

BP Statistical Review of World Energy

June 2012

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Energy in 2011 – disruption and continuity

Paul Appleby, Head of Energy Economics

Outline

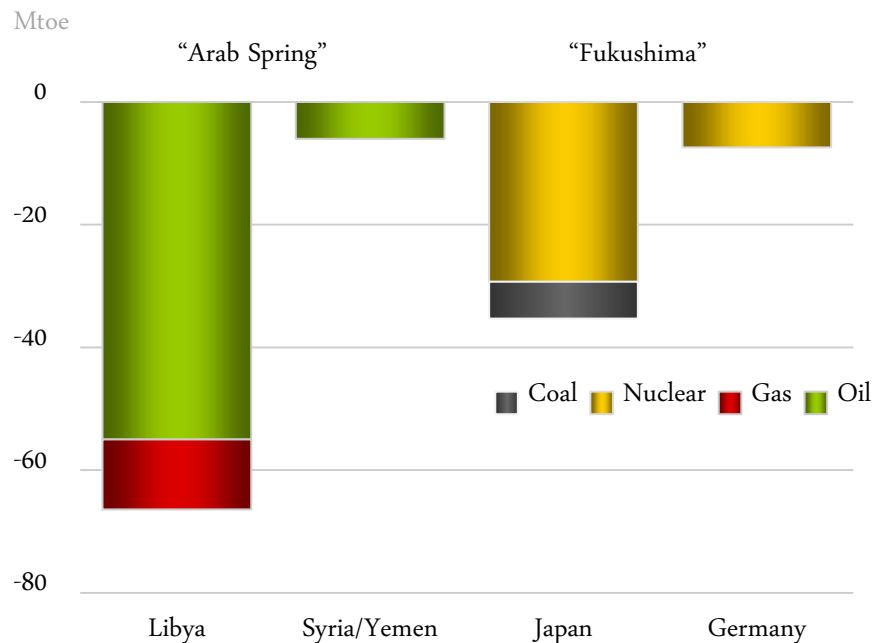


- A year of disruptions
- Energy and the economy
- Fuel by fuel
- Concluding remarks



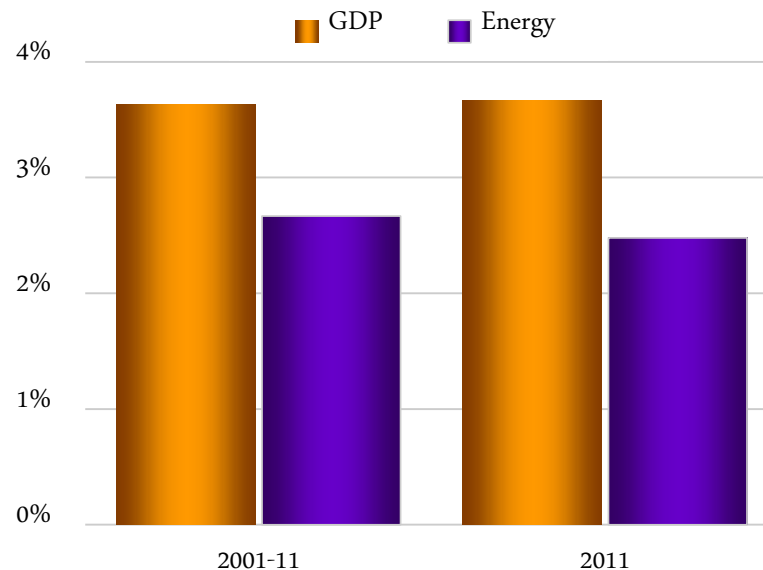
Energy in 2011 – disruptions and continuity

