



Energy markets – the short and the long term

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Zürich, 18. Oktober 2012



Outline

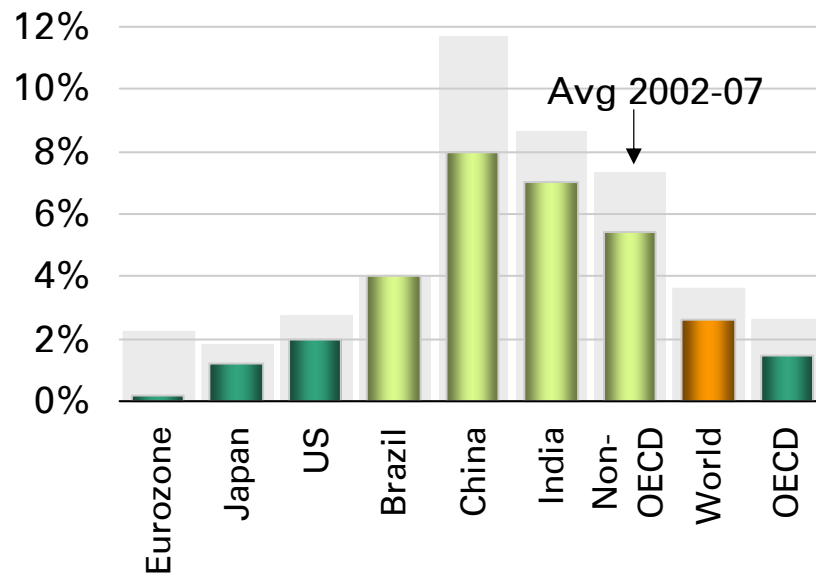
- The economy
 - A year of disruptions
 - Long term implications
 - Conclusion
-



Global growth: slow and on life support

2013 GDP and the good old days

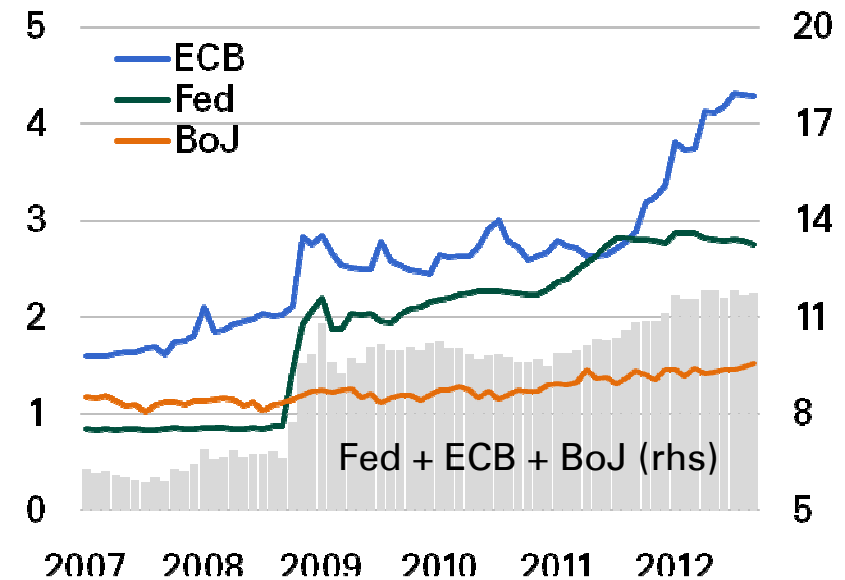
Annual change, %



Central Bank liquidity

Trillion \$US*

% of world GDP



*At constant 2011 exchange rates

Source: includes data from Thomson Reuters Datastream

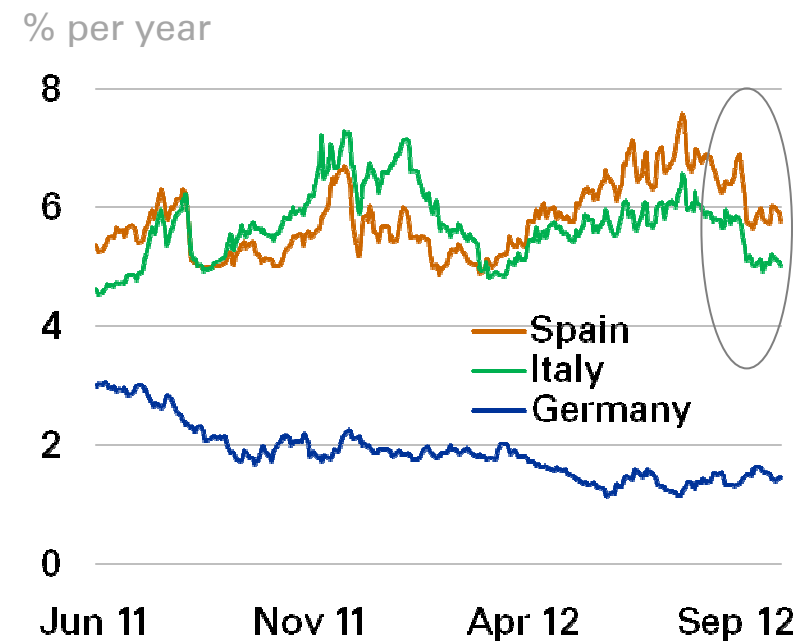


Europe struggles into recession

Eurozone indicators



10-year benchmark bond yields



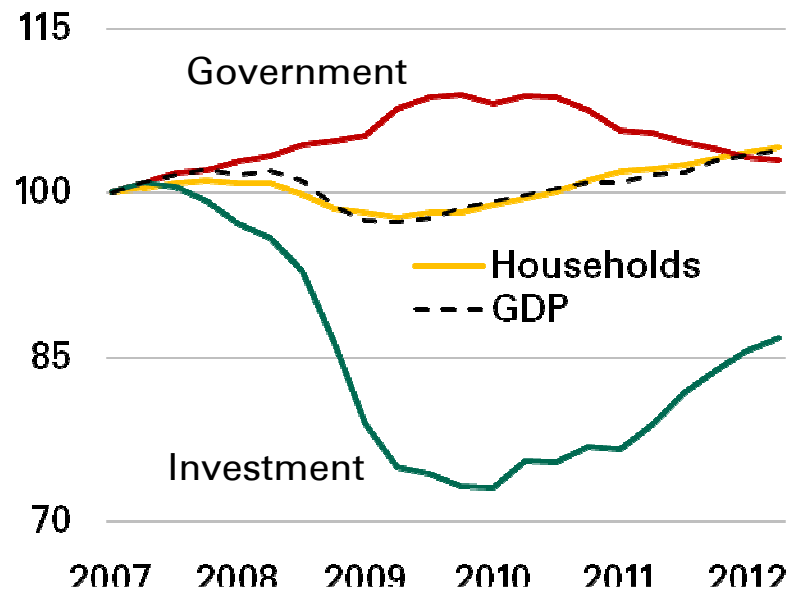
Source: includes data from Thomson Reuters Datastream



The US grows slowly

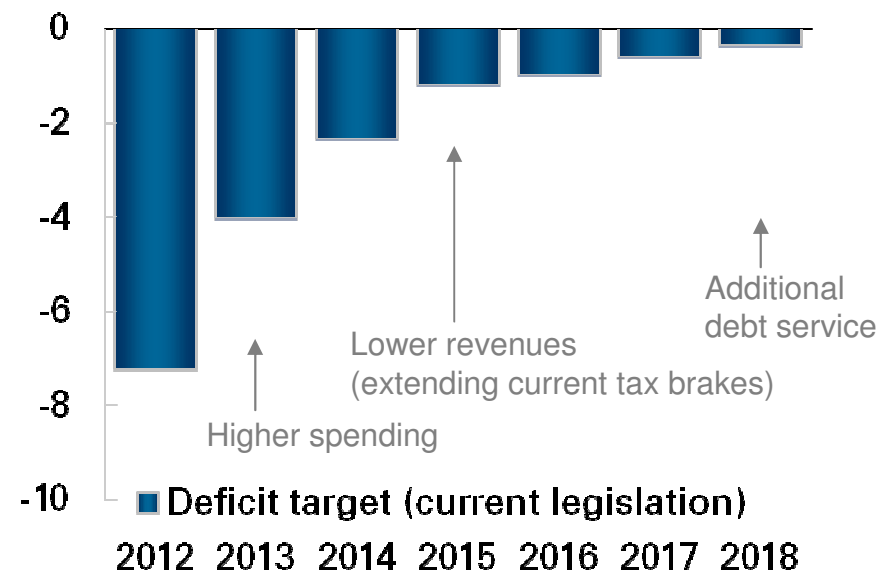
Components of domestic demand

Index: 1Q 2007=100



"Fiscal cliff"

Budget deficit, % of GDP



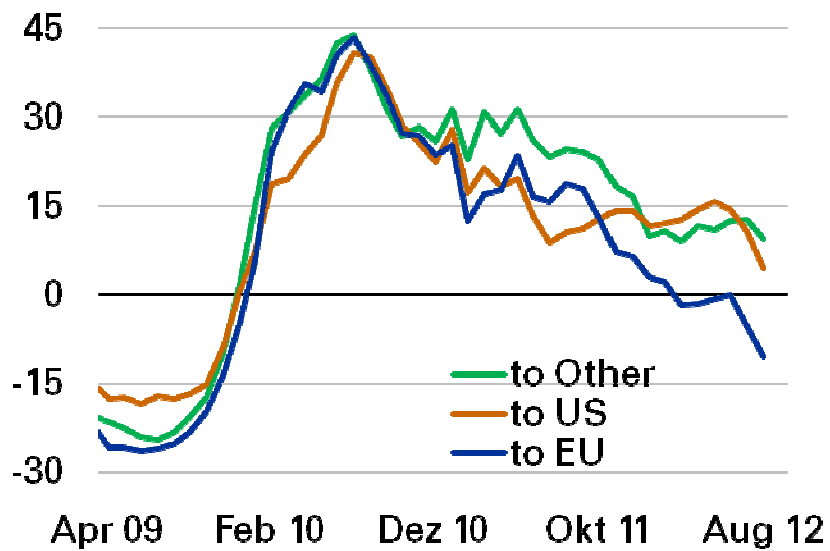
Source: includes data from CBO August 2012 forecast and Thomson Reuters Datastream



The Chinese economy slows

Exports

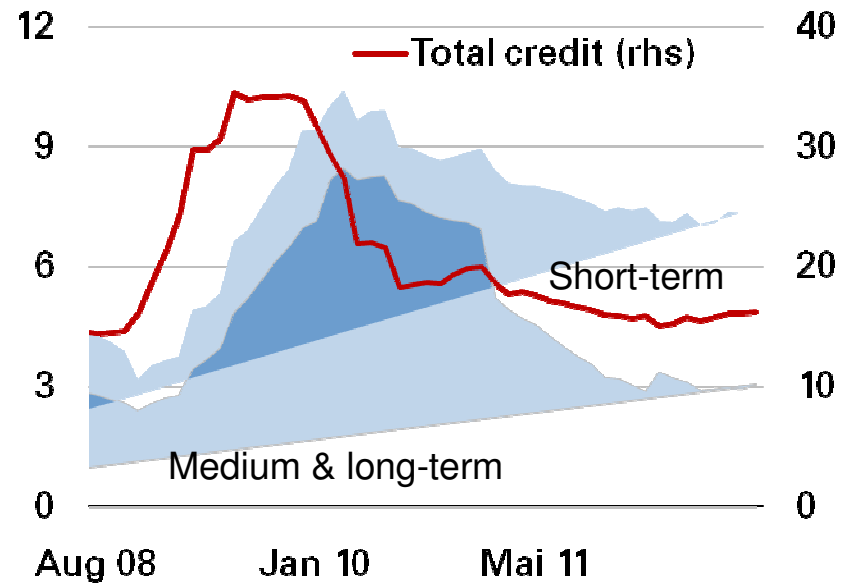
% y-o-y, 3m ma.



