



# BP Statistical Review of World Energy

June 2016

## 2015: A year of plenty

Spencer Dale, group chief economist

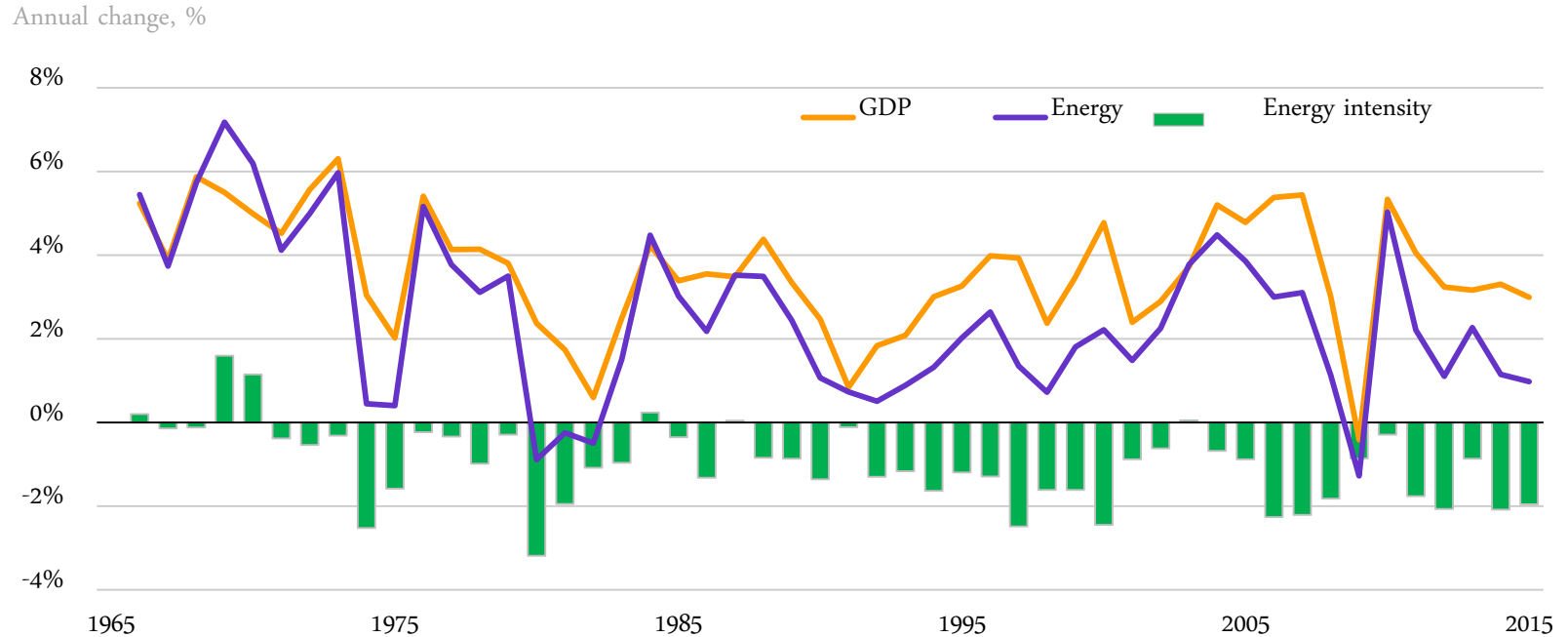
# Key global trends

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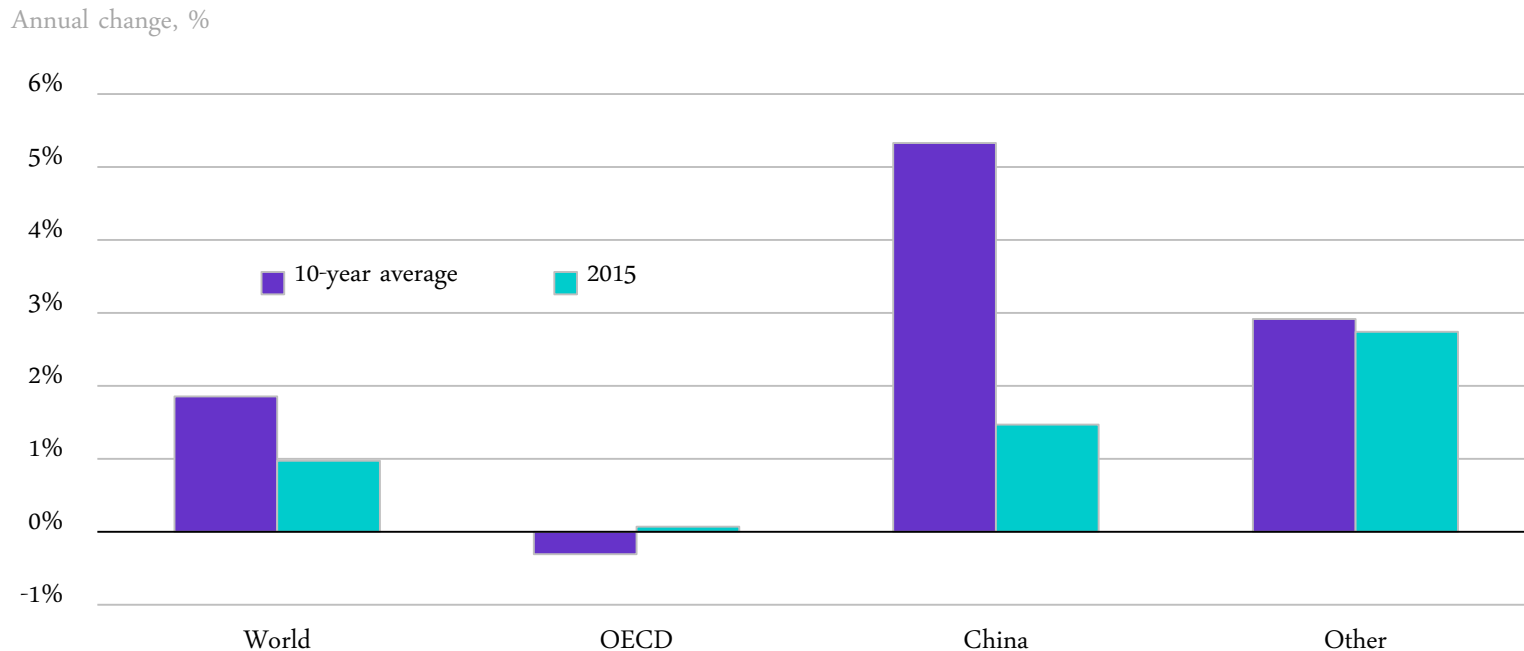
- Energy demand in transition
  - China's growth in energy demand slowing
  - increased global focus on energy efficiency
- Technological advances driving energy supplies
  - US shale revolution
  - renewable energy



