Perspectives on the Market from the Energy and Process Industries

Panel Discussion
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The oil & gas value chain is made up of three distinct segments:

**UPSTREAM**
- Exploration
  - Oil
  - Gas
  - Production
- Petrochem

**MIDSTREAM**
- Gas
  - Processing
  - Transport
- Marketing

**DOWNSTREAM**
- Oil
  - Refining
  - Marketing
The US natural gas market has experienced a “supply shock” driven by the shale gas boom.

Source: EIA
A ‘supply shock’ is also underway in US tight oil and crude sources are changing rapidly.

Source: EIA
Long-term forecasts for US oil & gas production vary widely

ALL FORECASTS EXPECT GAS PRODUCTION TO INCREASE

US natural gas production (Bcf/d)

FORECASTS VARY ON IF AND WHEN OIL PRODUCTION WILL PEAK

US crude oil production (MMbpd)

Source: various
Total US oil & gas exploration and development capital expenditures are beginning to slow

US Oil & Gas Exploration and Development Capex

Source: Based on Rystad forecasts
Midstream companies are investing at historically high levels to capitalize on supply shifts.

Capital expenditures as a percent of Enterprise Value

- Supermajors (13E-16E): 52%
- Midstream (04-07): 15%
- Midstream (13E-16E): 74%

Source: Company annual reports and investor presentations; Interstate Natural Gas Association of America (INGAA); Bain analysis
US chemical industry expected to see significant increased investment due to shale-gas induced competitiveness

Source: IHS, “America’s New Energy Future: The Unconventional Oil and Gas Revolution and the US Economy”

U.S. Energy-Related Chemicals CapEx

CAGR ('13-'16) 43%
Engineering and Construction Contracting Association