



BP Statistical Review of World Energy June 2009

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Volatility and Structural Change

Mark Finley
General Manager, Global Energy Markets
June 16th, 2009

Outline

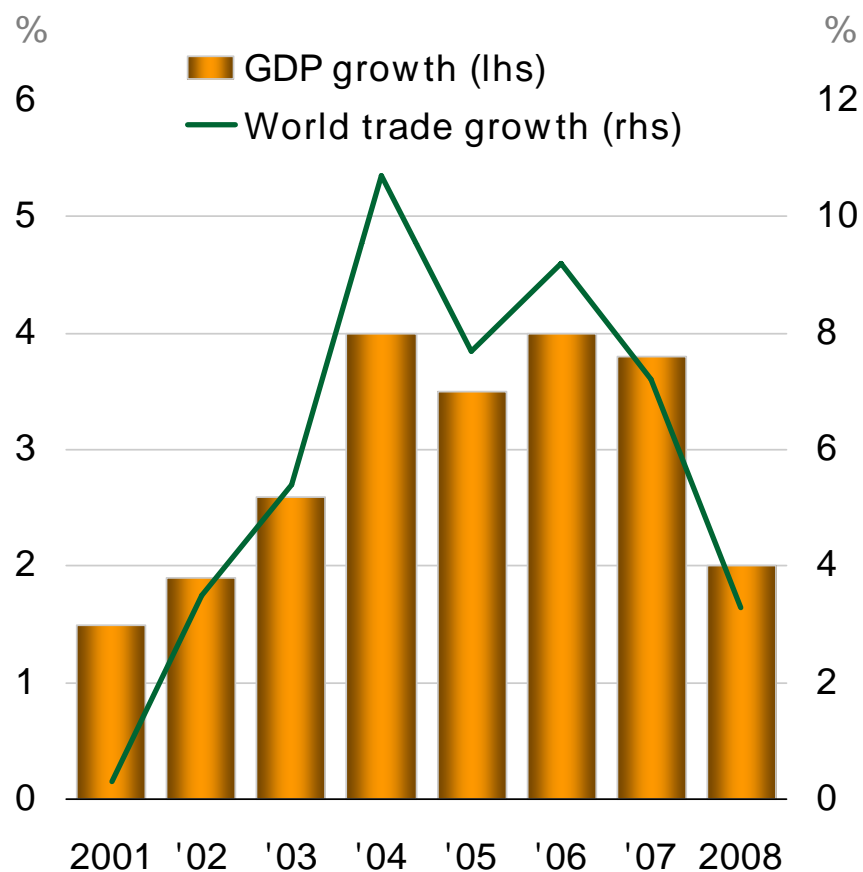


- Introduction
- Volatility and Structural Change
- Fuel by Fuel
- Conclusion

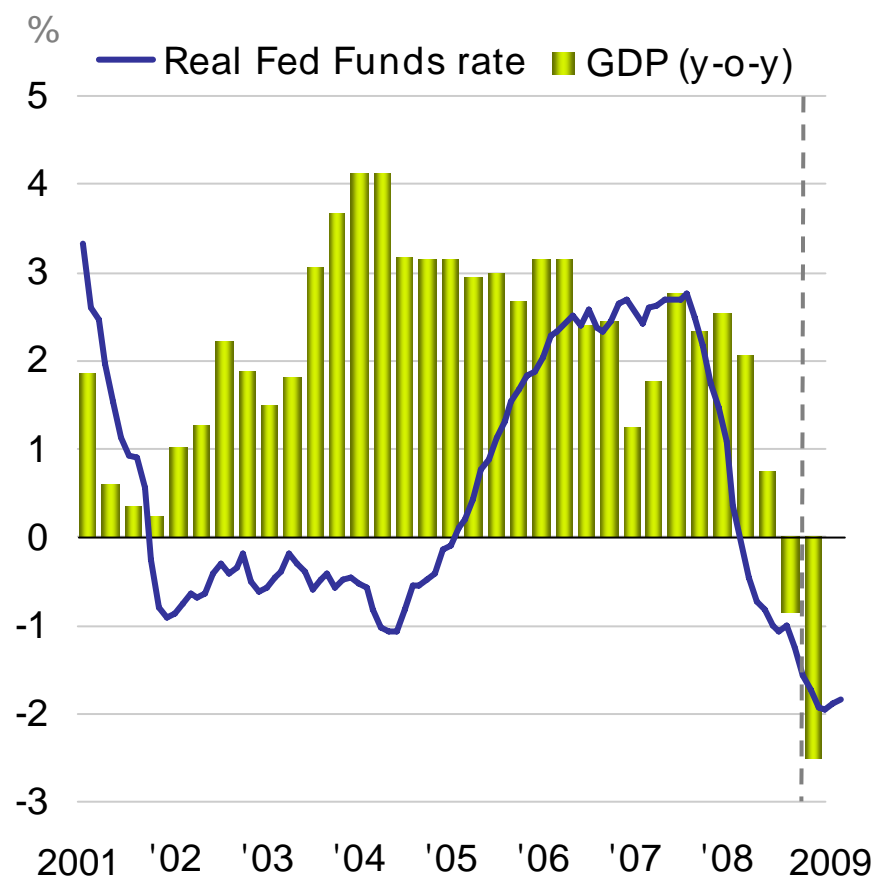
The Economy



Growth in global GDP and trade



US real policy rates and GDP growth



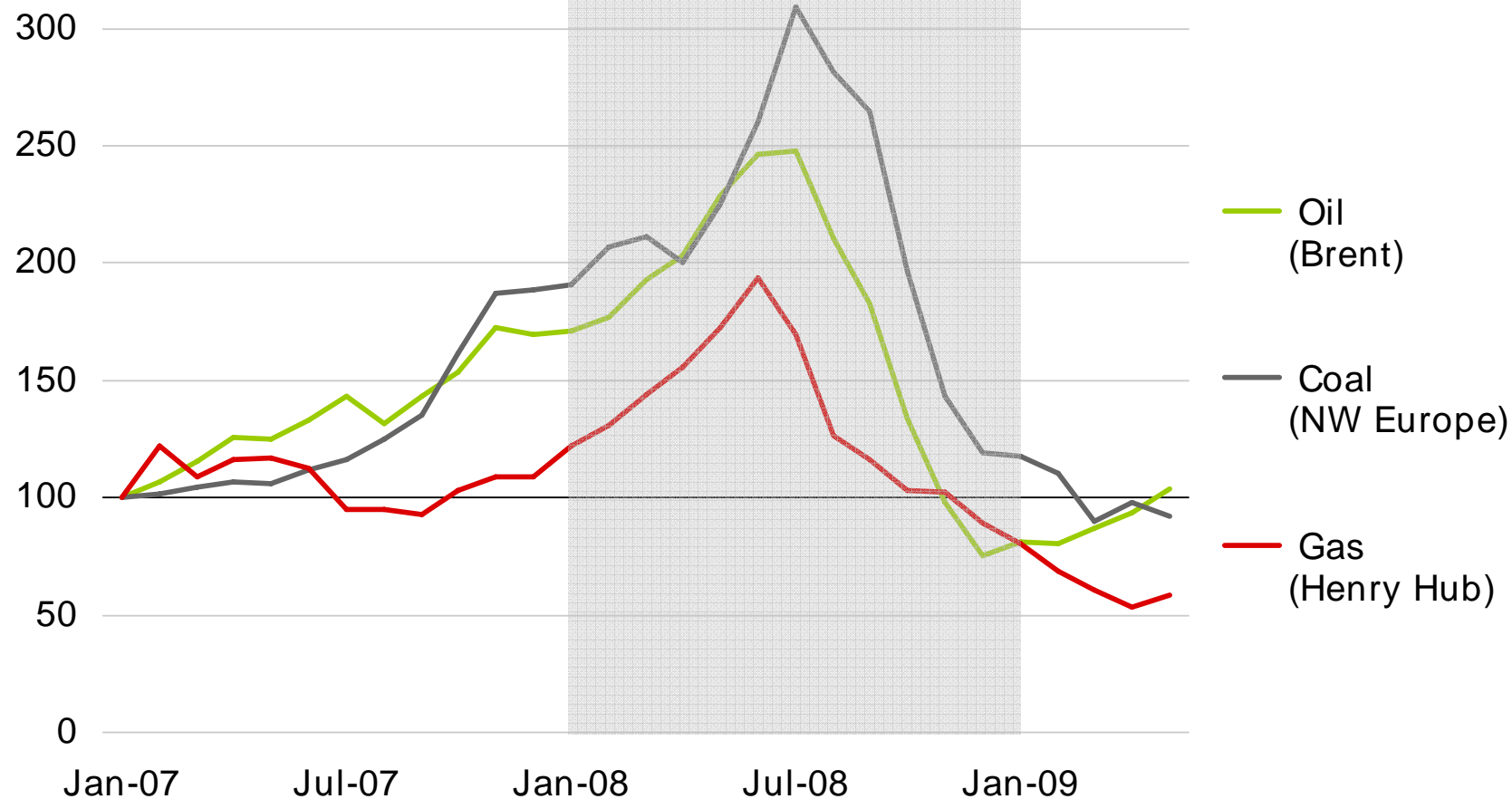
Source: Includes data from IMF World Economic Outlook and Oxford Economics

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Energy Prices



Index: Jan-07=100

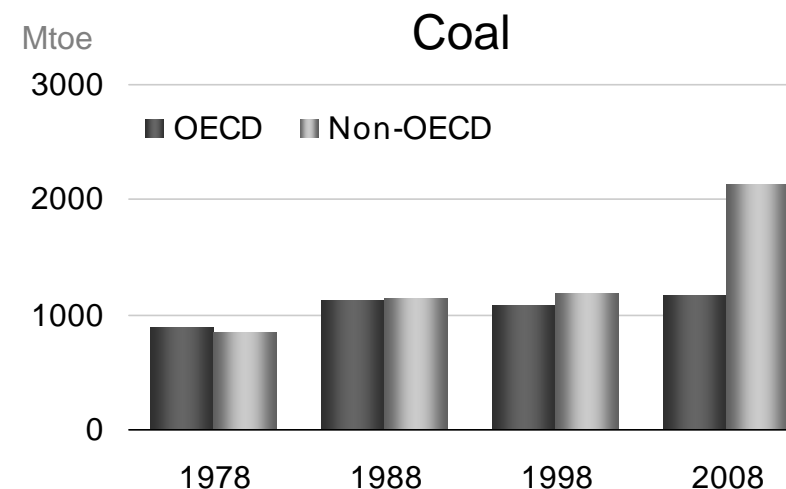
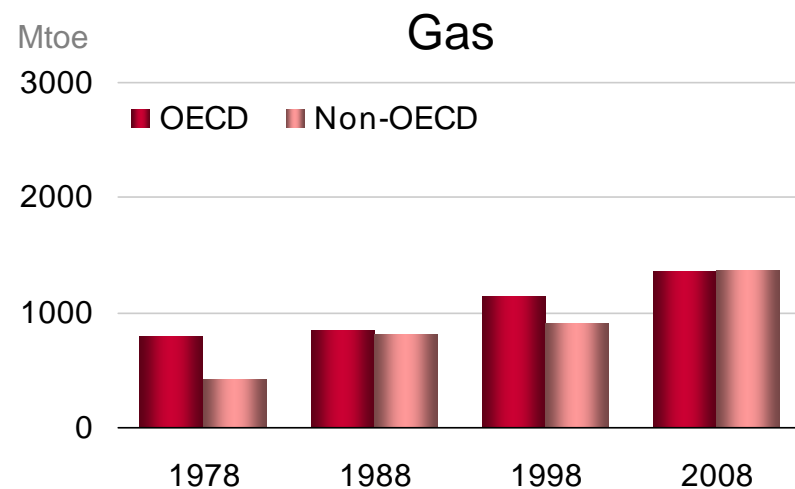
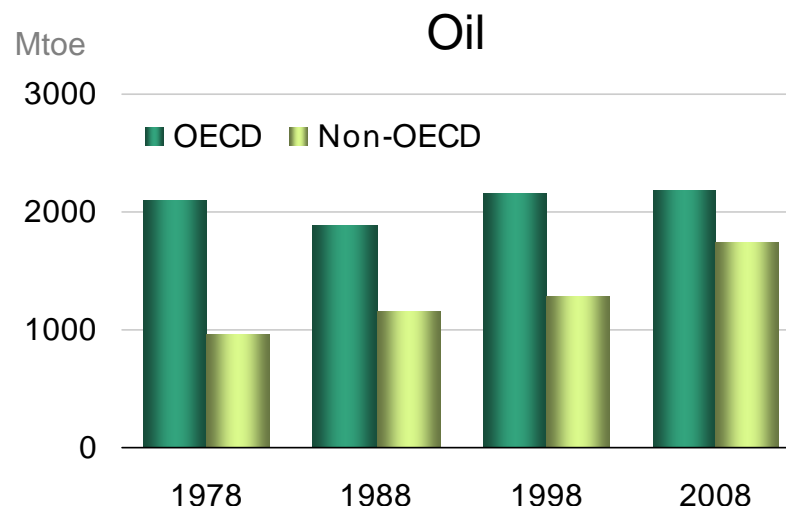
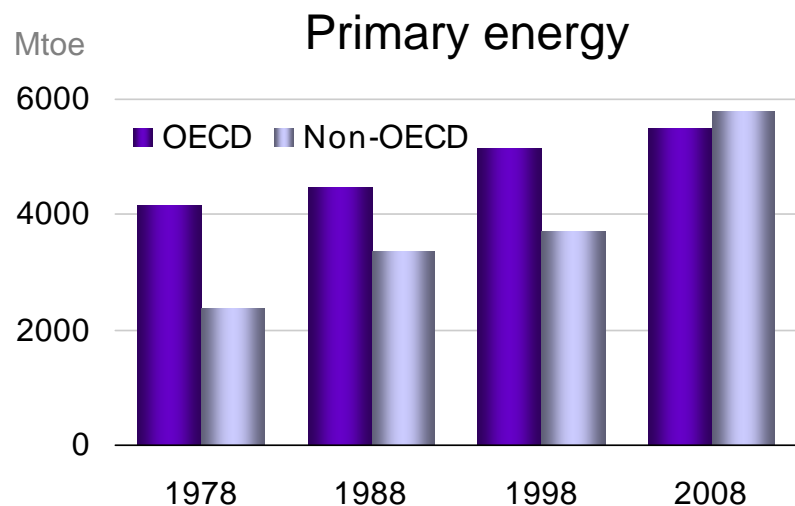