# Growth in GDP and energy



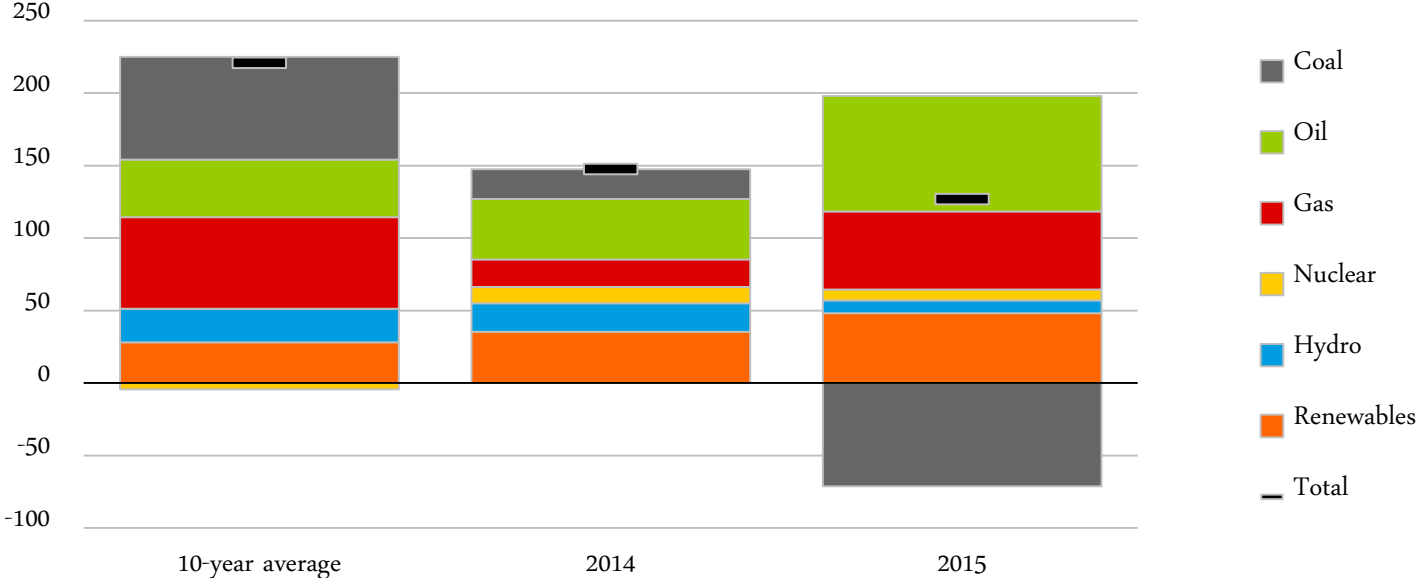
# Primary energy growth



# Primary energy growth

Fuel increments

Annual change, Mtoe

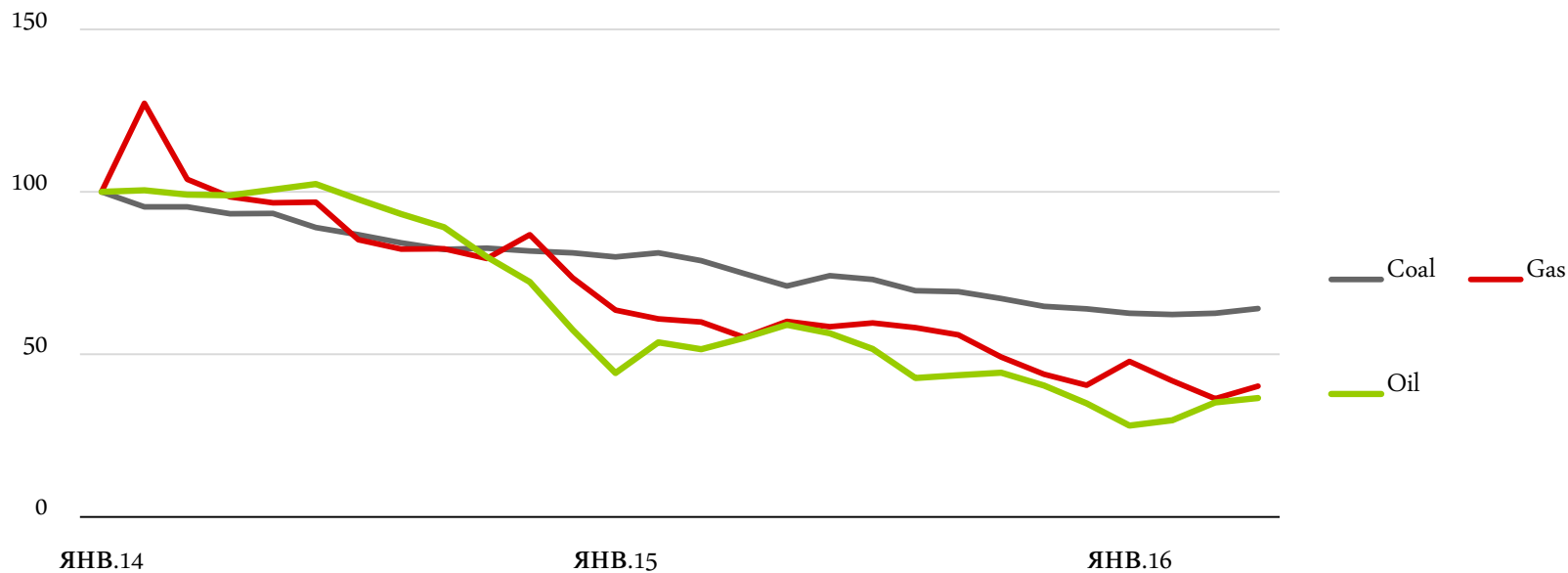


# Energy prices



Prices by fuel

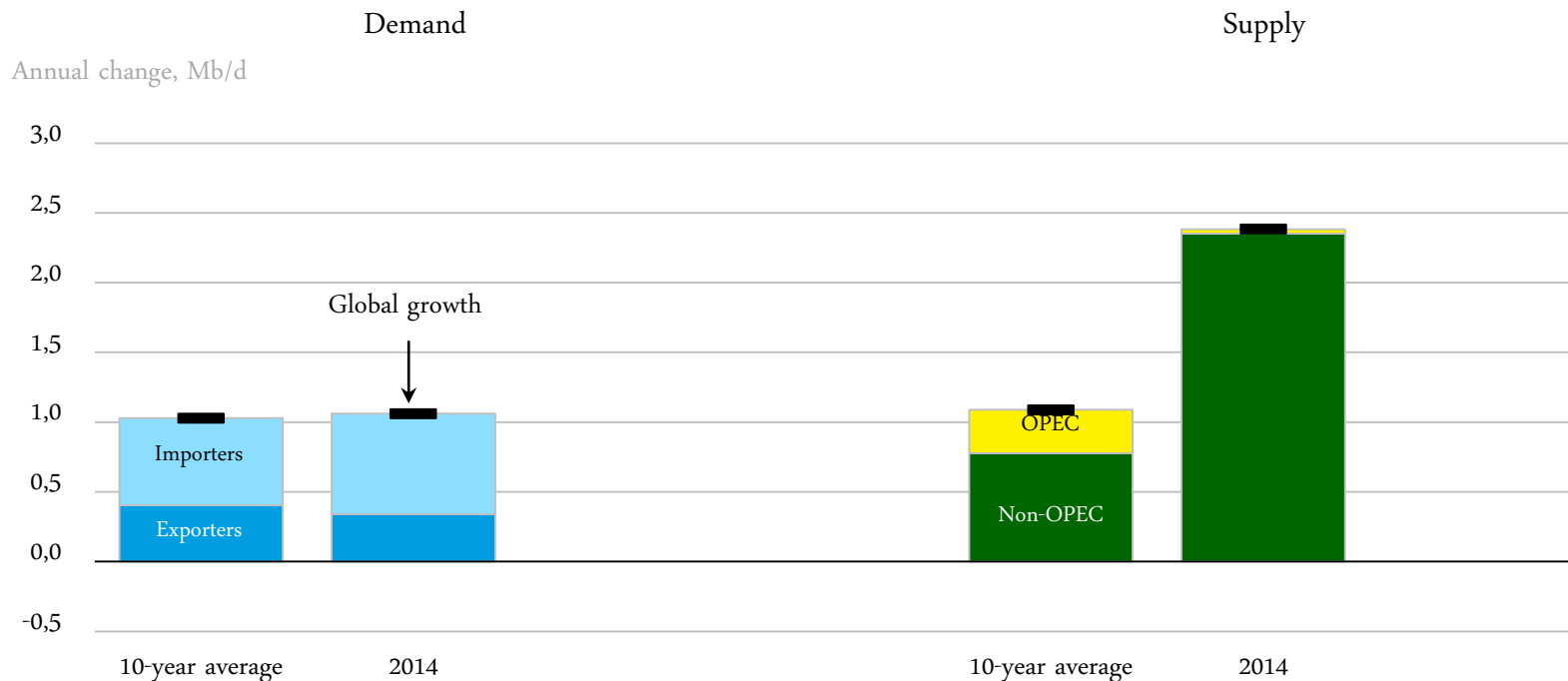
Index (Jan 2014 = 100)





