



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

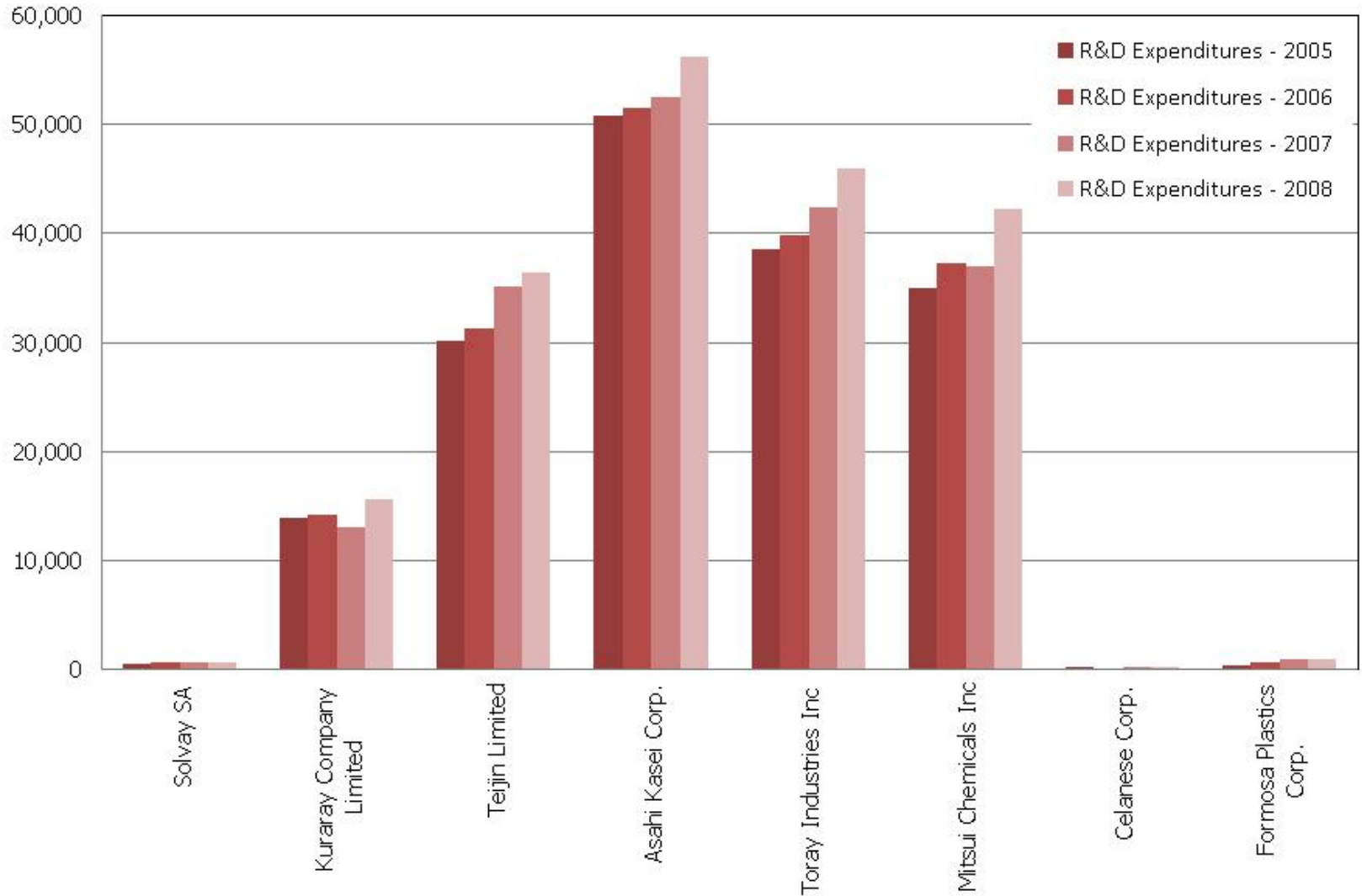
R&D as a vehicle to long-term profitability

