

BP Statistical Review of World Energy

June 2014

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Energy in 2013: Taking stock



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Energy in 2013: Taking stock

Christof Rühl, Group Chief Economist





Outline

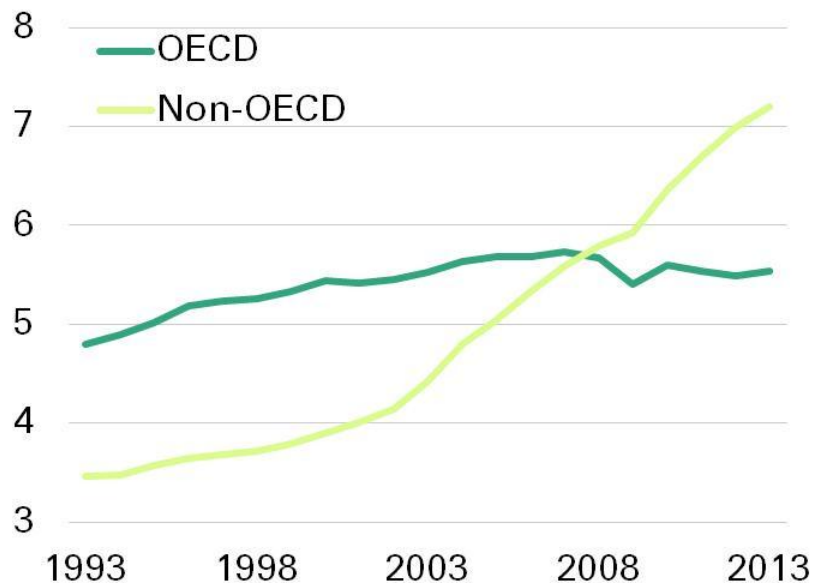
- Introduction
- Energy and the economy
- Fuel by fuel
- Concluding remarks



Energy demand and prices

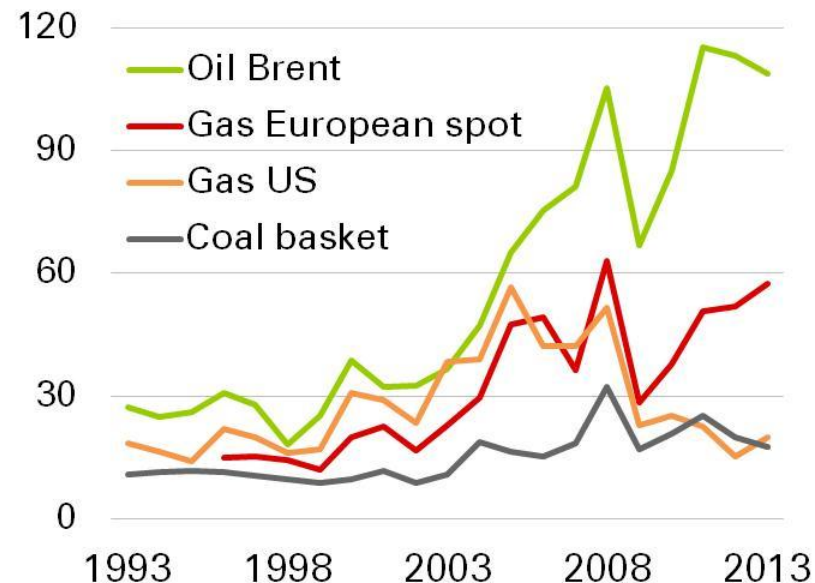
Primary energy consumption

Billion toe



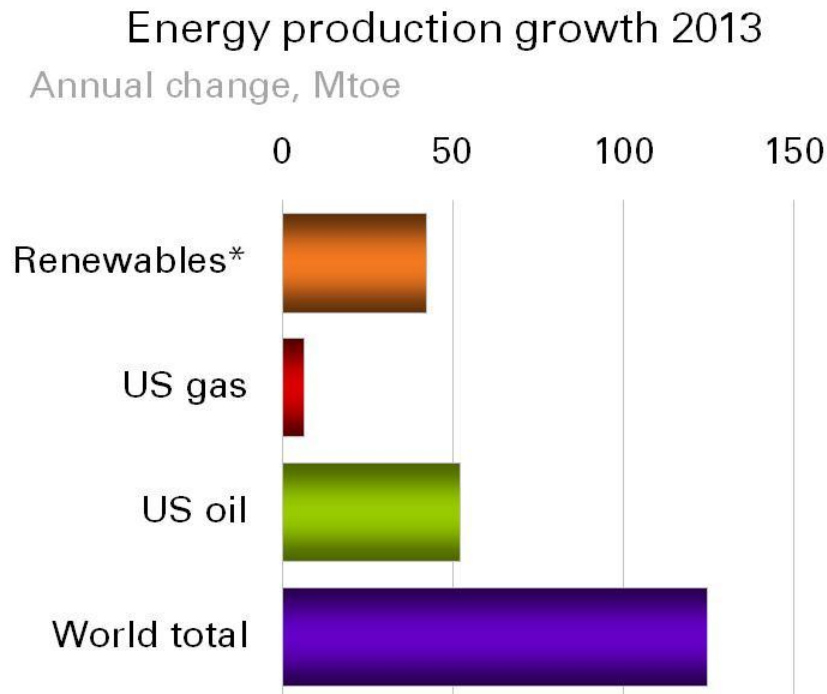
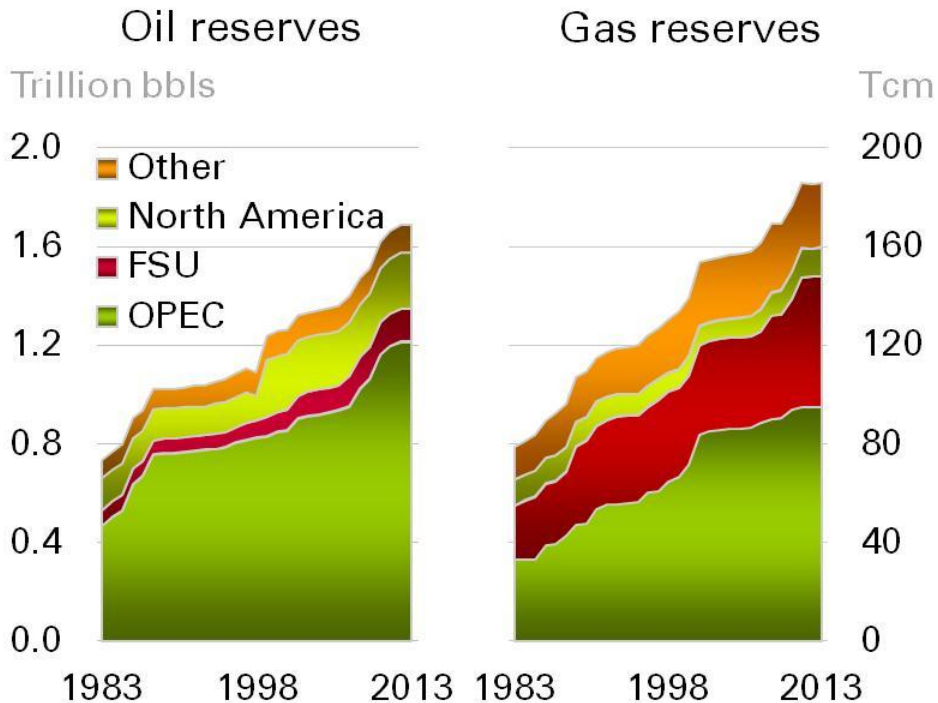
Inflation adjusted prices

\$2013/boe





Reserves and new sources of energy supply



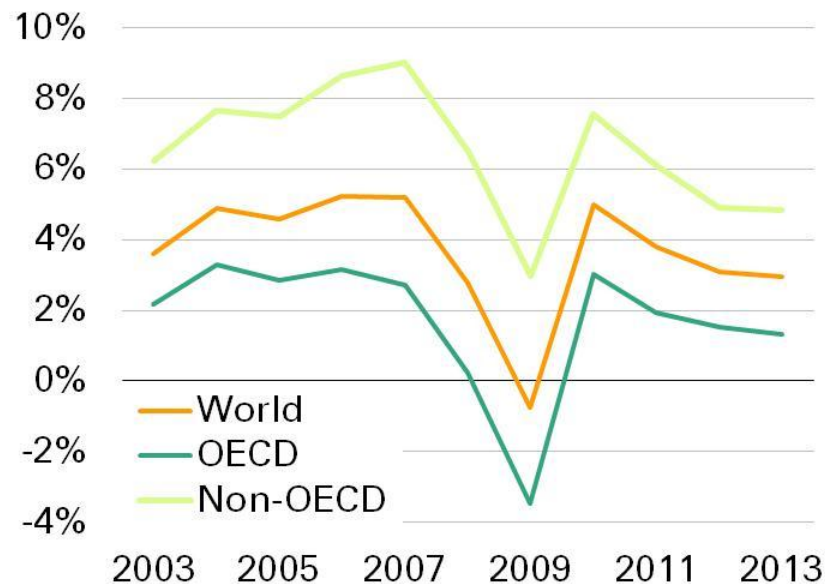
* Includes biofuels



Energy and the economy

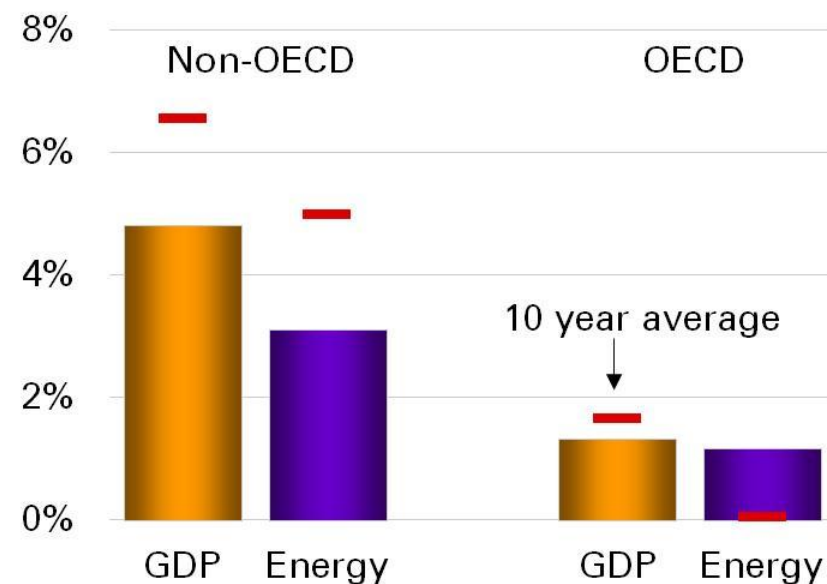
GDP growth

Annual change, %



Energy and GDP in 2013

Annual change, %



Source: includes data from Oxford Economics

Note: GDP growth based on Purchasing Power Parity measure of GDP

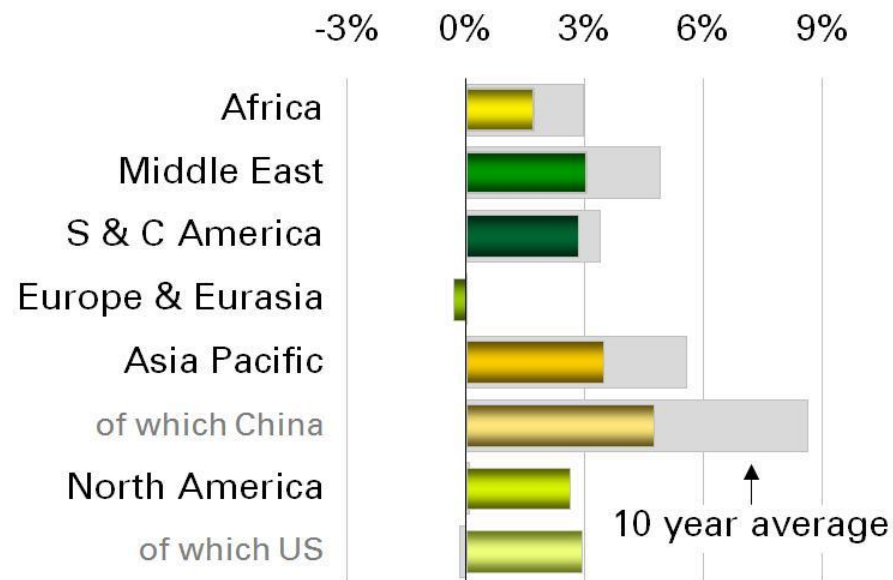
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Energy consumption in 2013