Commercial bank loans

Change y-o-y, trillions of CNY

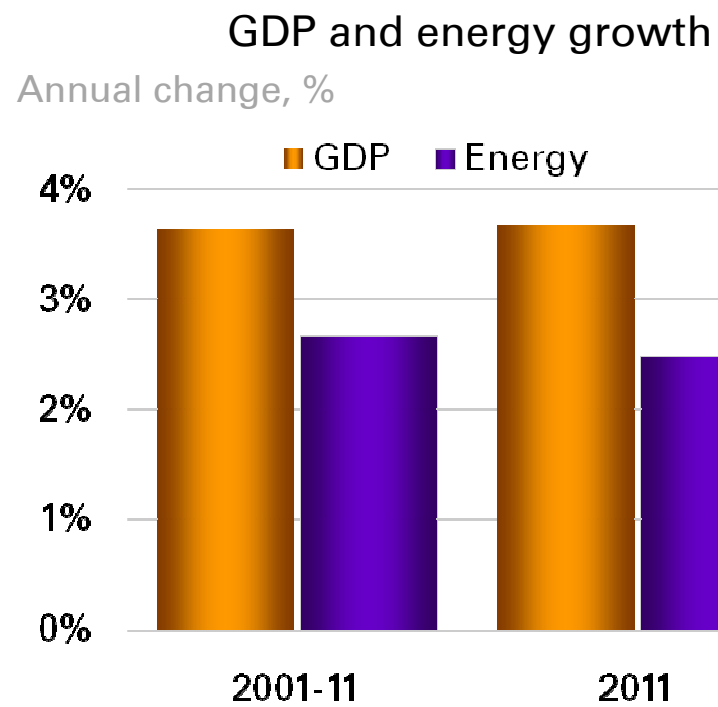
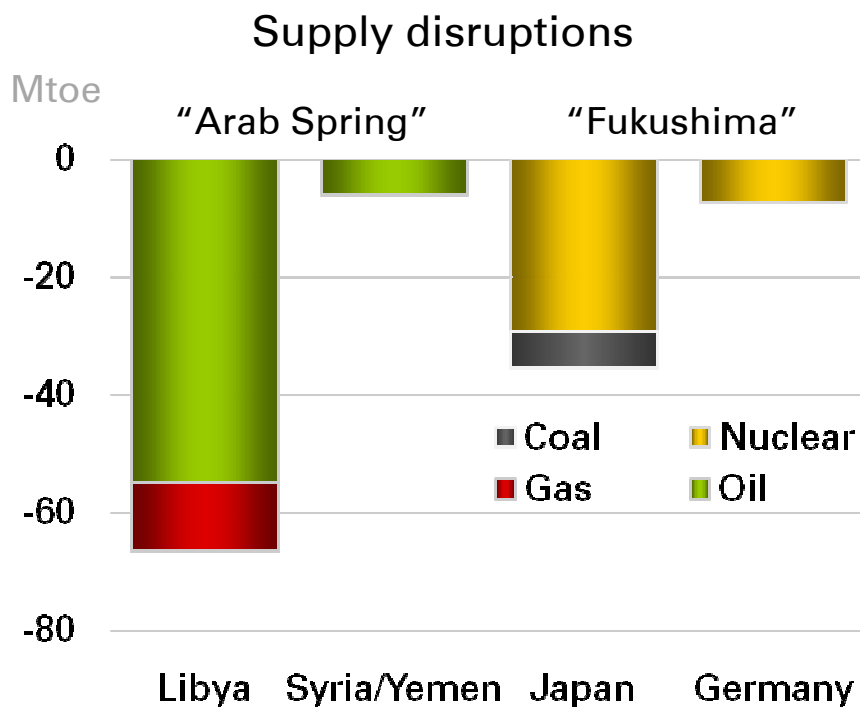
% y-o-y



Source: includes data from Thomson Reuters Datastream



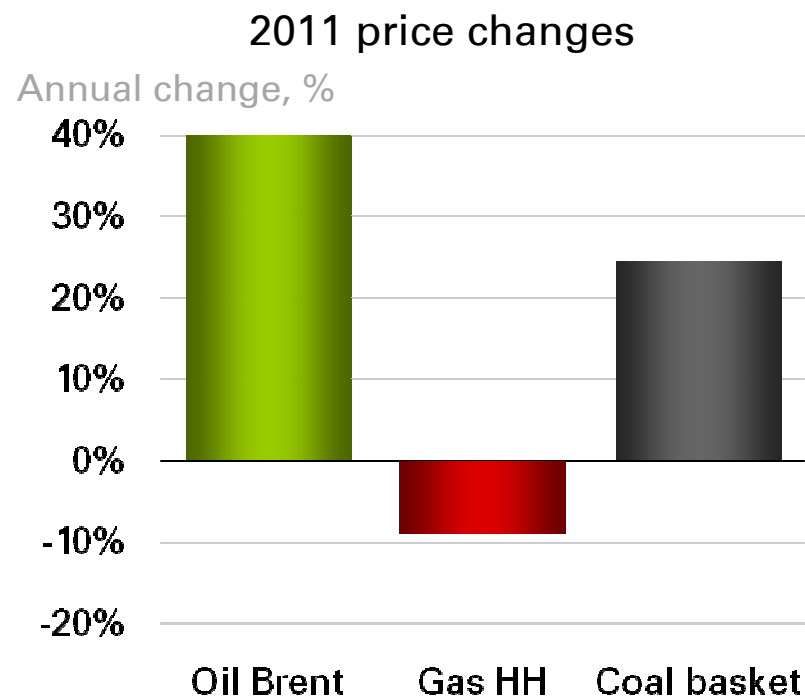
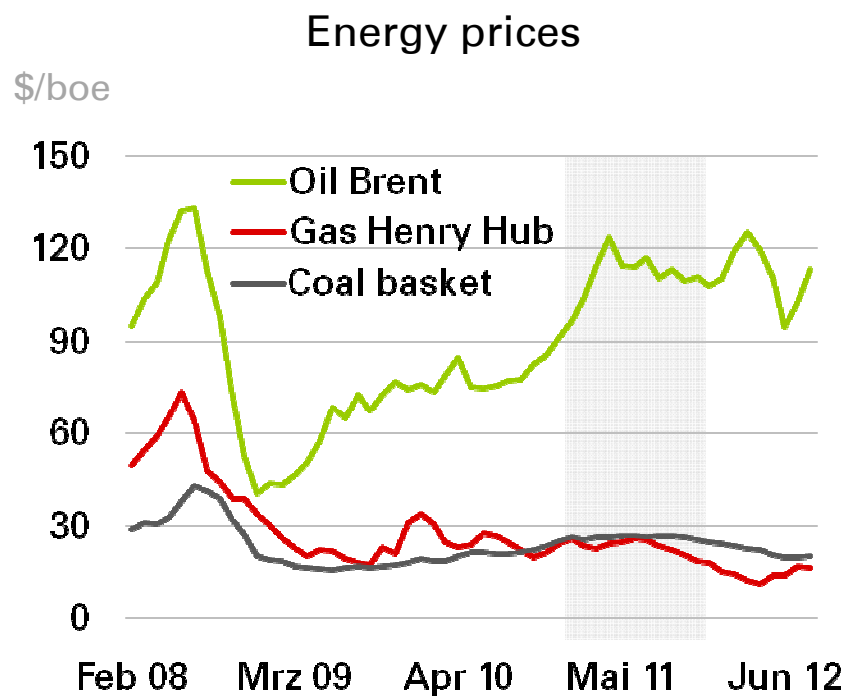
Energy in 2011 – disruptions and continuity