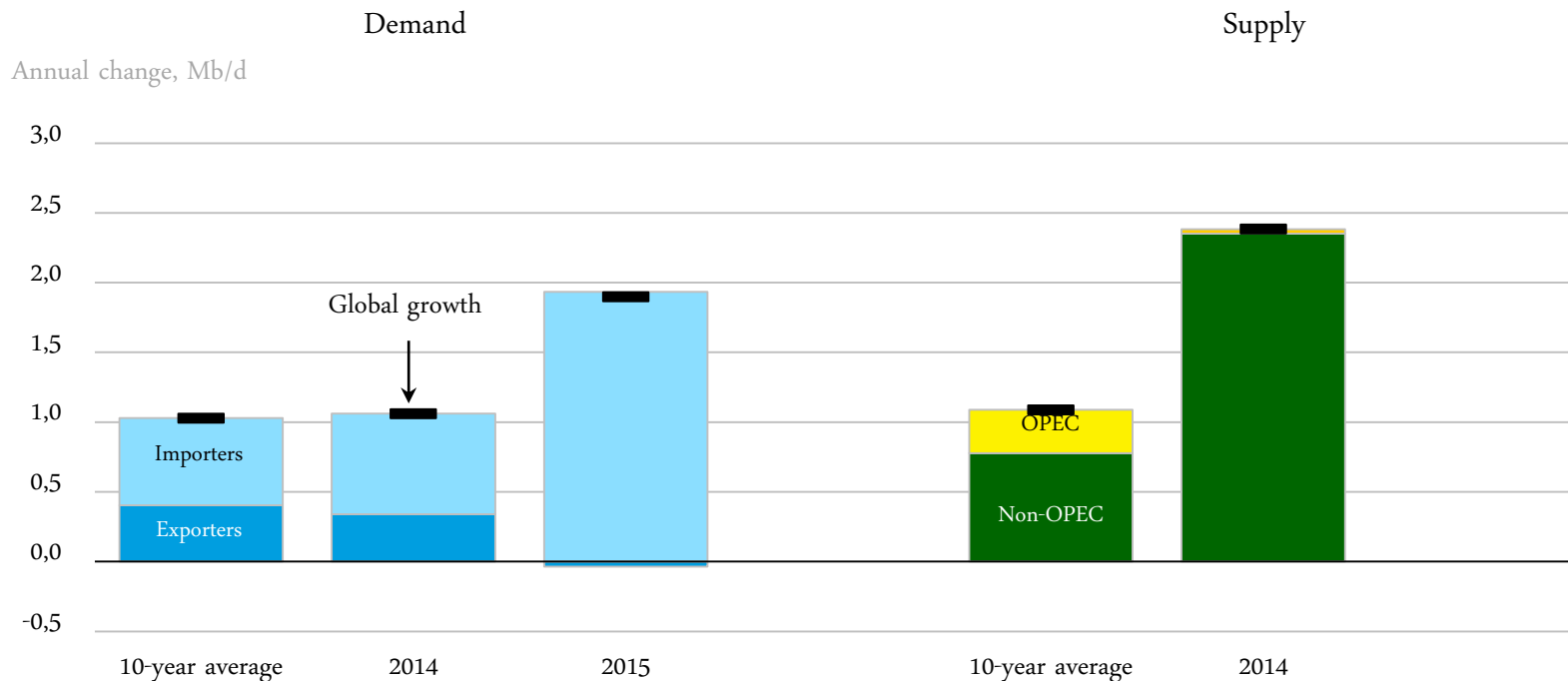
# Oil and refining

# Oil market in 2014

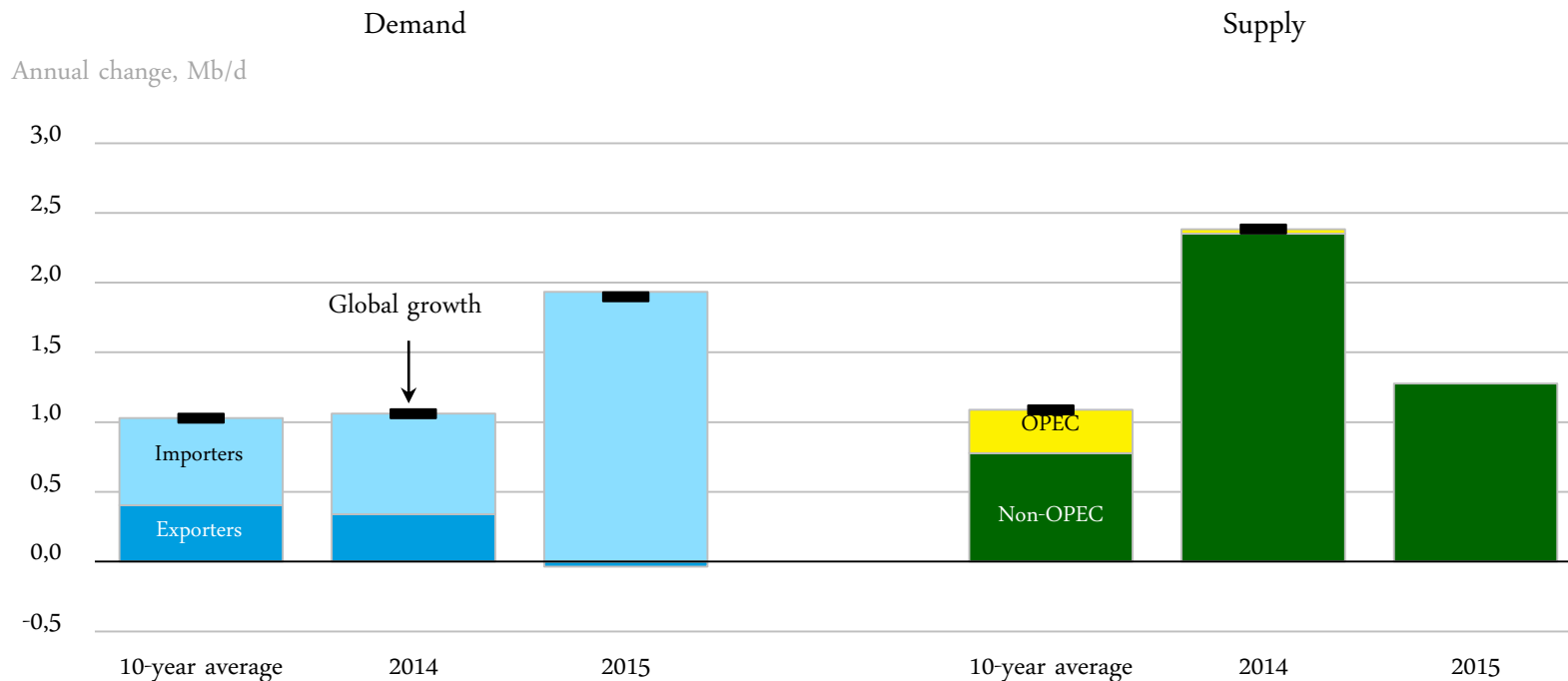




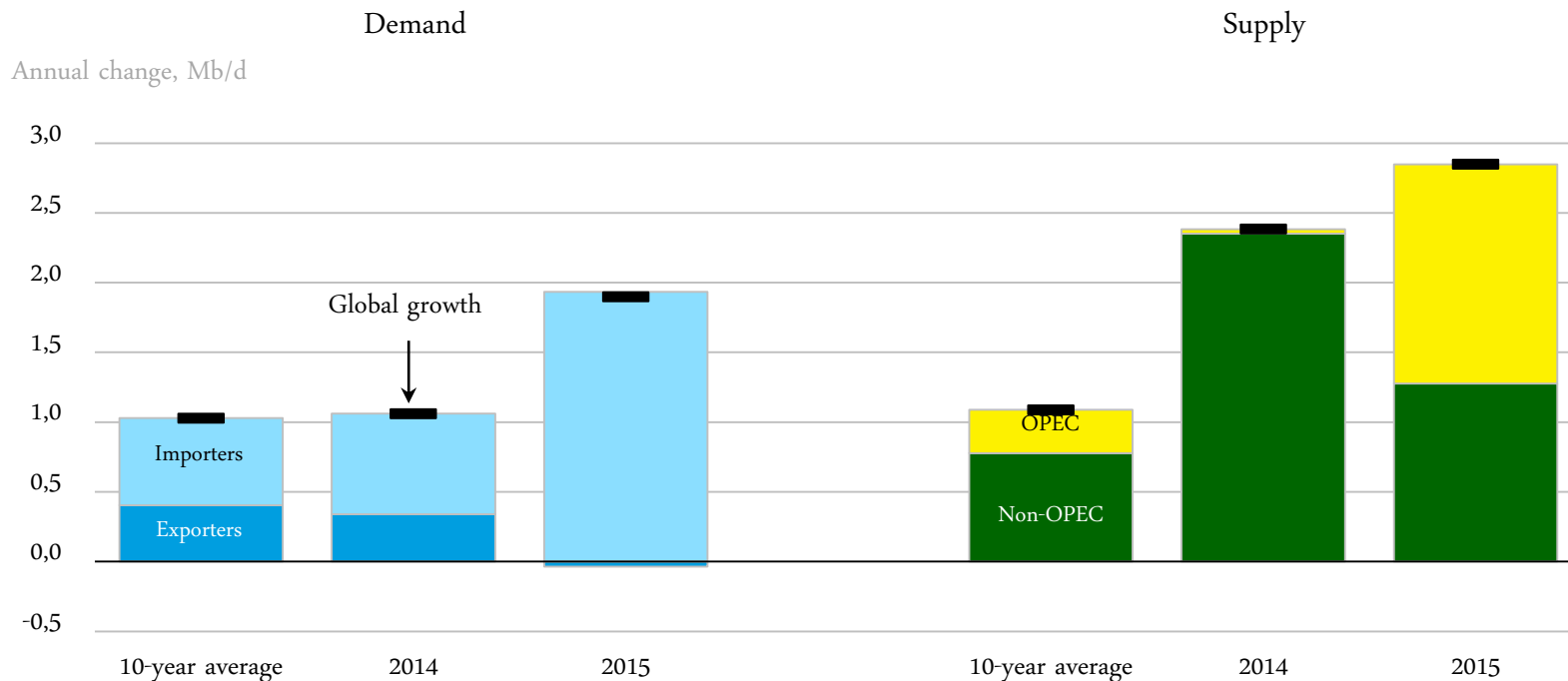
# Oil market in 2014 and 2015



# Oil market in 2014 and 2015



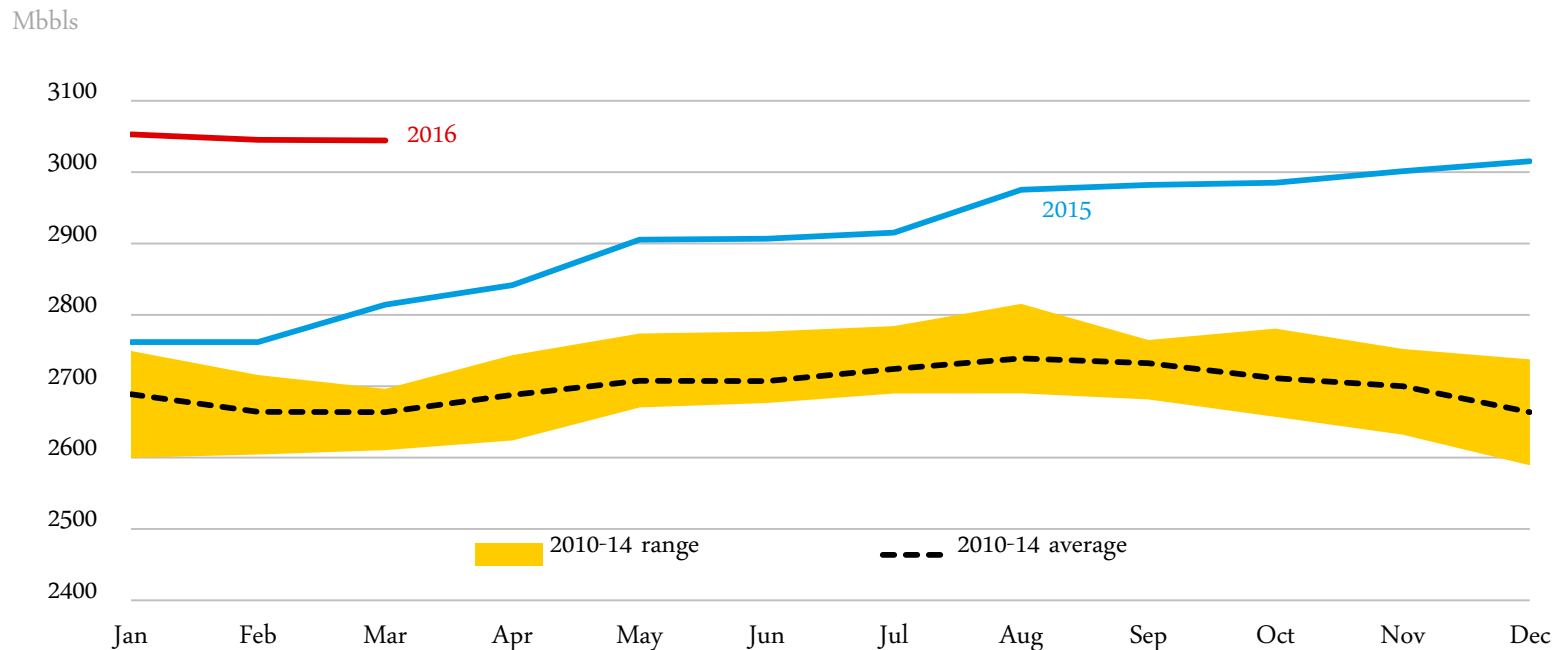
