

BP Statistical Review of World Energy

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Energy in 2012 – Adapting to a changing world

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General Manager, Global Energy Markets





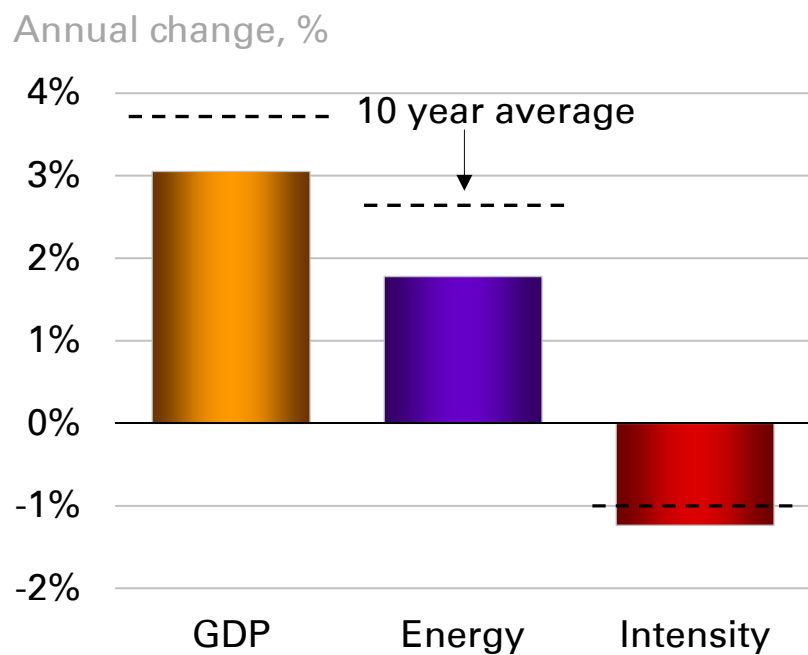
Outline

- Introduction
- 2012 in long-term context
- Fuel by fuel
- Concluding remarks

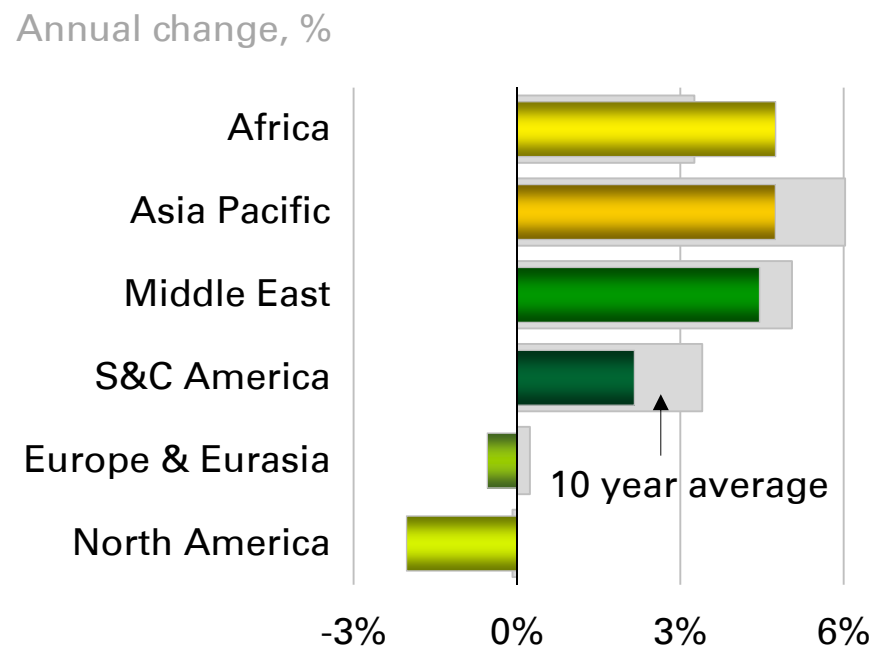


Energy in 2012

Energy and GDP



Energy growth by region



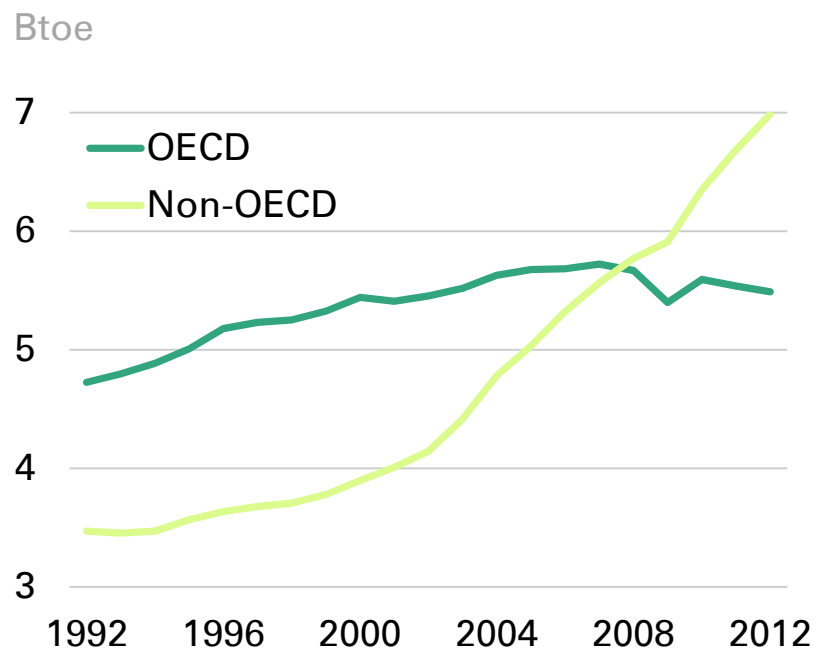
Source: includes data from Oxford Economics

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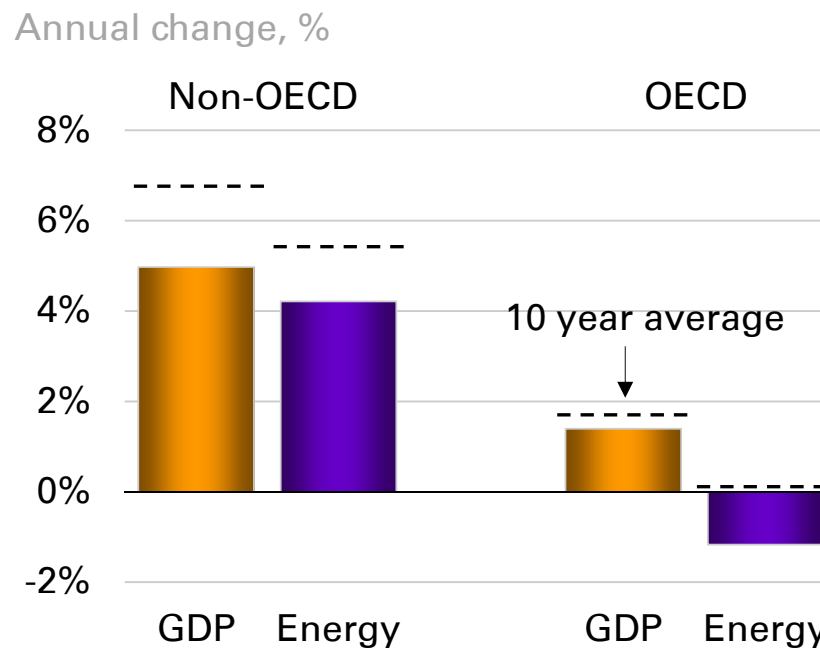


Long-term energy trends

Primary energy demand



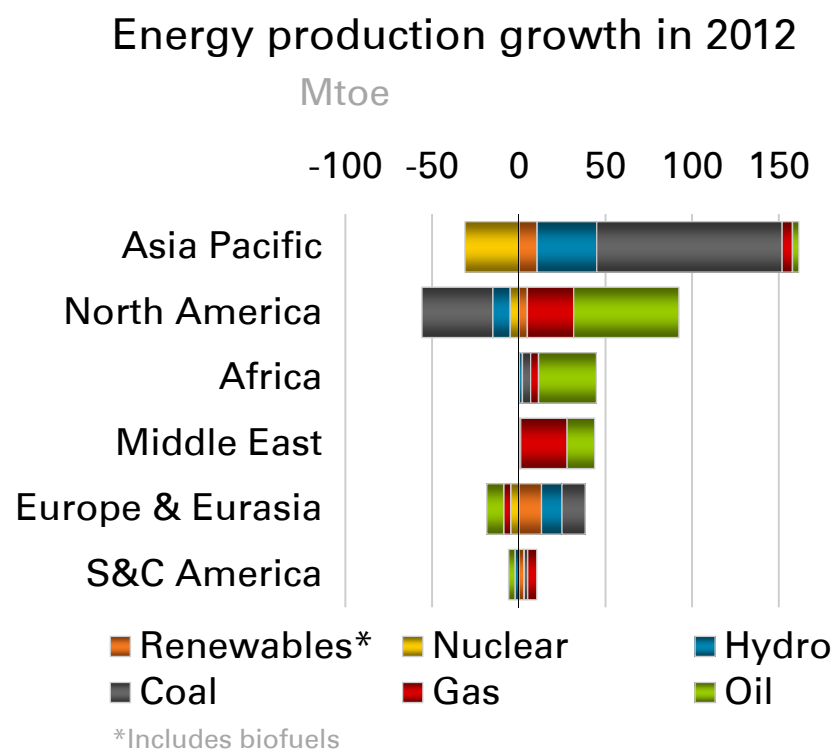
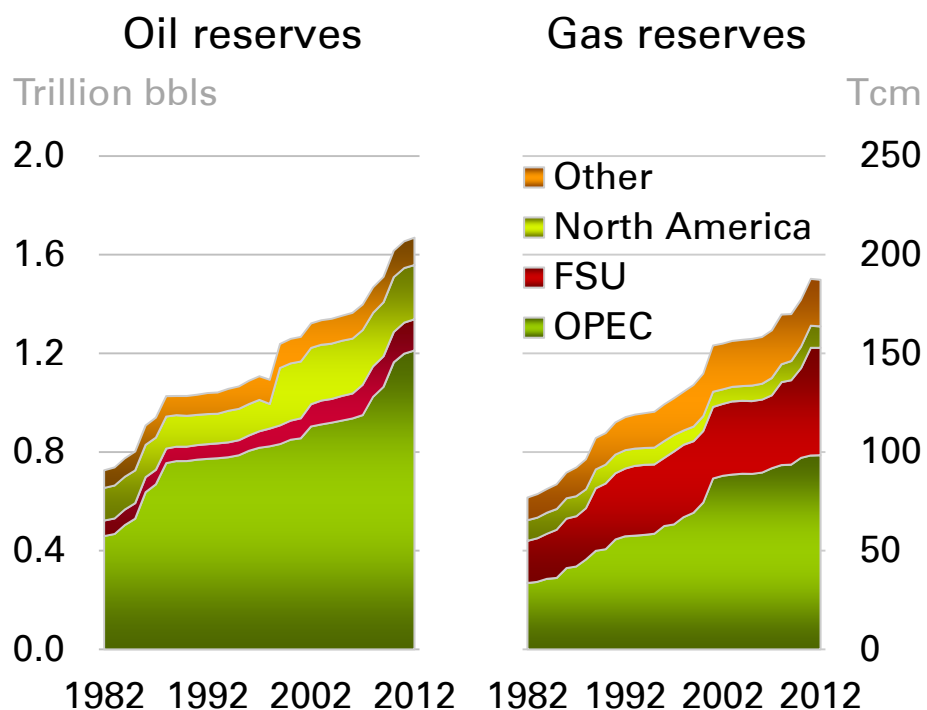
Energy and GDP in 2012



