Bern, Switzerland
29th September 2005





Security of Supply and Climate Change

Challenges for National and International Energy Policy

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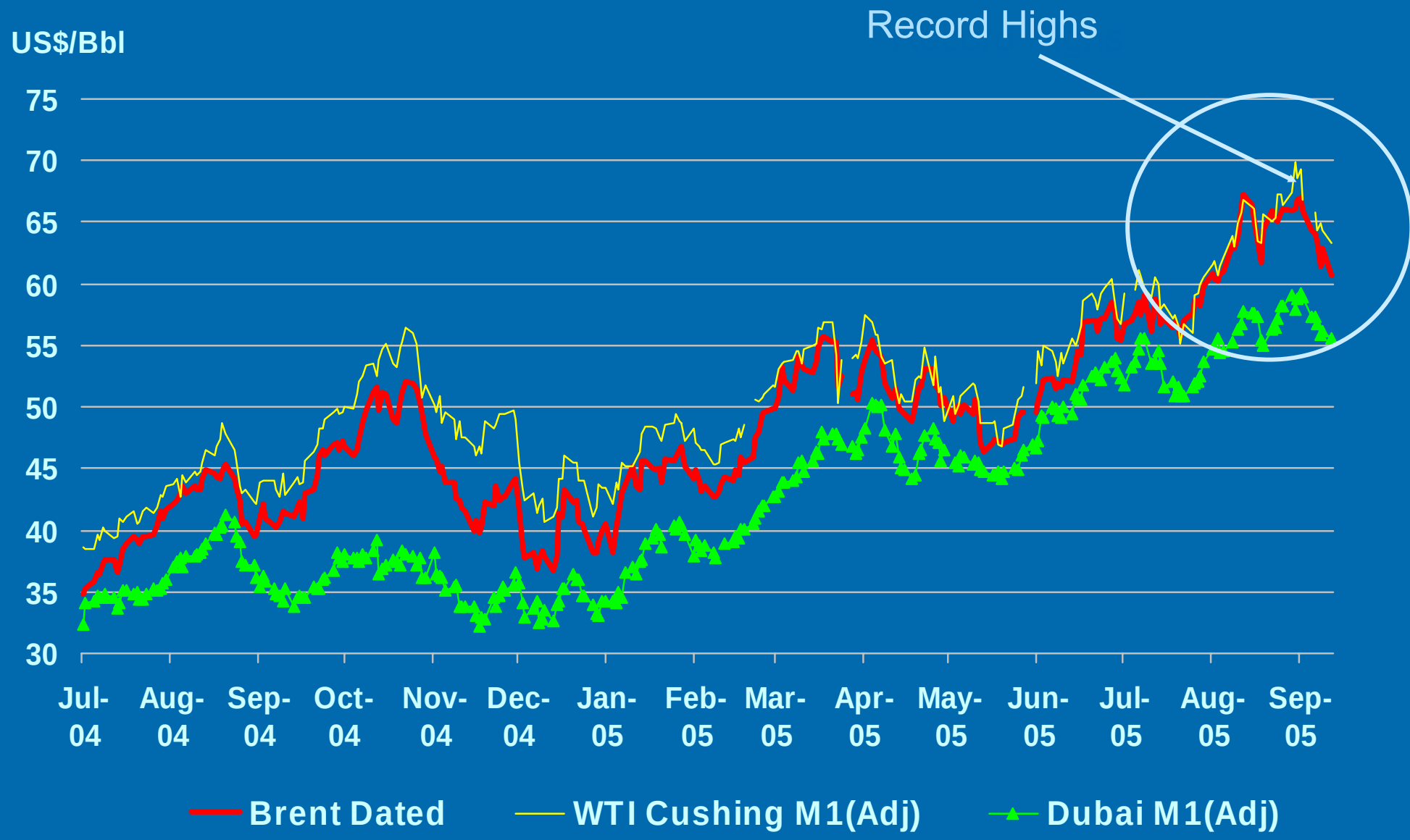
