



# BP Statistical Review of World Energy June 2011

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## 2010 – Energy Rebounds

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Mark Finley, GM Global Energy Markets & US Economics

# Outline

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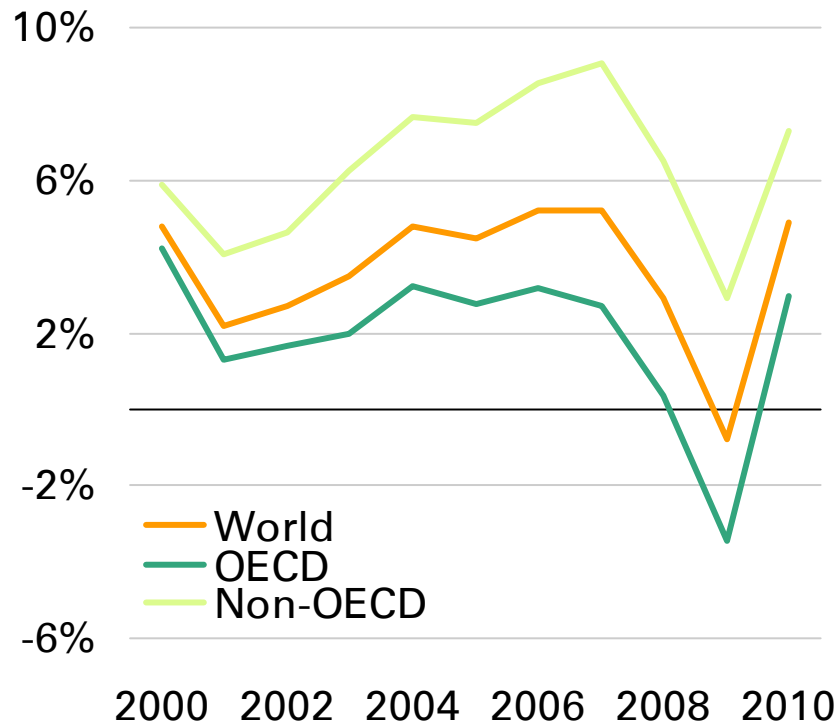
- Introduction
- Energy and the economy
- Fuel by fuel
- Conclusion

# The economy and energy demand



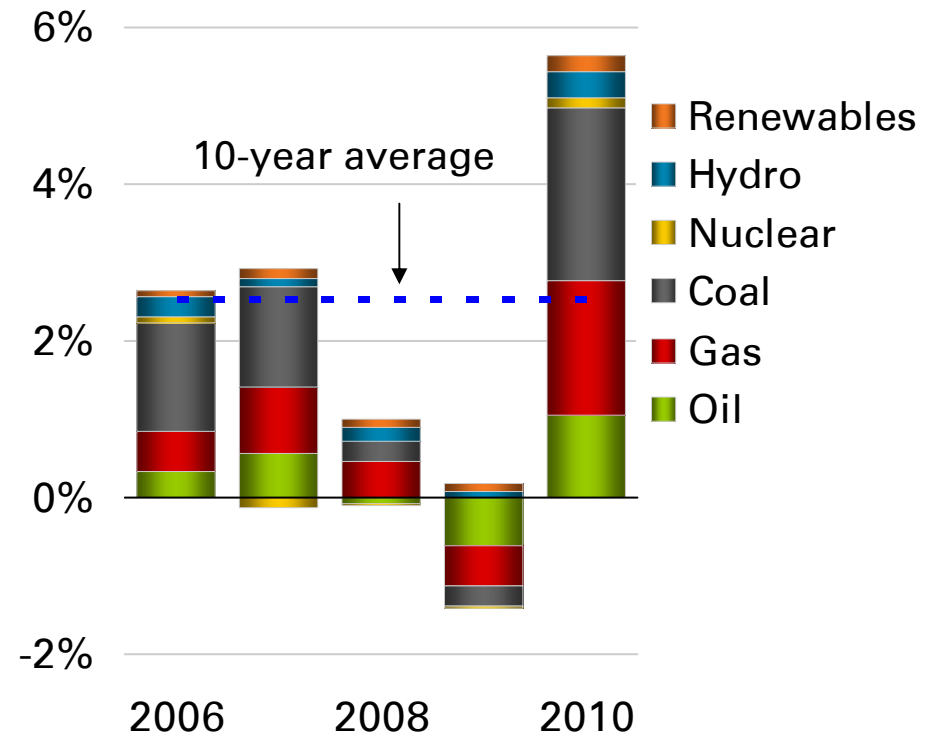
## GDP

Annual change, %

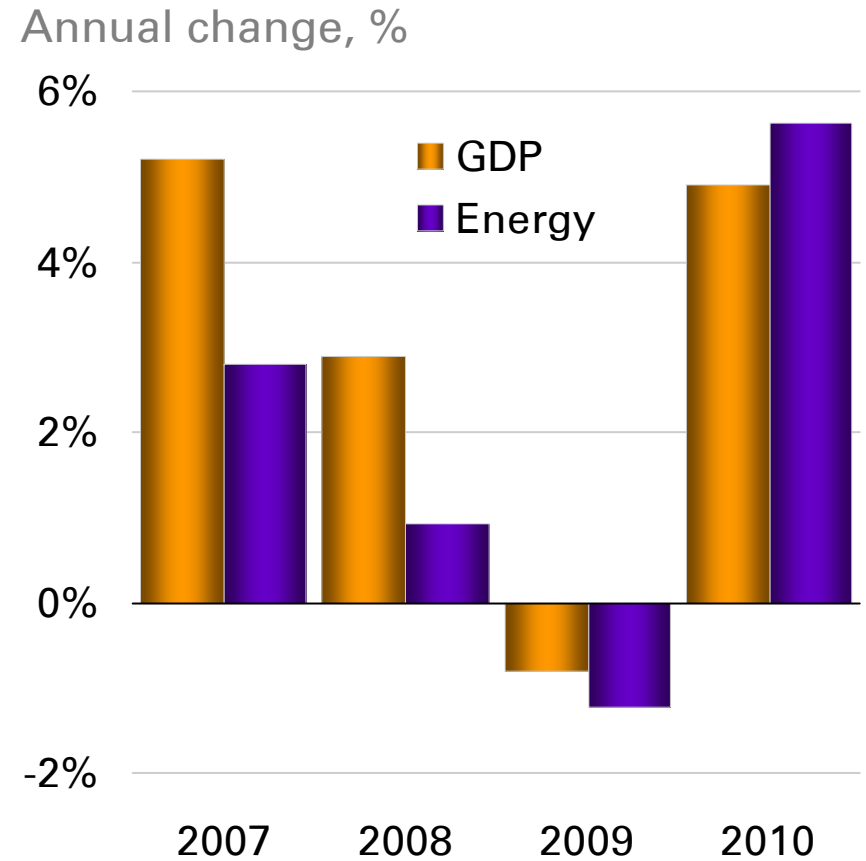
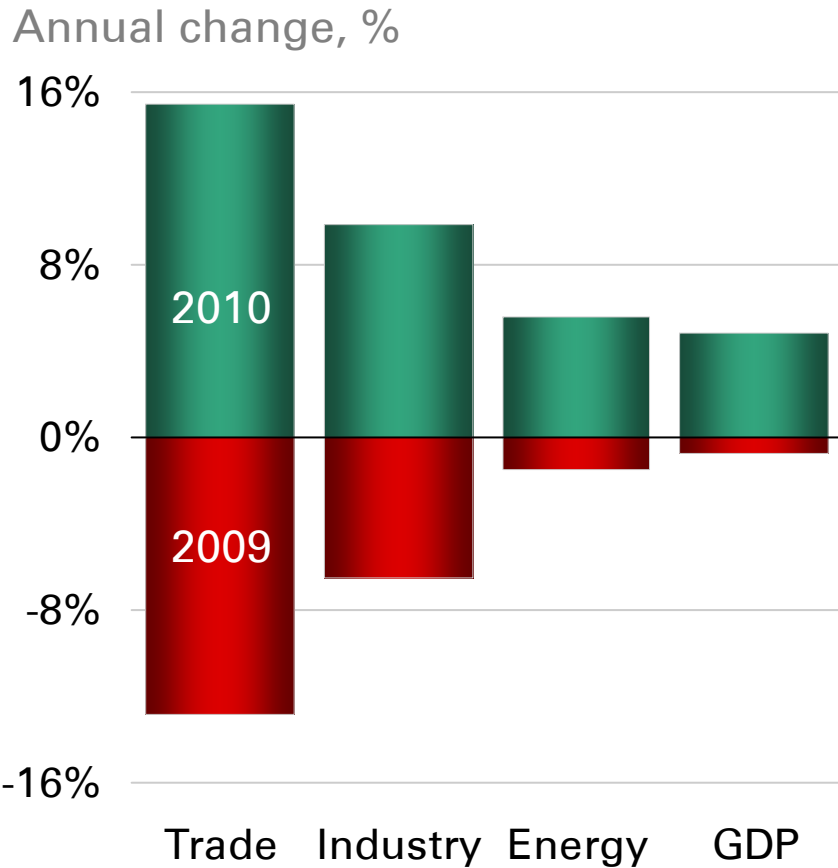


