



# Energy markets – the short and the long term

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# Outline

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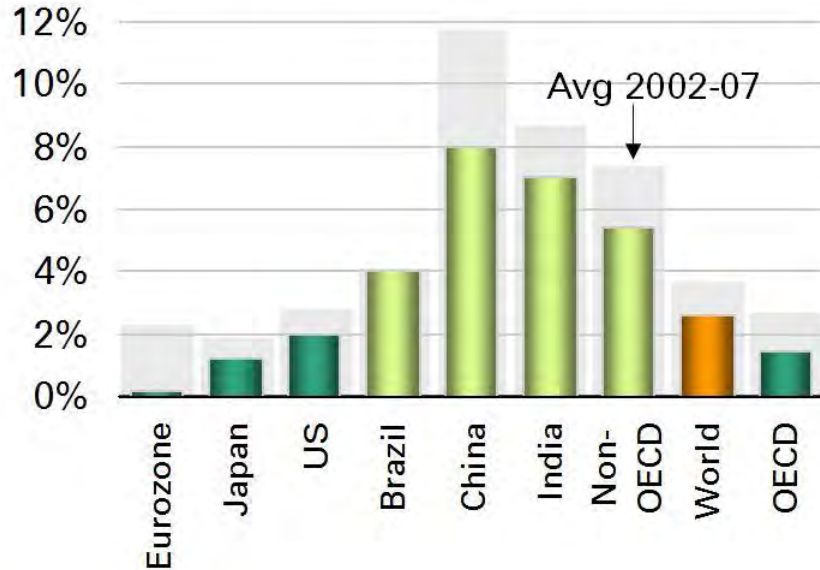
- The economy
  - A year of disruptions
  - Long term implications
  - Conclusion
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# Global growth: slow and on life support

