

BP Statistical Review of World Energy

June 2013

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Energy in 2012 – Adapting to a changing world



Outline



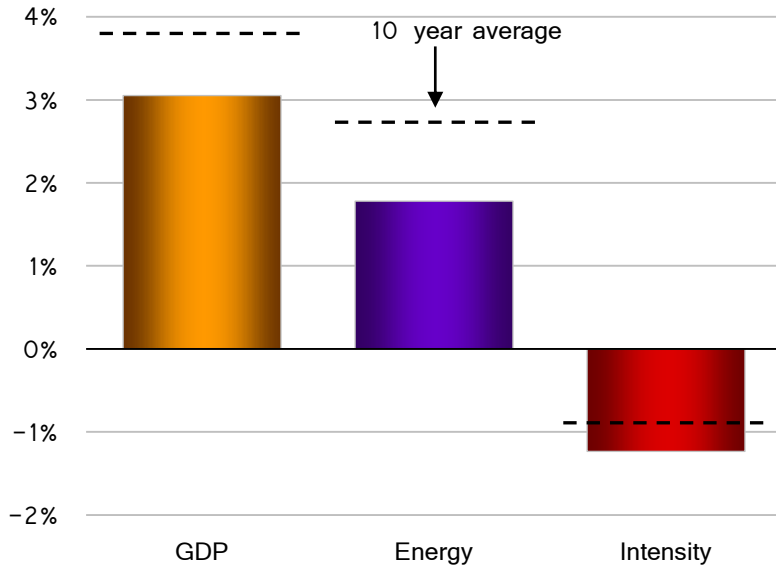
- Introduction
- 2012 in long-term context
- Fuel by fuel
- Concluding remarks



Energy in 2012

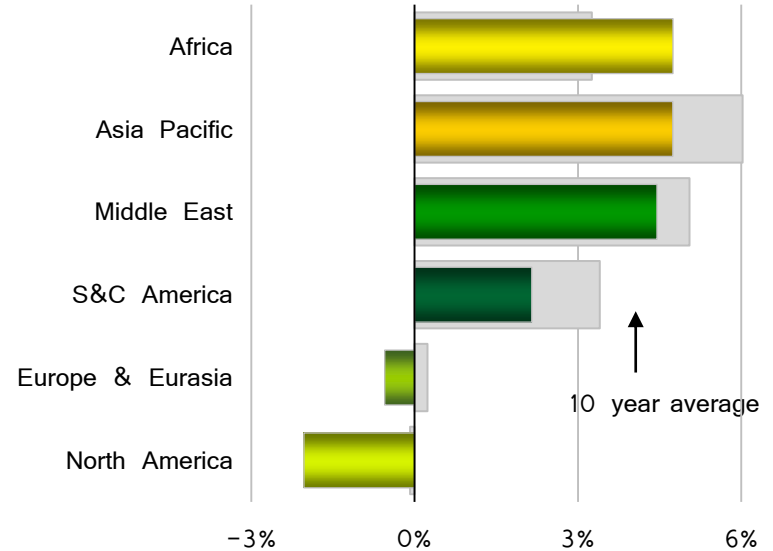
Energy and GDP

Annual change, %



Energy growth by region

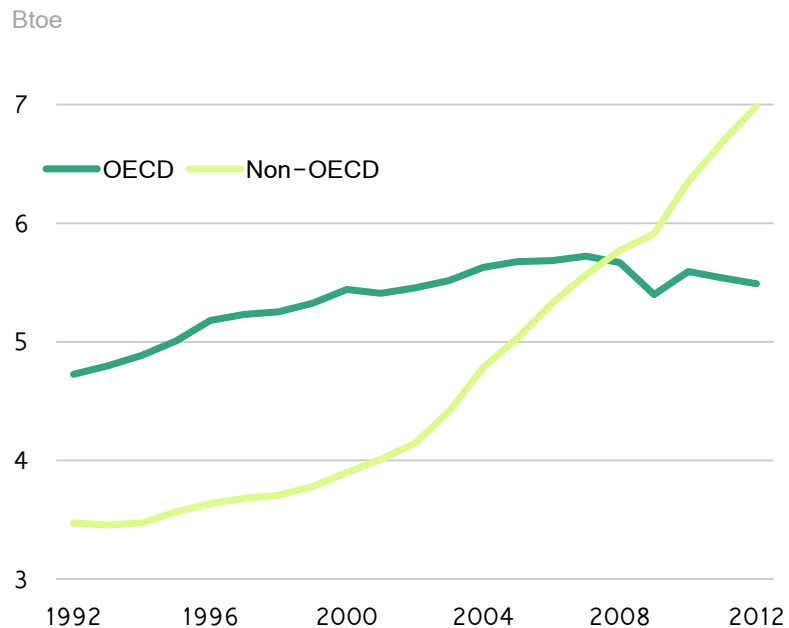
Annual change, %



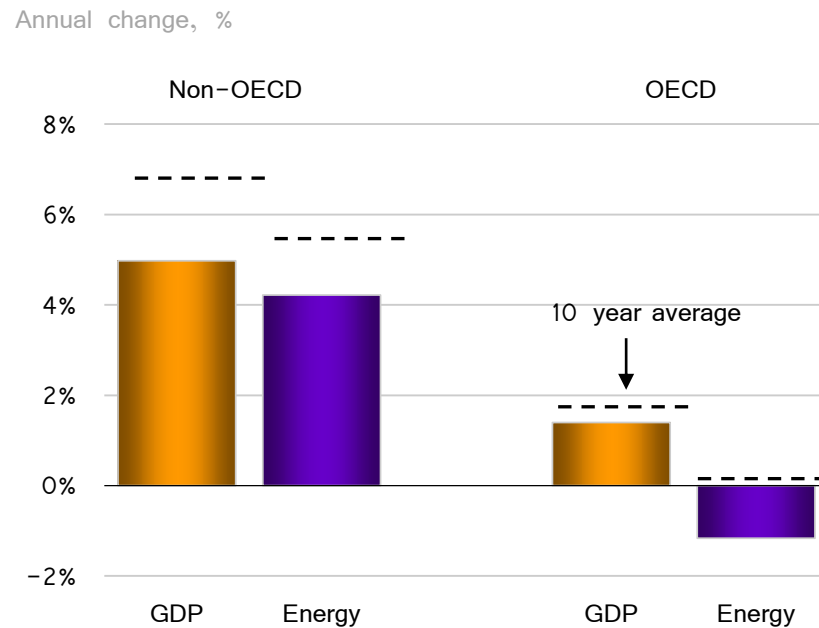


Long-term energy trends

Primary energy demand

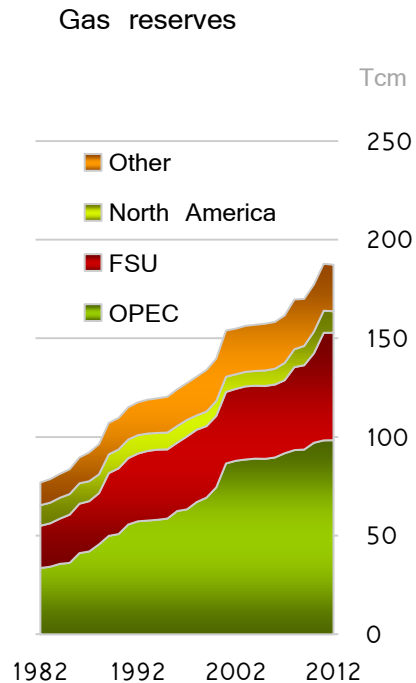
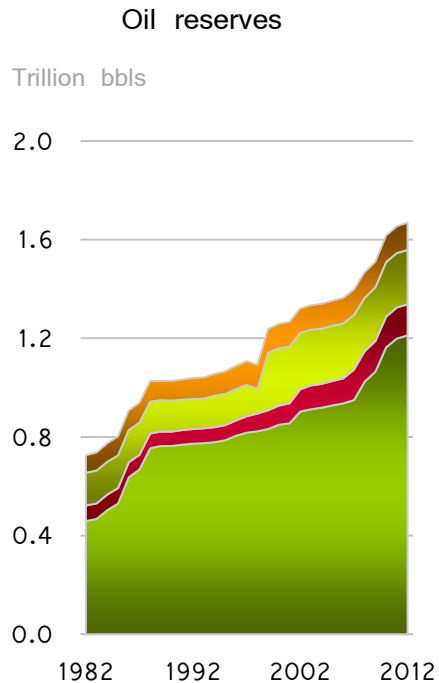