Current capital constraints

Cleantech Continuum Model



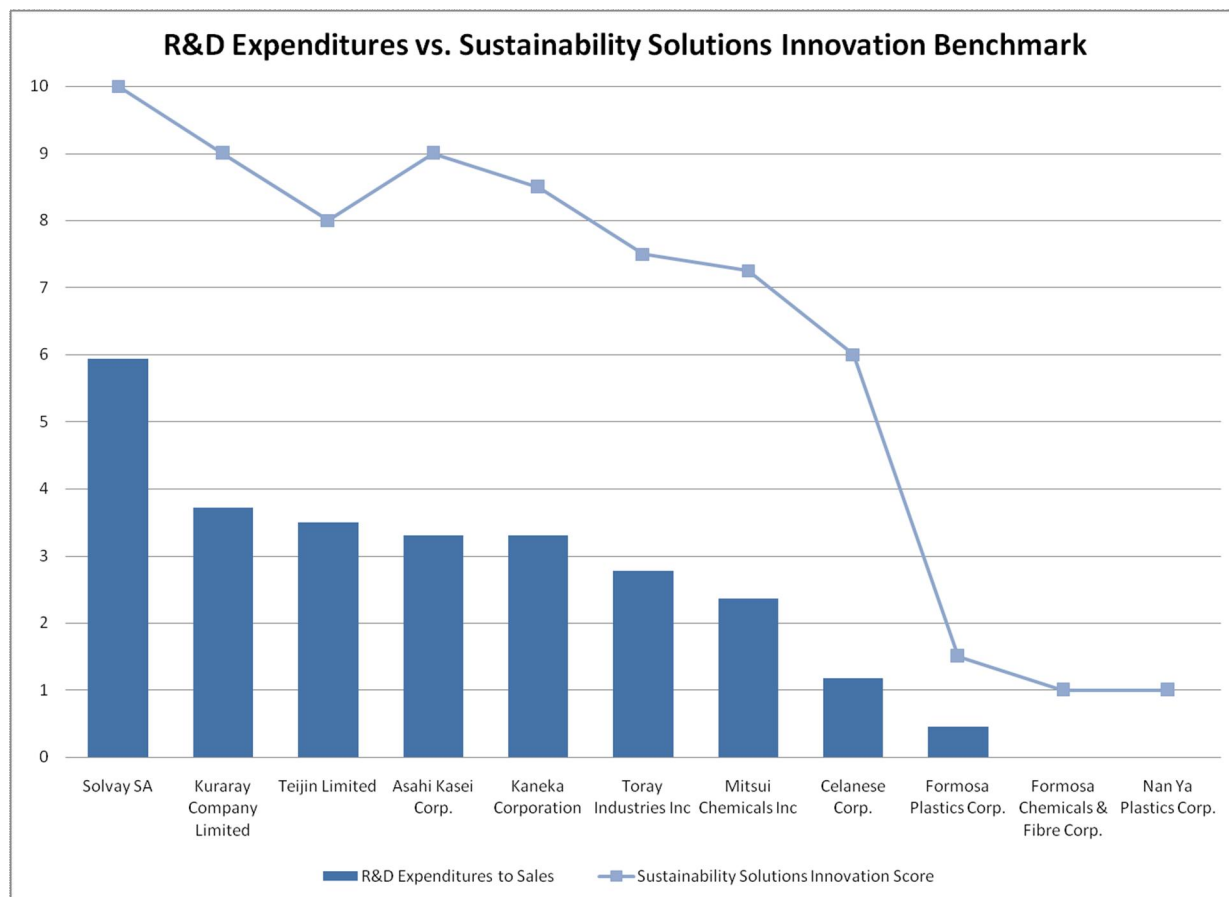
R&D Spending on the Rise for Commodity Chemicals



