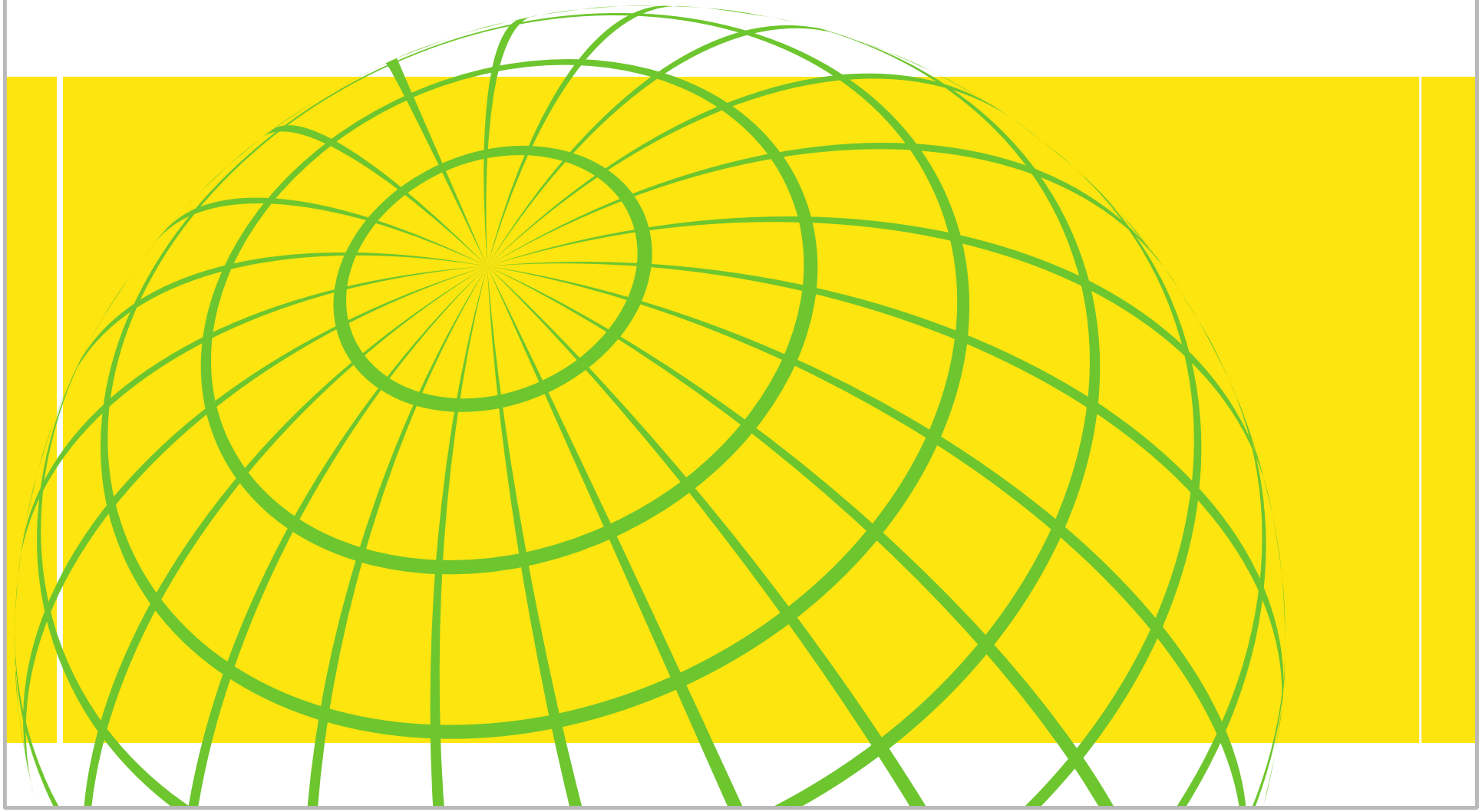
BP Energy Outlook 2030

August 2013 – Focus on North America



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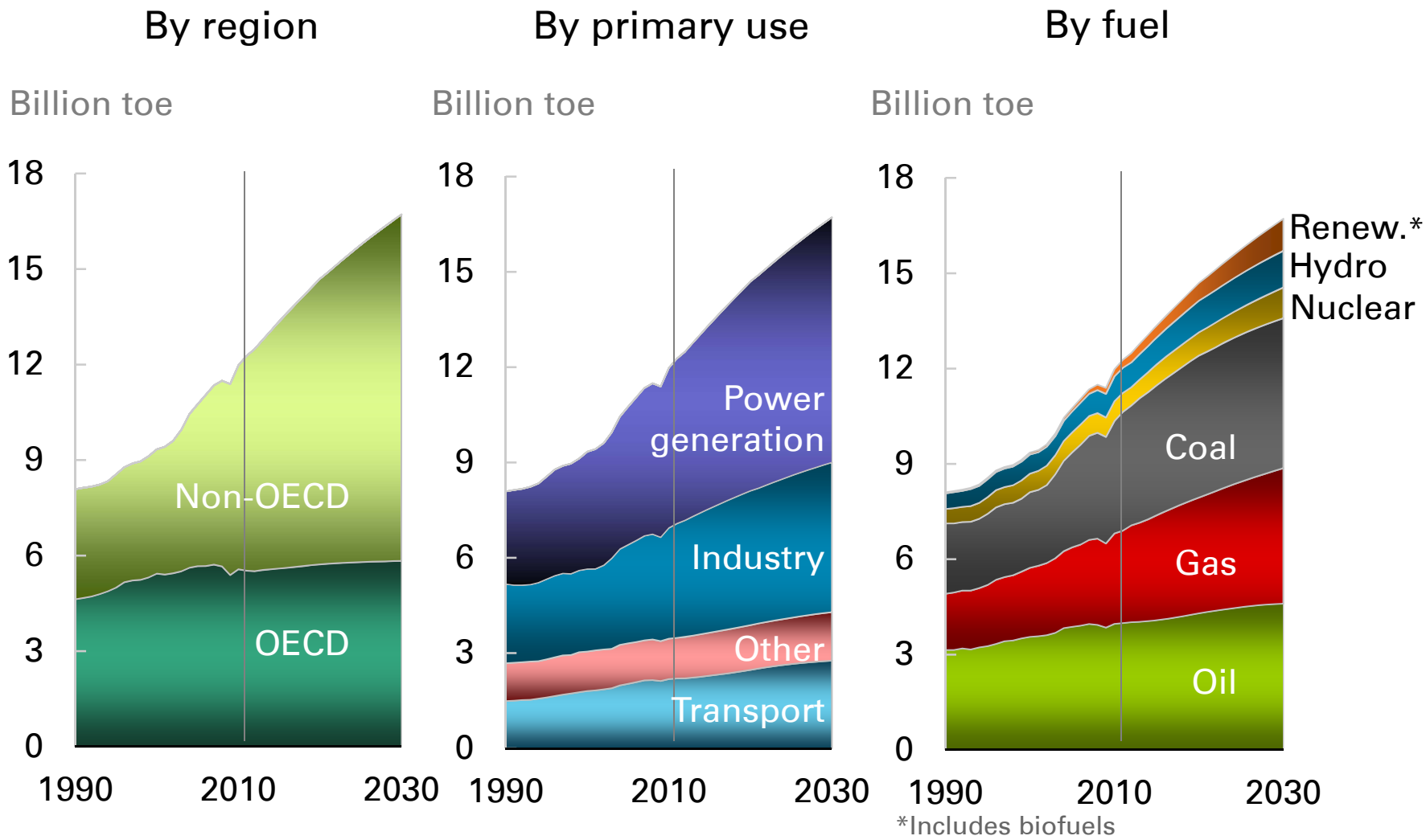
Industrialization drives energy growth