Source: includes data from Oxford Economics



Energy prices



Source: includes data from Platts and McCloskey

The Fukushima Adjustment

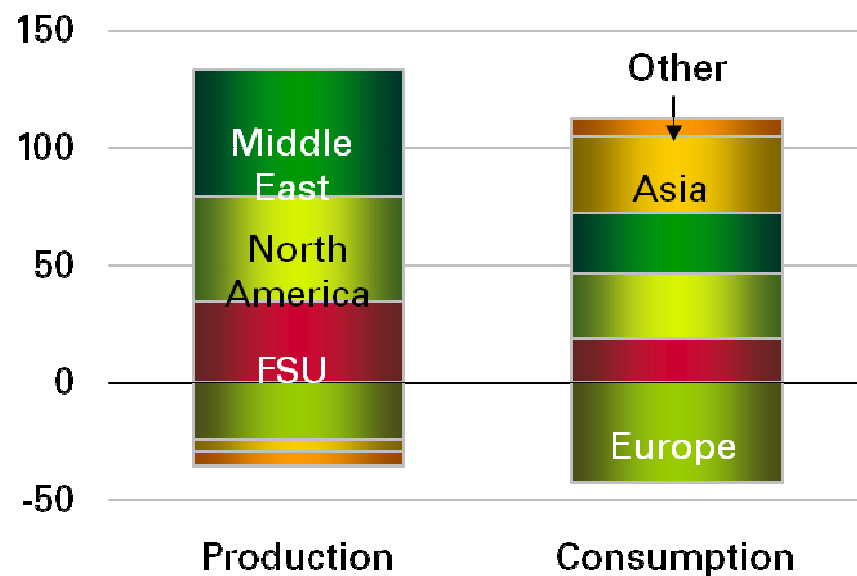




Natural gas markets in 2011

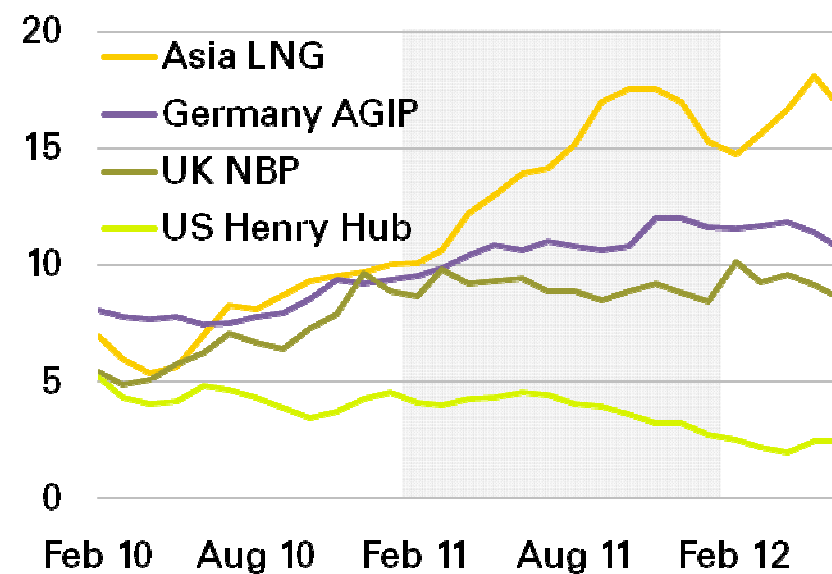
Production and consumption growth

Annual change, Bcm



Regional gas prices

\$/Mmbtu

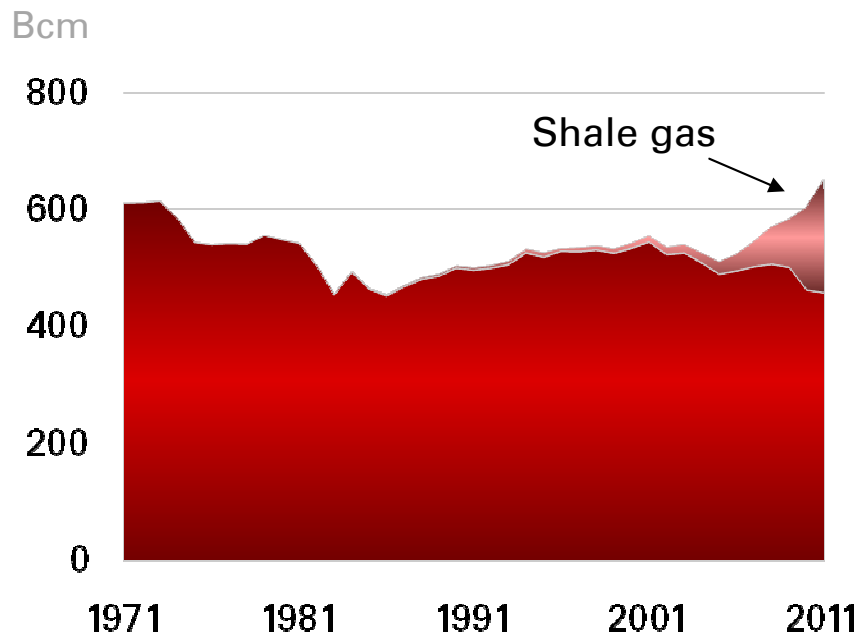


Source: includes data from Platts

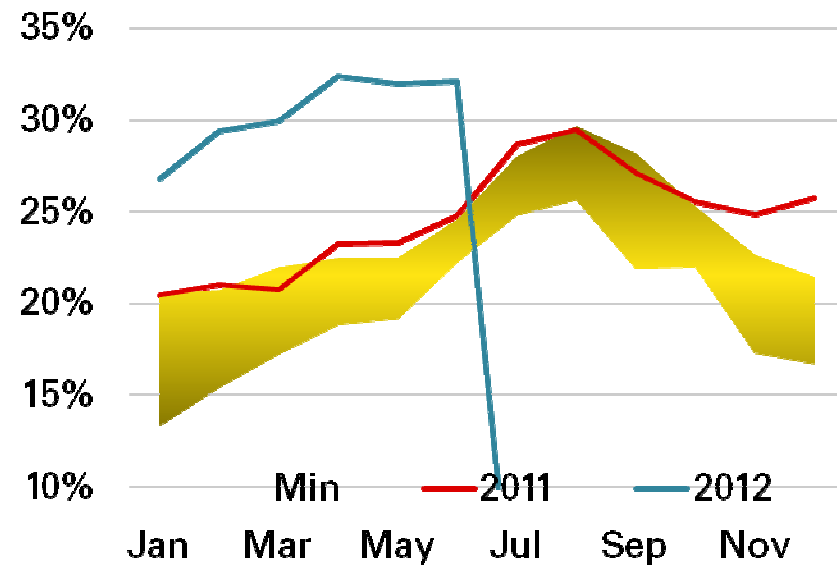
US natural gas market



Production



Gas share in power generation

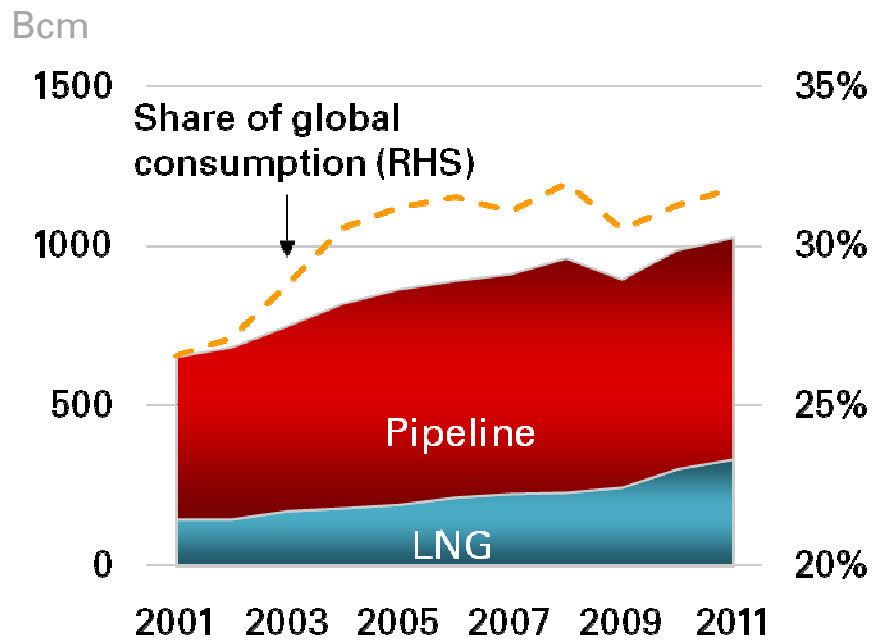