Source: includes data from Oxford Economics



Reserves and production



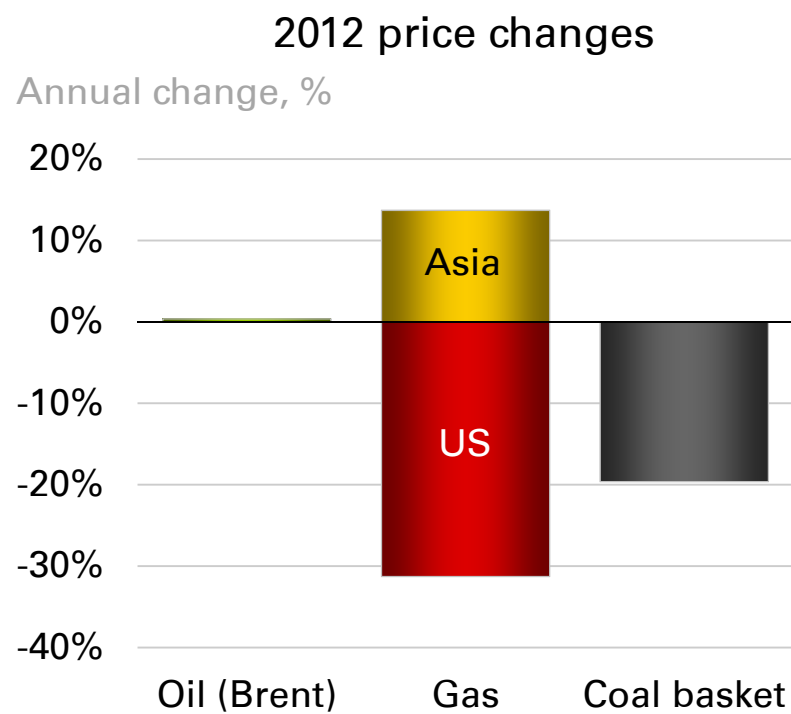
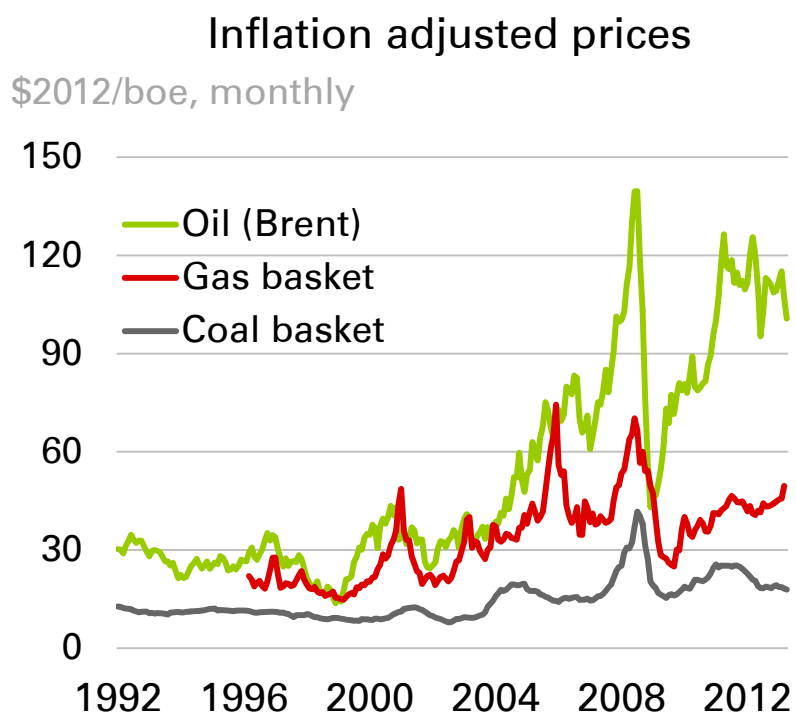
*Includes biofuels

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Energy prices



Source: includes data from ICIS Heren Energy and Energy Intelligence Group, McCloskey and Platts

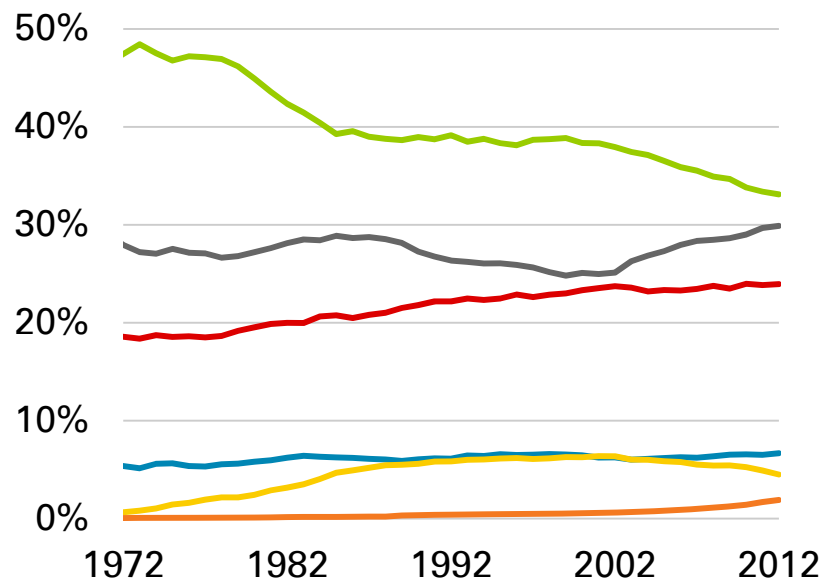
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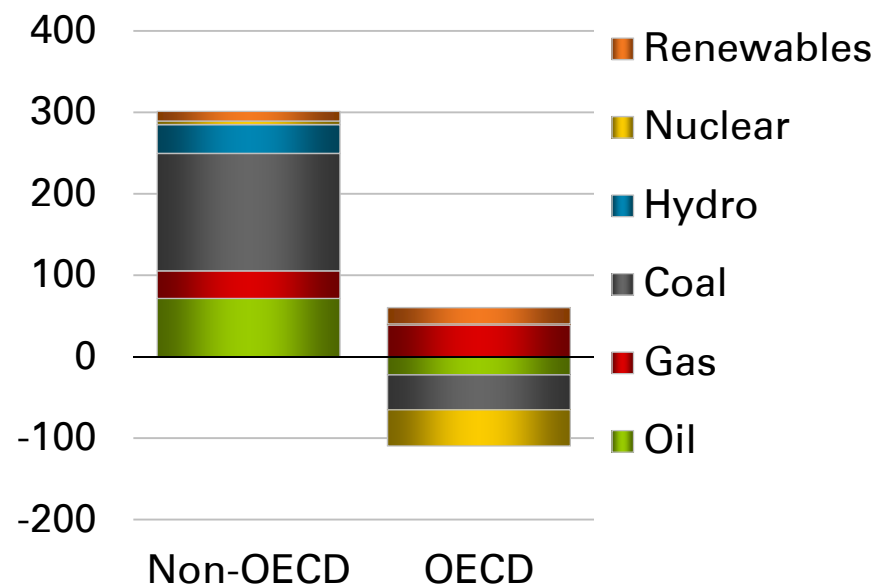
The evolving fuel mix