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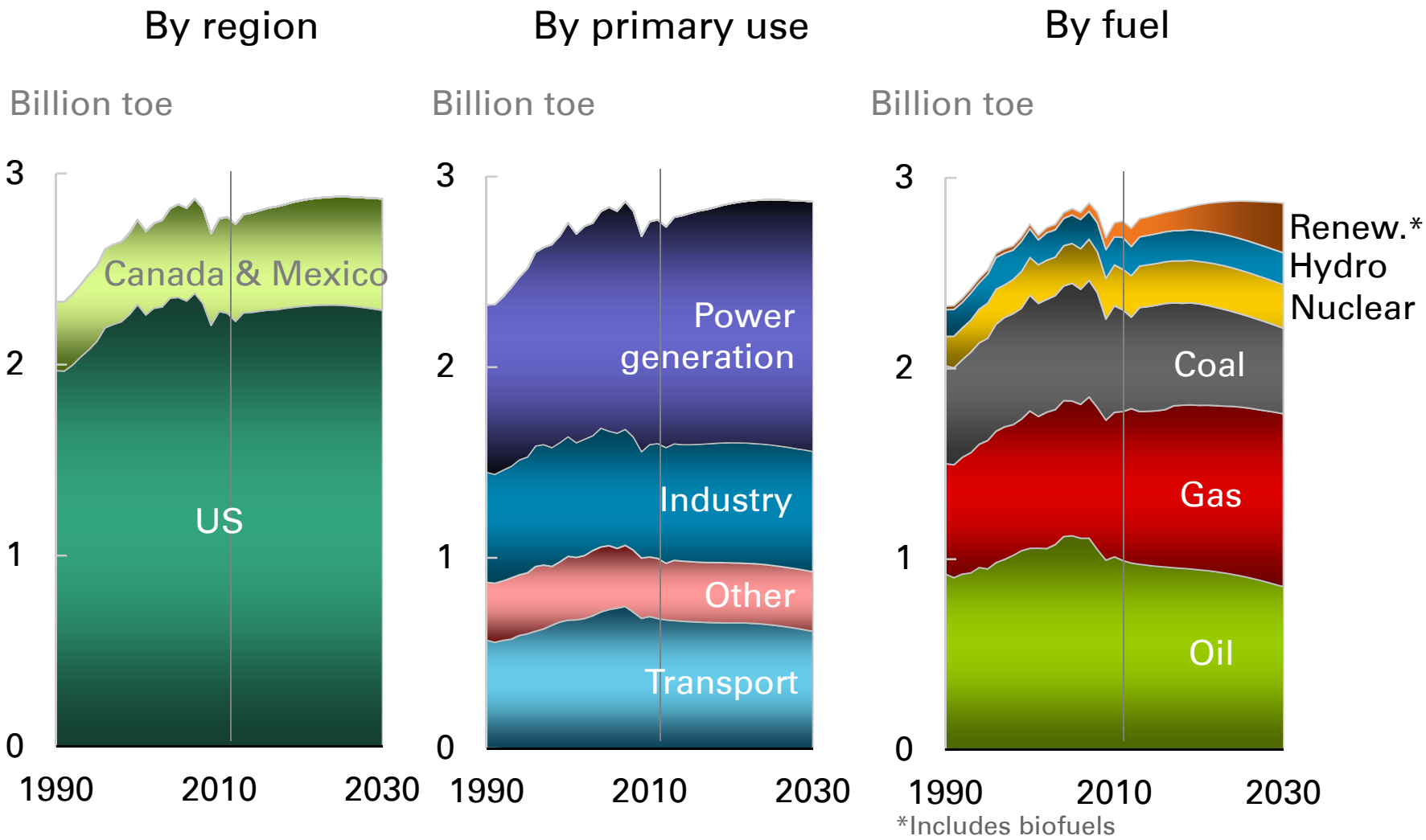
North American energy use rises slightly