Source: includes data from Energy Information Administration

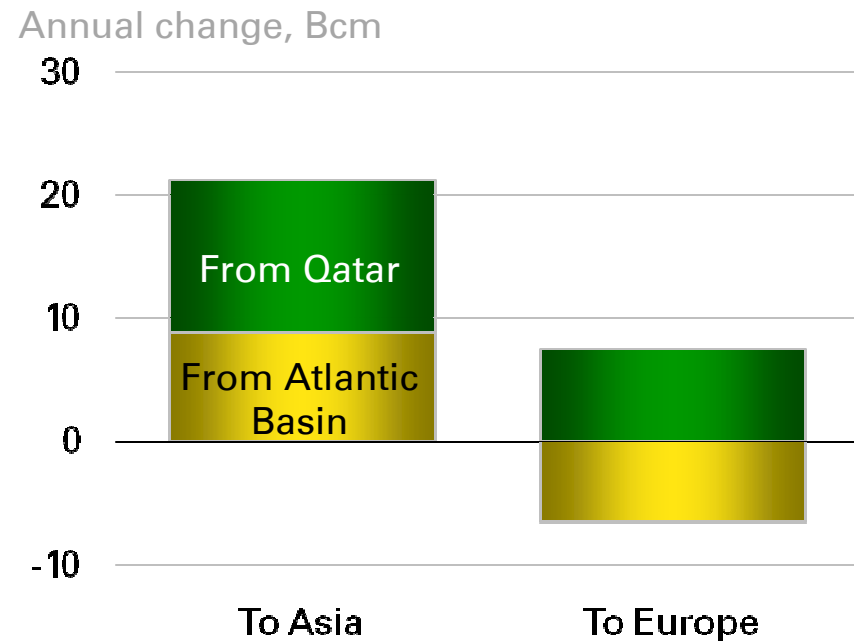
Global gas trade



Gas exports



LNG import growth in 2011

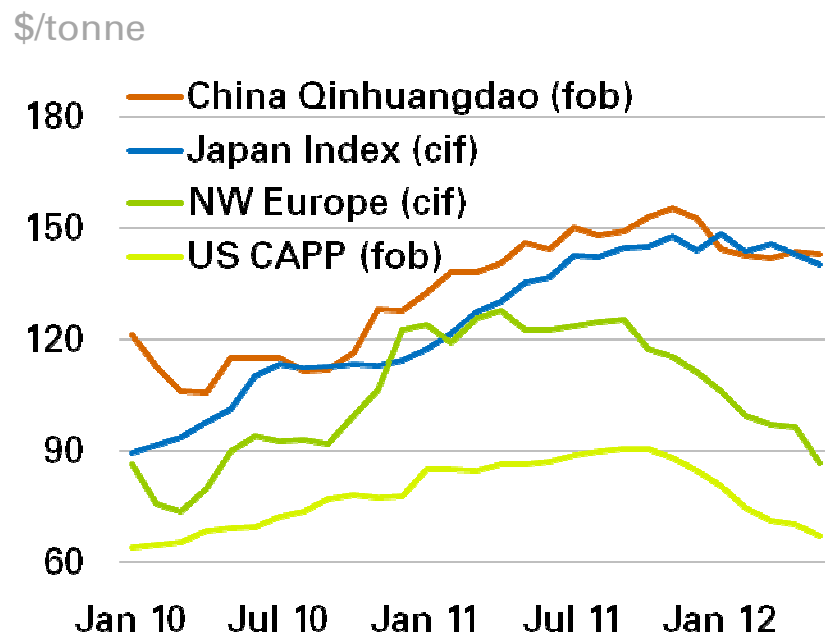


Source: includes data from Cedigaz, GIIGNL, CISStats, Poten, Waterborne



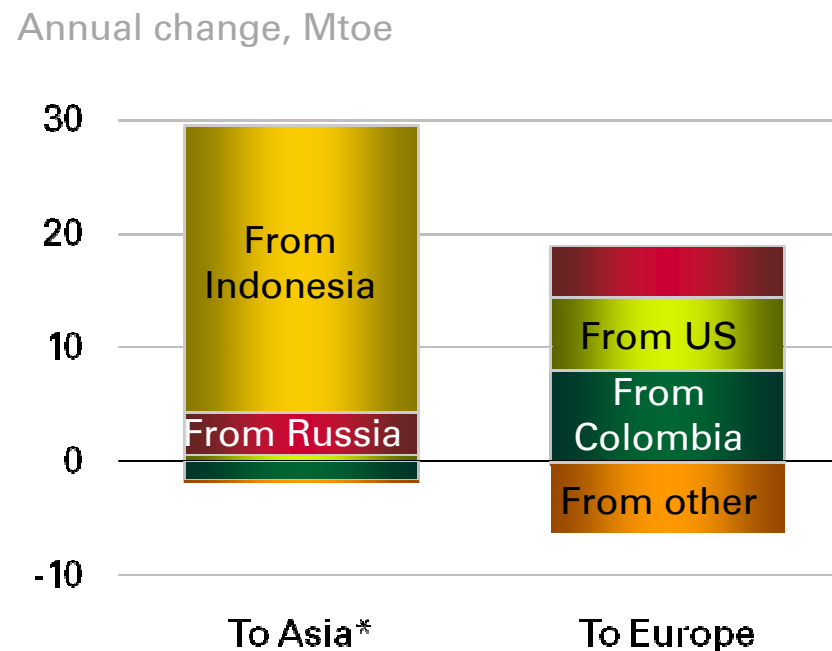
Coal prices and trade

Steam coal prices



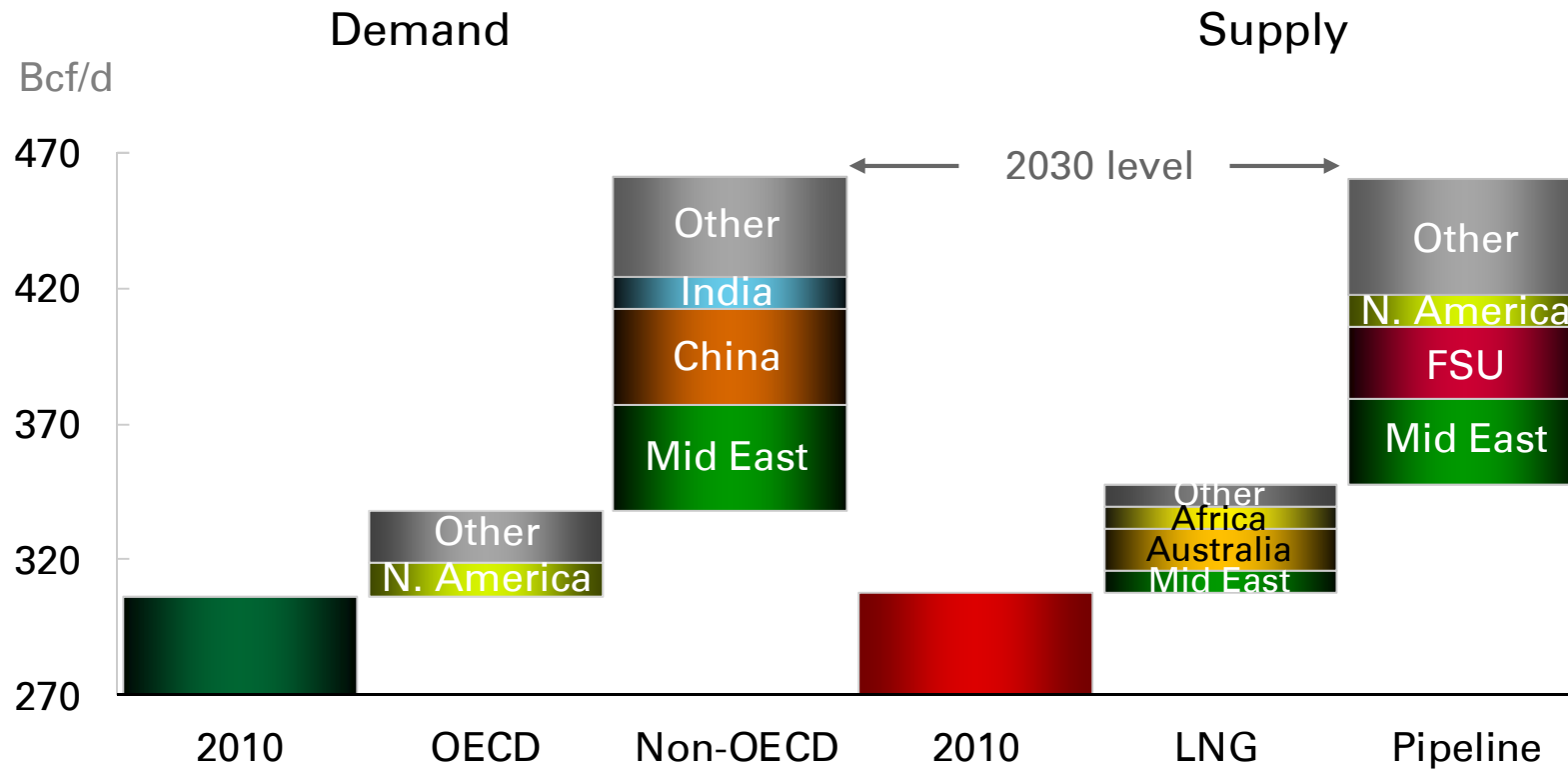
Source: includes data from McCloskey, Eurostat, IHS CERA

Import growth in 2011



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

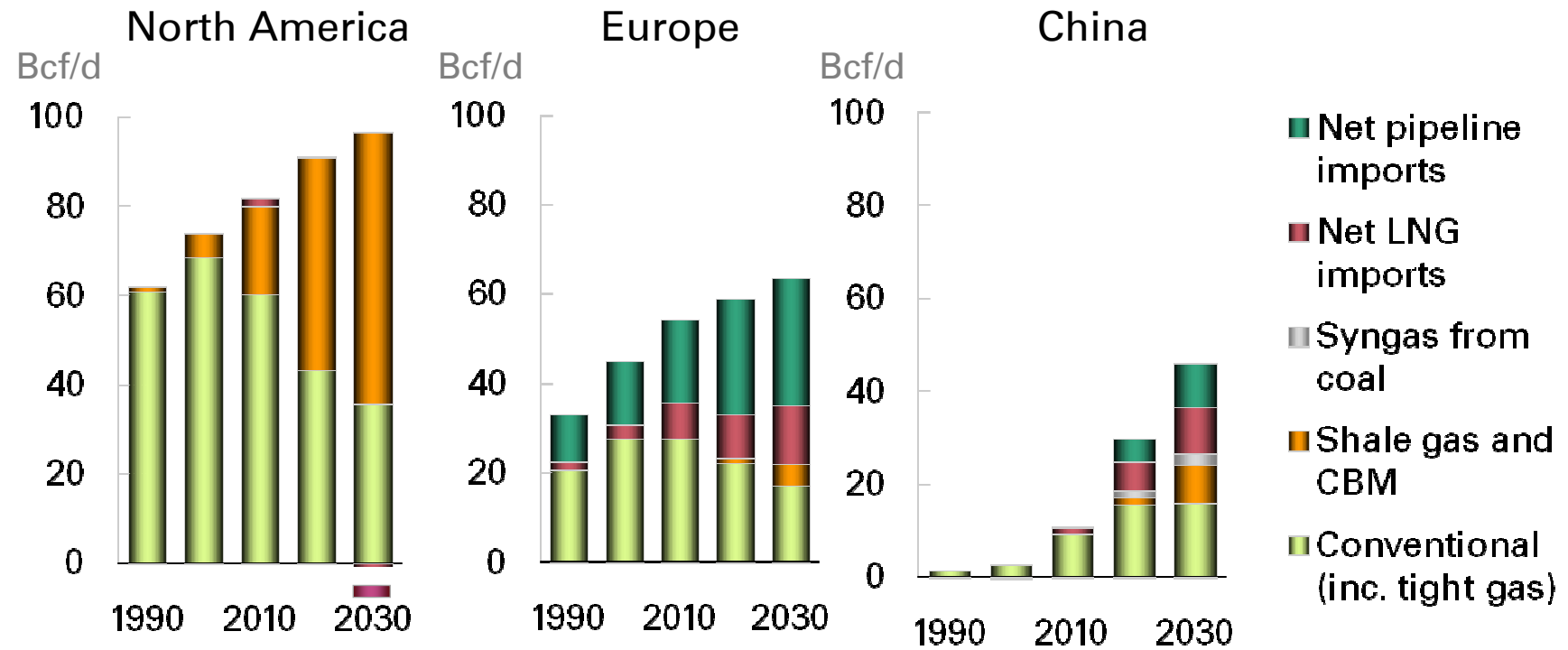
Gas demand growth concentrated in non-OECD