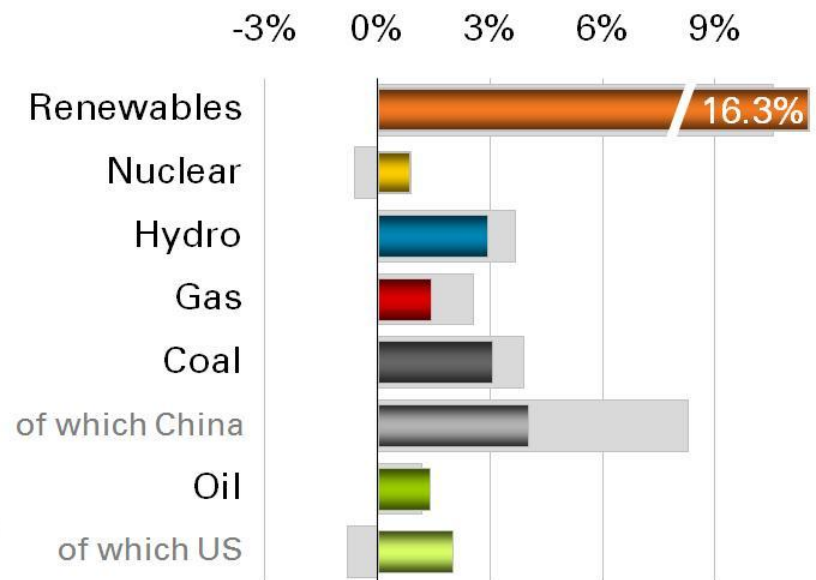
Growth by region

Annual change, %



Growth by fuel

Annual change, %

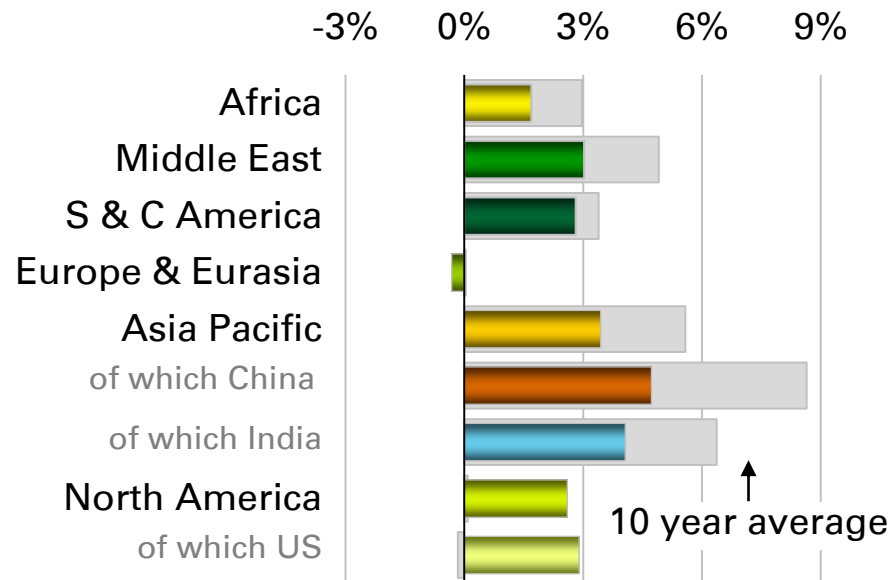


Energy consumption in 2013



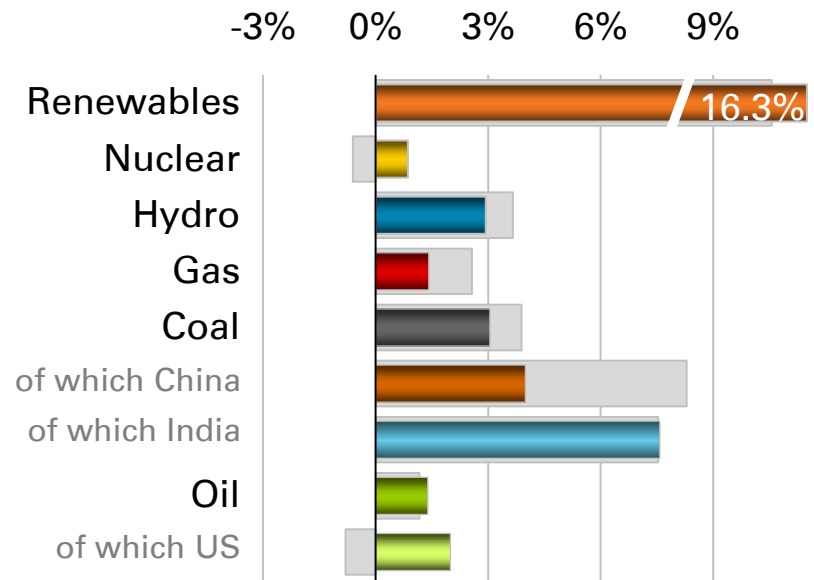
Growth by region

Annual change, %



Growth by fuel

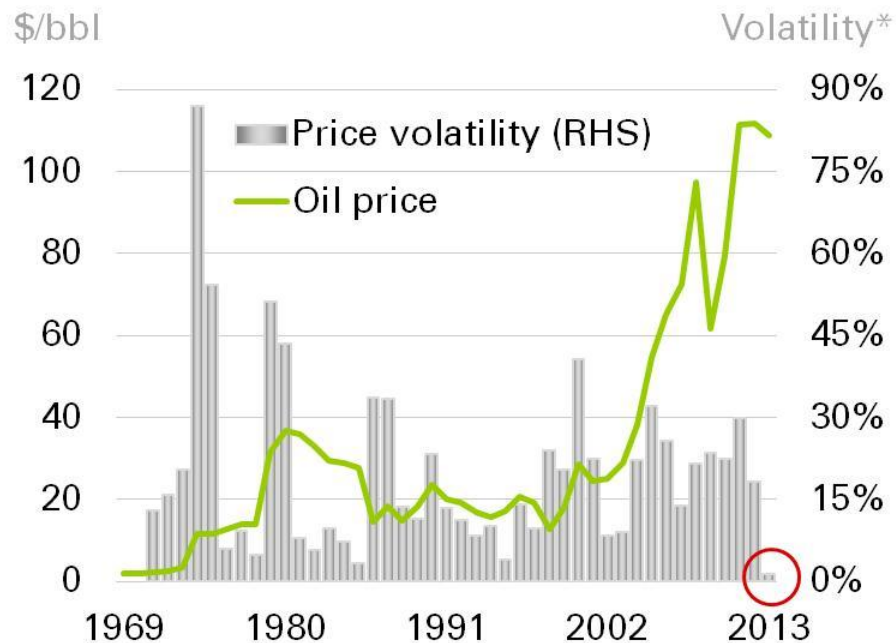
Annual change, %





The oil market in 2013

Oil prices and volatility

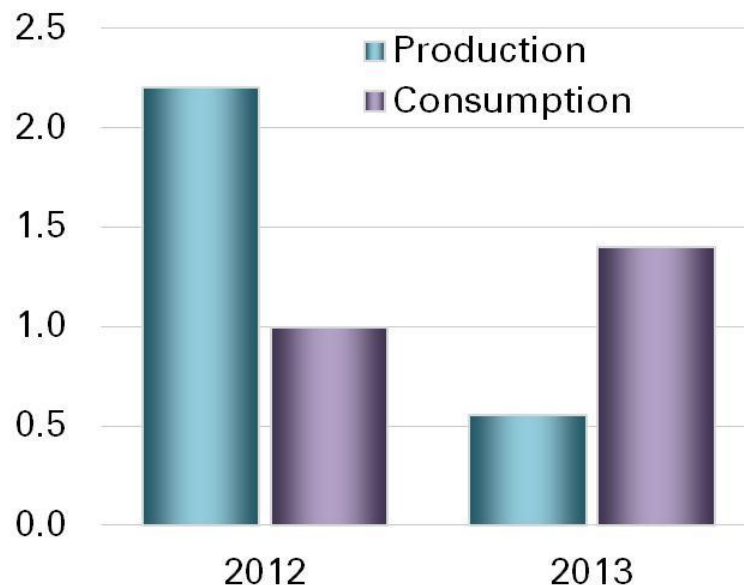


Source: includes data from Platts

* Three year standard deviation

Production and consumption growth

Annual change, Mb/d

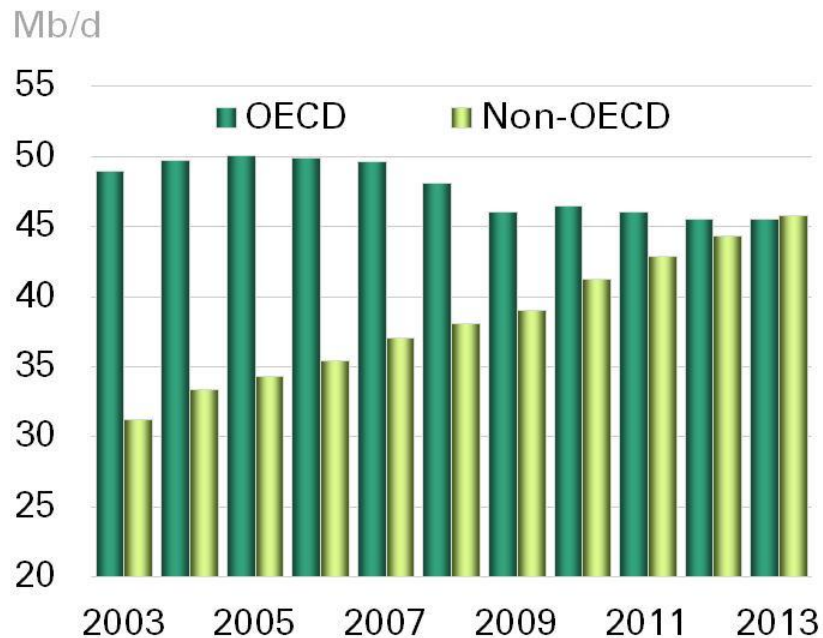


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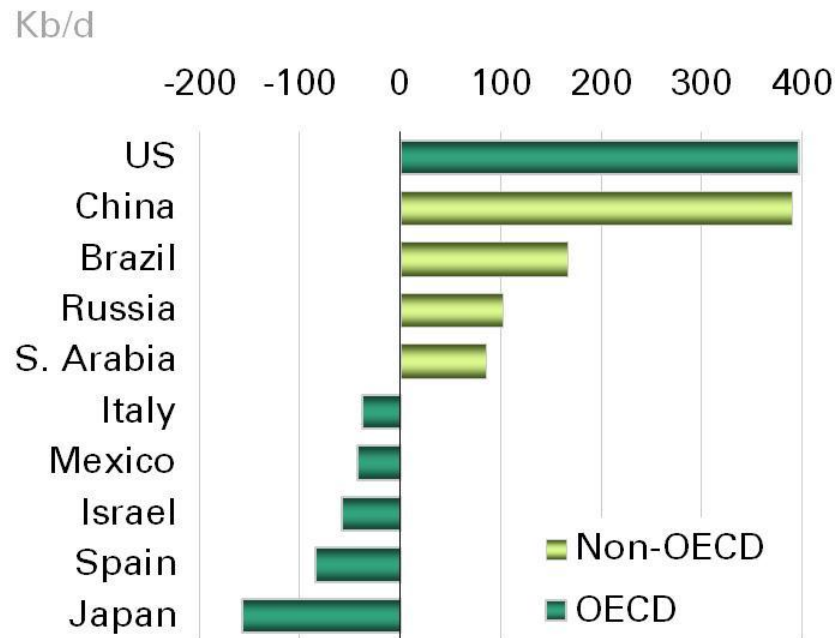
Oil consumption