## 2013 GDP and the good old days

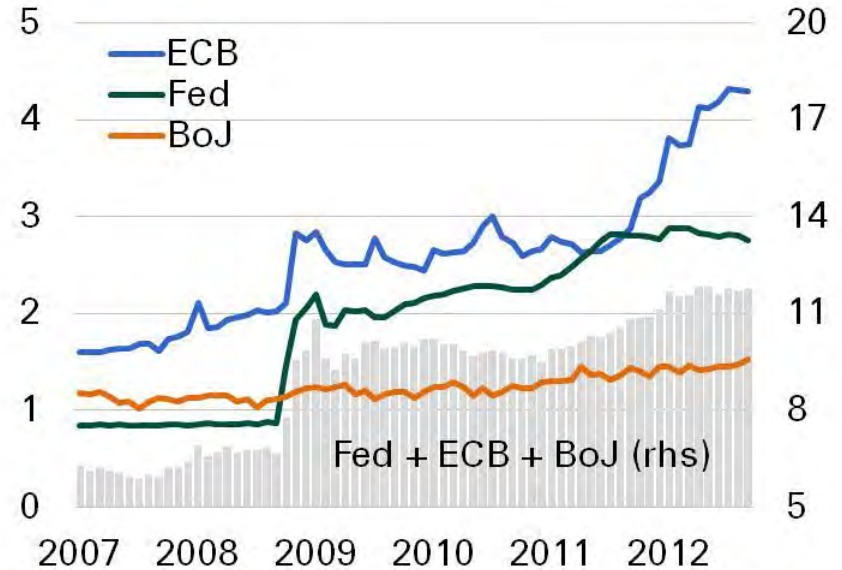
Annual change, %



## Central Bank liquidity

Trillion \$US\*

% of world GDP

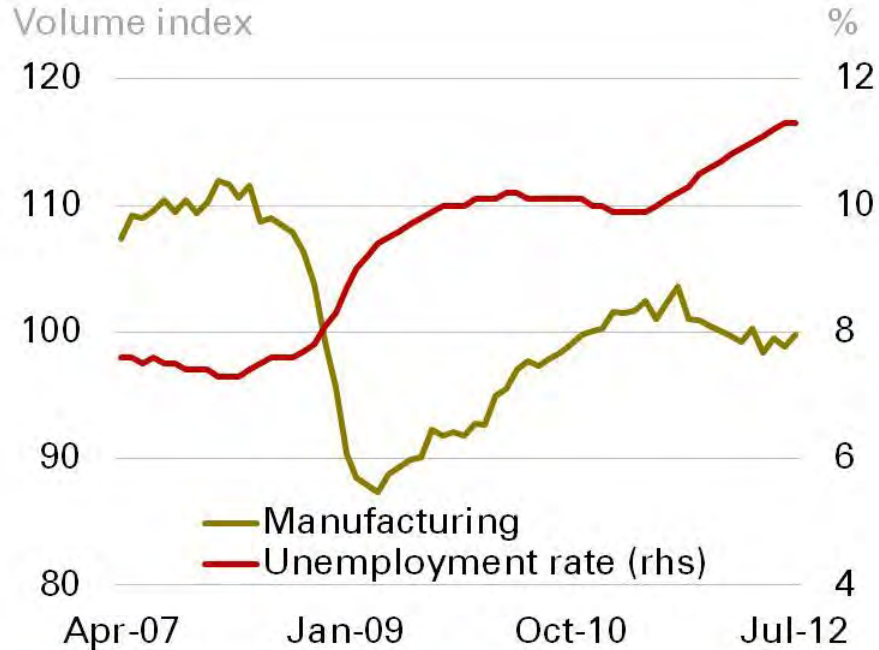


\*At constant 2011 exchange rates



# Europe struggles into recession

## Eurozone indicators



## 10-year benchmark bond yields

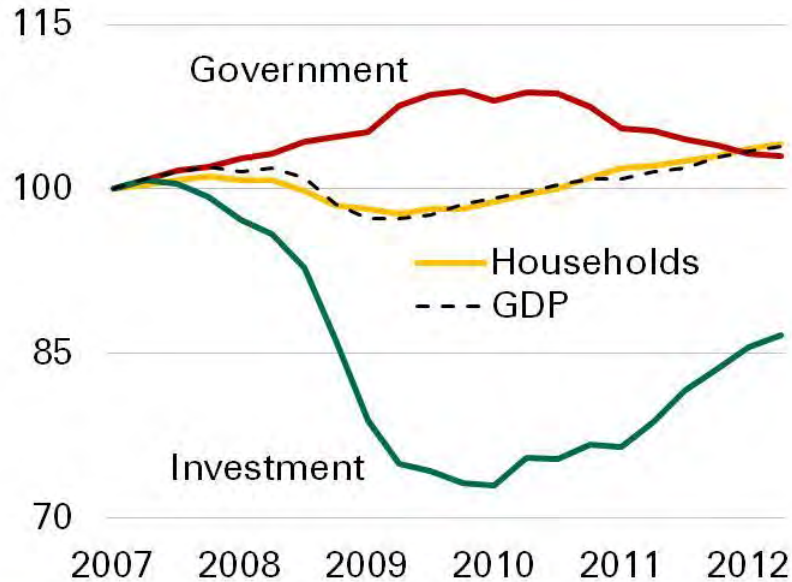




# The US grows slowly

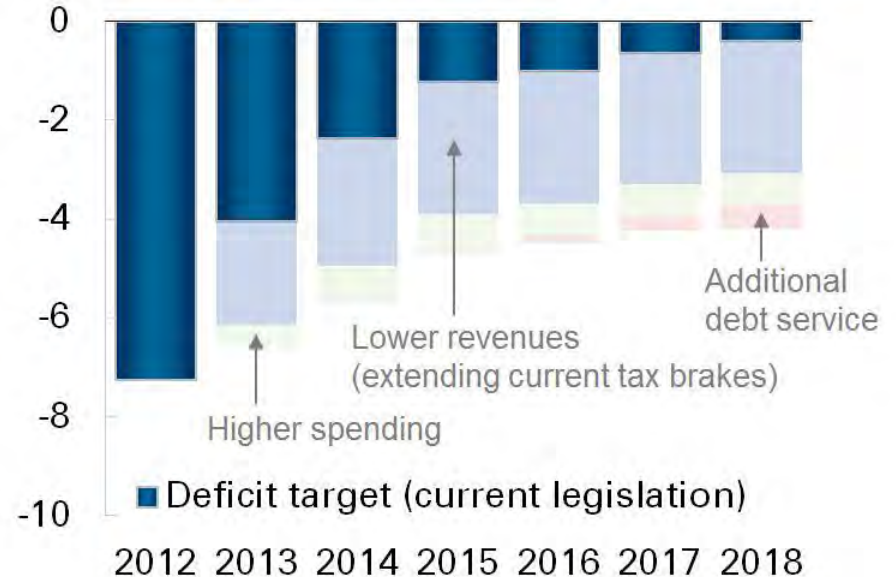
## Components of domestic demand

Index: 1Q 2007=100



## "Fiscal cliff"

Budget deficit, % of GDP

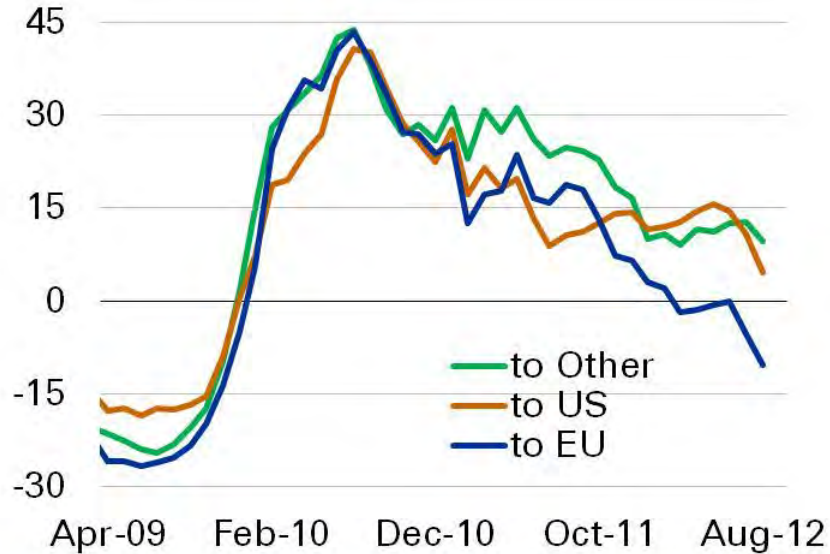




# The Chinese economy slows

## Exports

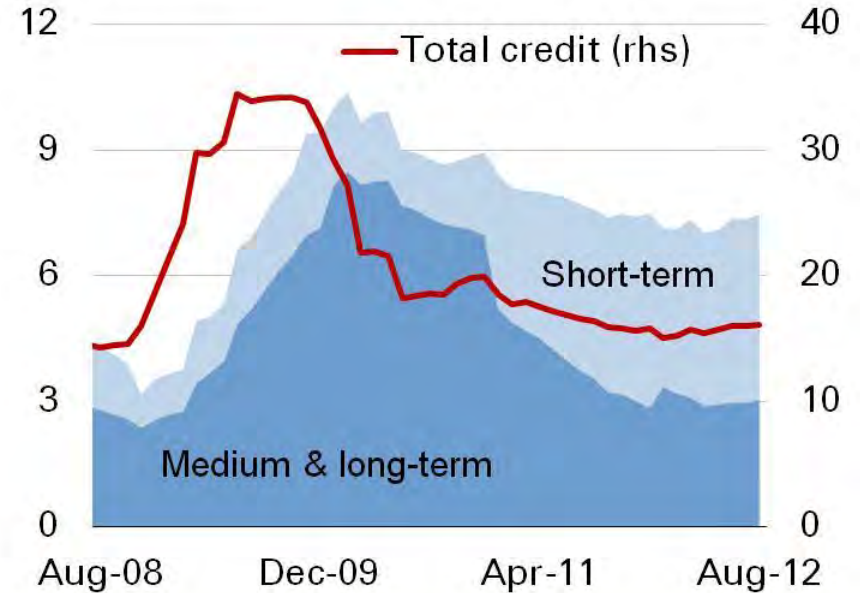
% y-o-y, 3m ma.