Source: Includes data from Platts and McCloskey

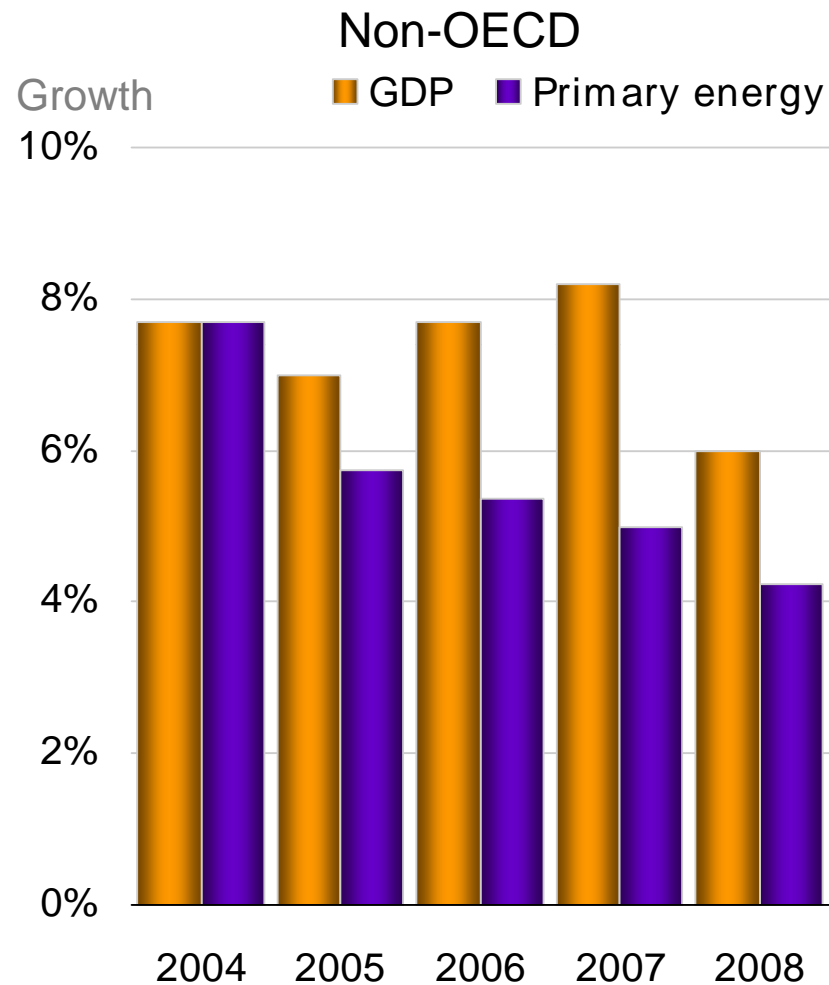
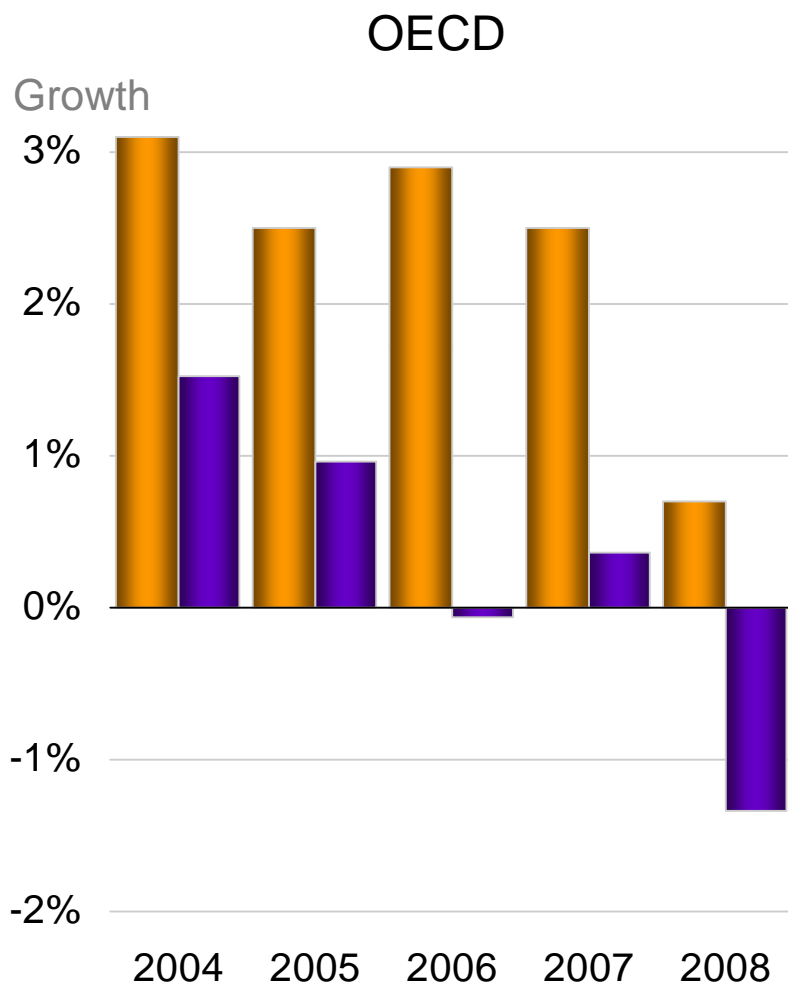
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OECD and Non-OECD Energy Consumption