Oil consumption



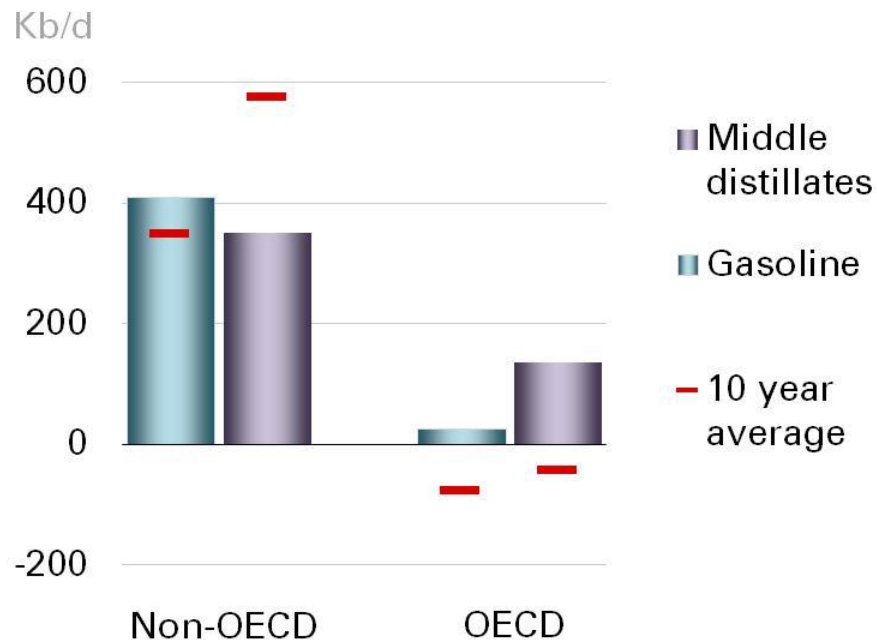
Largest changes in 2013



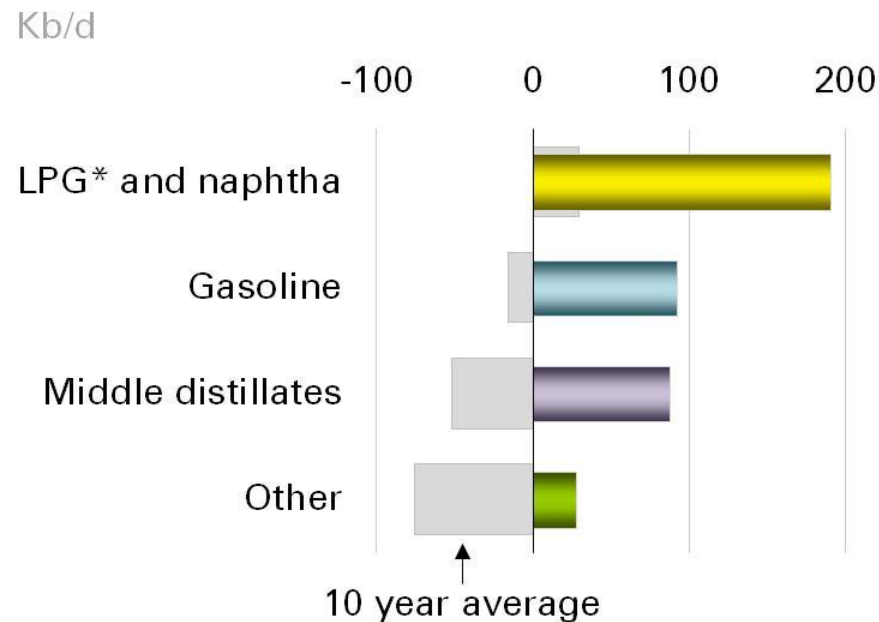


Oil consumption by product

Growth by product type in 2013



US growth in 2013

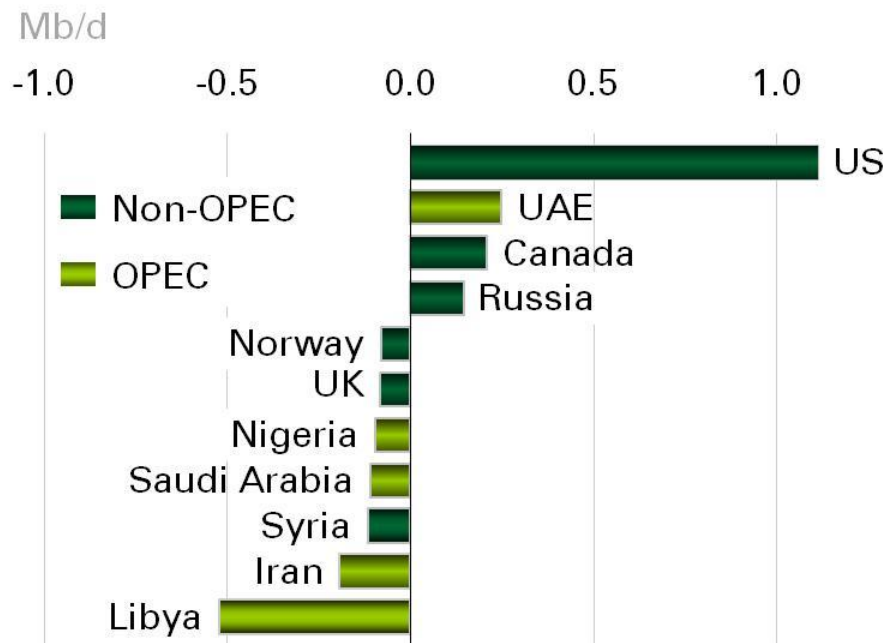


* Includes ethane

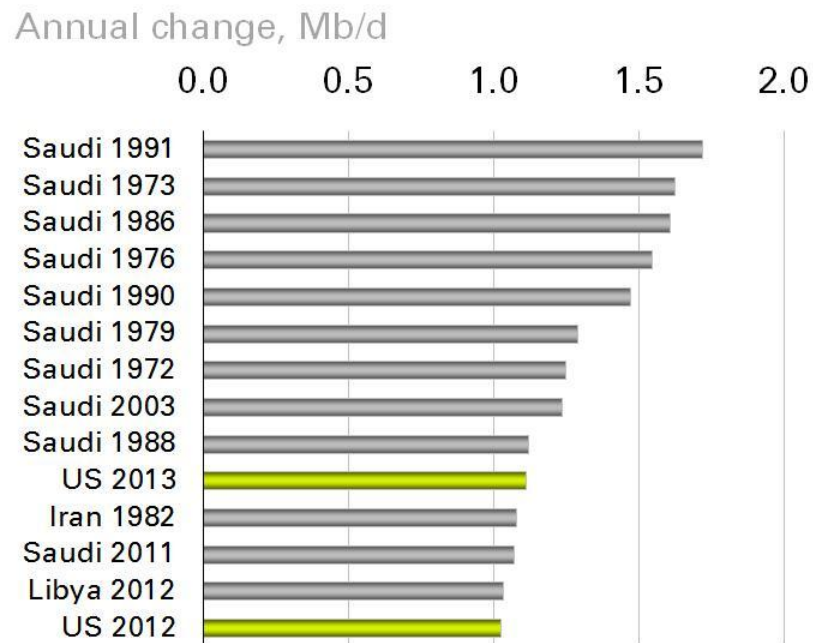
Oil production



Largest changes in 2013



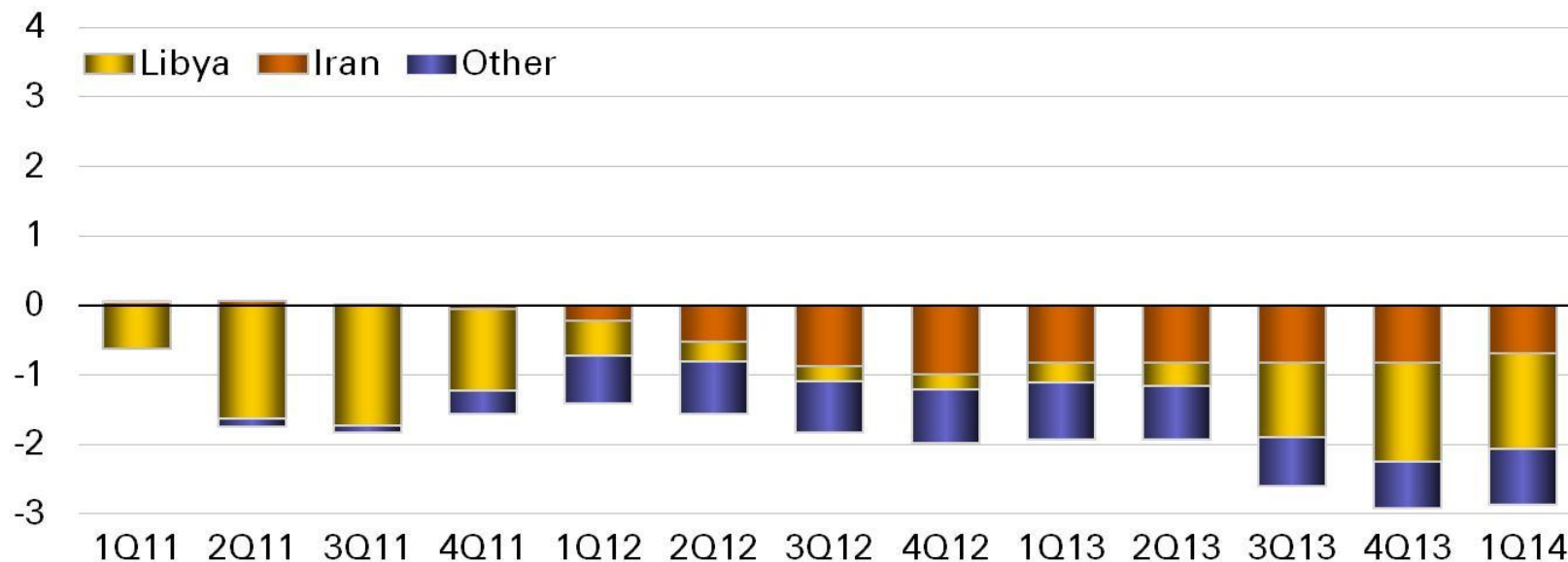
Largest oil production increases



Oil supply disruptions



Cumulative change since 4Q10, Mb/d



Source: includes data from US Energy Information Administration

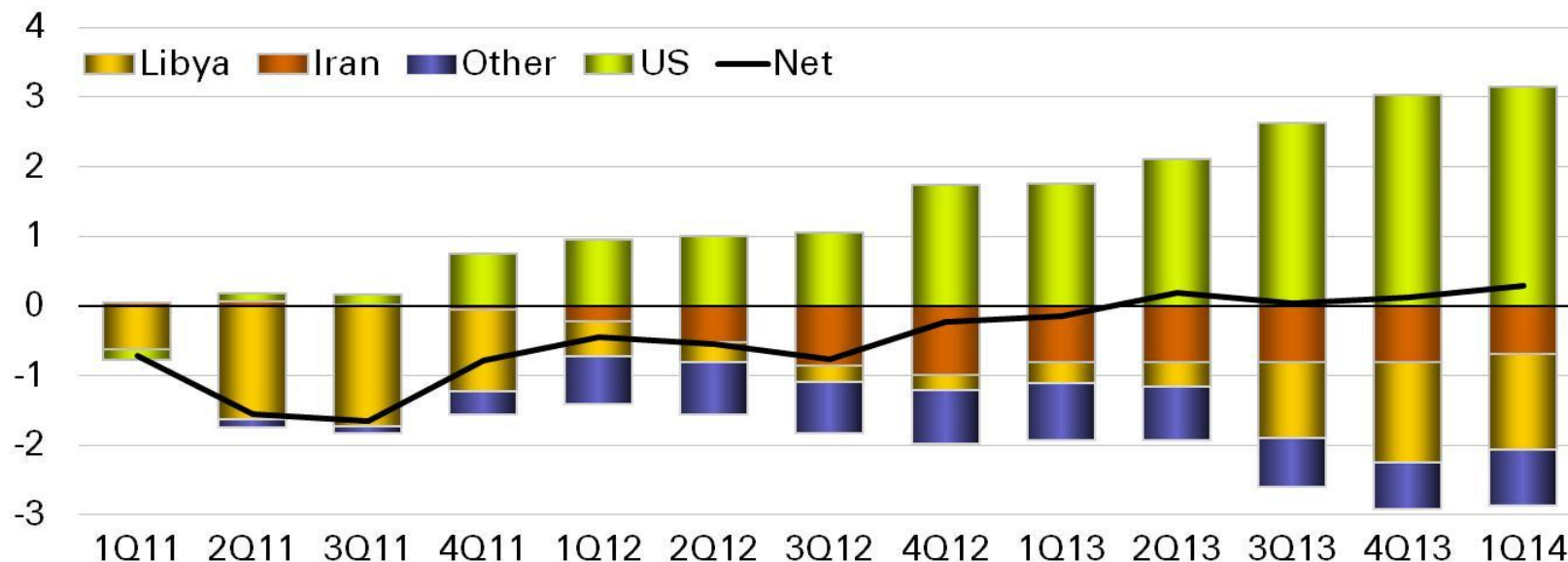
Note: Other includes Sudan/S Sudan, Syria & Yemen

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Oil supply disruptions and US production growth