## Commercial bank loans

Change y-o-y, trillions of CNY

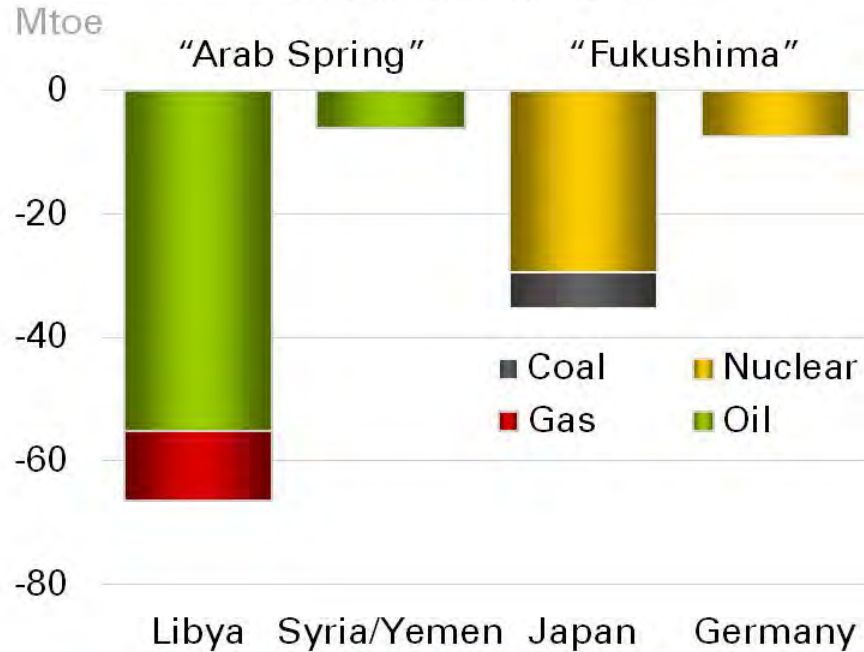
% y-o-y



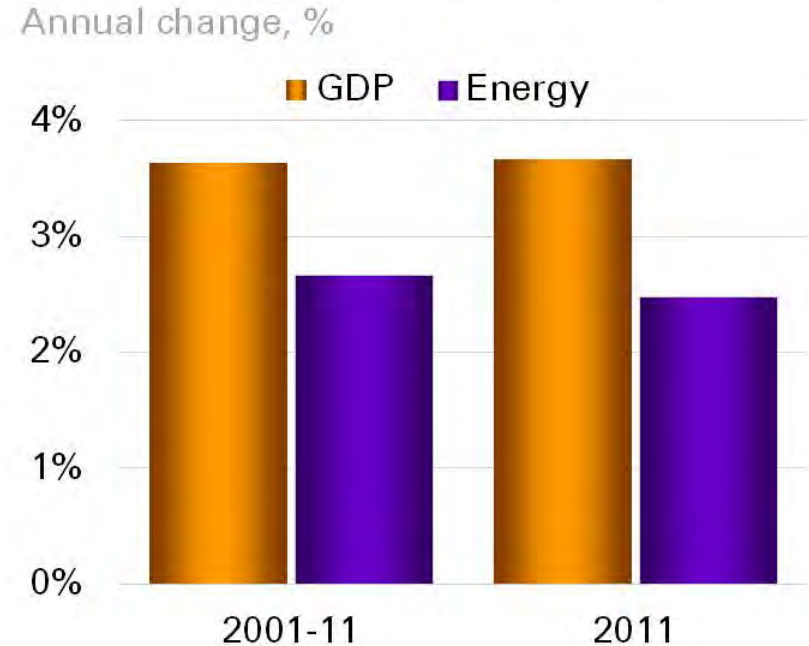


# Energy in 2011 – disruptions and continuity

## Supply disruptions



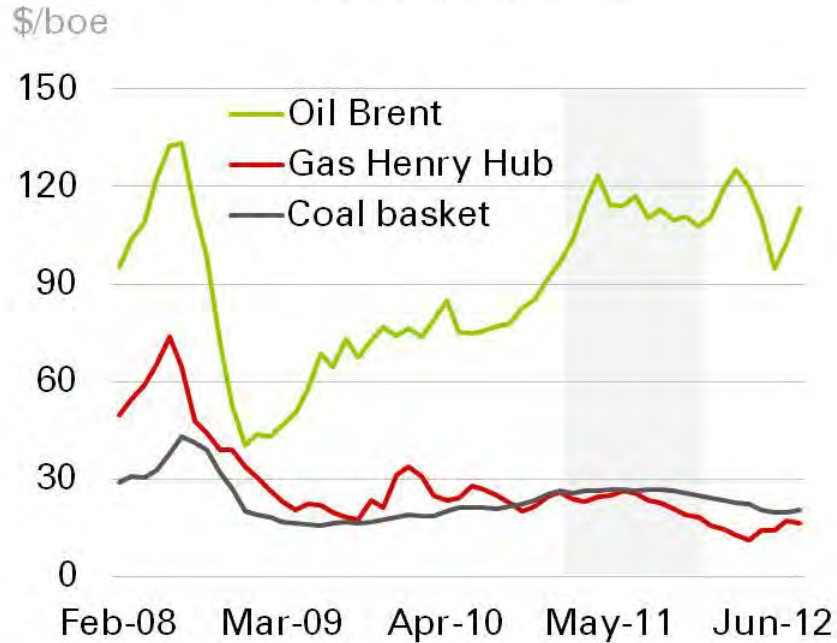
## GDP and energy growth



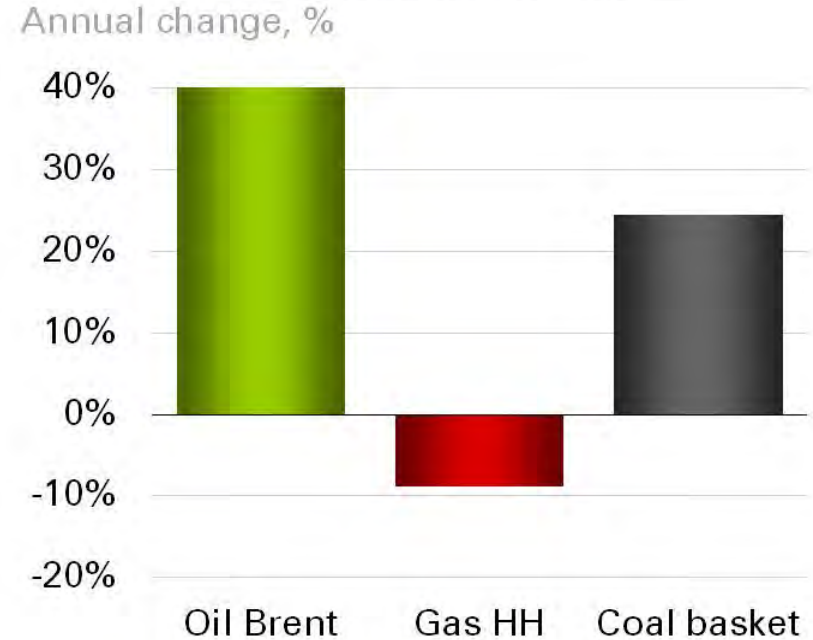


# Energy prices

## Energy prices



## 2011 price changes





# The Fukushima Adjustment

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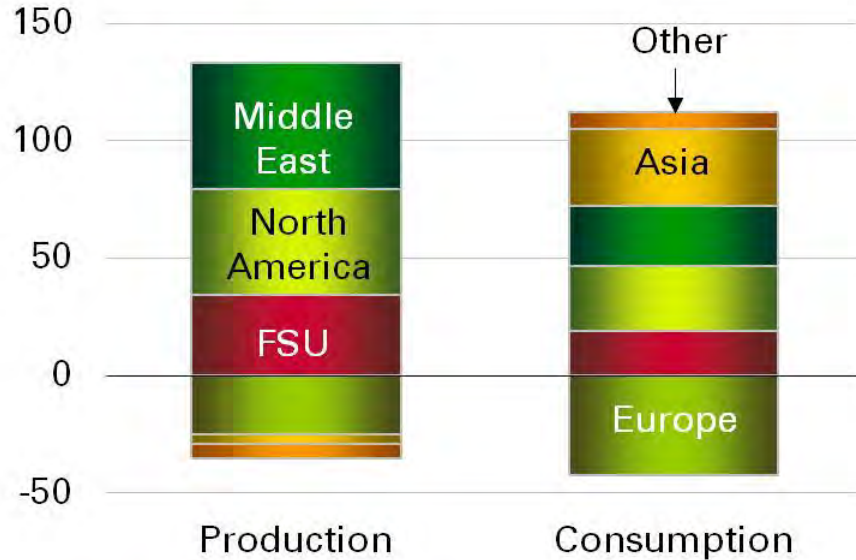