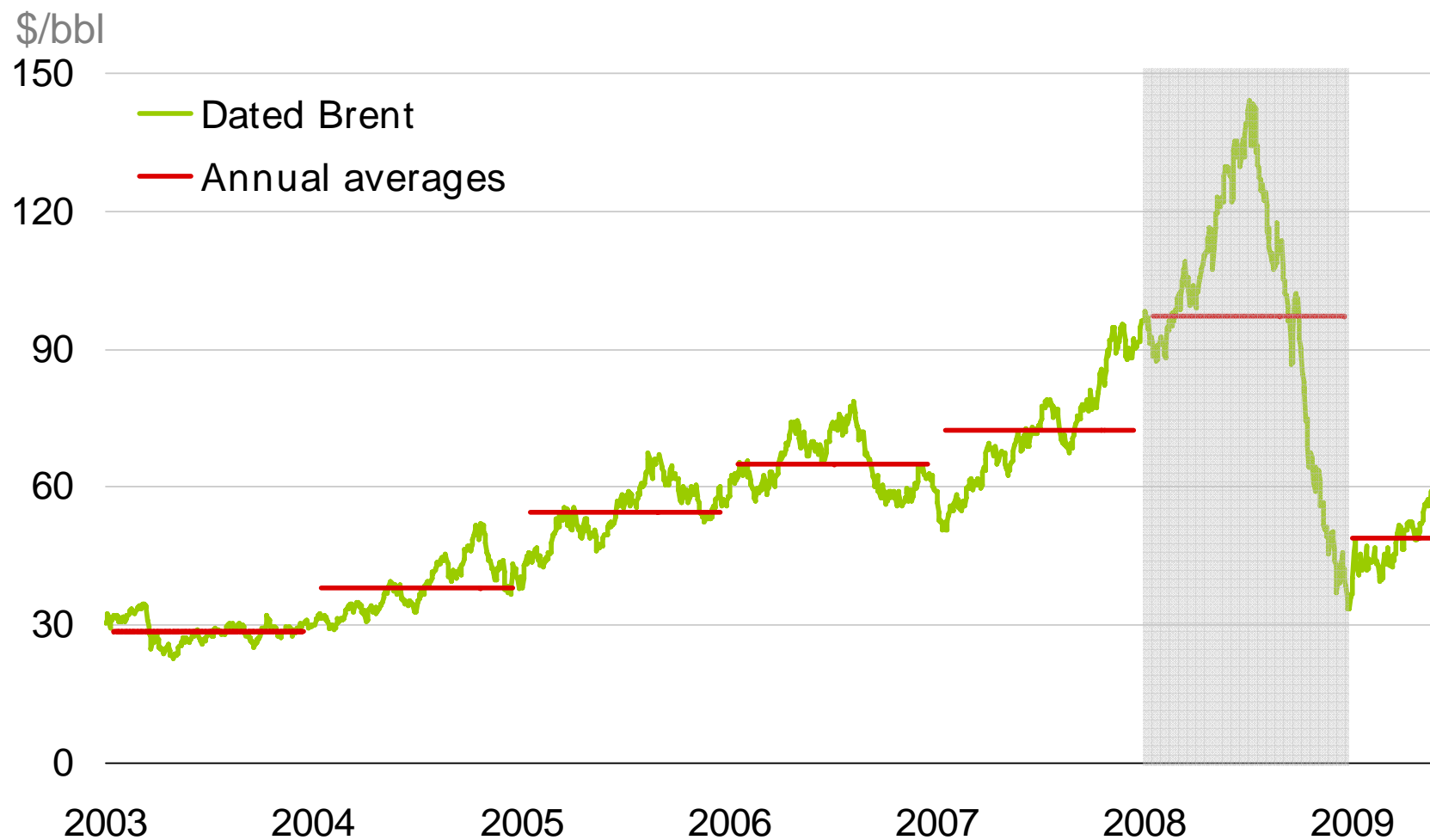
GDP and Primary Energy Growth



Source: Includes data from Oxford Economics

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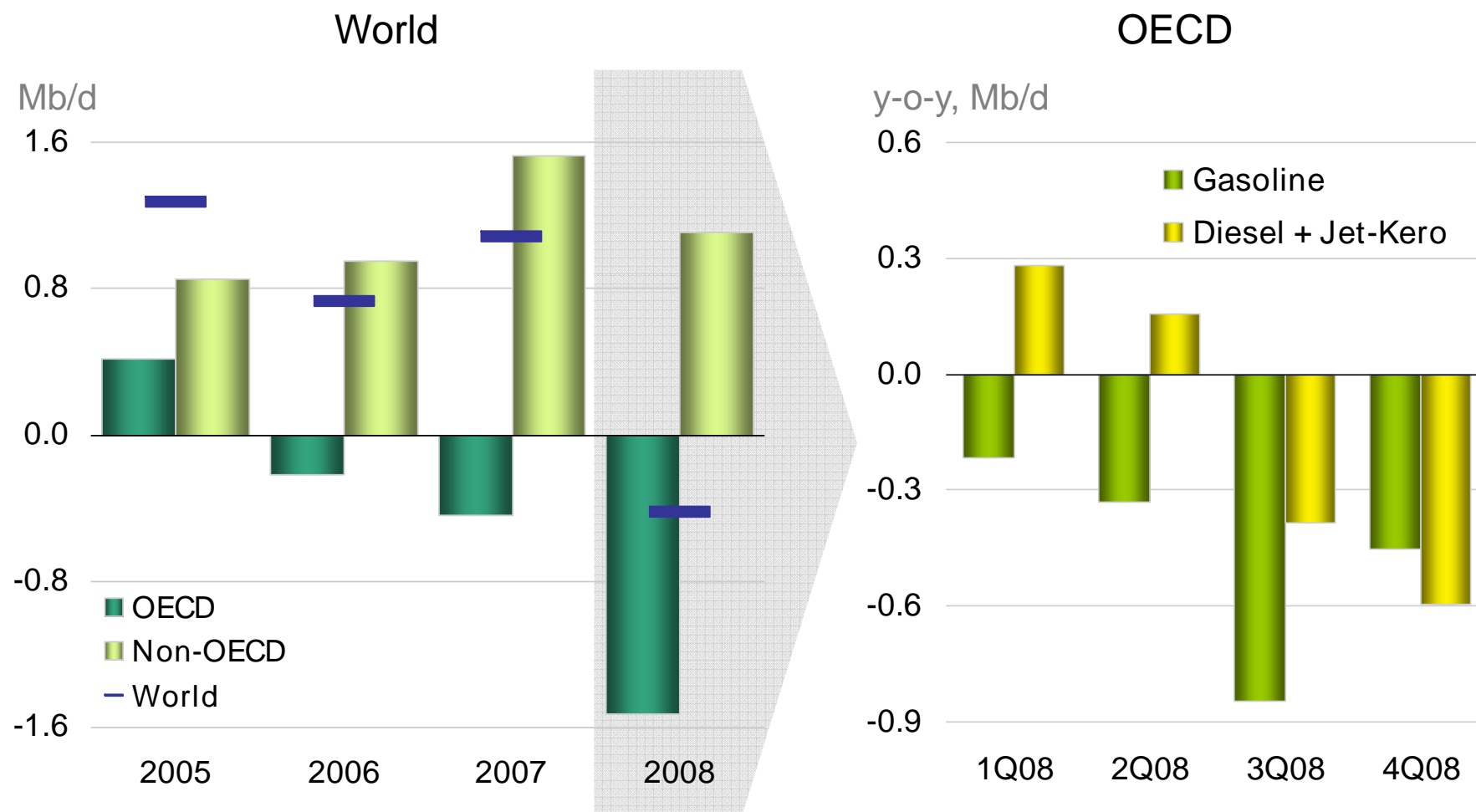
Crude Prices: What Happened?



Source: Includes data from Platts

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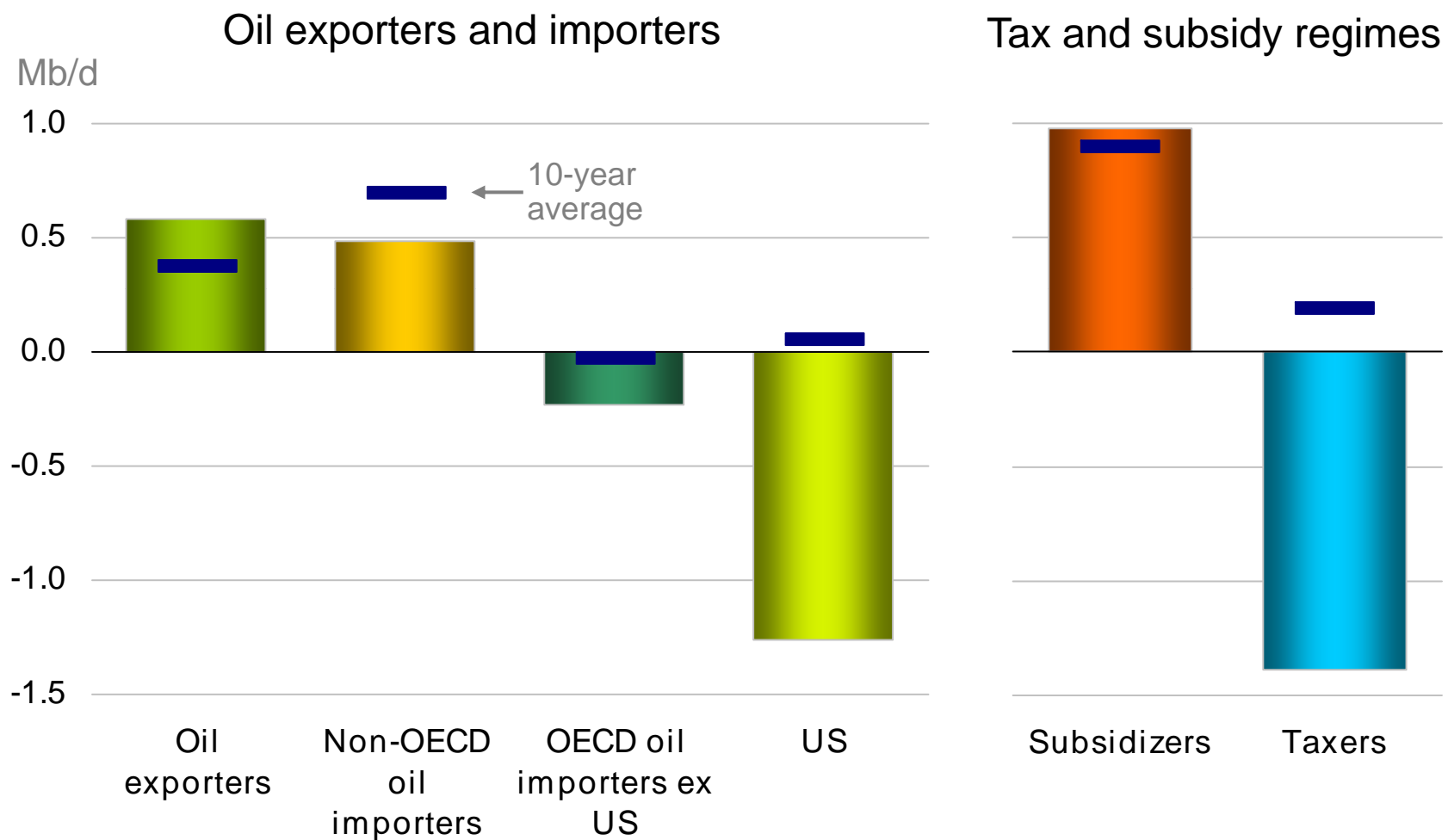
Oil Consumption Growth



Source: Includes data from IEA

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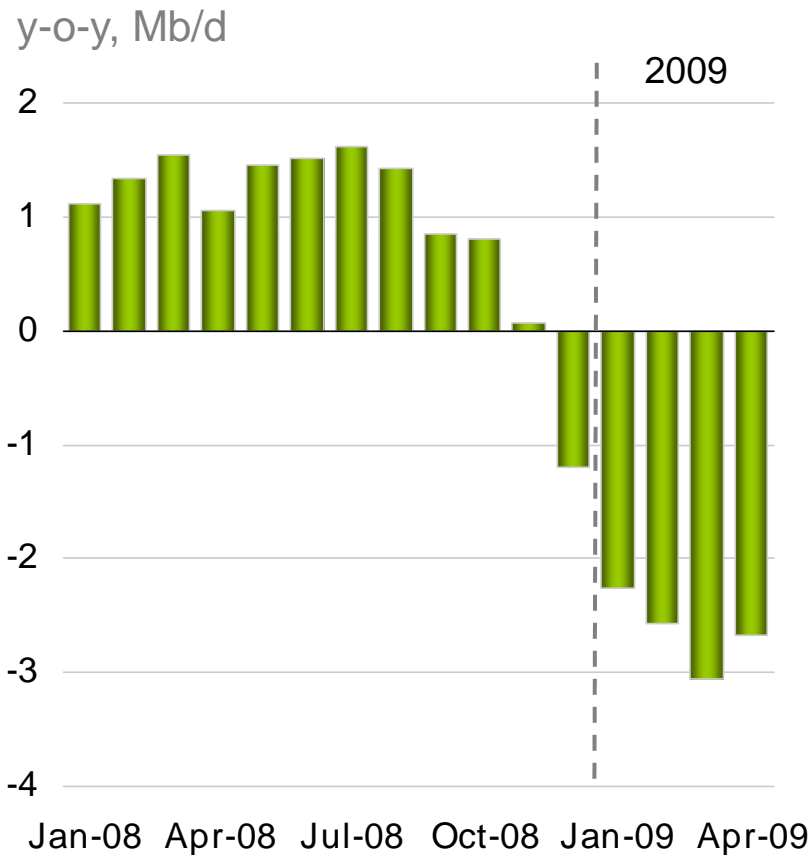
Oil Consumption Growth in 2008