## Energy

Annual change, %



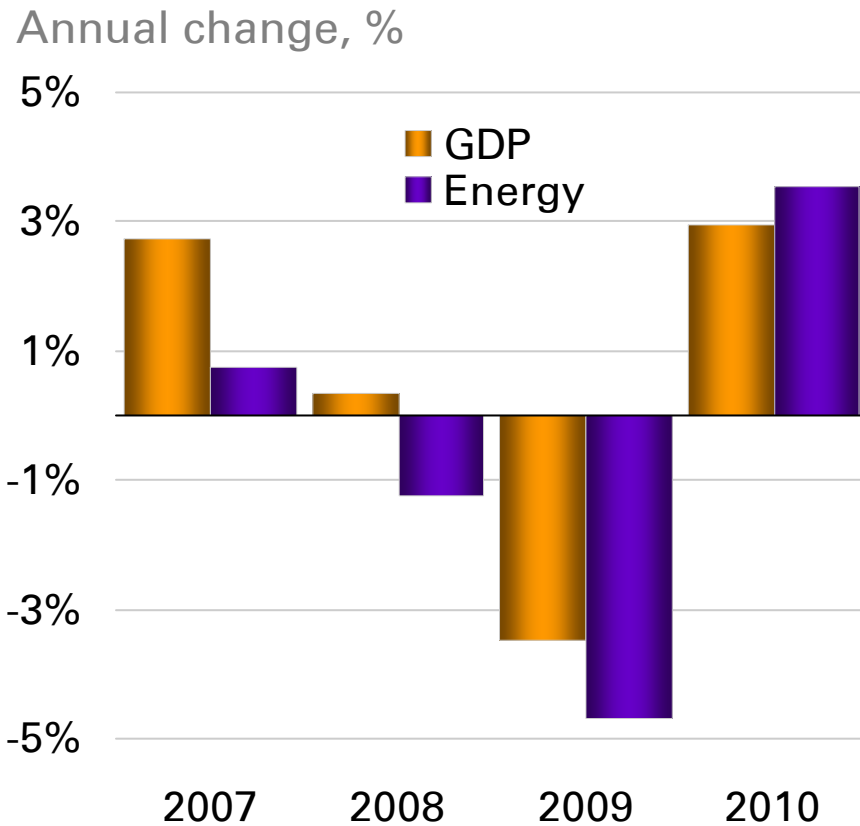
# Recession and recovery



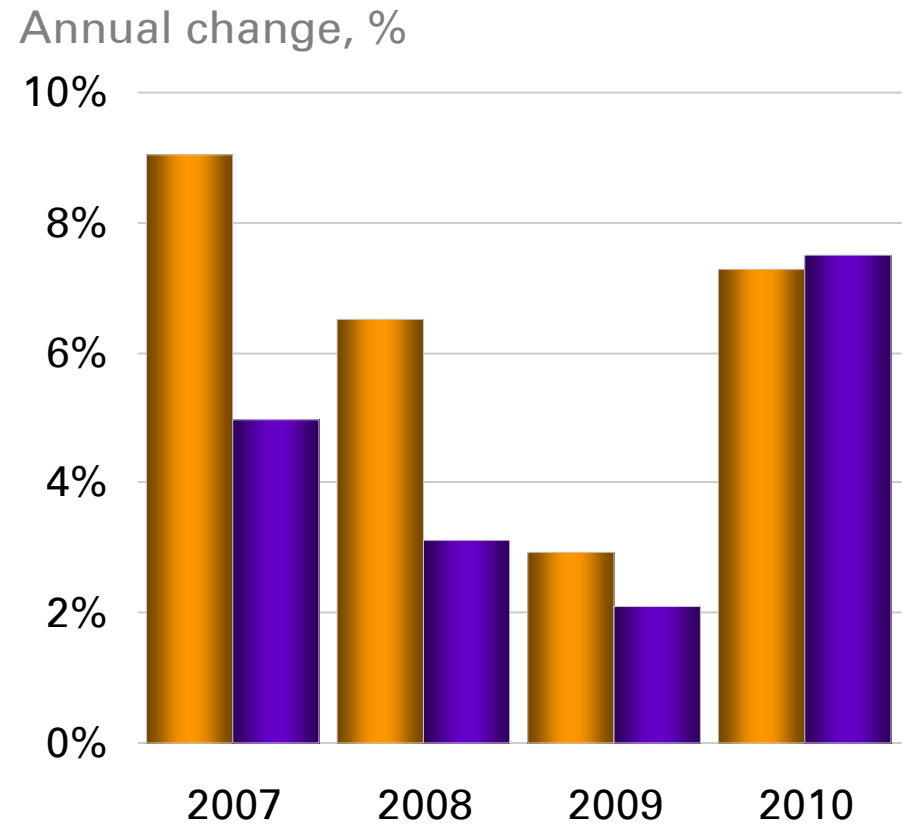
# GDP and energy growth



## OECD



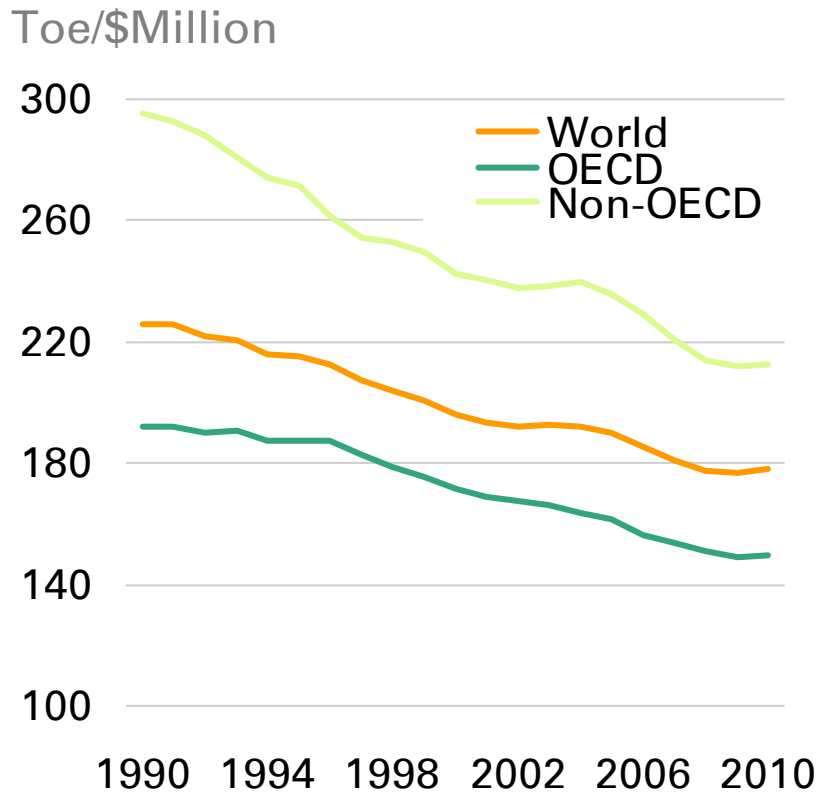
## Non-OECD



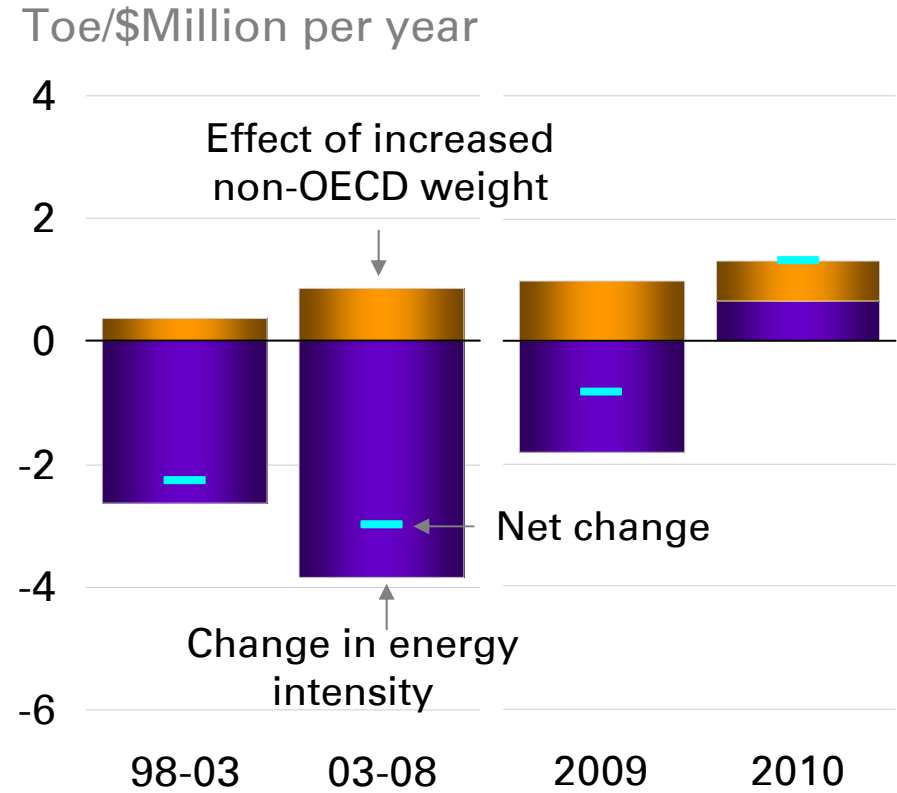
# Energy intensity



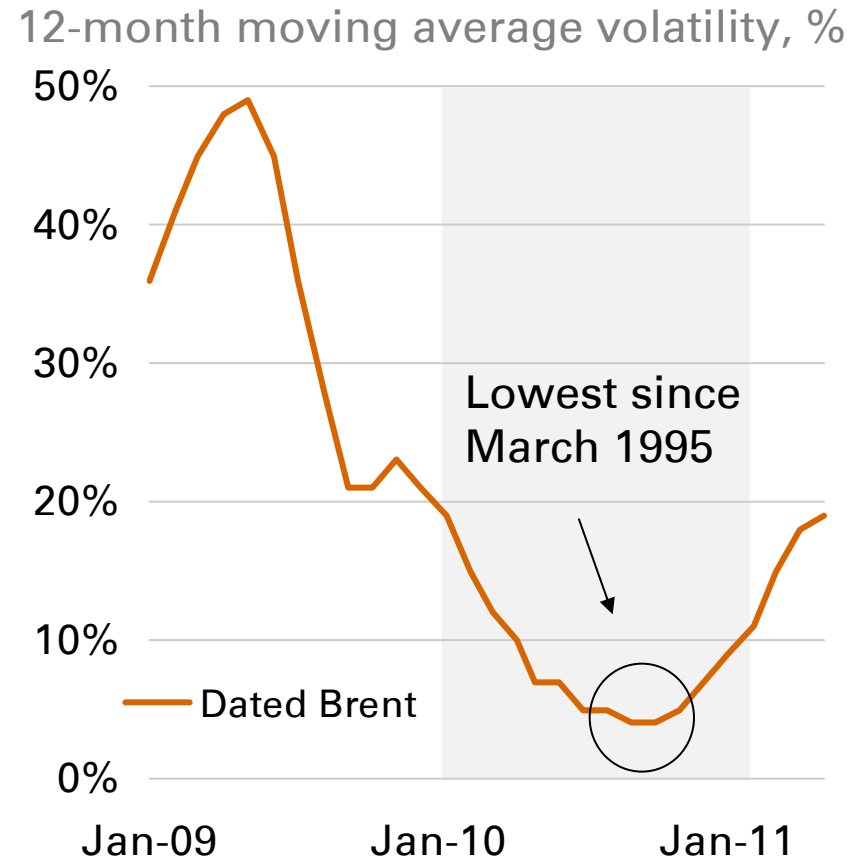
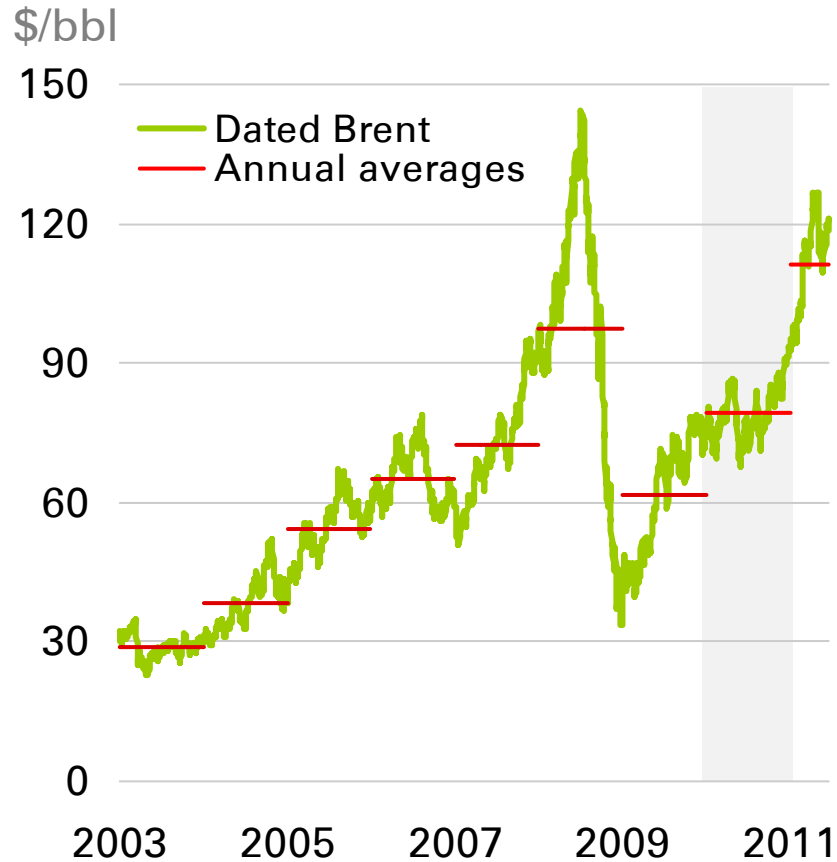
## Energy intensity level