Cumulative change since 4Q10, Mb/d



Source: includes data from US Energy Information Administration

Note: Other includes Sudan/S Sudan, Syria & Yemen

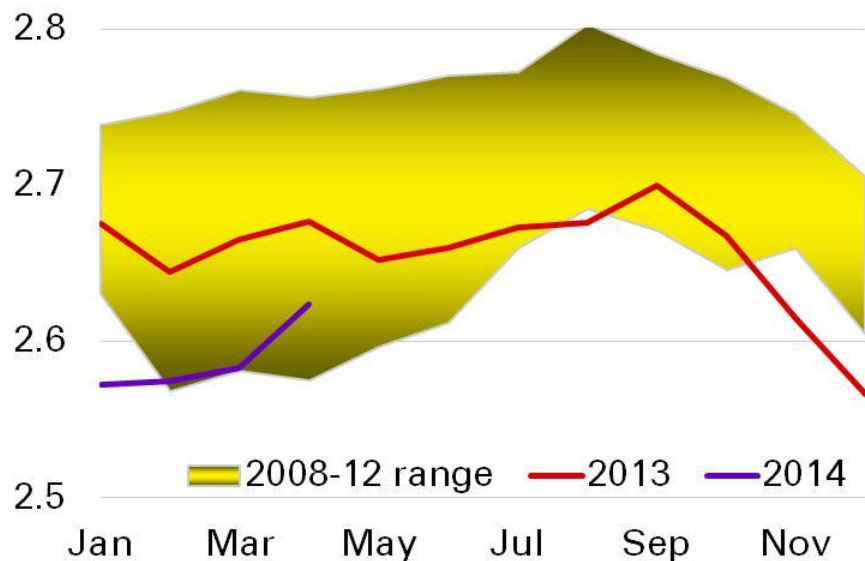
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Oil inventories



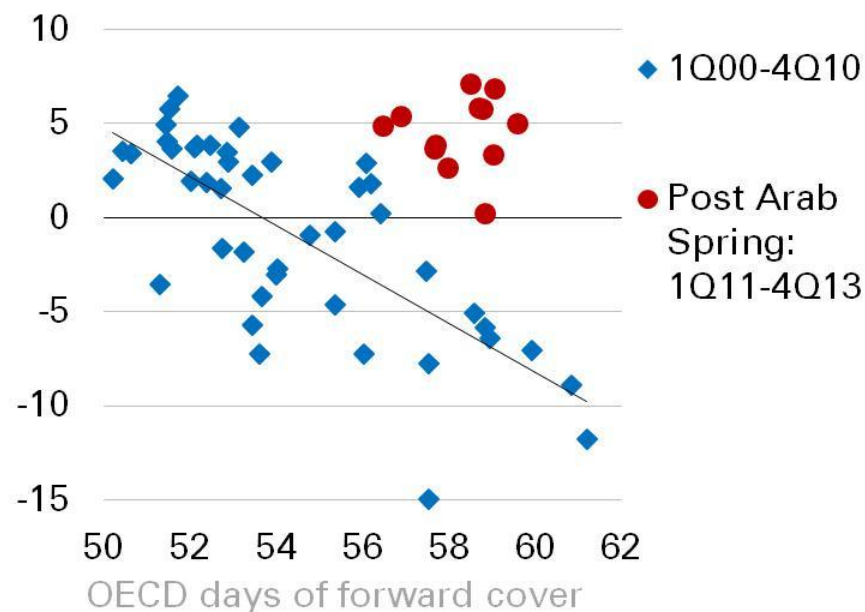
OECD commercial inventories

Billion bbls



OECD stocks and forward markets

Dated Brent minus 12-month futures, \$/bbl

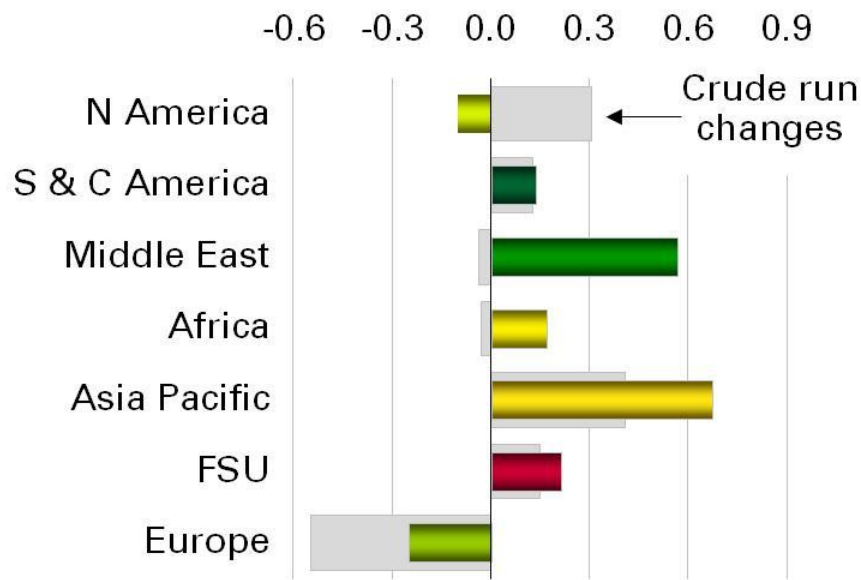




Refining capacity

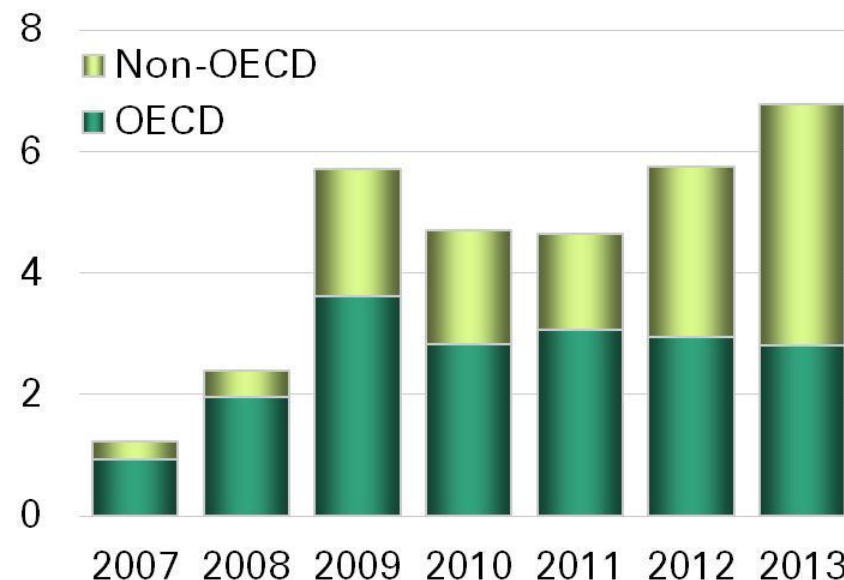
Capacity growth in 2013

Mb/d



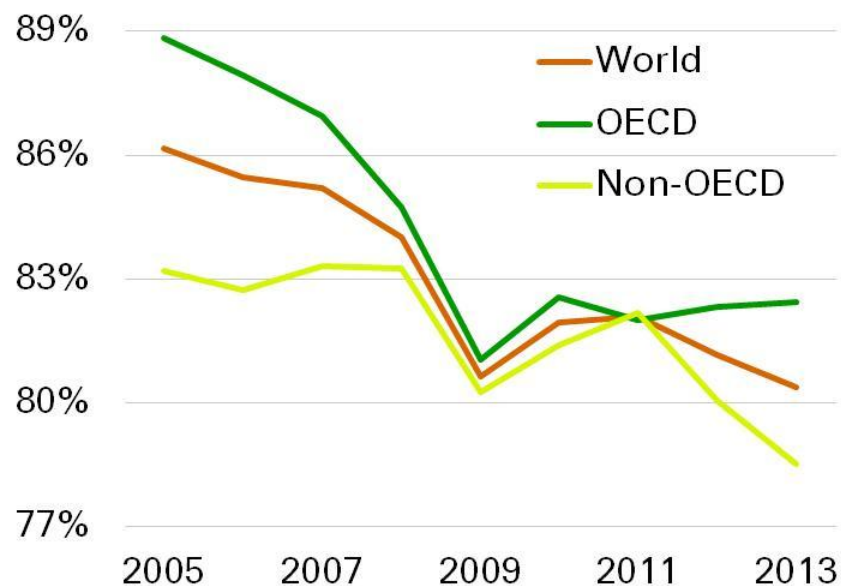
Cumulative spare capacity growth

Mb/d since 2005

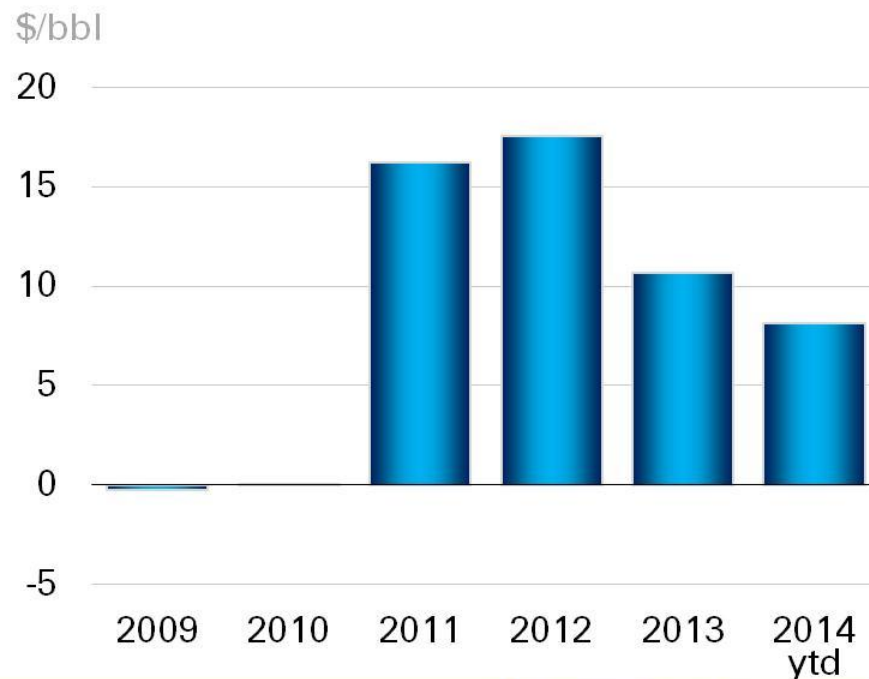


Refinery utilization and crude differentials

Refinery utilization



Brent-WTI



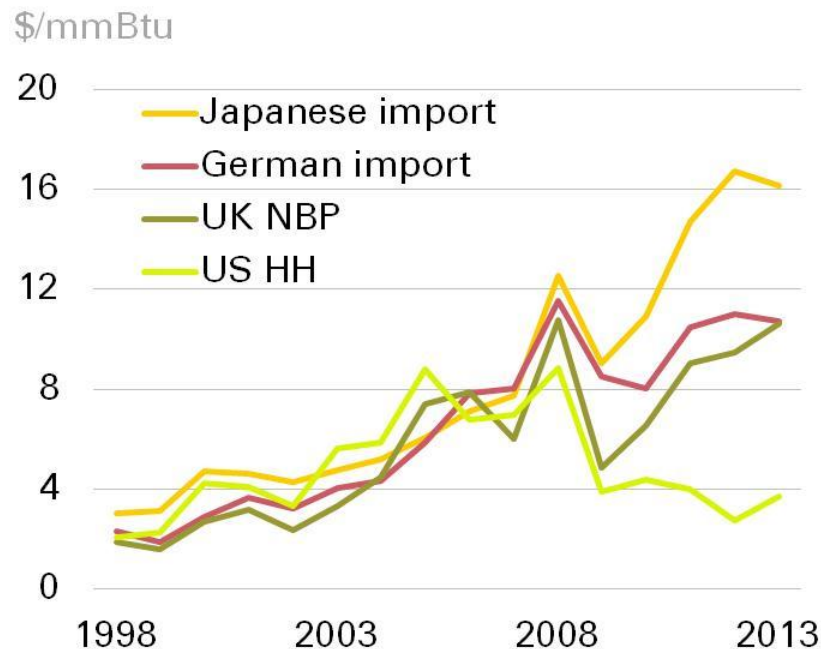
Source: includes data from Energy Security Analysis, Inc. and Platts

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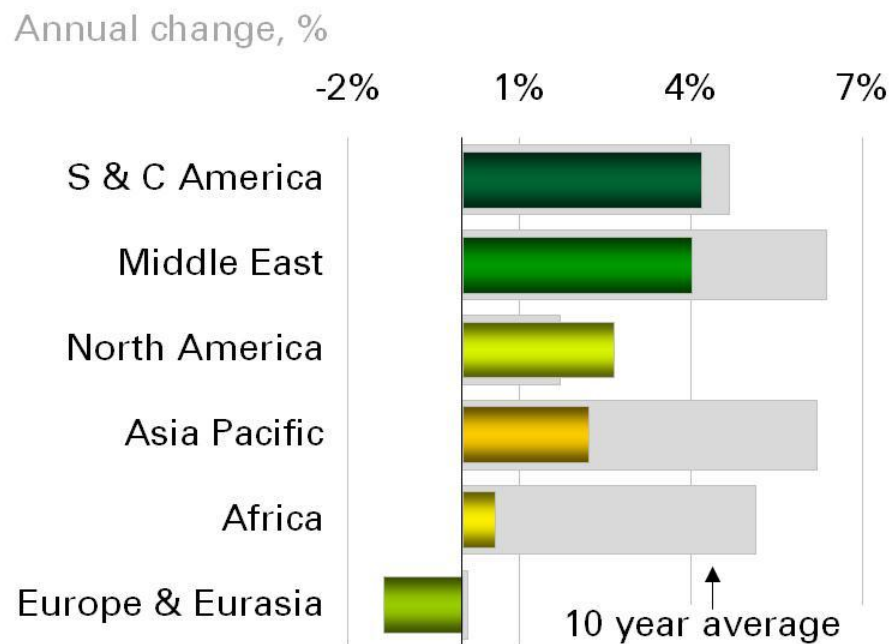