Unconventional gas will play a growing role



Gas supply by region



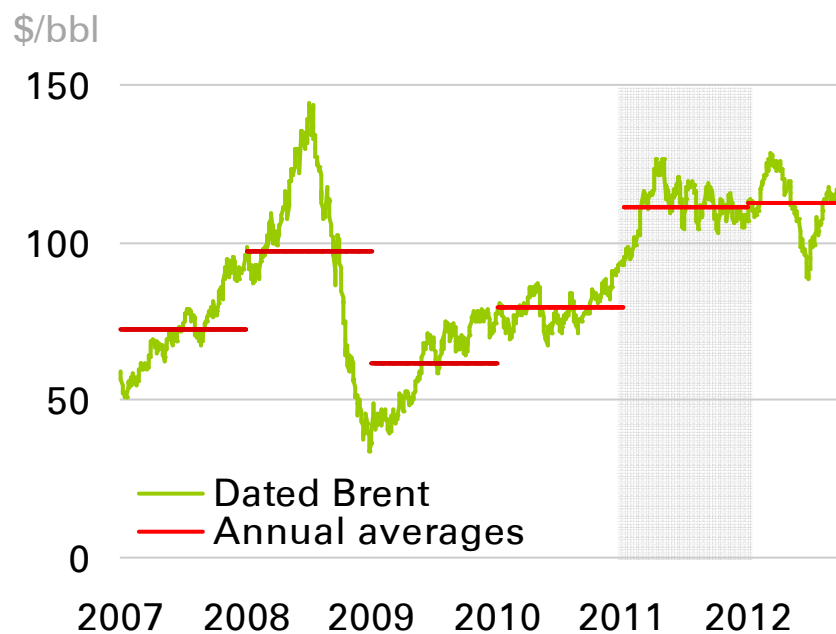
Oil markets and trends



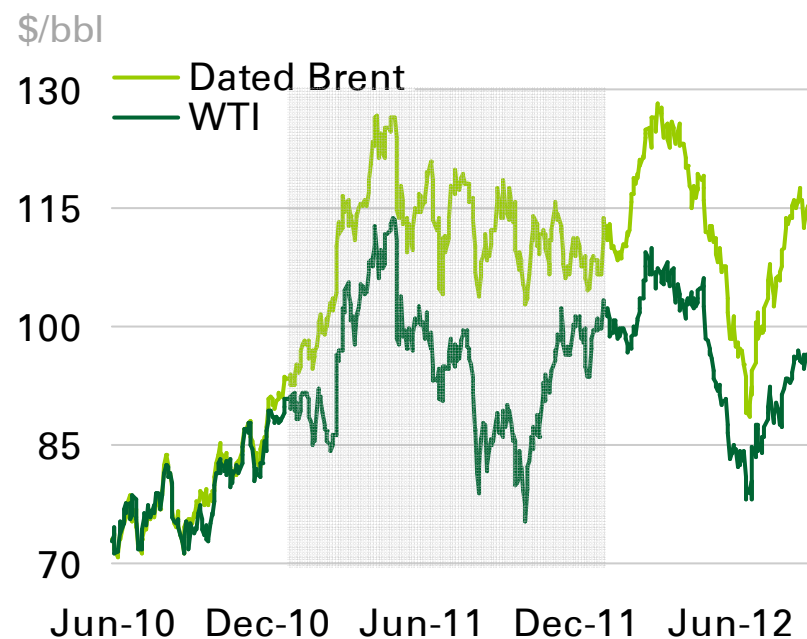


Crude oil prices

Dated Brent



Dated Brent and WTI

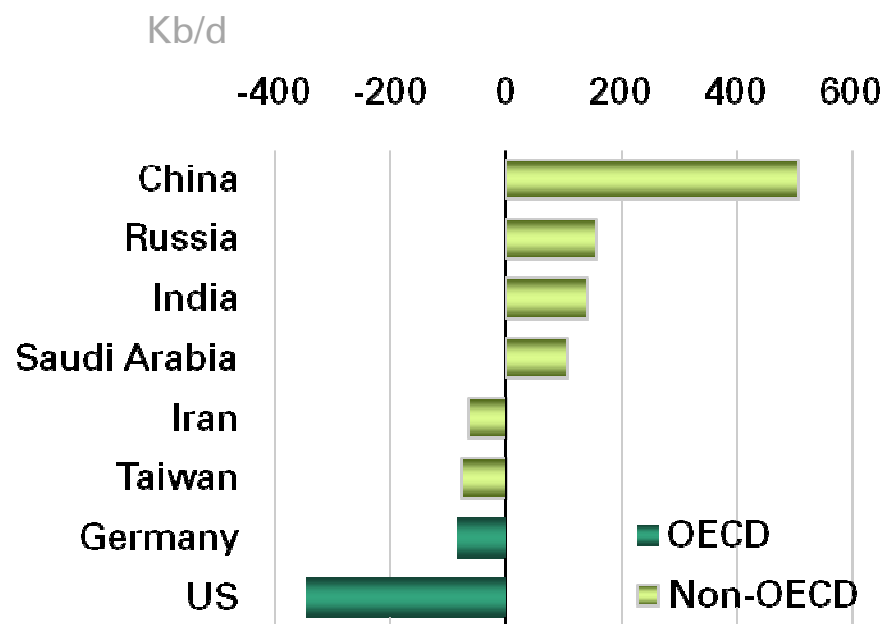


Source: includes data from Platts

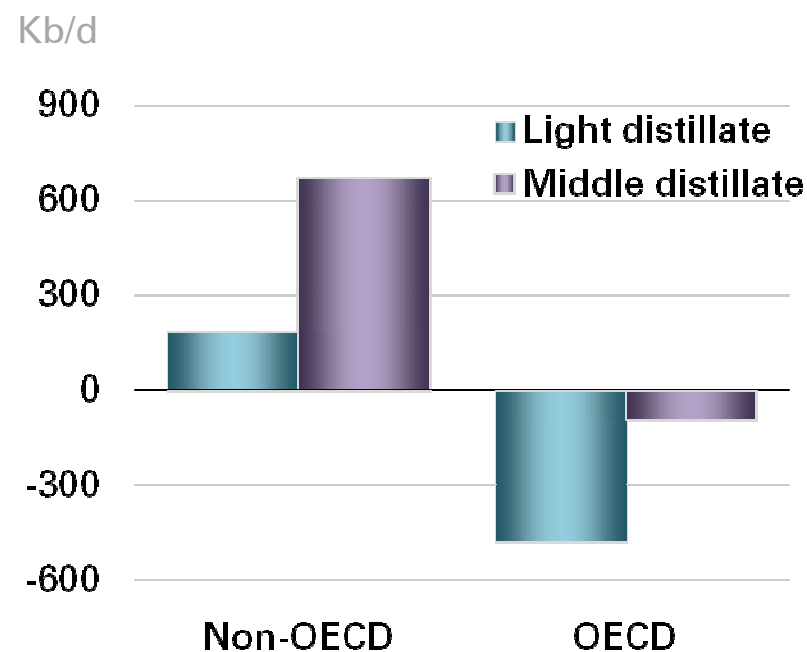


Oil consumption growth in 2011

Largest changes



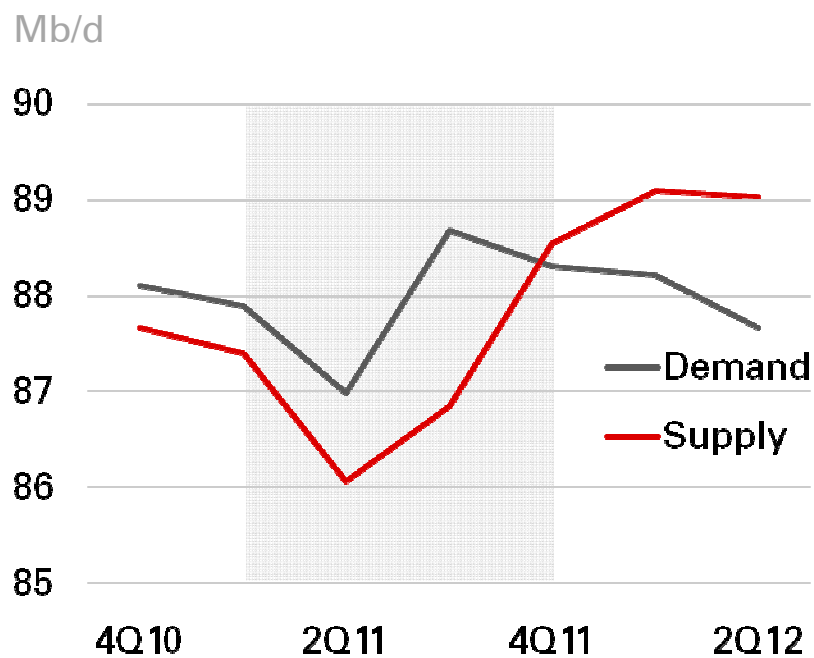
Regional growth by fuel type



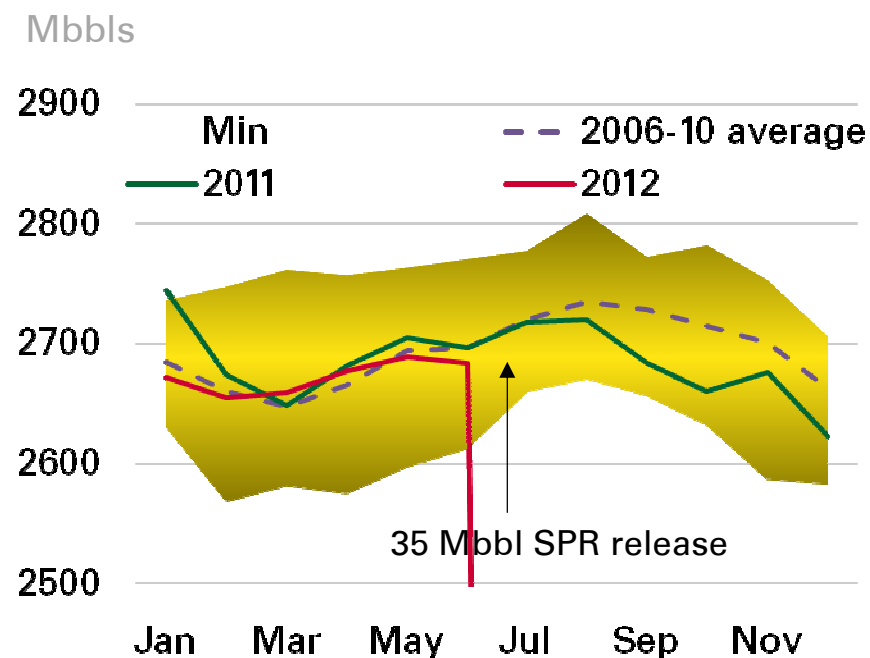