## Change in energy intensity



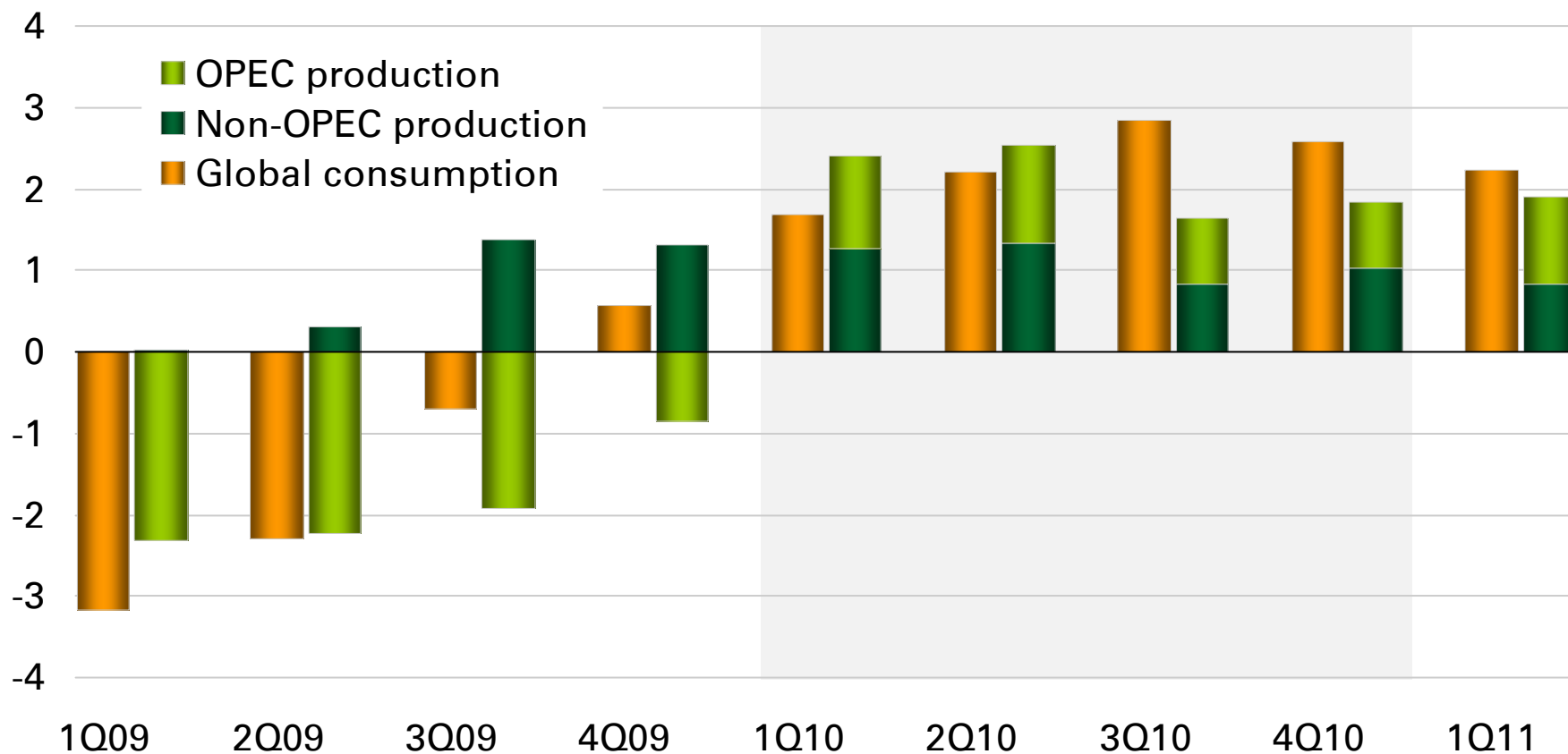
# Crude oil prices



# Oil consumption and production



Annual change, Mb/d

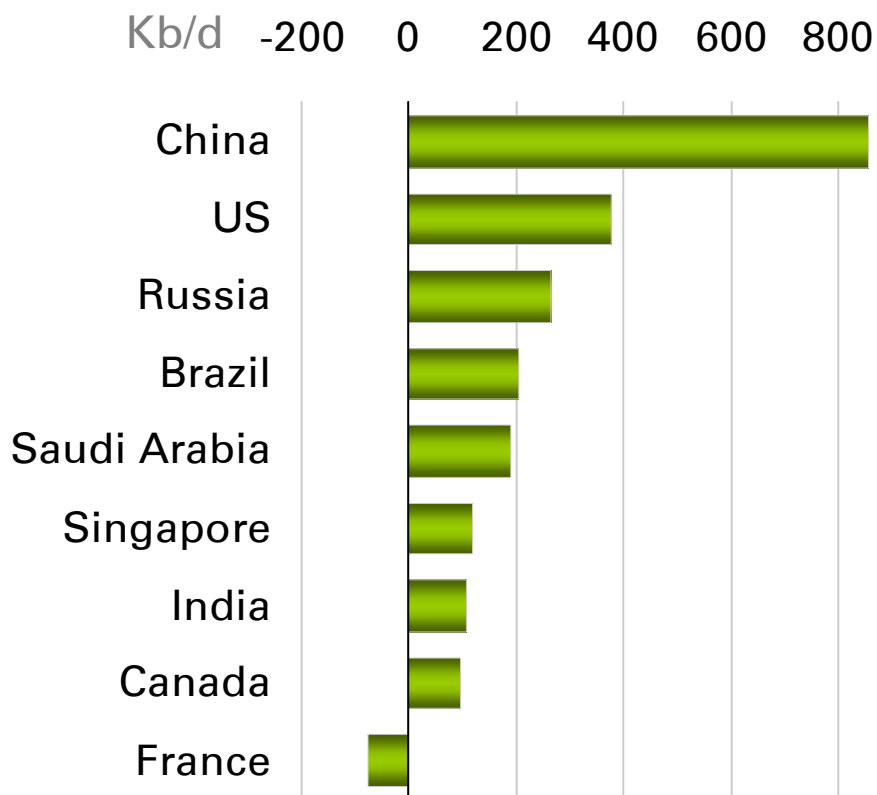




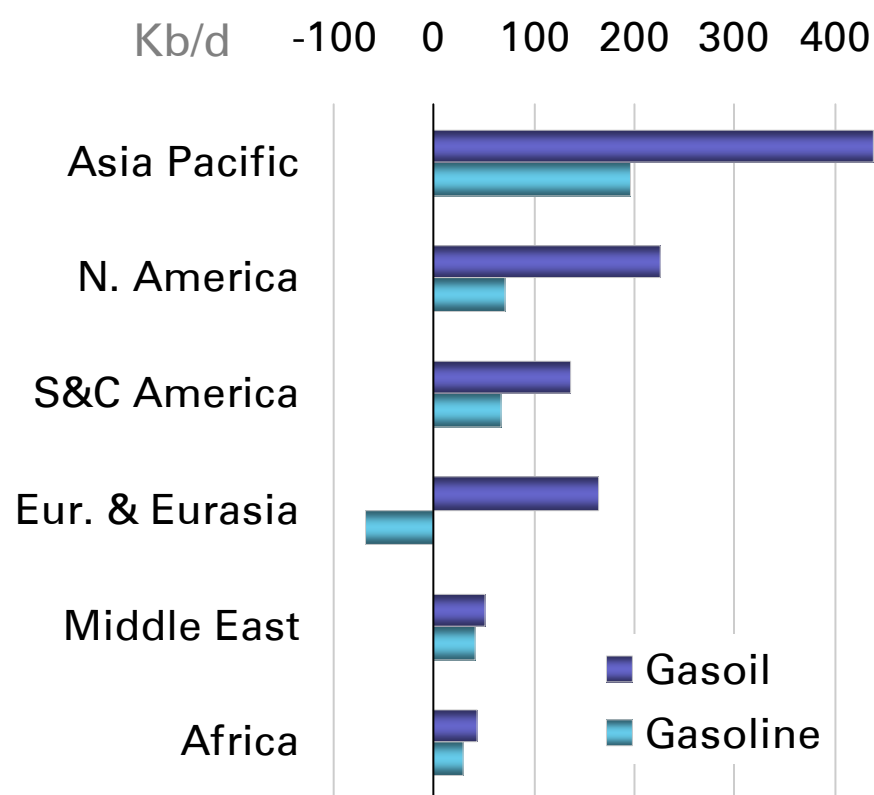
# Oil consumption growth in 2010



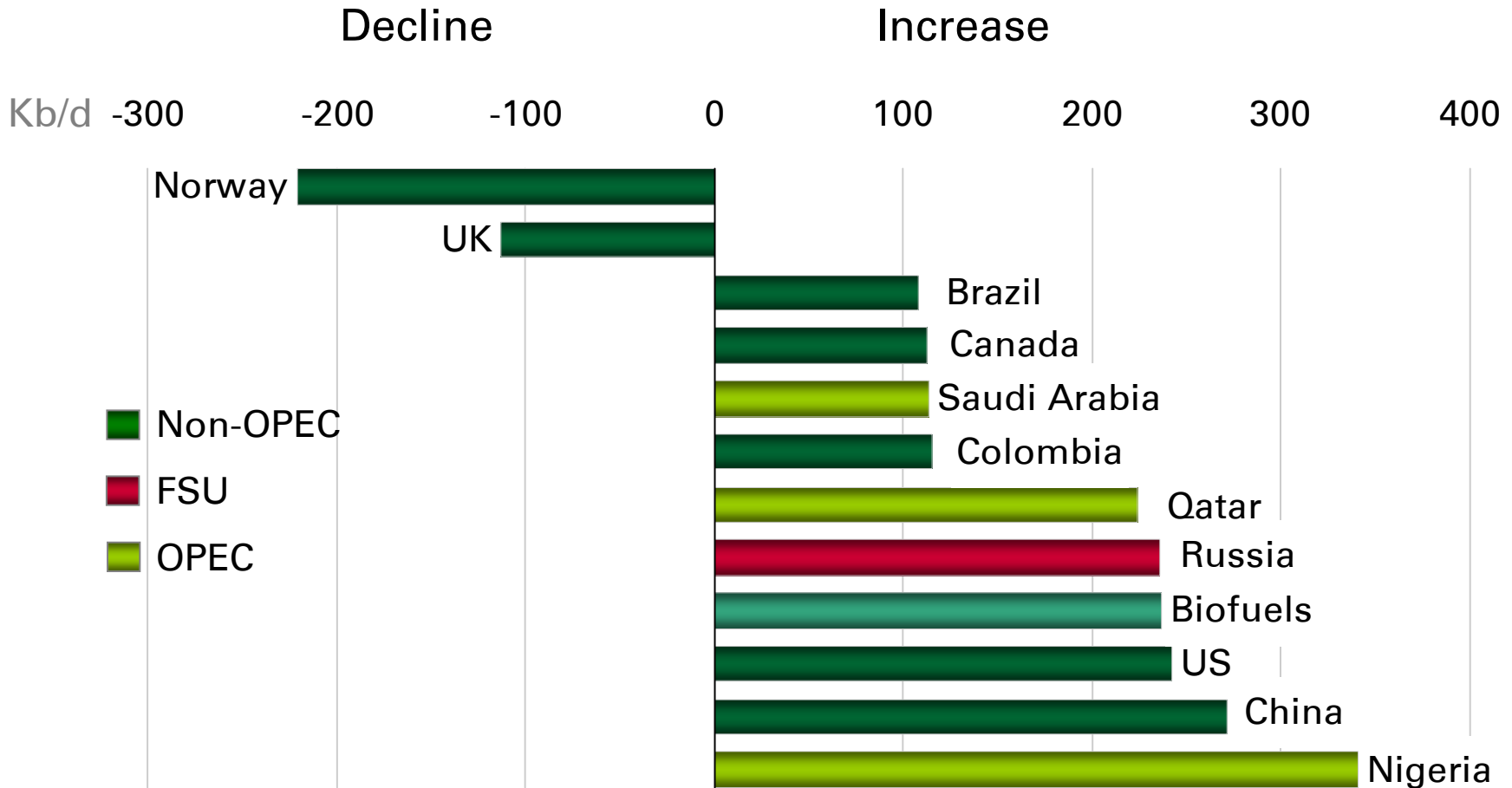
## Largest changes



## Regional growth by fuel type



# Oil production growth in 2010

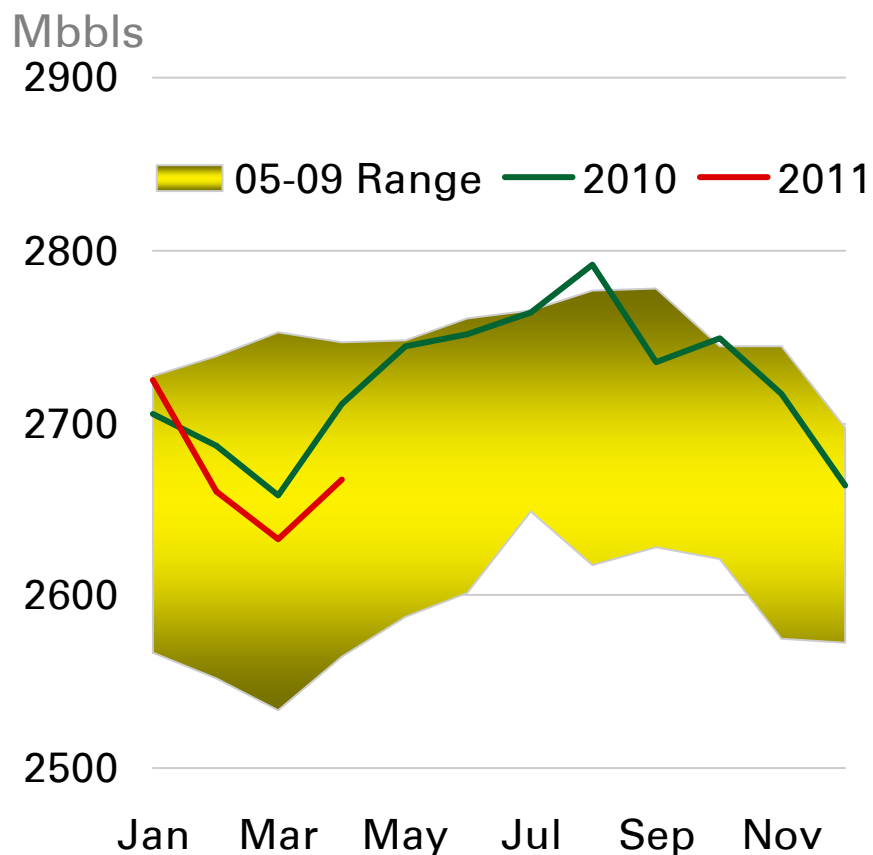


Changes of more than 100 Kb/d.

