

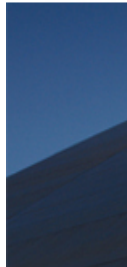
Integrating Energy Policy and Climate Policy

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How Did We Get Into This Oil / Energy Market?

Five Key Factors that Drove Oil Higher

Weights

35%

- The emergence of China and India as new super-commodity consumers – and a strong base of oil demand in the US

25%

- Underinvestment in new production and refining capacity

20%

- Rising geopolitical risk

10%

- Falling US dollar and low interest rates

10%

- Migration of investment and speculative money into the commodities complex



Source: DB Global Markets Research

How Did We Get to Current Views on Climate Change?

Europe Was Way Ahead of the US Curve on This Topic



Source: *The Economist*, November 2000

Dealing with Climate Change Underway

- Stern Review
- US Supreme Court- EPA
- UN IPCC reports
- *Inconvenient Truth*
- Media acceptance
- Politicians have “turned the page”

Source: DB Global Markets Research

Why the US Decided to Deal with Climate Change ...the Miracle on 34th Street

Can an Elected Judge Send Santa to Jail?
...not in New York at Christmas!



Who Will Condemn the Polar Bears?
...not elected state commissioners

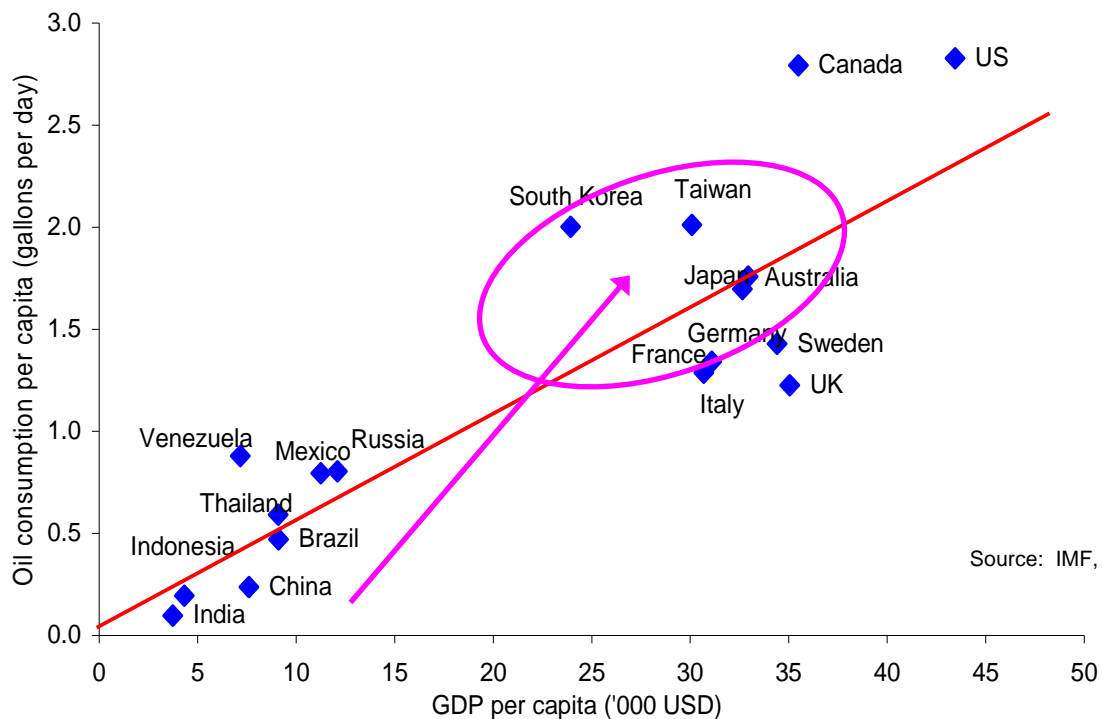


- Kansas Governor Kathleen Sebelius said she will veto a bill to strip the state's top environmental regulator of the authority he used to block expansion of a coal-fired power plant over health concerns. The bill targets state Health Secretary Roderick Bremby's decision in October to reject Sunflower Electric Power's plan to expand the Holcomb Station on grounds that greenhouse gas emissions from the plant are a threat to public health.
 - American Electric Power (AEP), the largest US producer of coal-fired electricity, got approval for a \$2.23 billion West Virginia plant that may advance efforts to reduce emissions of greenhouse gases. By converting coal to gas, the plant promises cheaper capture and sequestration of heat-trapping carbon dioxide than from conventional coal-burning plants.
- Source: Bloomberg, March 7, 2008

Long-Term Looks Hard to Manage

Per Capita Oil Consumption Relative to GDP

Twenty five years ago, South Korea and Taiwan were where China and India are now.



Outlook

- One third of the world's population is just entering the middle class and want the oil-consuming lifestyle that goes with that.
- The questionable characteristics of Asian financing - subsidized loans and the tendency to prioritize full employment and expansion of market share above rates of return, efficiency and profitability - have not disappeared since 1998.
- Some economists argue that sooner or later that this too-rigid system in China will crack, just as occurred at different times in Japan, South Korea, Thailand, Malaysia, Taiwan and Indonesia.

What Are the Energy Answers?

Are They All 10 Years Away? Rip Van Winkle / Sleeper

There are solutions, but in many cases they remain tantalizingly a decade away.

- Carbon Capture and Sequestration
- Lighter, Fuel-Flexible/Electric Vehicles
- Greenfield Nuclear Power
- Cellulosic Biofuels / 2nd Generation Renewables
- Involve Developing Nations



Source: DB Global Markets Research

What Are the Policy Prescriptions?