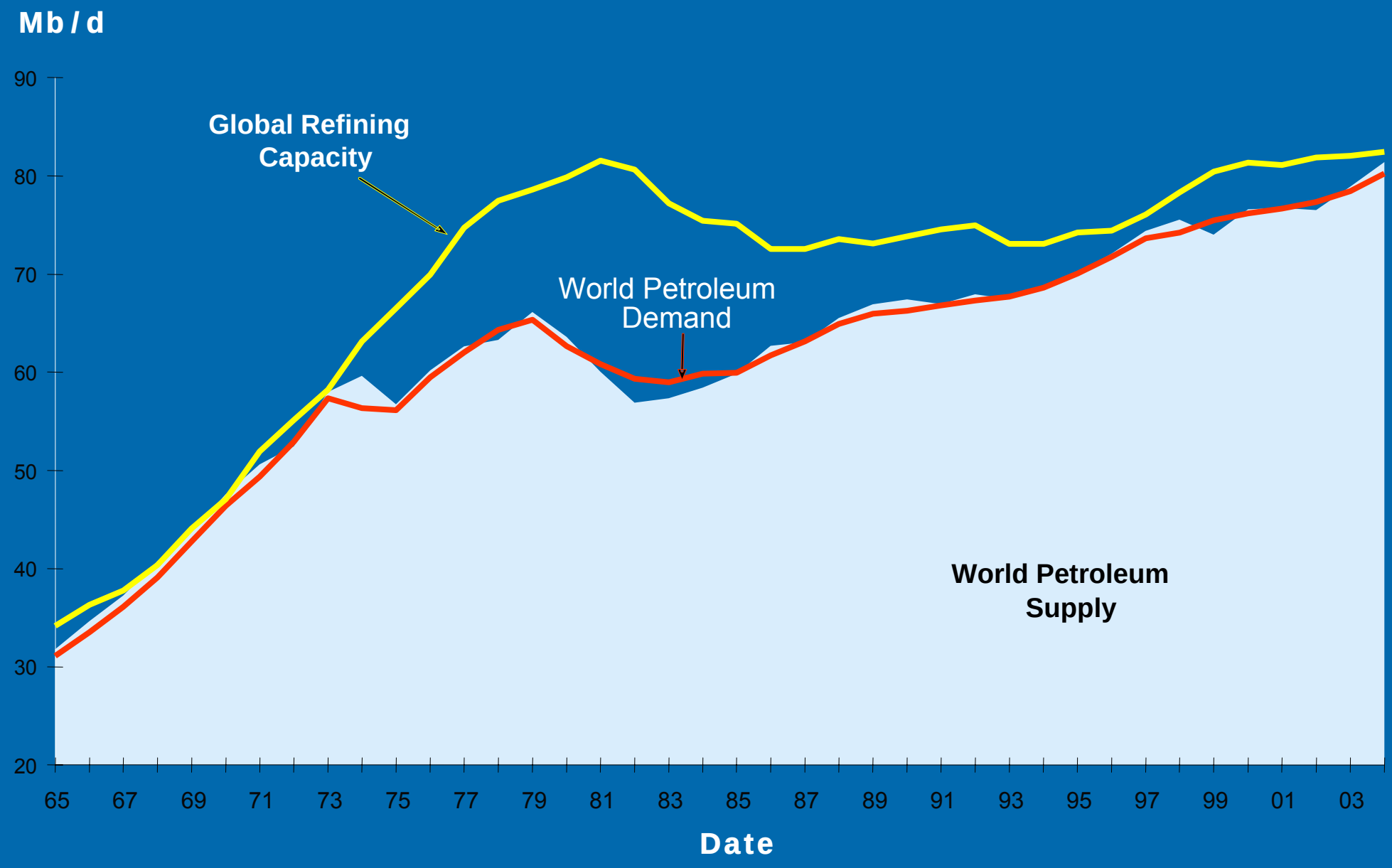
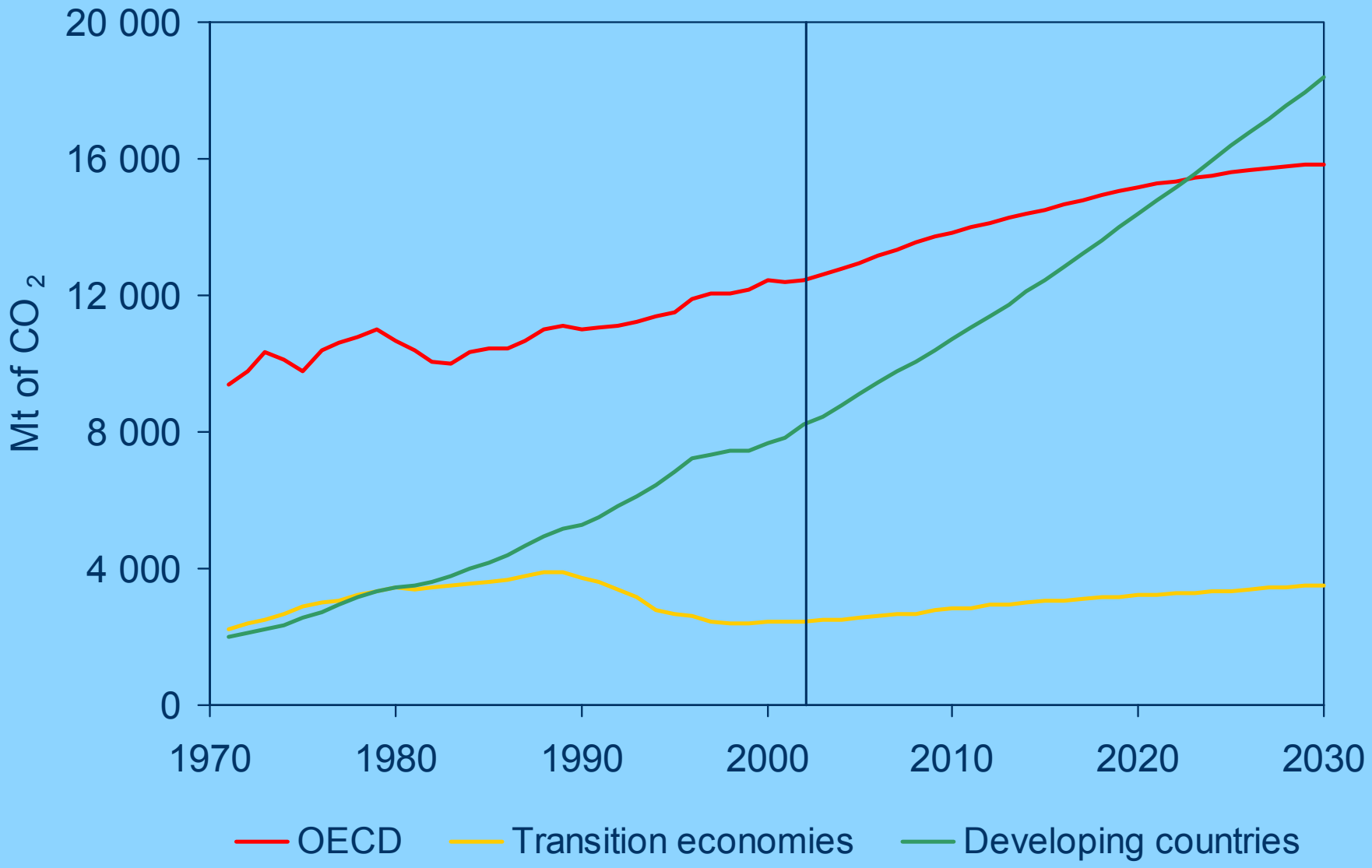
Spot Benchmark Crude Prices