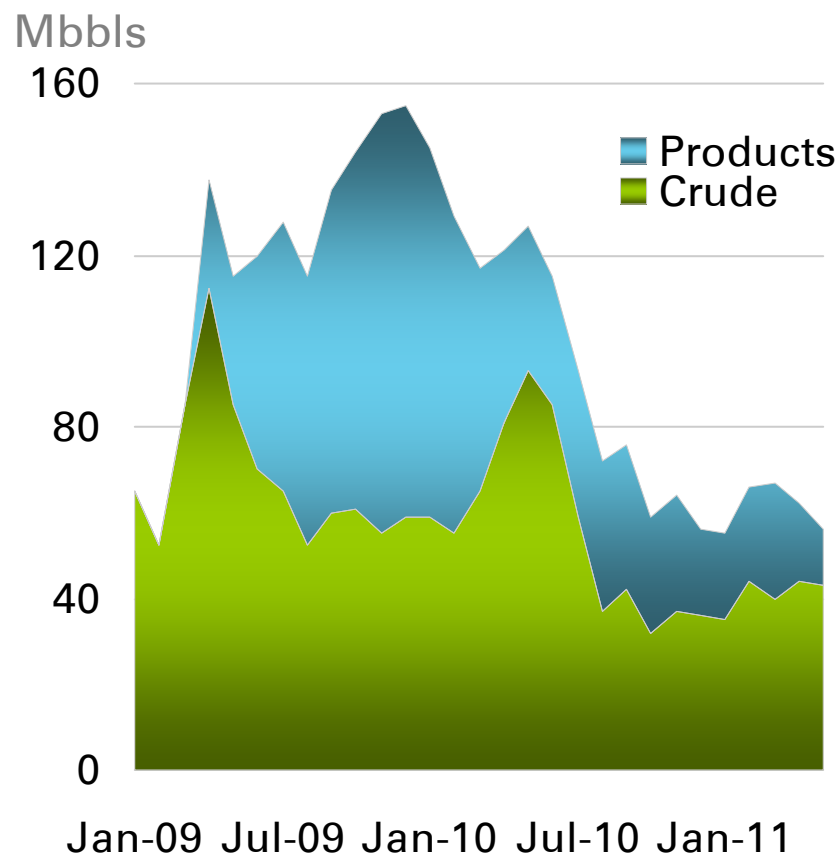
# Oil inventories



## OECD commercial oil stocks



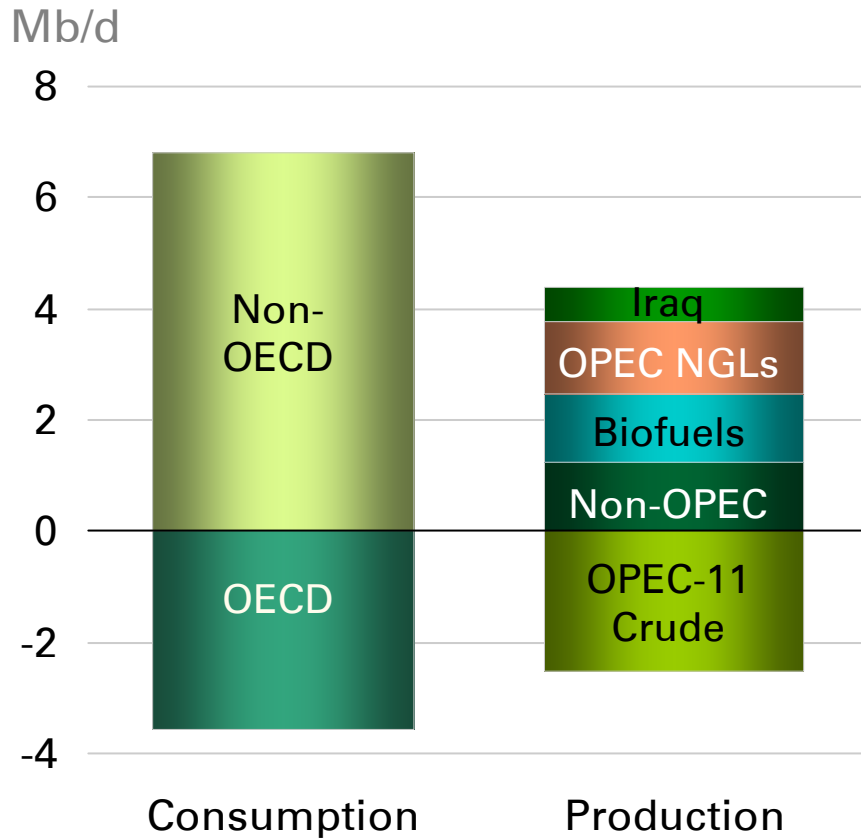
## Oil in floating storage



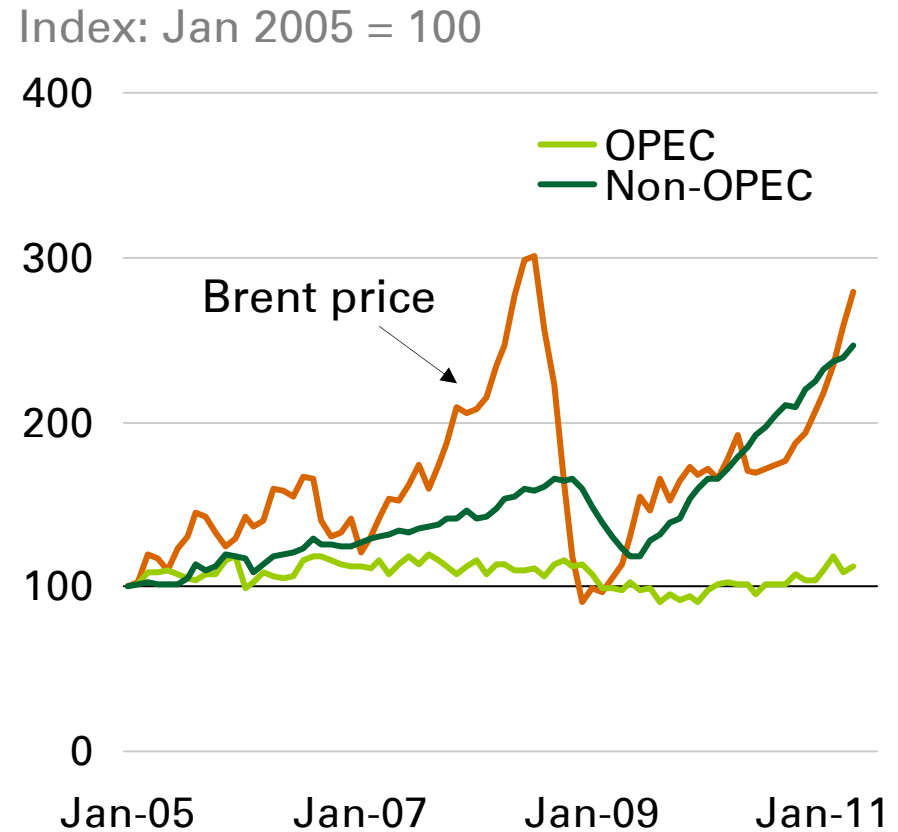
# Cumulative demand and production



## Changes since 2005



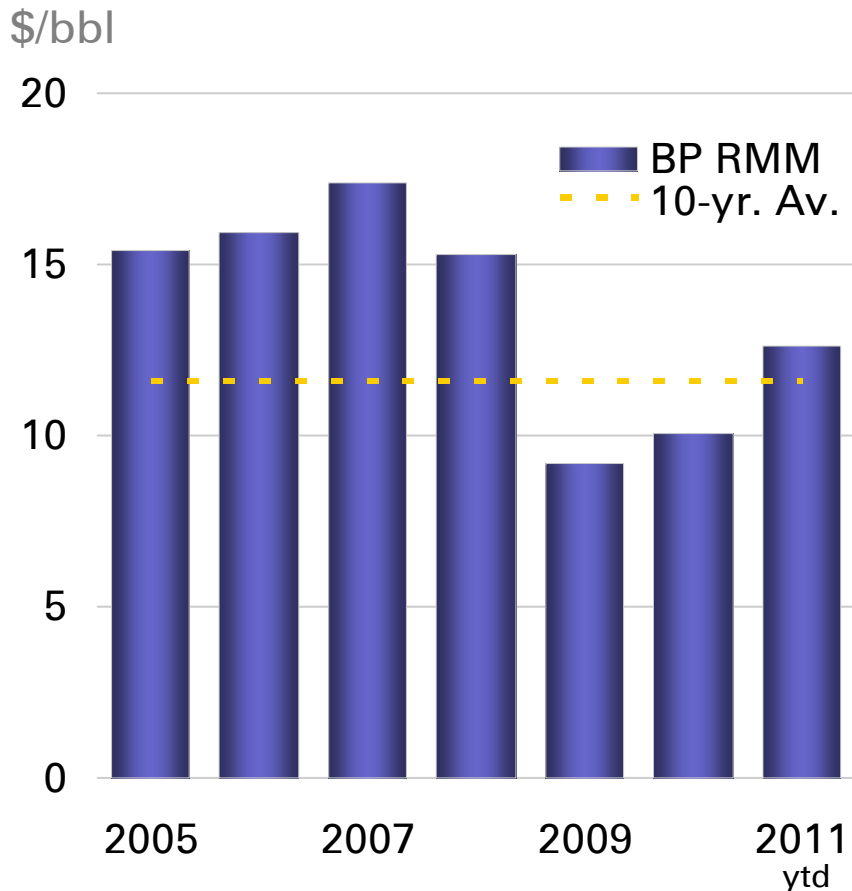
## Oil rig count and oil price



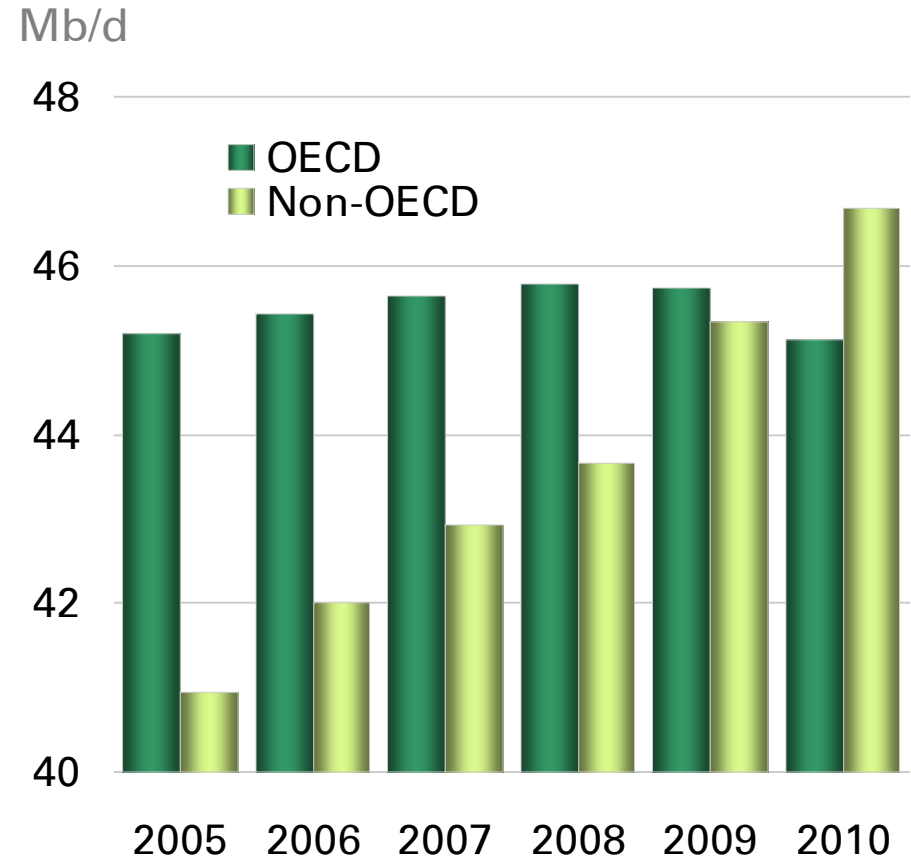
# Refining capacity and margins



## Refining margins



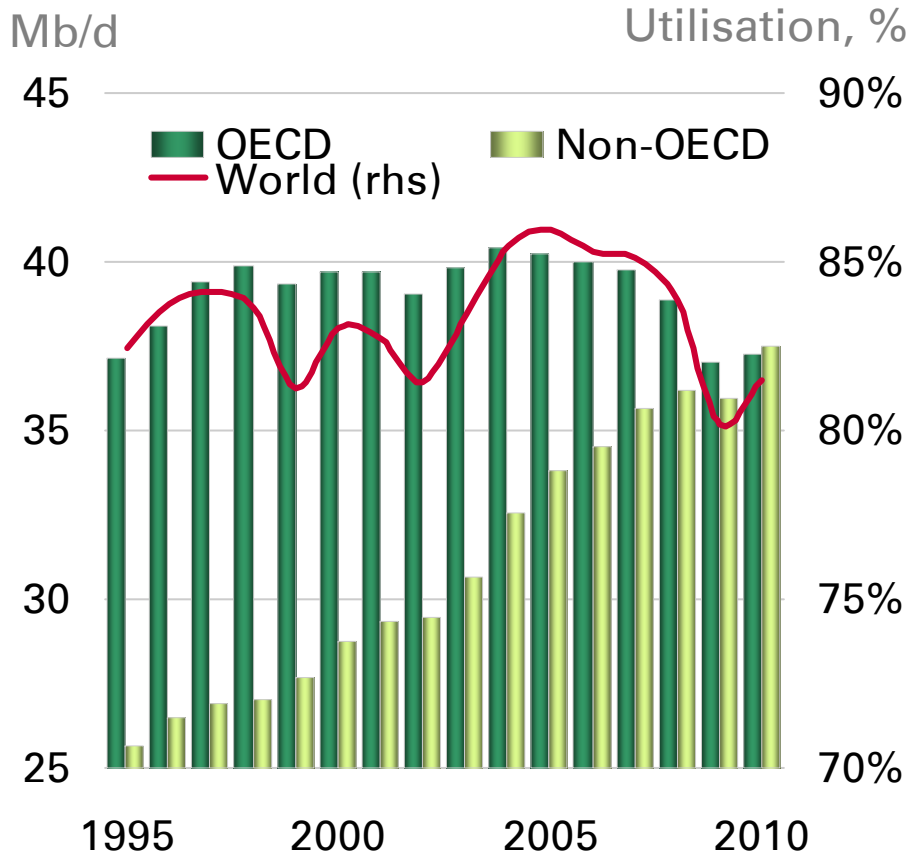
## Refining capacity



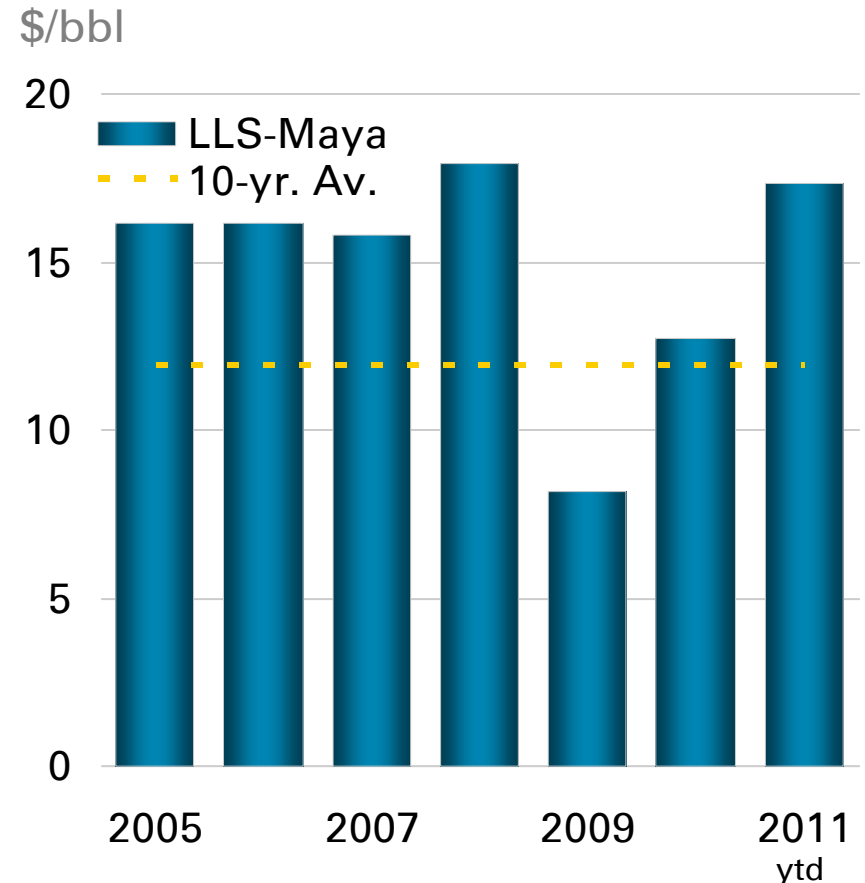
# Crude runs and light-heavy spreads



## Crude runs and utilisation



## Light-heavy spreads



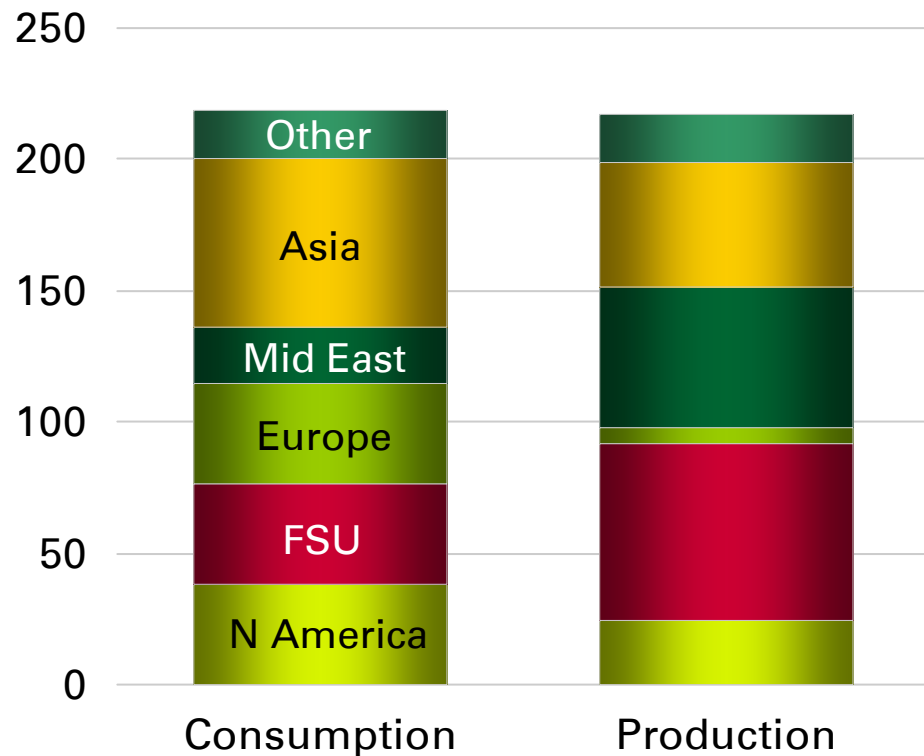
Source: includes data from ESAI, Platts.