Energy and GDP in 2012

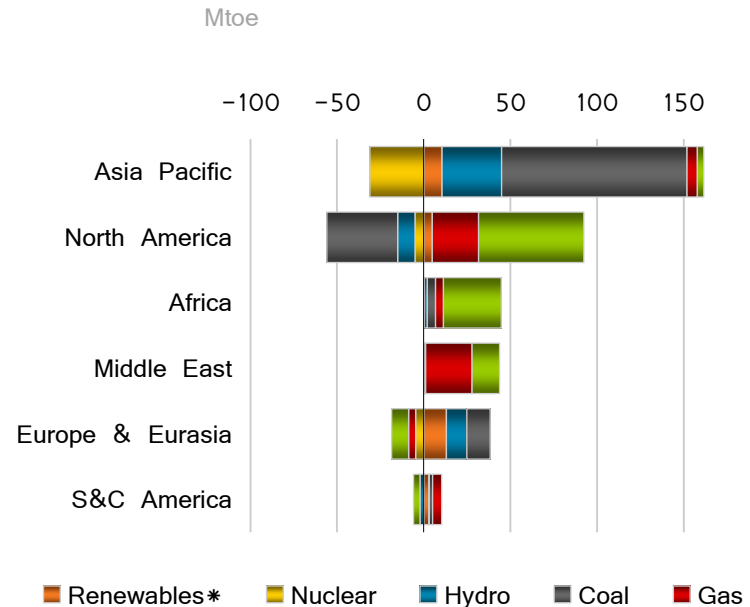




Reserves and production



Energy production growth in 2012

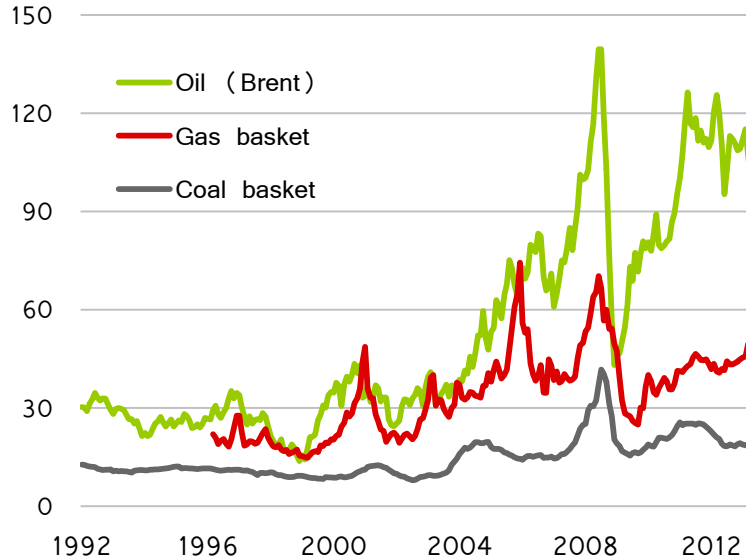


*Includes biofuels

Energy prices

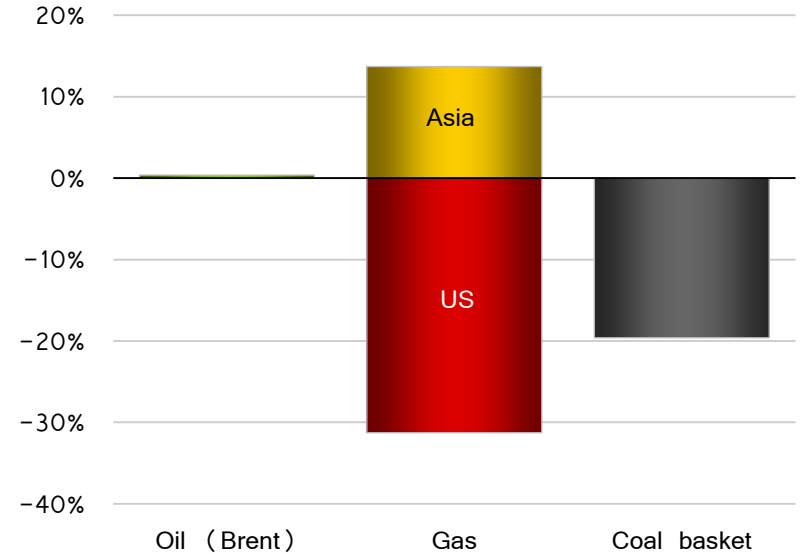
Inflation adjusted prices

\$2012/boe, monthly



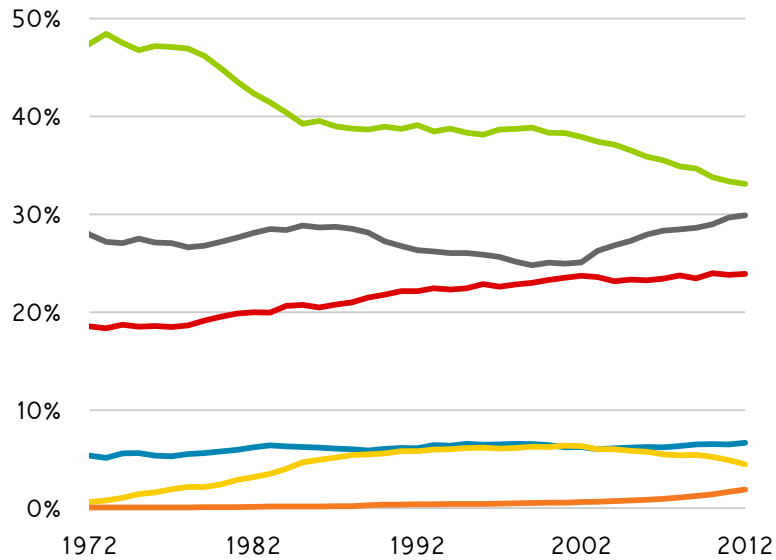
2012 price changes

Annual change, %



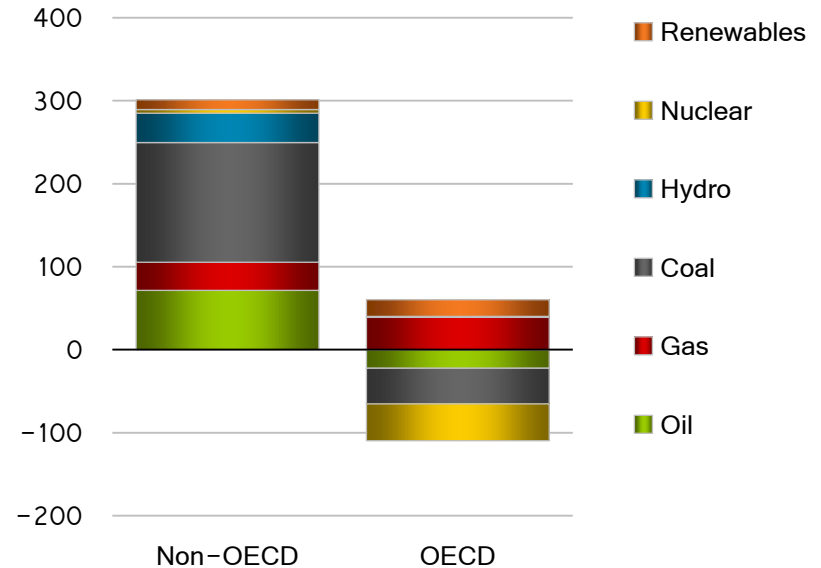
The evolving fuel mix

Shares of global primary energy



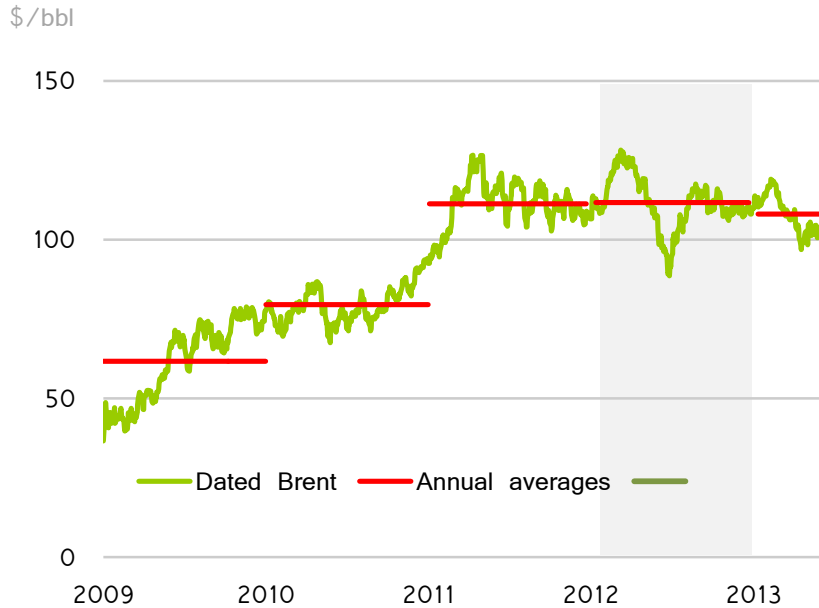
2012 energy consumption changes