Surplus Oil Refining Capacity Nearly Disappeared



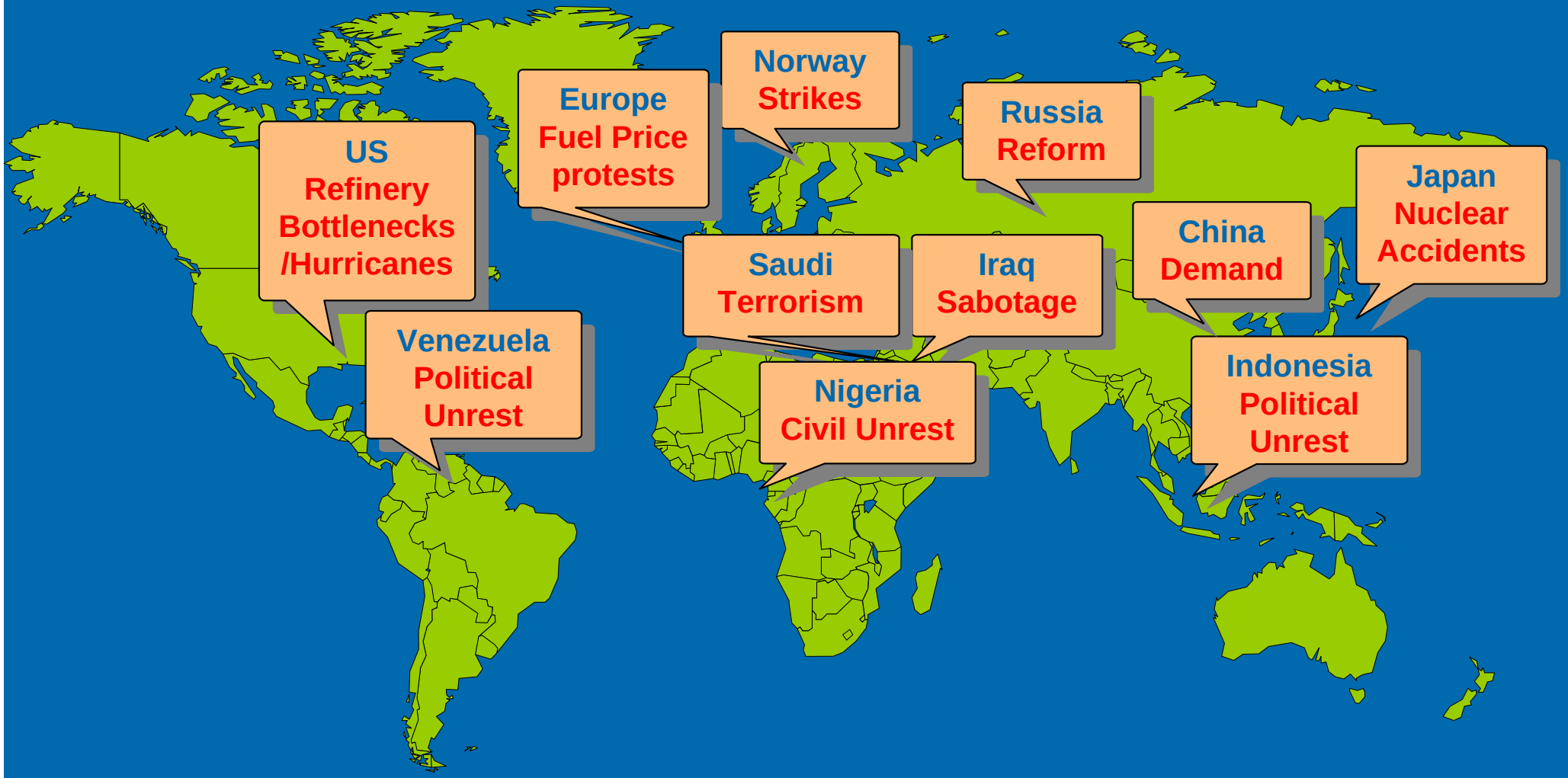
Global CO_2 Emissions, 1971-2030



CO_2 emissions will increase fastest in developing countries, overtaking OECD in the 2020s

