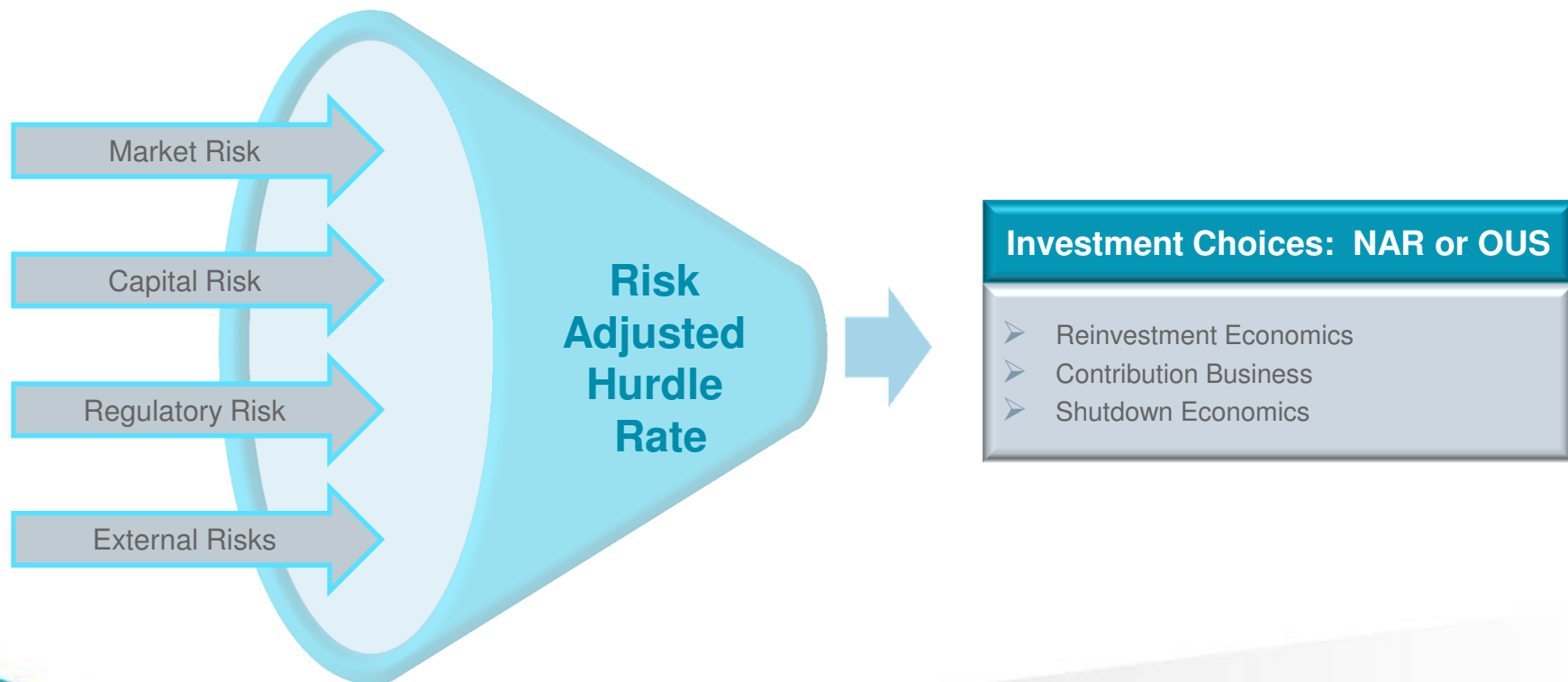


Macro-Trend	Pros	Cons
Active Government Regulation	<ul style="list-style-type: none"> • Drives environmental improvements valued by society • Improves human health • Levels the playing field • Funds basic research • Protects vulnerable populations 	<ul style="list-style-type: none"> • Consistently underestimates costs • Consistently overestimates benefits • Not sensitive to macro-economic impacts • Politics can trump science • Uncertainty (judicial review, lawsuits, etc)
Emergence of Shale Gas	<ul style="list-style-type: none"> • Lower criteria pollutants • Lower capital investment for greenfield builds • Lower carbon footprint • Positive national balance of trade • Positive for national GDP 	<ul style="list-style-type: none"> • CH4 emissions during production • Water use • Competitive impact on renewable energy sources • Impact fuel diversity (coal in particular) • Volatility • Impact of LNG on domestic mfg
Sustainability &/or Climate Disruption &/or Climate Change &/or Global Warming	<ul style="list-style-type: none"> • Drive for bio/renewables Increases fuel diversity • Lowers overall environmental impact • Stimulates R&D, with other ripple effect benefits • Stimulates demand for some products 	<ul style="list-style-type: none"> • More expensive in most of US (capex & operating) • Not significant in many competing economies • Subsidies skew the playing field • Negative impact on grid reliability

Investment Choices

Weighing all the risk factors is necessary before making investment choices. Weighing policy risk factors due to energy and environmental regulations will influence whether investments are made in the US or outside the US.

Investment Choices Reflect a Wide Array of Relevant Risk Factors



What Does American Business Really Need?

The real world doesn't guarantee a portfolio of low-risk, high-return investment options. So what do American companies really want when they consider their choices?

1. Level playing field
 - a. Between industries
 - b. US vs. Rest of World

2. Predictable, rational regulations

3. A chance to leverage our competitive advantages
 - a. Competitive (abundant) energy and raw materials
 - b. Talent
 - c. Intellectual property