Annual change, Mtoe



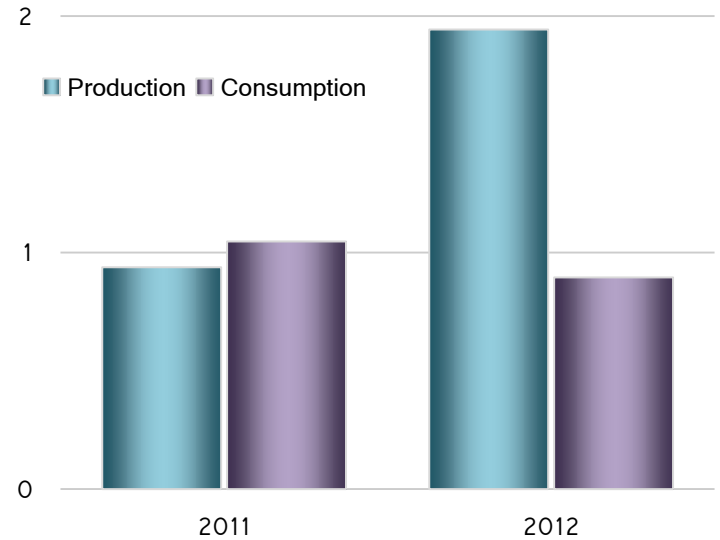
The oil market in 2012

The price of oil



Production and consumption growth

Annual change, Mb/d

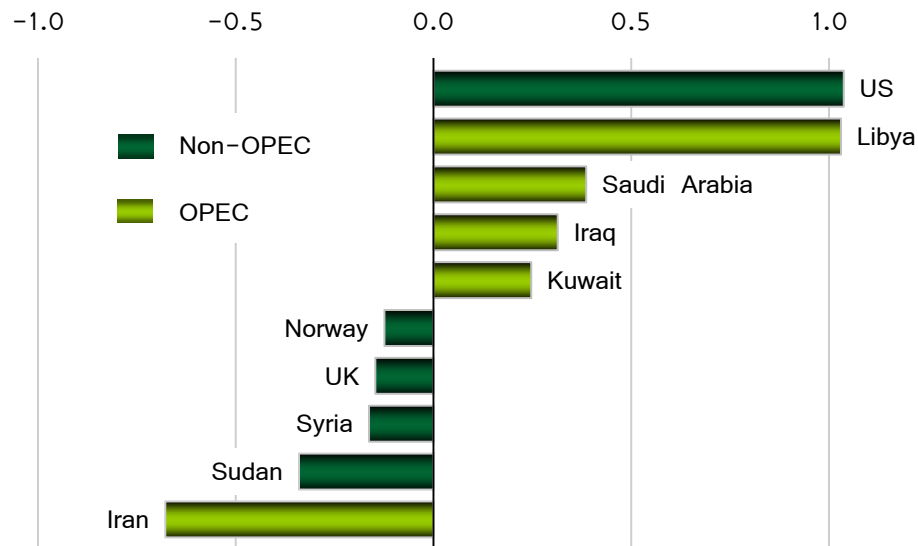




Oil production in 2012

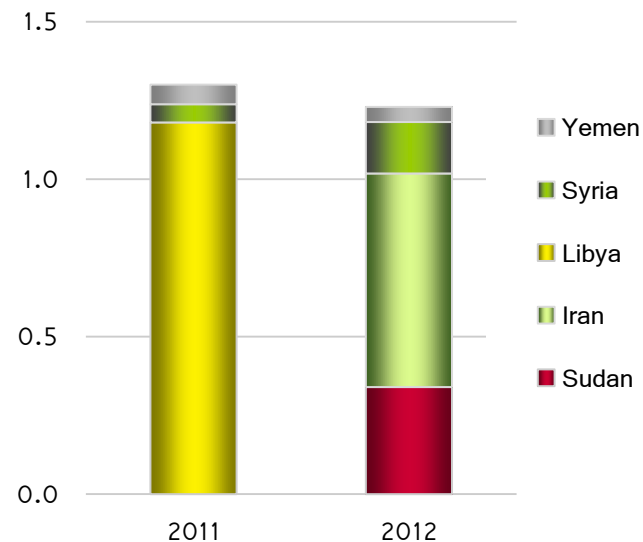
Largest changes

Mb/d



Supply disruptions

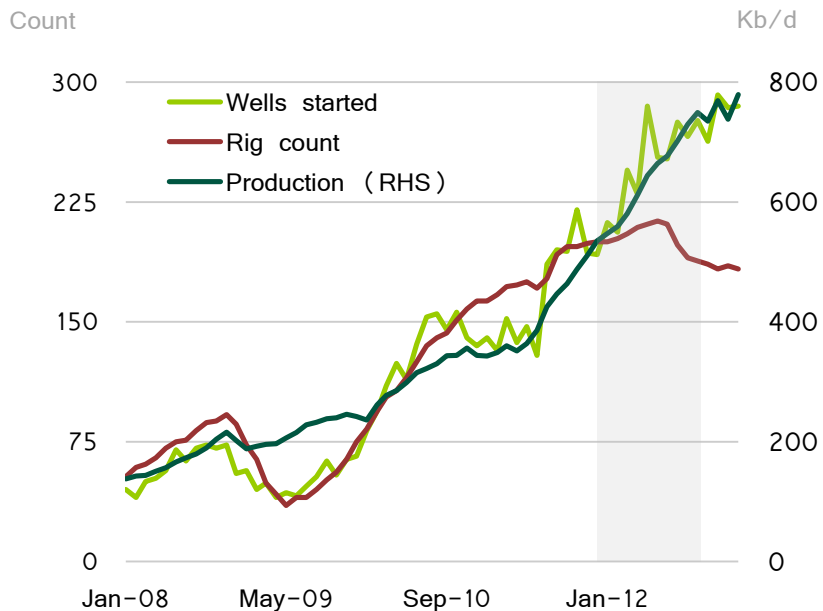
Annual loss, Mb/d





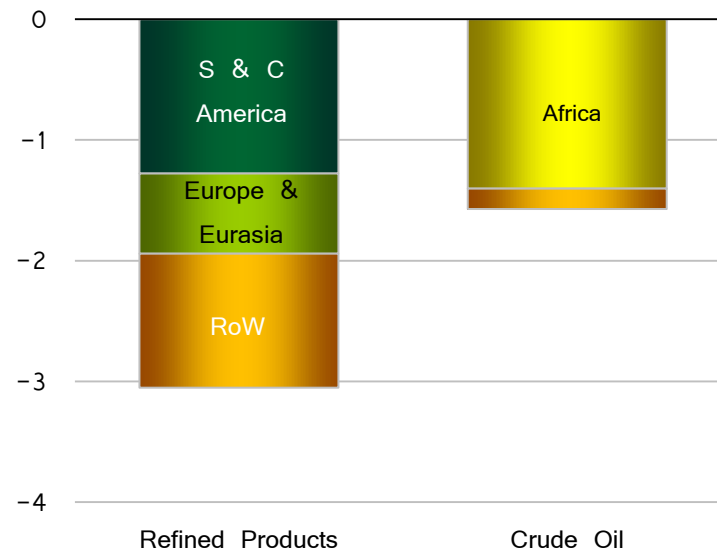
US oil supply: cause and effect

North Dakota production



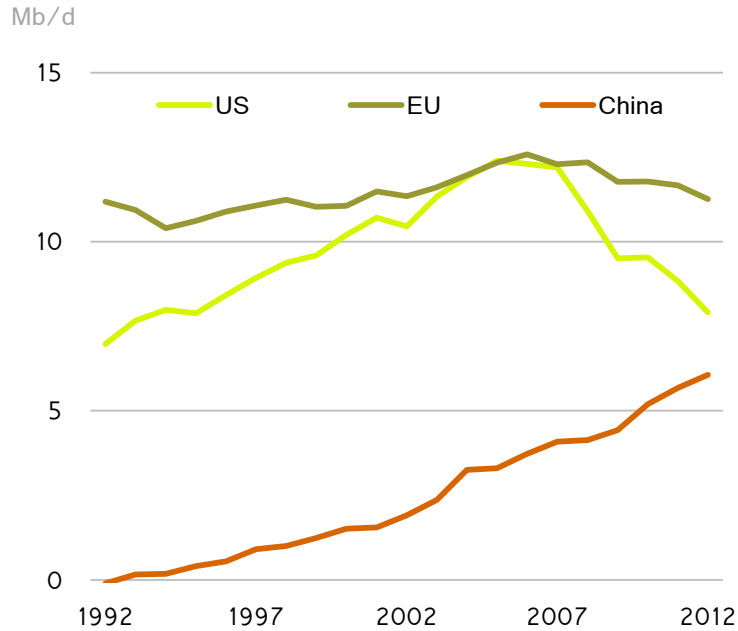
Net US oil imports