Supply disruptions



GDP and energy growth

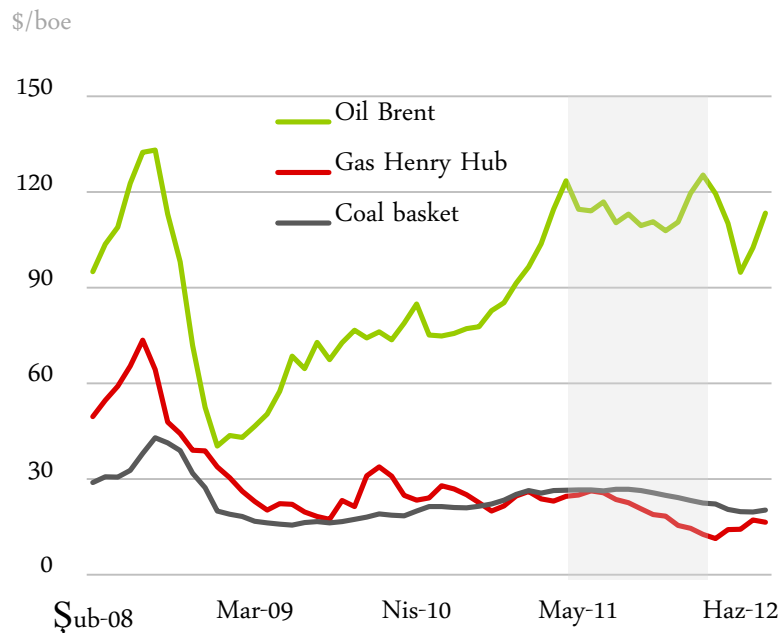
Annual change, %





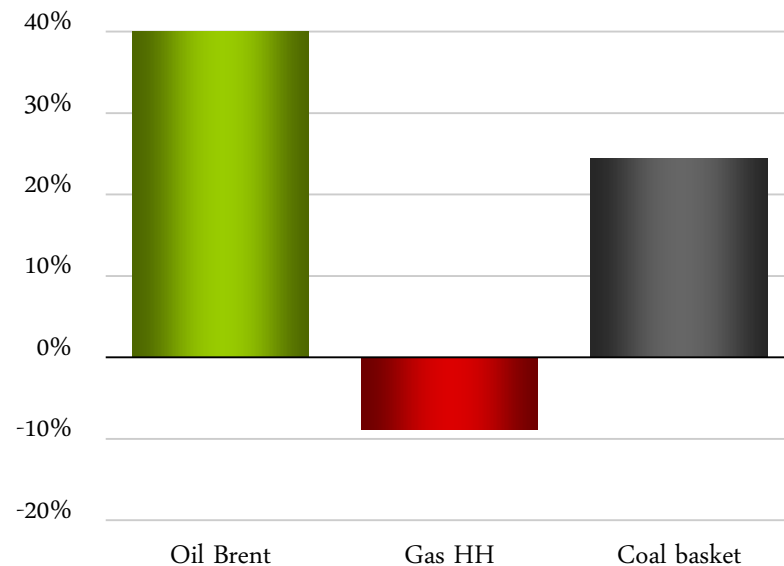
Energy prices

Energy prices



2011 price changes

Annual change, %

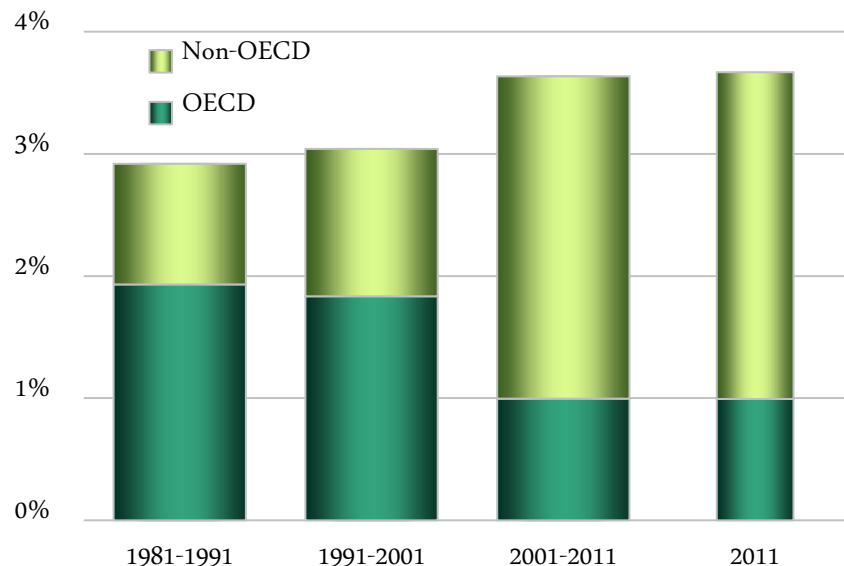




The economy

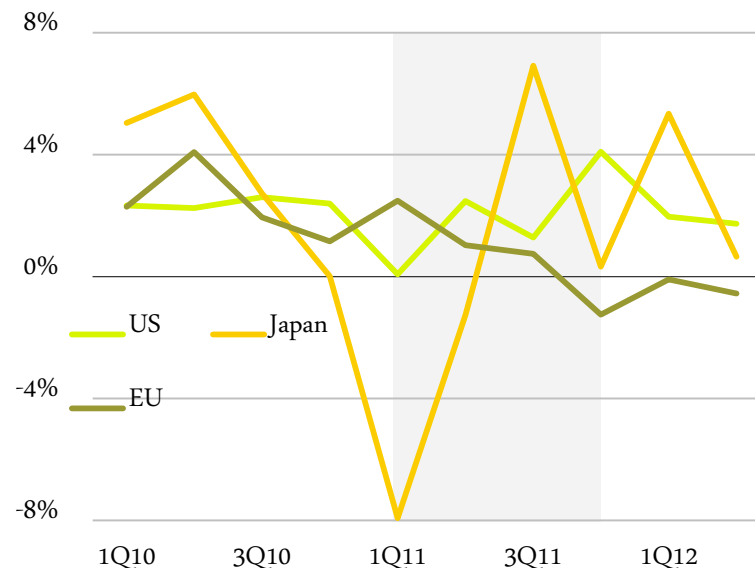
Contribution to GDP growth

Annual change, %



GDP growth

Quarterly change, % annualised

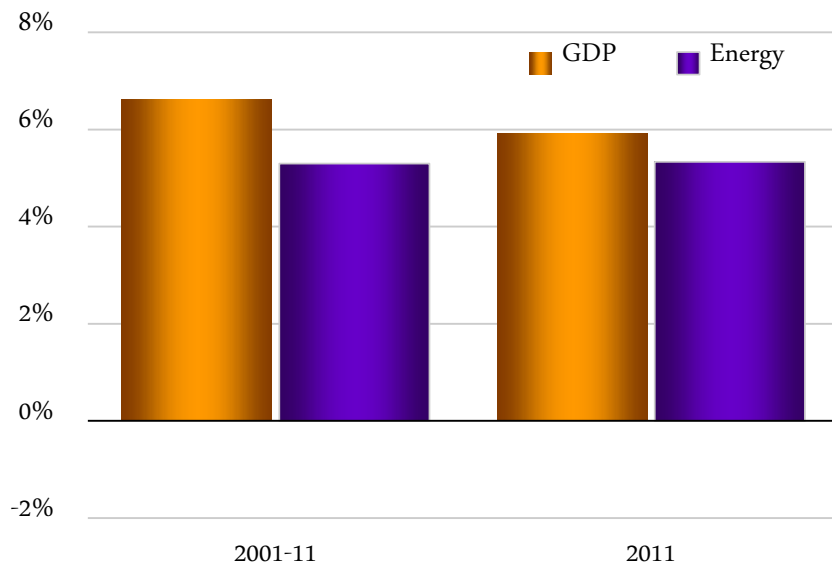




GDP and energy growth

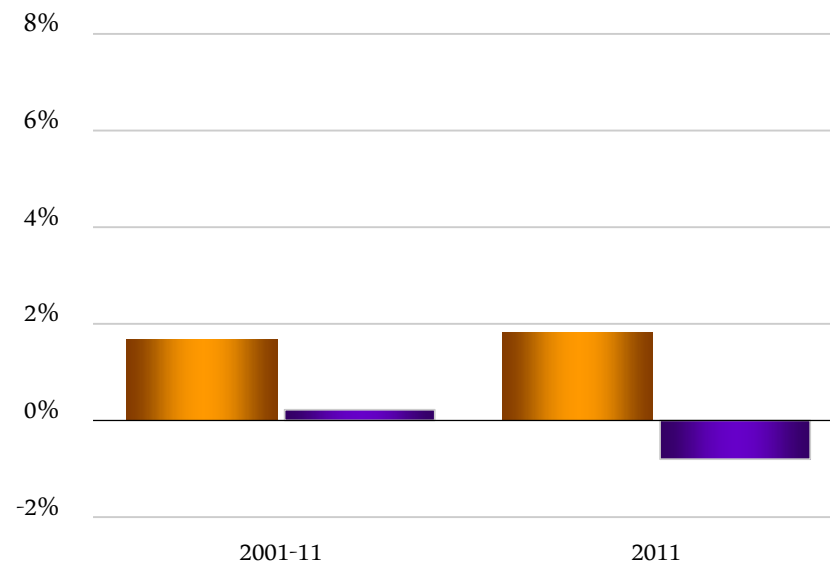
Non-OECD