# Oil market in 2014 and 2015



# Oil inventories



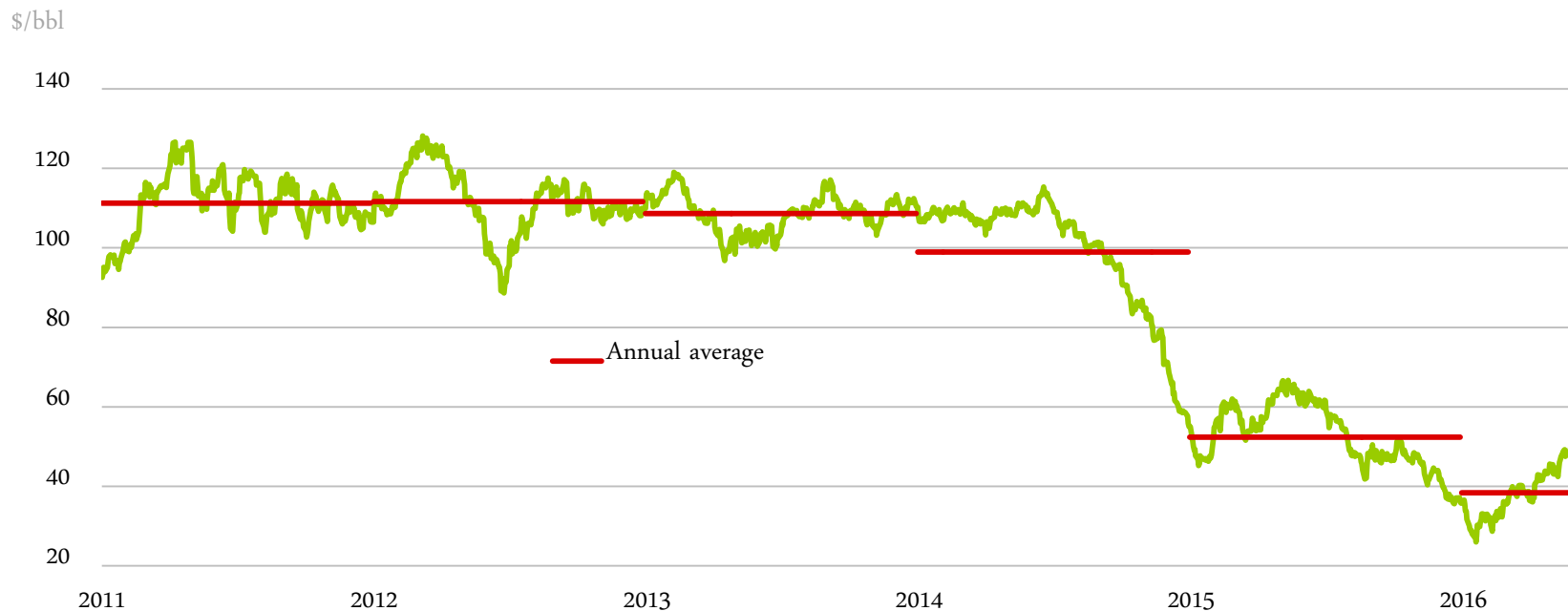
OECD commercial inventories



# Oil price



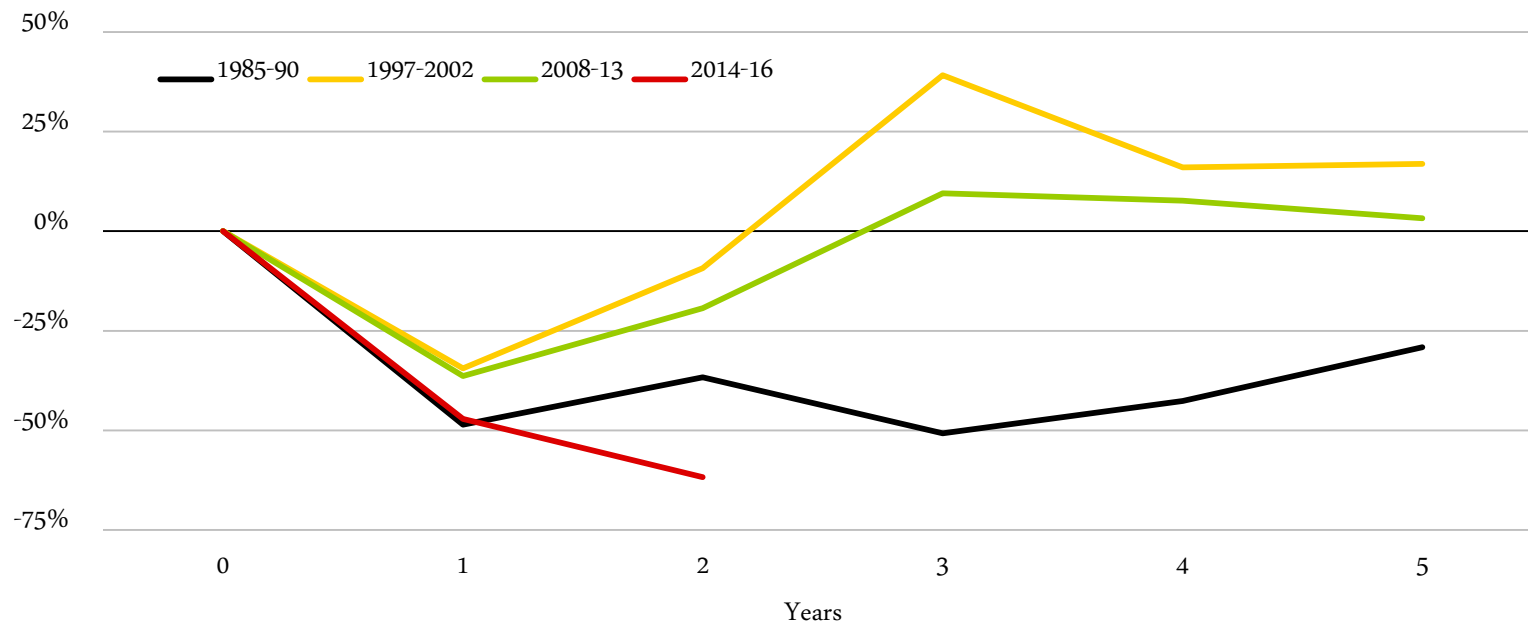
Dated Brent





# Past episodes of large oil price falls

Cumulative