Global natural gas markets

Natural gas prices



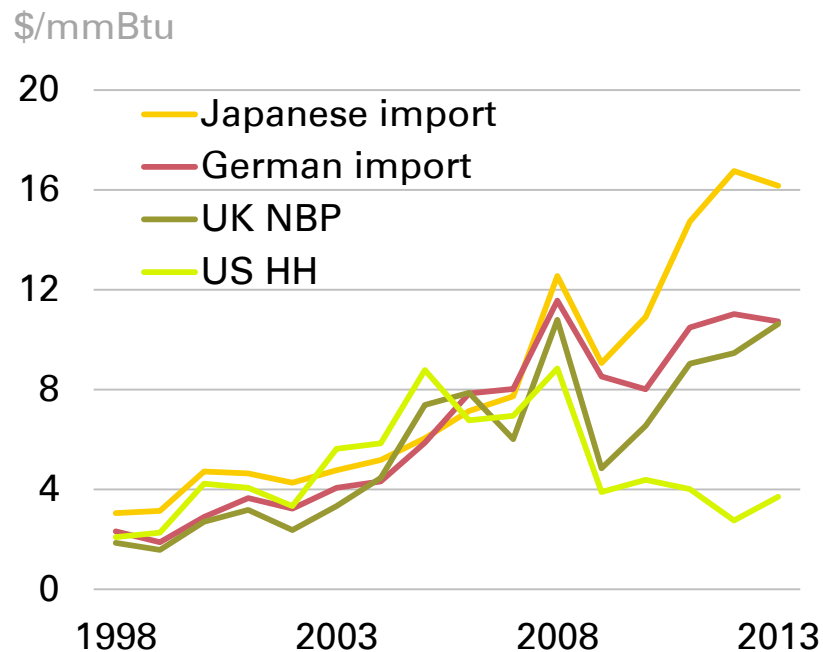
Gas consumption growth in 2013



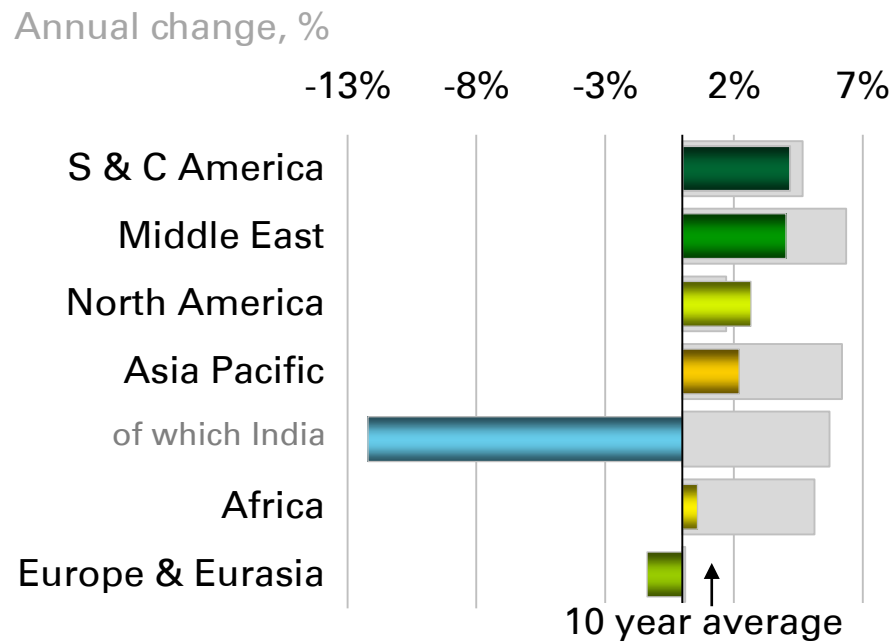
Global natural gas markets



Natural gas prices



Gas consumption growth in 2013

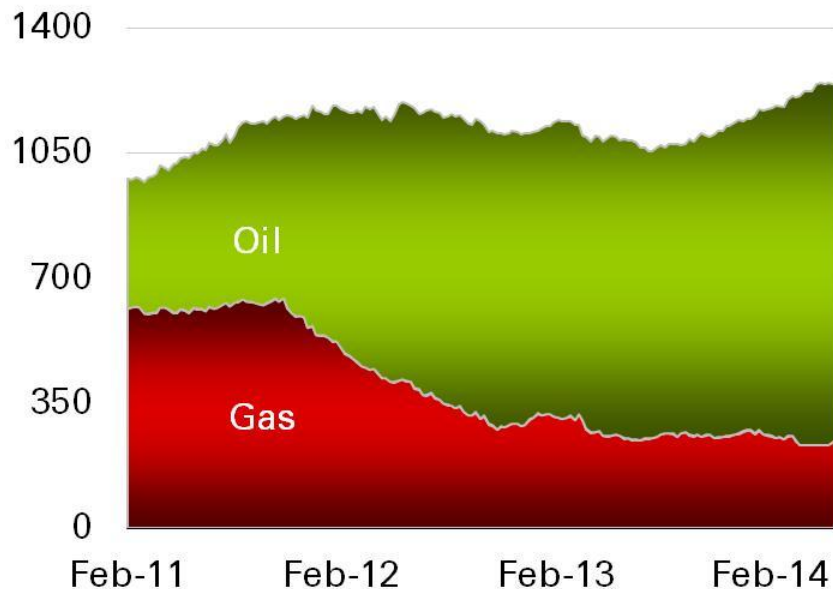




US natural gas market

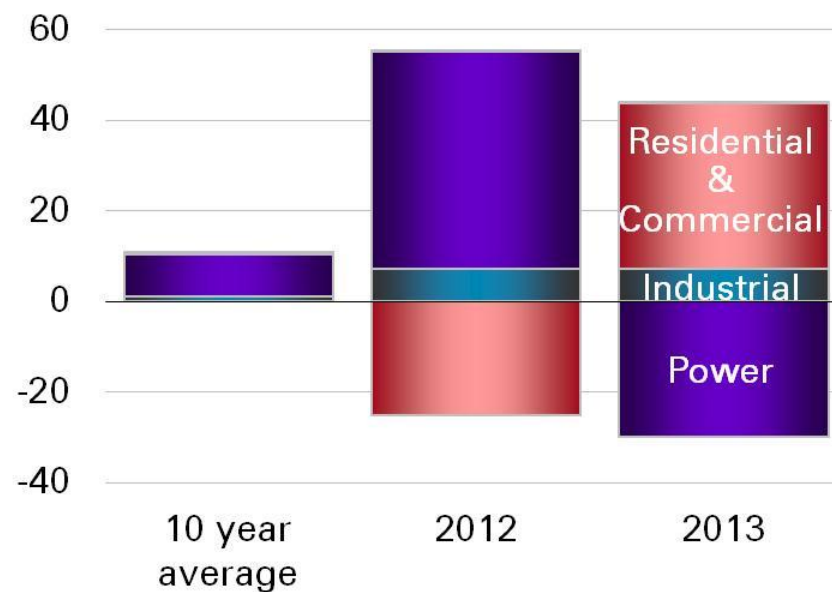
Horizontal drilling rigs

Number of rigs



Consumption growth in 2013

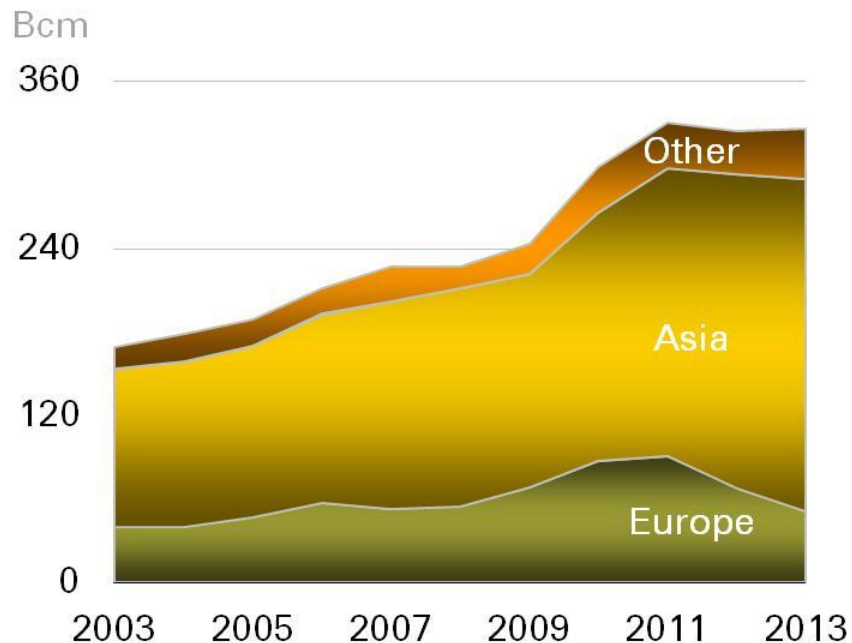
Annual change, Bcm



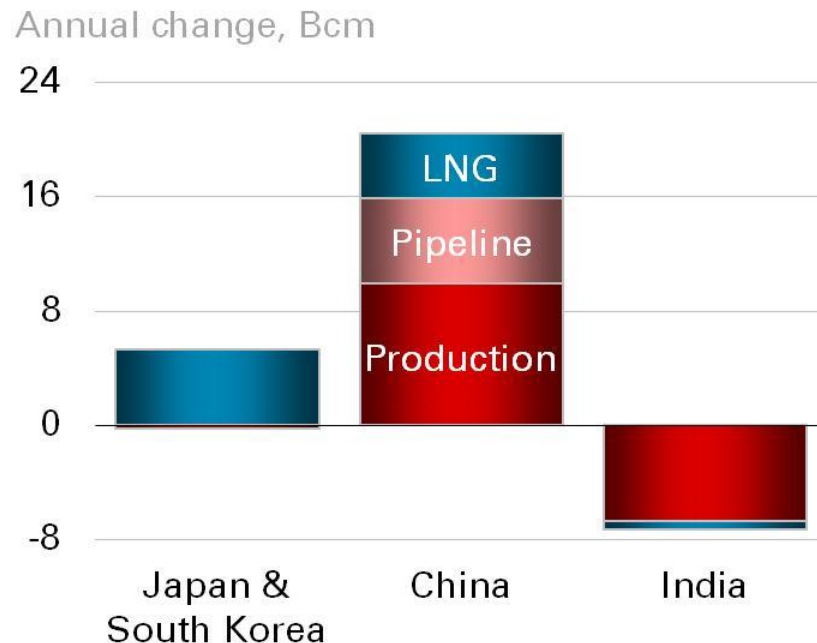


Global LNG and Asian supply

Global LNG imports



Asian supply growth in 2013

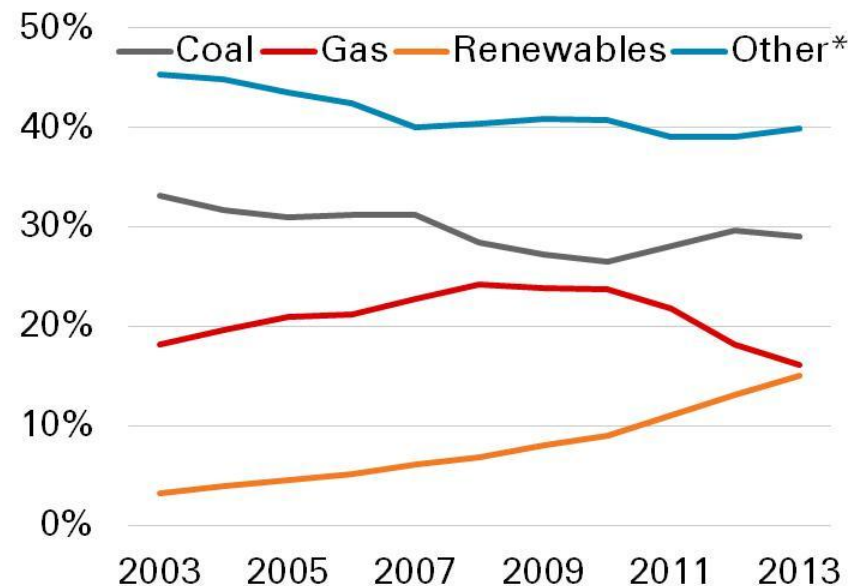




EU natural gas market

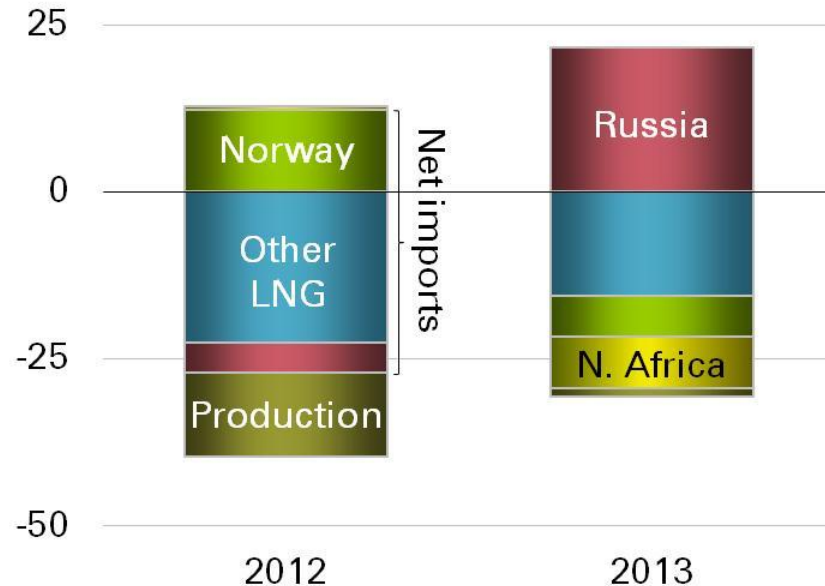
Power generation mix

Share of total generation, %



Natural gas supply

Annual change, Bcm



Source: includes data from ENTSOE and IHS CERA

* Includes hydro, nuclear and oil

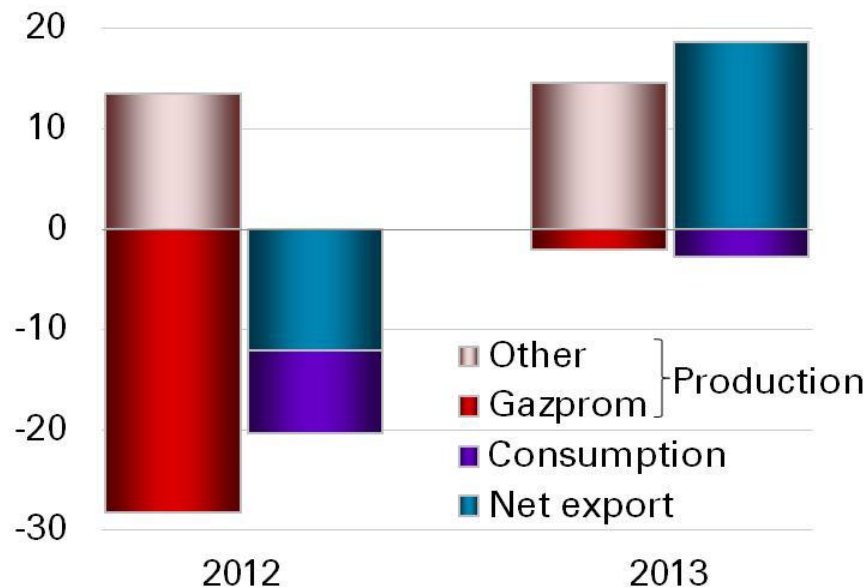
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Russian natural gas market and global trade