Annual change, %



OECD

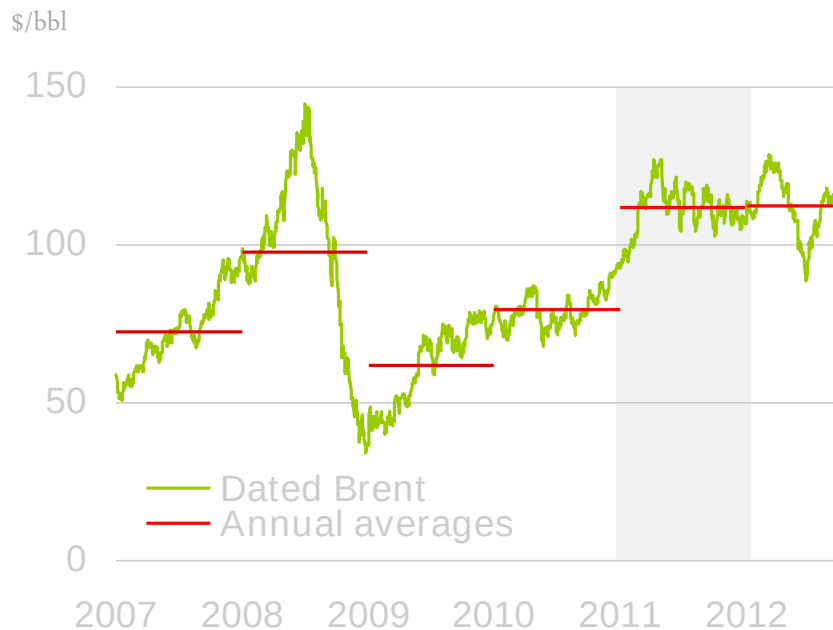
Annual change, %



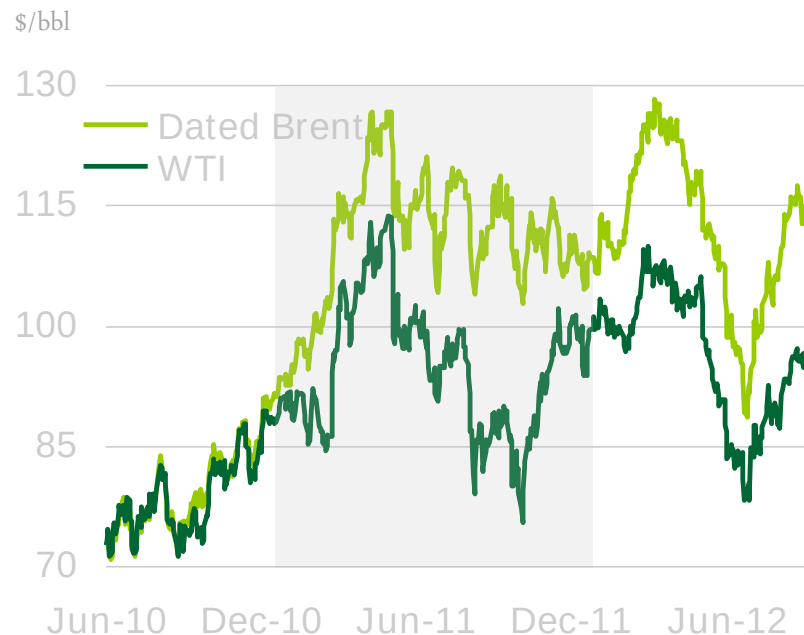


Crude oil prices

Dated Brent

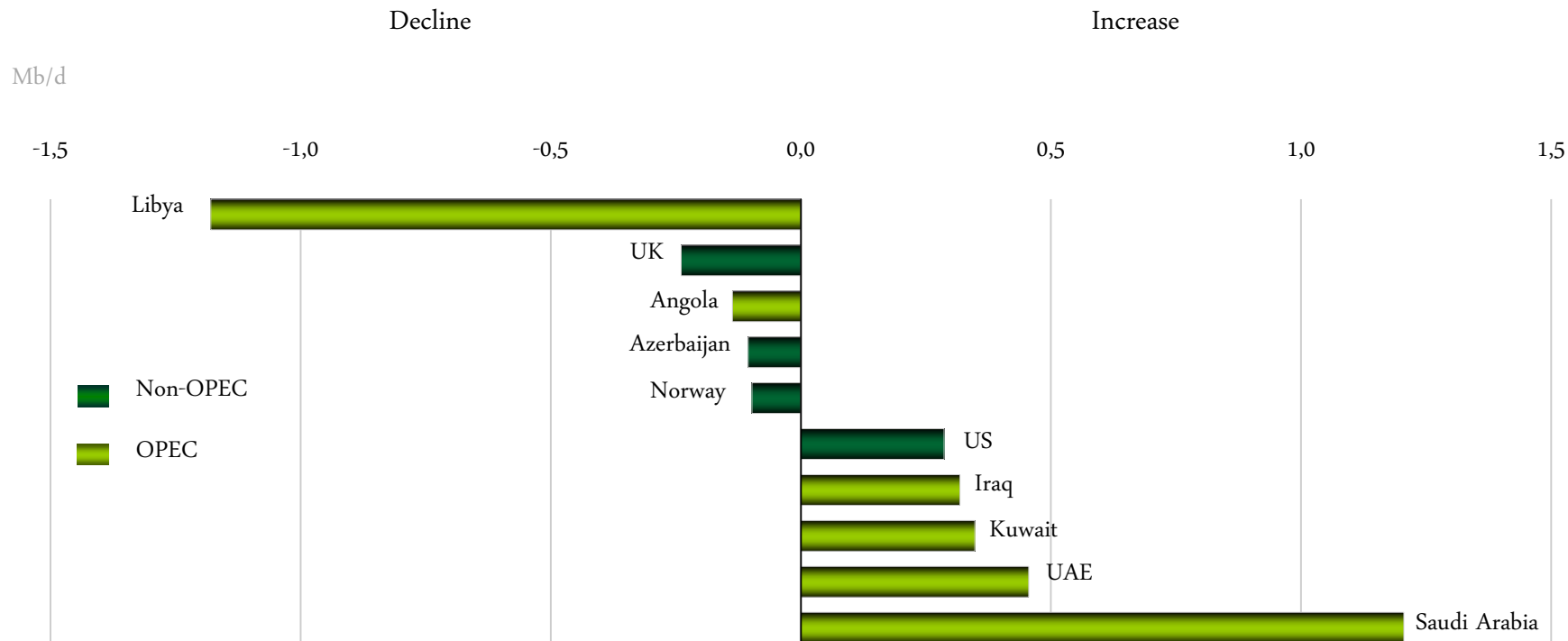


Dated Brent and WTI





Oil production growth in 2011

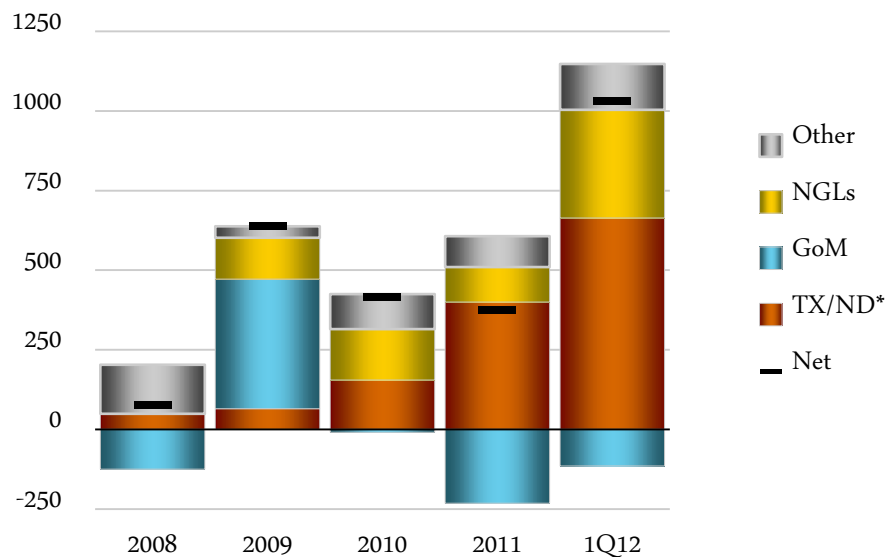


US supply



US supply

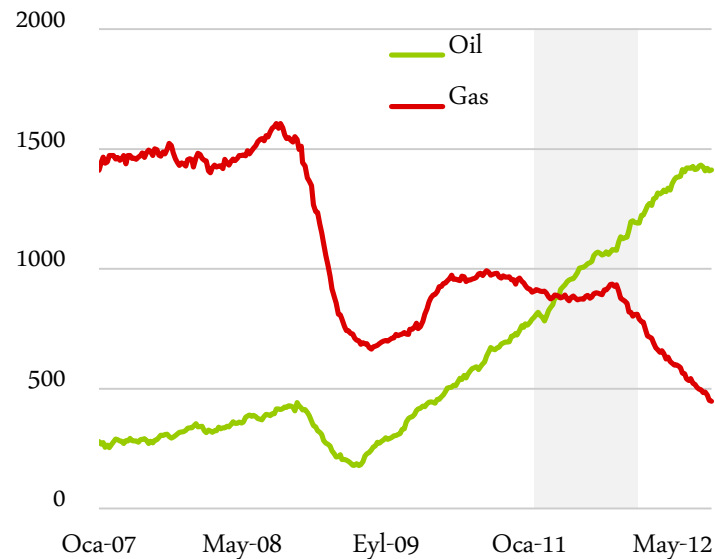
Annual change, Kb/d



*Texas and North Dakota

US rig counts

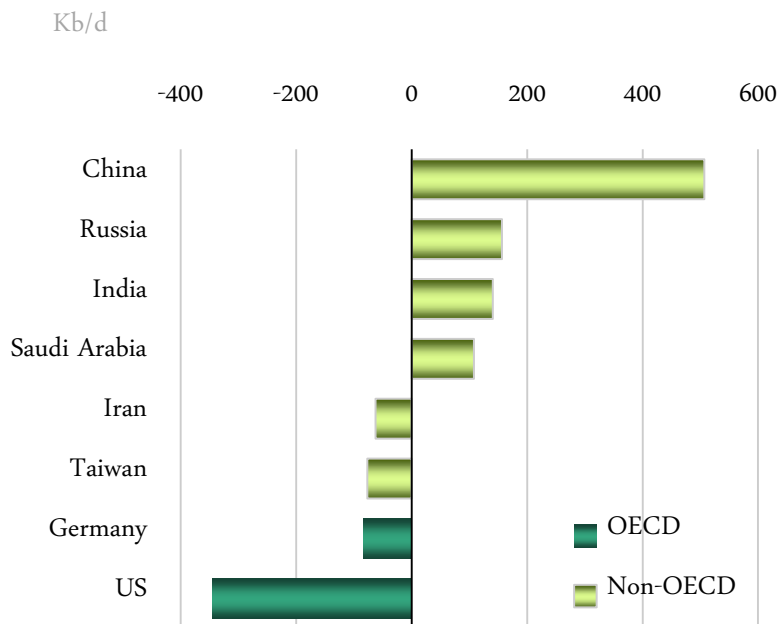
Rigs



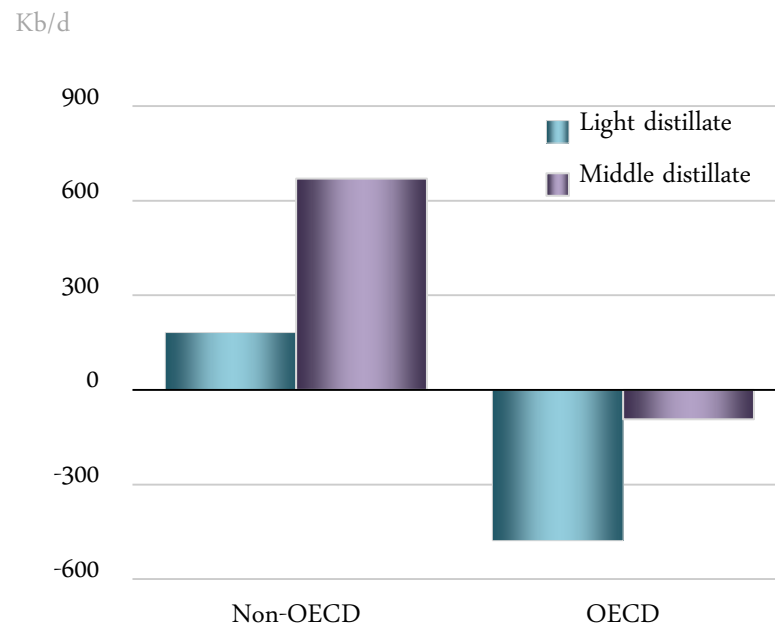