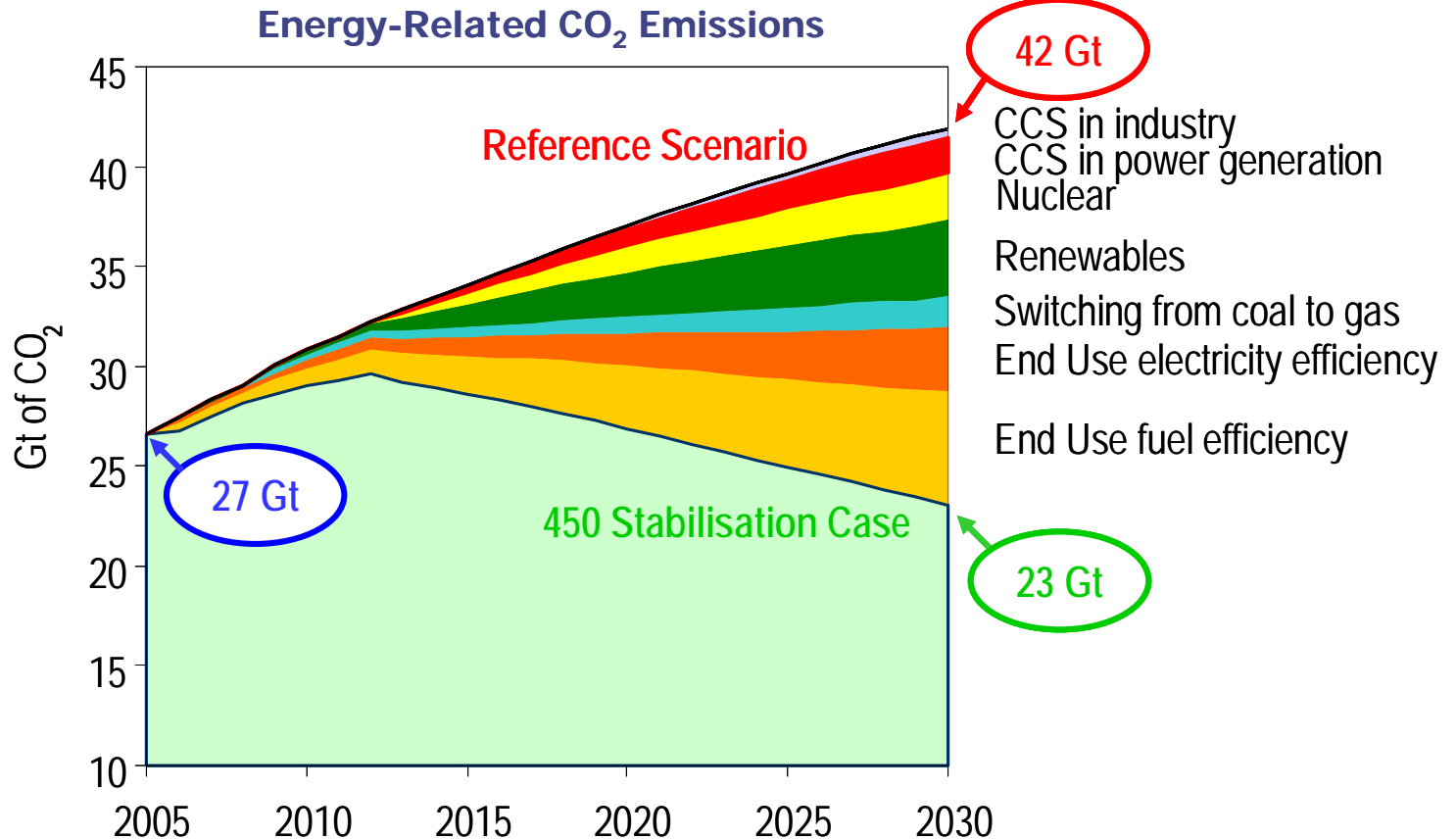
There Is No Single, Easy Solution to the Global Challenges Ahead

- **Encourage energy efficiency across all sectors**
- **Encourage all fuels – diversity is key**
- **Price externalities (carbon is an externality)**
- **Encourage trade and investment**
- **Avoid “easy” solutions that make problems worse**
- **Establish global standards for measuring carbon**

Source: DB Global Markets Research

What Are the Climate/Energy Answers?

Accomplishing This Goal Probably Requires a Complete Energy Policy Rethink



Source: IEA World Energy Outlook 2007

Unintended Consequences & Potential De-Railers

What Can Go Wrong?



- **Energy shortfalls**
What happens if policy mistakes result in shortages?
- **Larger-than-Expected Retail Price Increases**
Public could rebel at the costs and demand adaptation measures rather than abatement policies
- **Economic Failure-to-Thrive**
What will public officials do if the costs to GDP are too great?
- **Three Cold Winters in a Row**
Public/voter willingness to sacrifice for the long-run could be hurt

Source: DB Global Markets Research

Are We Doomed?

There Is a Lot of Pessimism in the Market

Some analysts think that we are going to freeze in the dark, and be hungry at the same time.



Source: *The Economist*

The End of Prosperity Is NOT Near

What Creates Wealth? Sieminski's Five Forces

Markets and prices
work better than
regulation most of
the time.

Energy and climate
policy should be
shaped by these
guiding principles.

- Strong and creative capital markets
- Sophisticated and innovative technology
- Fair and consistent legal system
- Secular and responsive political system
- Educated population

Source: DB Global Markets Research

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Adam Sieminski

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