Oil consumption and production

World liquids demand and supply



OECD commercial oil stocks



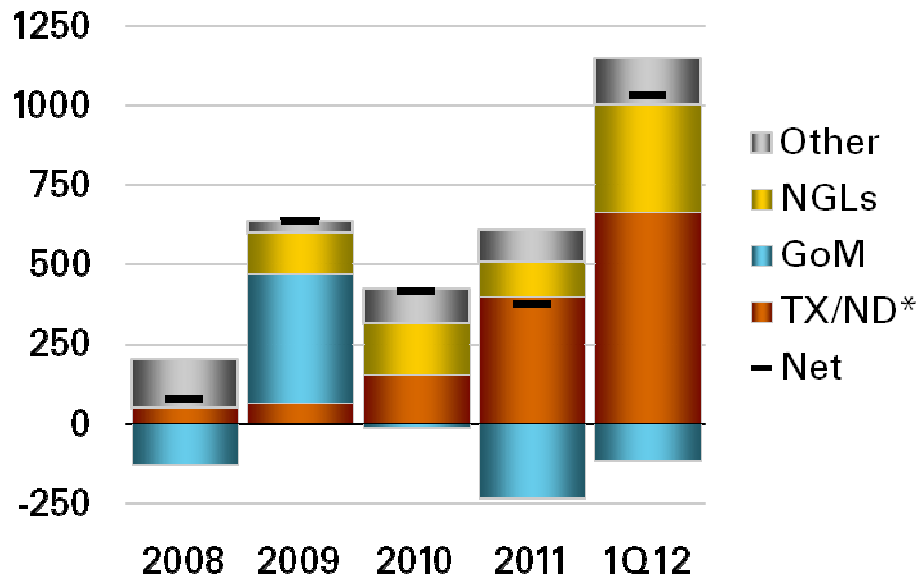
Source: includes data from Energy Information Administration and Monthly Oil Data Services © OECD/International Energy Agency June 2012

US supply



US supply

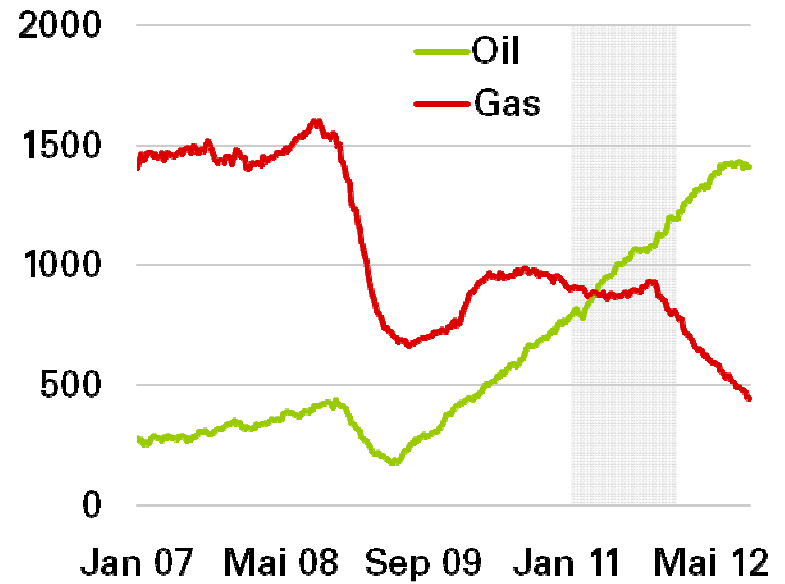
Annual change, Kb/d



*Texas and North Dakota

US rig counts

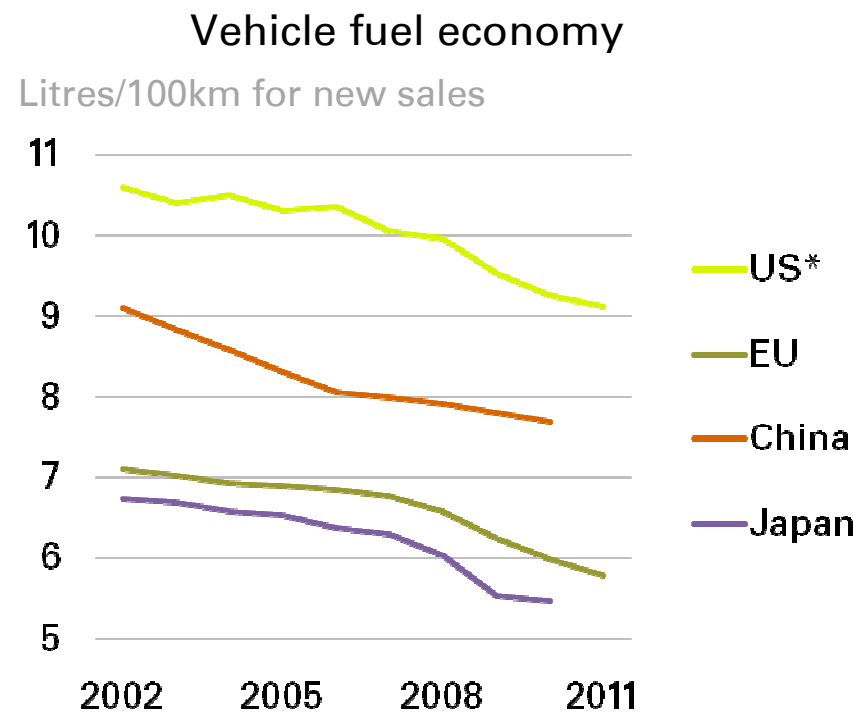
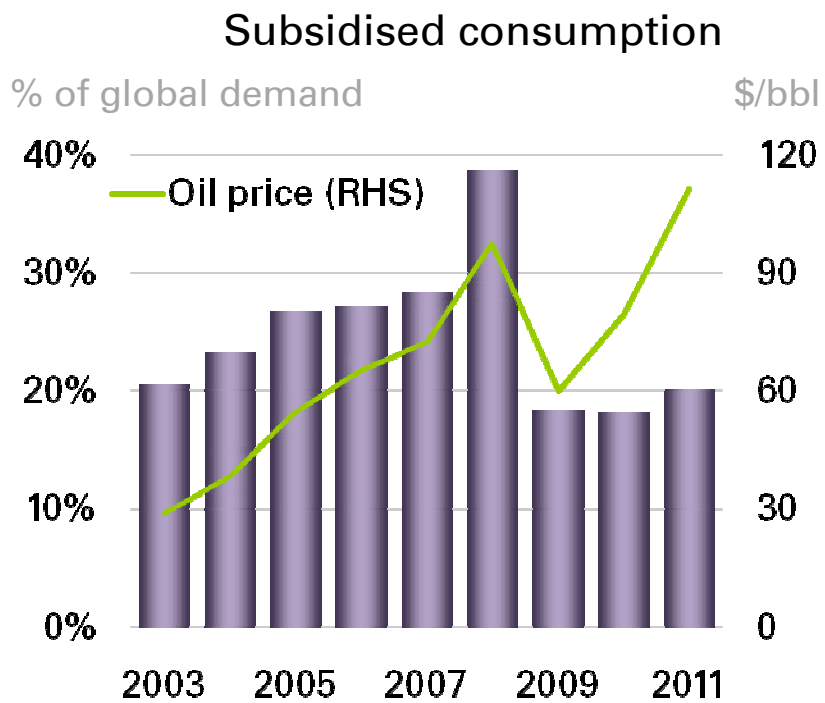
Rigs