Change since 2007, Mb/d

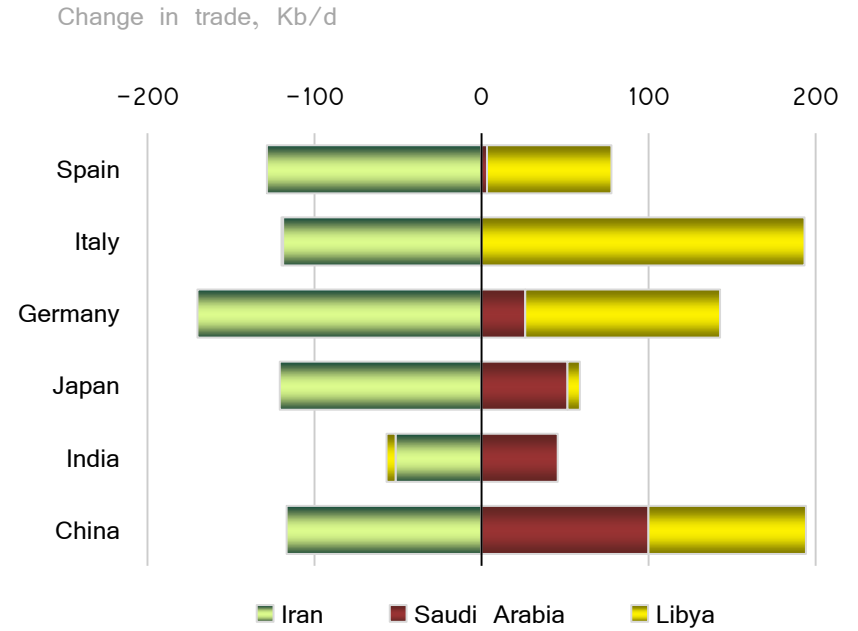


Emerging oil trade patterns

Net oil imports



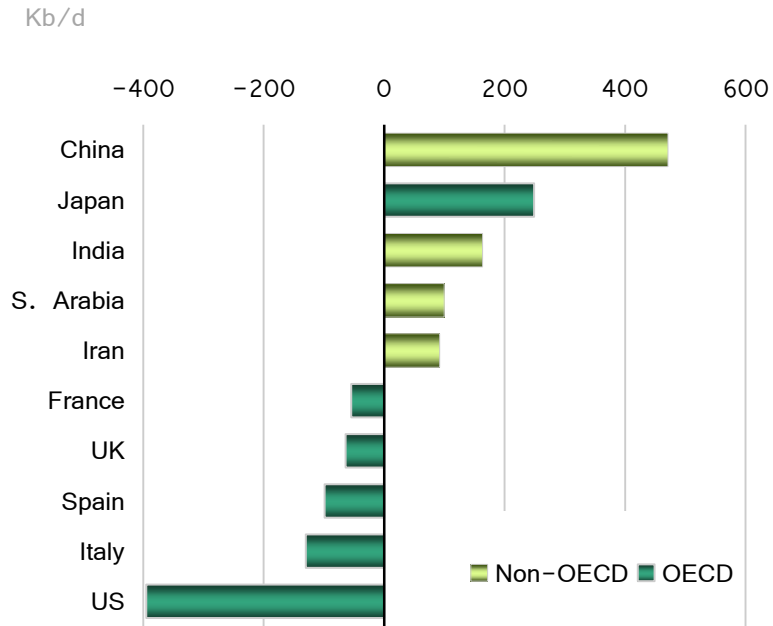
Adjustment to 2012 disruptions



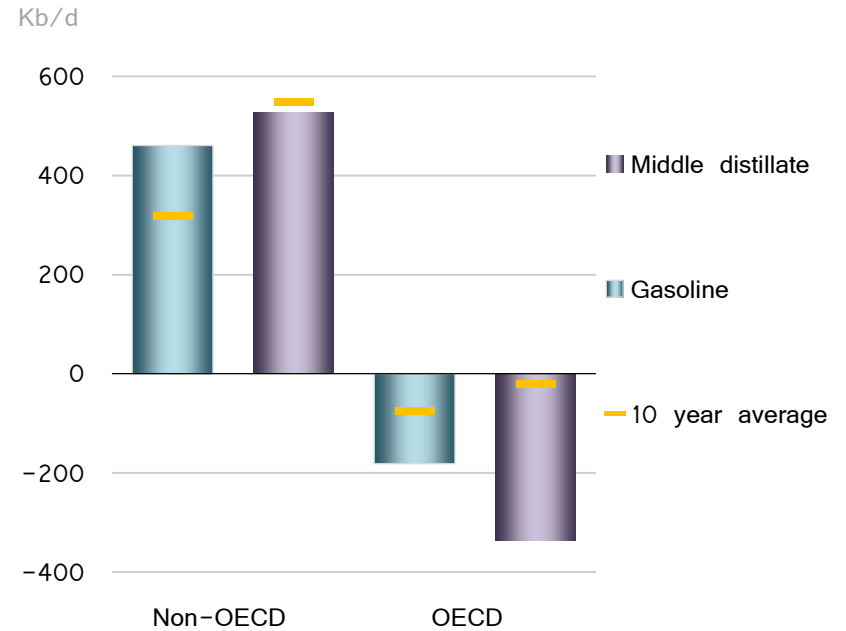


Oil consumption in 2012

Largest changes



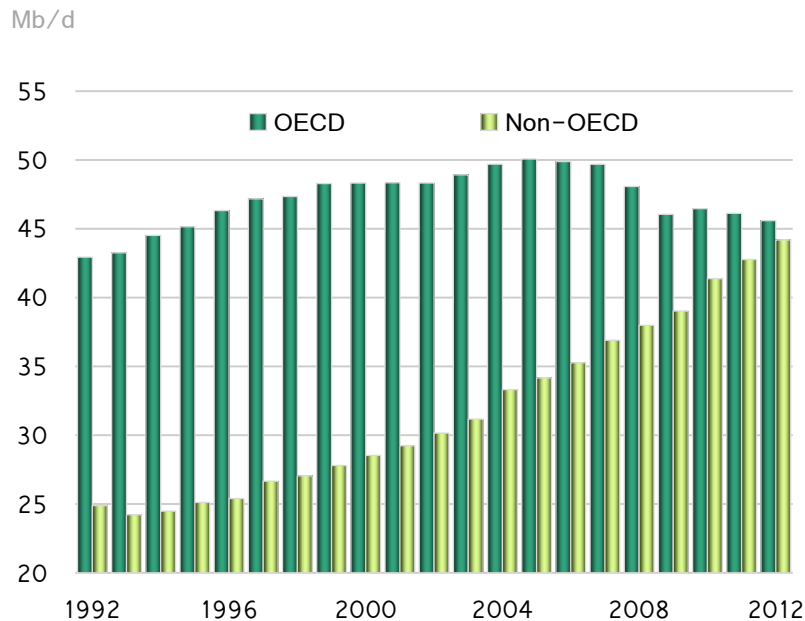
Growth by product type



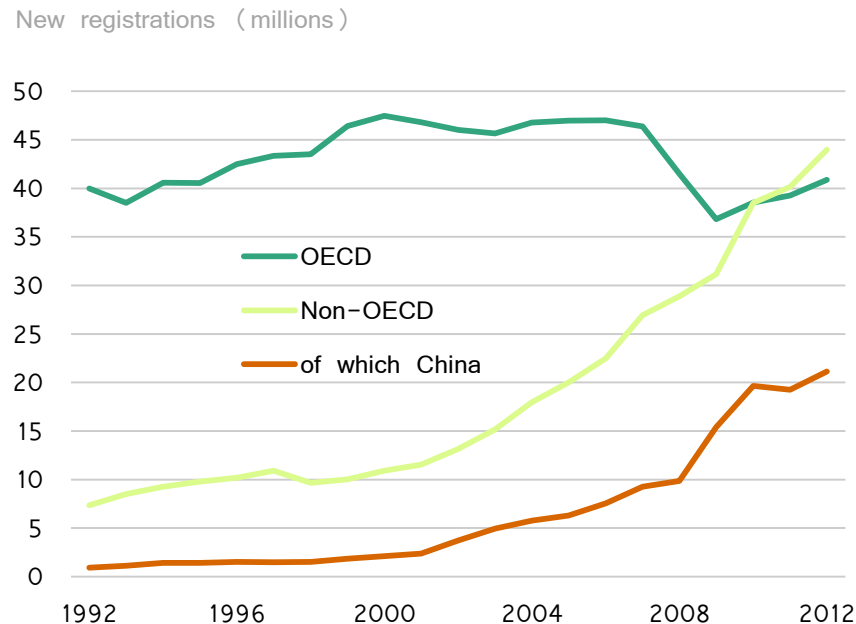
Oil consumption and mobility



Oil consumption trends

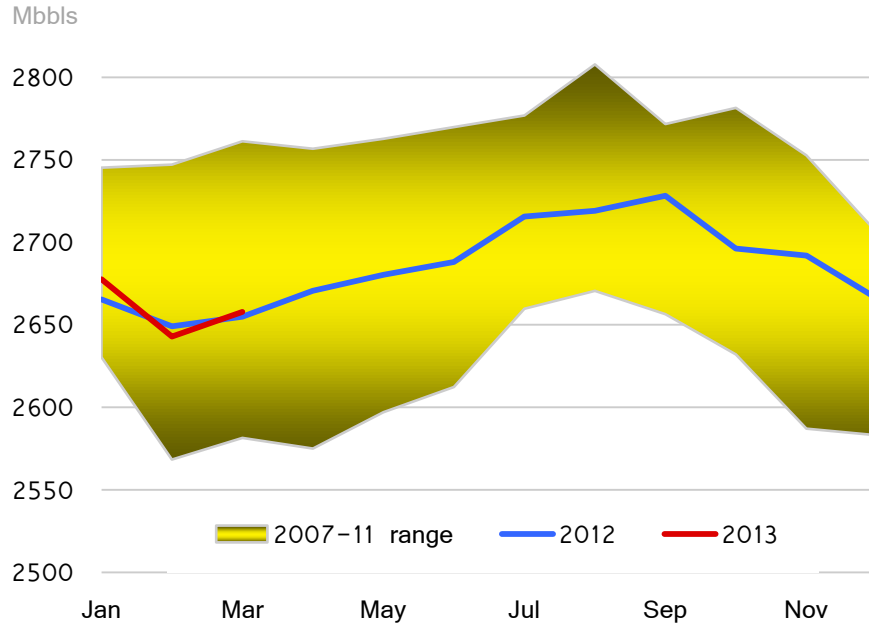


Vehicle sales

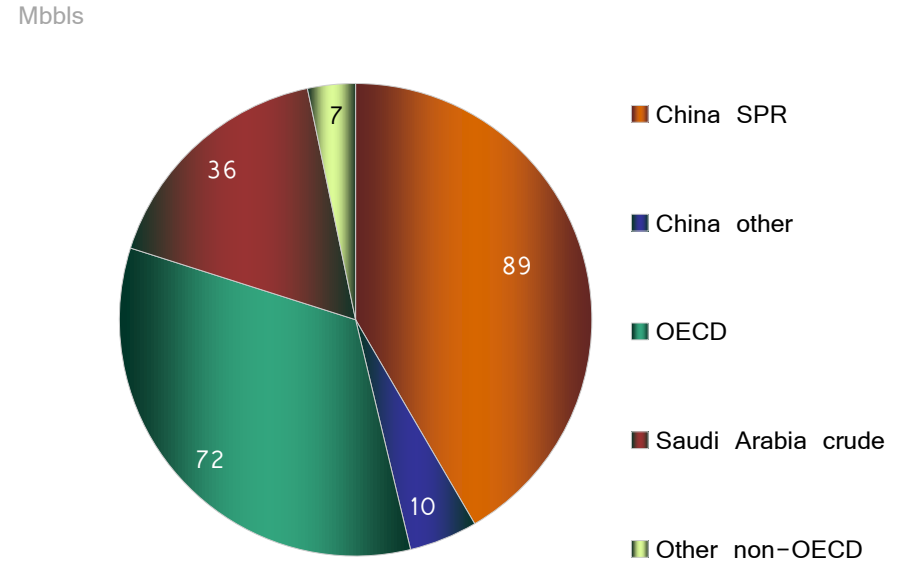