# Natural gas markets



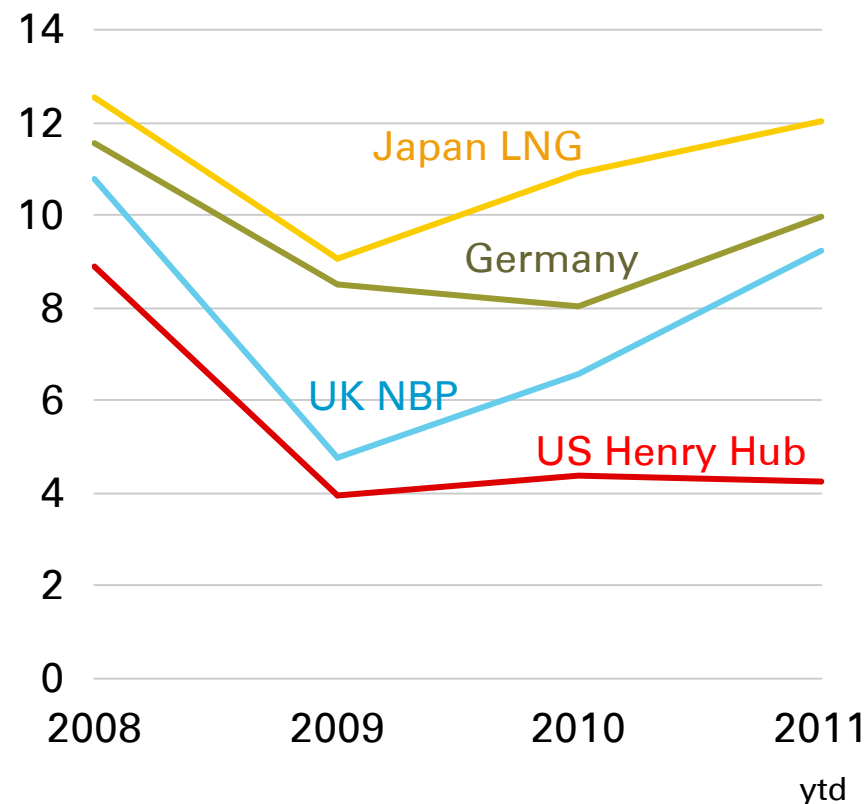
## Consumption and production growth

2010 vs 2009, Bcm



## Prices

\$/Mmbtu



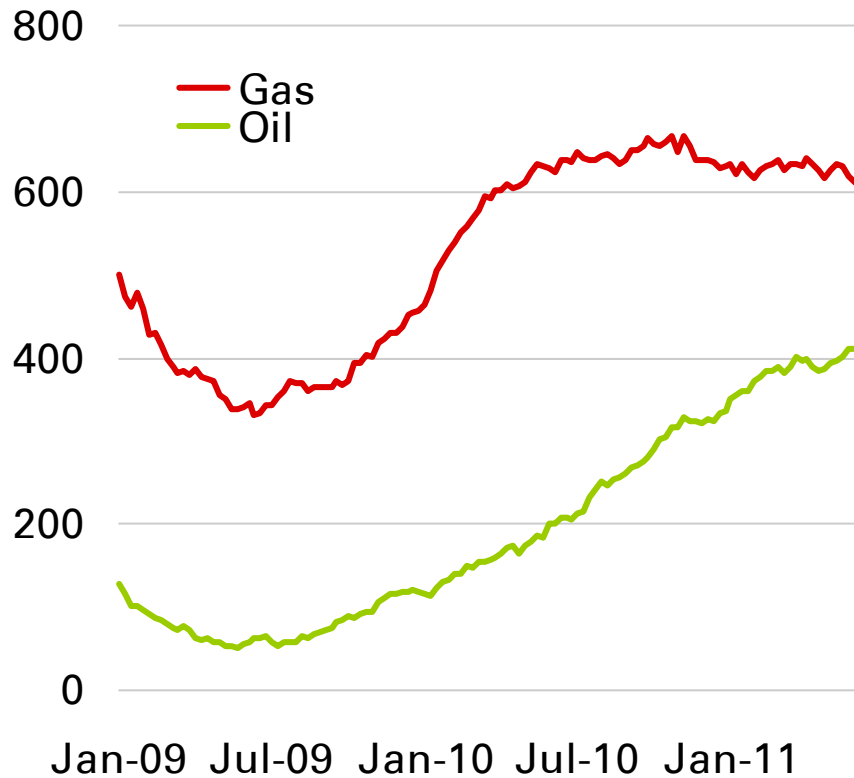
Source: includes data from Platts, BAFA.

# US natural gas market



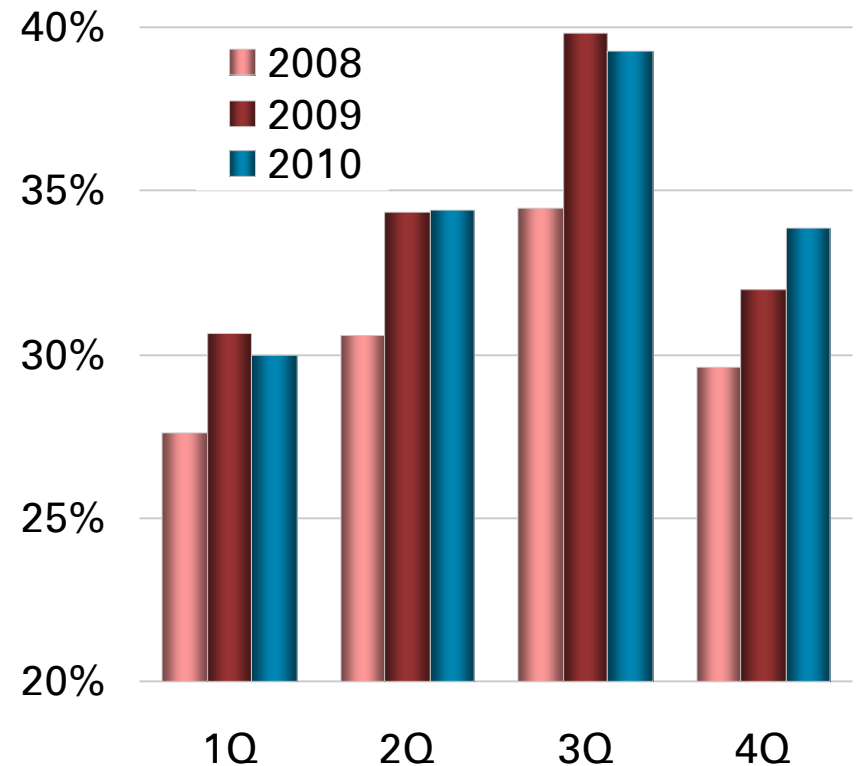
## Horizontal gas and oil drilling

Number of horizontal rigs



## Gas in power generation

Gas share in generation from coal and gas

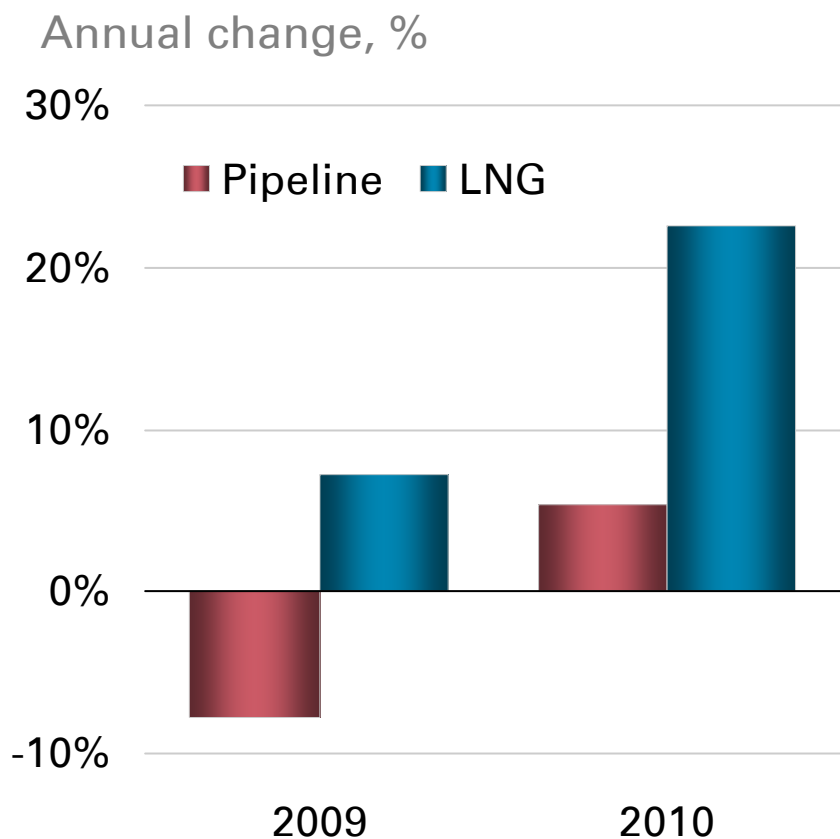




# Global natural gas trade

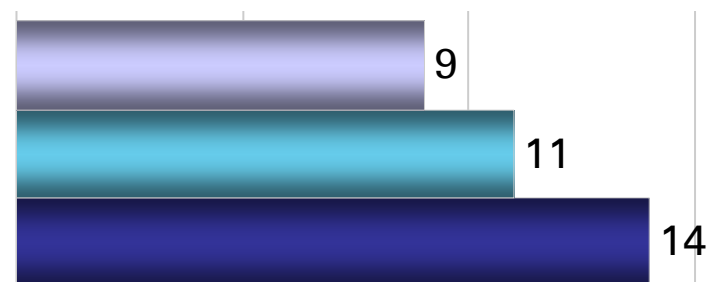


## Global gas trade growth

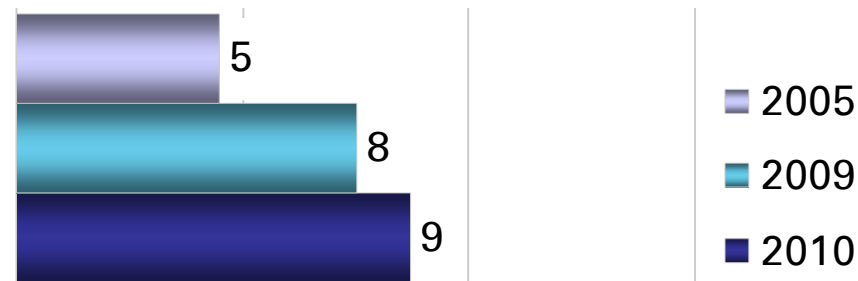


## LNG trade links

### Four main importers, av. number of sources



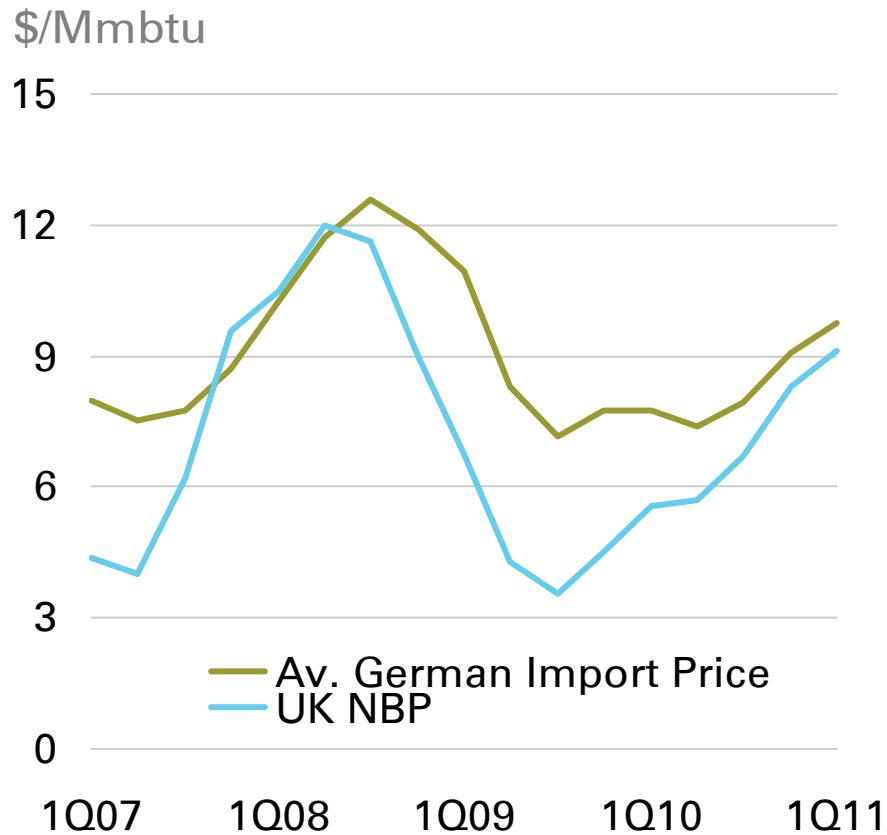
### All exporters, av. number of markets