*Includes biofuels

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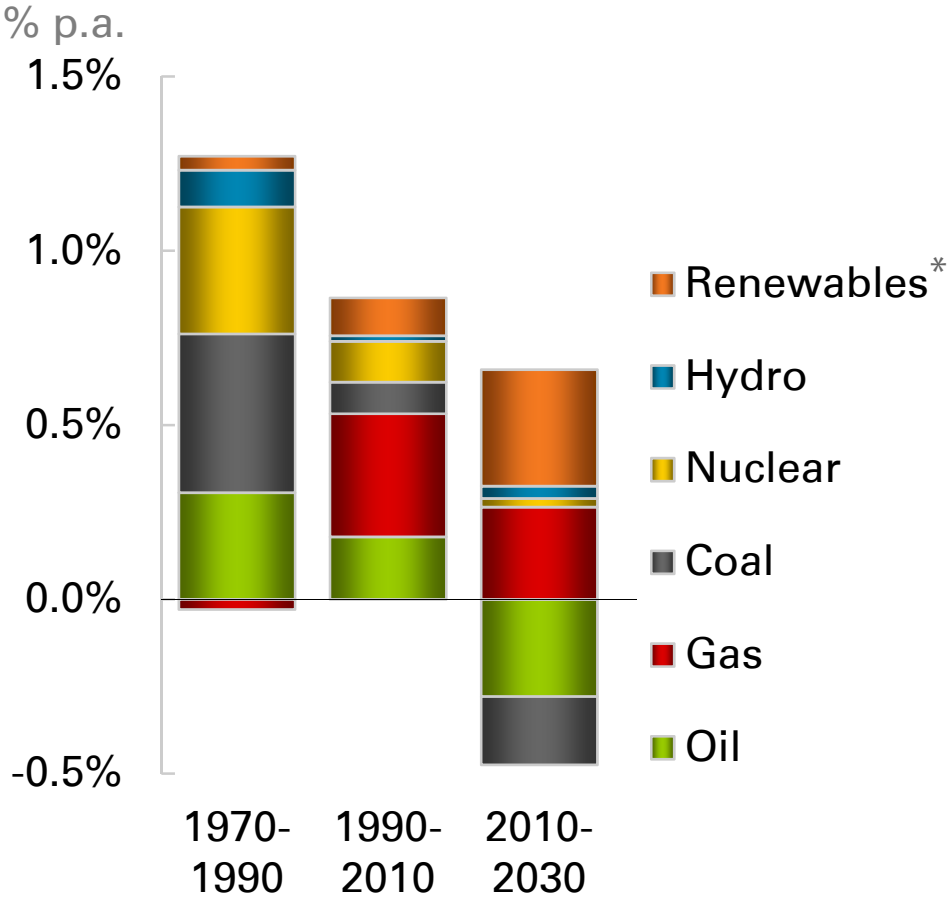
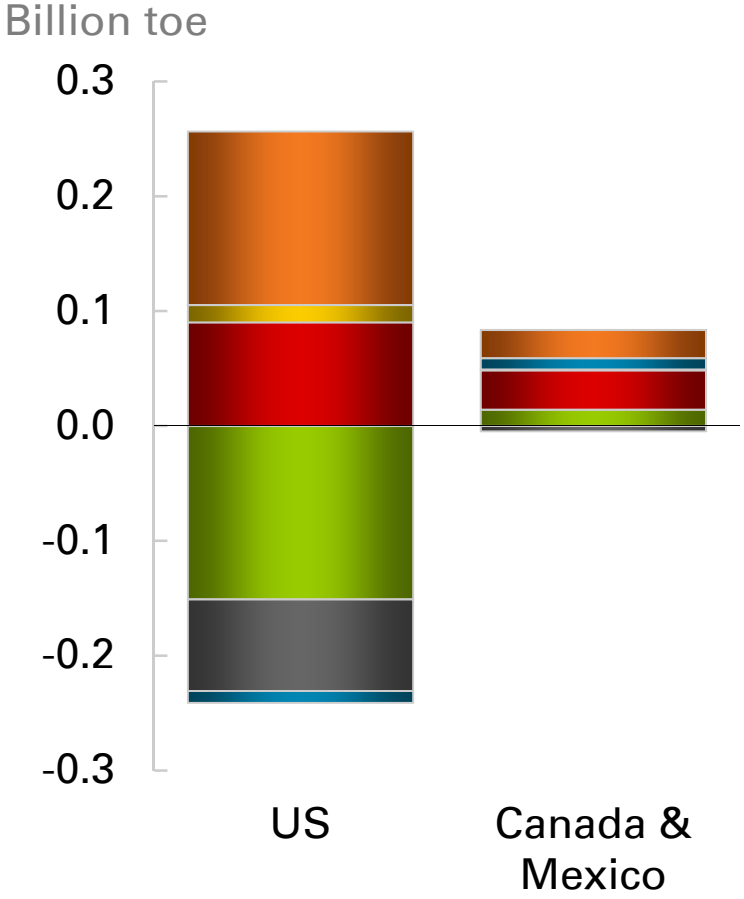
Declining demand growth amid fuel substitution