change in real prices from initial year



Note: Oil prices have been converted into 2015 dollars to show changes in prices adjusted for inflation.

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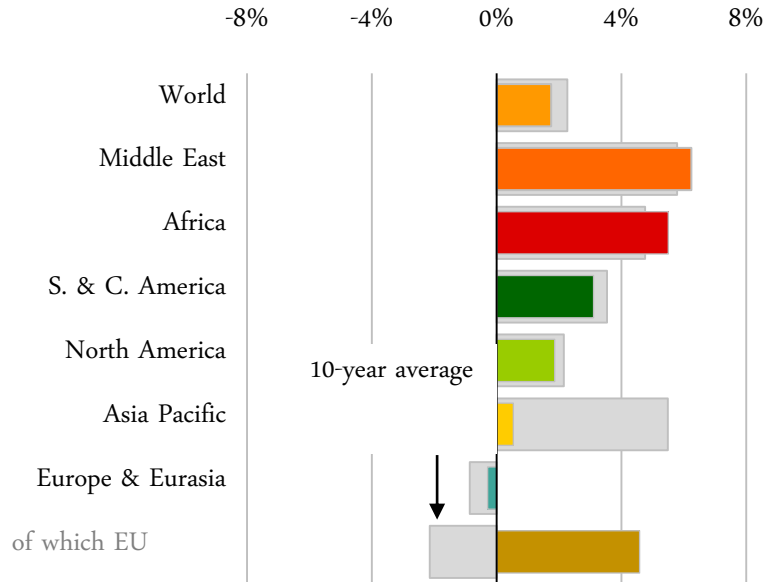
Natural gas