Shares of global primary energy



2012 energy consumption changes

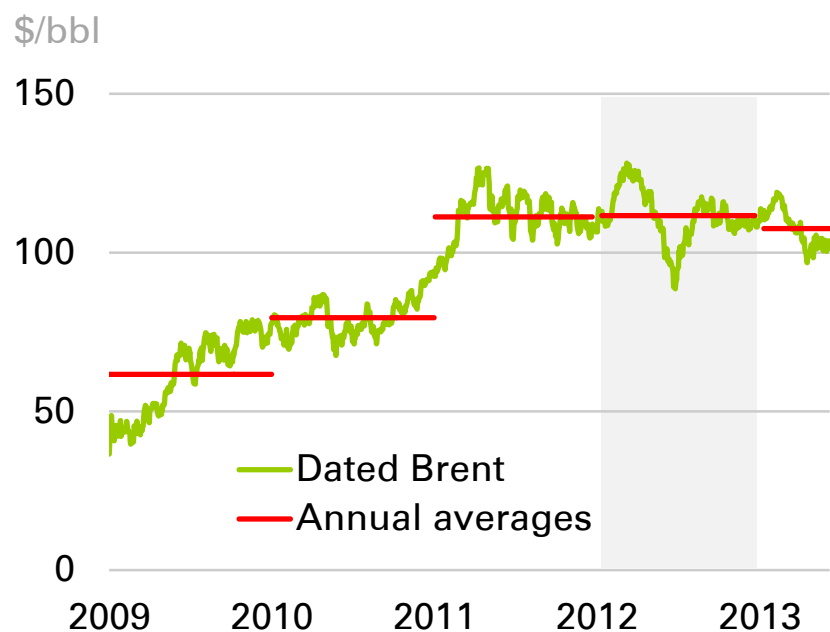
Annual change, Mtoe





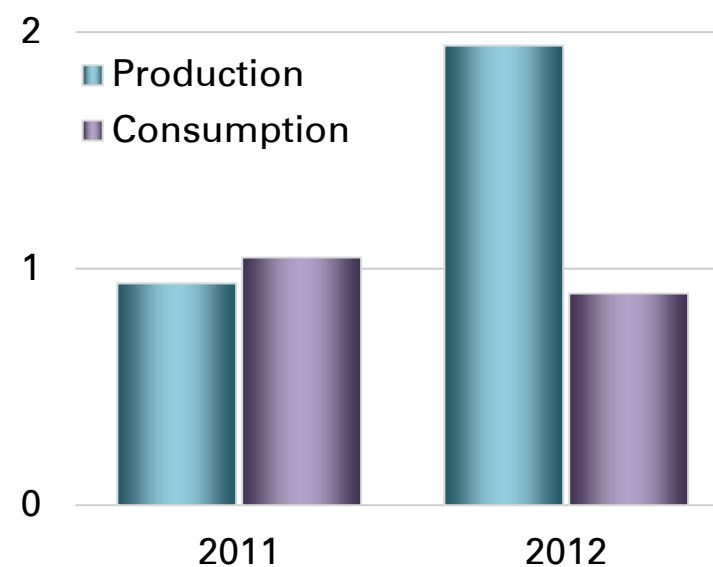
The oil market in 2012

The price of oil



Production and consumption growth

Annual change, Mb/d

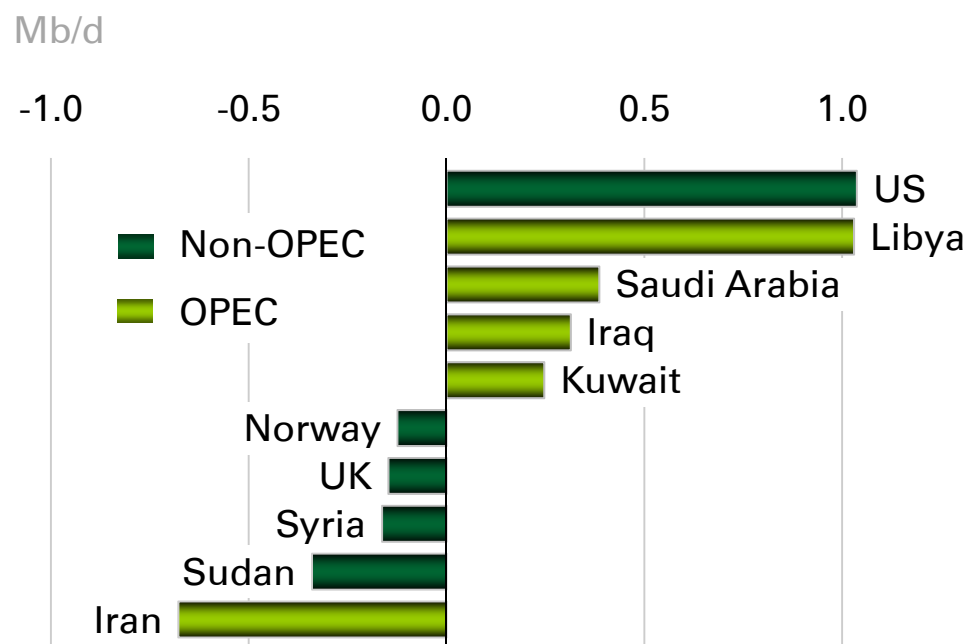


Source: includes data from Platts

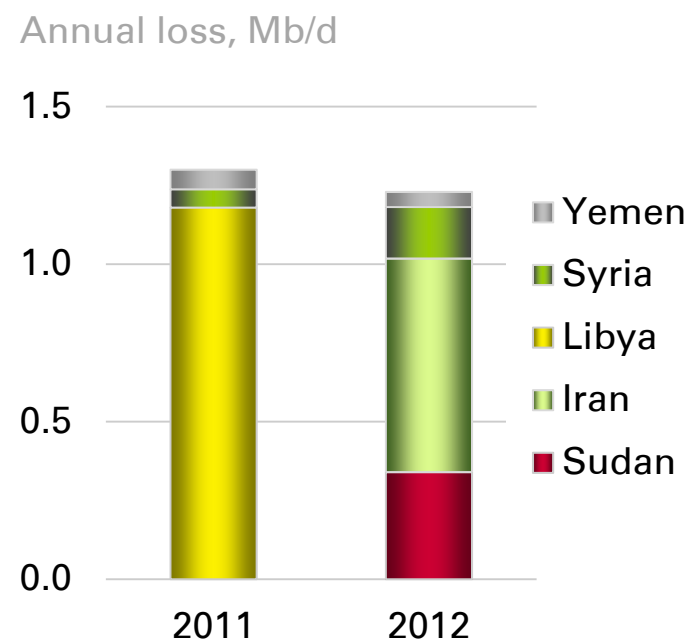


Oil production in 2012

Largest changes

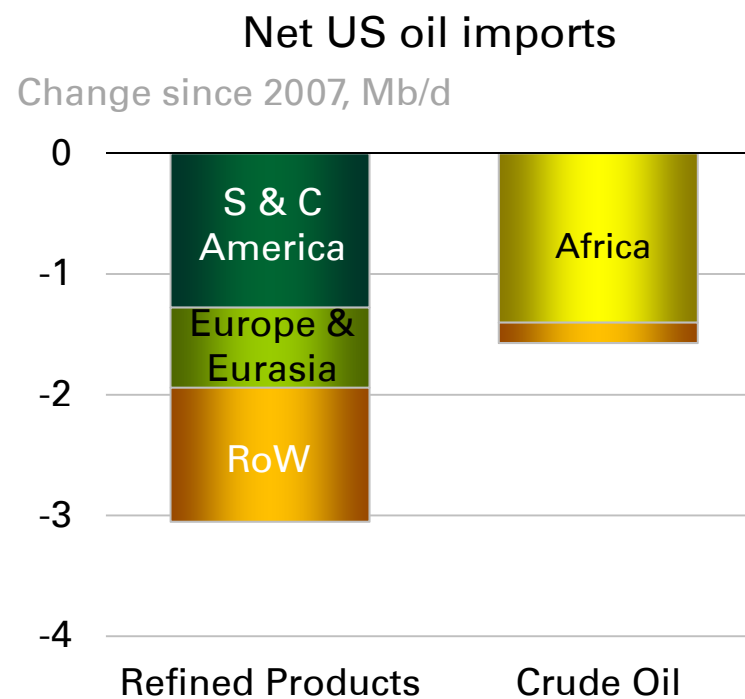
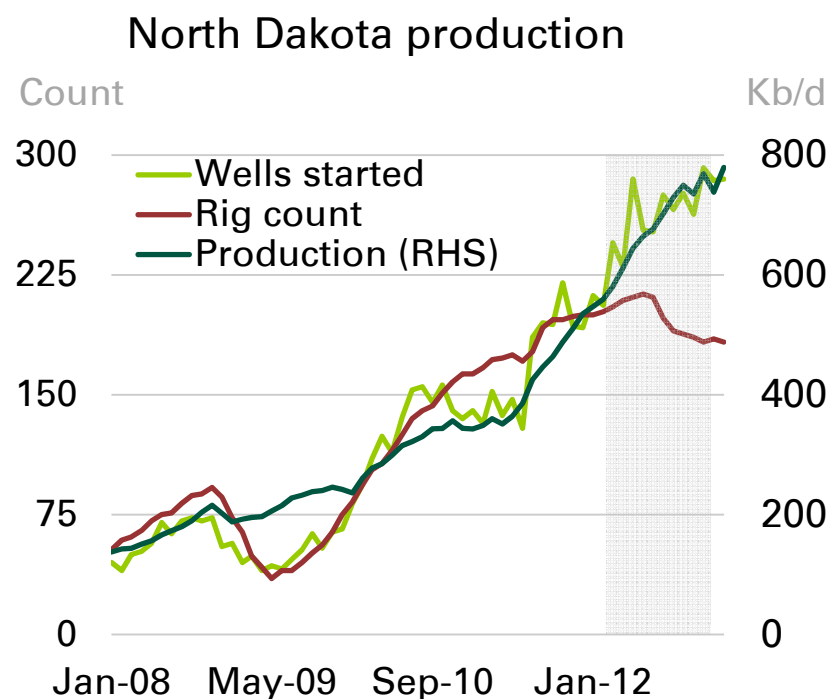


Supply disruptions





US oil supply: cause and effect

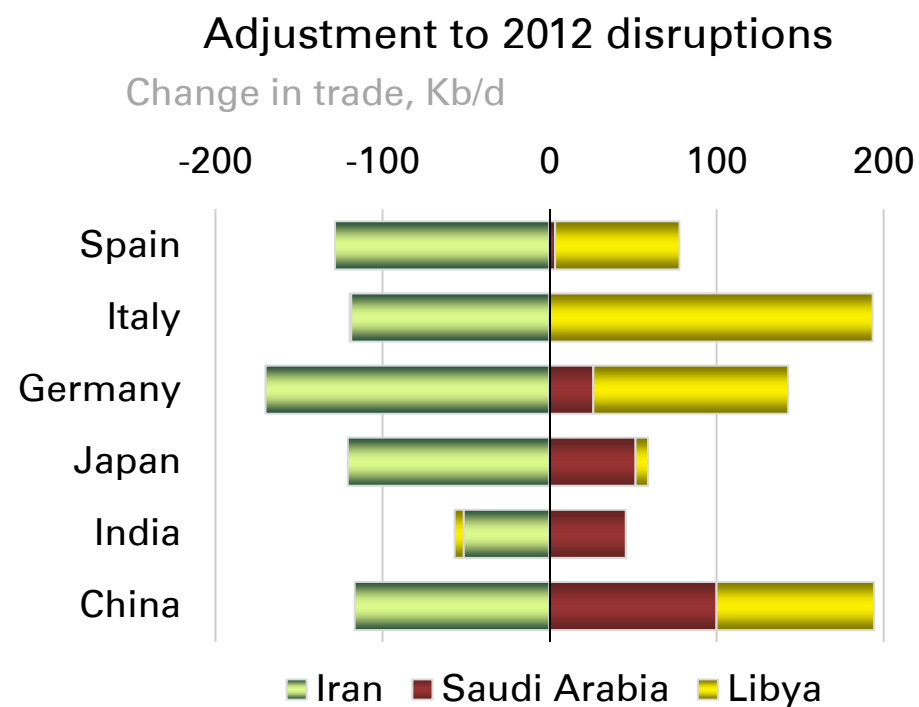
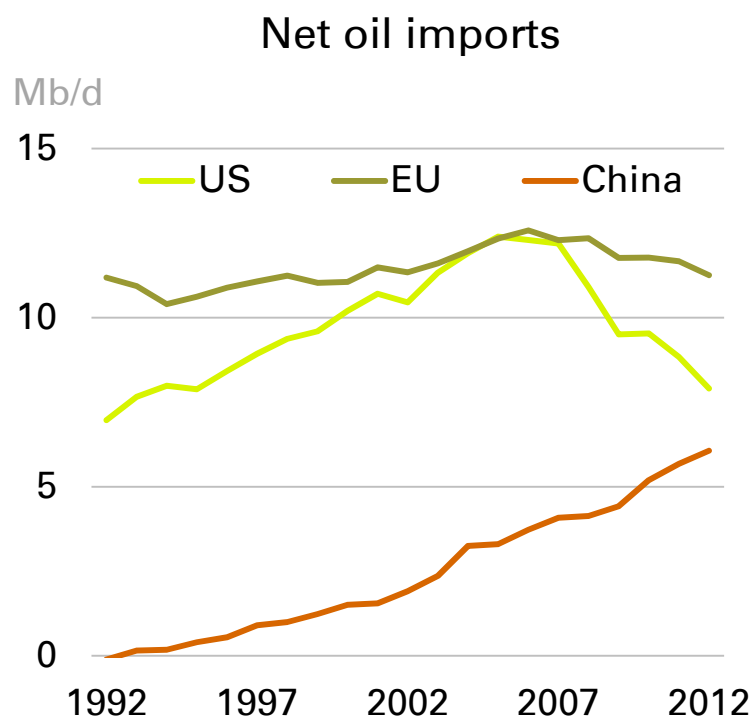


Source: includes data from North Dakota Department of Mineral Resources and Energy Information Administration