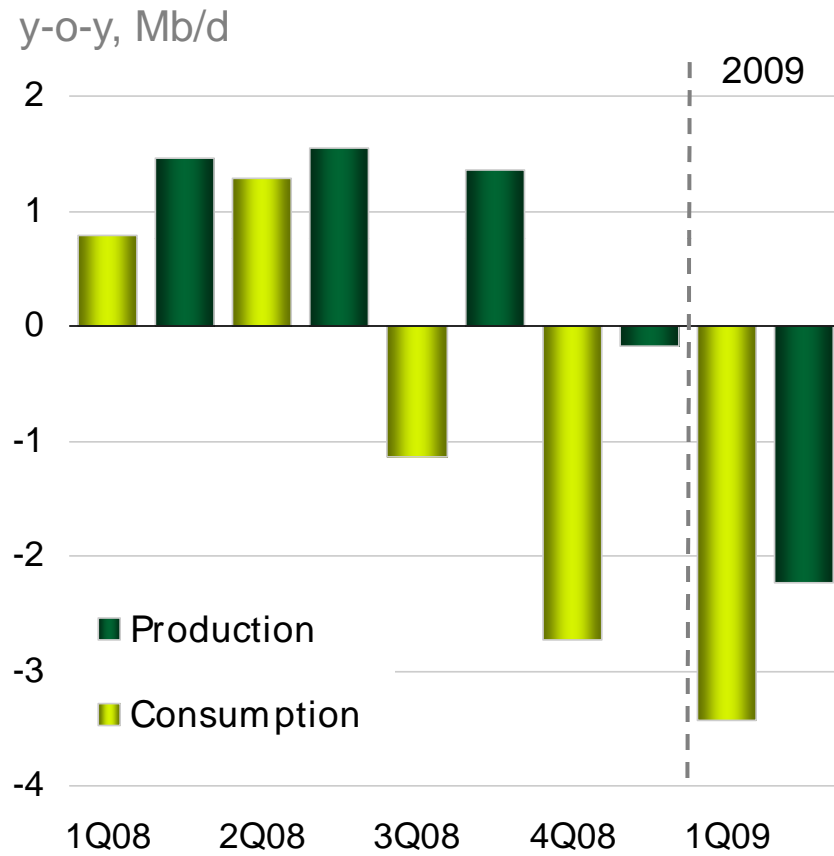
OPEC Adjusts to Falling Consumption



OPEC-12 crude oil production



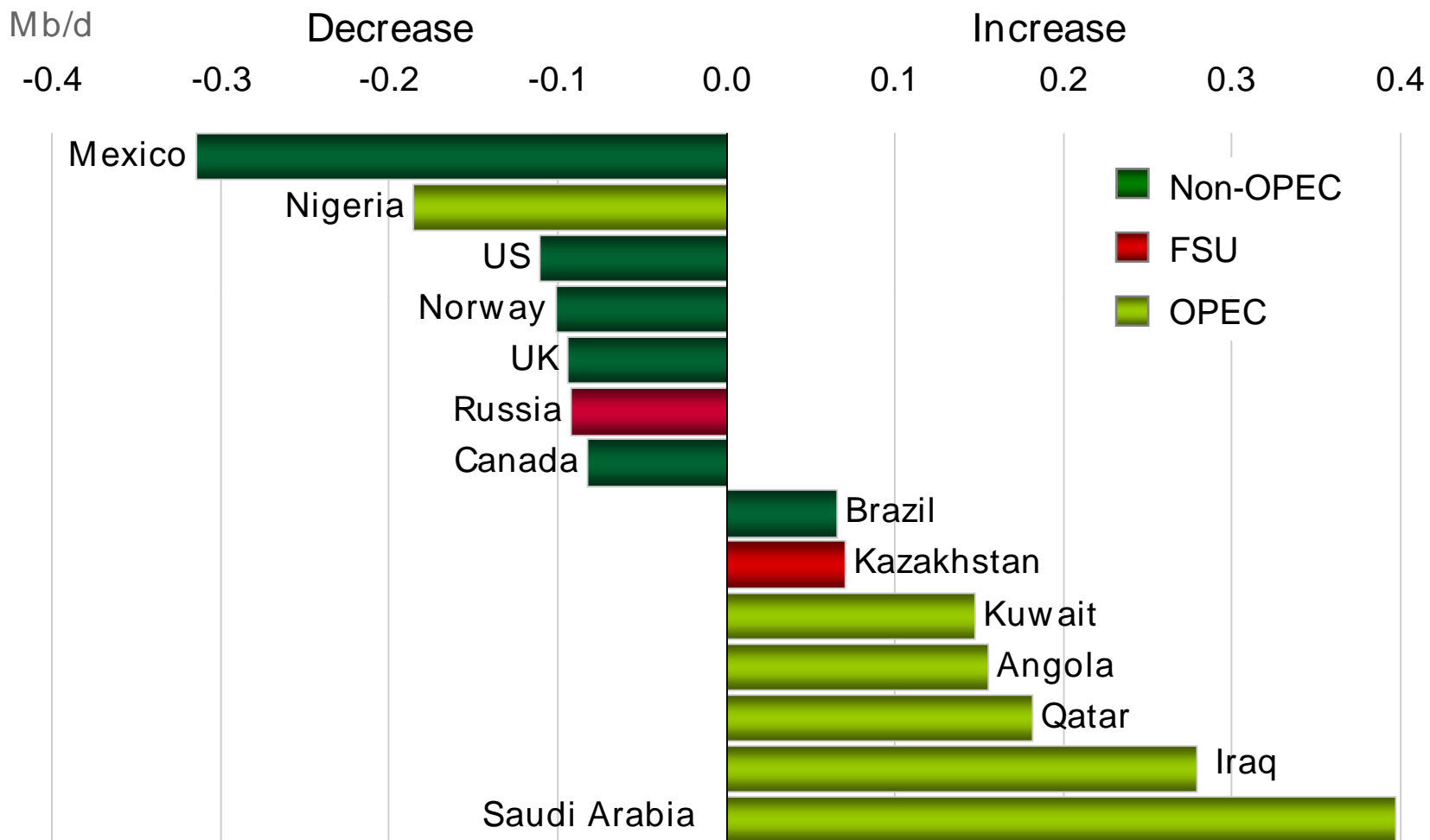
Global consumption and production



Source: Includes data from US DOE

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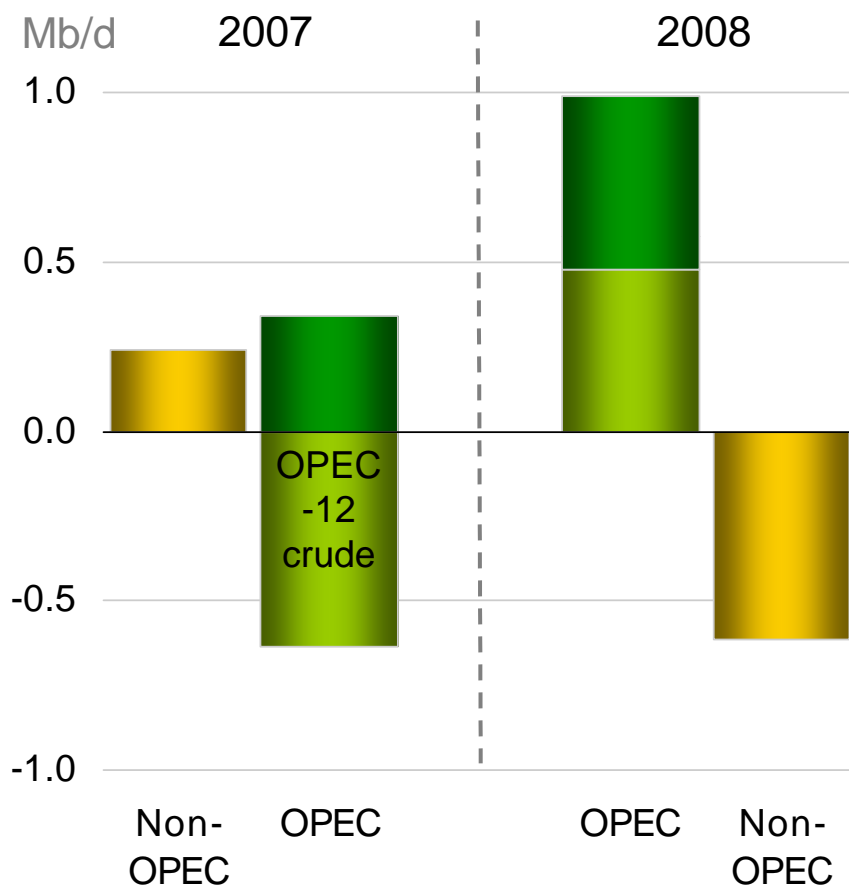
Main Oil Production Changes



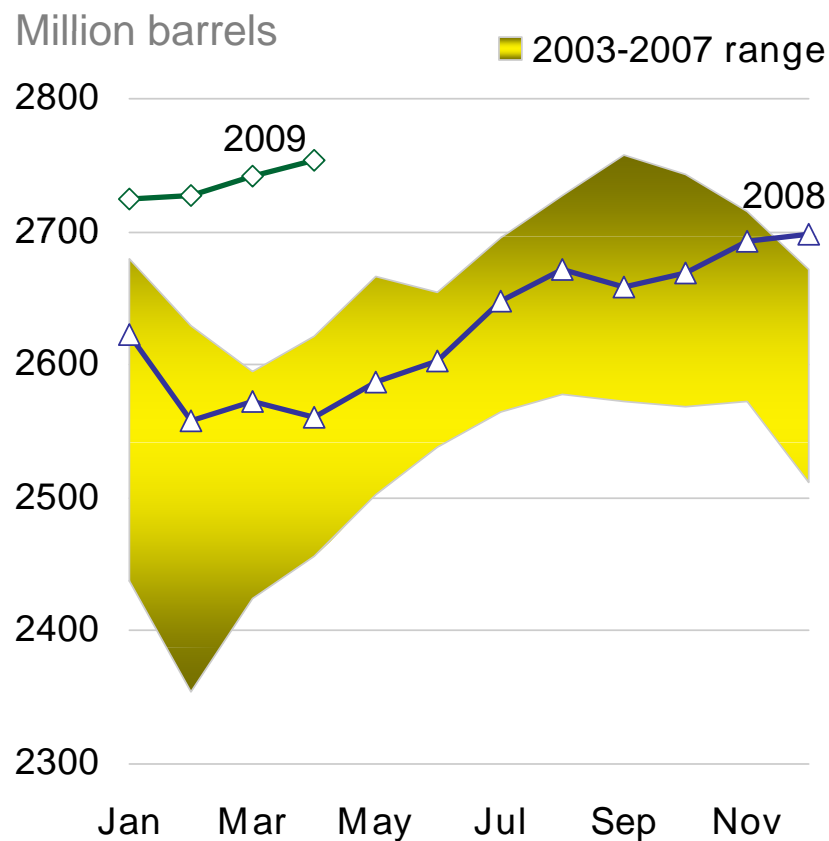
Changes in Production and Inventories



Global oil production changes



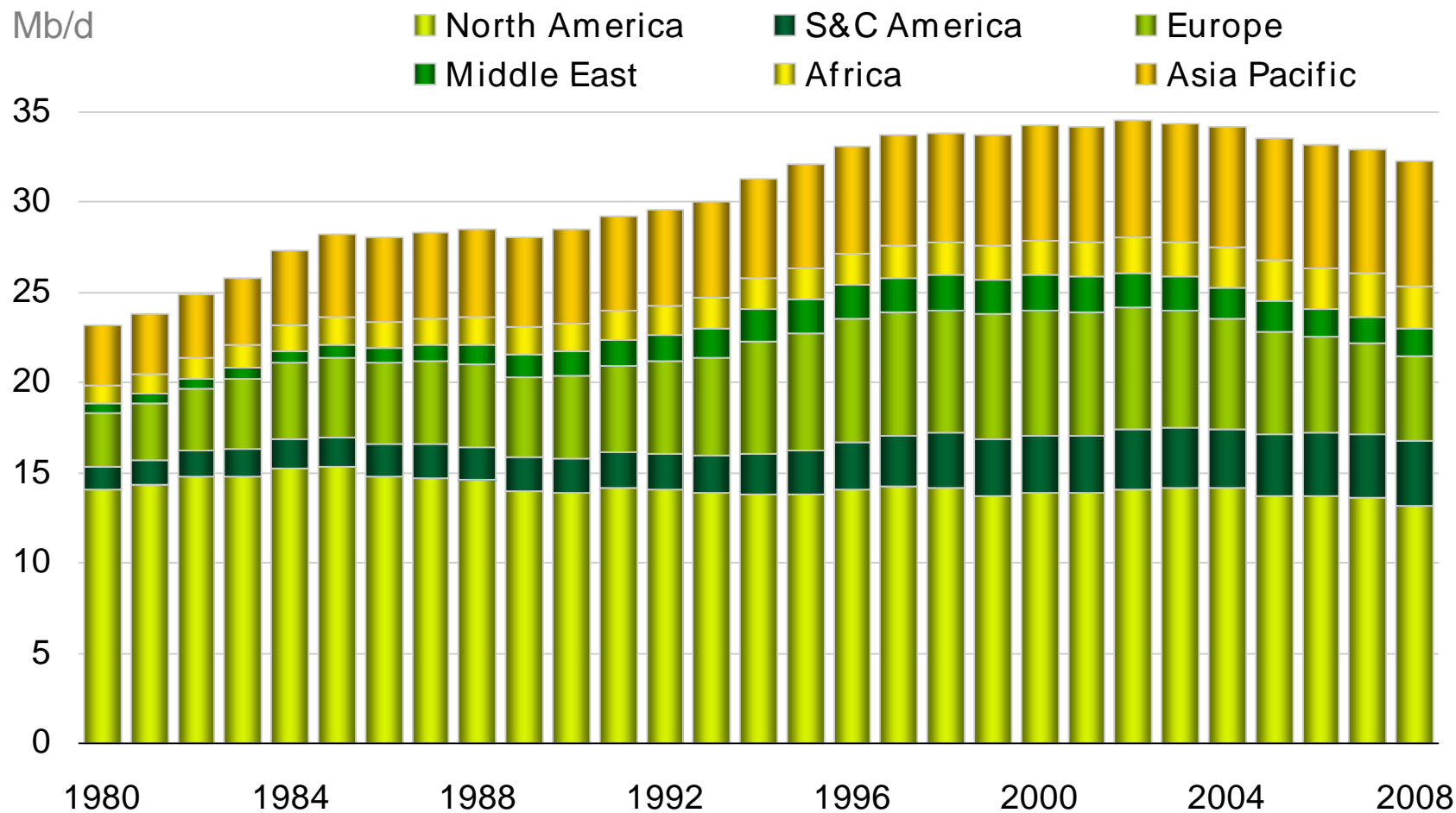
OECD commercial inventories



Source: Includes data from IEA

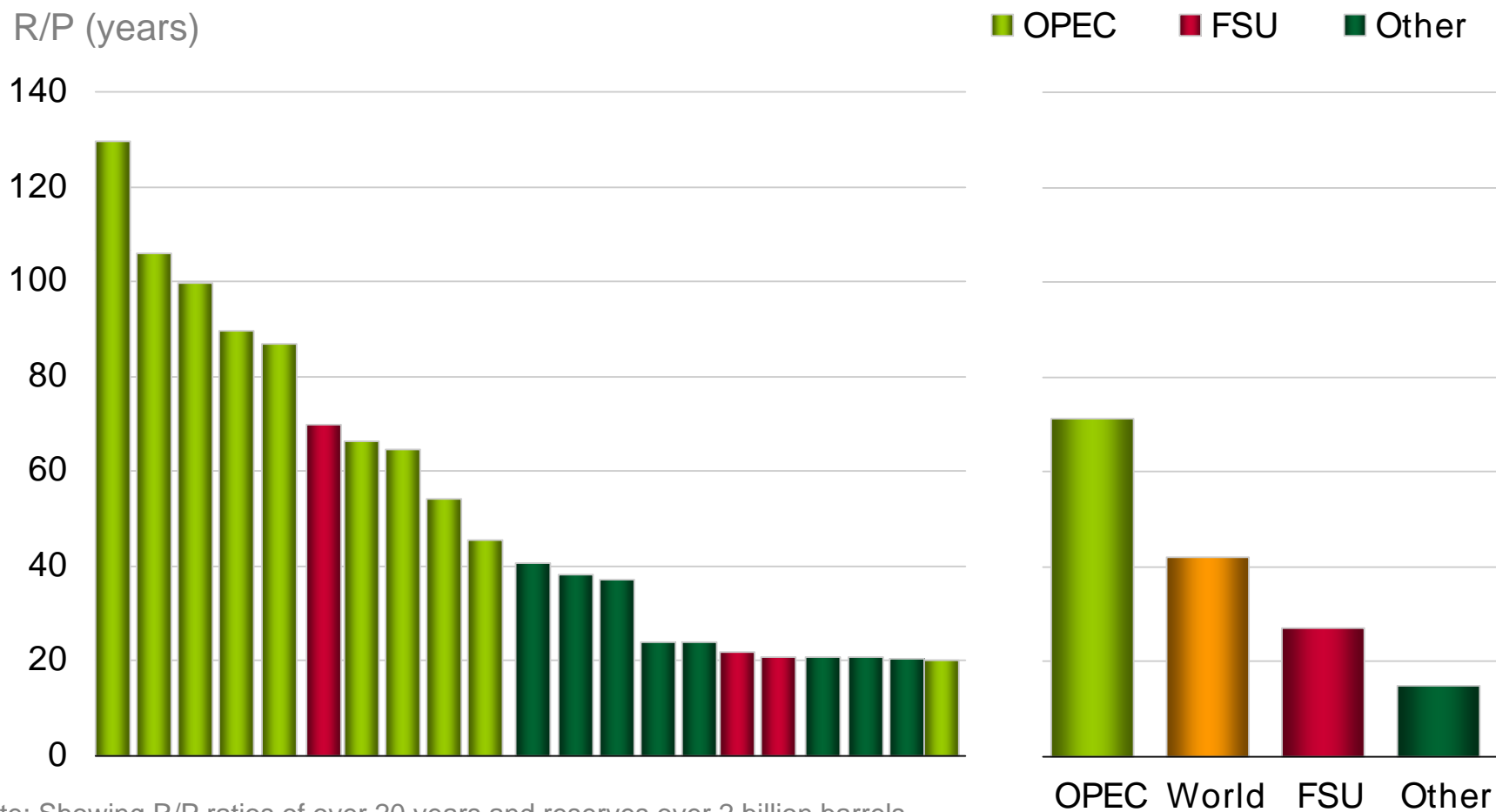
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Non-OPEC ex FSU Oil Production