Oil consumption growth in 2011

Largest changes



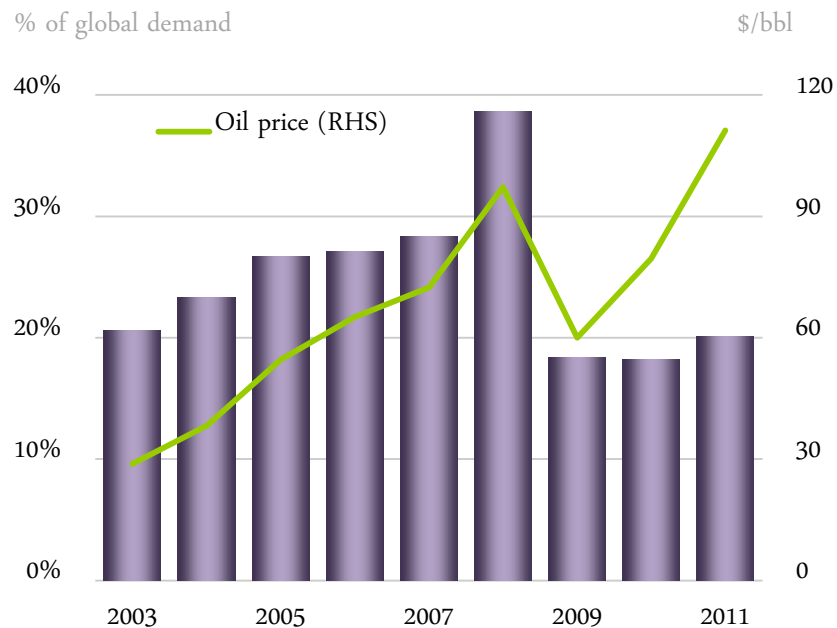
Regional growth by fuel type



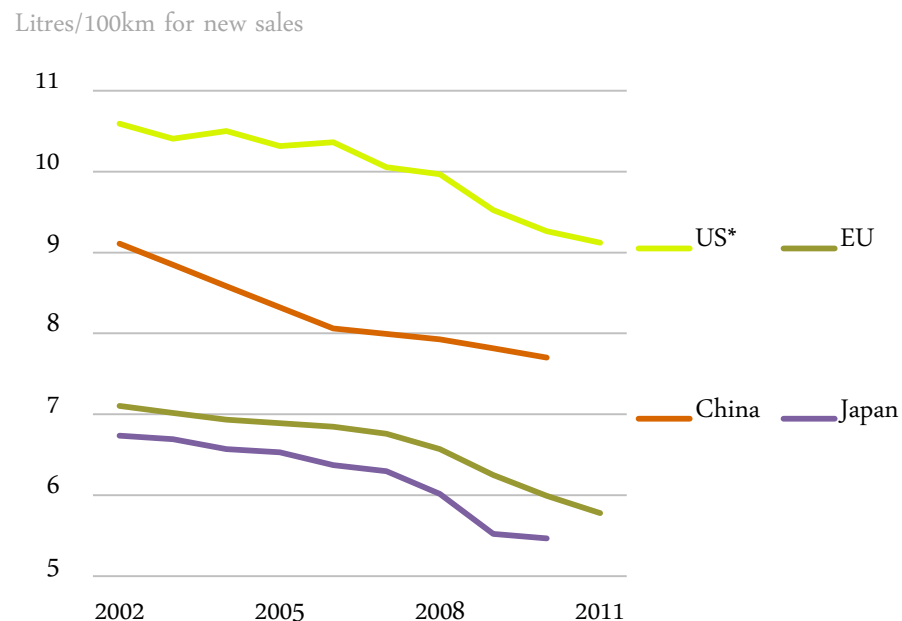


Limits to oil consumption growth

Subsidised consumption



Vehicle fuel economy



* Includes light trucks

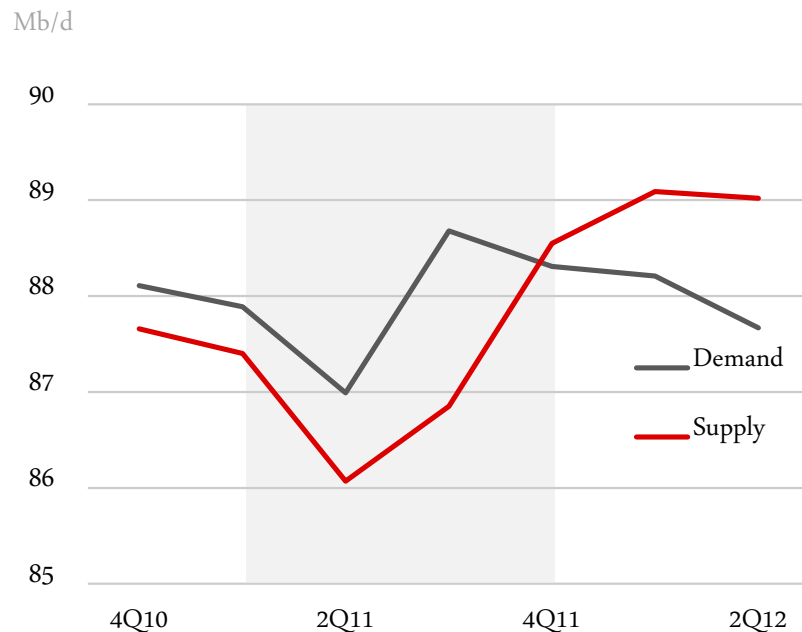
Source: includes data from the International Council for Clean Transportation and the US Environmental Protection Agency

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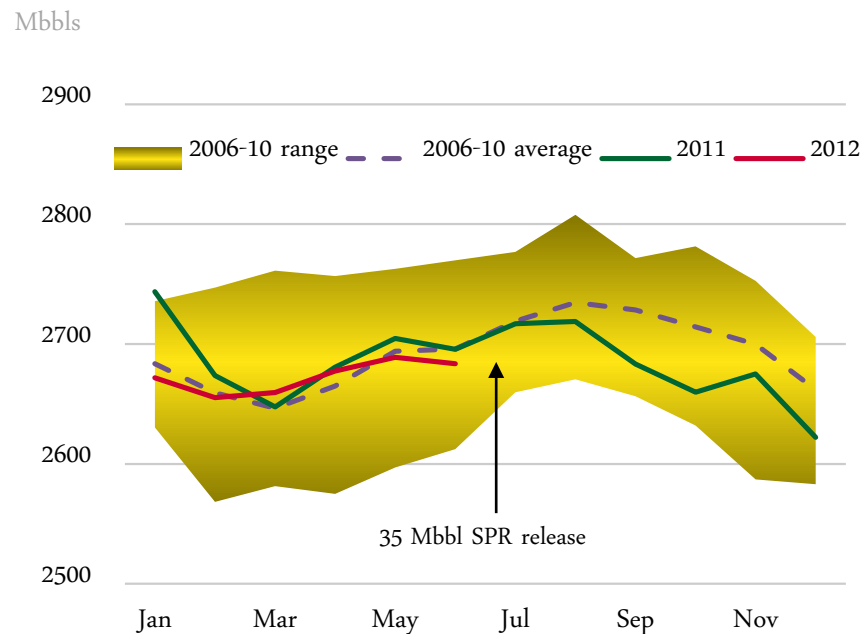