Oil inventories

OECD commercial inventories



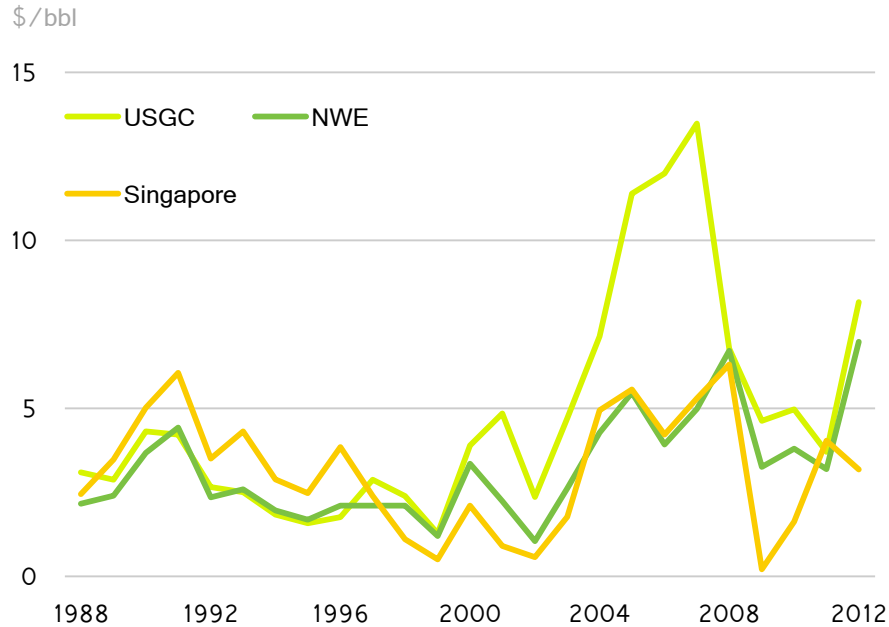
Inventory increases in 2012



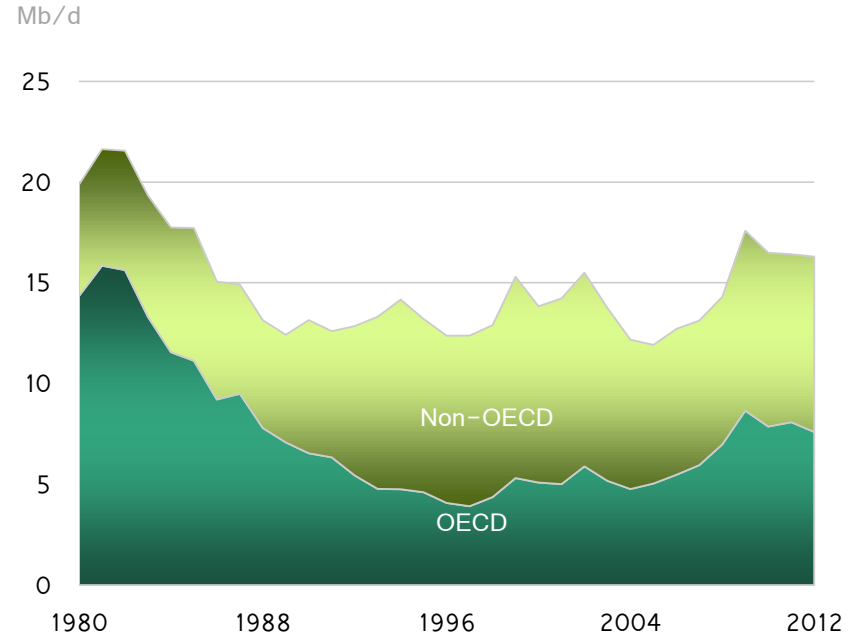


Refining margins and capacity

Upgrading margins



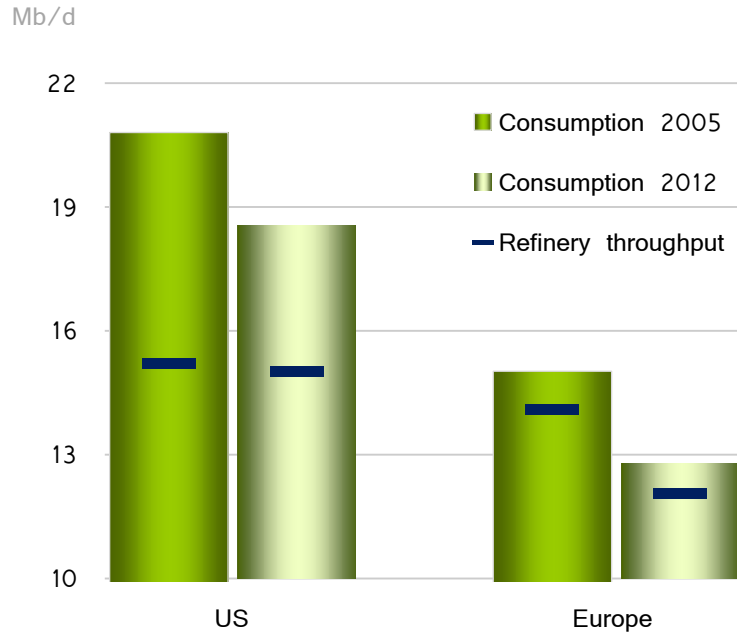
Unused refining capacity



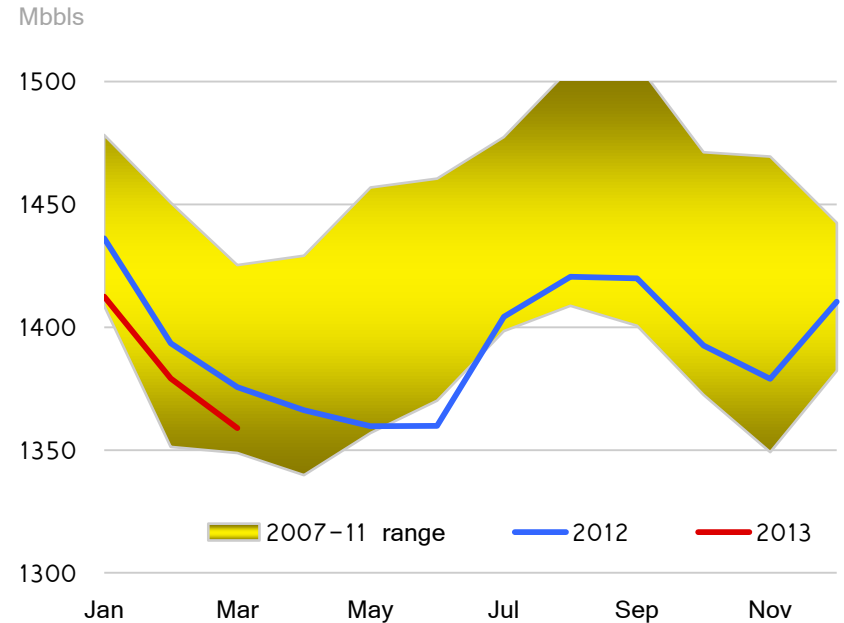


Crude run rebalancing and product stocks

Oil consumption and crude runs



OECD product stocks

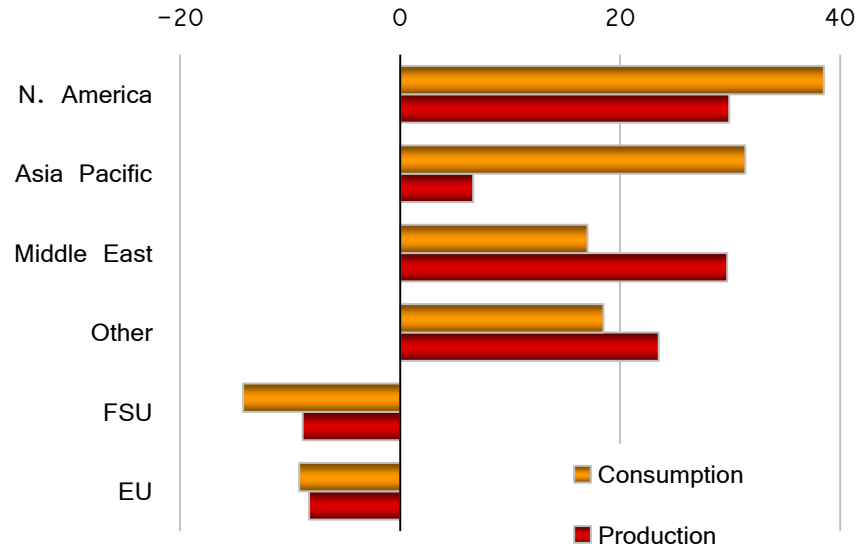




Global natural gas balance

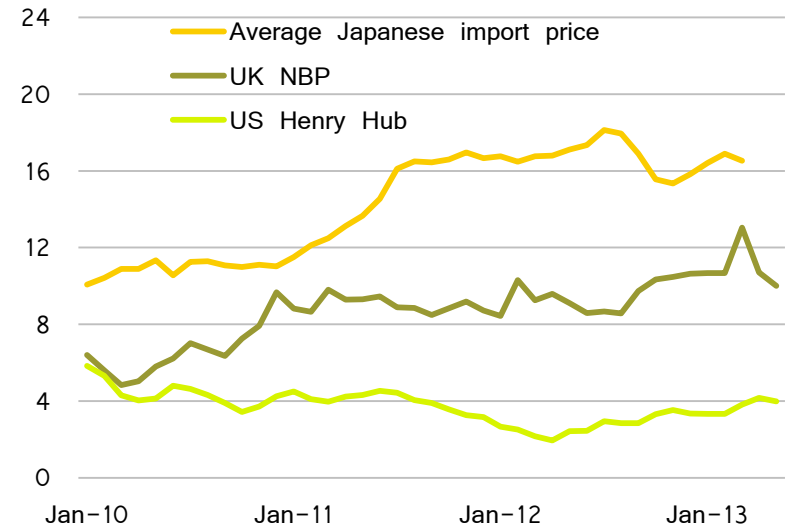