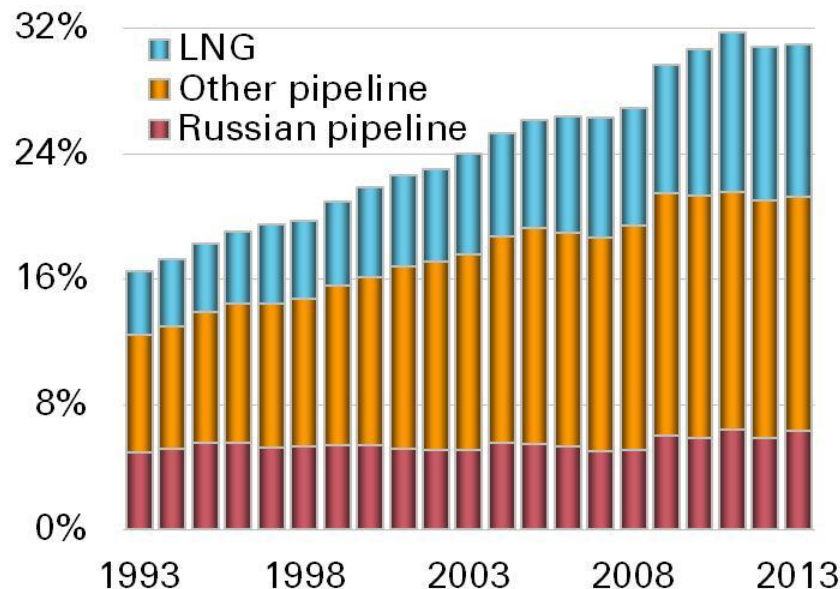
Russian natural gas

Annual change, Bcm



Trade share of global consumption

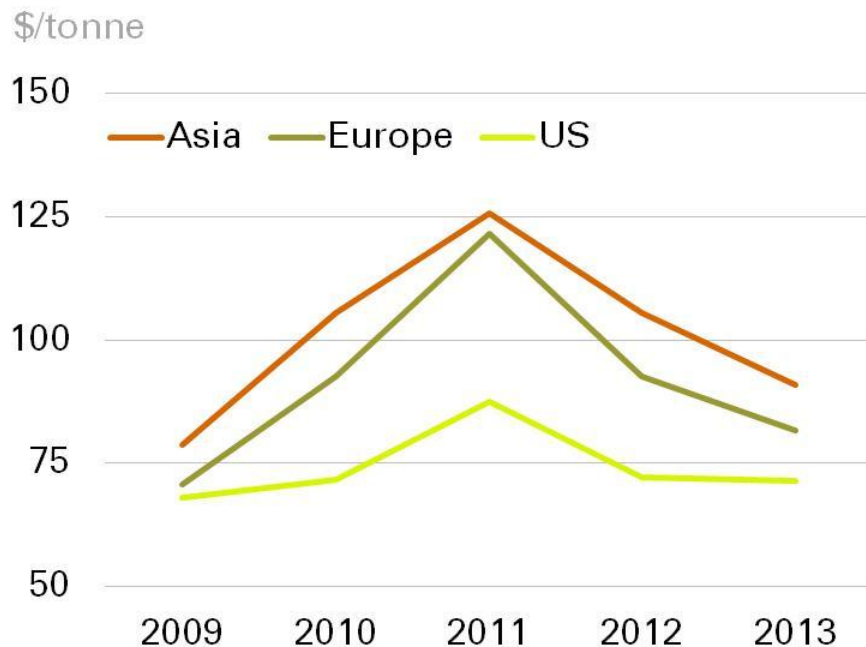
Share of consumption, %



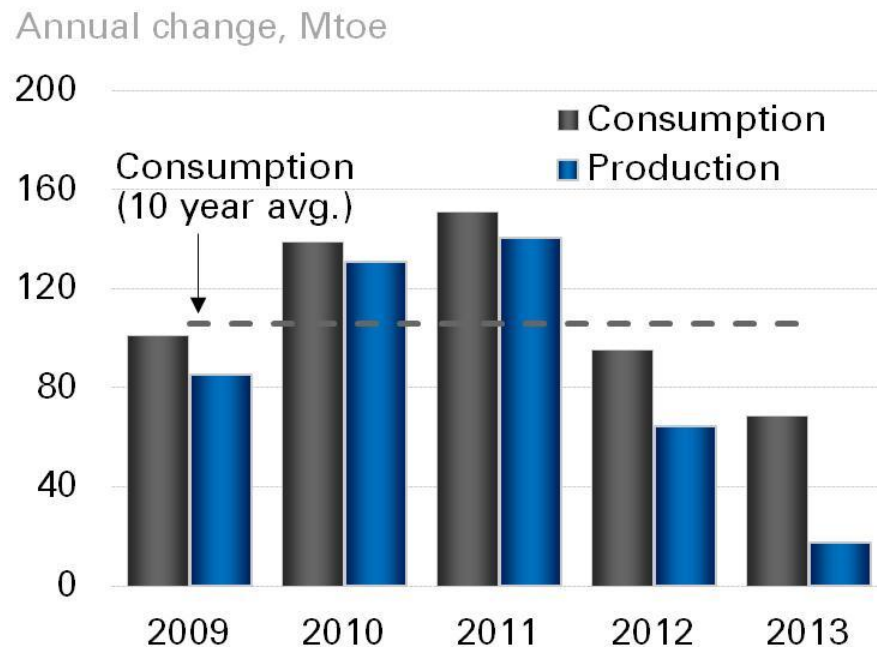


The coal market

Coal prices



Growth in China

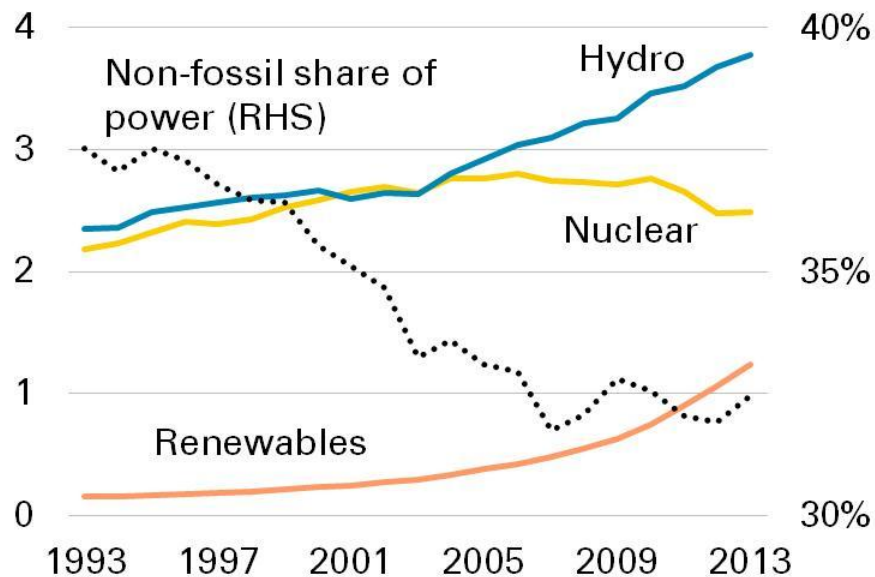




Hydro, renewables and nuclear

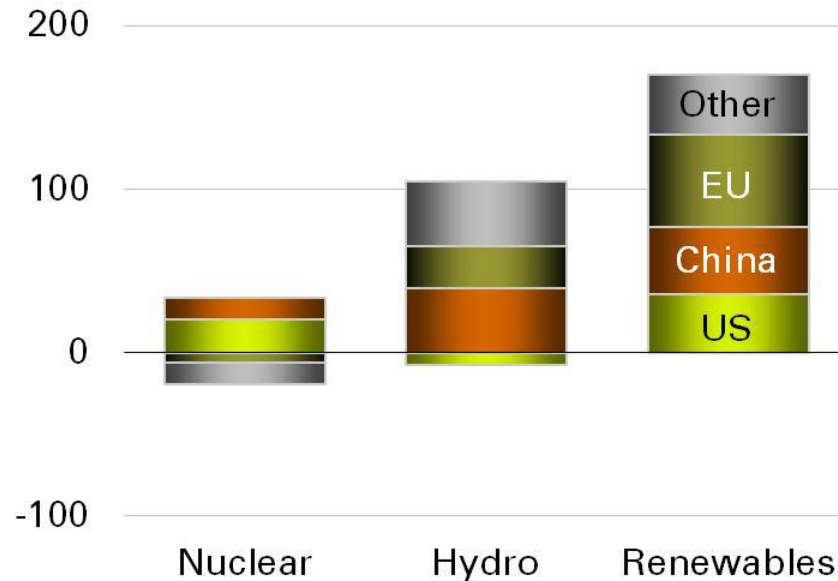
Power generation

Thousand TWh



Output changes in 2013

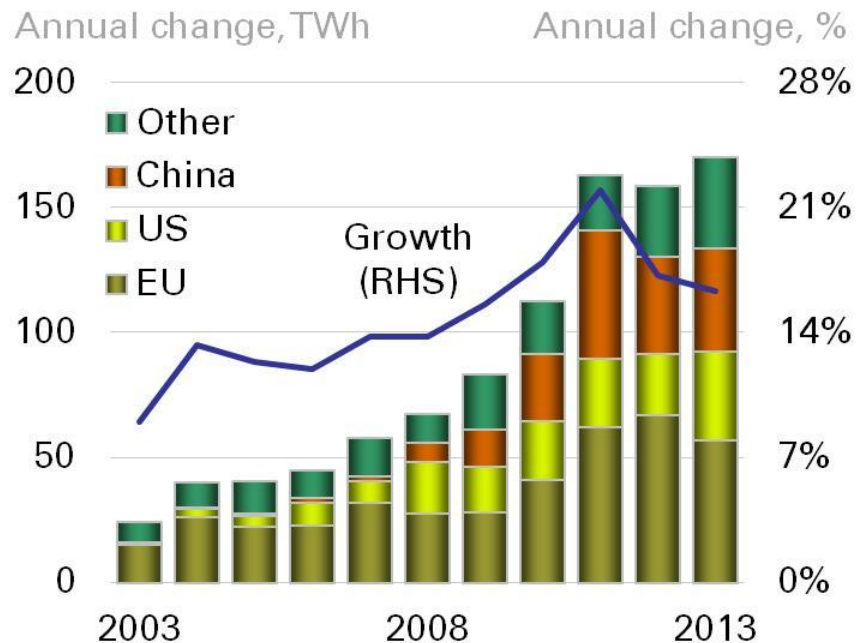
Annual change, TWh



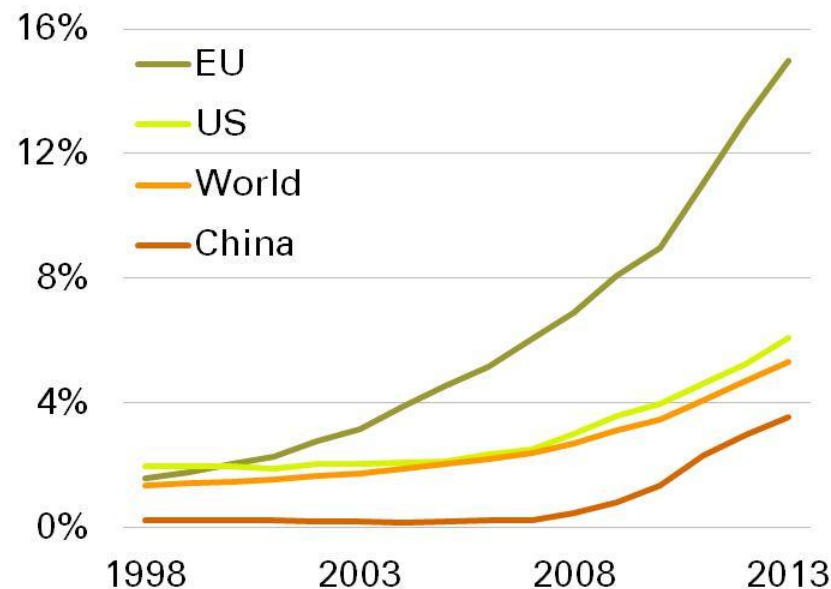


Renewables in power generation

Growth by region



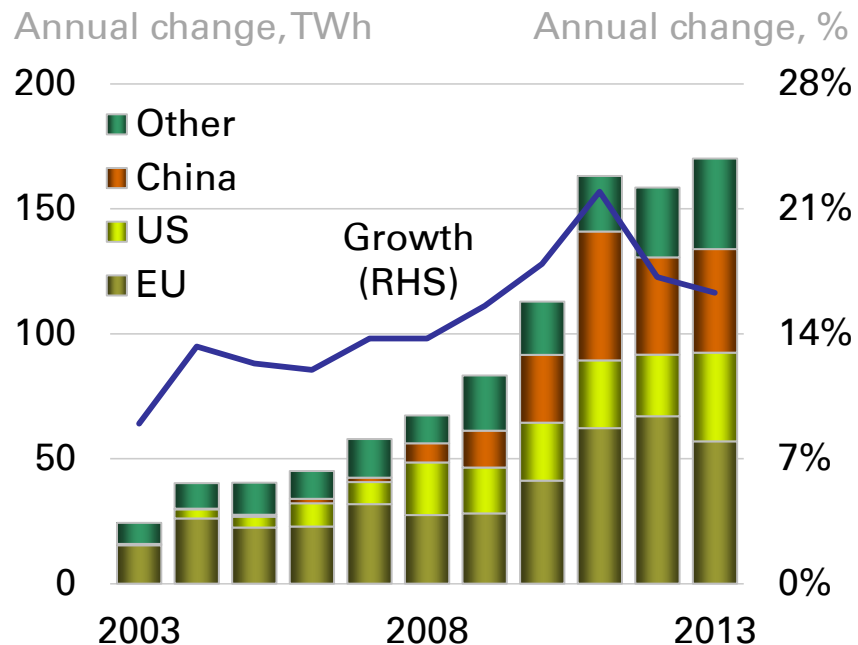
Renewables share of power



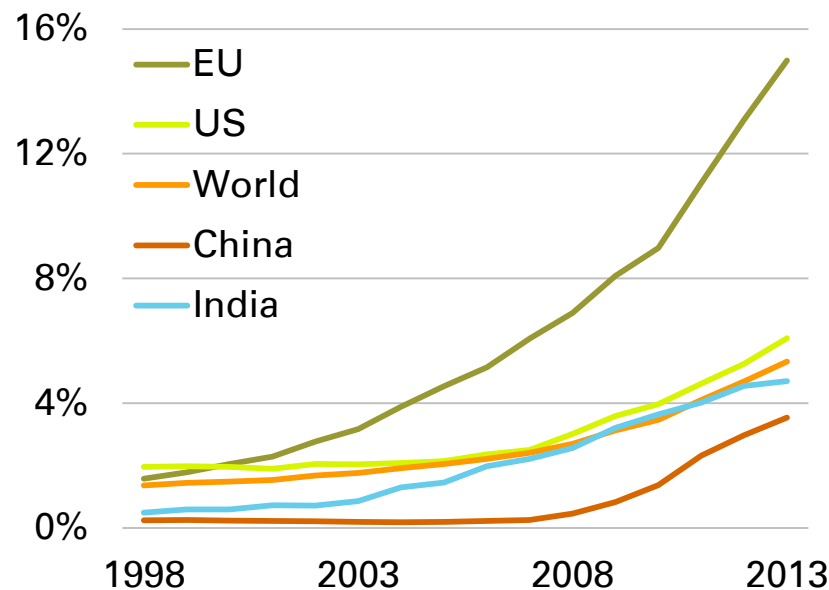


Renewables in power generation

Growth by region



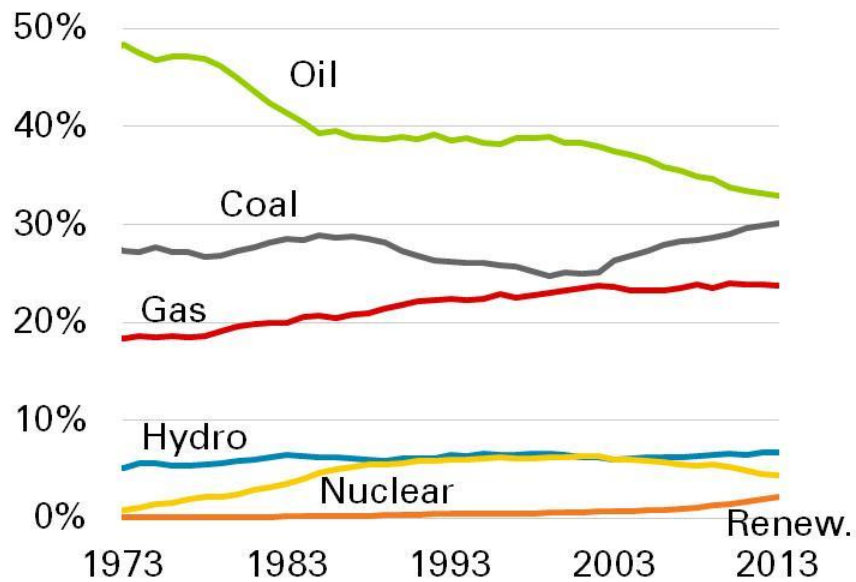
