The Business Case for Green Chemistry Innovation

Evolving Dynamics in the Chemicals Sector and Trends Going Forward

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Outline

Introduction – How We Add Value

Current Trends in R&D Spending

R&D as Lifeline to Chemicals Sector
RMG – Sustainability Solutions

Who We Are

How We Add Value

Megatrends We’re Monitoring

- Energy volatility
- R&D as a vehicle to long-term profitability
- Current capital constraints

Cleantech Continuum Model
R&D Spending on the Rise for Commodity Chemicals
RMG Innovation Benchmark

Components of Innovation Benchmark

- Overarching Innovation Strategy
- Strategic Focus on Cleantech Development
- Revenue Targets
Chemical Sector Cleantech Continuum

Cleantech Continuum

- Investment timeline for cleantech development
- Innovation as a buffer to volatile feedstocks

Methodology

- Top-line Adjustments – Cleantech Investments
  - Bio-based feedstocks, environmental catalysts, bio-based plastics
- Oil Prices – Two Scenarios
  - Aggressive Scenario: USD 150/bb
  - Conservative Scenario: USD 50/bb
Chemical Sector Cleantech Continuum

Strategic Focus on Innovation...

**BASF Projection - Basic EPS**
- Conservative Scenario: $5.94, $6.28, $6.83, $7.51
- Aggressive Scenario: $50/bbl

**DuPont Projection - Basic EPS**
- Conservative Scenario: $1.52, $1.62, $1.72, $1.83
- Aggressive Scenario: $50/bbl

Innovation Strategy Below Sector Average...

**Huntman Corp - Basic EPS**
- Conservative Scenario: $0.51, $0.51, $0.51, $0.51
- Aggressive Scenario: $50/bbl

**Celanese - Basic EPS**
- Conservative Scenario: $2.71, $2.77, $2.82, $2.87
- Aggressive Scenario: $50/bbl

$150/bbl
Conclusions and Trends Going Forward

Companies Will Reap Benefits of Cleantech Investments Starting 2012

Resiliency to Raw Material Price Hikes

Shifting Away from Commodityization and Cyclicity
- Energy pricing, economic conditions, non-petrochemical alternatives pave the way
- Example – Dow Chemical’s solutions-based business
Innovation in a Downturn

Tough Climate for Cleantech
- Venture Capital Shortage
- M&A in a difficult credit climate

Push Toward Process Optimization

Maintaining Competitiveness through R&D
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