# Natural gas markets in 2011

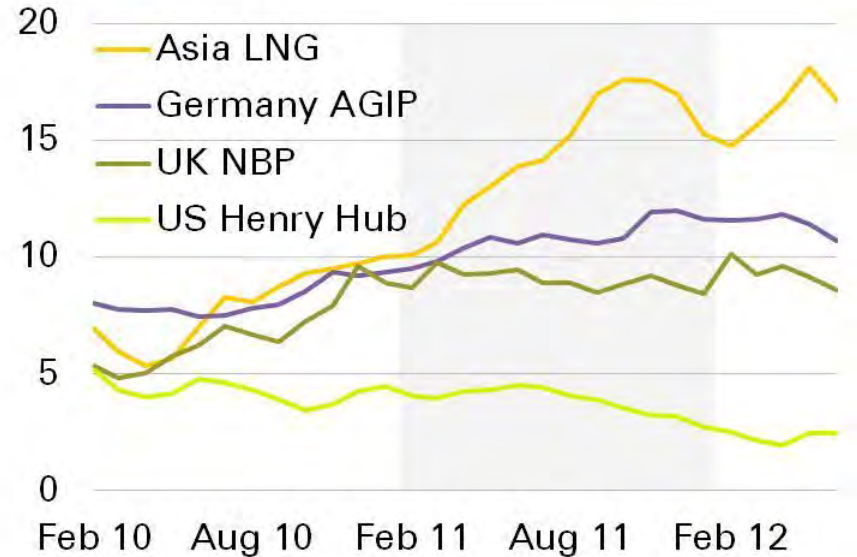
## Production and consumption growth

Annual change, Bcm



## Regional gas prices

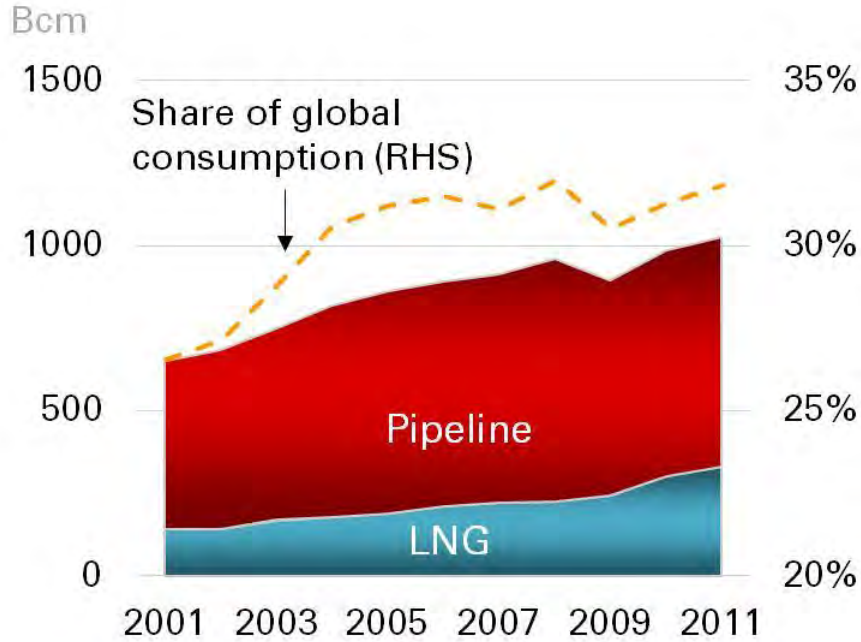
\$/Mmbtu



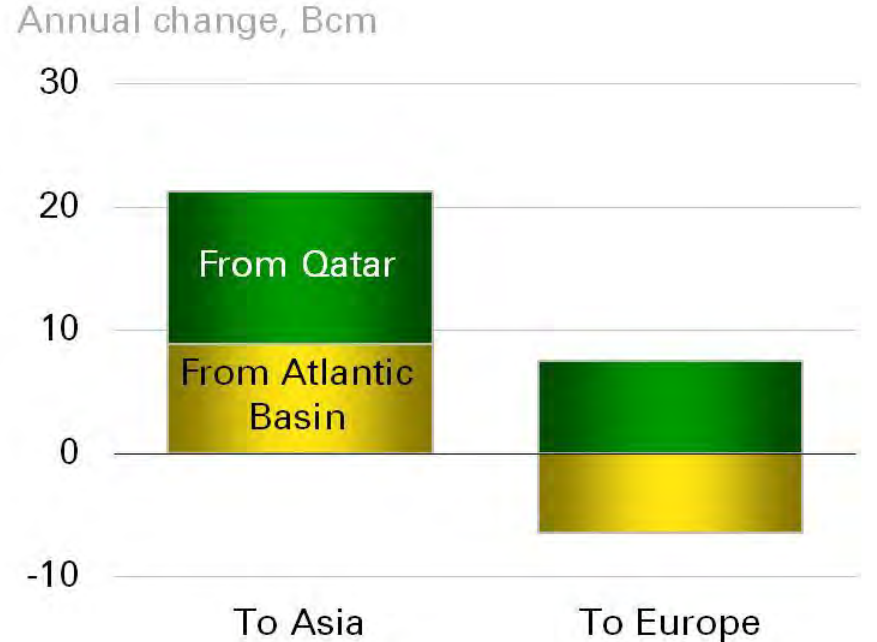


# Global gas trade

## Gas exports



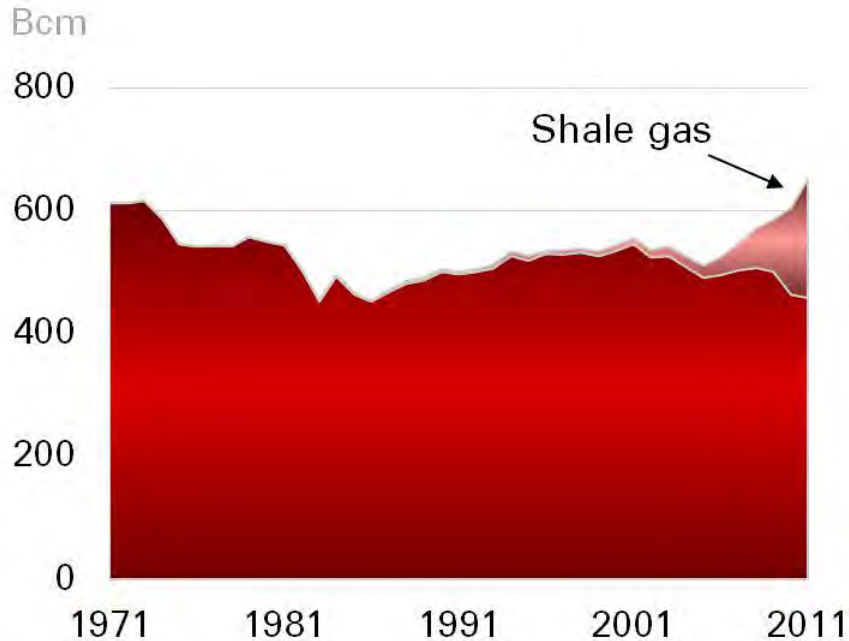
## LNG import growth in 2011



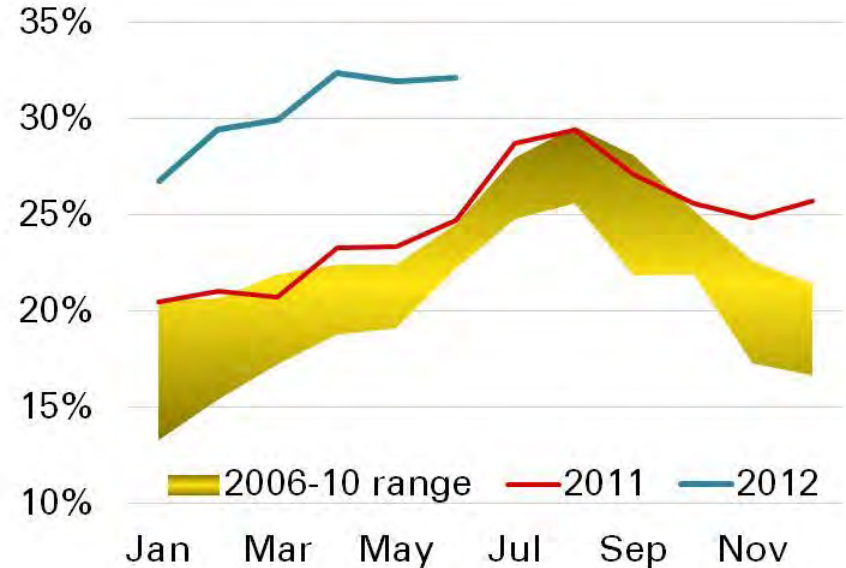