Global growth in 2012

Annual change, Bcm



International gas prices

\$/mmBtu

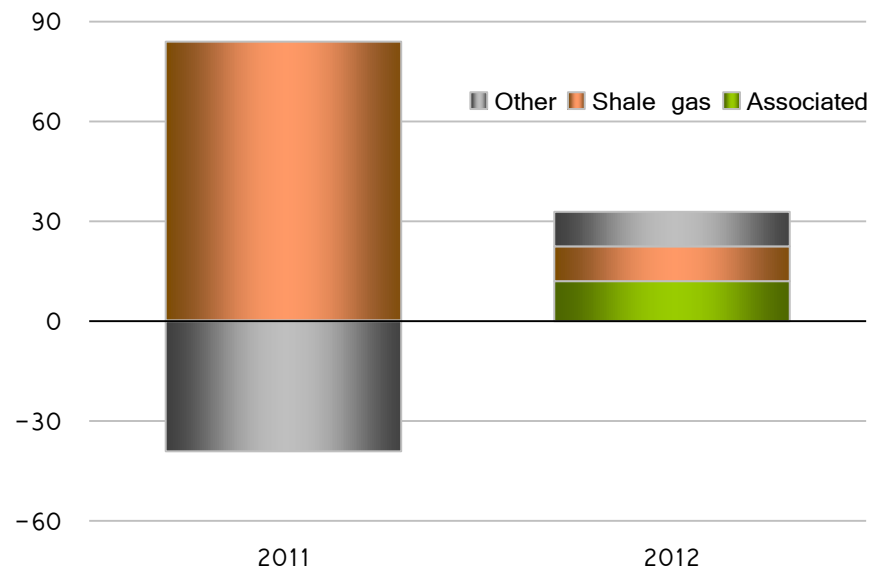




US natural gas production

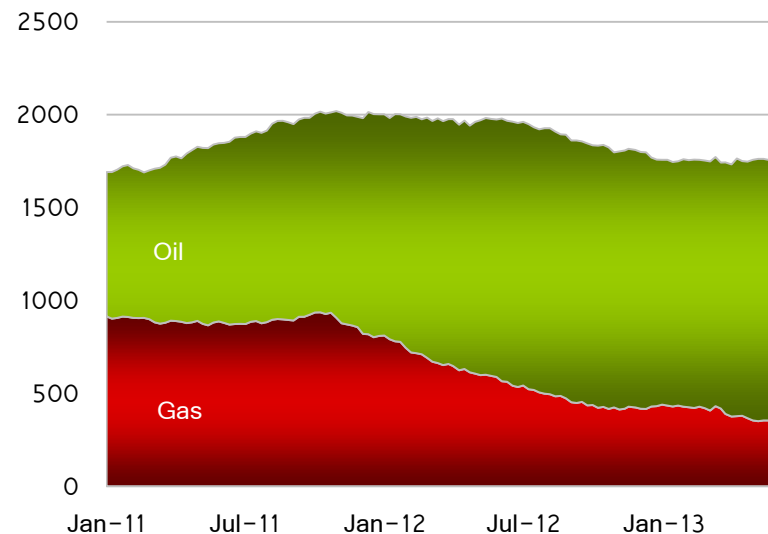
Production growth

Annual change, Bcm



Rig count

Count

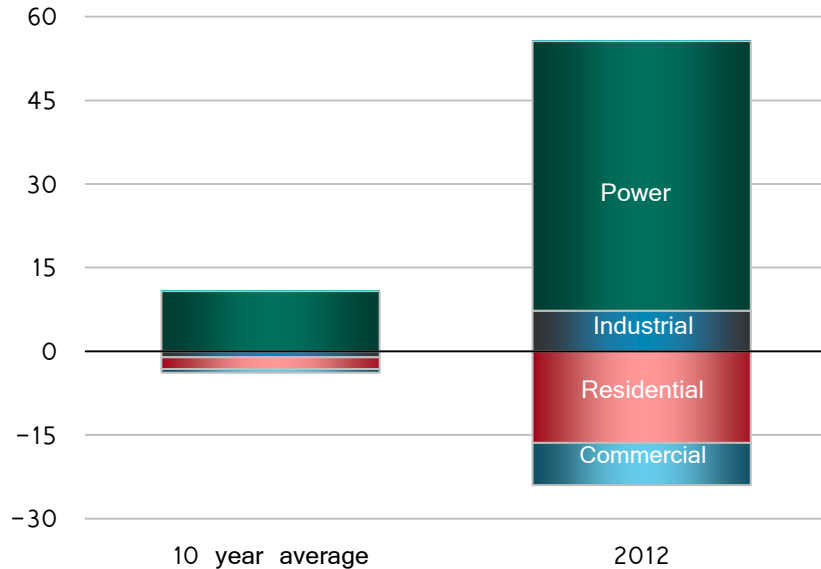




US coal to gas switching

Natural gas consumption growth

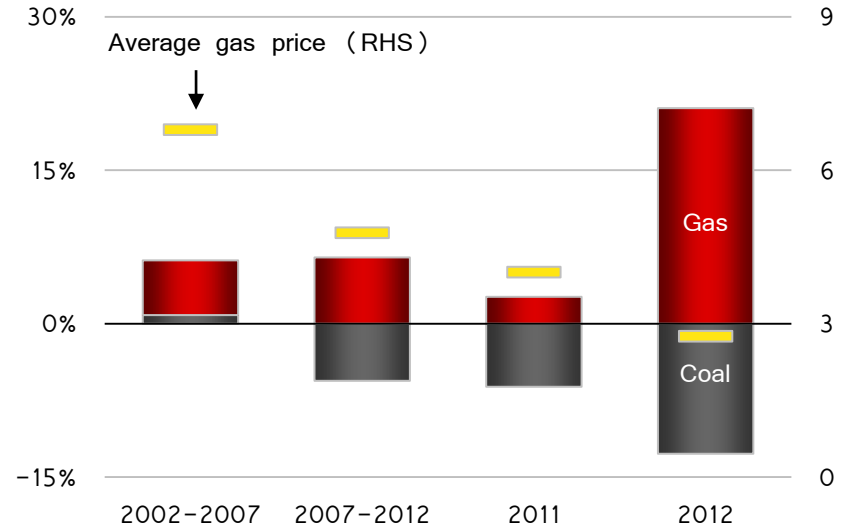
Annual change, Bcm



Power generation

Annual change, %

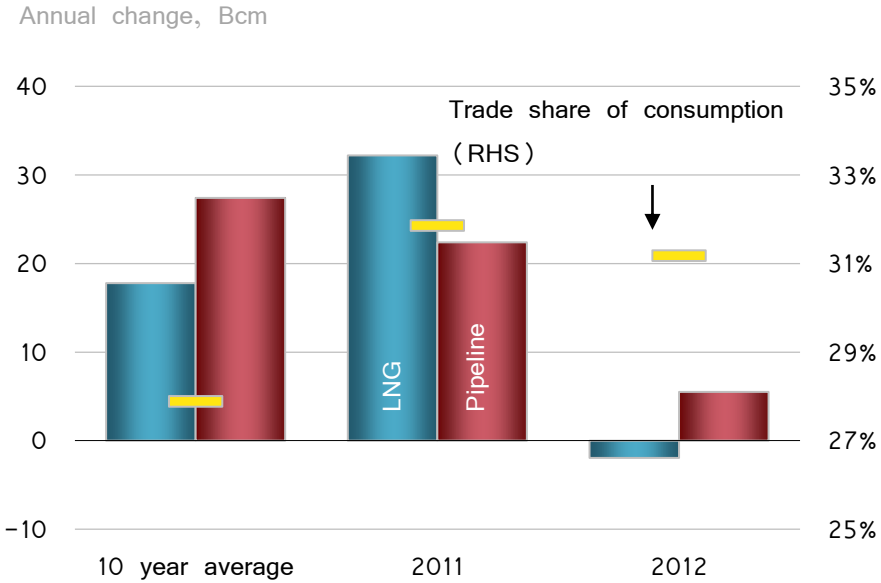
\$/mmBtu



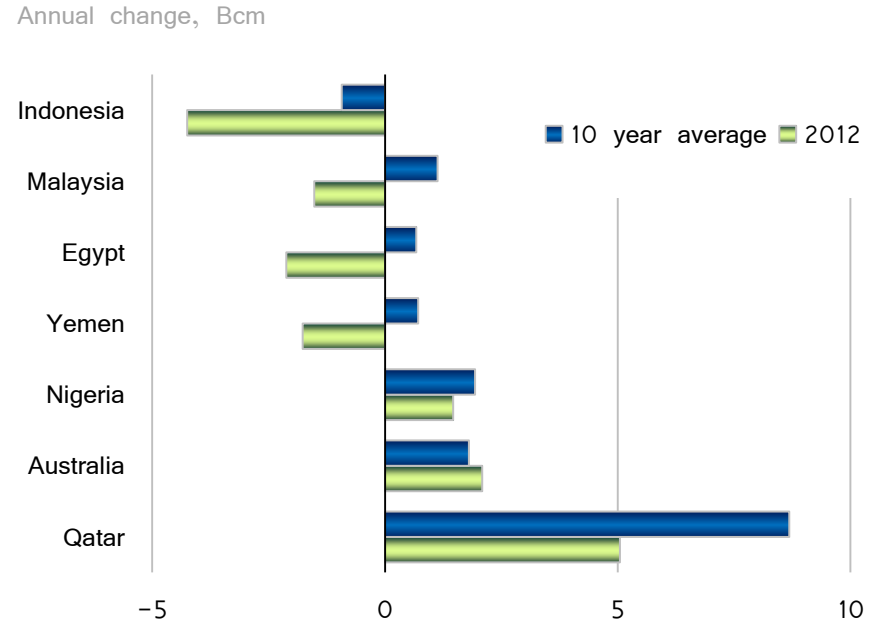