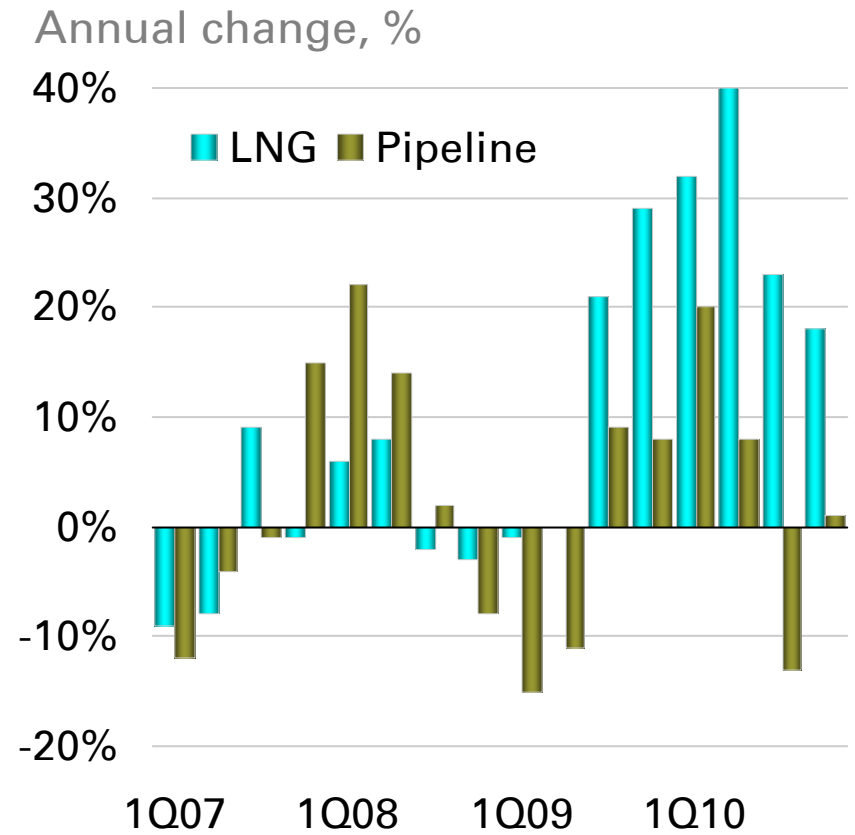
# OECD Europe natural gas market



## Prices



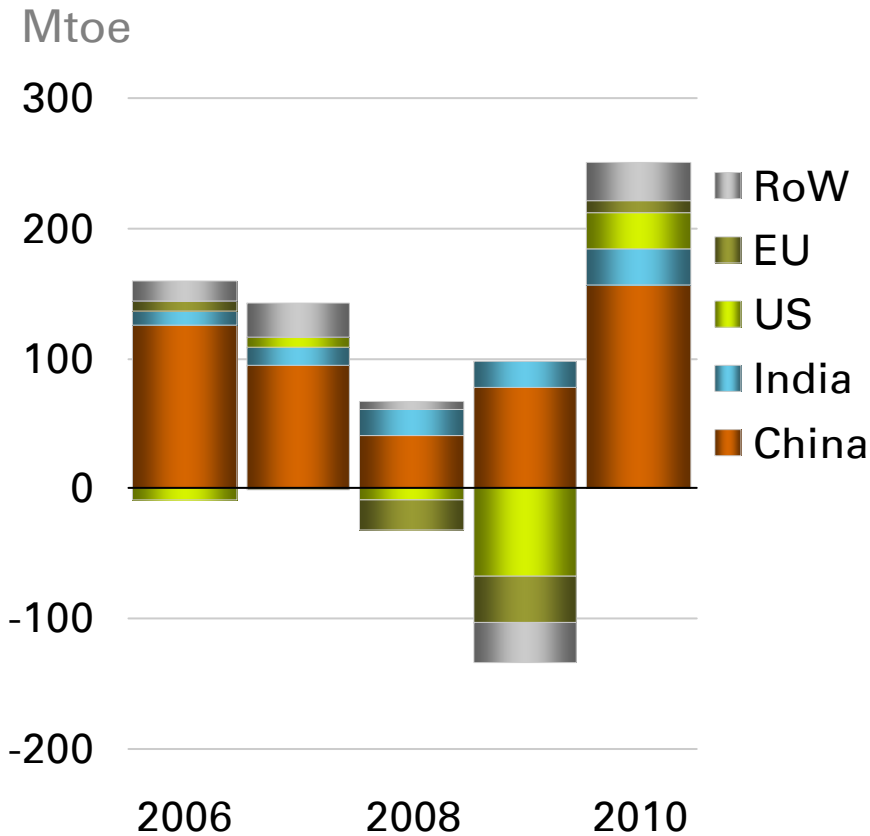
## Import growth



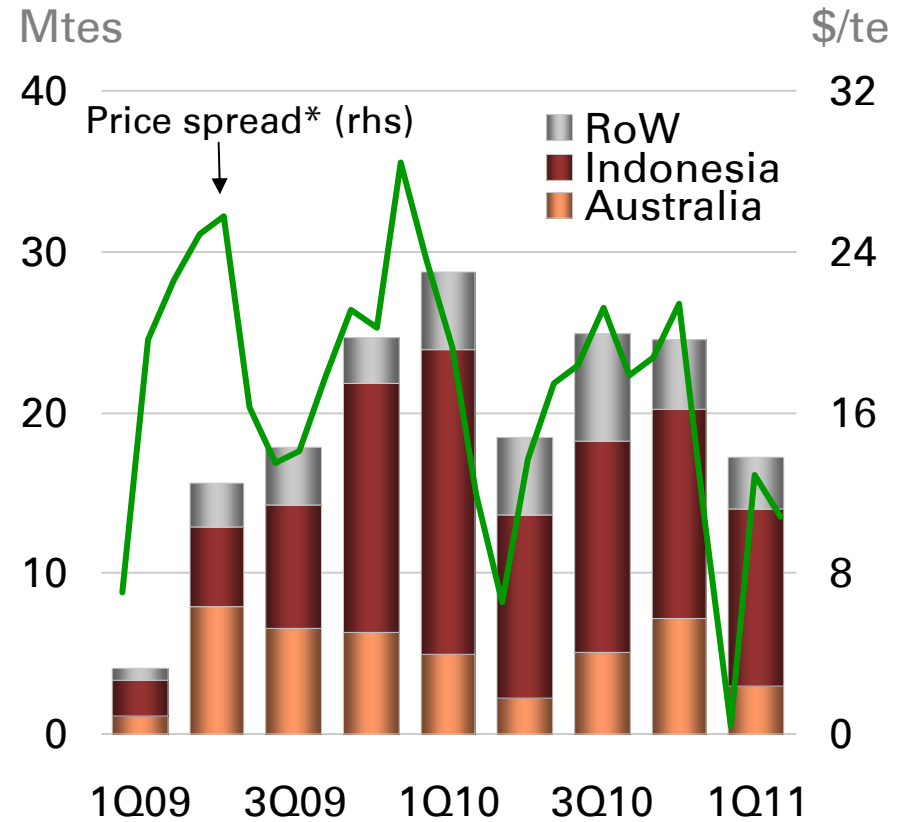
# Coal consumption and imports



## Consumption changes



## China's imports

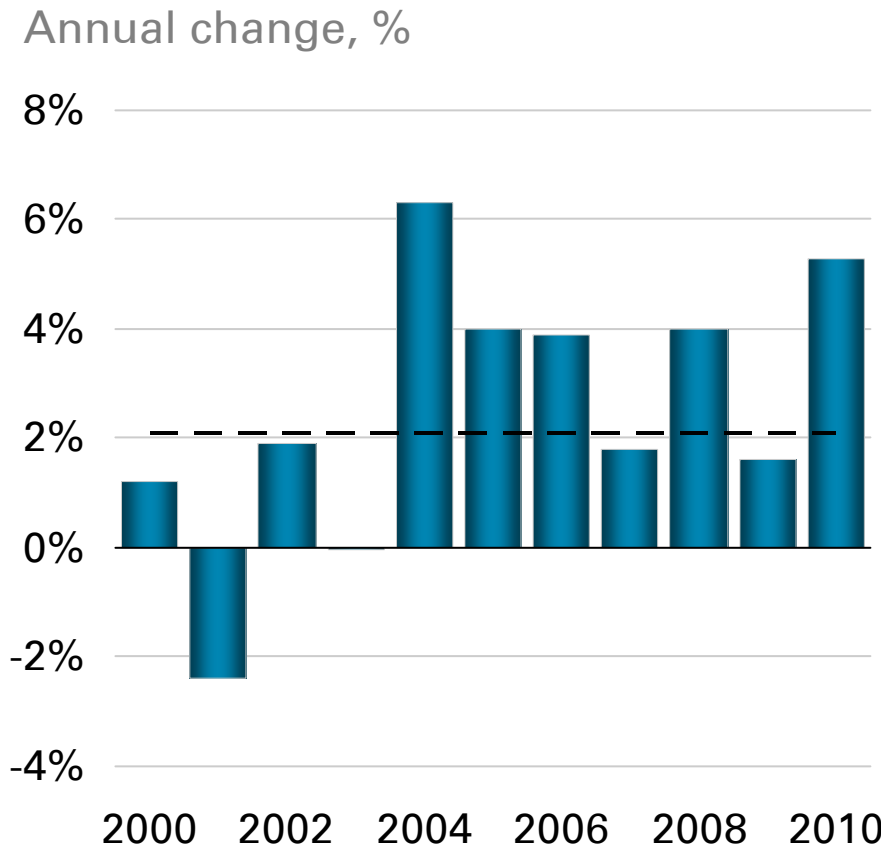


Source: includes data from IHS CERA, IHS McCloskey.  
 \*Spread between China's Qinhuangdao and Australia's Newcastle coal prices.