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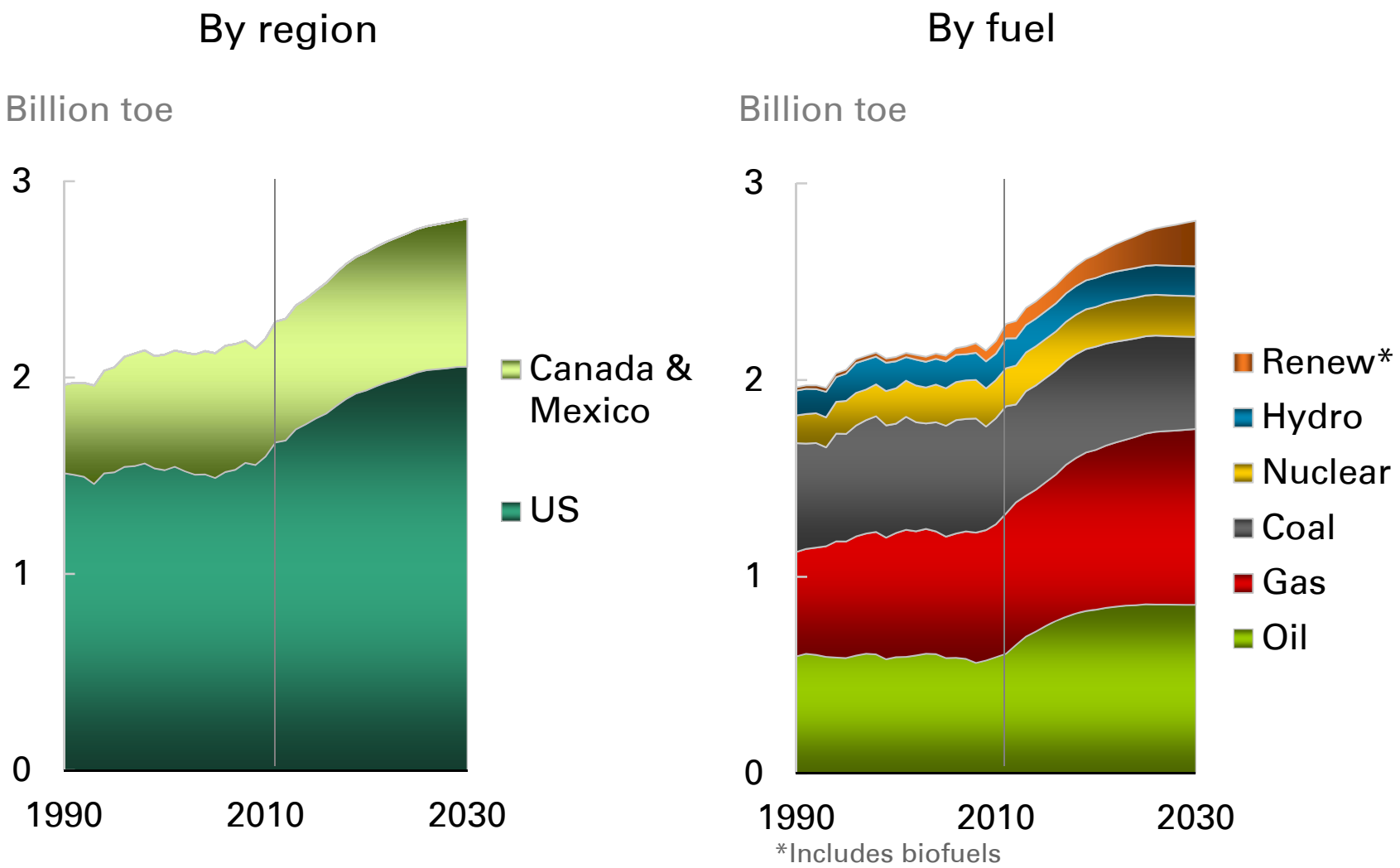
North American production expands significantly



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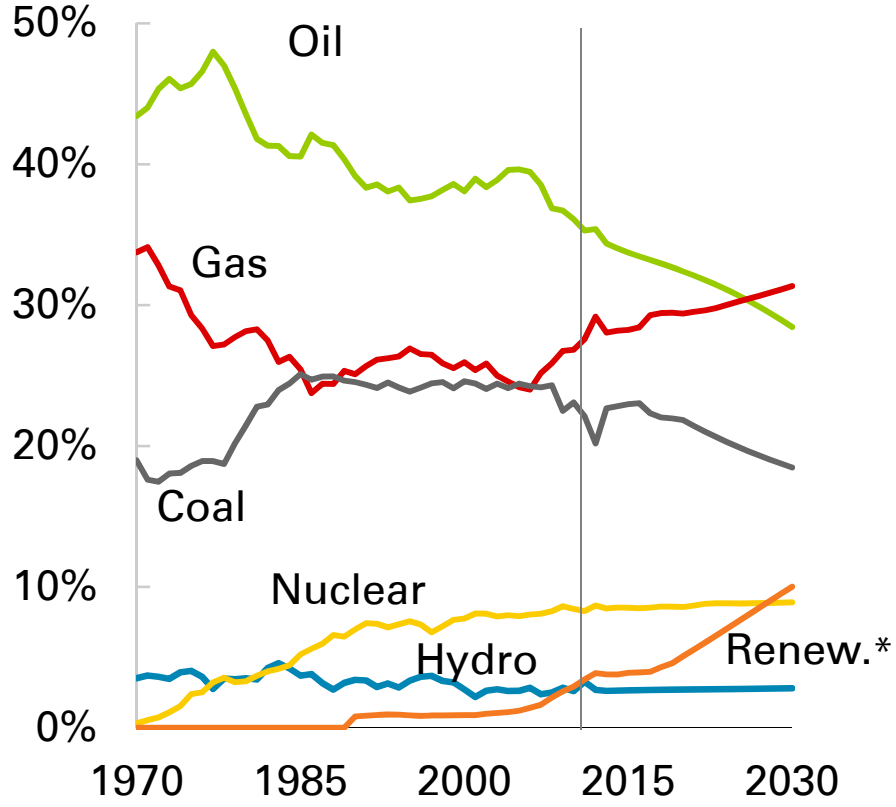
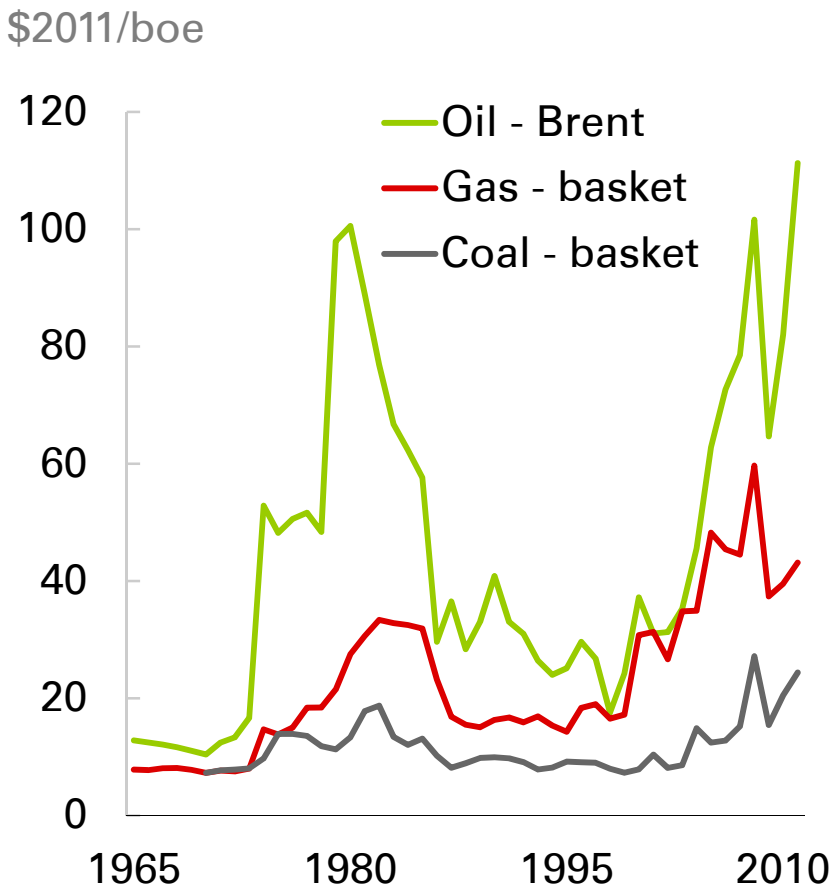
Fuel shares and energy prices