Natural gas trade

LNG and pipeline trade



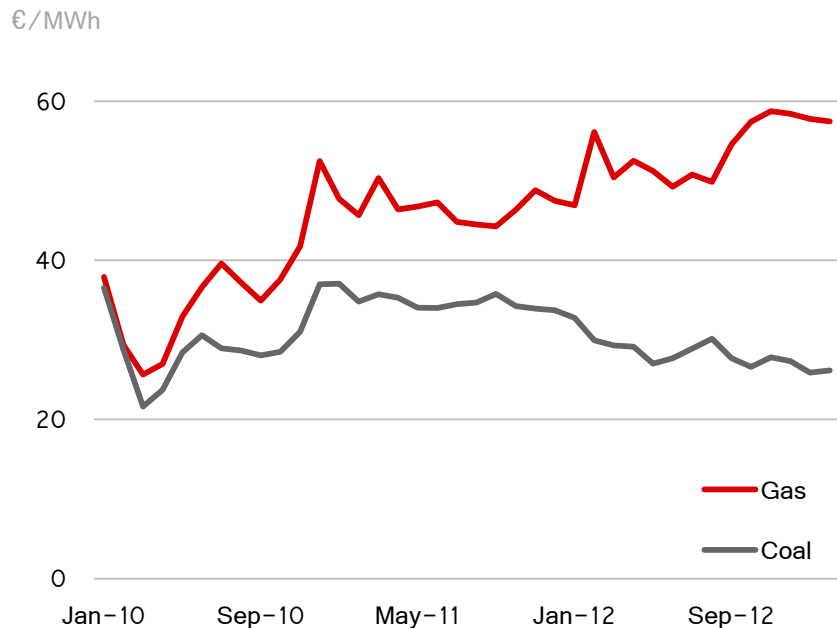
LNG exports



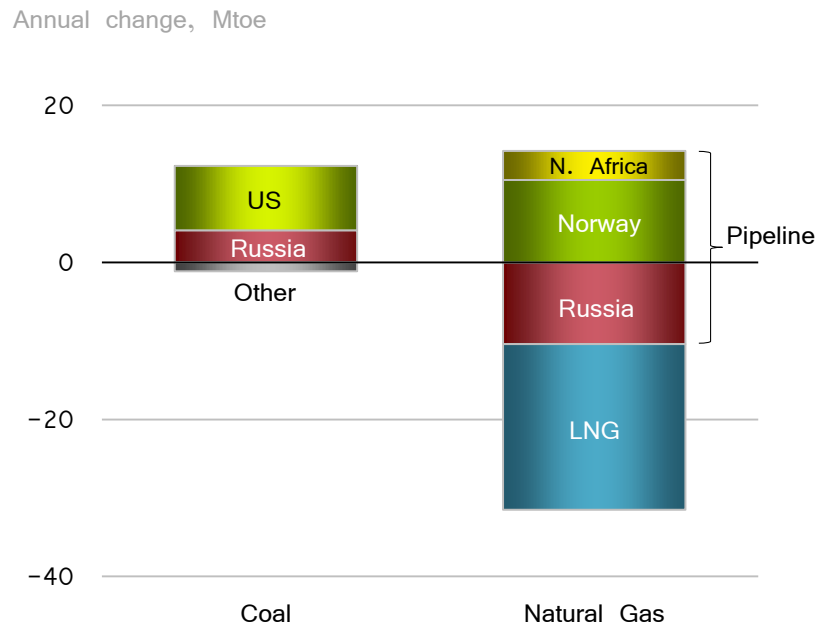


European gas-coal competition

EU power generation cost



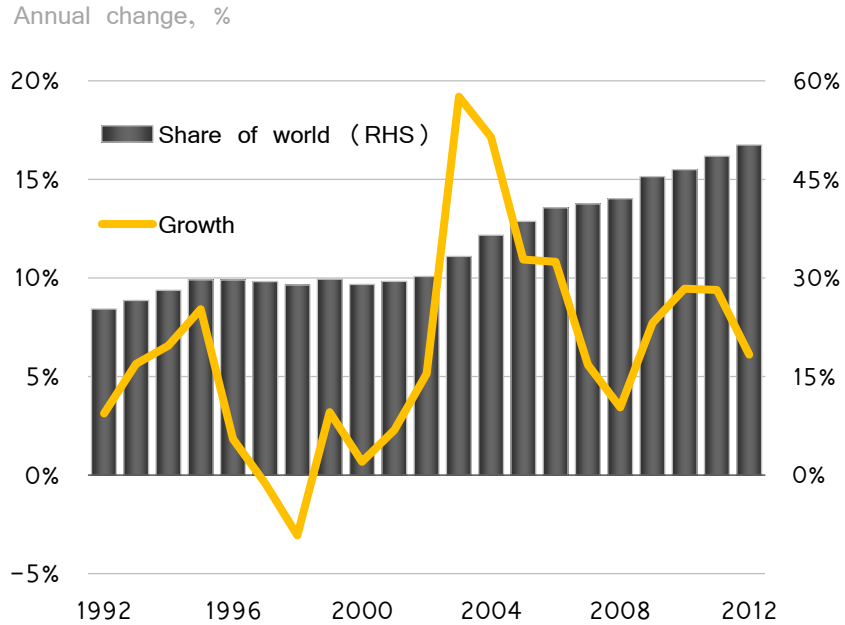
2012 changes in EU imports



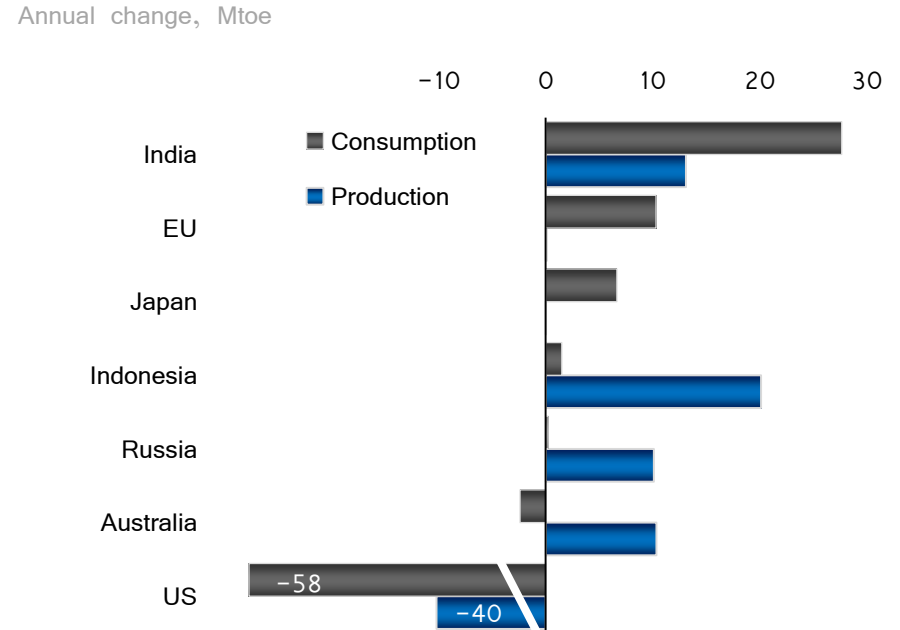


The coal market in 2012

Coal consumption in China



Largest changes outside China in 2012

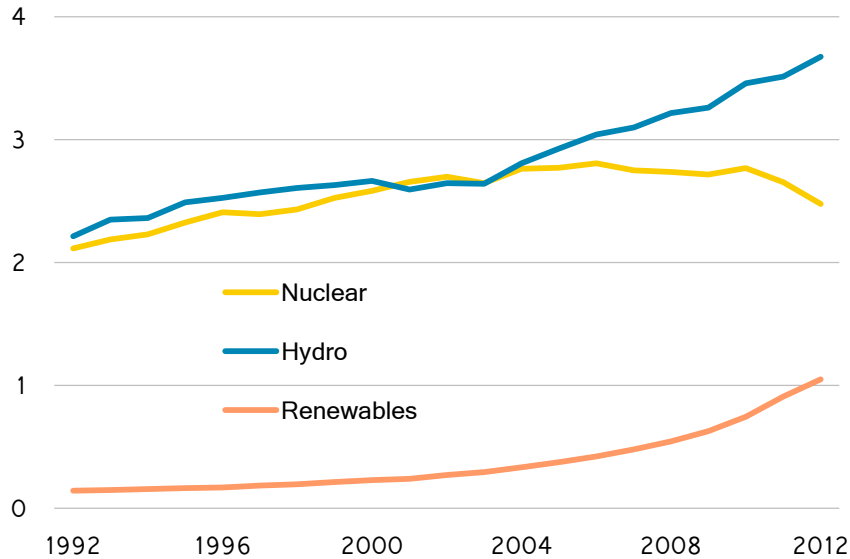




Hydro, other renewables and nuclear

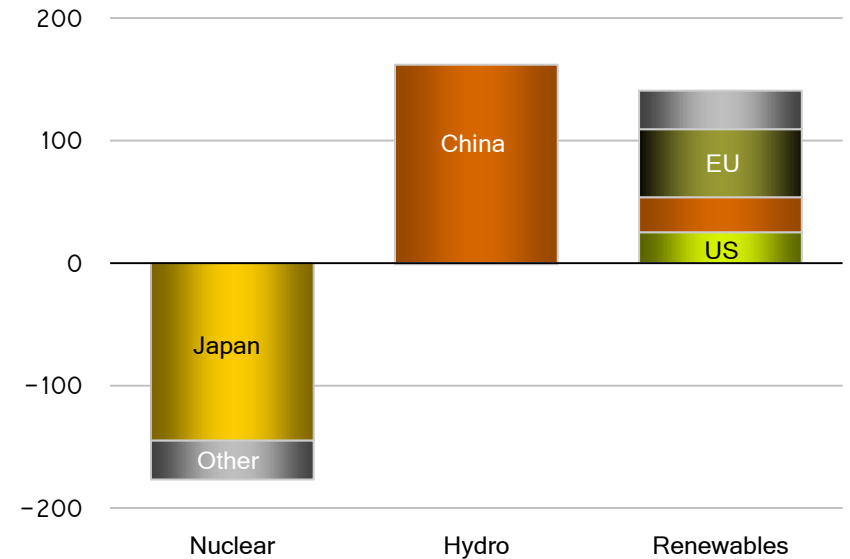
Power generation