Oil consumption and production

World liquids demand and supply



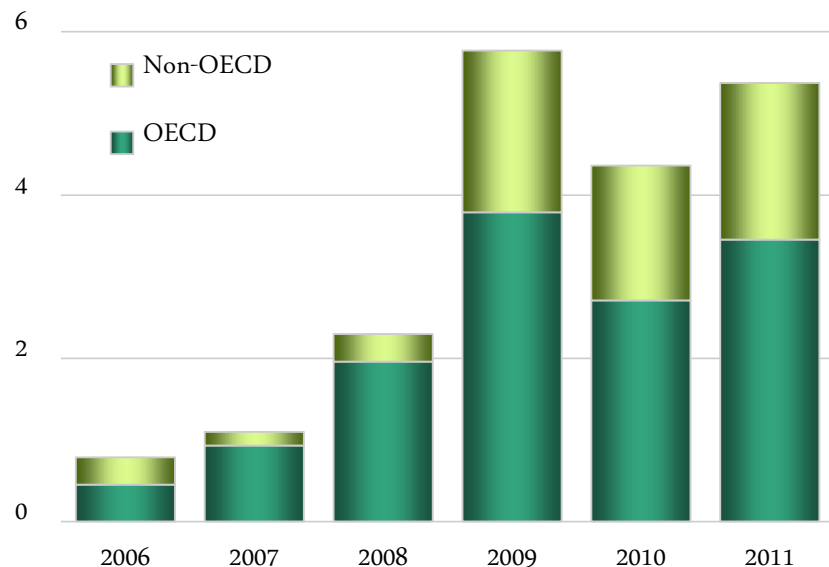
OECD commercial oil stocks



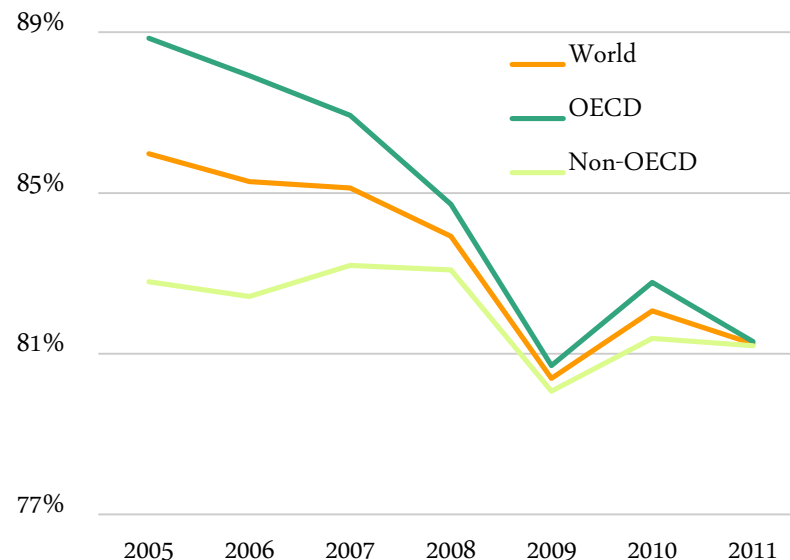
Refining: spare capacity and utilisation