Renewables share of power





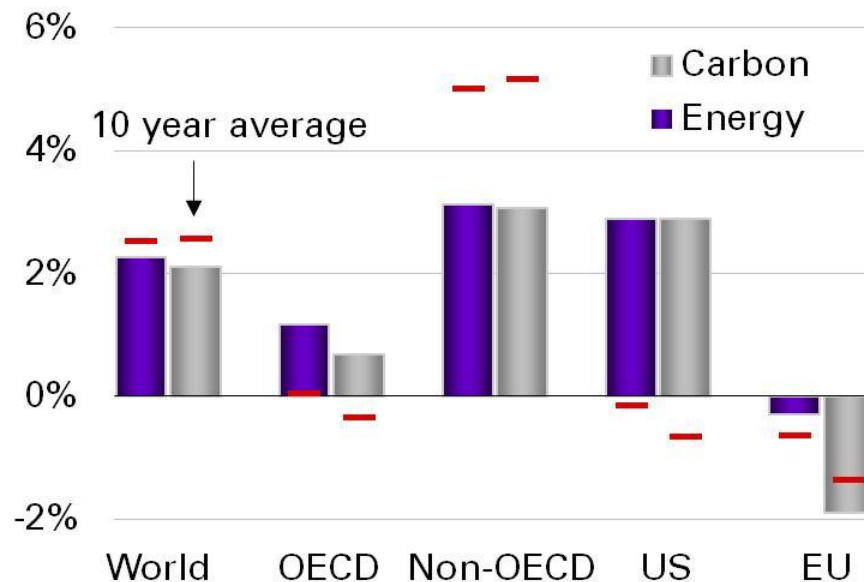
Fuel shares and carbon emissions

Shares of global primary energy



Energy and emissions growth in 2013

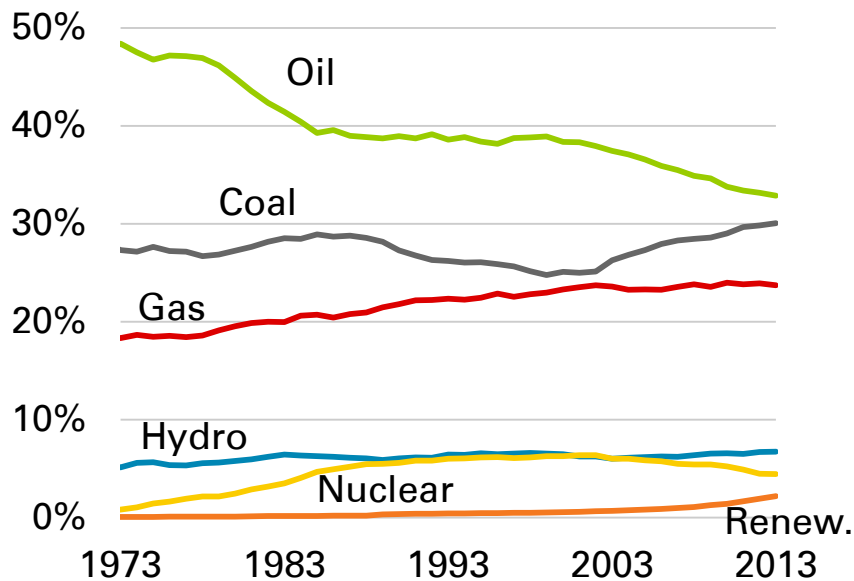
Annual change, %





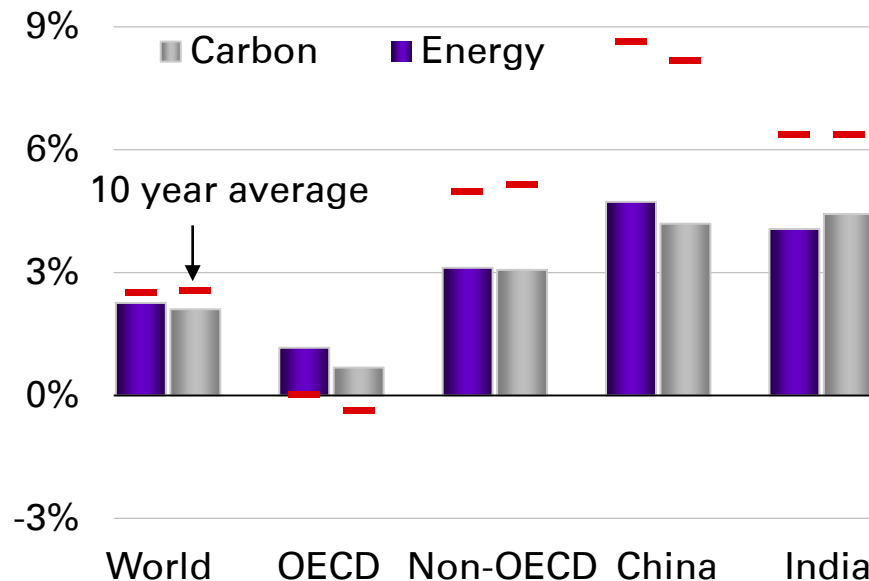
Fuel shares and carbon emissions

Shares of global primary energy



Energy and emissions growth in 2013

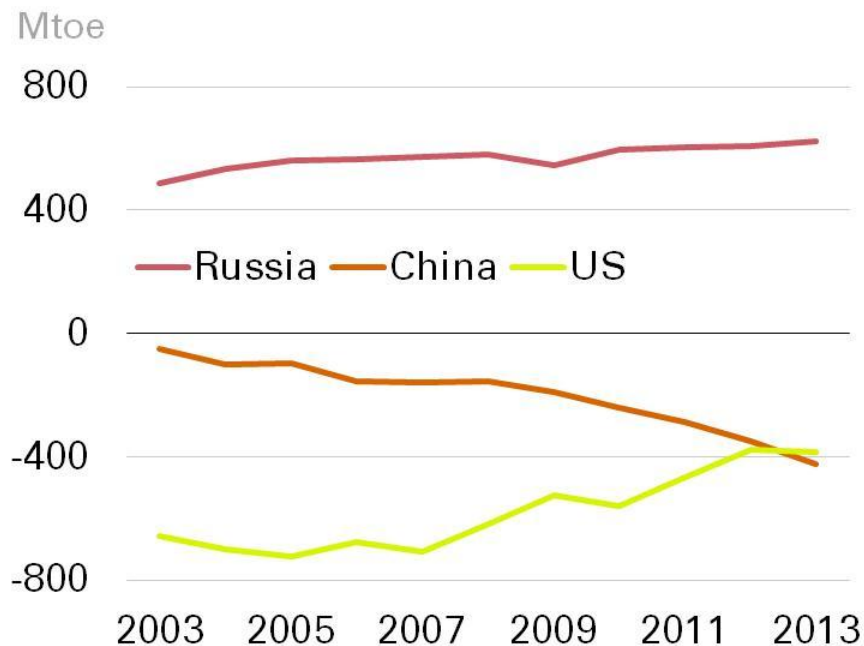
Annual change, %



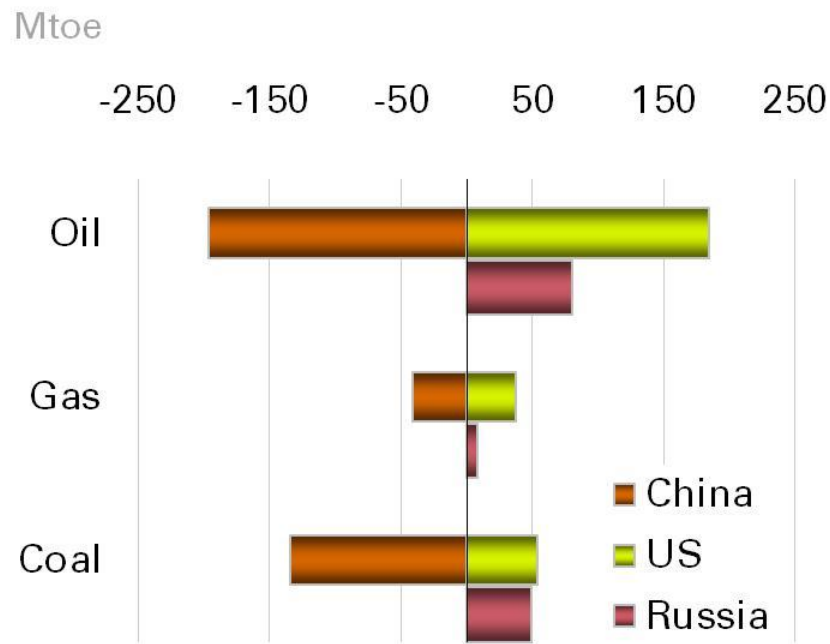


Changes in energy balances

Fossil fuel imbalances



Change in imbalances, 2003-2013

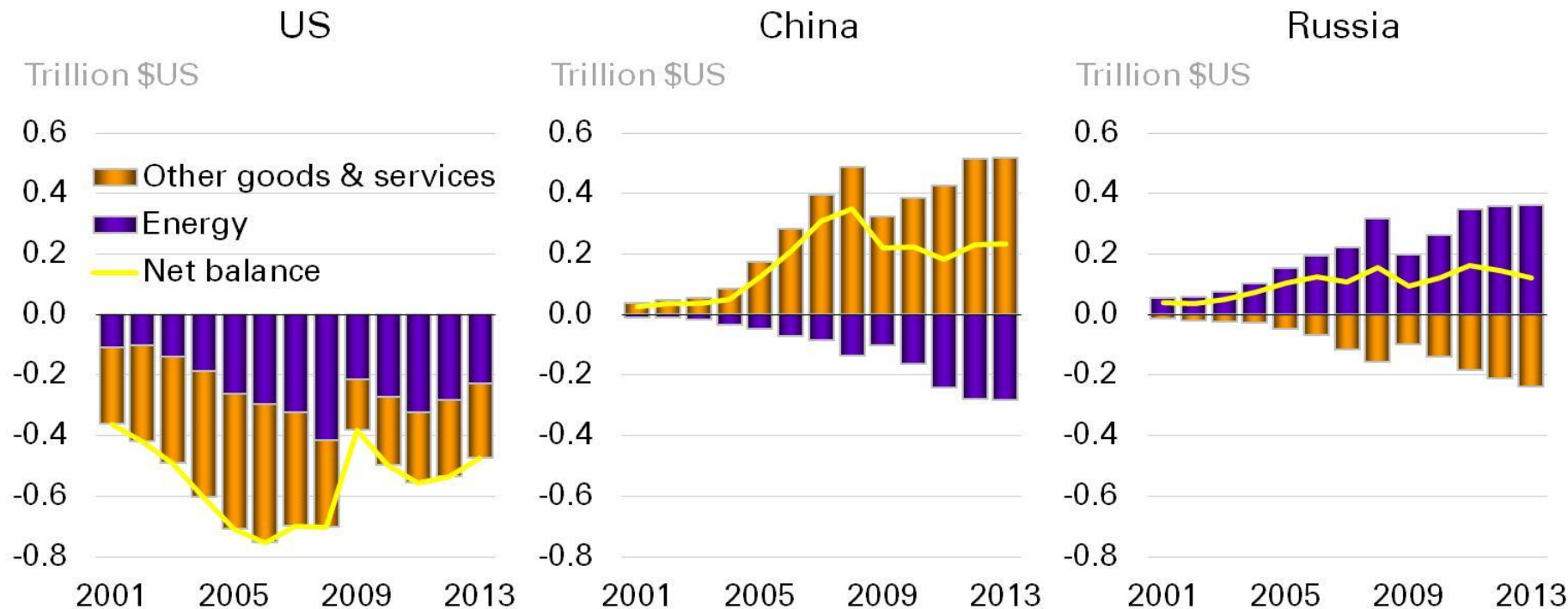


Note: imbalances defined as production minus consumption

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Trade balances and energy



Source: includes data from CEIC and Thomson Reuters Datastream