# Natural gas demand and supply

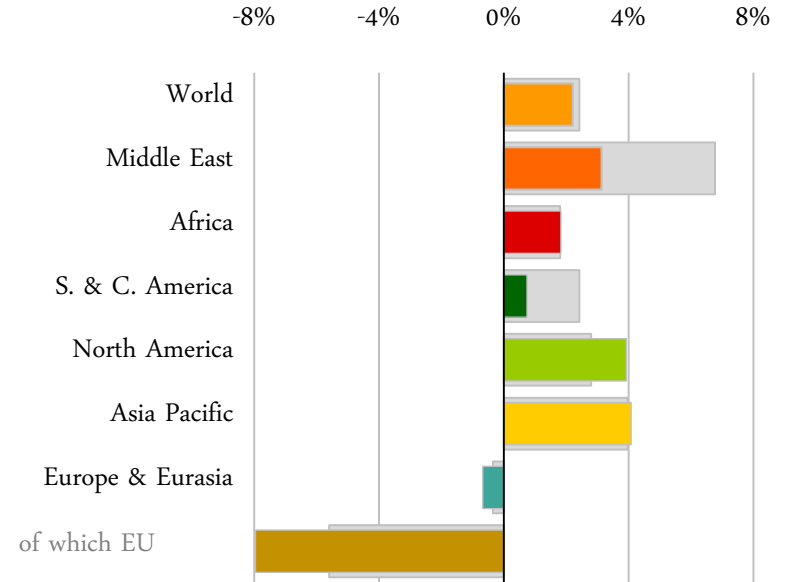
Regional demand growth

Annual change, %



Regional supply growth

Annual change, %

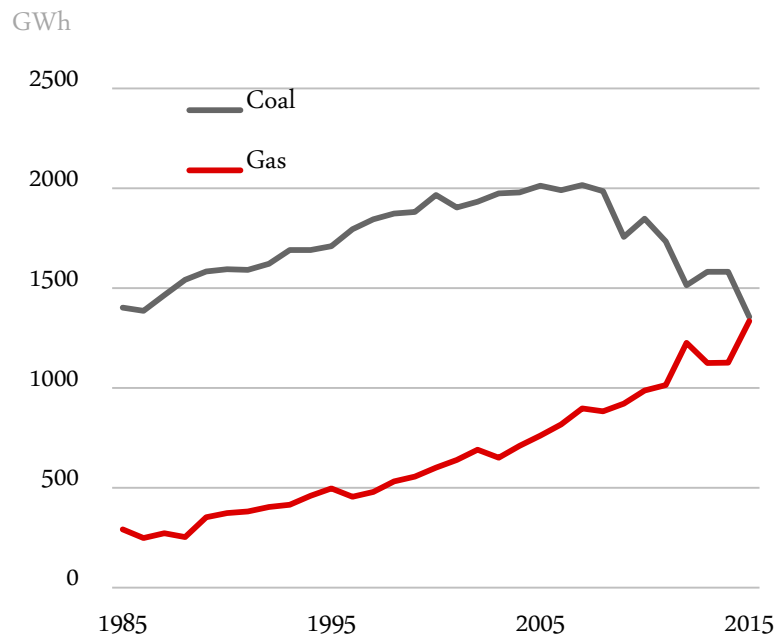




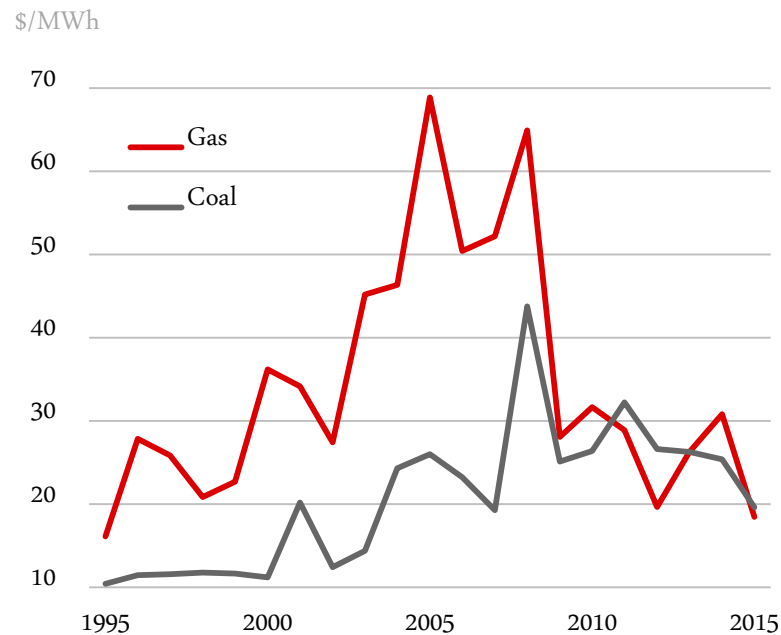
# US electricity sector



### Electricity generation by fuel



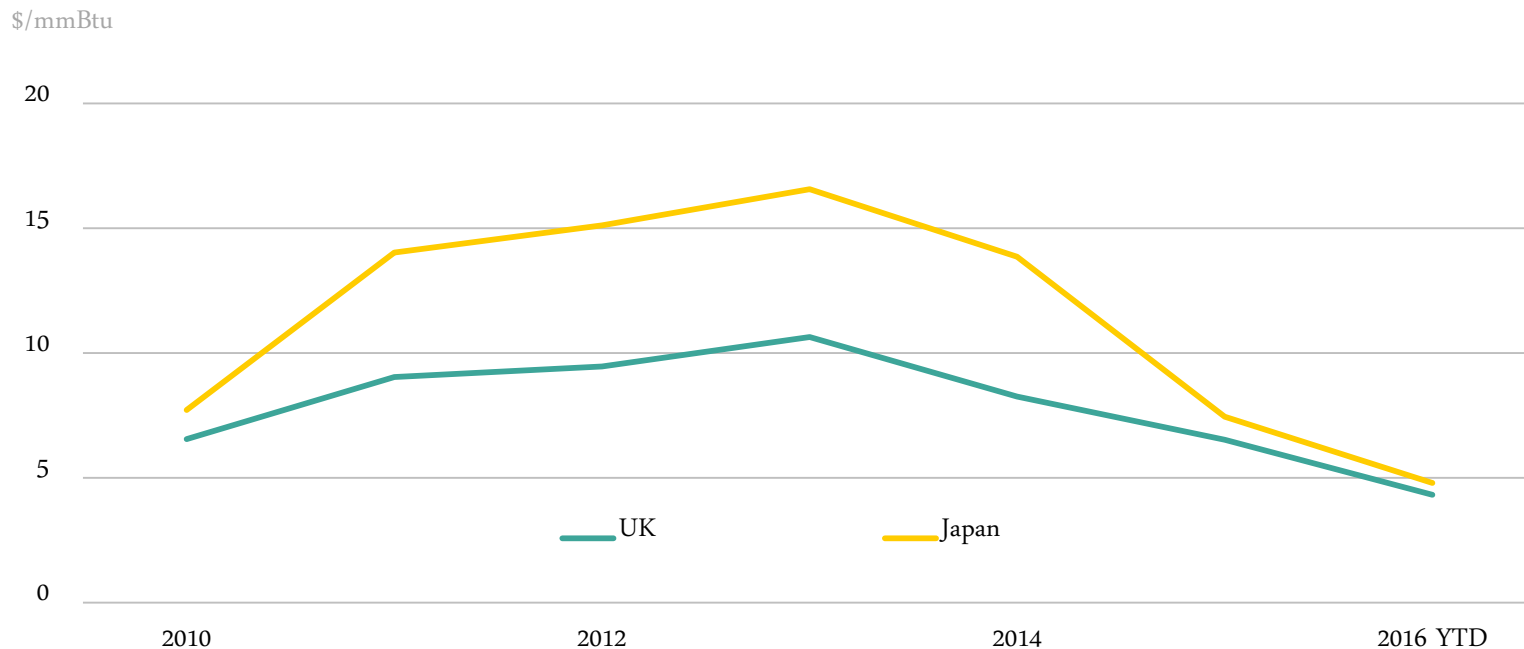
### Electricity generation cost by fuel



# Natural gas prices



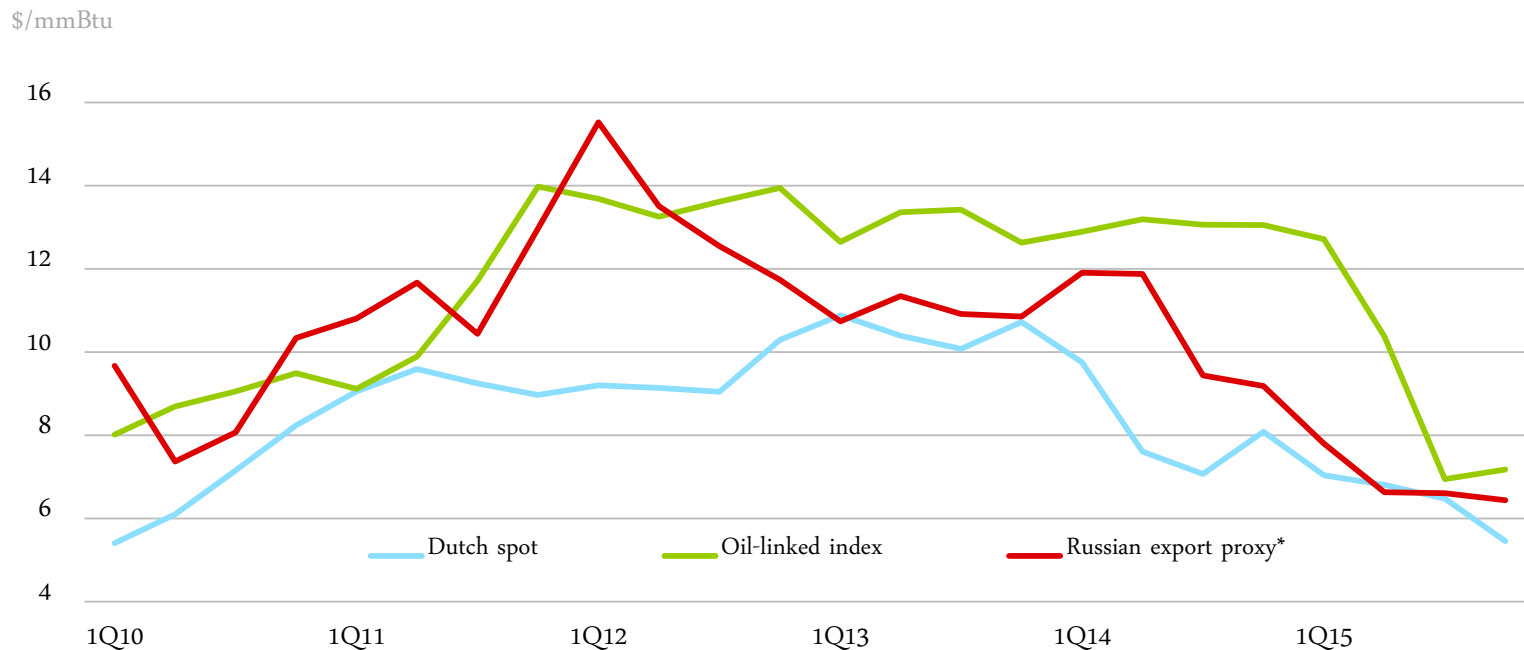
Spot LNG prices



# Natural gas prices



## European prices



\*Estimate derived from reported Average German Import Price and trade volumes.