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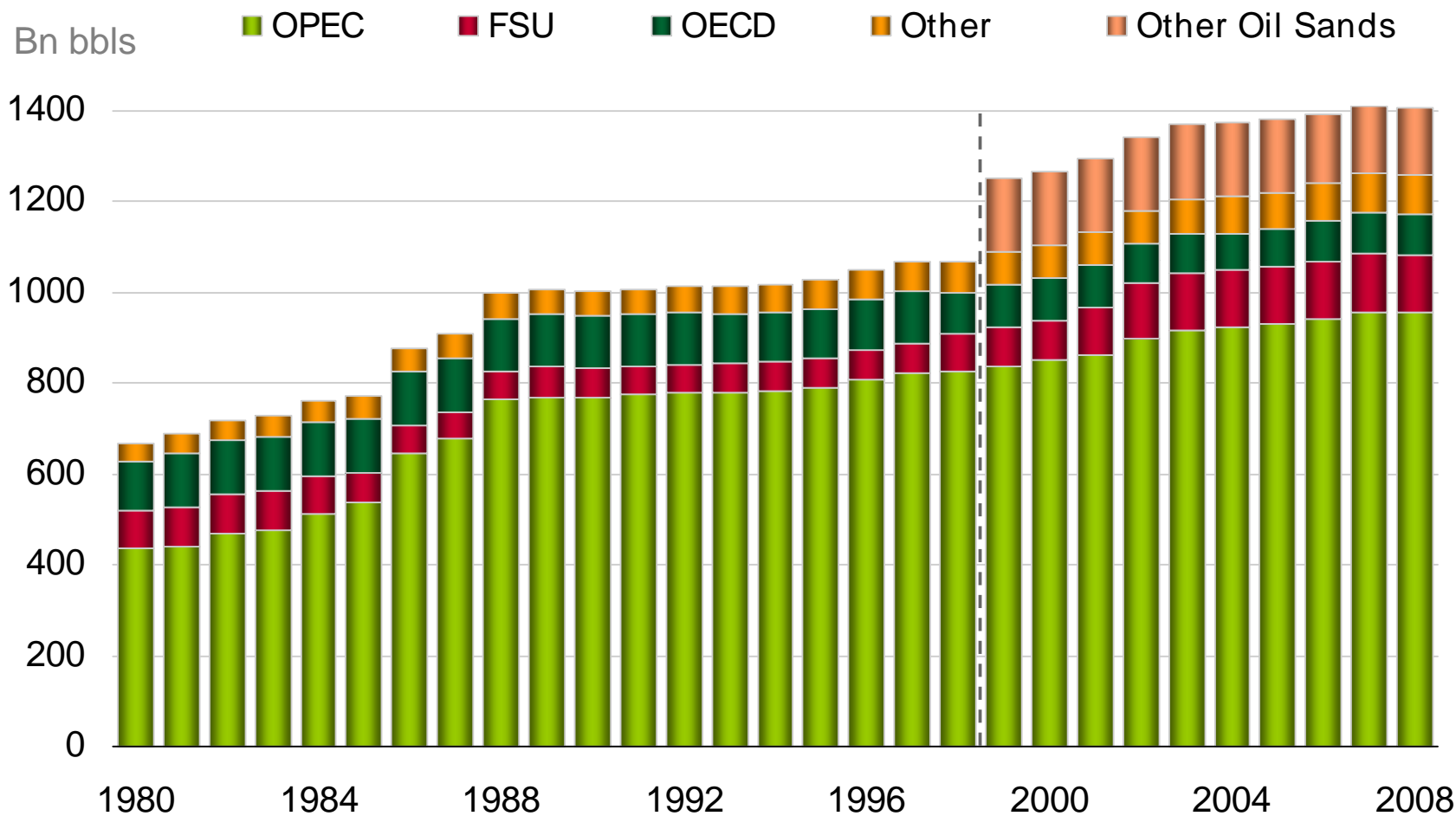
Reserves-to-Production Ratios



Note: Showing R/P ratios of over 20 years and reserves over 2 billion barrels.

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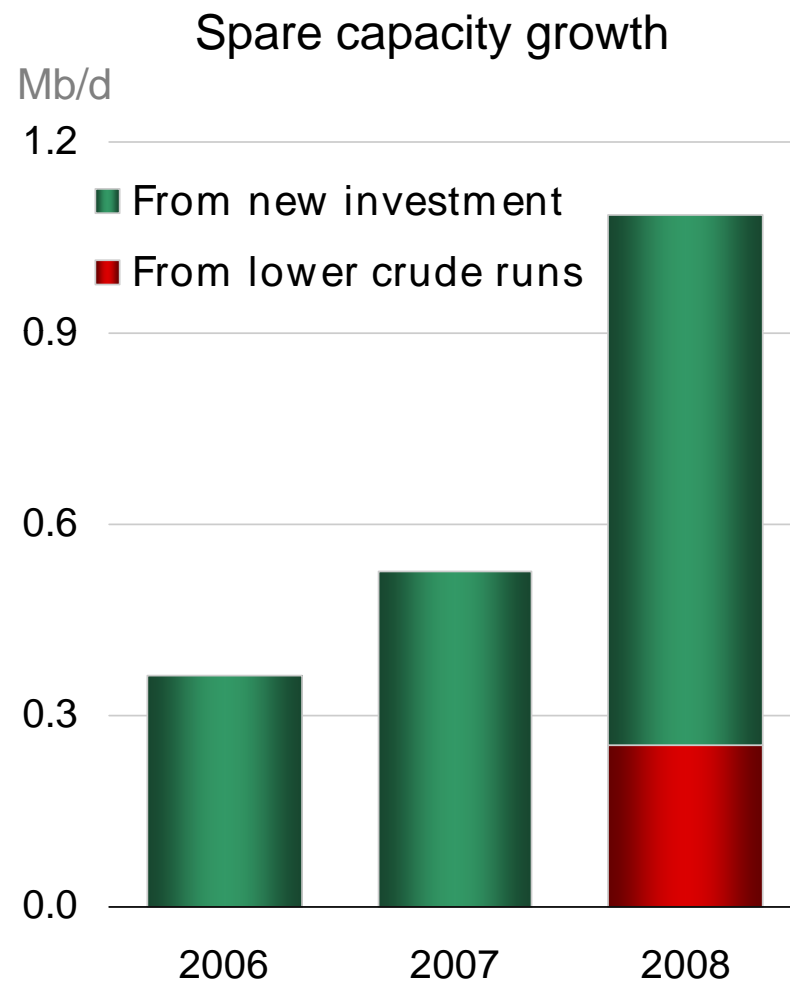
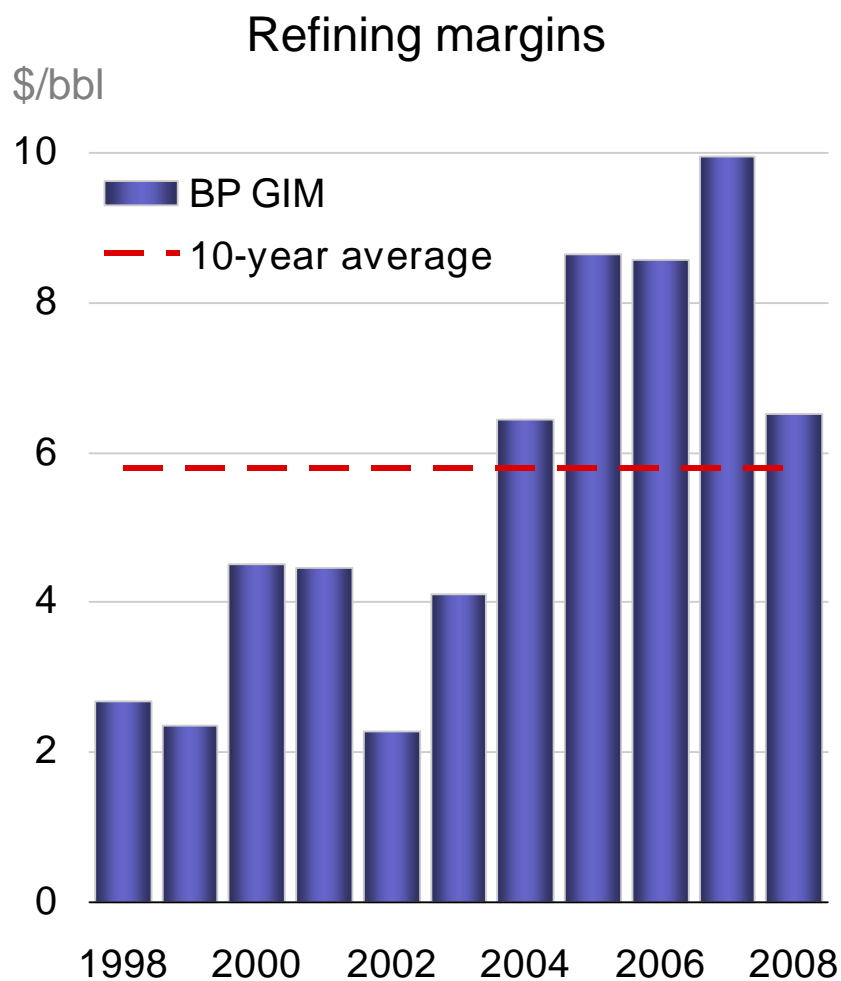
Global Oil Reserves



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Refining Margins and Spare Capacity



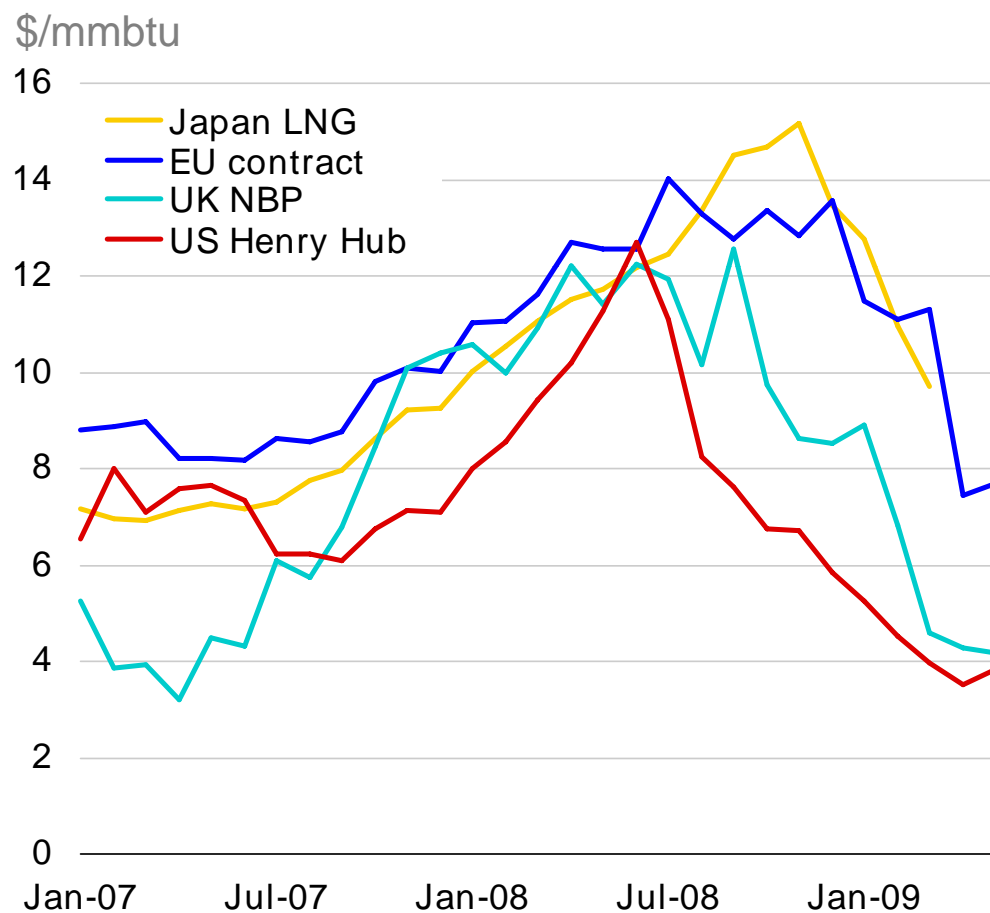
Source: Includes data from Parpinelli and Energy Security Analysis Inc.