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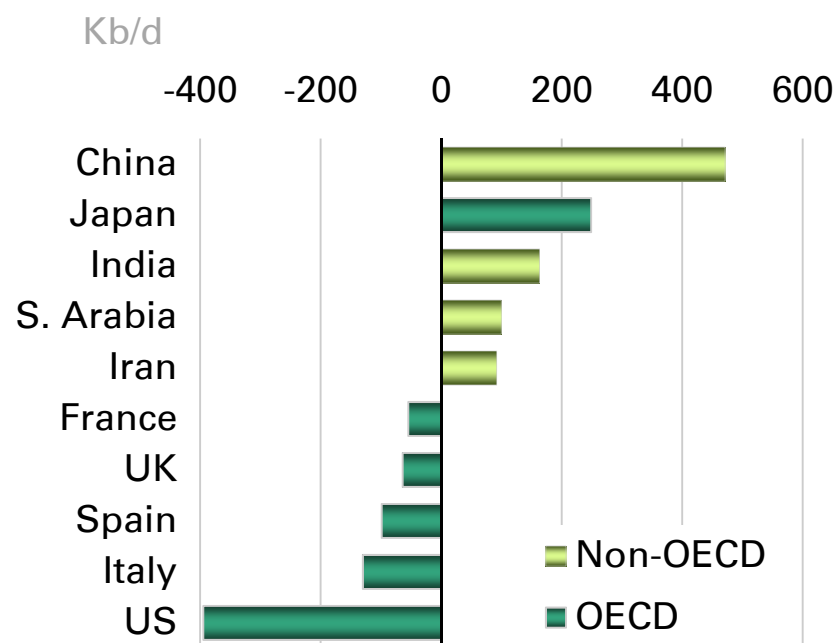
Emerging oil trade patterns



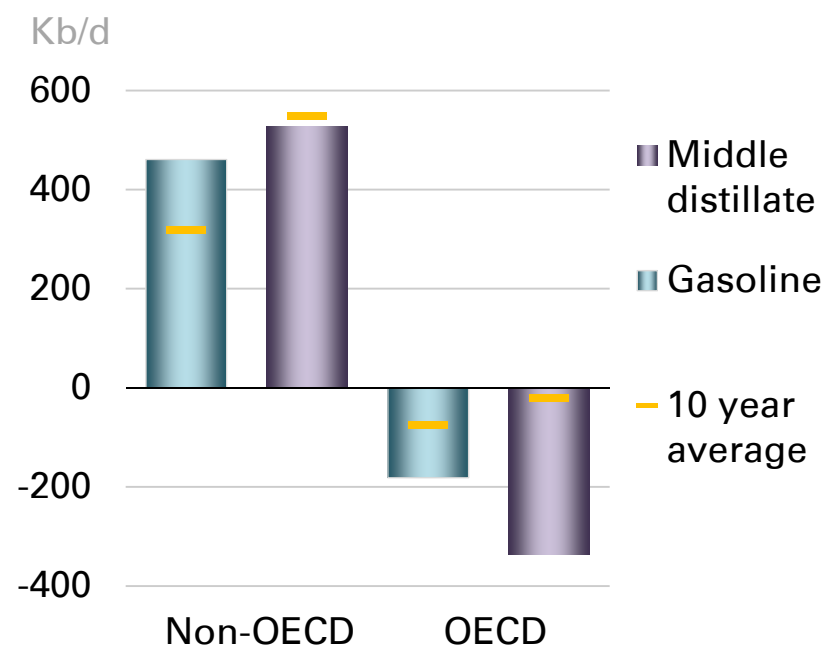


Oil consumption in 2012

Largest changes



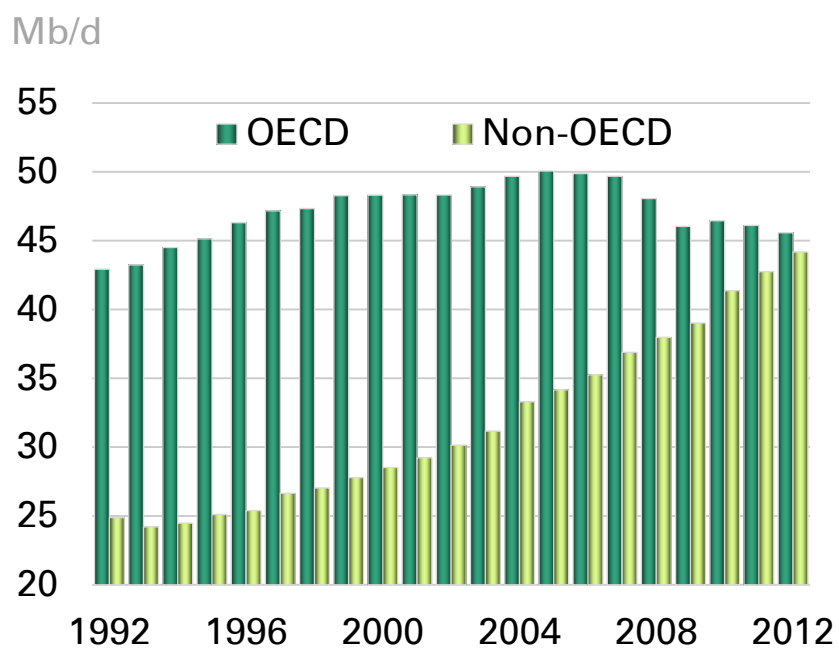
Growth by product type



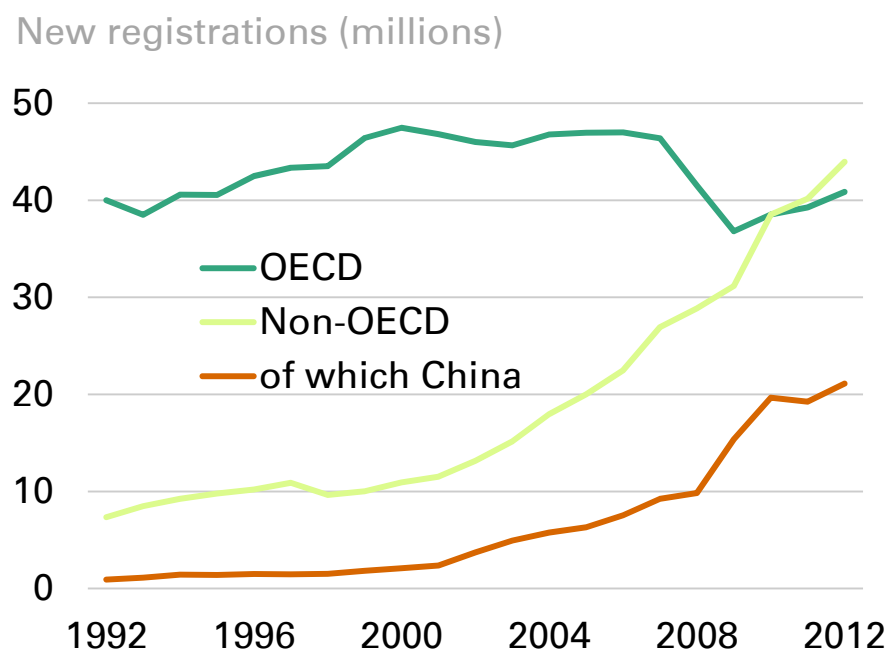


Oil consumption and mobility

Oil consumption trends



Vehicle sales

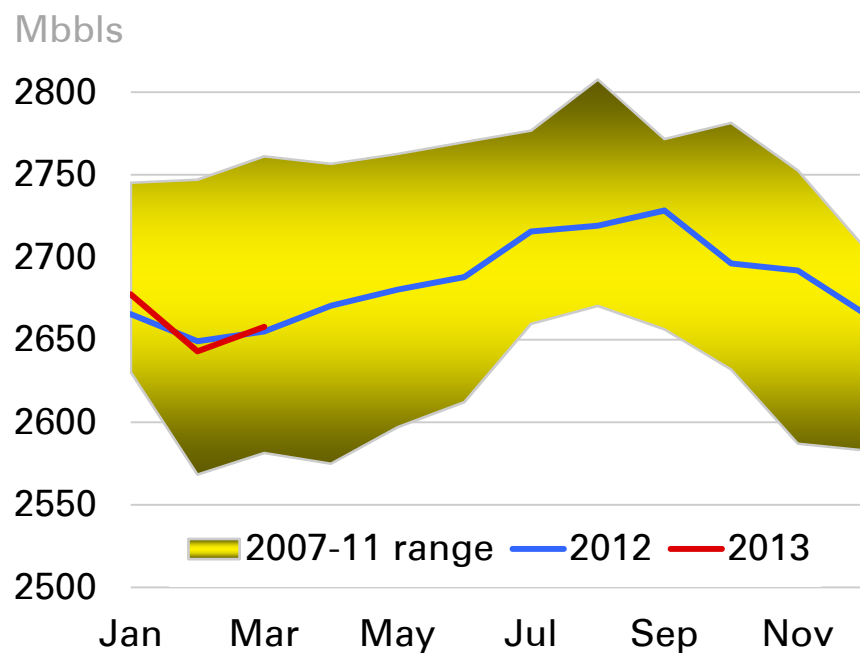


Source: includes data from R. L. Polk & Co.