Global Energy Security Threats

Across the world - Producers and Consumers



IEA Response, September 2005

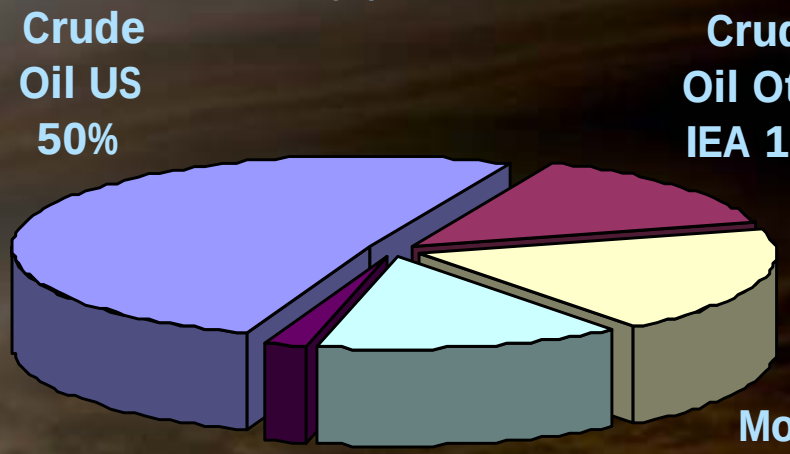
2, 100 kbd

Total IEA Initial Response

by Measure

Total IEA Stock Release

by product



(Hurricane Katrina)

IEA Ministerial Meeting 2005

"`The IEA need to Develop strategies for a clean, clever and competitive energy future"

- Energy Market Transparency and analysis
- Engagement with key Non-Members
- Energy efficiency:
  - *transport*
  - *building sectors*

- R&D cleaner combustion technologies and carbon capture and storage
- Improved investment environment
- Further work on economic growth and CO2 reduction

G8 Gleneagles plan of Action 2005

Climate Change, Clean Energy and Sustainable Development

Energy Efficiency

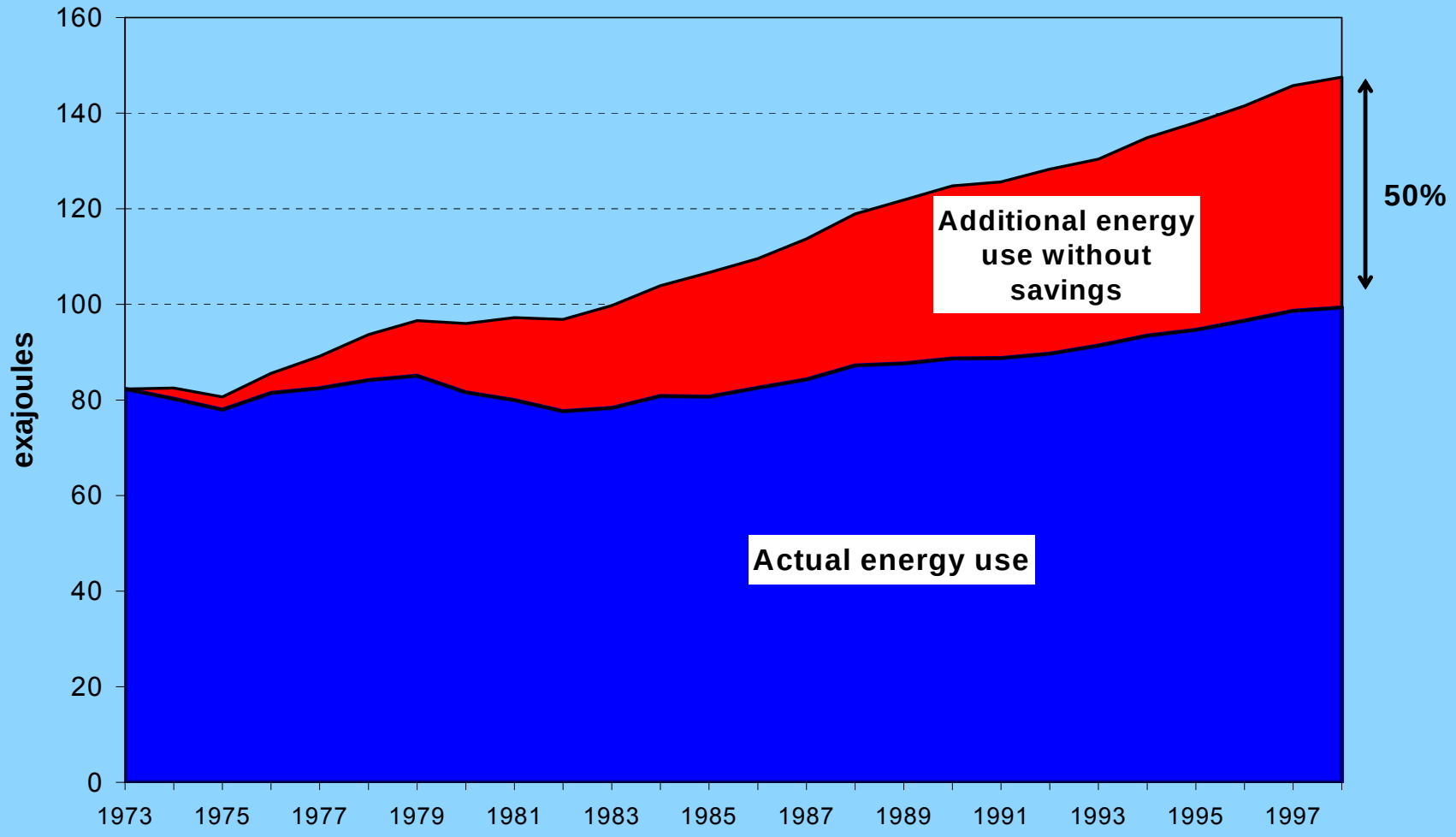
- Buildings
- Appliances
- Vehicle standards
- Industry assessment