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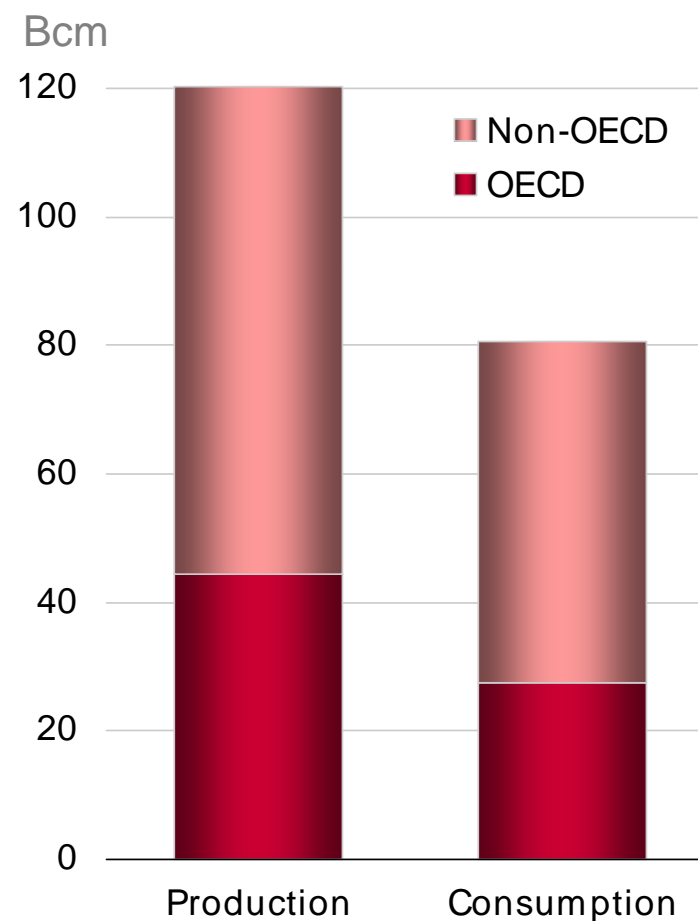
Natural Gas Market



Gas prices



Growth in 2008



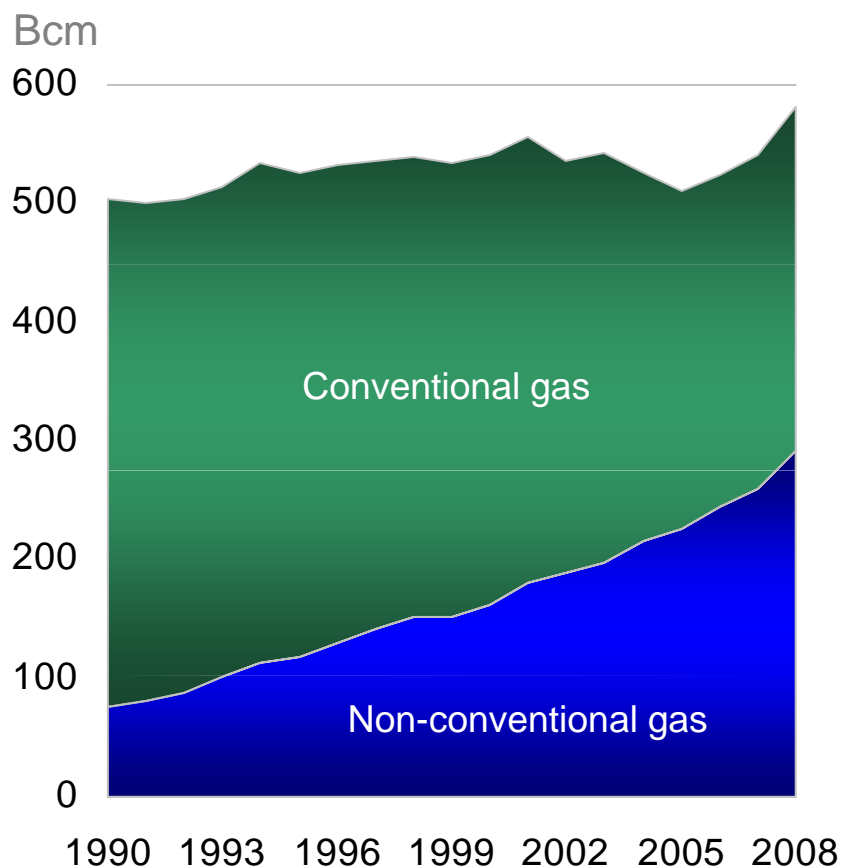
Source: Includes data from Platts

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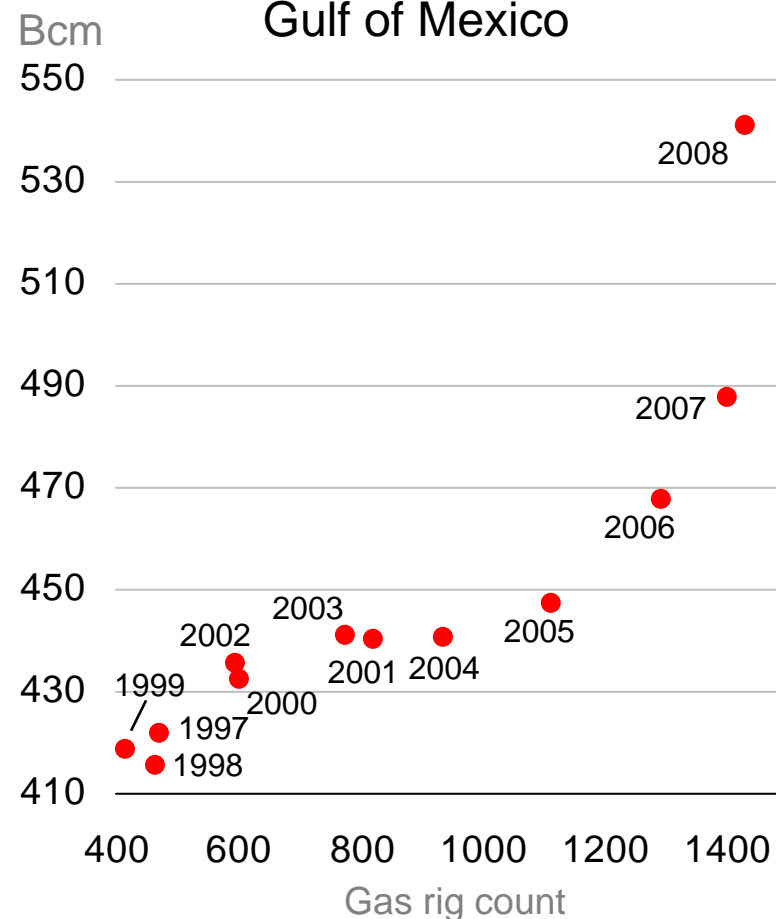
US Gas Production