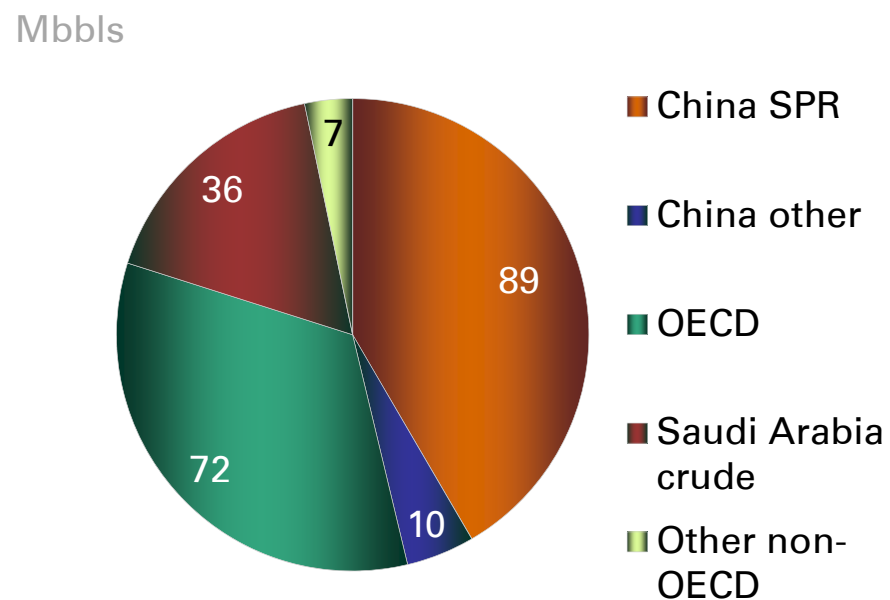


Oil inventories

OECD commercial inventories



Inventory increases in 2012

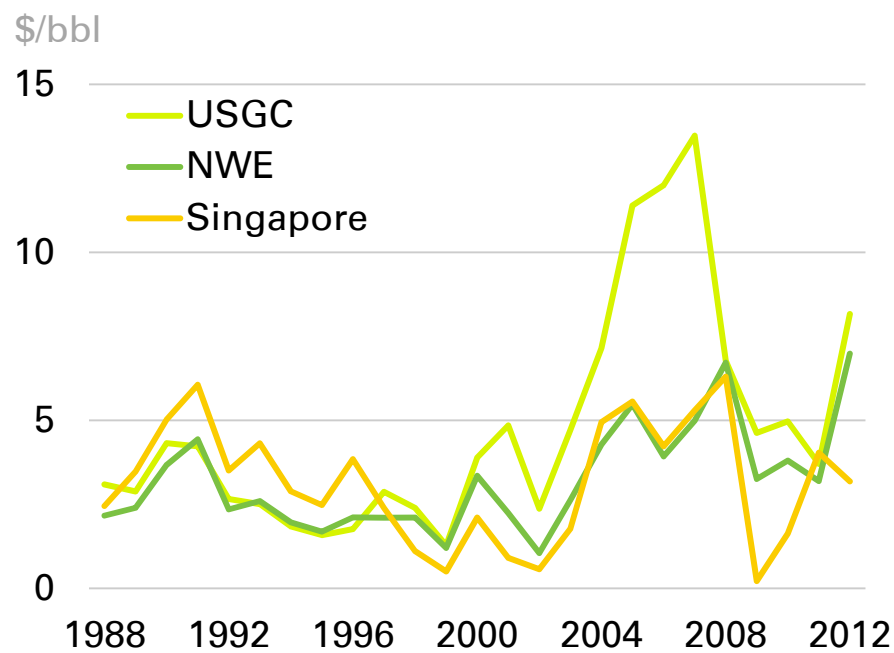


Source: Includes data from the International Energy Agency © OECD/IEA 2013

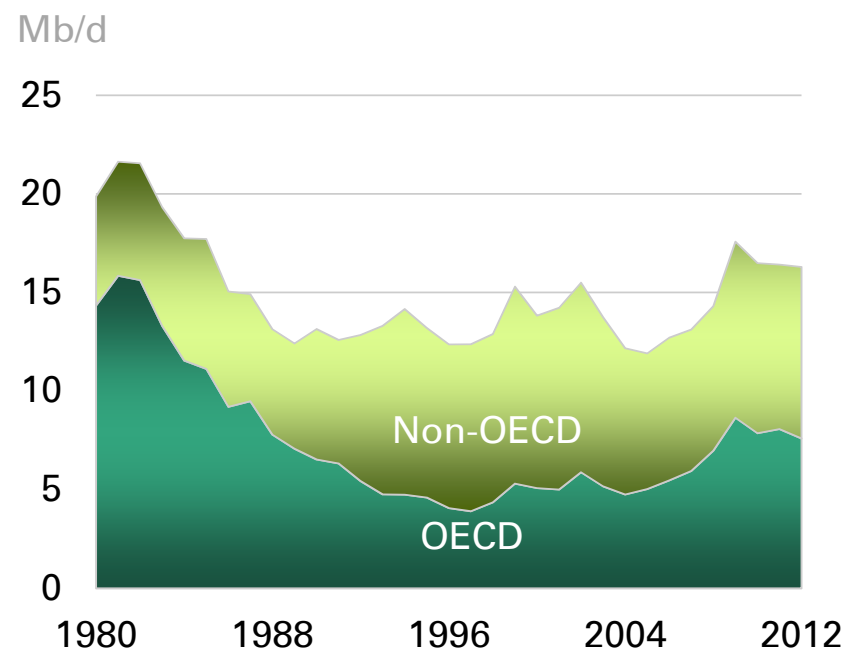


Refining margins and capacity

Upgrading margins



Unused refining capacity



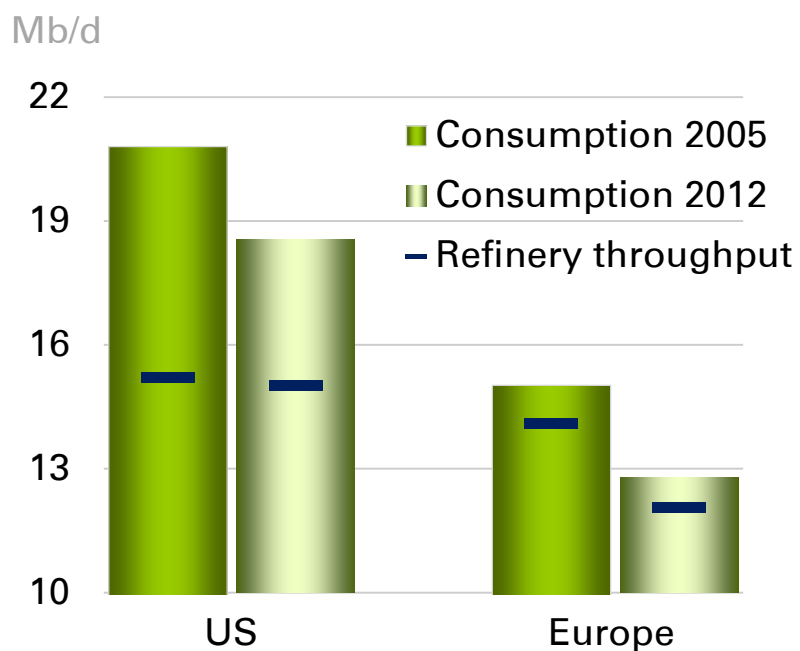
Source: Includes data from Platts

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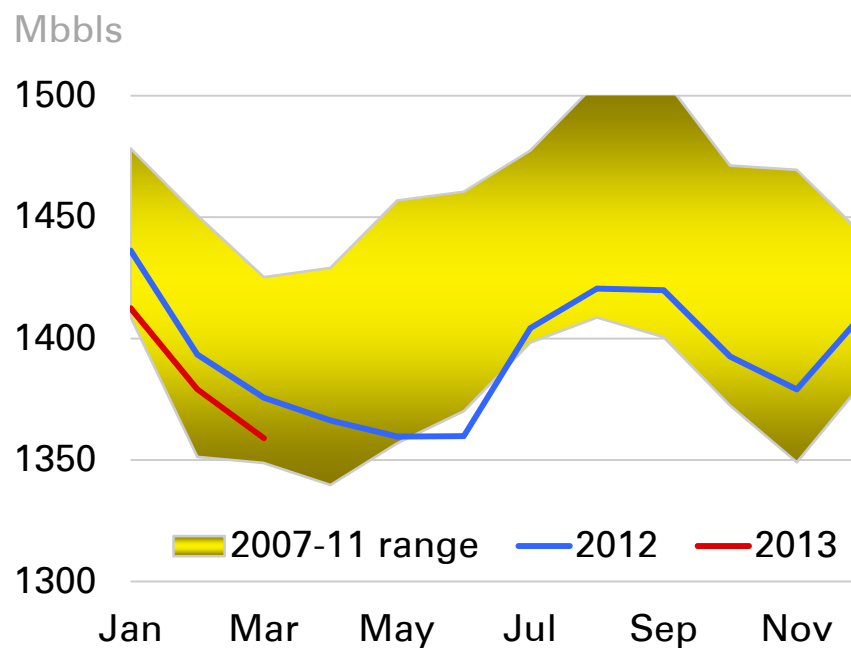


Crude run rebalancing and product stocks

Oil consumption and crude runs



OECD product stocks



Source: Includes data from the International Energy Agency © OECD/IEA 2013

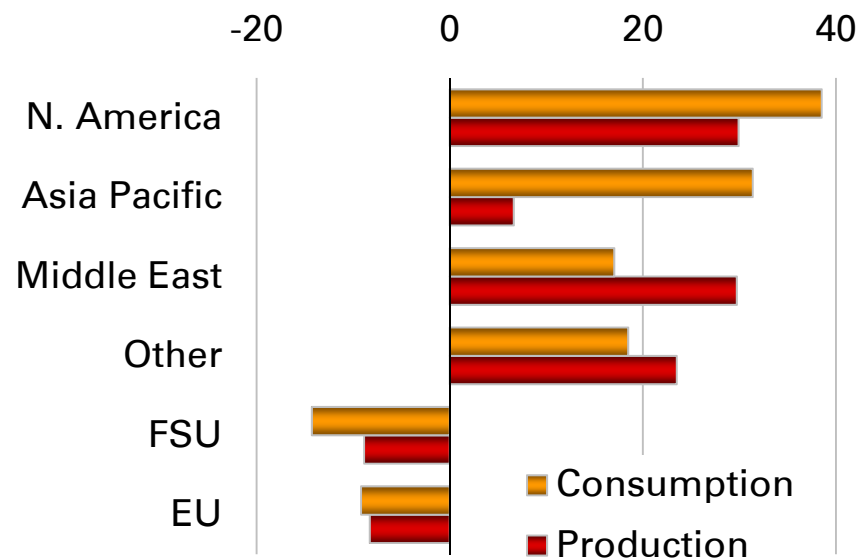
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Global natural gas balance