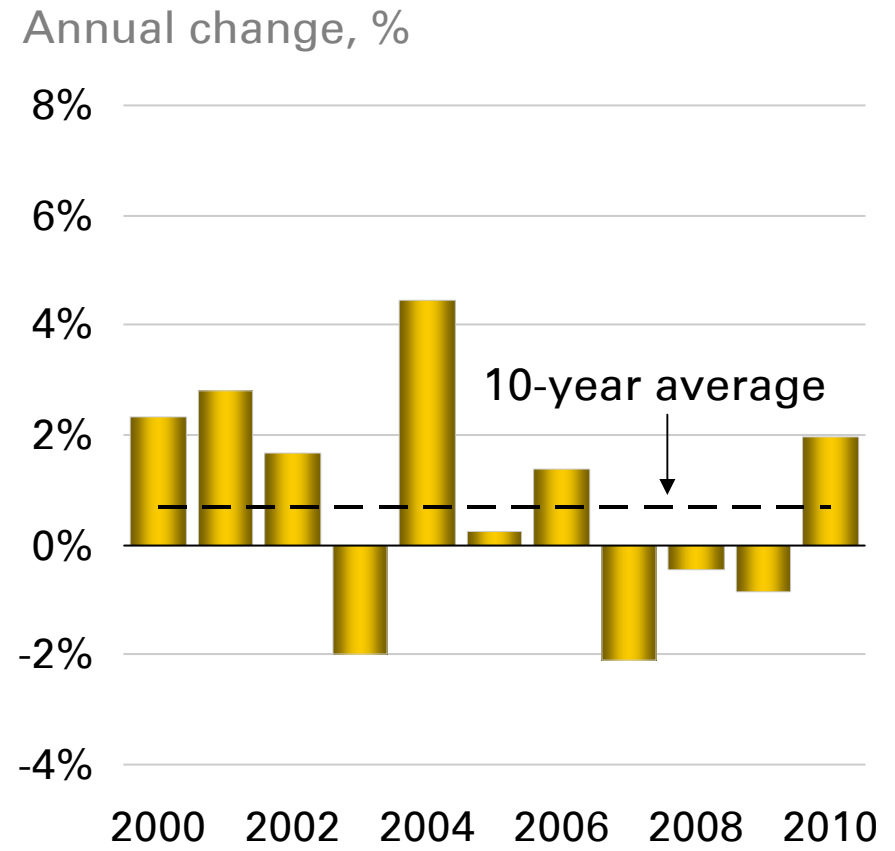
# Hydro and nuclear power consumption



## Hydro



## Nuclear

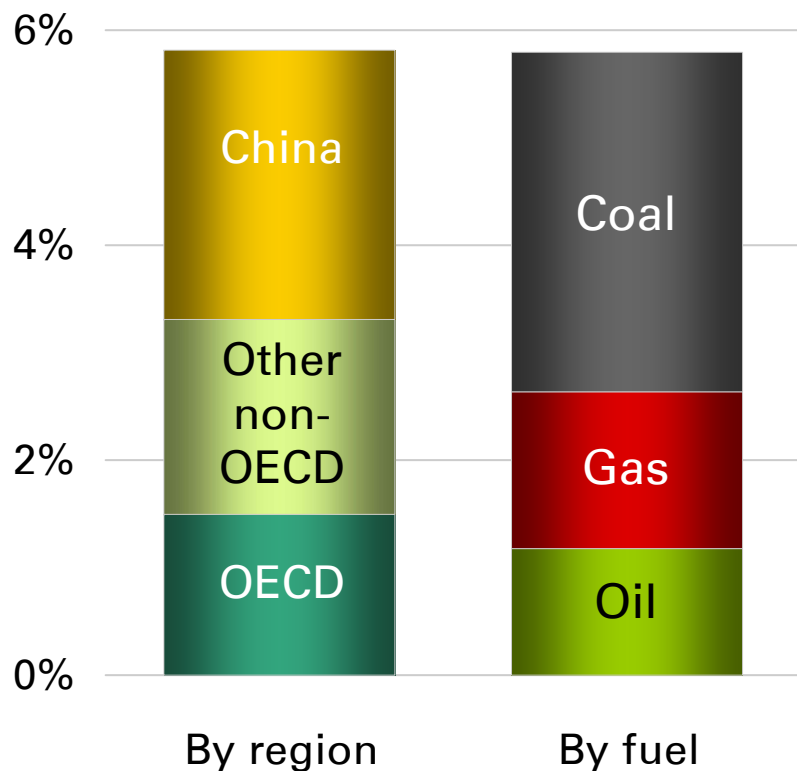


# CO<sub>2</sub> emissions



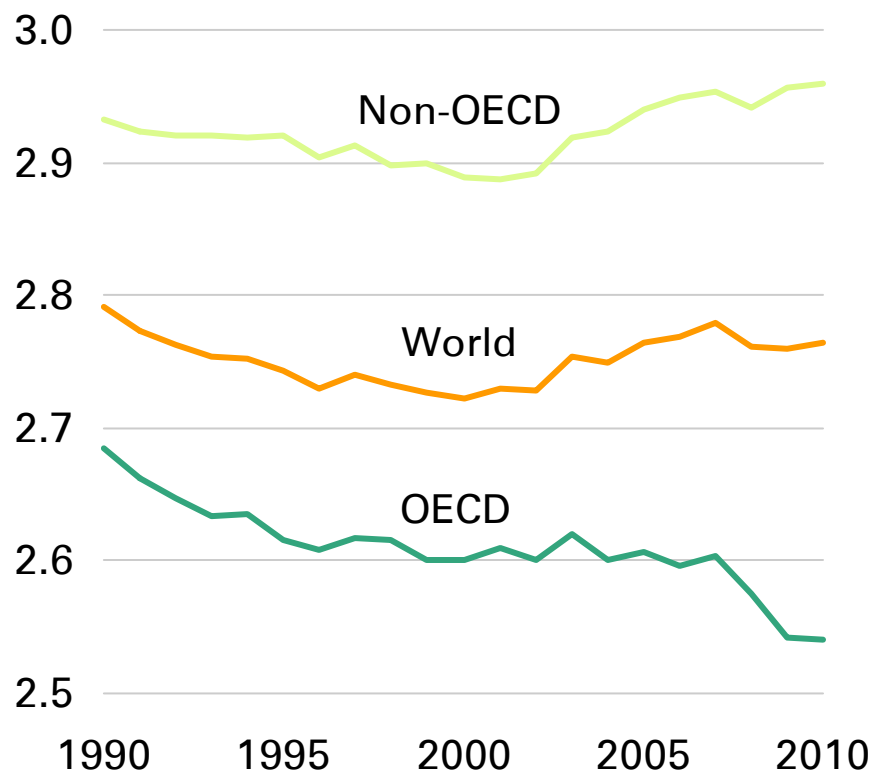
## CO<sub>2</sub> emissions growth 2010

Contributions to growth



## CO<sub>2</sub> intensity of energy

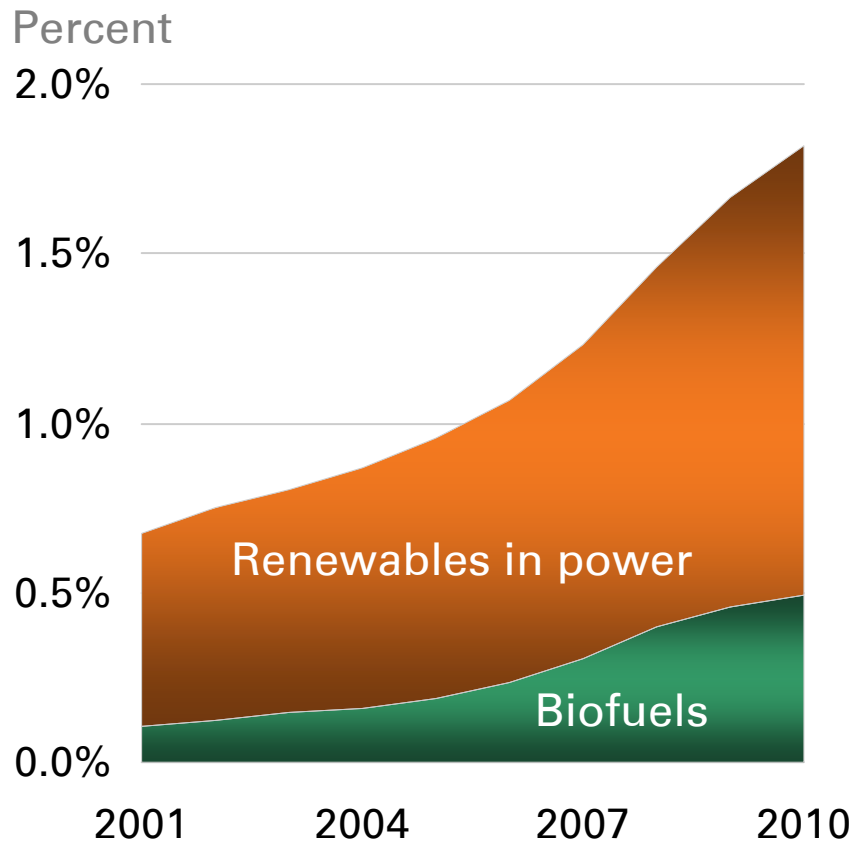
Tonnes of CO<sub>2</sub> per toe



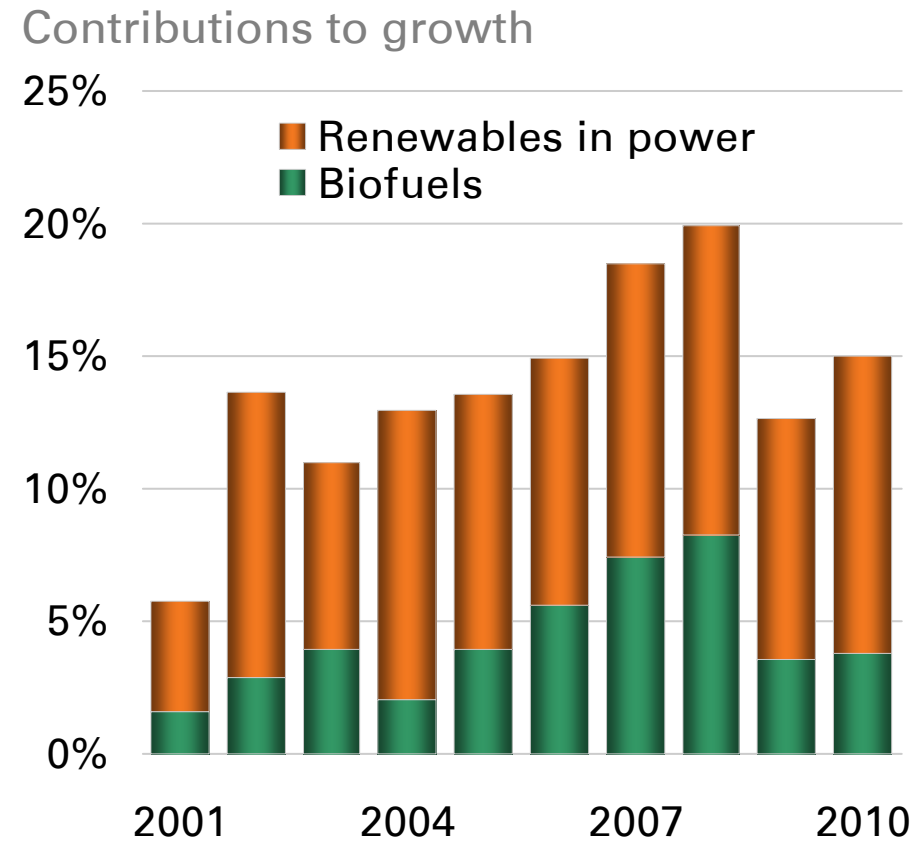
# Renewable energy



## Share of primary energy



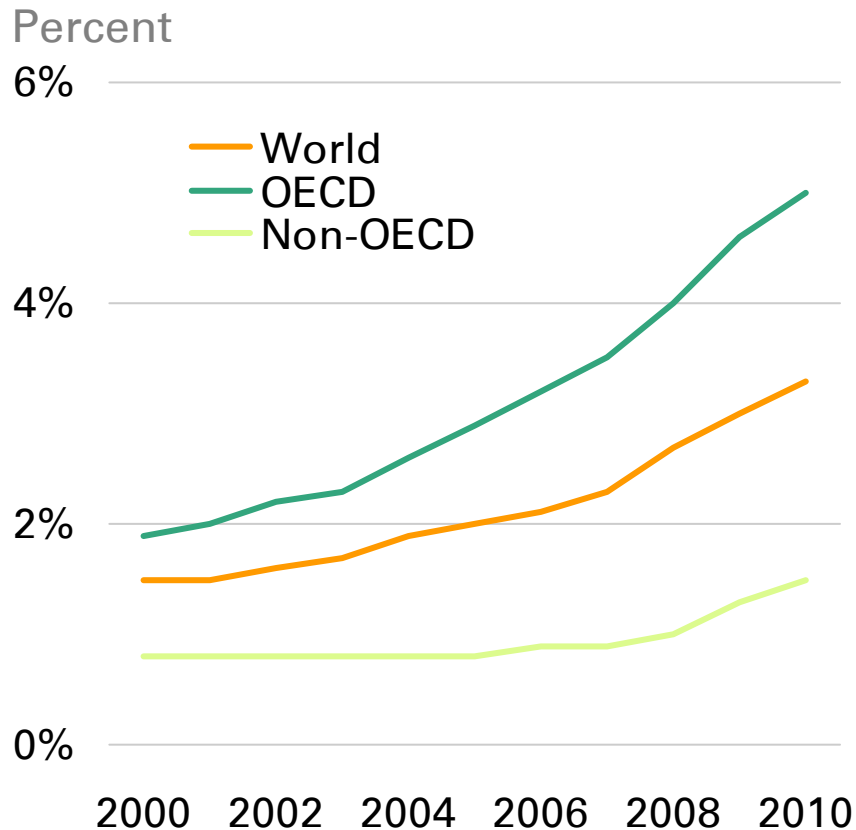
## Renewables growth



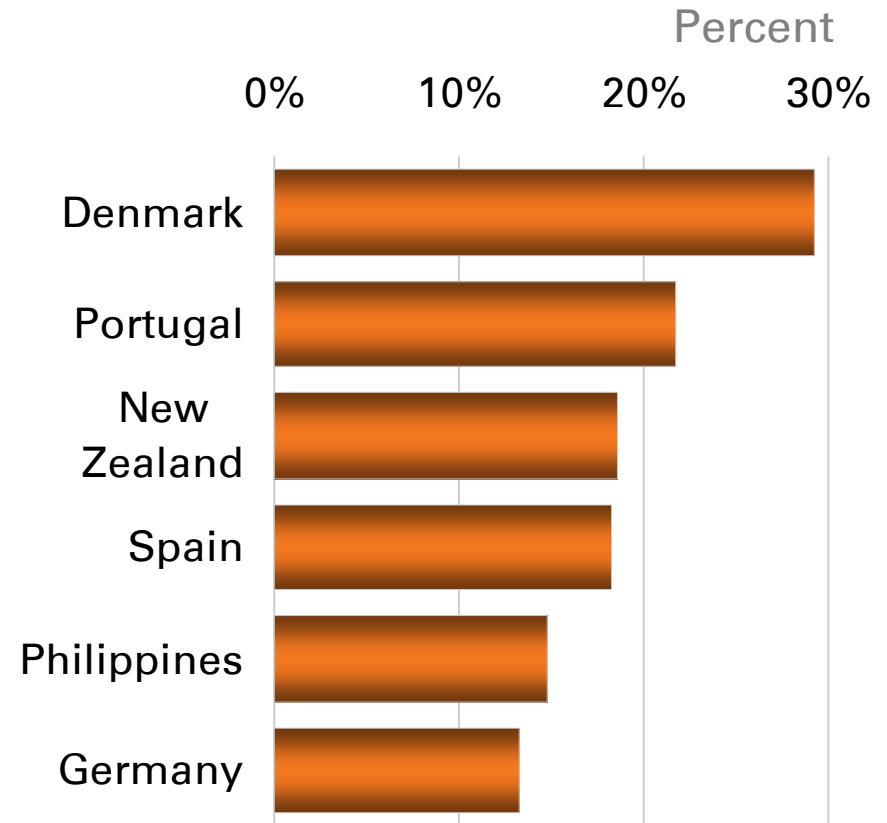
# Renewables in power



## Share of power generation



## Share of power generation in 2010

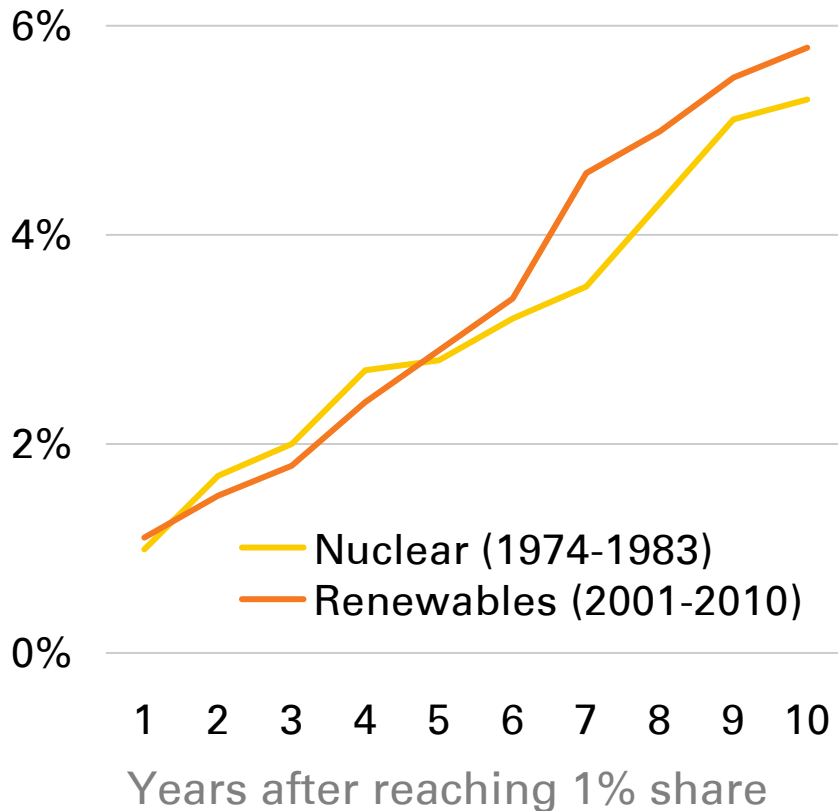