Source: includes data from Energy Information Administration and Baker Hughes



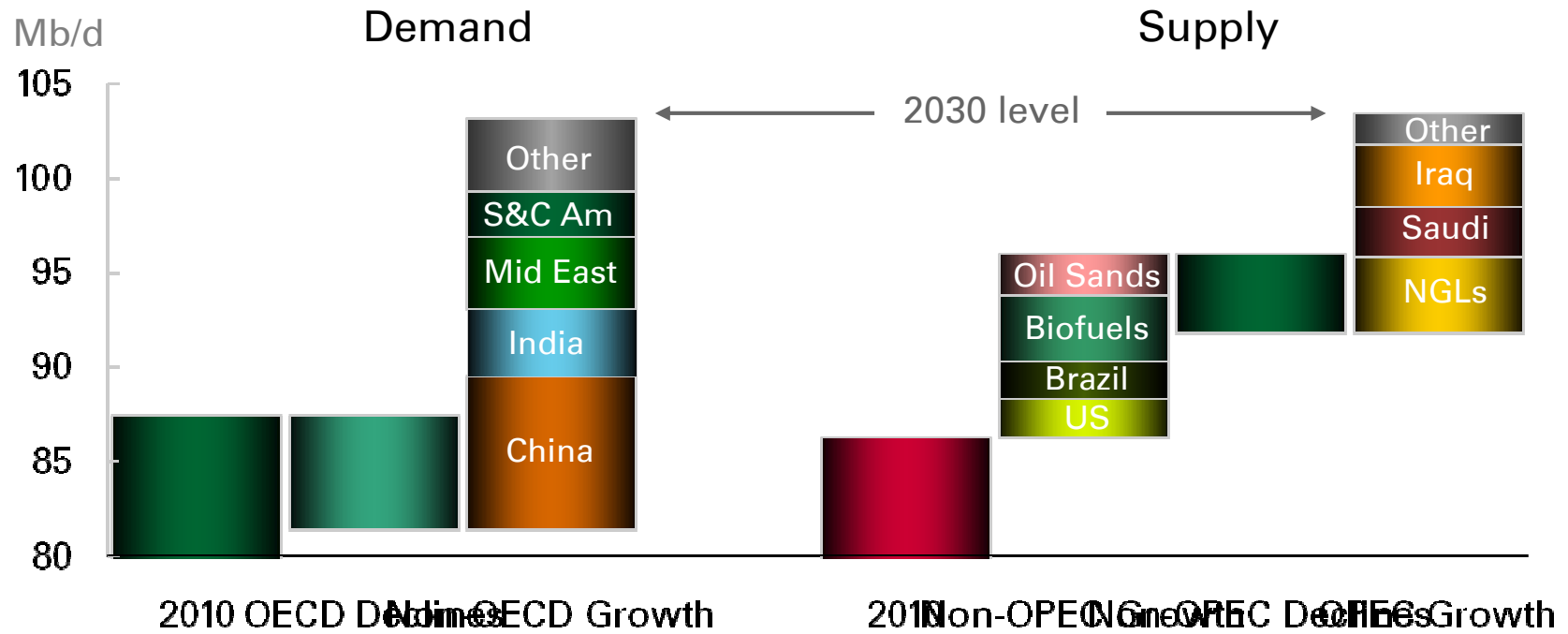
Limits to oil consumption growth



* Includes light trucks

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

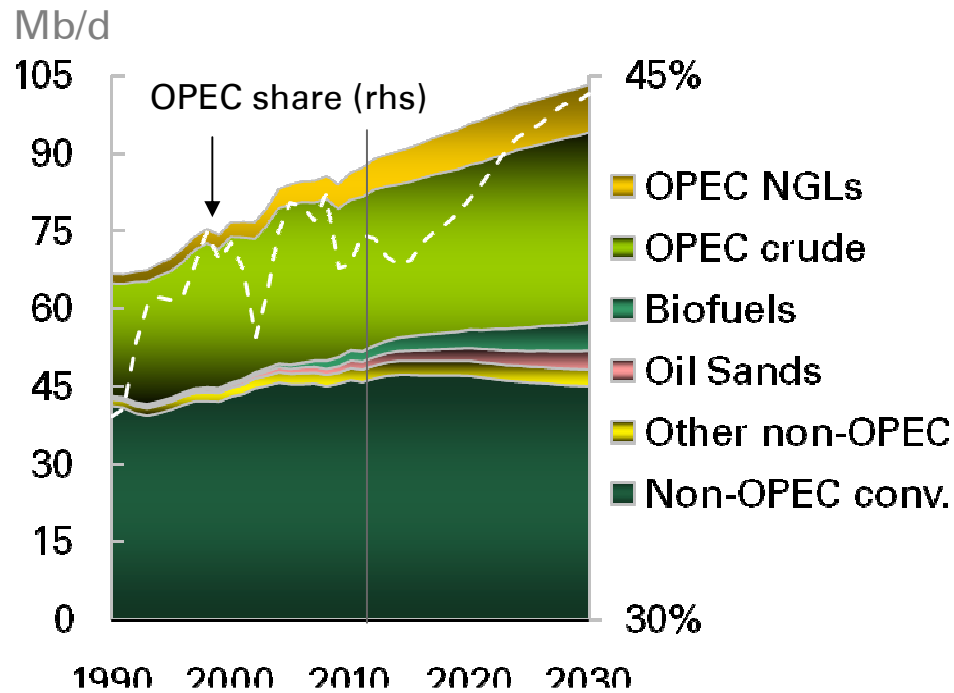
Global liquids – demand and supply



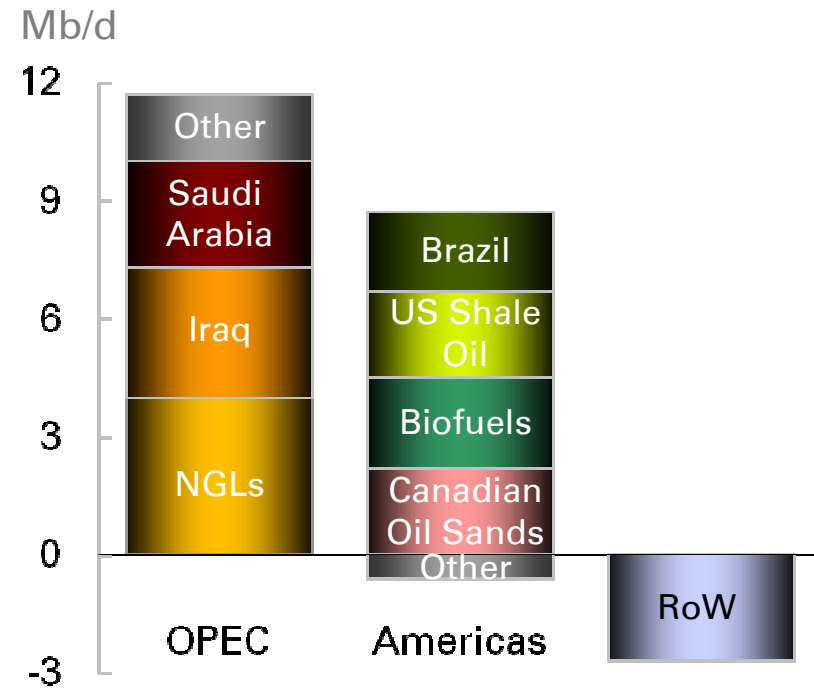
Liquids supply growth: OPEC and N. America



Liquids supply by type



Growth from 2010 to 2030

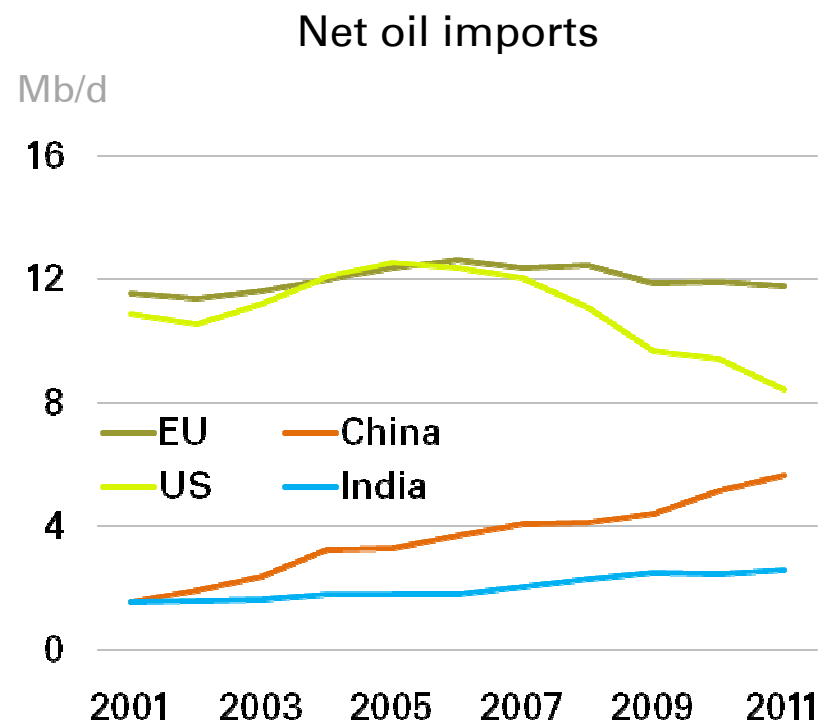
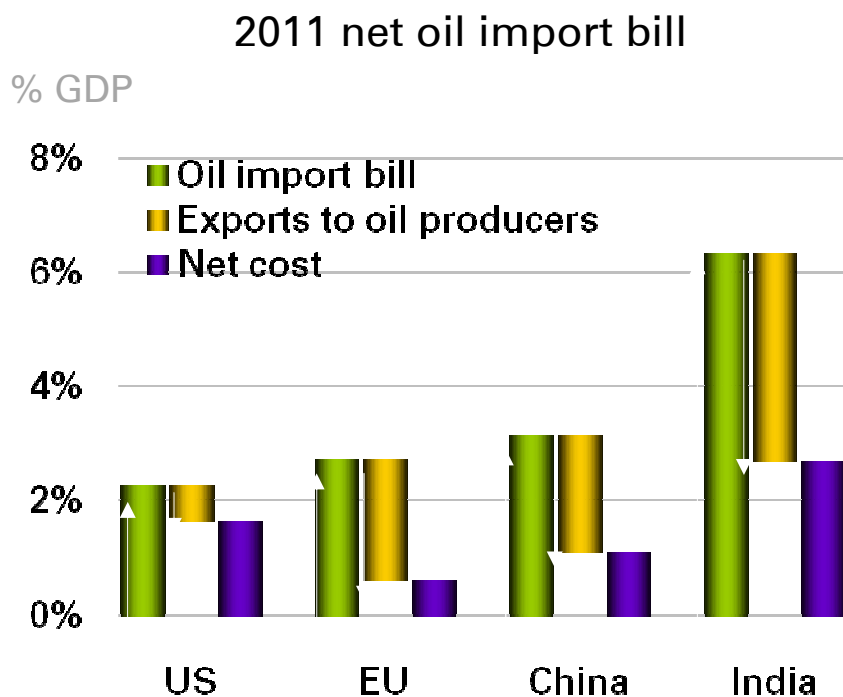