# US natural gas market

## Production



## Gas share in power generation

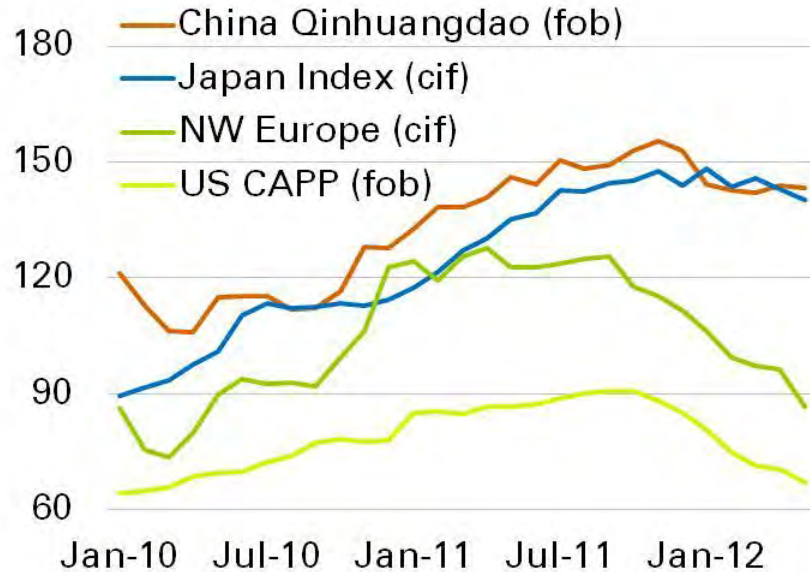




# Coal prices and trade

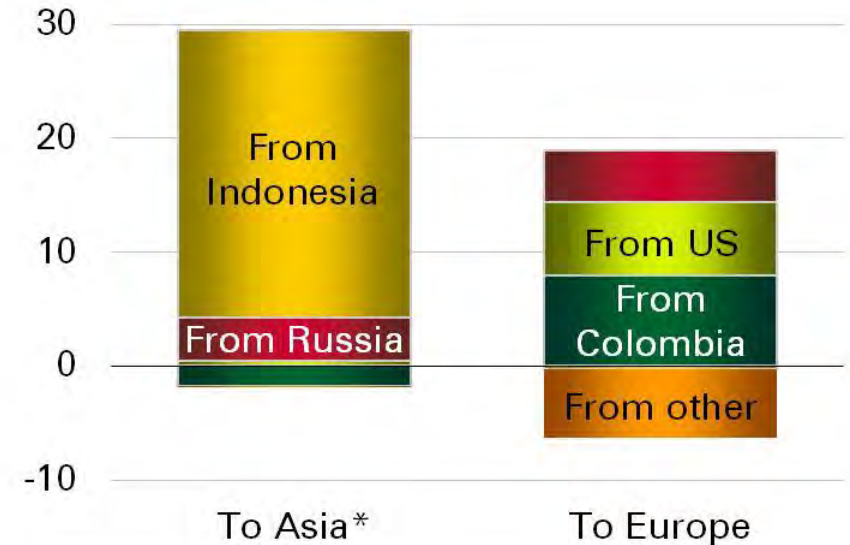
## Steam coal prices

\$/tonne



## Import growth in 2011

Annual change, Mtoe



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

# Oil markets and trends

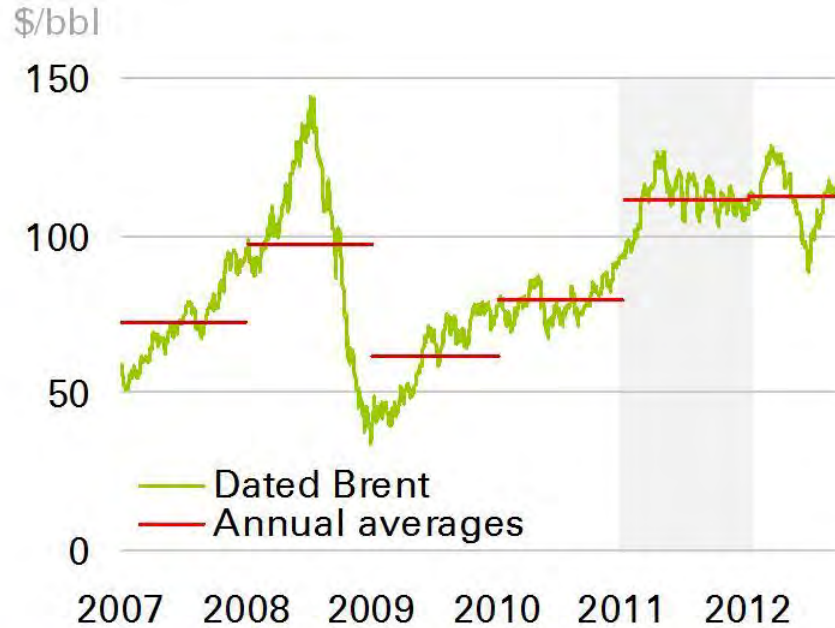
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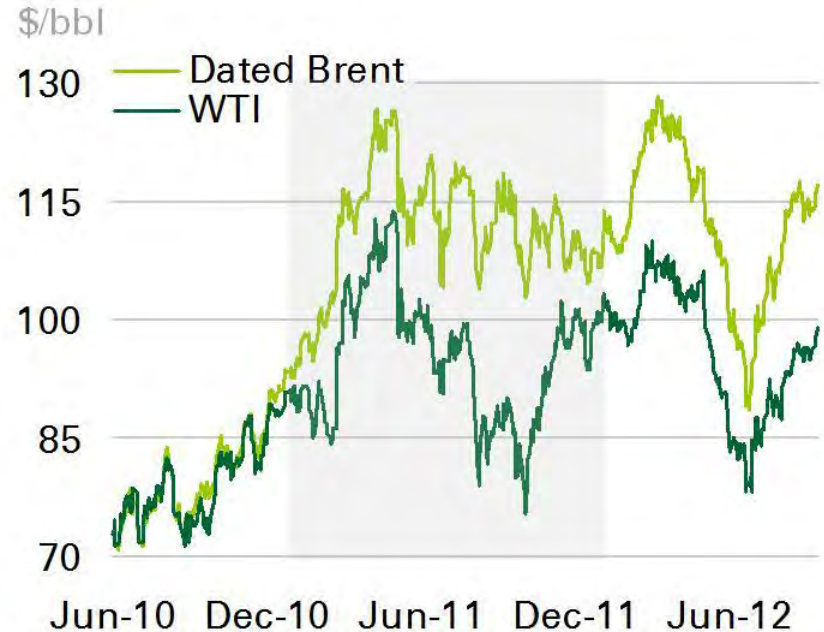