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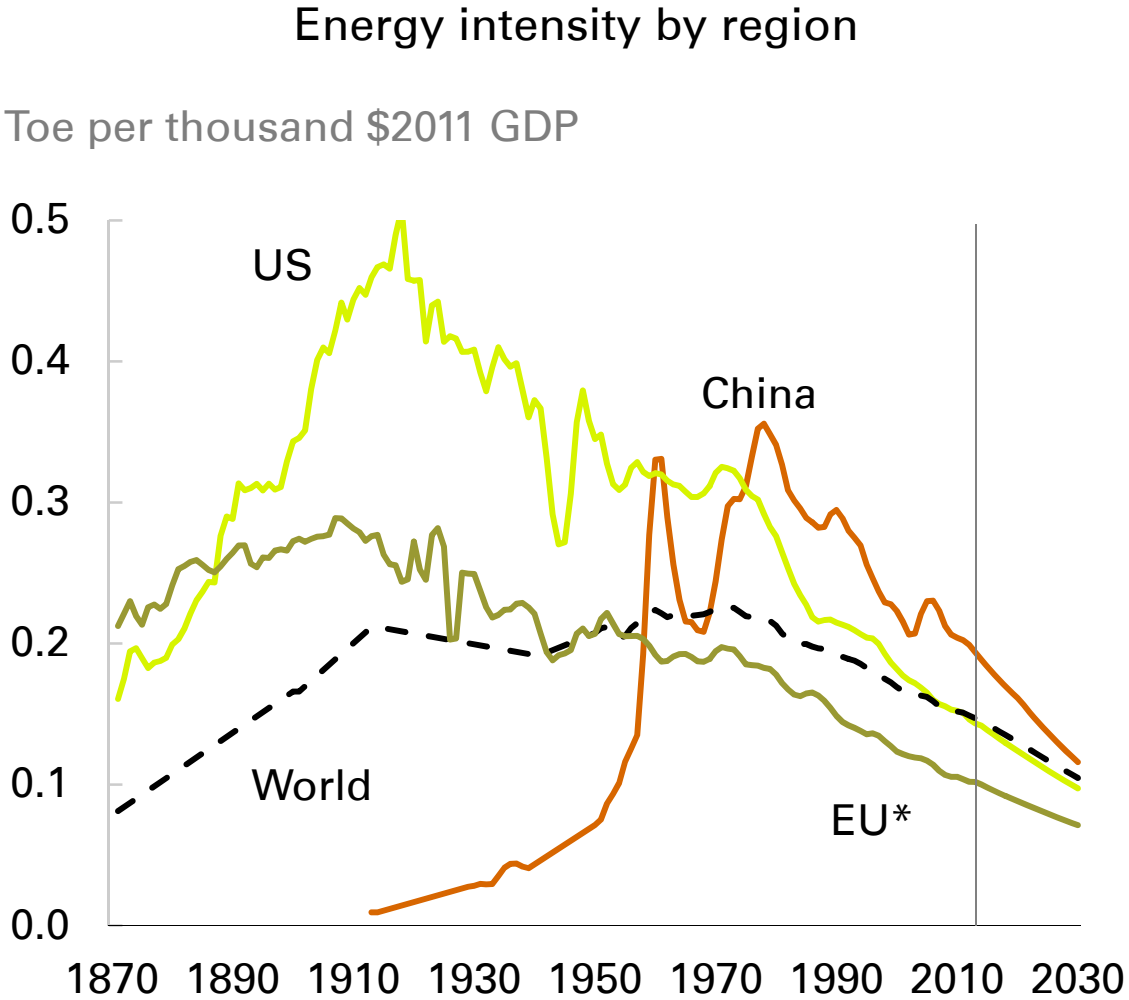
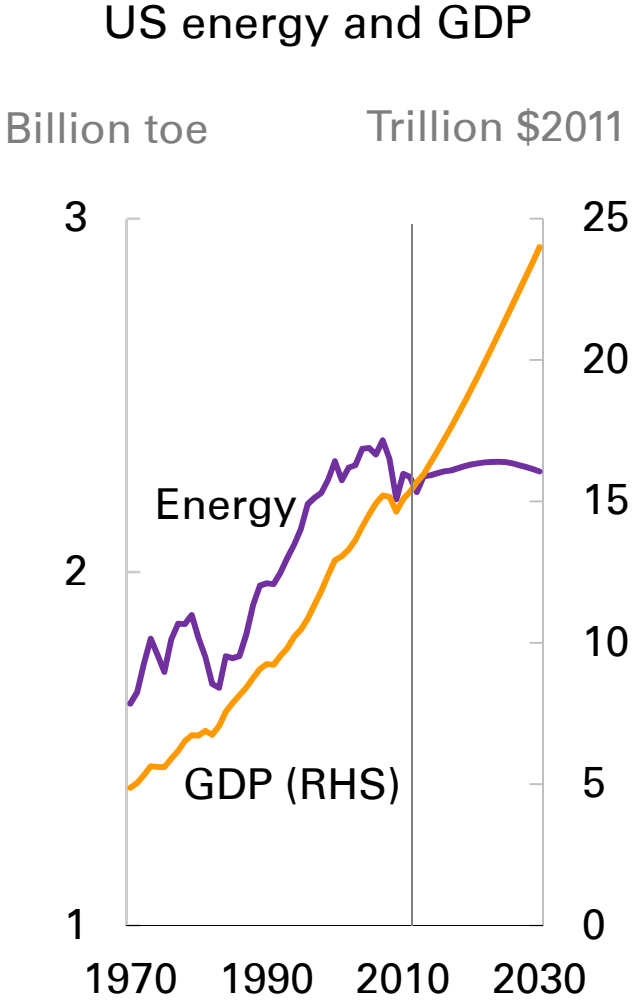
Energy intensity improvements