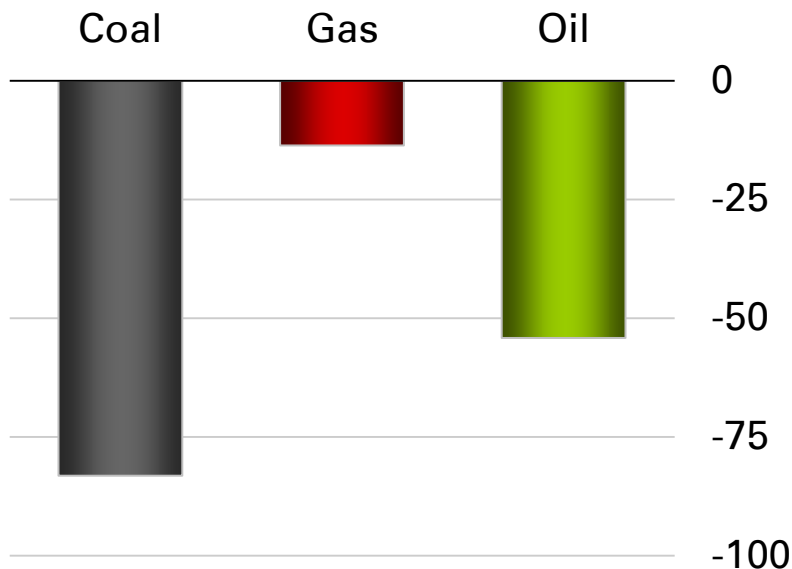
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Trade balances and energy in India

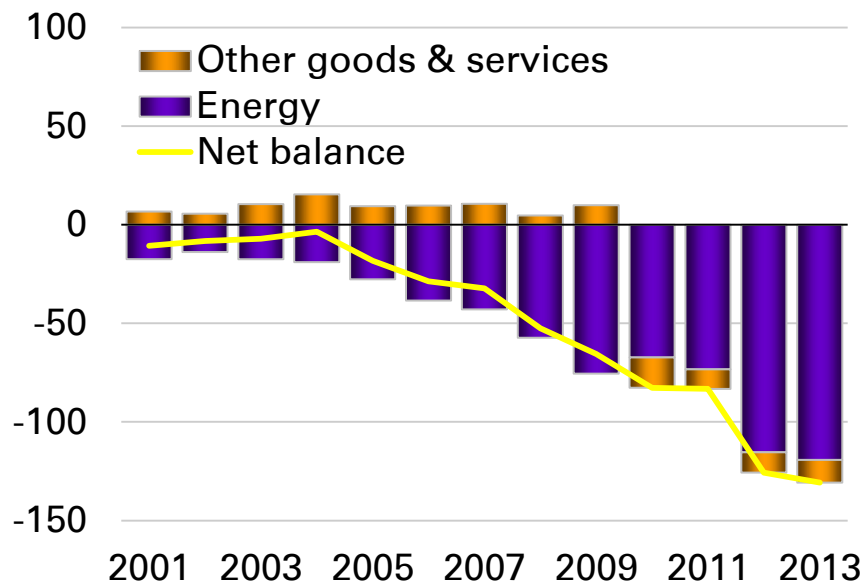
Change in imbalances, 2003-2013

Mtoe



Trade balance (fiscal year)

Billion \$US



Source: includes data from Thomson Reuters Datastream

Note: imbalances defined as production minus consumption

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Conclusion



Energy in 2013

- Energy and the economy – a two way relationship
- When things happen – ask the data
- Markets work – if you let them

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Energy in 2013: Taking stock

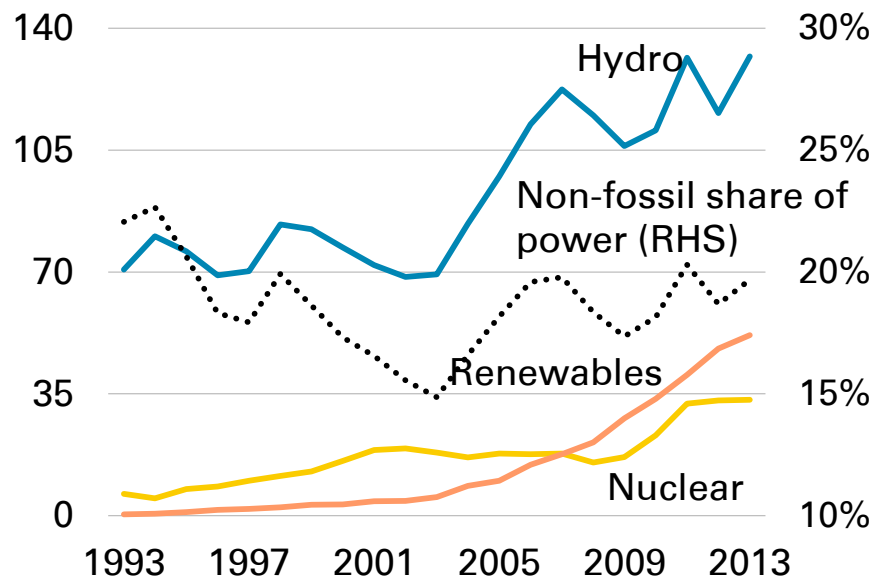




Hydro, renewables and nuclear in India

Power generation in India

Thousand TWh



Output changes in 2013

Annual change, TWh