Cleaner Energy

- Cleaner fossil fuels
- Clean coal technologies
- Carbon sequestration
- Renewables
- Hydrogen

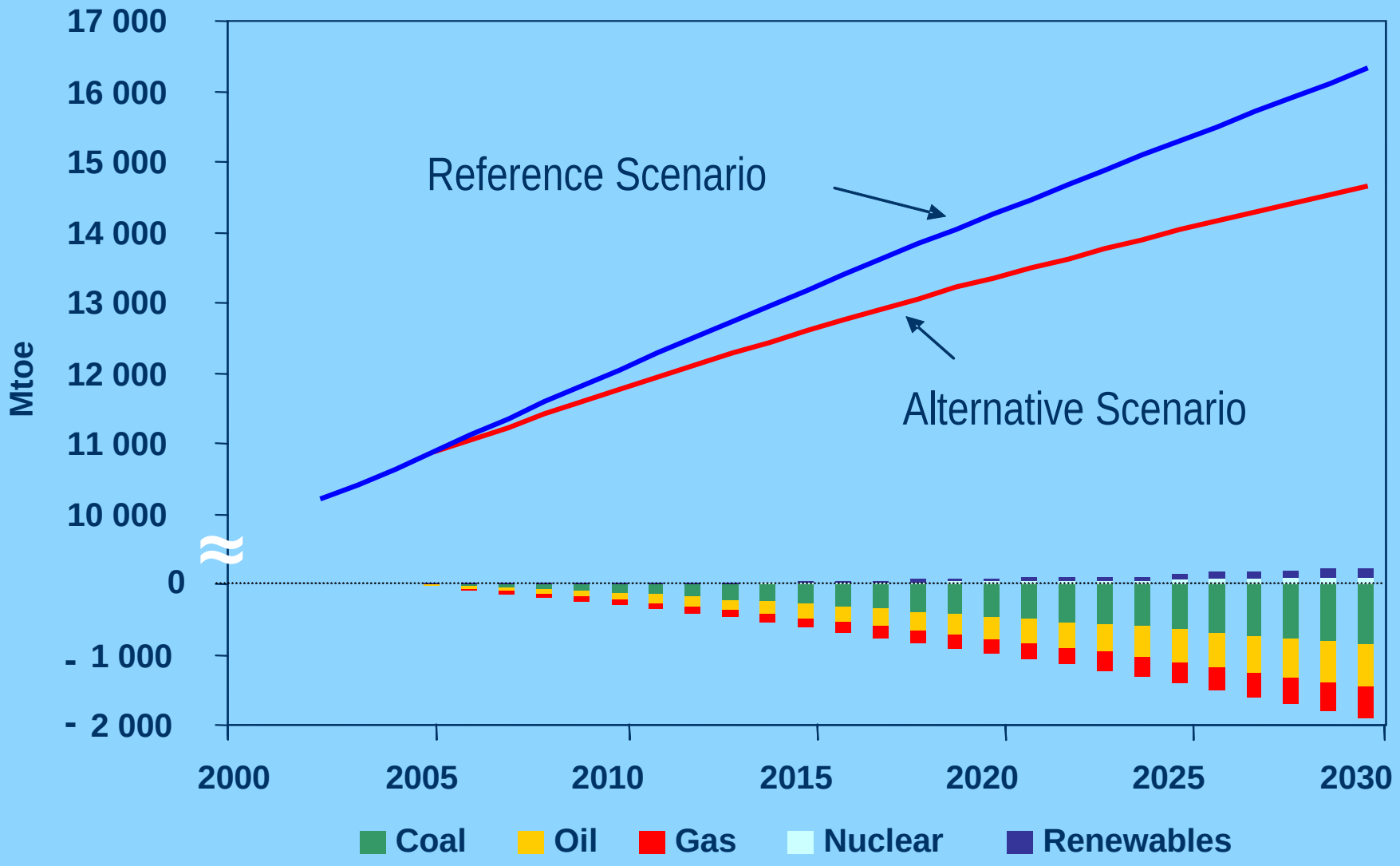
30 years of Energy Savings