*Euro4 (France, Italy, Germany, UK) pre-1970

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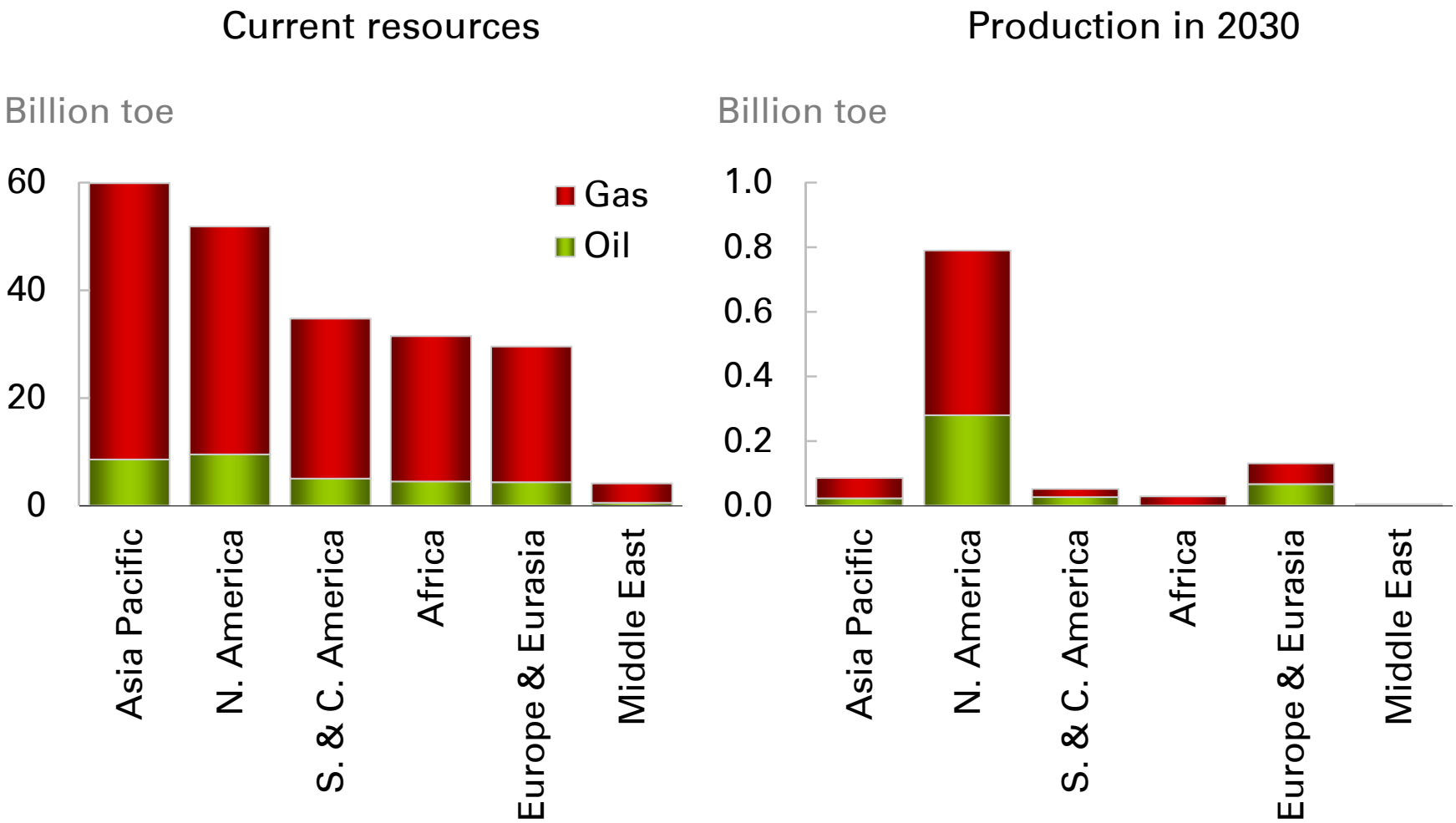
Shale gas and tight oil: resources and production