Cumulative spare capacity growth

Mb/d since 2005



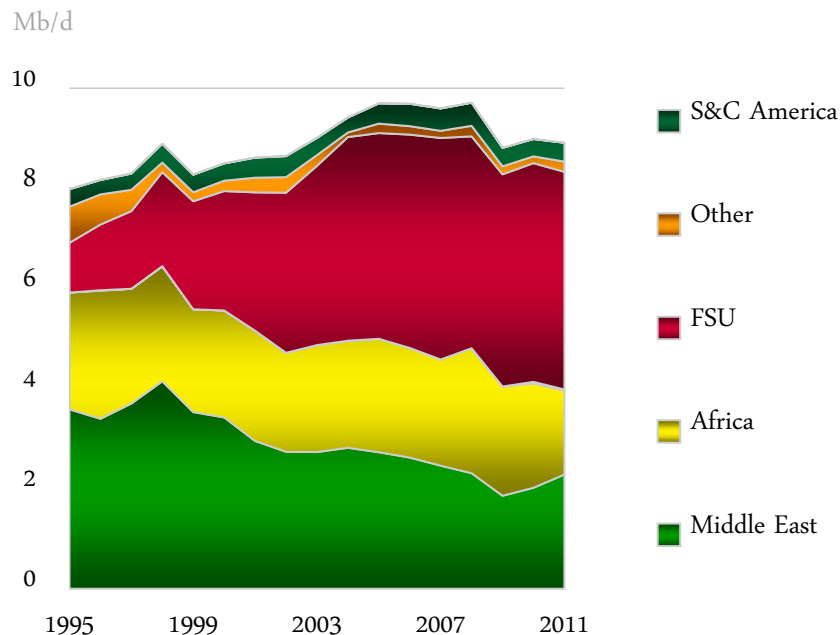
Refinery utilisation



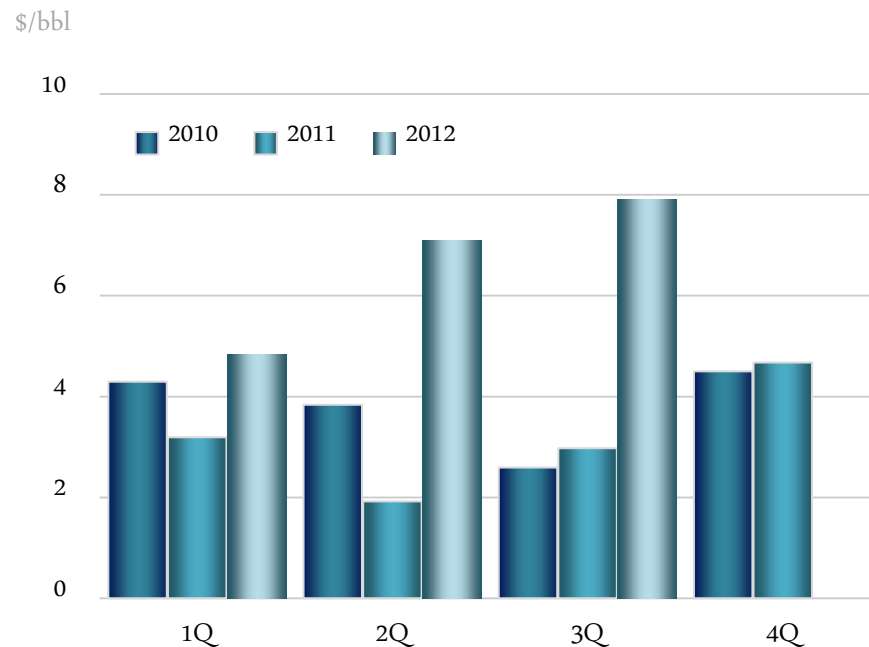


Crude oil trade and refining margins

European crude imports



NW Europe cracking margins

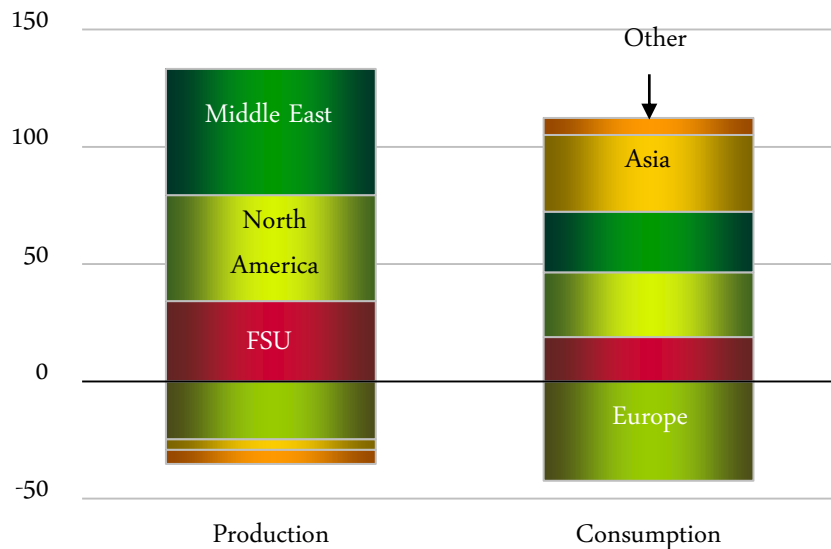




Natural gas markets in 2011

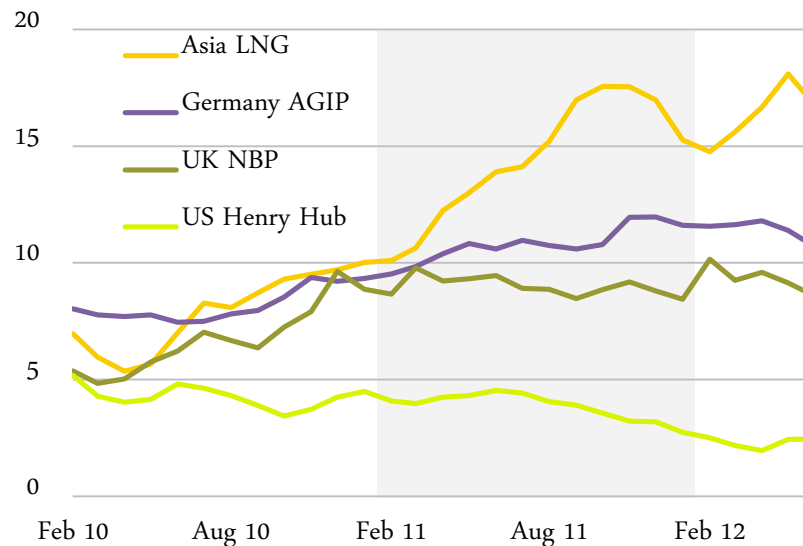
Production and consumption growth

Annual change, Bcm



Regional gas prices

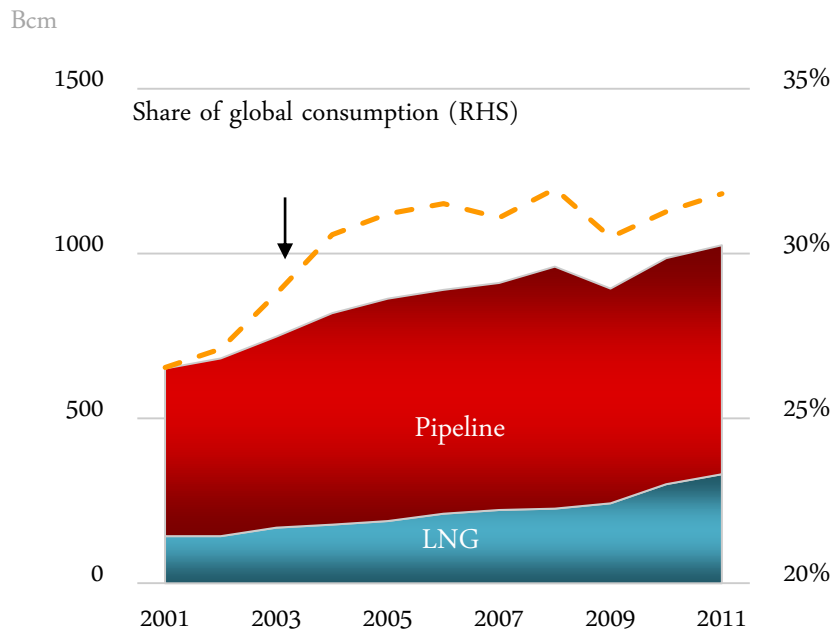
\$/Mmbtu





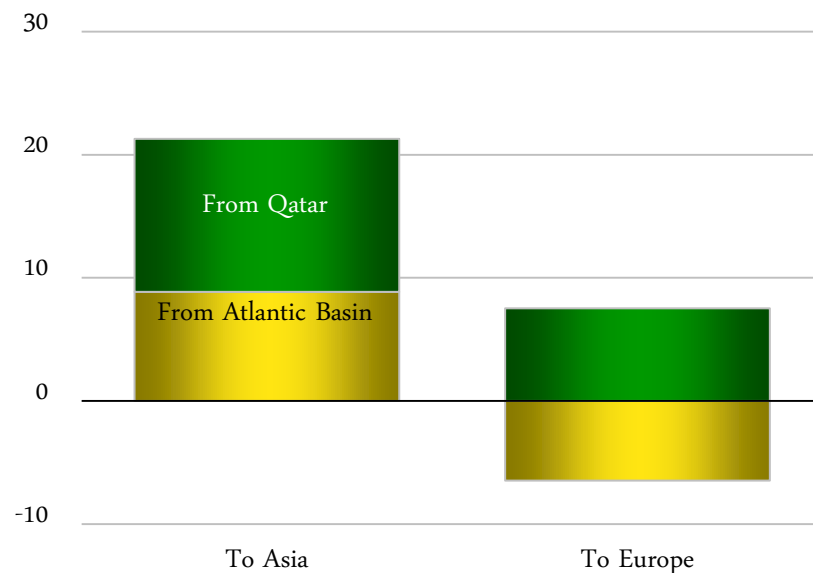
Global gas trade

Gas exports



LNG import growth in 2011

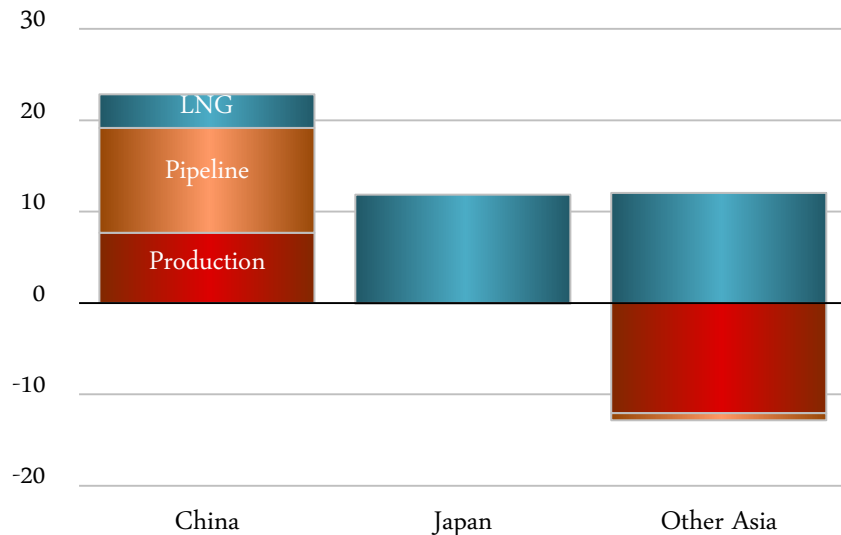
Annual change, Bcm



Natural gas in Asia and Europe in 2011

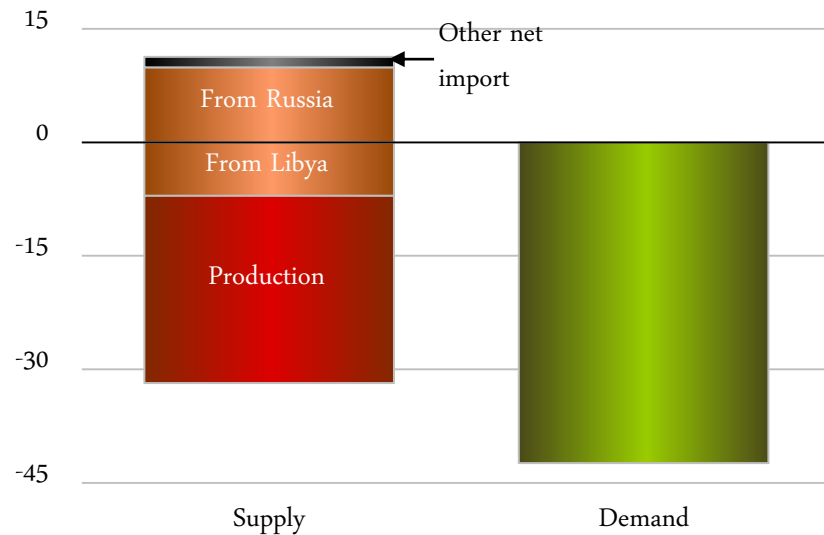