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

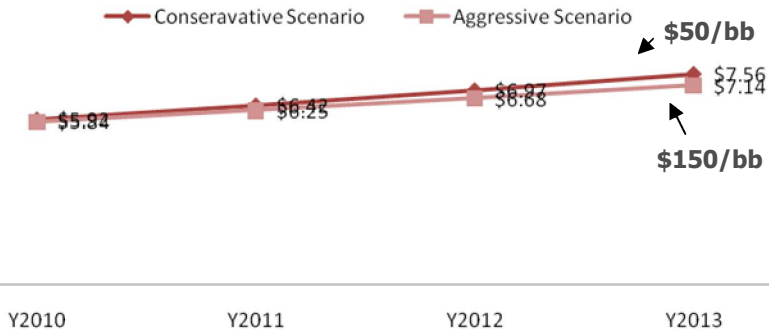
- Top-line Adjustments – Cleantech Investments
 - Bio-based feedstocks, environmental catalysts, bio-based plastics
- Oil Prices – Two Scenarios
 - Aggressive Scenario: USD 150/bb
 - Conservative Scenario: USD 50/bb



Chemical Sector Cleantech Continuum

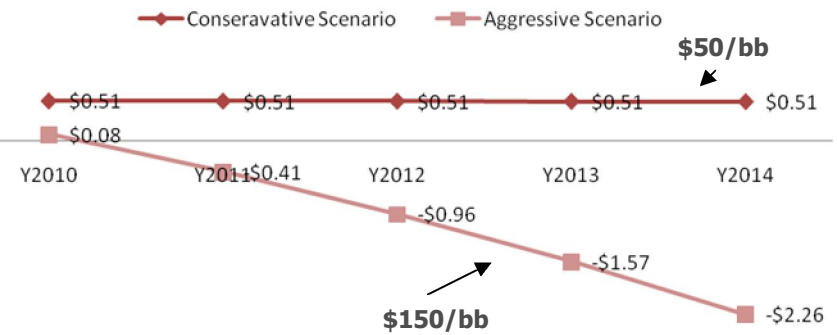
Strategic Focus on Innovation...

BASF Projection - Basic EPS

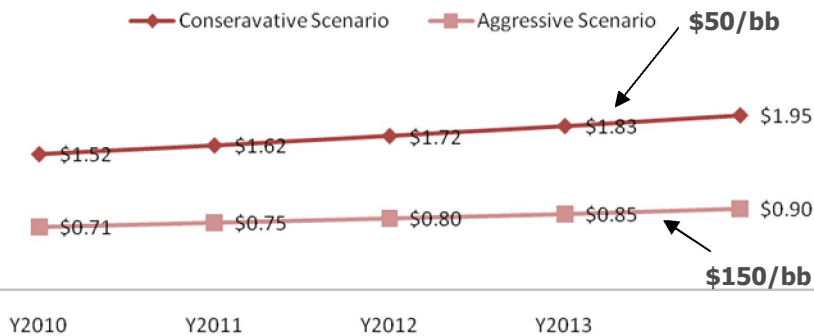


Innovation Strategy Below Sector Average...

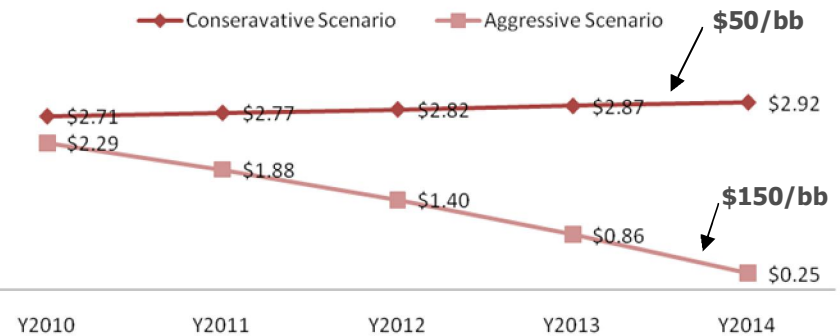
Hunstman Corp - Basic EPS



DuPont Projection - Basic EPS



Celanese - Basic EPS



Conclusions and Trends Going Forward

Companies Will Reap Benefits of Cleantech Investments Starting 2012

Resiliency to Raw Material Price Hikes

Shifting Away from Commoditization and Cyclical

- 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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