Gas production



Production vs. rig count outside Gulf of Mexico

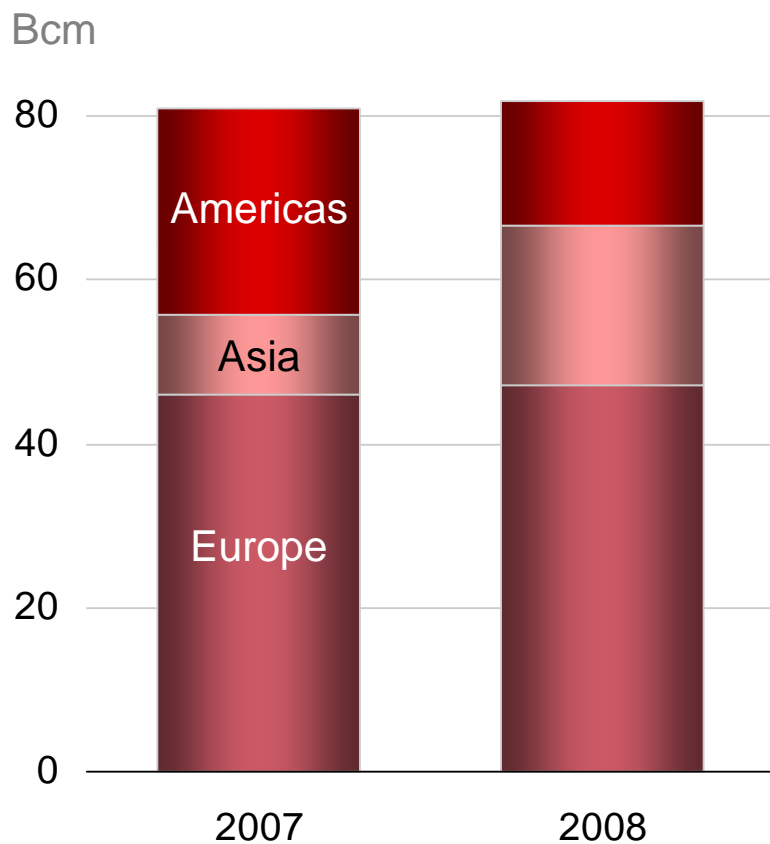


Sources: Includes data from US DOE and Baker Hughes

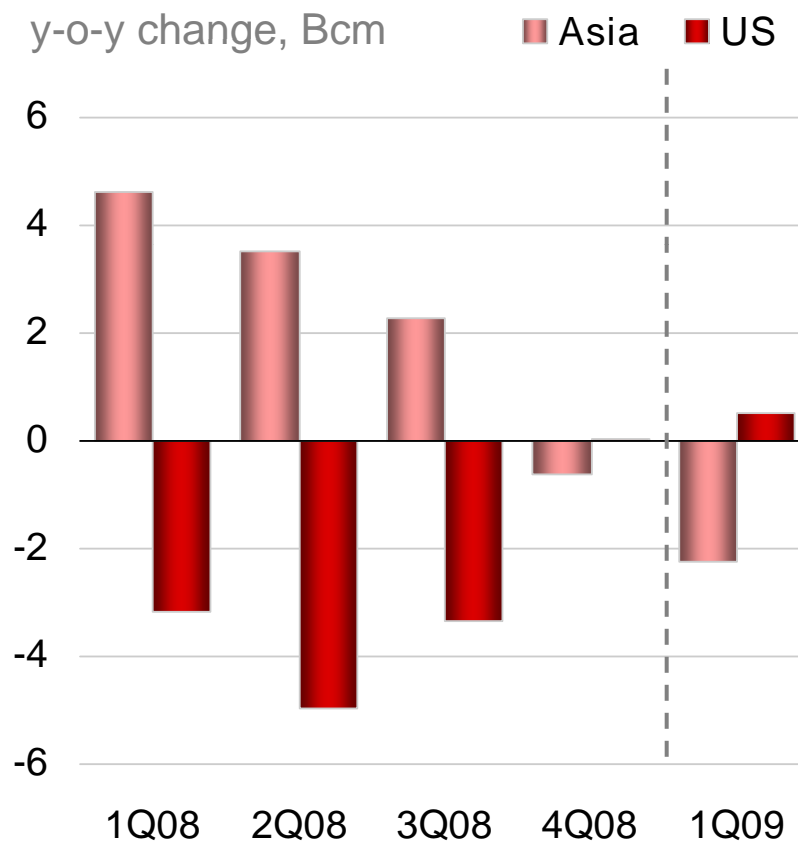
Atlantic Basin LNG*



By importer



Switching between markets

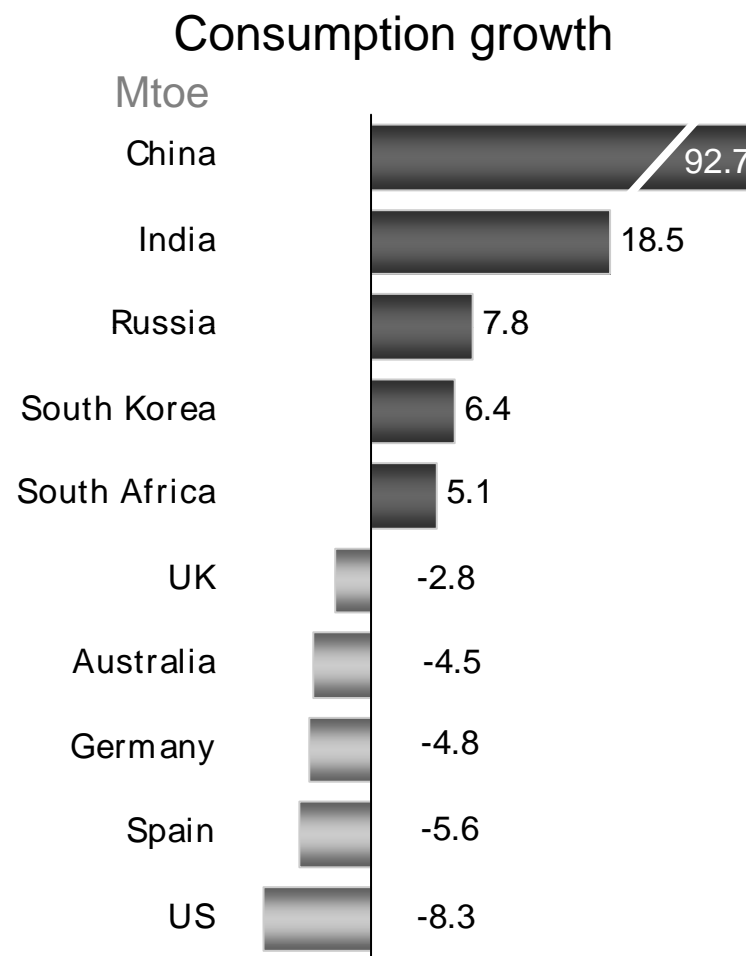
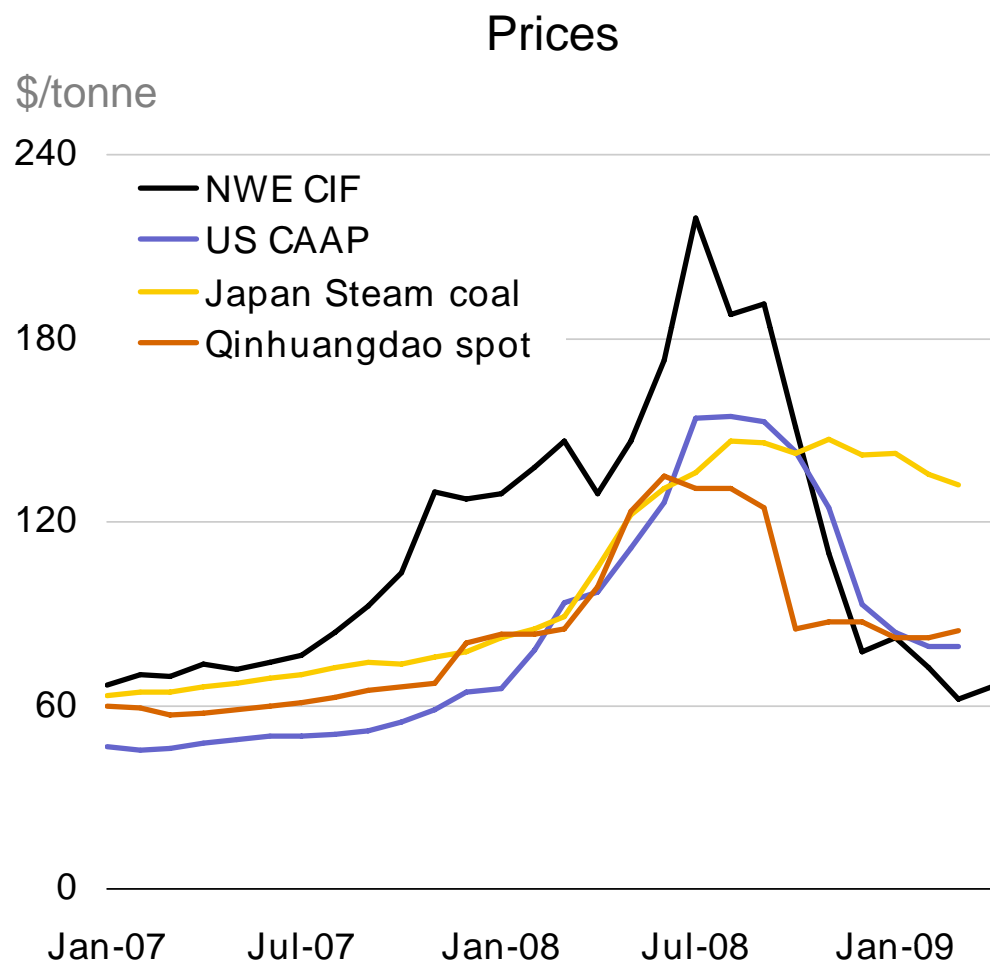


* LNG from Algeria, Belgium, Egypt, Nigeria, Norway, Trinidad and Equatorial Guinea

Sources: Includes annual data from Cedigaz and quarterly figures from Waterborne LNG

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Coal Prices and Consumption Growth



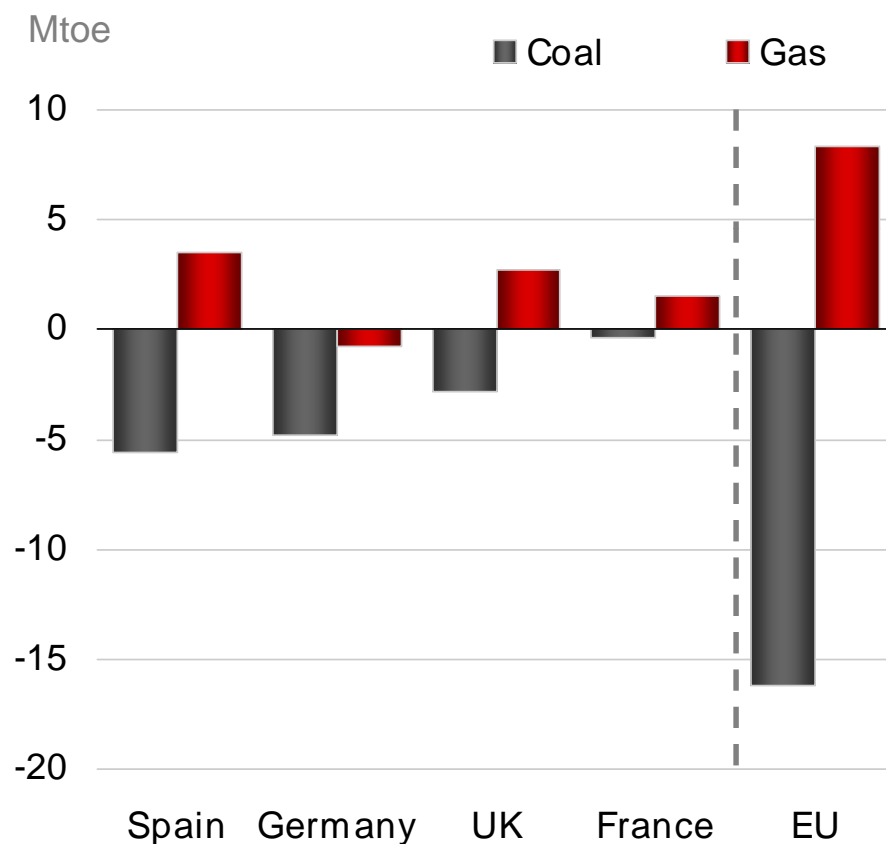
Sources: Includes data from McCloskey and Platts

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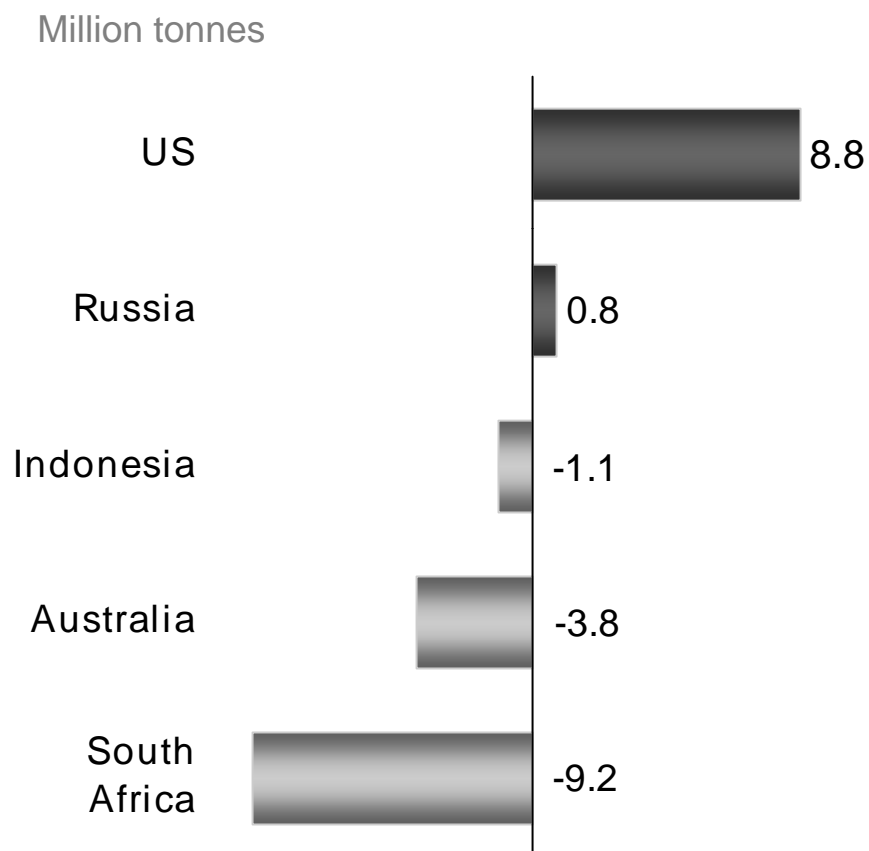
Coal in the European Union