# Crude oil prices

## Dated Brent

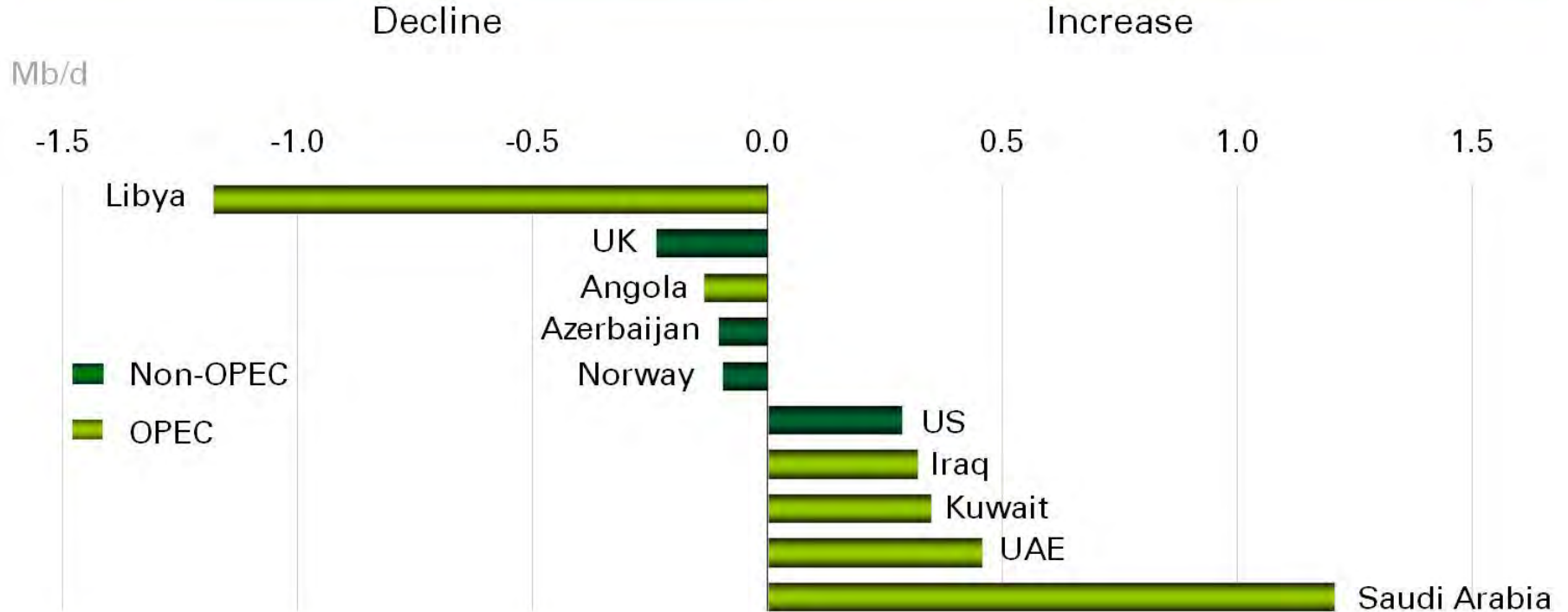


## Dated Brent and WTI





# Oil production growth in 2011

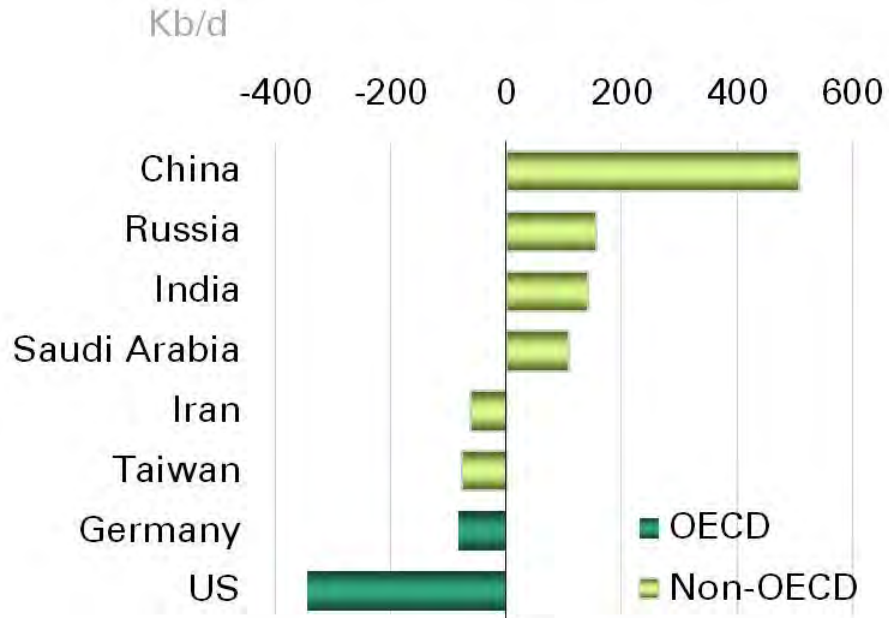




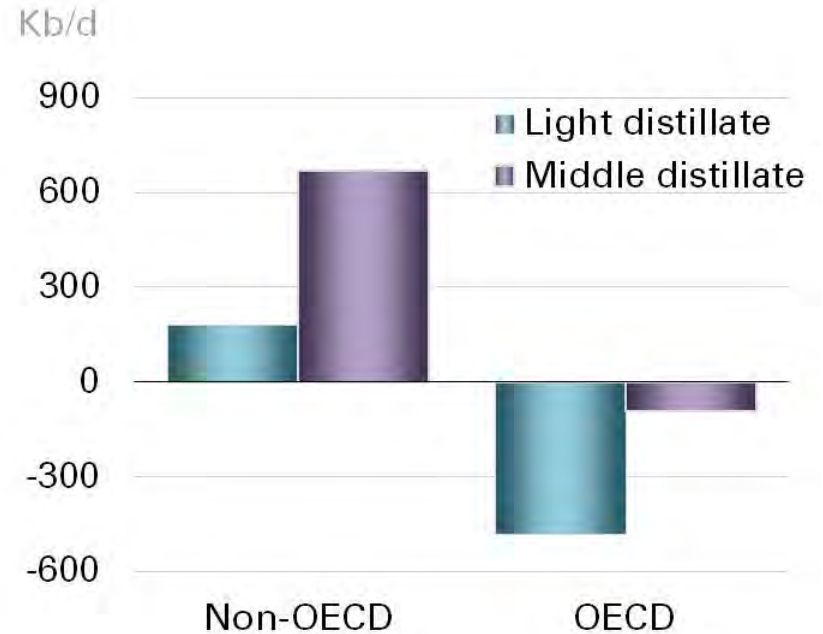


# Oil consumption growth in 2011

## Largest changes



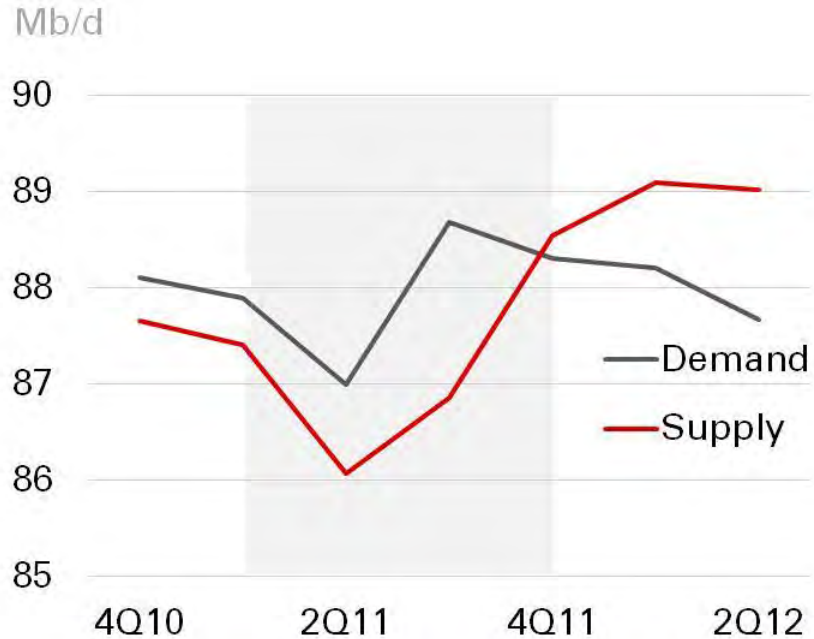
## Regional growth by fuel type



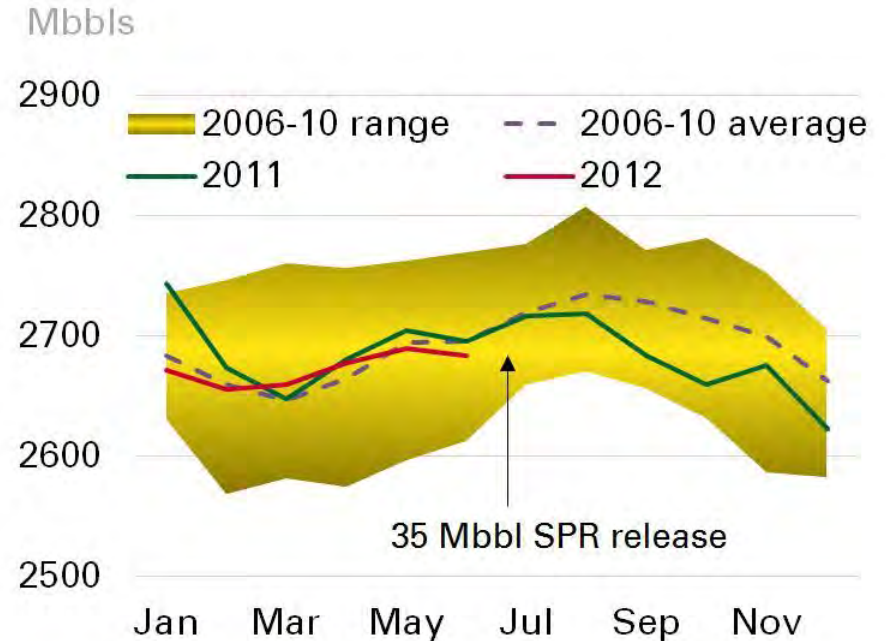


# Oil consumption and production

## World liquids demand and supply



## OECD commercial oil stocks

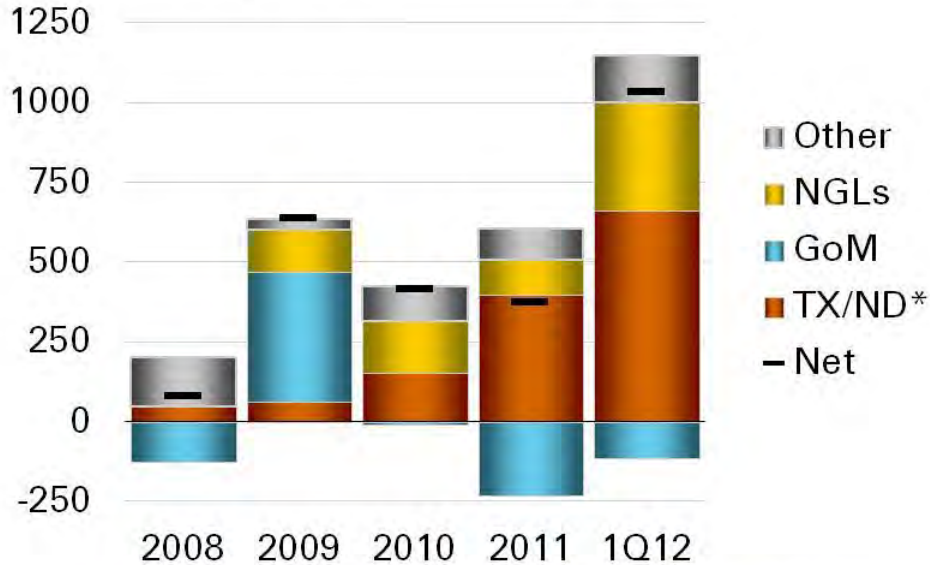