The long term: energy security





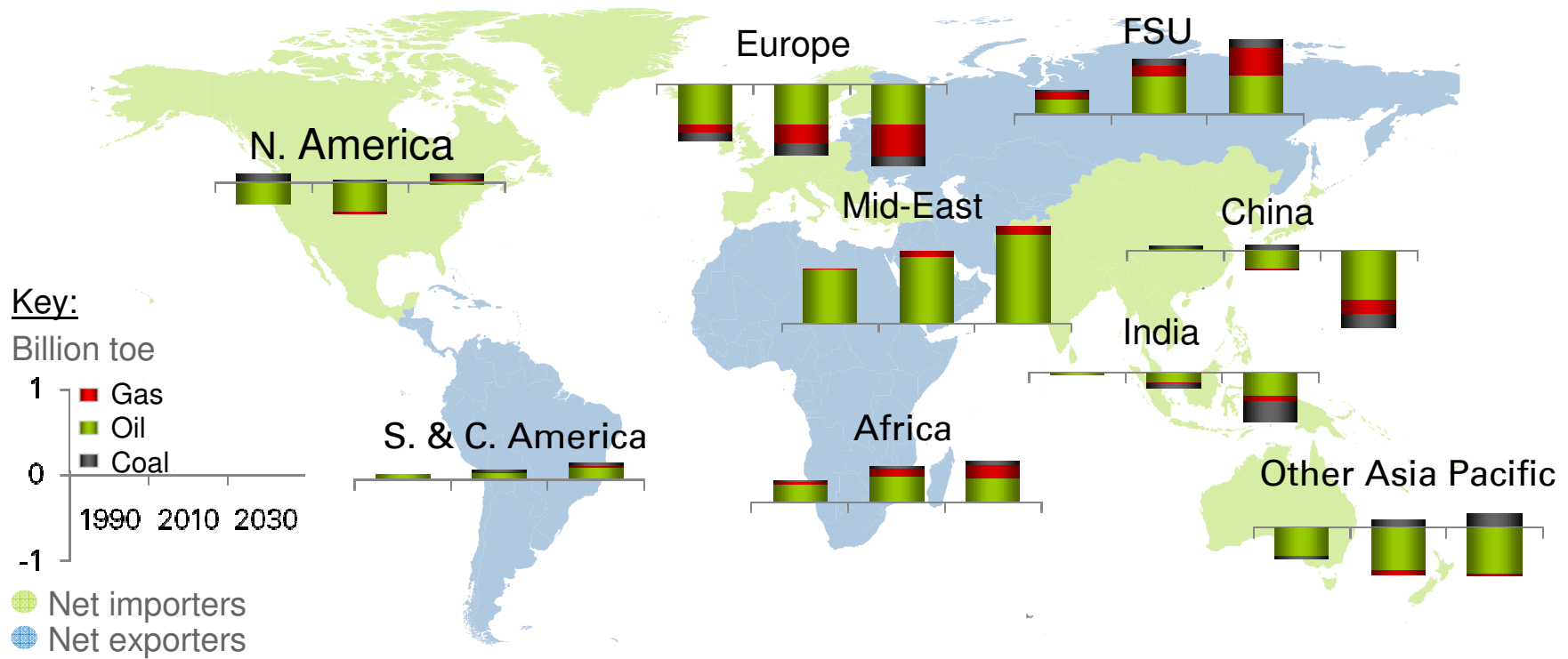
Impact of oil prices on the economy



Source: includes data from the International Monetary Fund



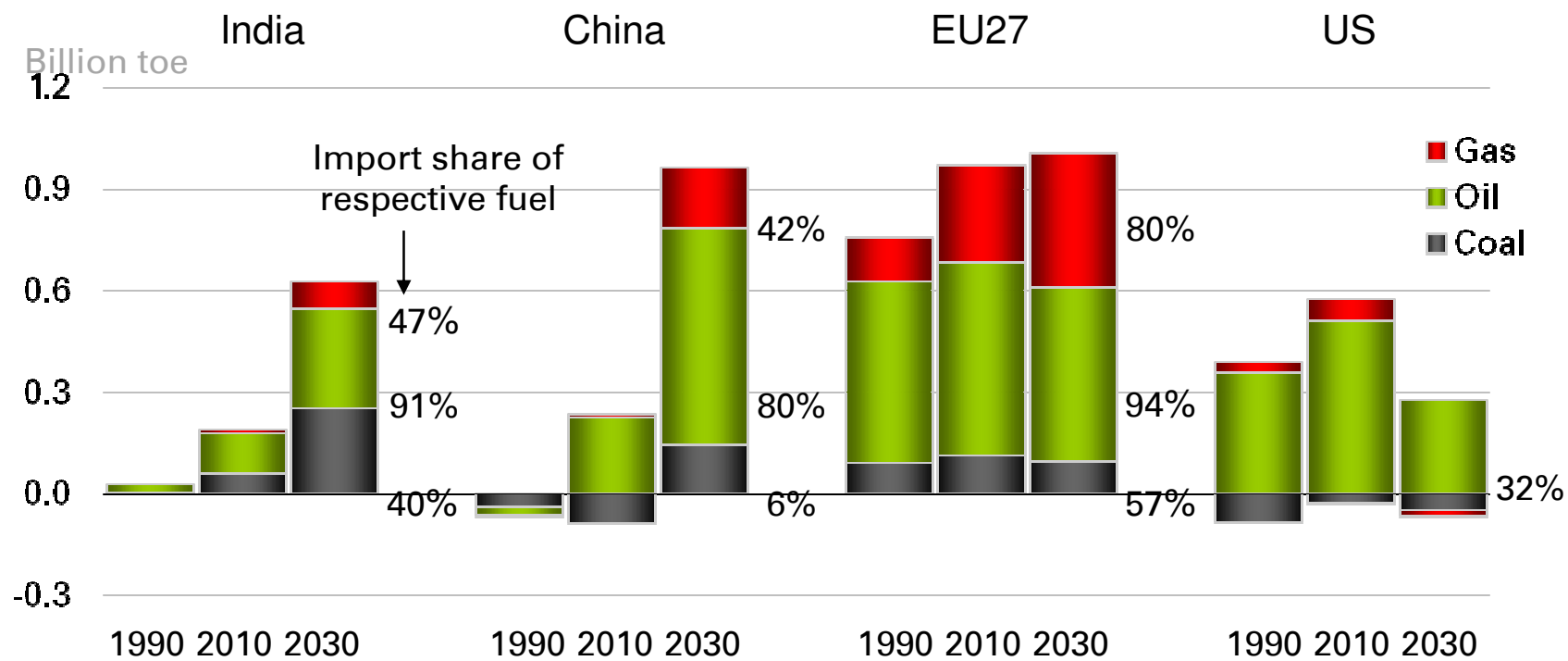
Regional energy imbalances



Source: includes data from the International Monetary Fund



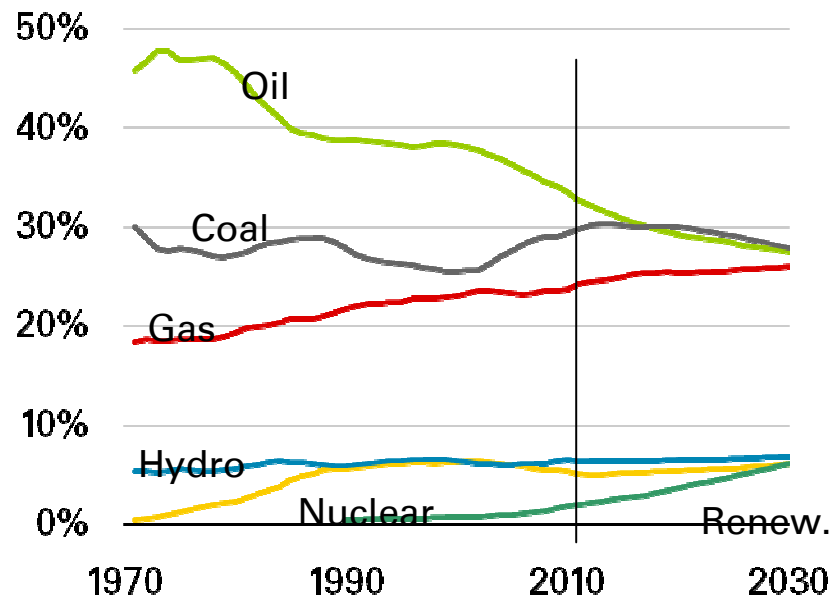
Import dependency rises in Asia and Europe



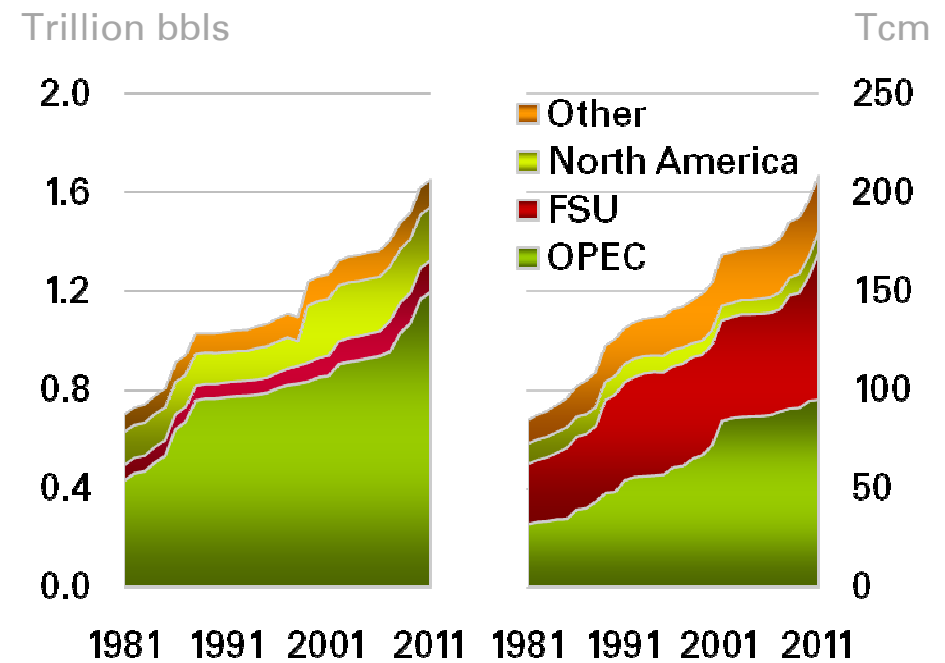


Long-term trends

Shares of world primary energy



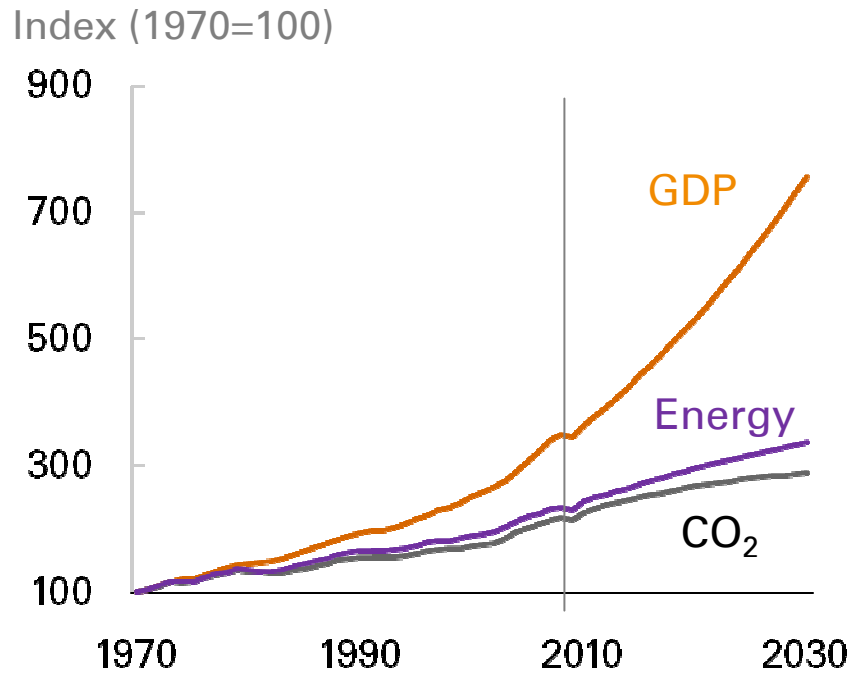
Oil and gas reserves



Conclusion



GDP, Energy and CO₂



- Energy can be available and affordable
 - Competition
 - Innovation
 - Regulation
- Energy security an issue
- CO₂ emissions not on track



Conclusion

- Key to the 2011 response: flexible markets
 - Medium term: supply response, inter-fuel substitution and trade optimisation
 - Long term: Global integration and its perils
-



Energy markets – the short and the long term