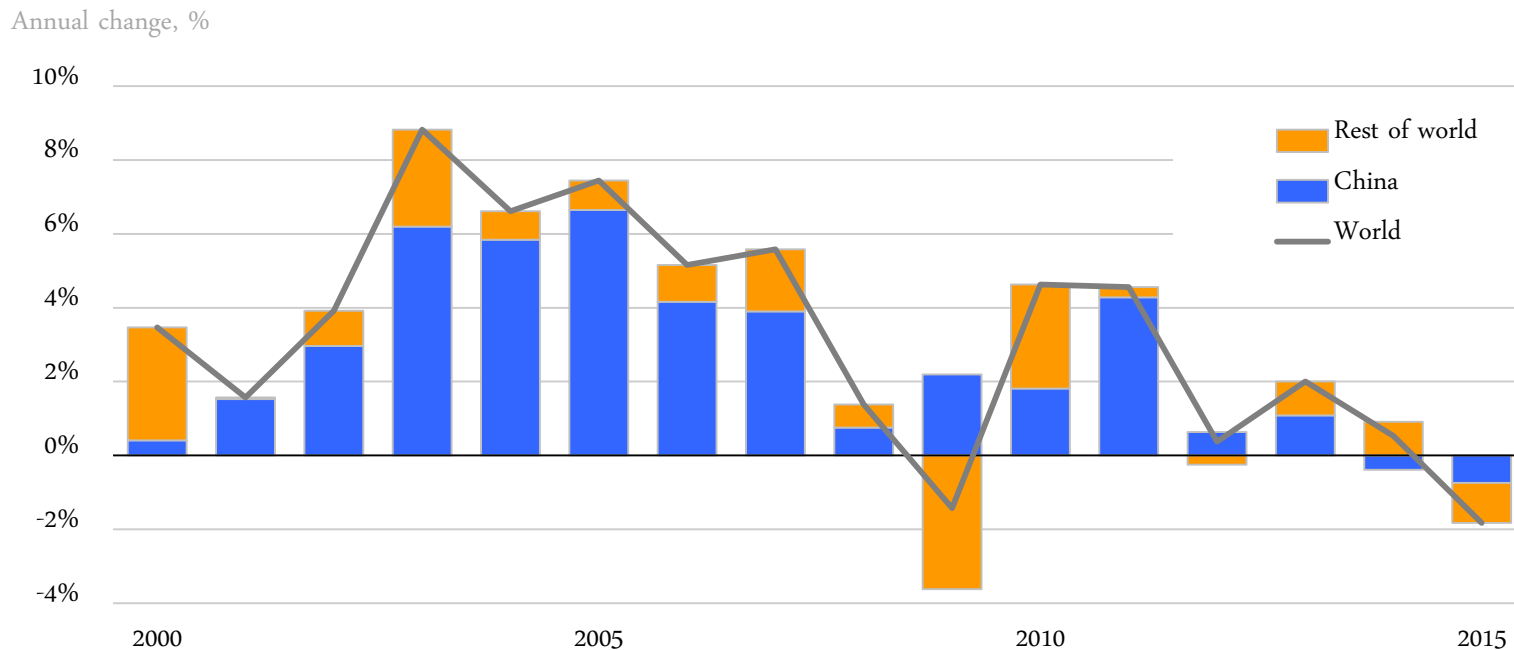


Coal

# Global coal market



Global coal demand growth



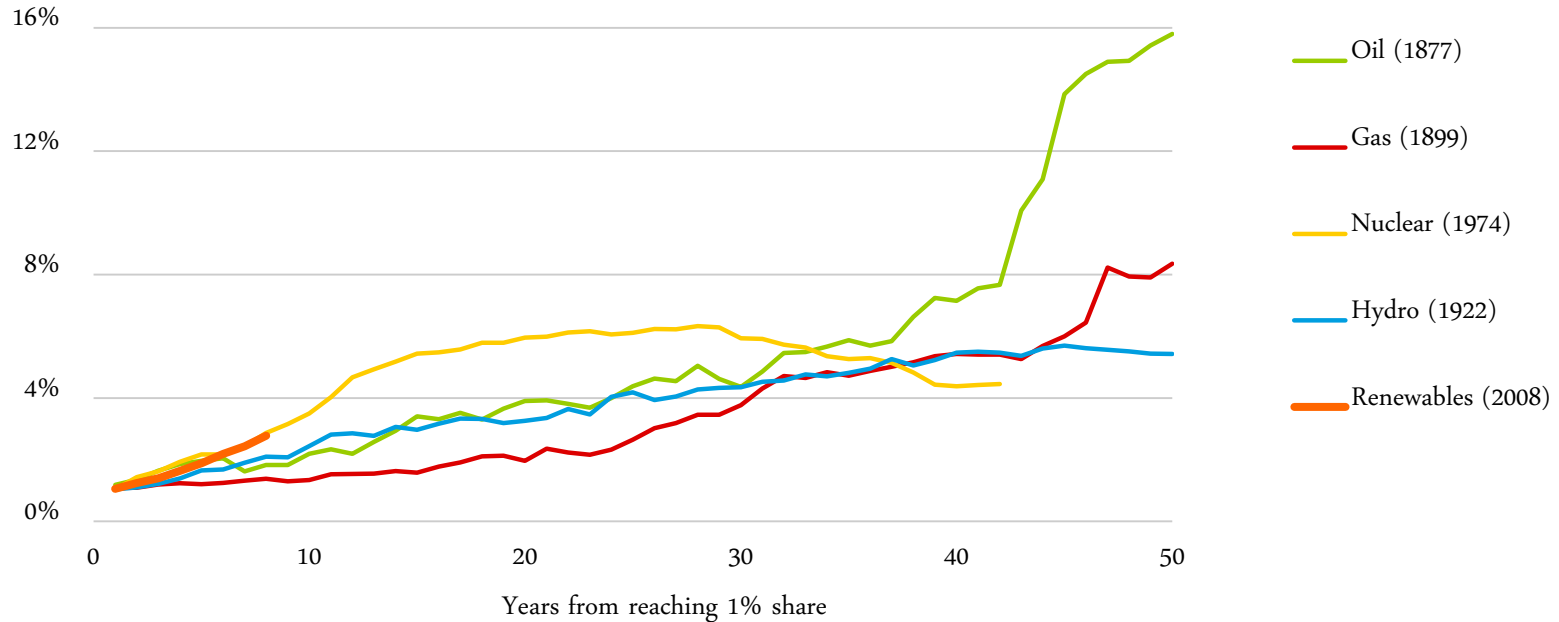


# Non-fossil fuels



# Speed of transition

Shares of global primary energy

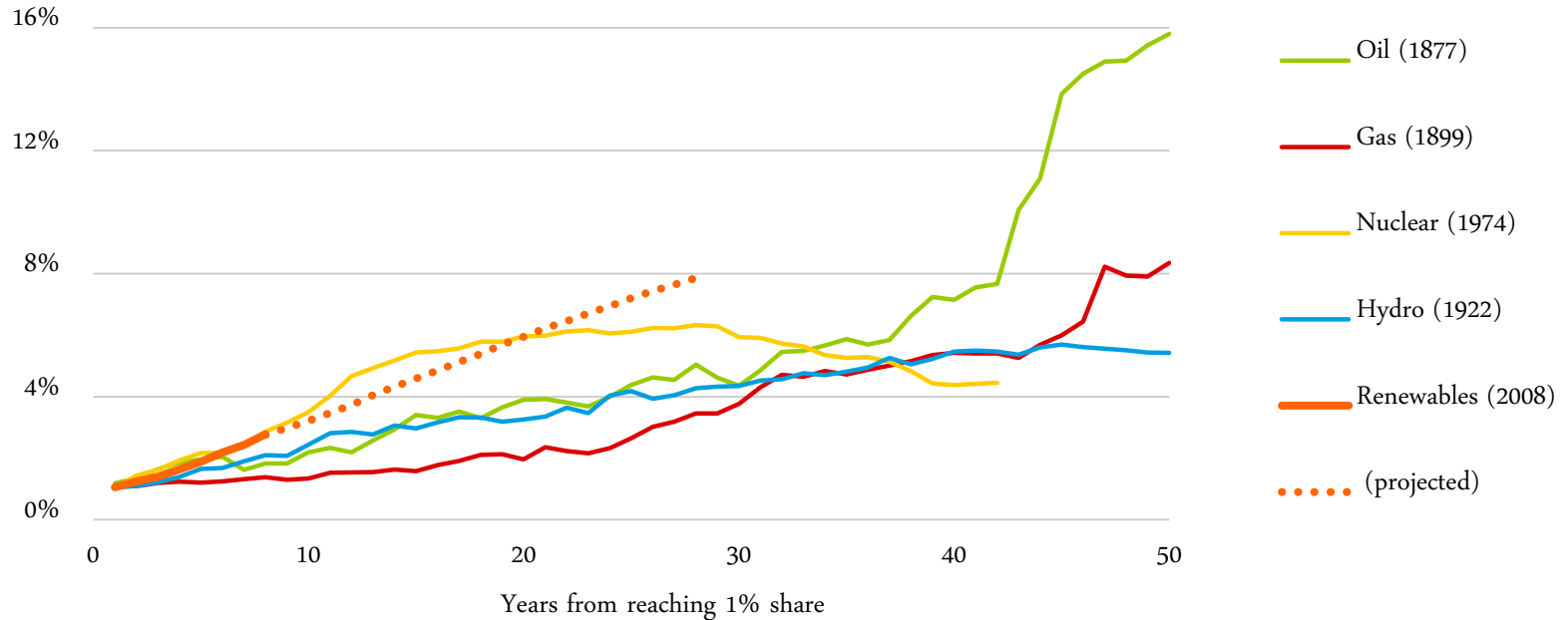


Note: - For sources of data pre-1965 see "Economic development and the demand for energy" by Ruehl et al, Energy Policy, 2012.