Source: © OECD/IEA 2012

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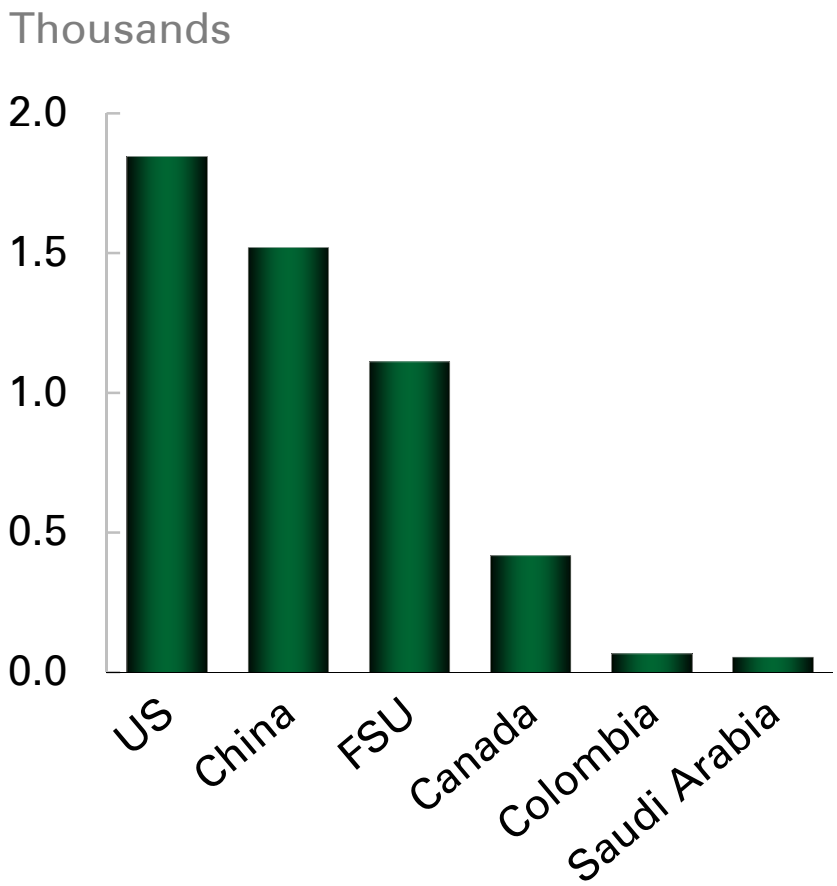
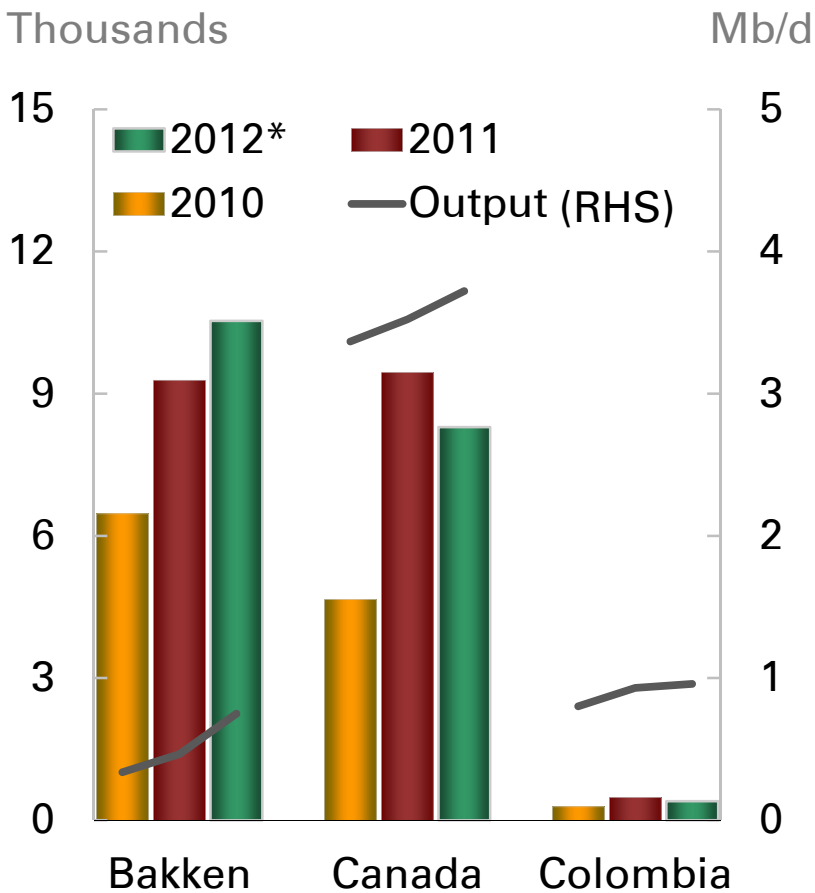
US tight oil and shale gas: robust service sector