# US supply

## US supply

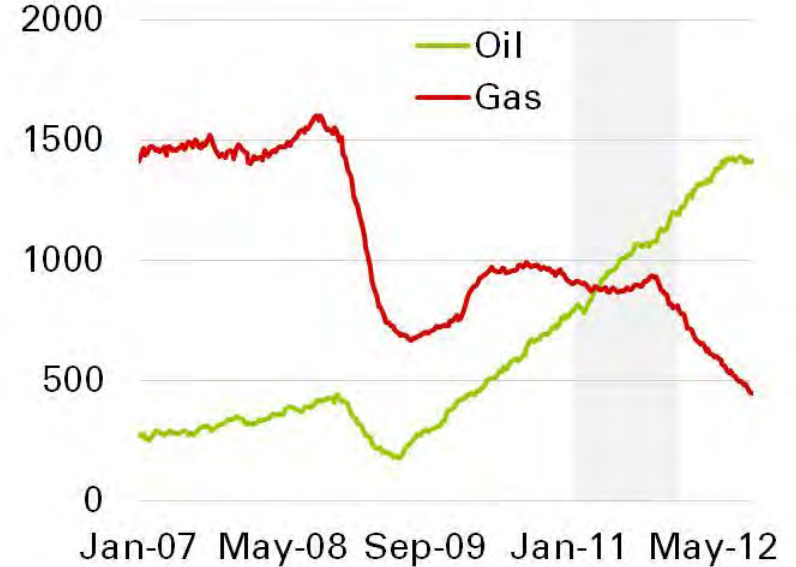
Annual change, Kb/d



\*Texas and North Dakota

## US rig counts

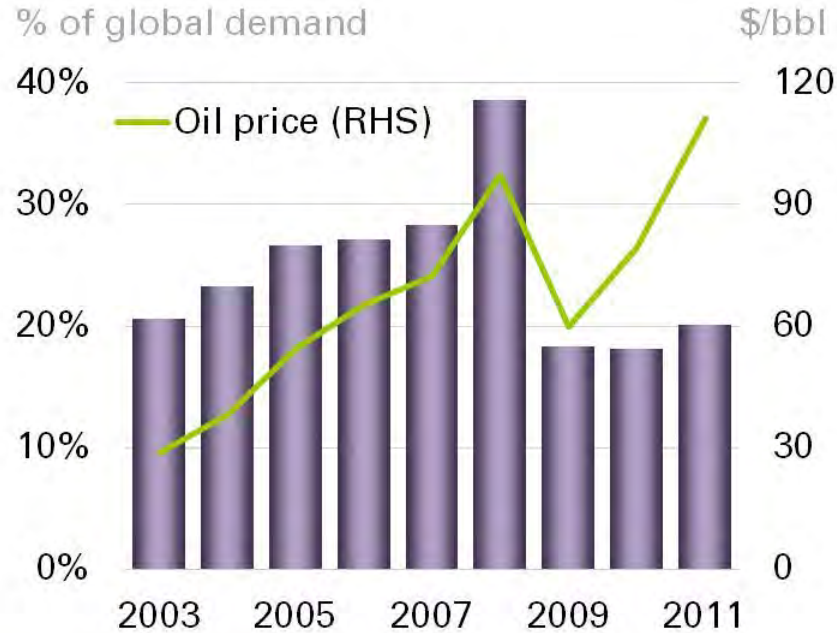
Rigs



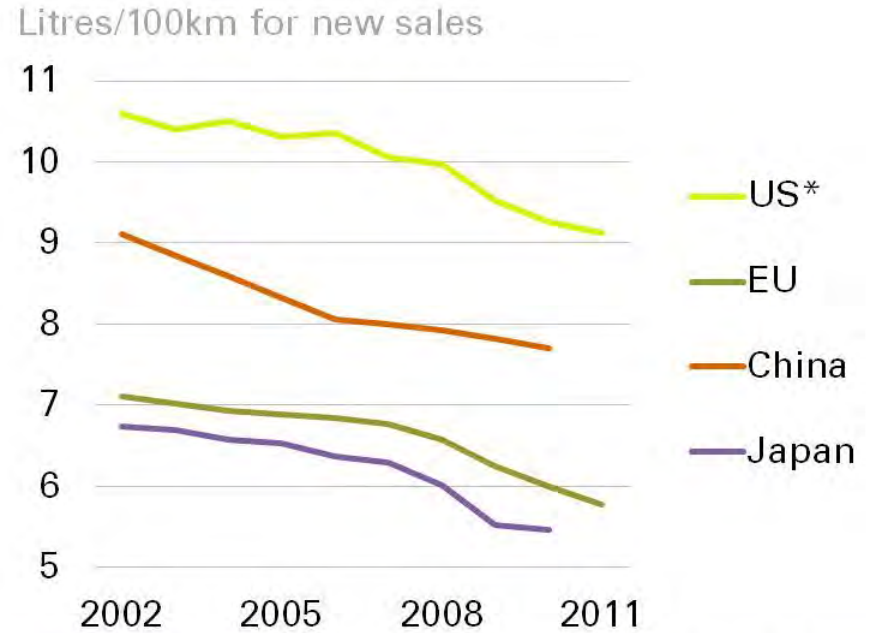


# Limits to oil consumption growth

## Subsidised consumption



## Vehicle fuel economy



\* Includes light trucks

# The long term: energy security

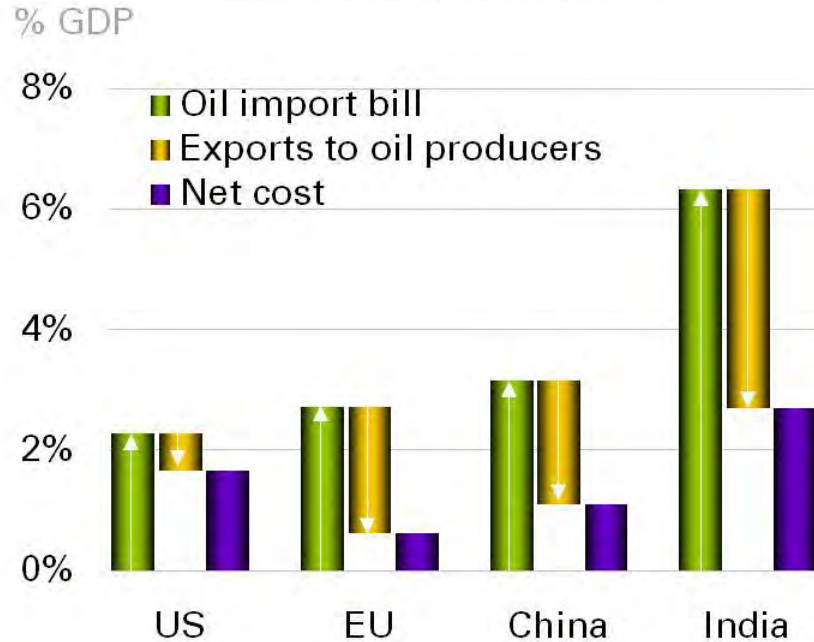
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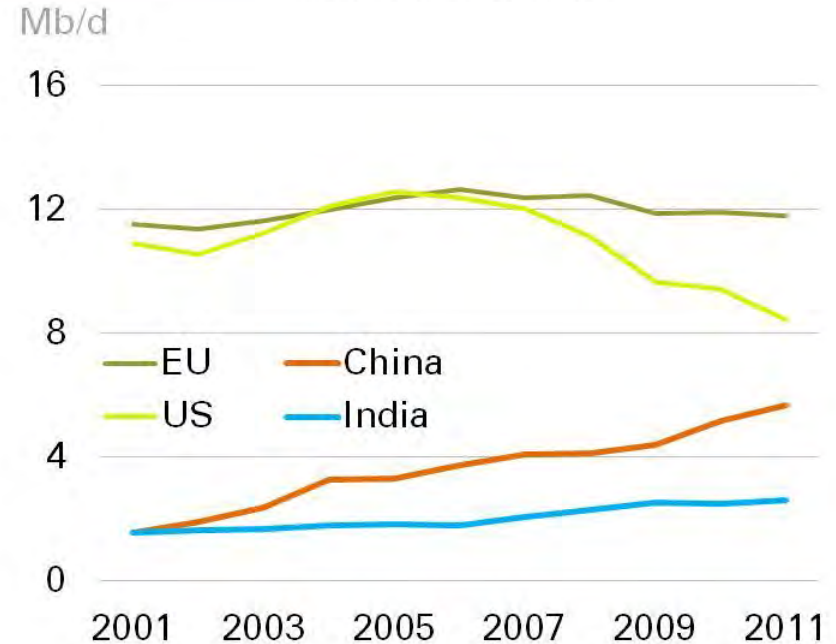