Thousand TWh



Output changes in 2012

Annual change, TWh

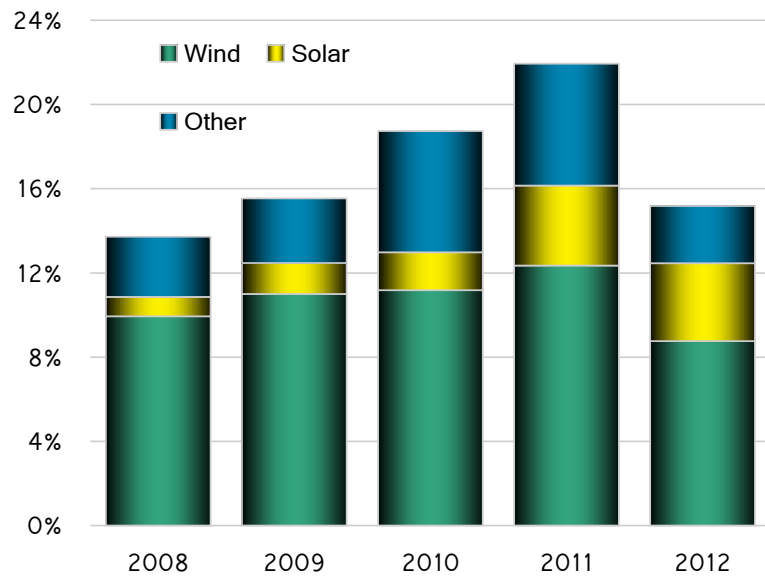




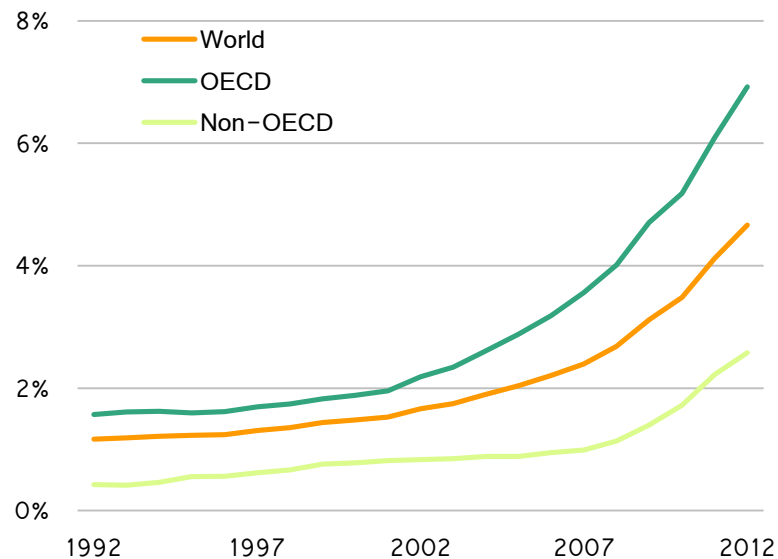
Renewables in power generation

Contributions to growth

Annual change, %



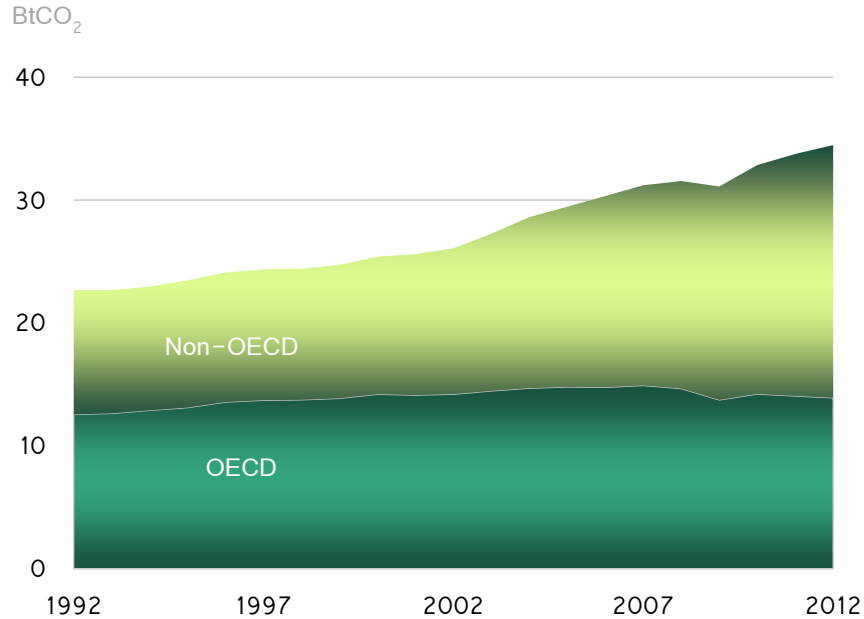
Renewables share of power



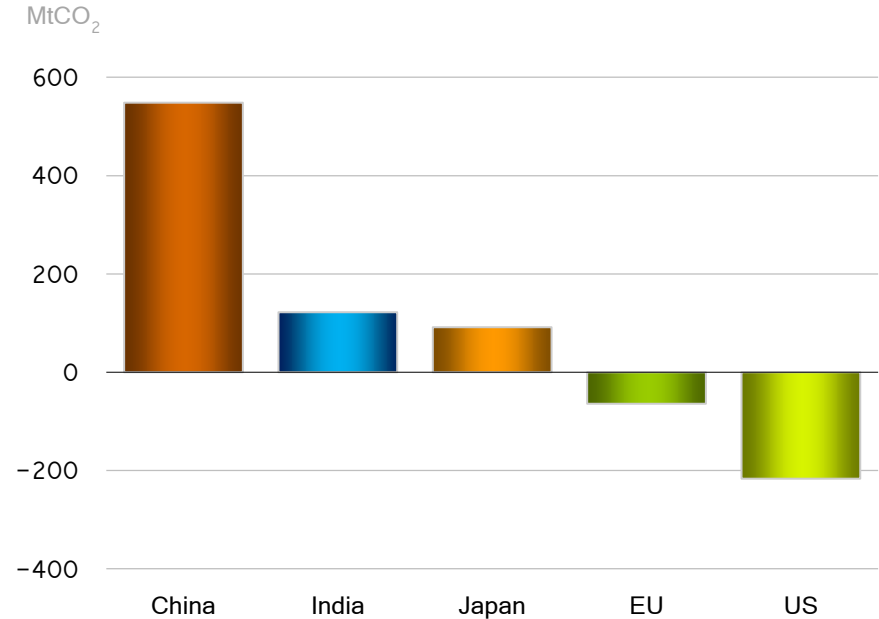


Carbon emissions

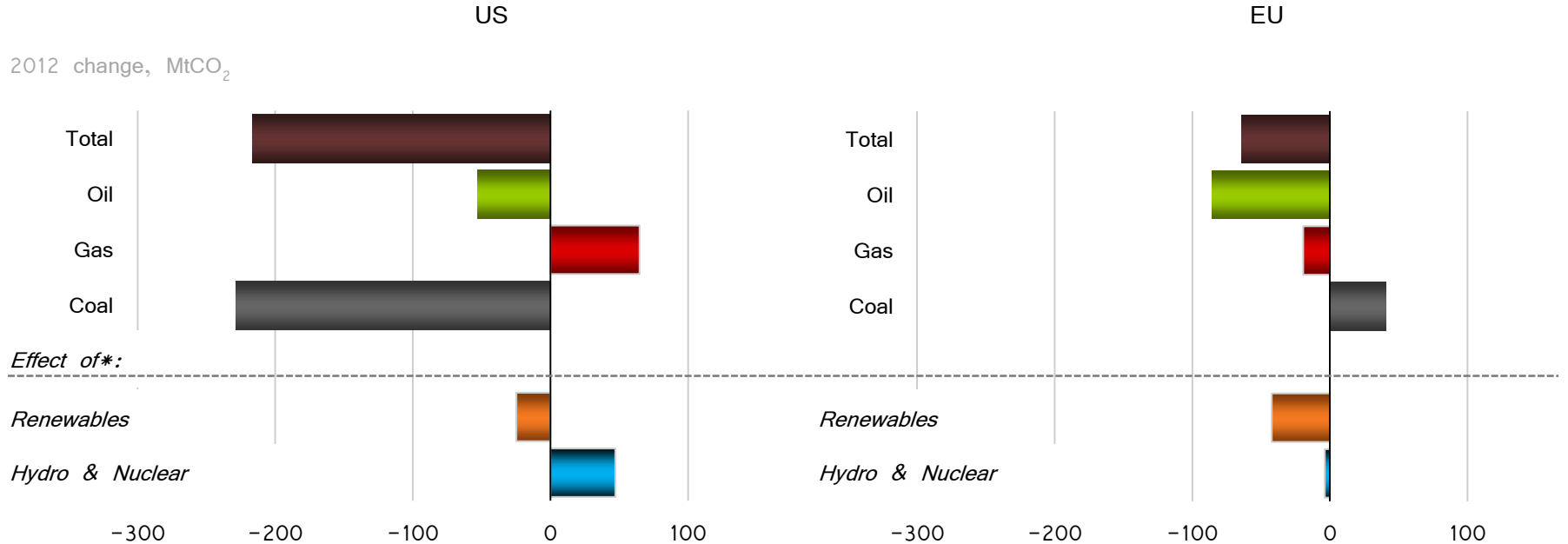
Global emissions from energy use



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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