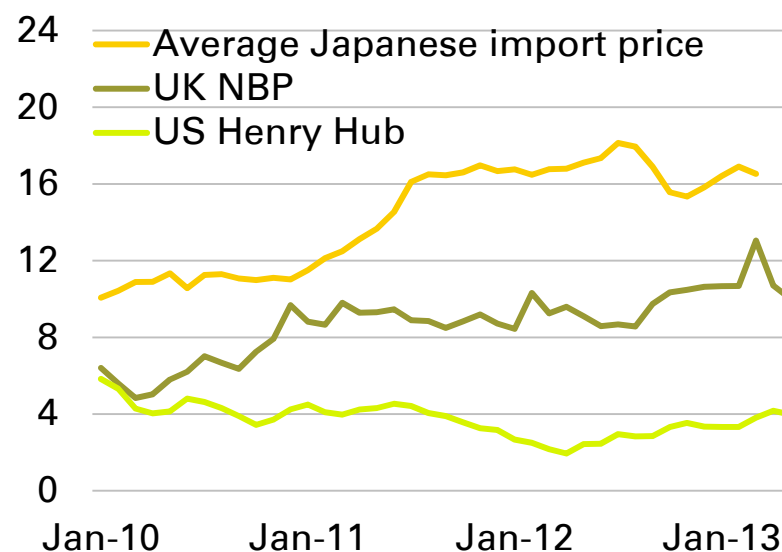
Global growth in 2012

Annual change, Bcm



International gas prices

\$/mmBtu

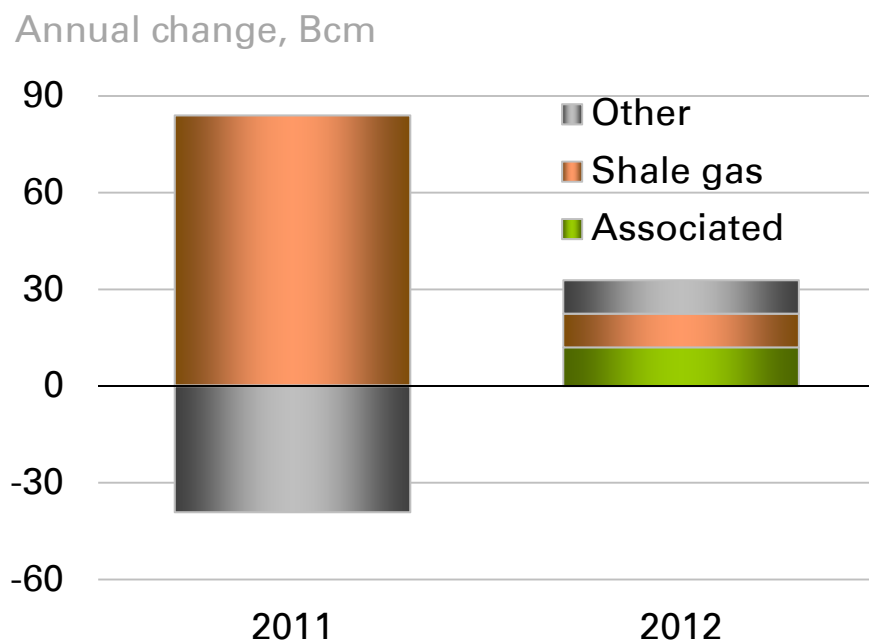


Source: includes data from ICIS Heren Energy and Energy Intelligence Group

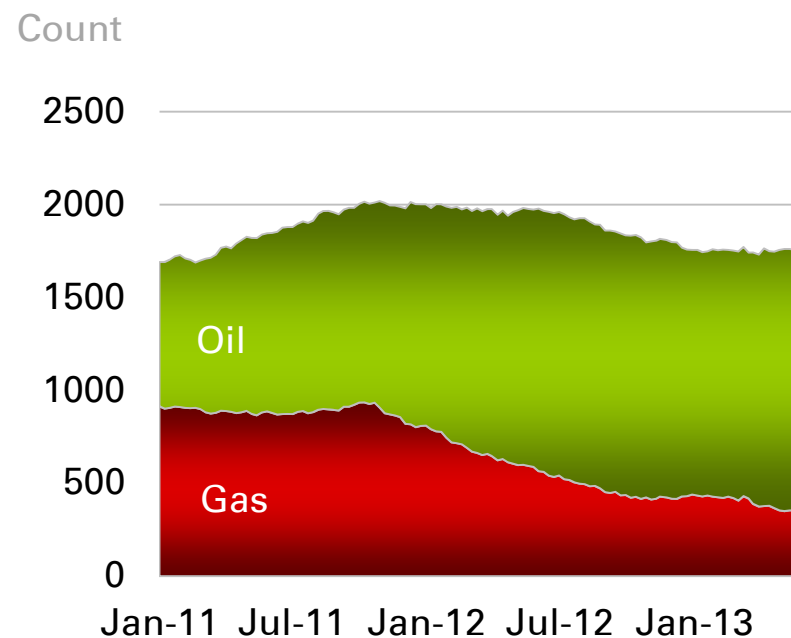


US natural gas production

Production growth



Rig count



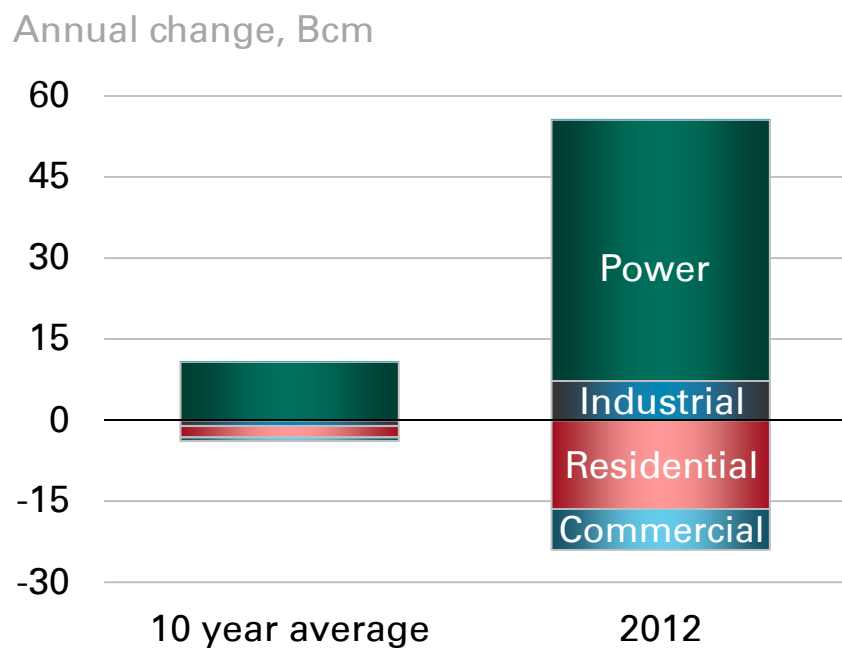
Source: includes data from Energy Information Administration and Baker Hughes

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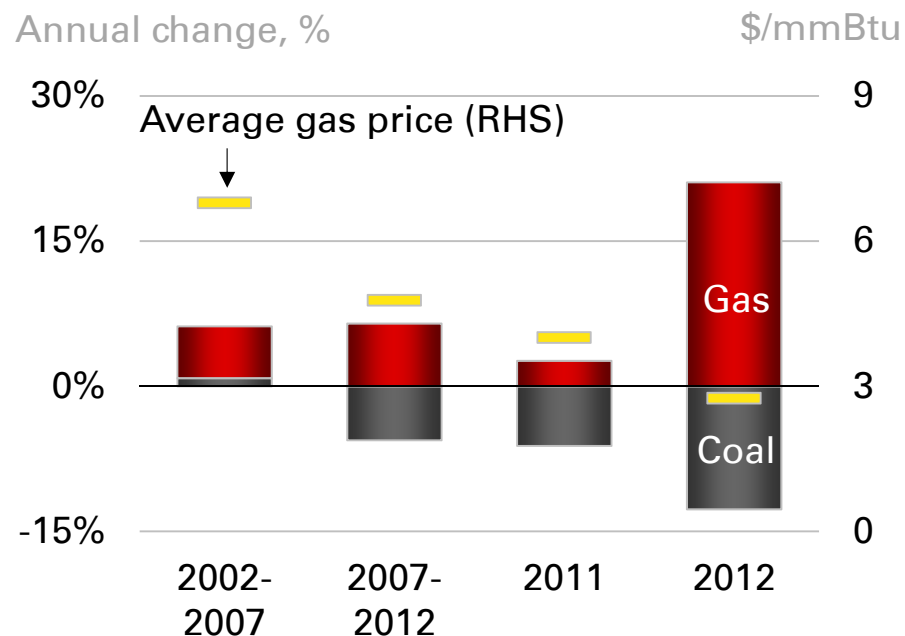


US coal to gas switching

Natural gas consumption growth



Power generation



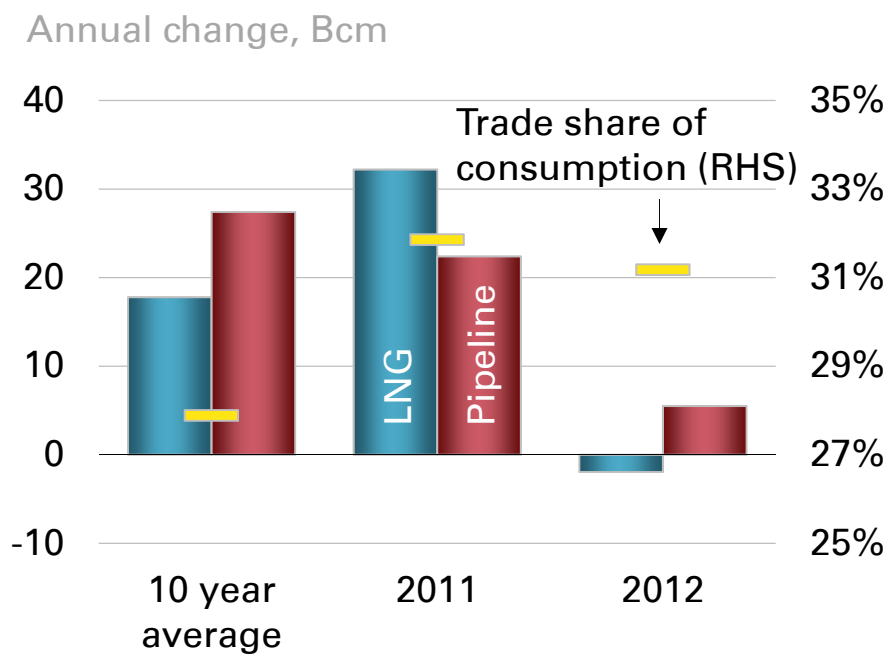
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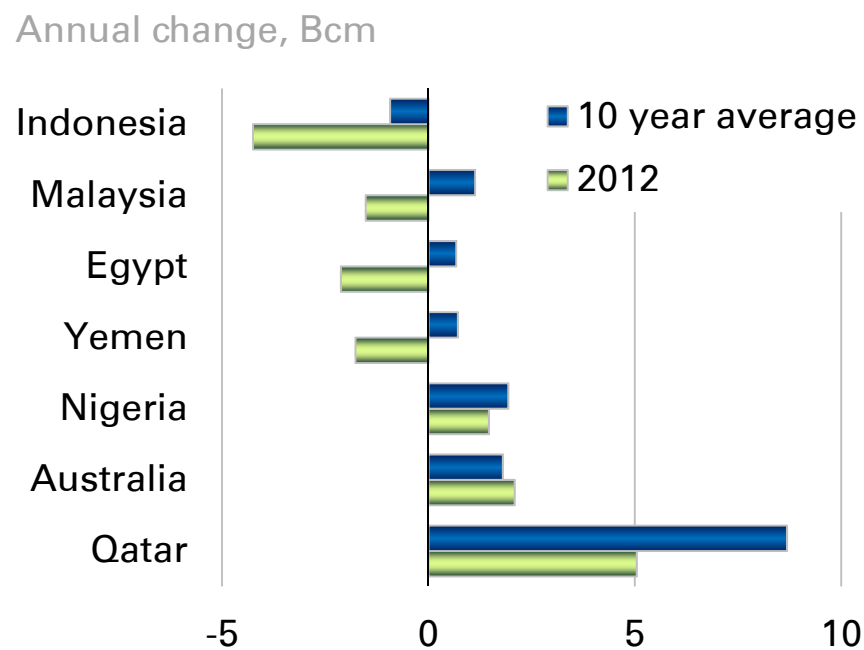