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# Speed of transition

Shares of global primary energy



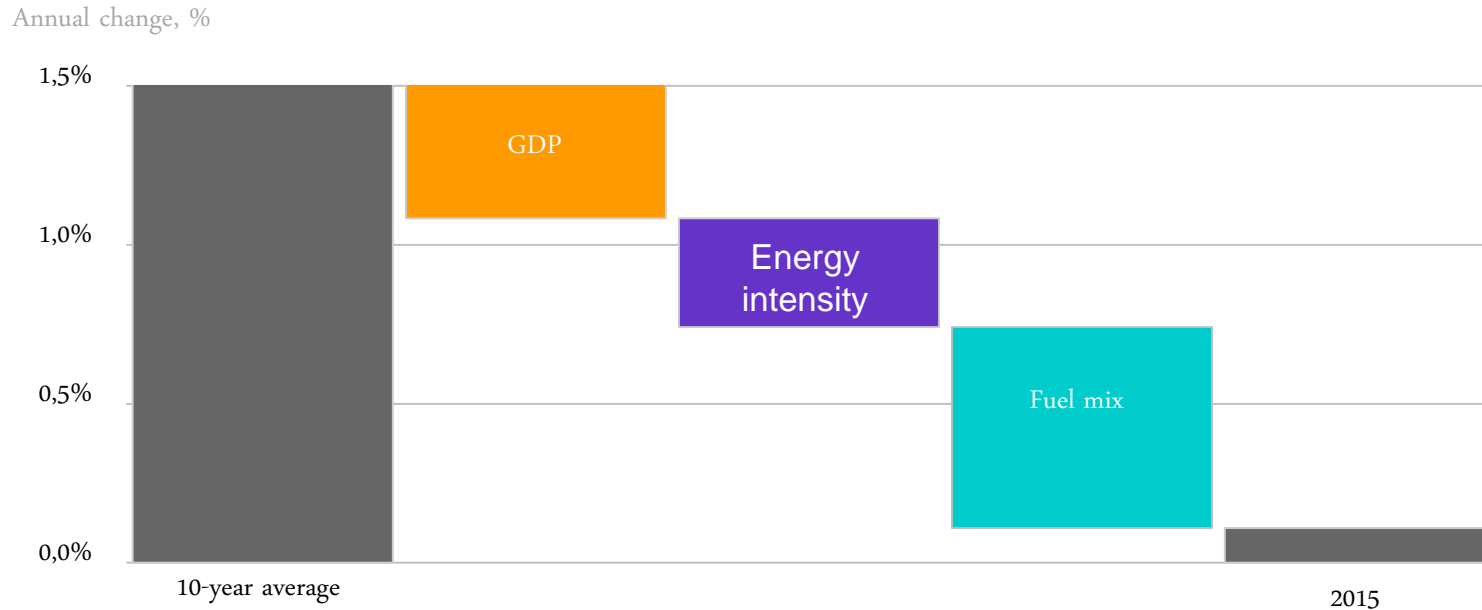




# Carbon emissions

# Factors driving slower growth of carbon emissions

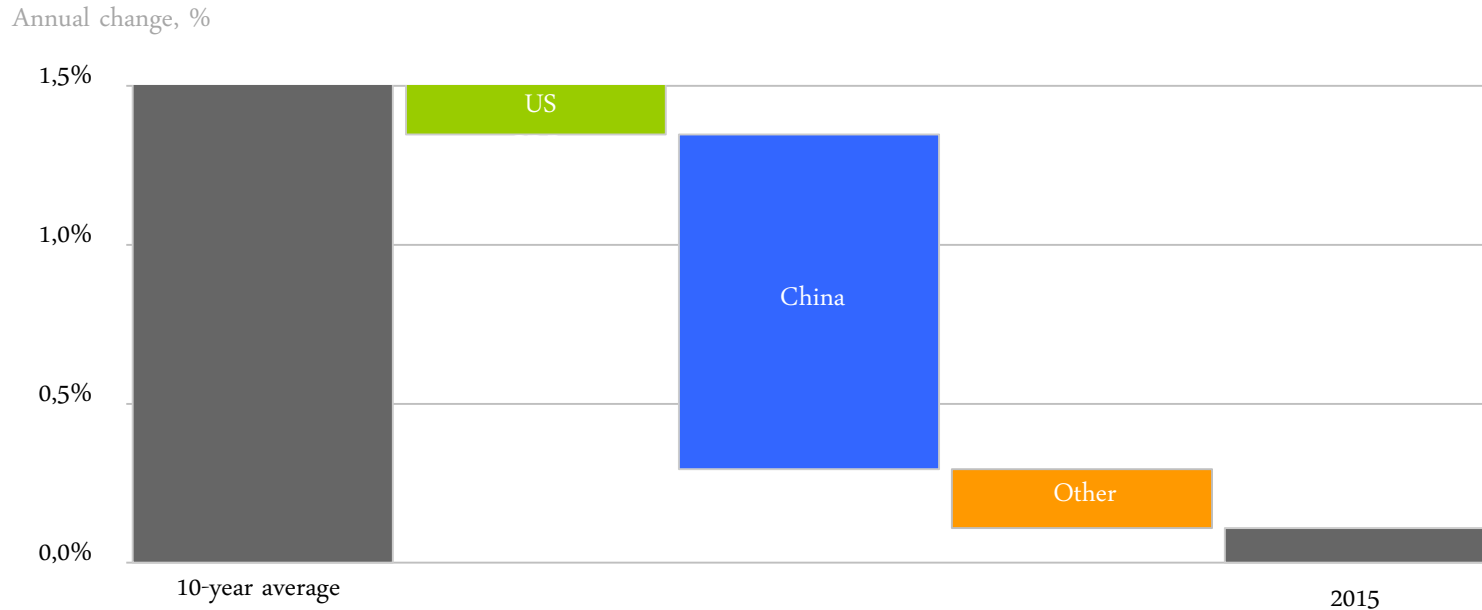
Contributions to slowdown in 2015 growth vs trend



Note: these charts show, for each factor or geographic entity, the difference between its contribution to the growth of emissions in 2015 and its average contribution to emissions growth over the past decade.

# Factors driving slower growth of carbon emissions

Contributions to slowdown in 2015 growth vs trend

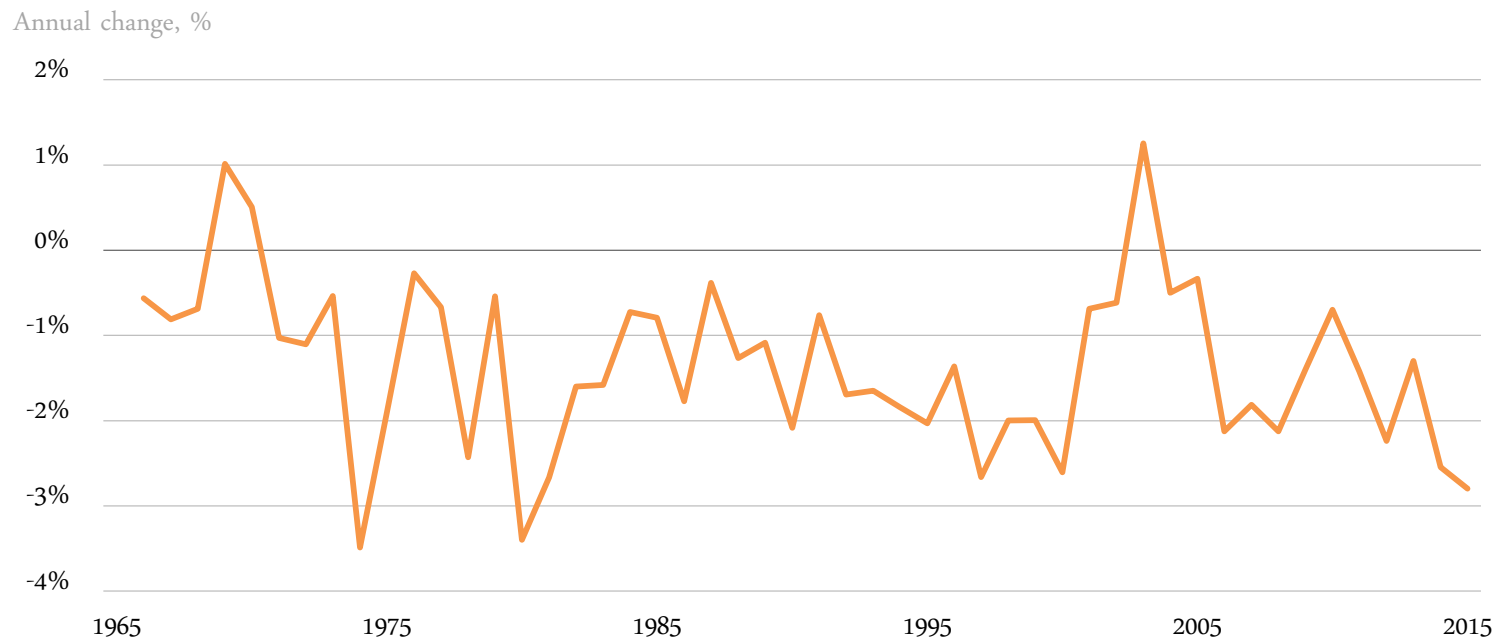


Note: these charts show, for each factor or geographic entity, the difference between its contribution to the growth of emissions in 2015 and its average contribution to emissions growth over the past decade.

# Carbon intensity



Change in carbon intensity of GDP



# Conclusion

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## 2015

- Another year of weak growth (structural and cyclical)
- Fuels: winners and losers (prices work)
- Carbon emissions stall

## Future

- Energy demand in transition
- Technological advances driving supply



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