Asia supply growth

Annual change, Bcm



Europe supply and demand growth

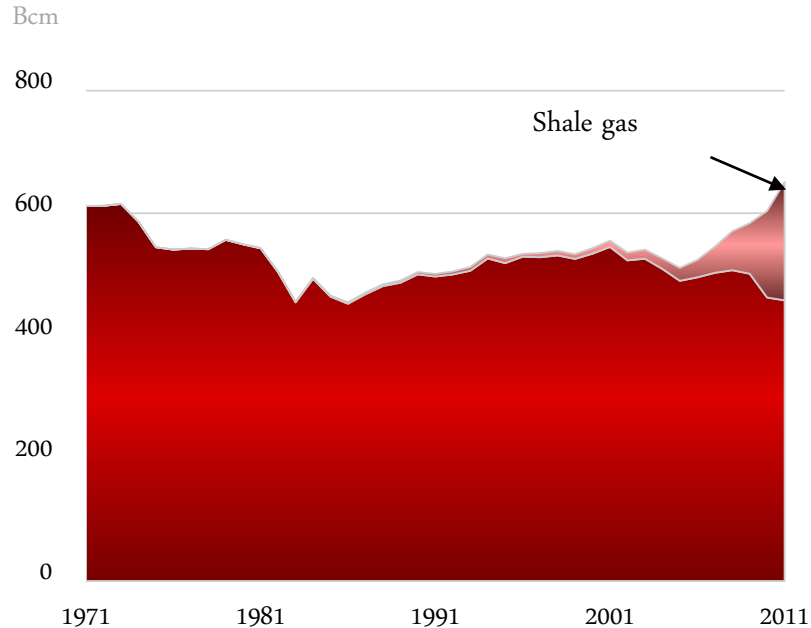
Annual change, Bcm



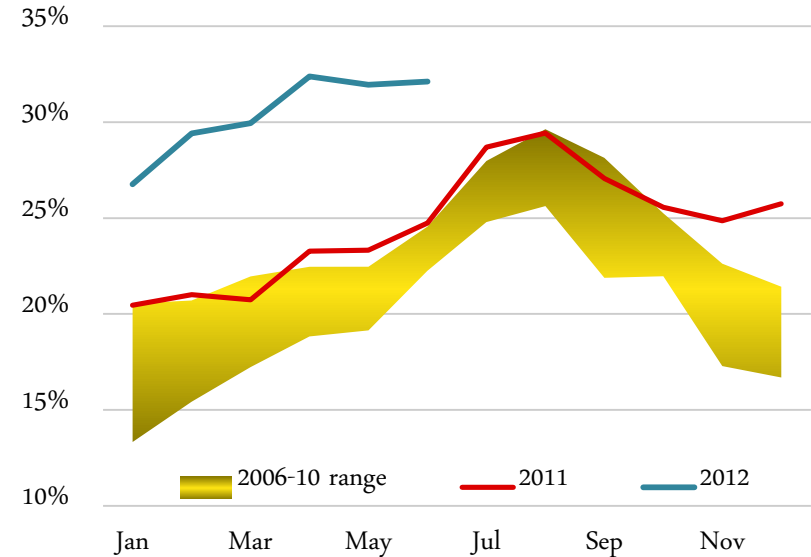
US natural gas market



Production



Gas share in power generation

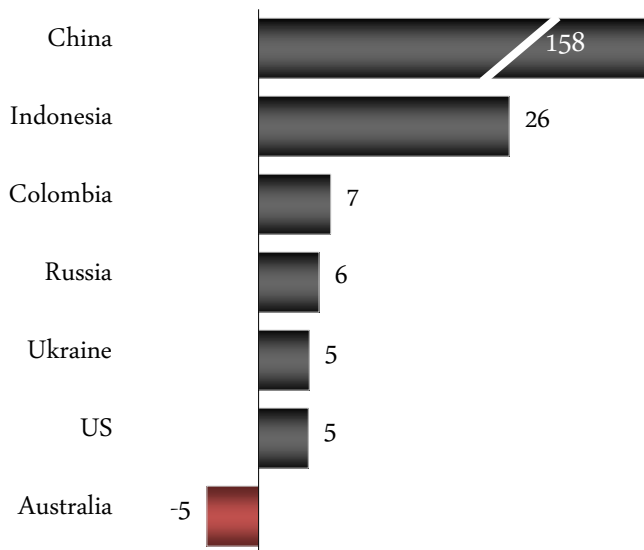




Coal growth in 2011

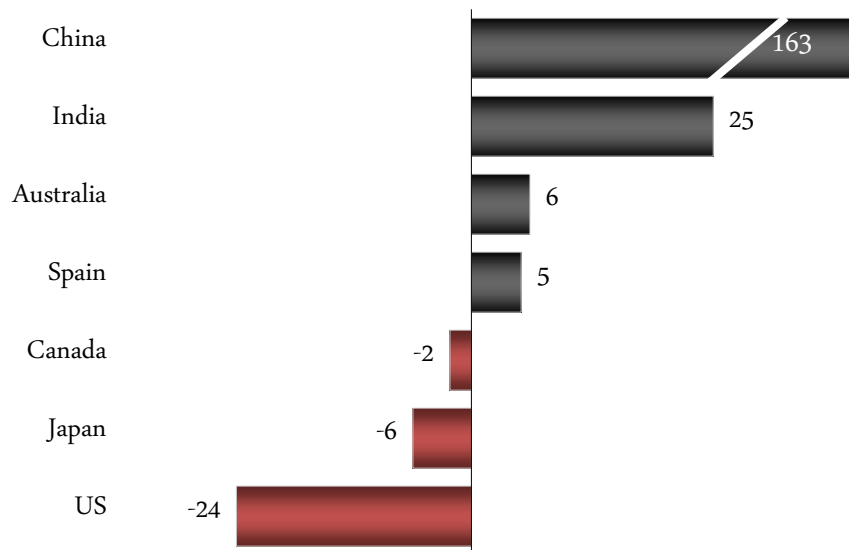
Largest changes in production

Mtoe



Largest changes in consumption

Mtoe

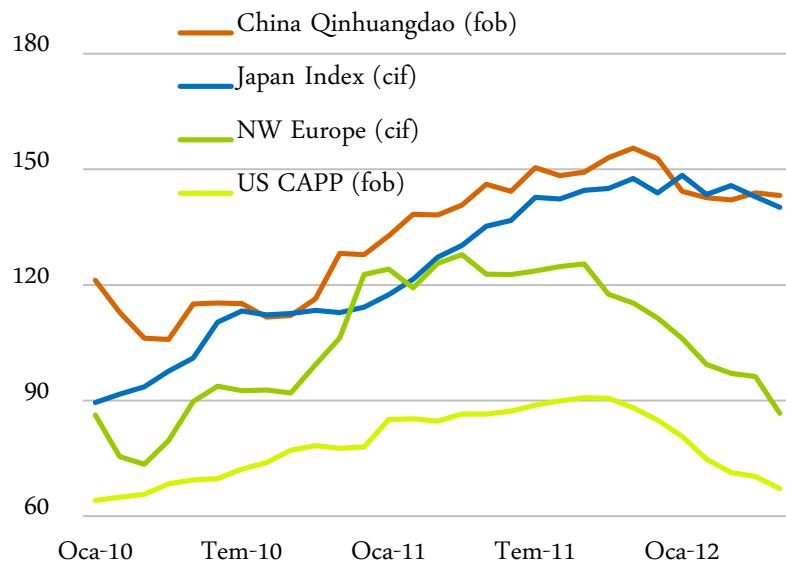




Coal prices and trade

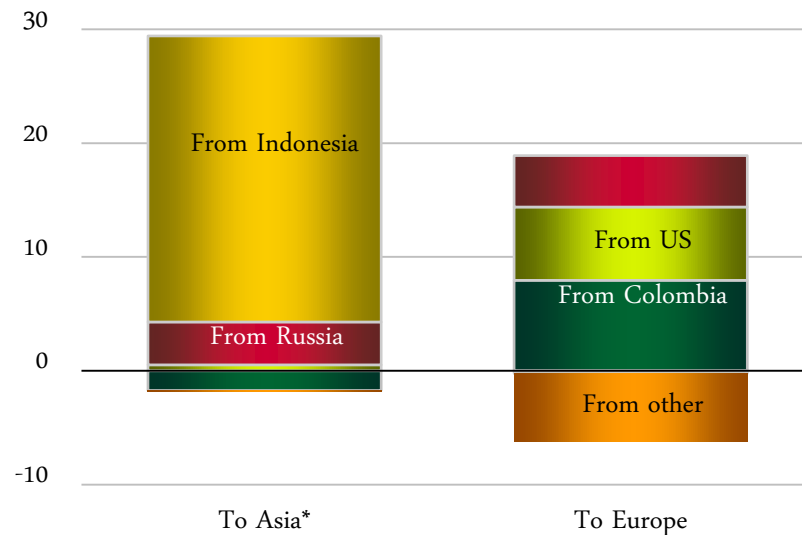
Steam coal prices

\$/tonne



Import growth in 2011

Annual change, Mtoe



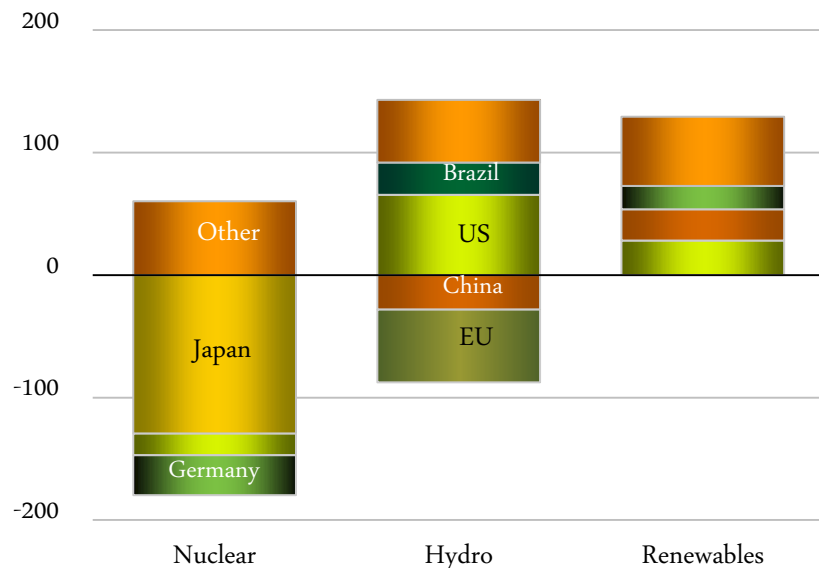
*China, India, Japan, South Korea, Hong Kong, Taiwan