# Impact of oil prices on the economy

## 2011 net oil import bill

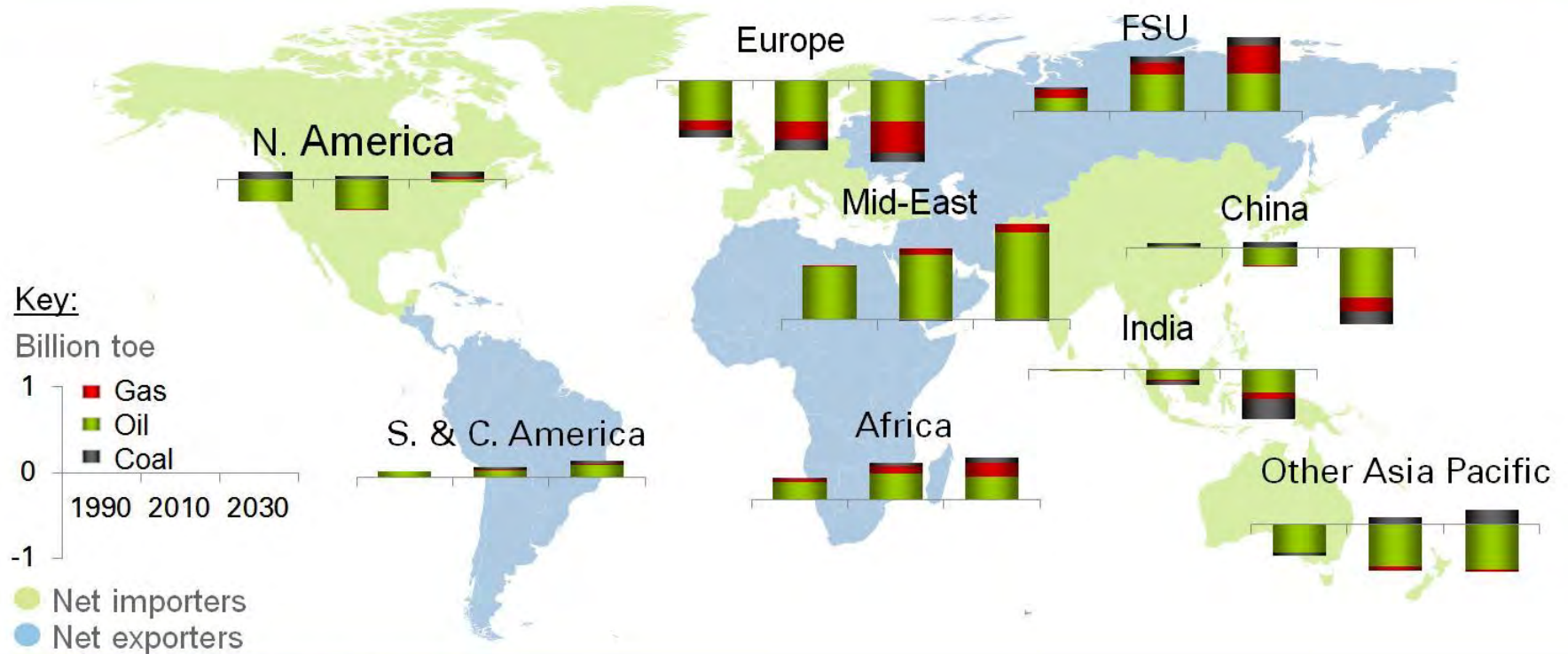


## Net oil imports



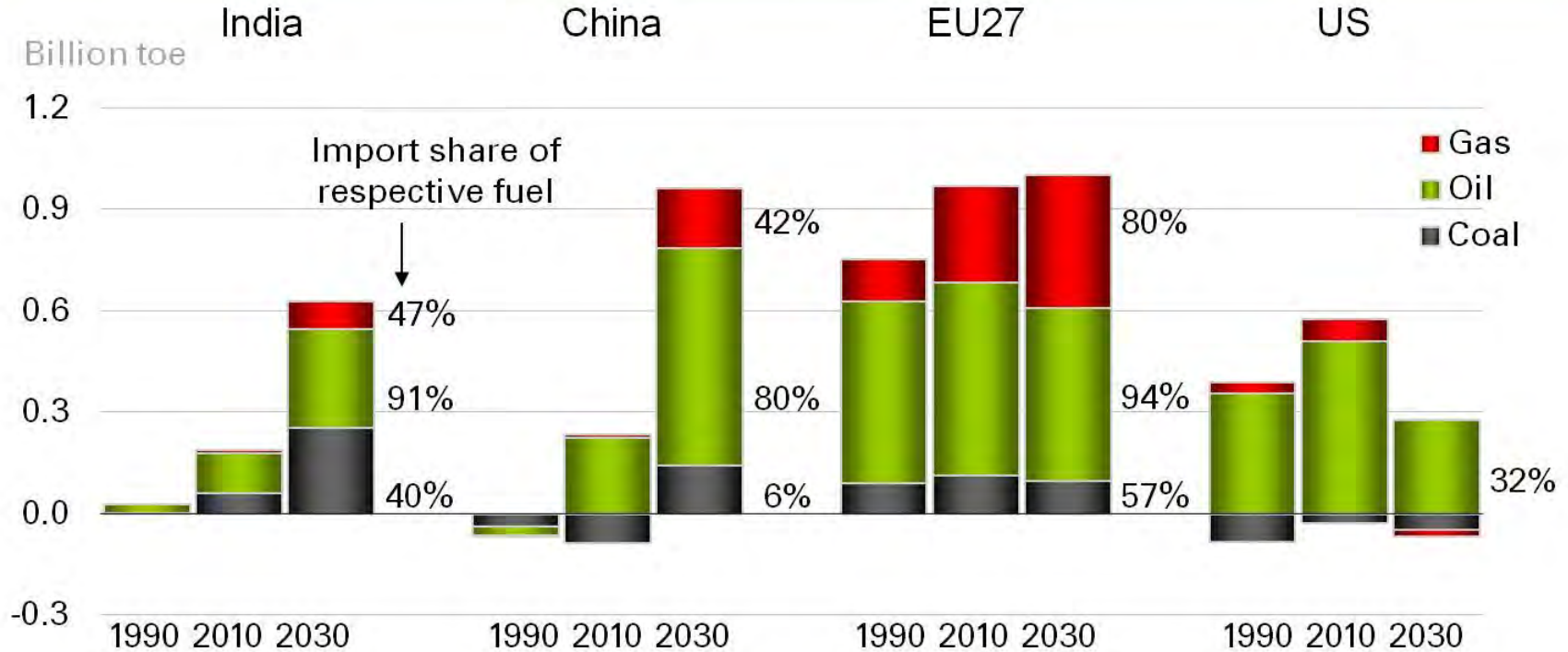


# Regional energy imbalances





# Import dependency rises in Asia and Europe

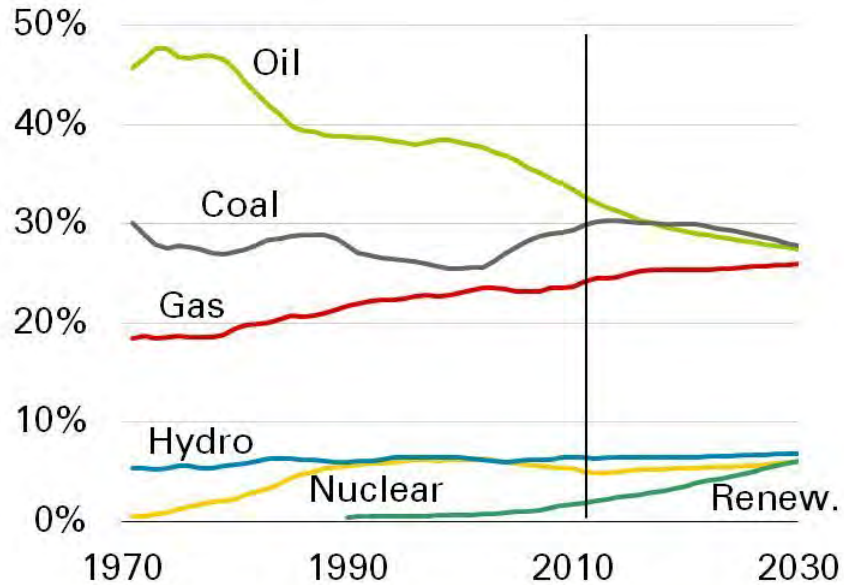




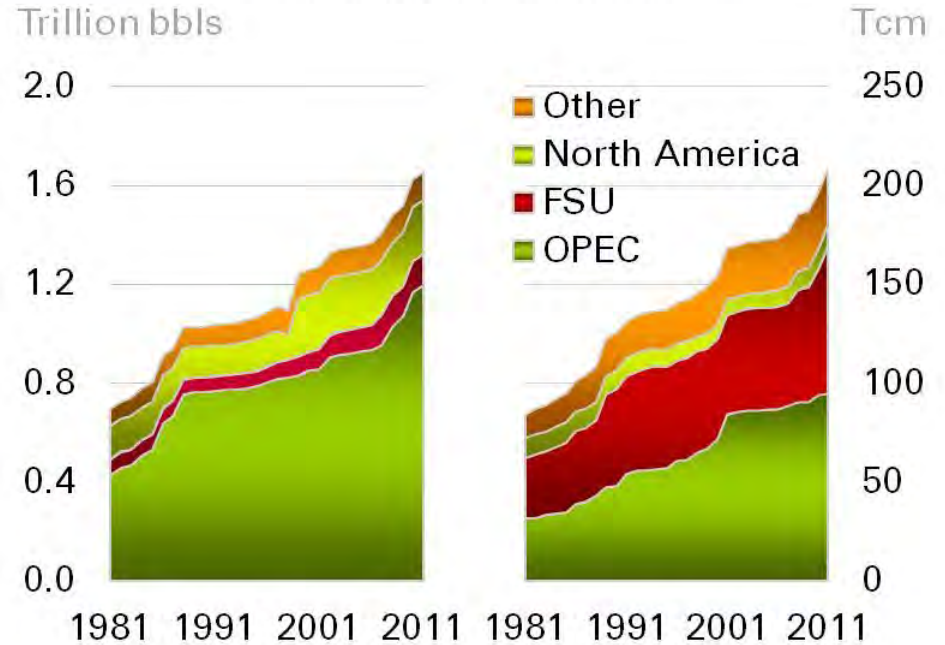


# Long-term trends

## Shares of world primary energy



## Oil and gas reserves





# Conclusion

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