Natural gas trade

LNG and pipeline trade

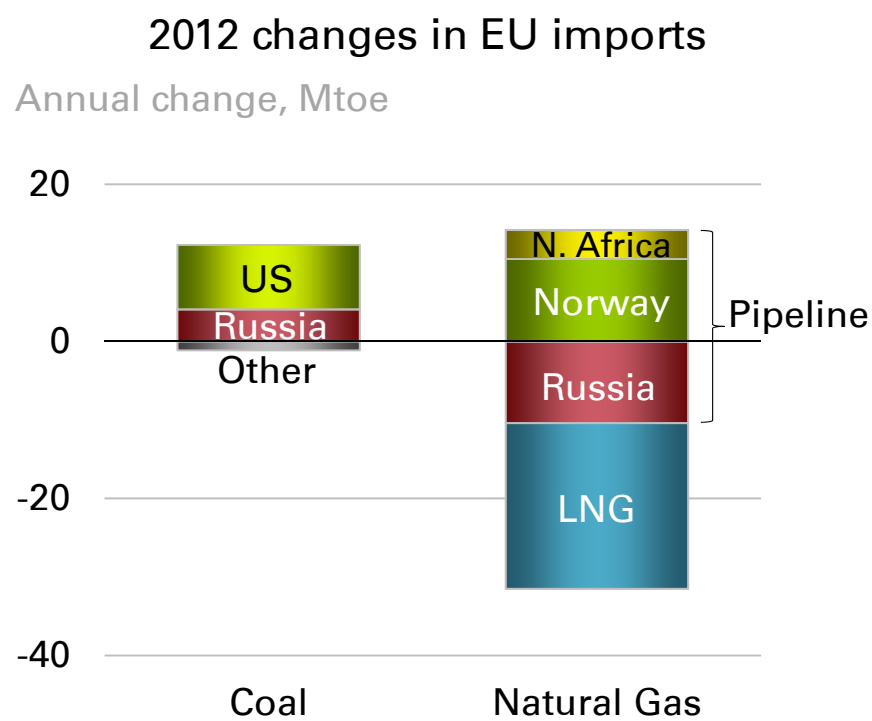
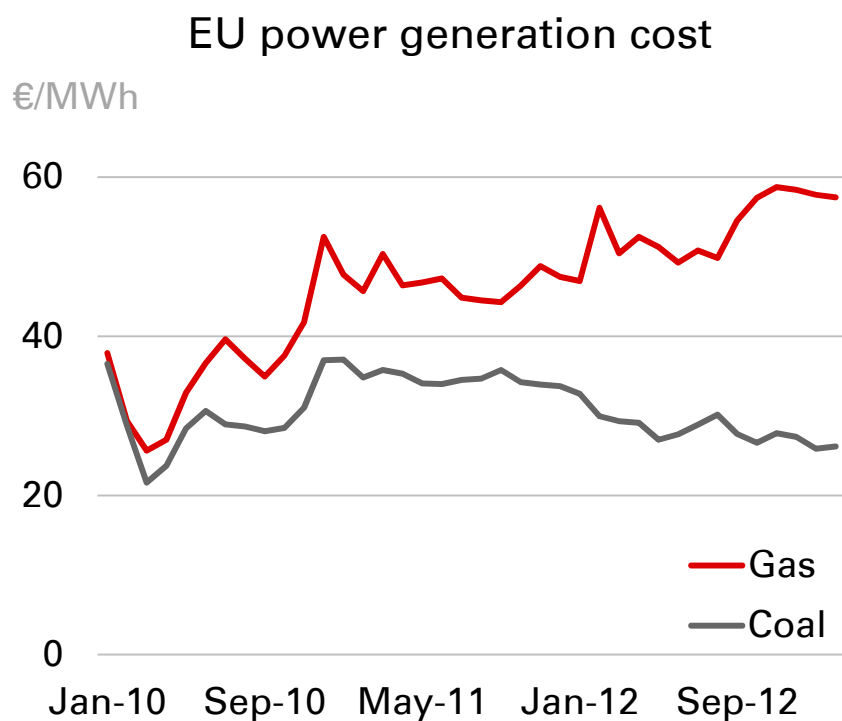


LNG exports





European gas-coal competition



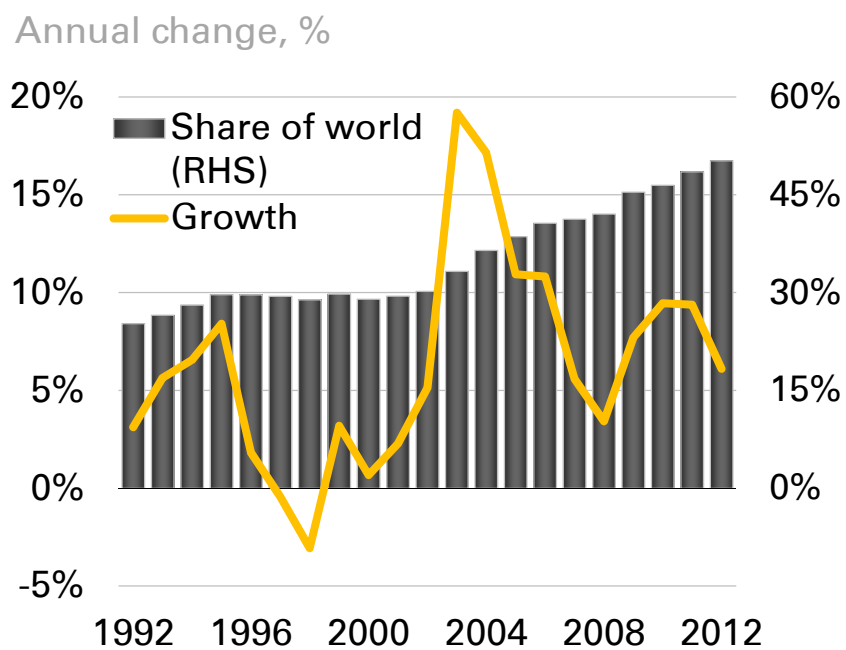
Source: includes data from Platts, IHS McCloskey and IntercontinentalExchange

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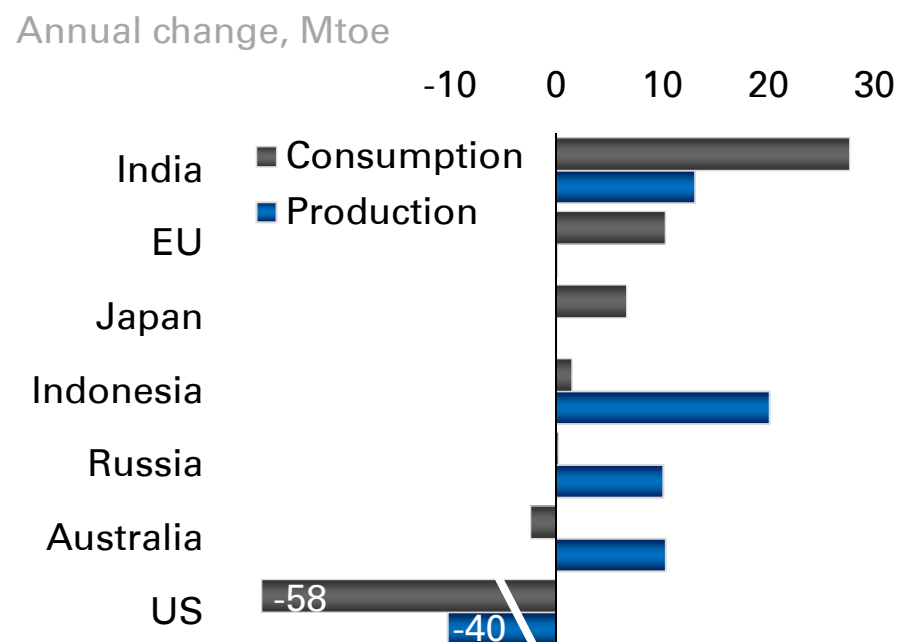


The coal market in 2012

Coal consumption in China

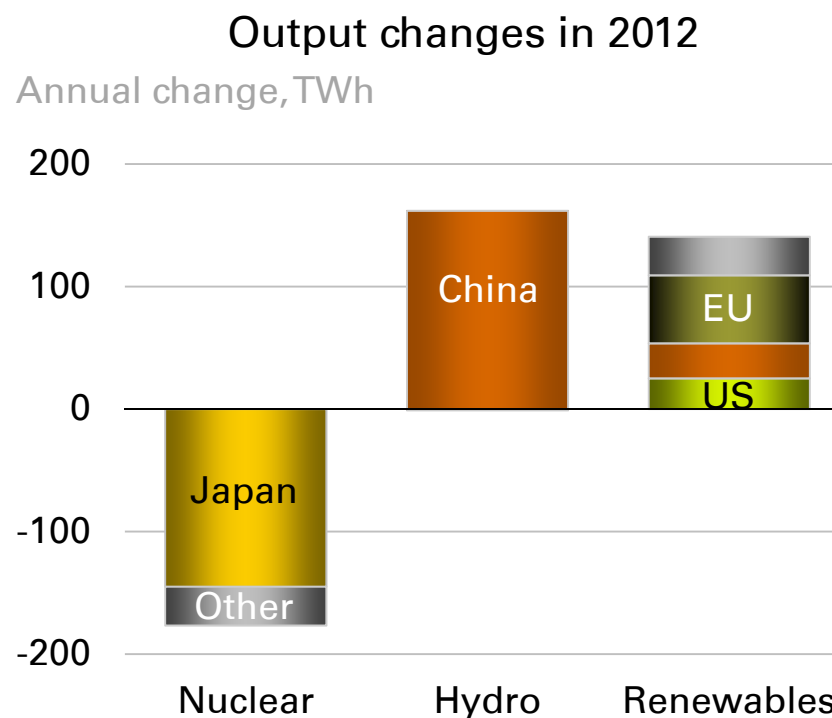
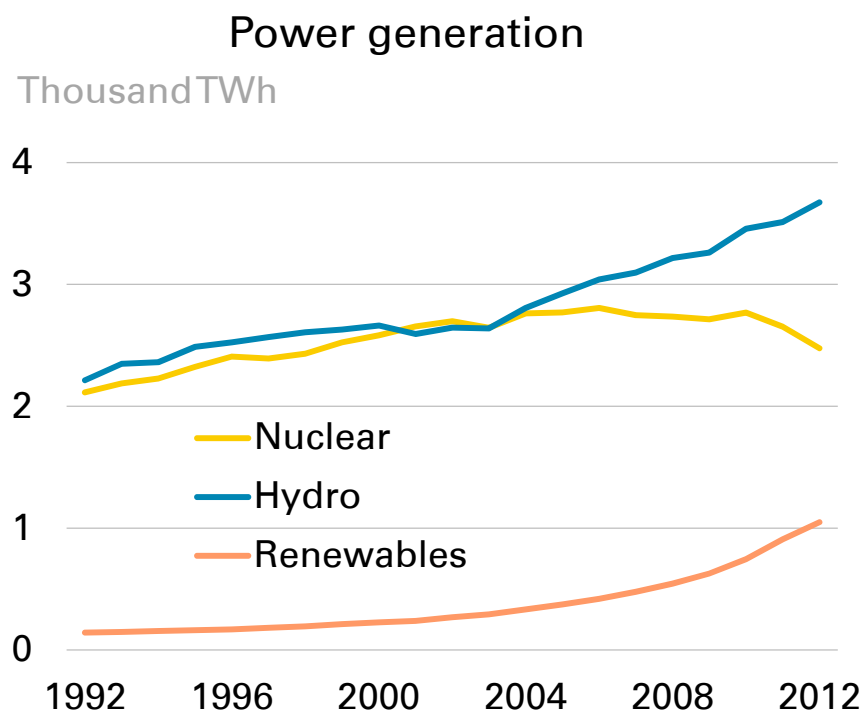