Gas and coal consumption growth



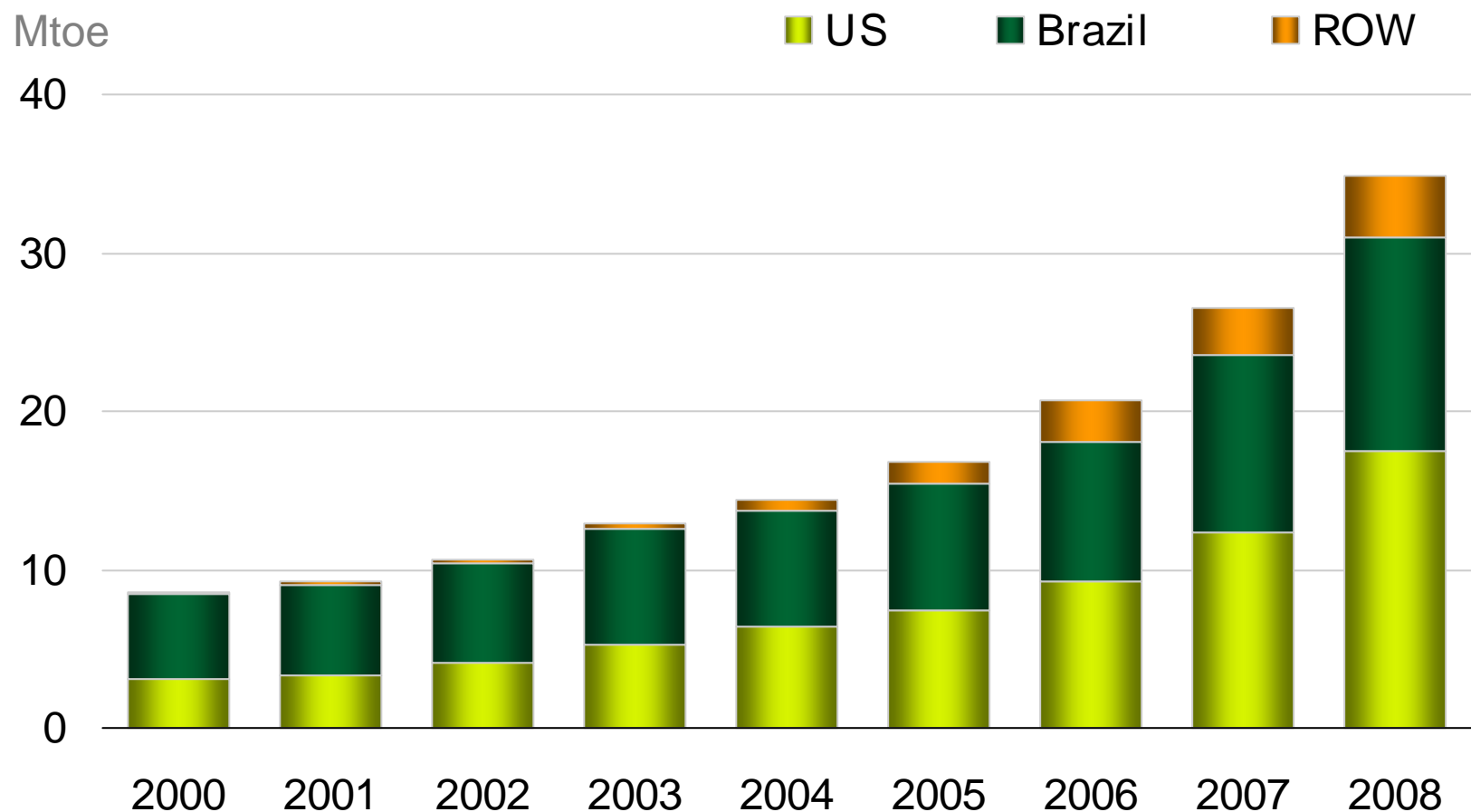
Changes in EU coal imports by source



Sources: Includes data from Eurostat

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Global Ethanol Production

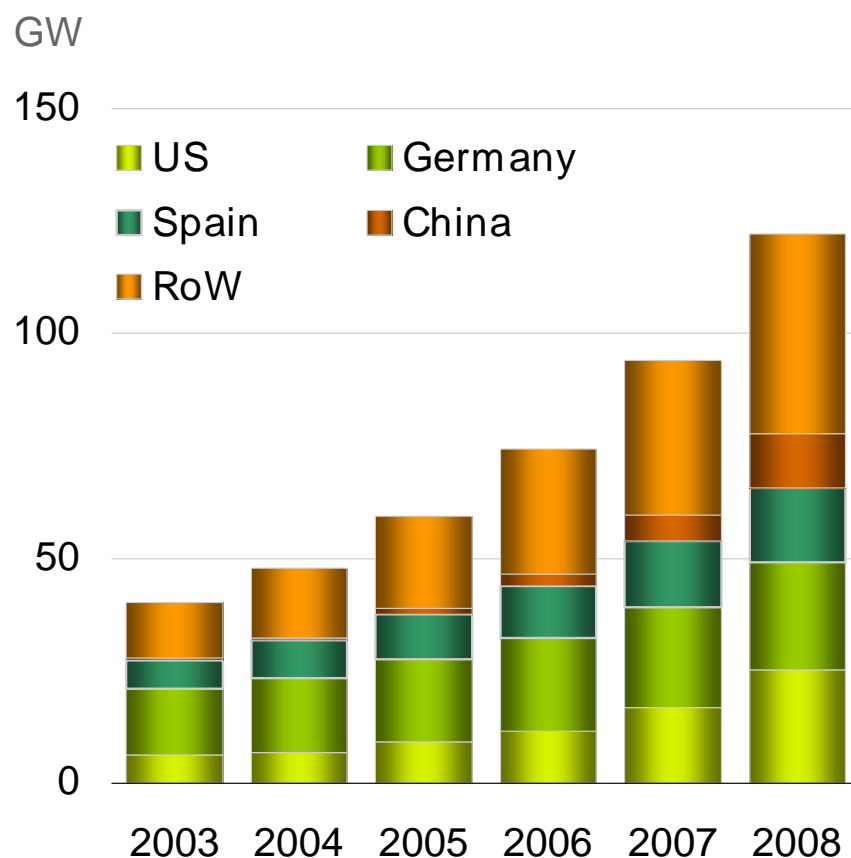


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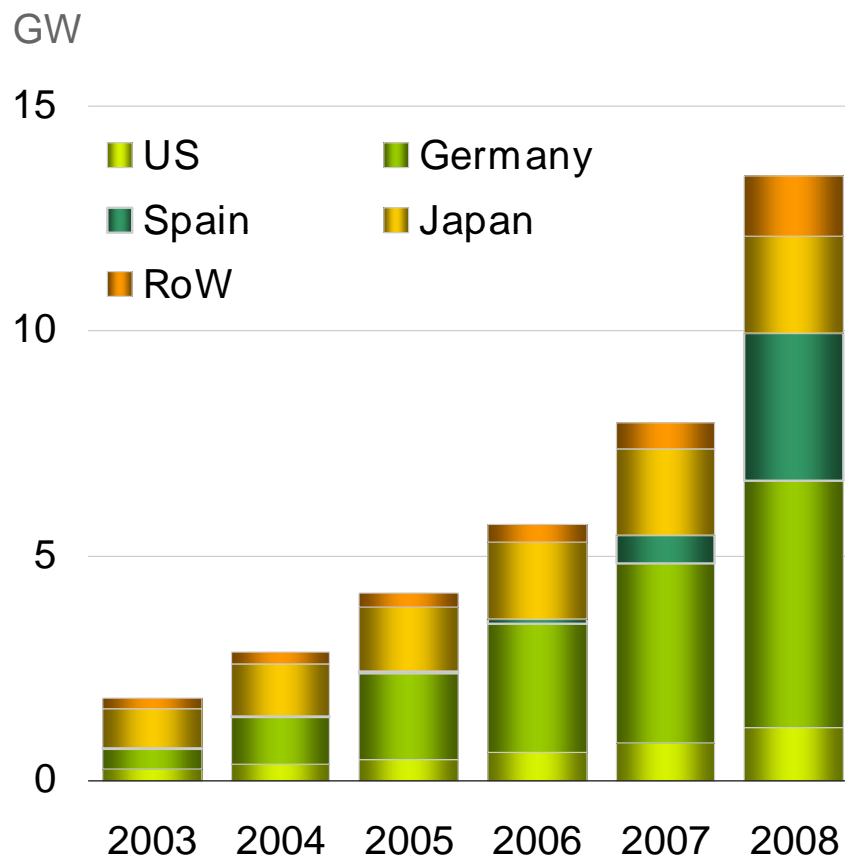
Renewable Energy



Wind capacity



Solar PV capacity



Sources: Includes data from BTM Consult, IEA, EPIA and EurObserver

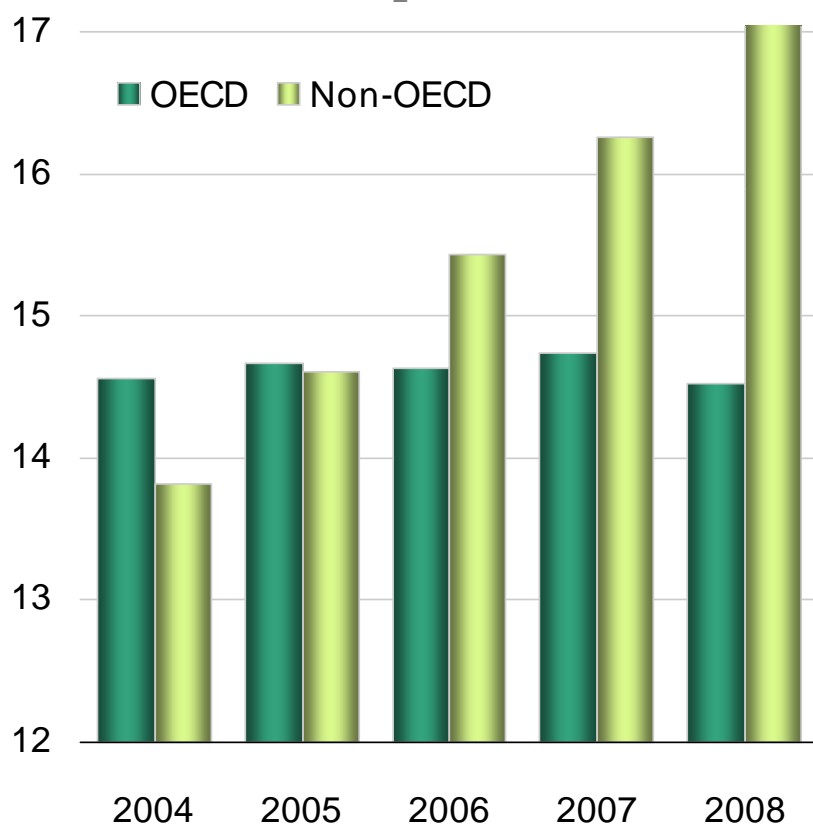
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CO₂ Emissions and Prices



Global CO₂ emissions

Billion tonnes of CO₂



EU Emissions Trading Scheme

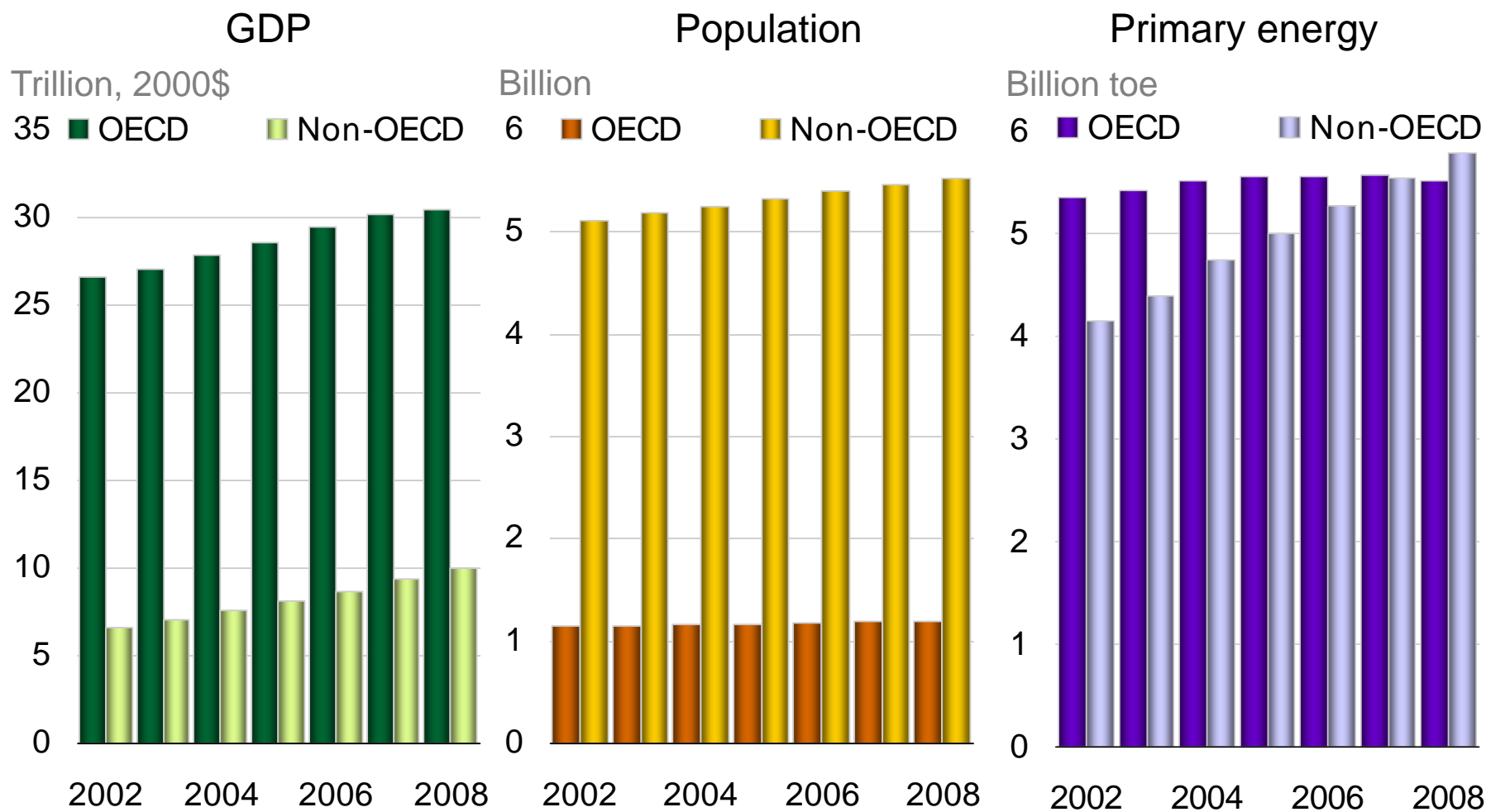
€/tonne of CO₂ equivalent



Source: Includes prices from European Climate Exchange

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GDP, Population and Primary Energy Consumption



Source: Includes data from Oxford Economics and US DOE

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Conclusion



- 2008: Rapid market adjustment
- Non-OECD: The future is here
- Volatility: Unavoidable in our industry?



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Volatility and Structural Change

Q & A

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