Energy Demand and Savings
IEA -11



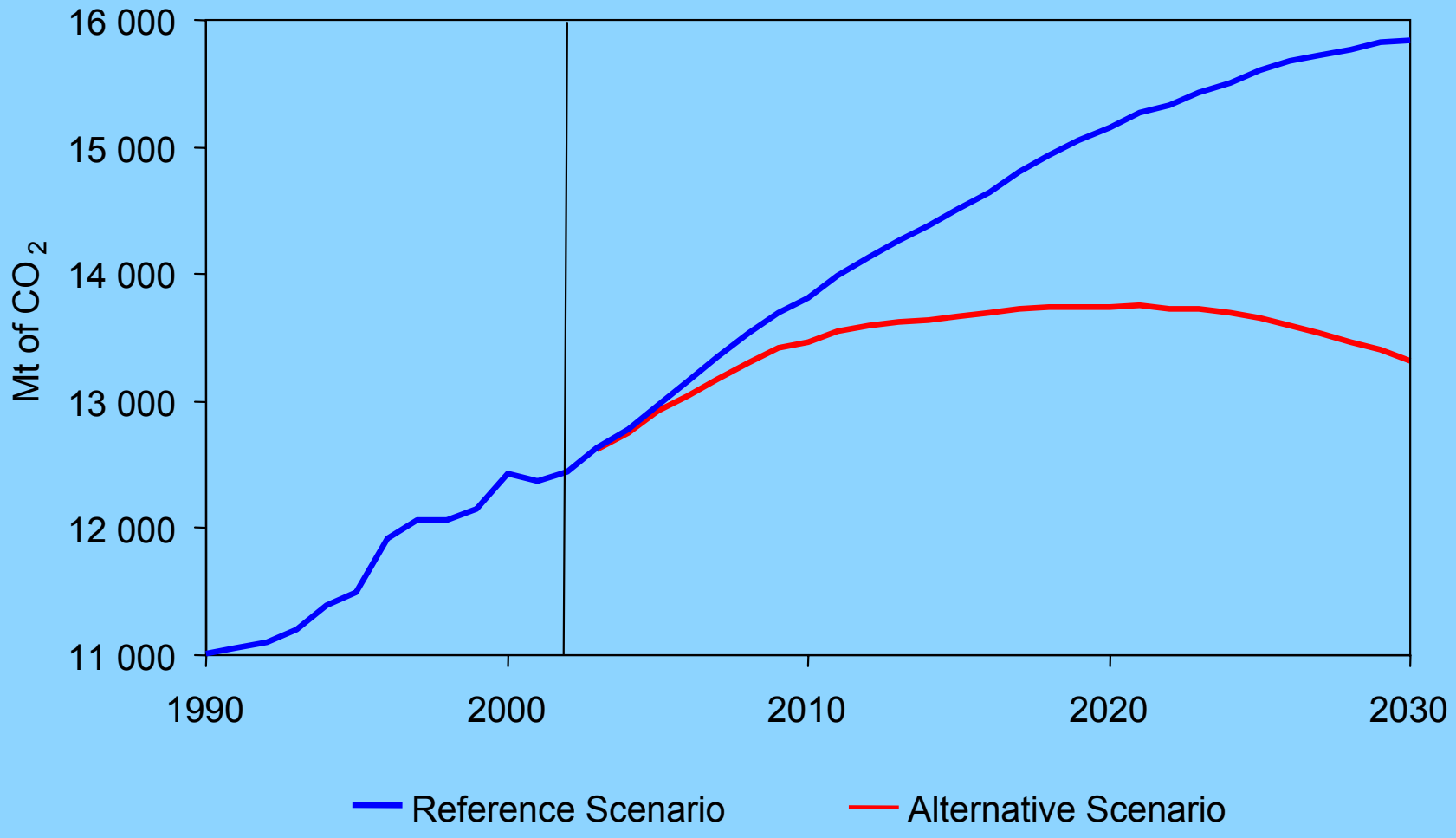
Without energy savings achieved since 1973 energy demand in 1998 would have been 50% higher, but…