Largest changes outside China in 2012





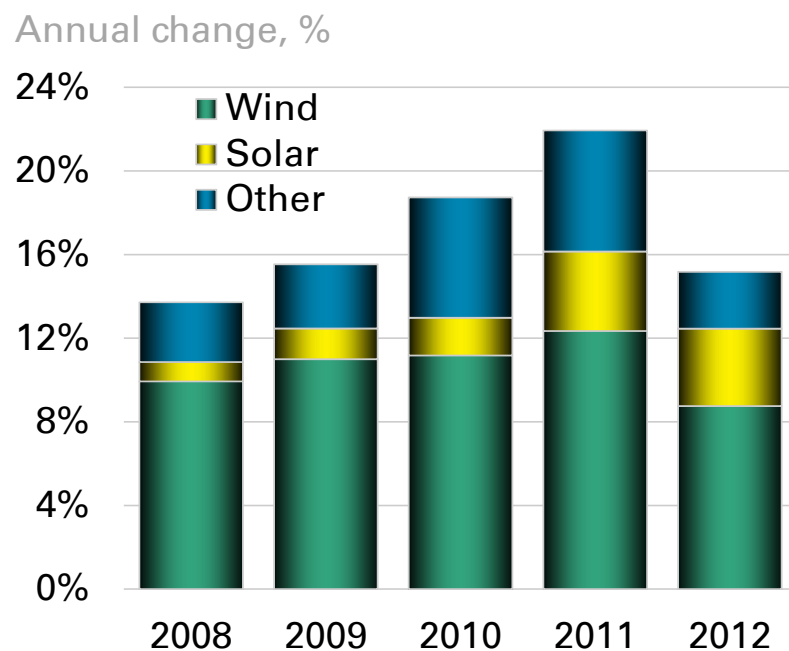
Hydro, other renewables and nuclear



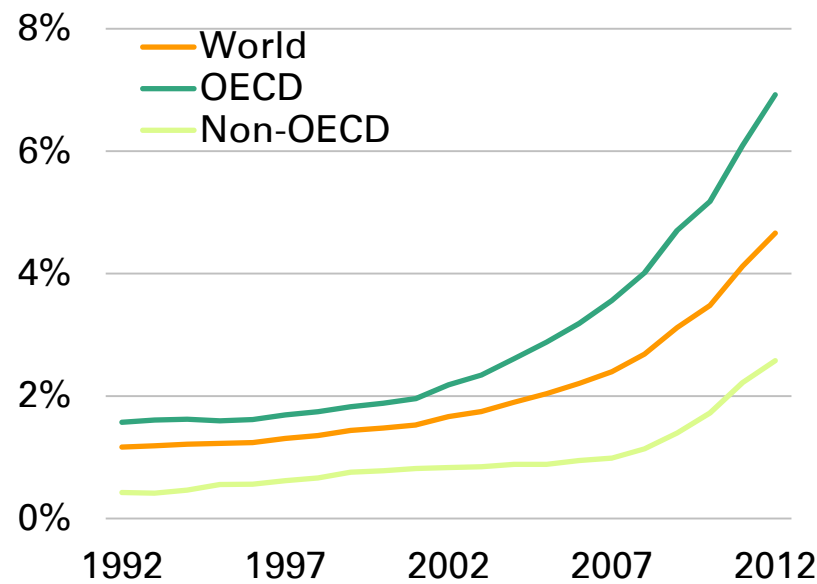


Renewables in power generation

Contributions to growth



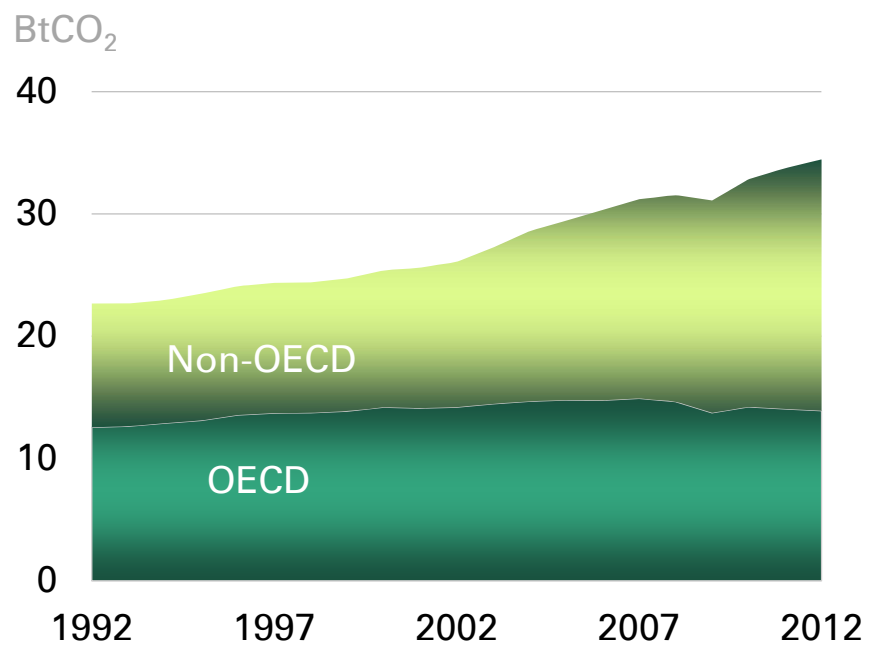
Renewables share of power



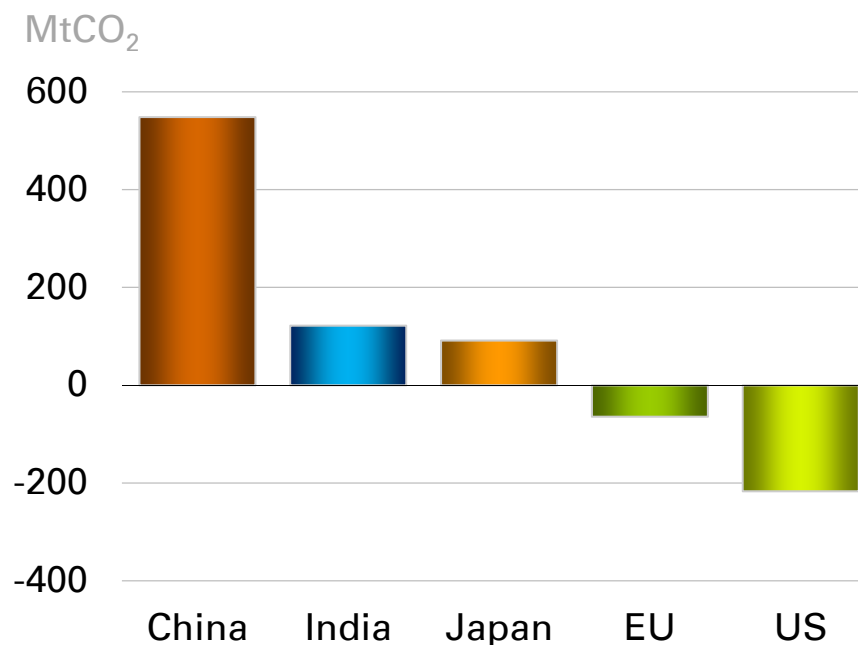


Carbon emissions

Global emissions from energy use

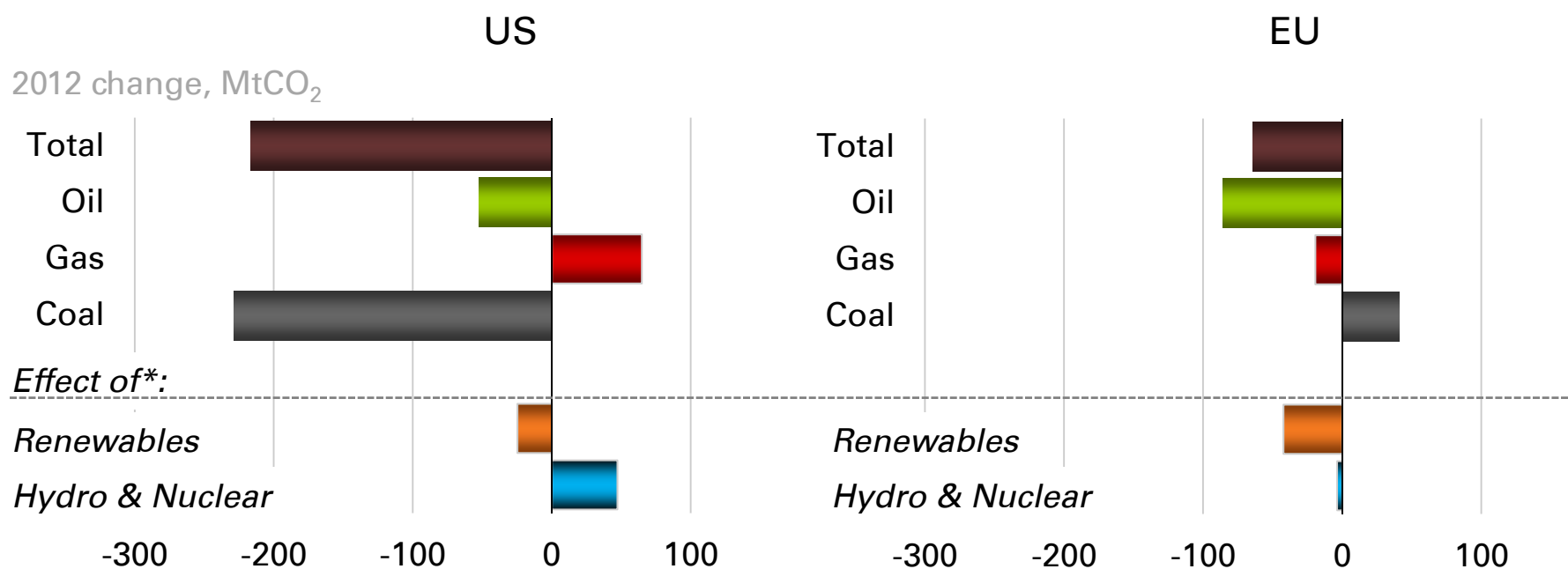


Largest emission changes in 2012





Carbon emissions by fuel: US and EU



* The net effect of changes in non-fossil fuels in power on emissions, based on 2011 shares of fossil fuels in power generation



Conclusion

Energy in 2012

- Fundamental adjustment
 - And short-term aberrations
- Market and price driven
 - Sometimes with surprises
- Policy matters

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