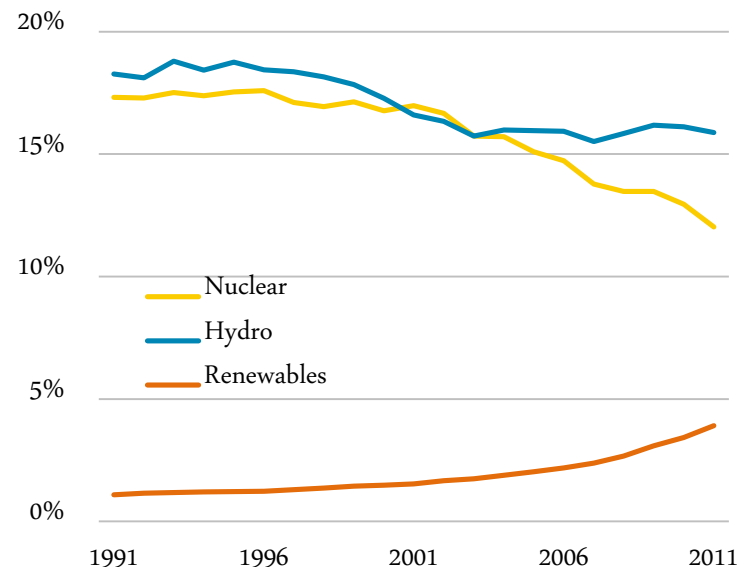
Nuclear, hydro and other renewables in power

Output changes in 2011

Annual change, TWh



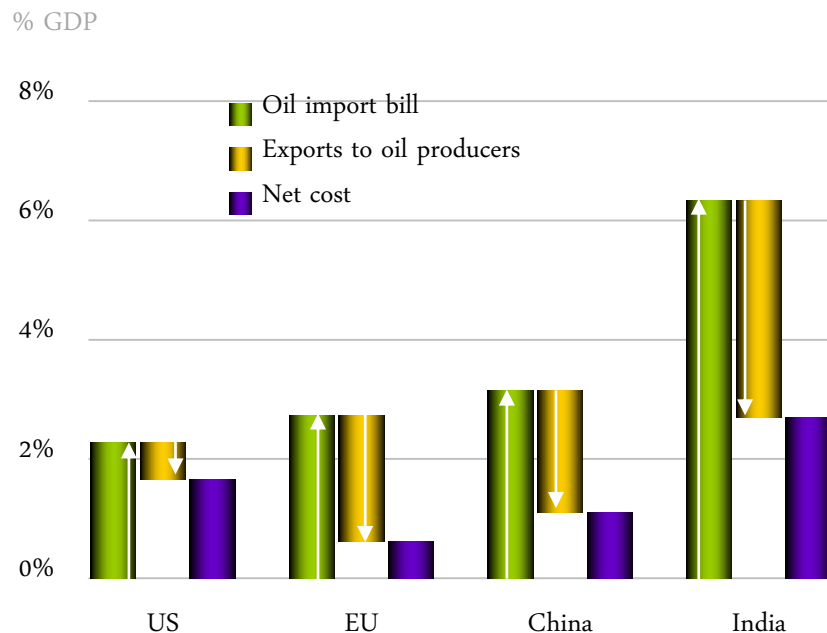
Shares of world power generation



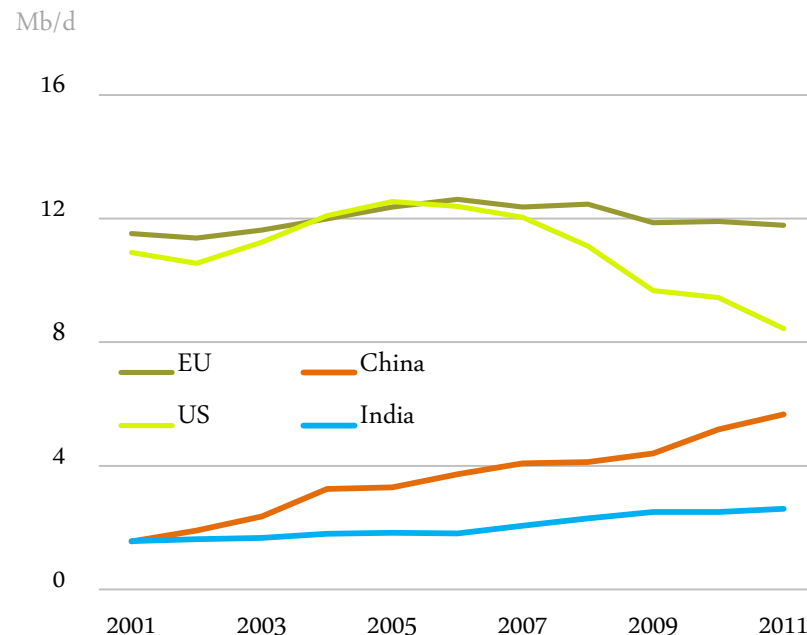


Impact of oil prices on the economy

2011 net oil import bill



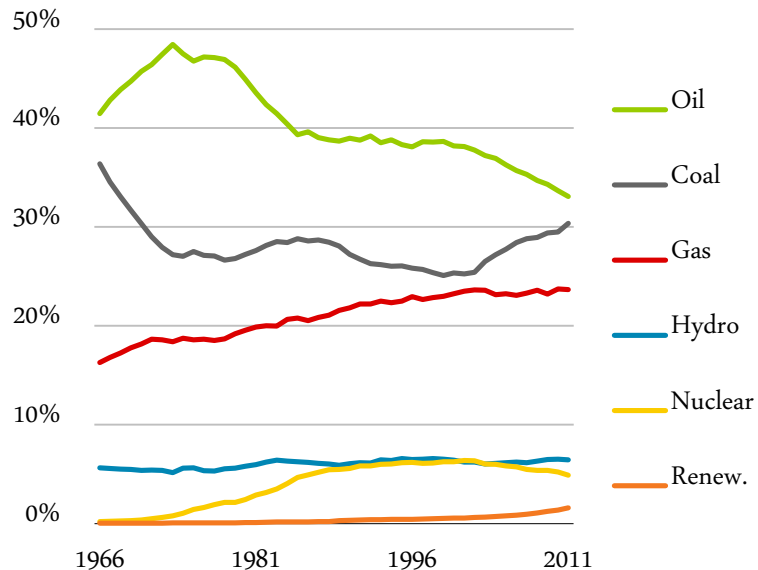
Net oil imports



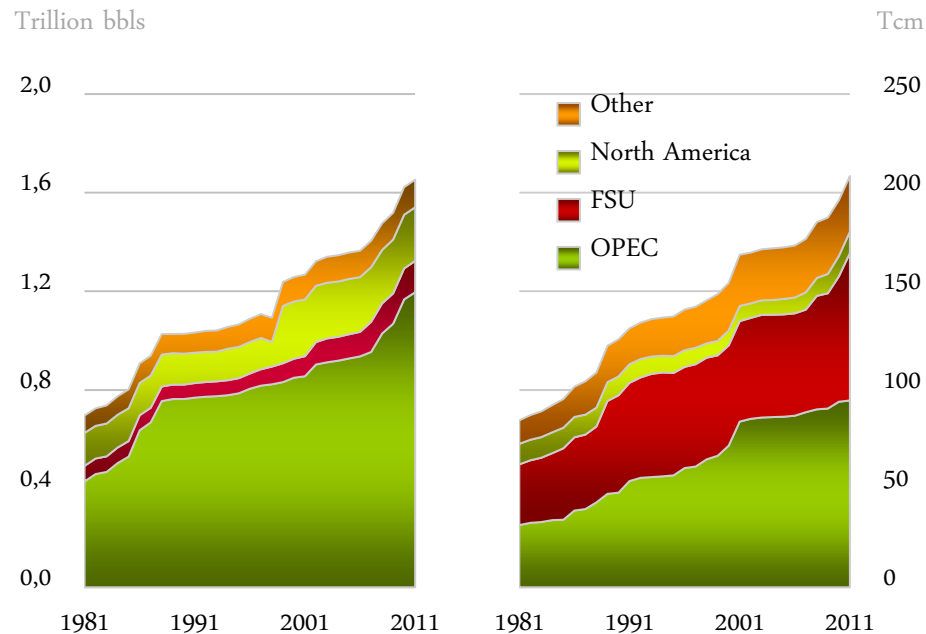
Long-term trends



Shares of world primary energy



Oil and gas reserves



Conclusion

- 2011: supply response, inter-fuel substitution, trade optimisation
- Key: flexible markets
- Lessons: diversity of supply, global integration

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