# Renewables in Germany and Spain

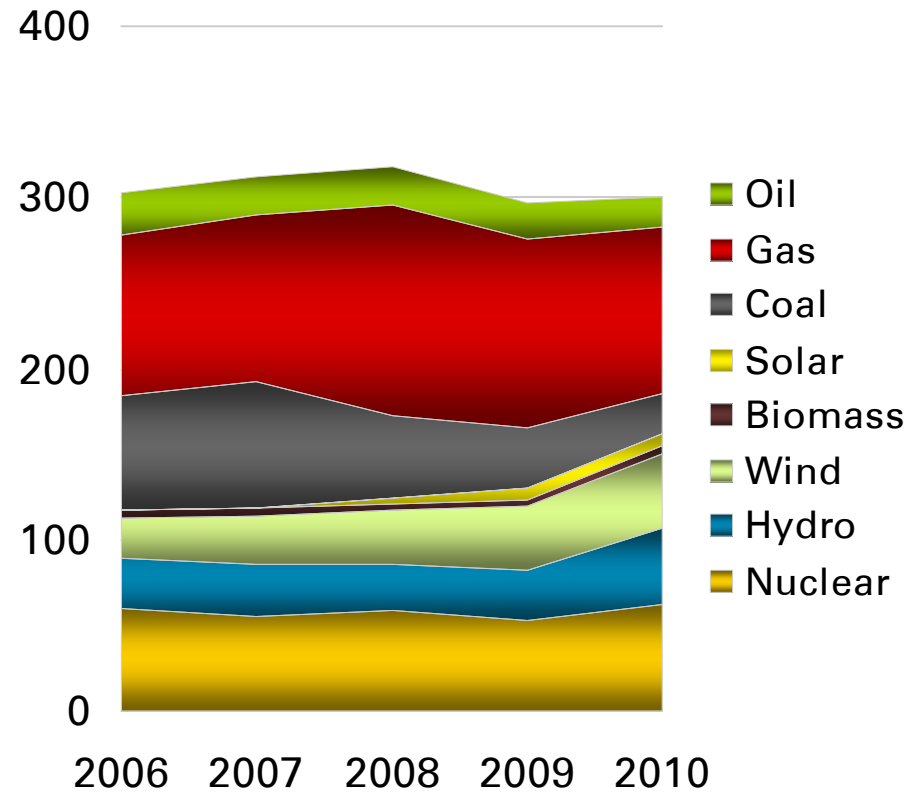
## Germany

Share of primary energy, %



## Spain

Power generation, TWh



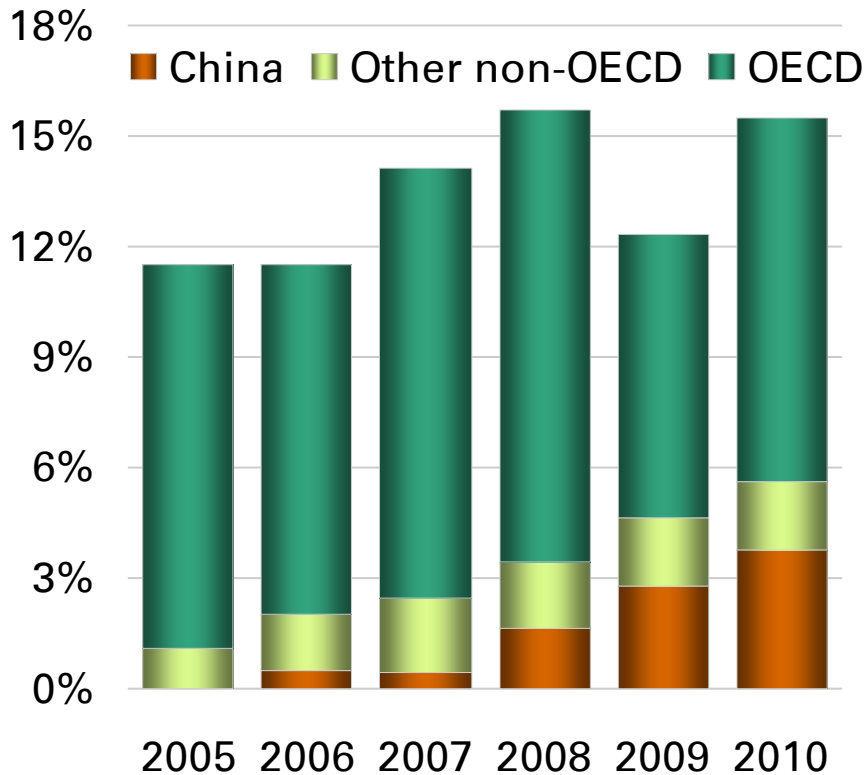


# Renewable power growth



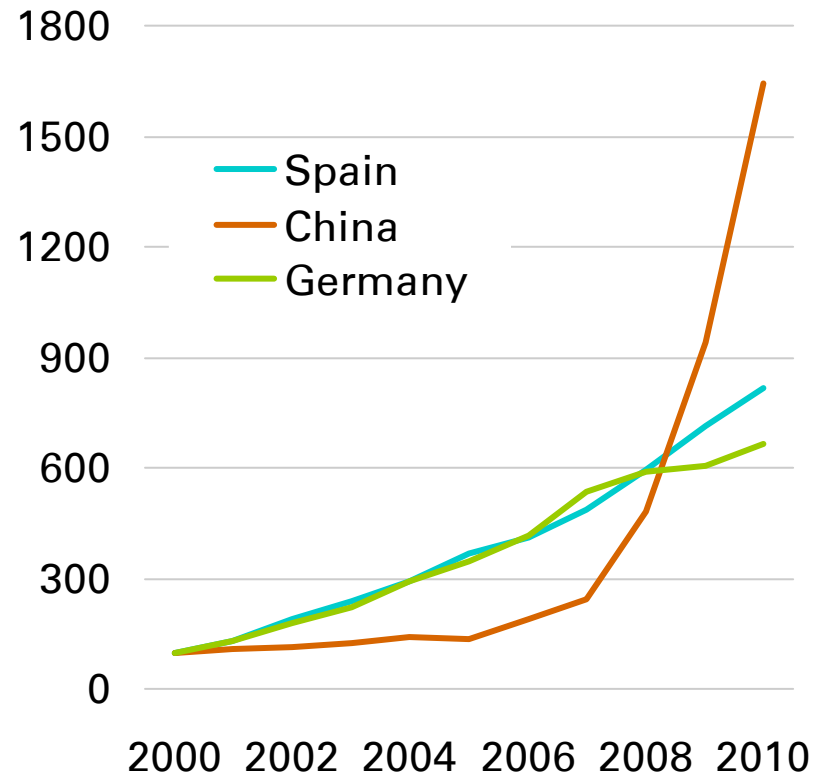
## Growth by region

Contributions to growth



## Renewables consumption

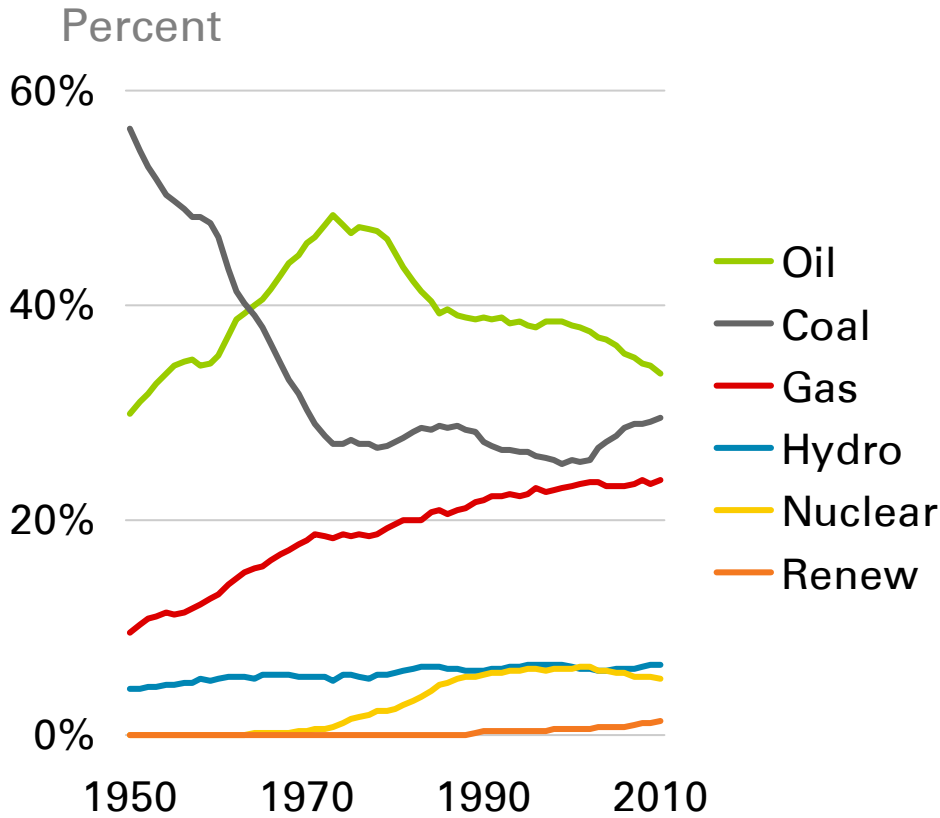
Index: 2000=100



# 60 years of energy

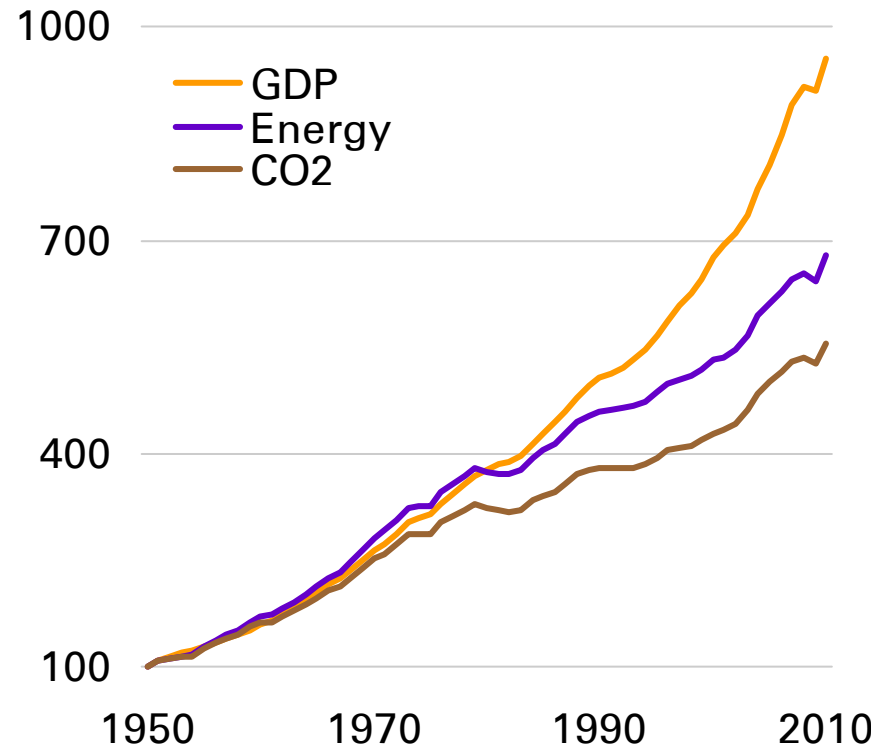


## World fuel shares



## World GDP, energy and emissions

Index: 1950=100





**60 years**

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## 2010 – Energy Rebounds

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Q & A



Thank you