World Primary Energy Demand in Reference & Alternative Scenarios



Coal demand falls most, partially offset by more use of renewables

OECD CO_2 Emissions in the Reference and Alternative Scenarios



OECD CO_2 emissions peak around 2020 – 25% higher than in 1990

Towards and Beyond the Alternative Policy Scenario

Bridging the gap between what is happening and what needs to be done

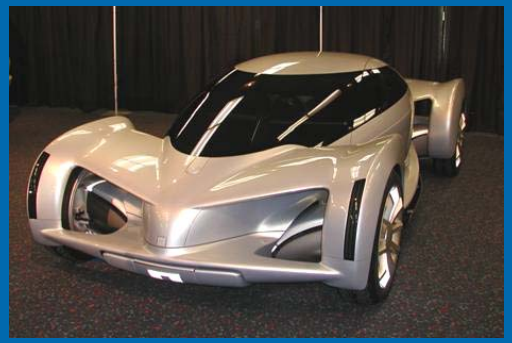
The Technology Challenge

Stabilising Greenhouse Gas Concentrations in the Atmosphere

No single technology or policy can do it all

Different

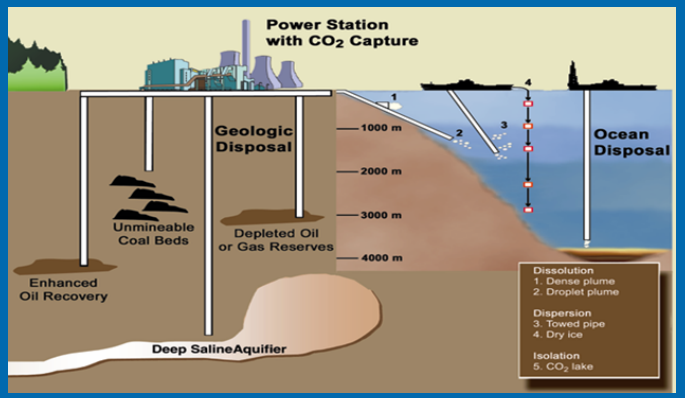
- regions
- markets
- scale-up requirements
- infrastructures
- resources
- preferences
- technology timing



Vehicles: Efficiency, Bio-fuels, Hydrogen Fuel Cells

Zero Net Emission Bldgs., Industrial Efficiency, CHP

Nuclear Power Generation IV



Carbon (CO_2) Sequestration

Renewable Energy Technologies

Bio-Fuels and Power

Advanced Power Grids

Summary & Conclusions

- **Projected market trends raise serious concerns**
  - **Negative impacts on economic growth**
  - **Increased vulnerability to supply disruptions**
  - **Rising CO_2 emissions**
- **More vigorous policies would curb rate of increase in energy demand and emission significantly**
- **But a truly sustainable energy system will call for faster technology development & deployment**
- **Urgent and decisive government action needed**

World Energy Outlook 2005

- Answers the question: how much oil and gas will the Middle East and North Africa export through to 2030 ?
- Focuses on Saudi Arabia, Iran, Iraq, Kuwait, the UAE, Qatar, Egypt, Libya and Algeria
- Analyses three distinct scenarios: Reference, Deferred Investment and Alternative Policy
- Draws implications for global energy markets, international oil and gas prices and energy security