Onshore oil & gas rigs 2011



Source: Baker Hughes and Smith Bits

Oil wells drilled and output



*Annualized from 1Q-3Q data

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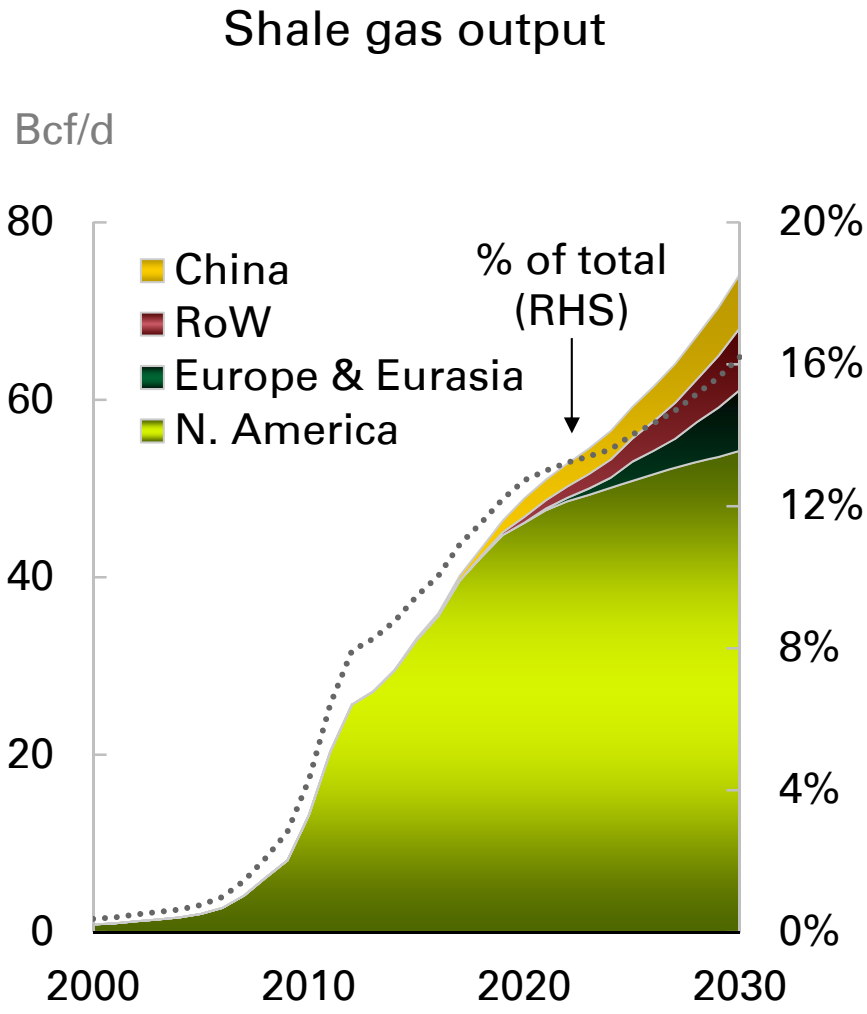
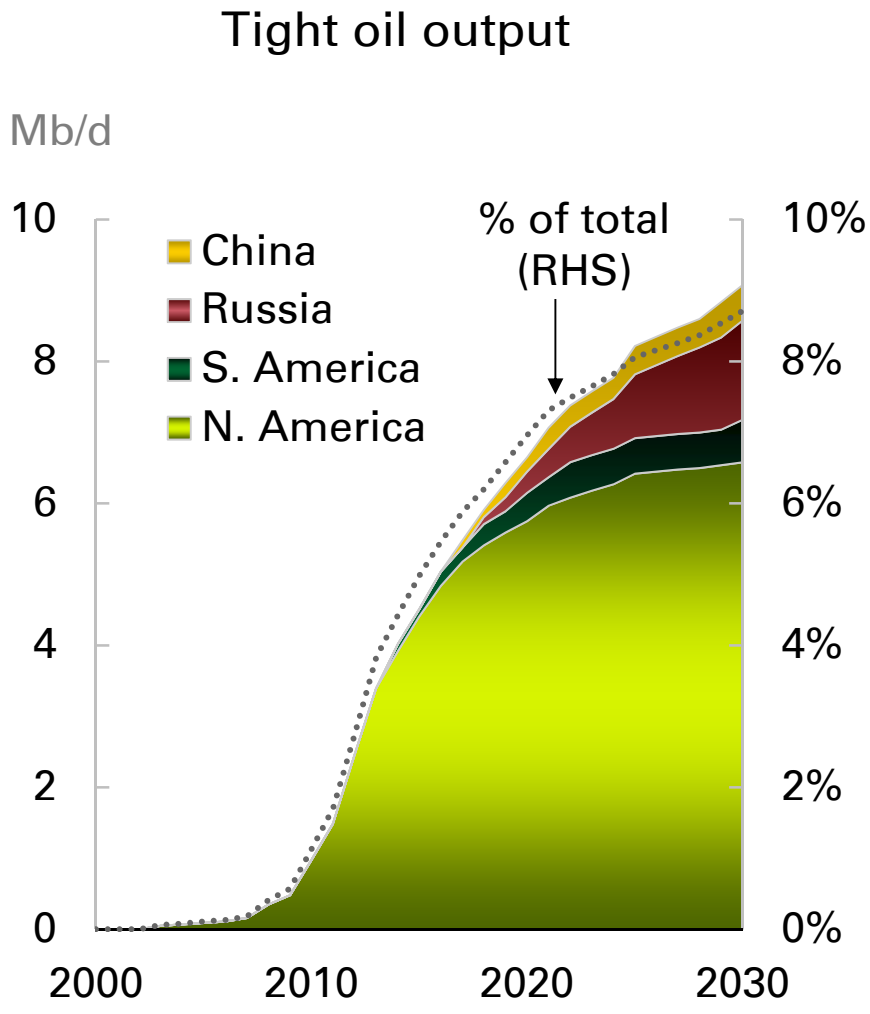
North America will dominate production





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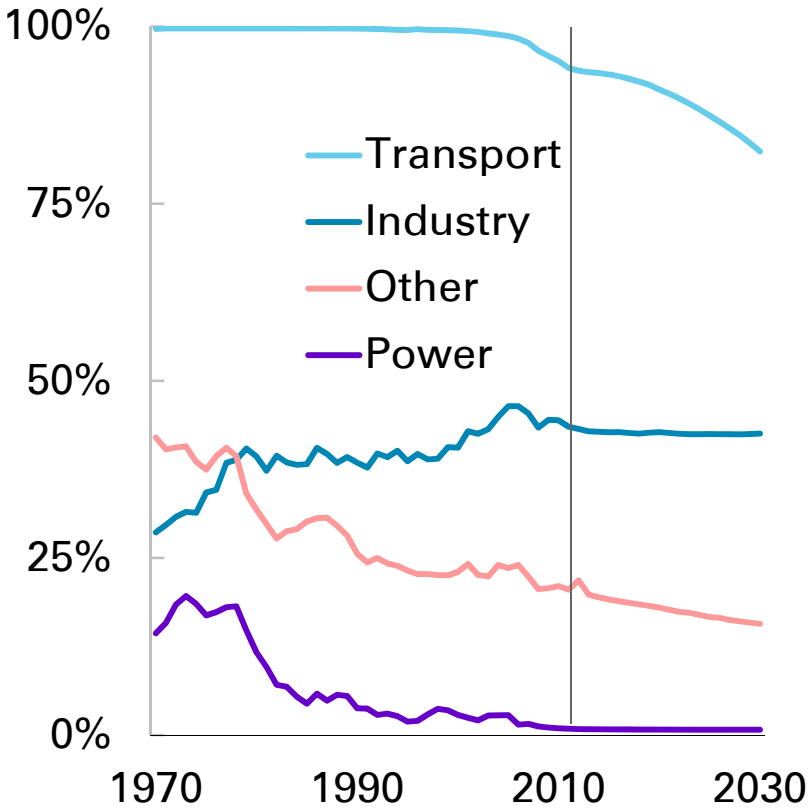
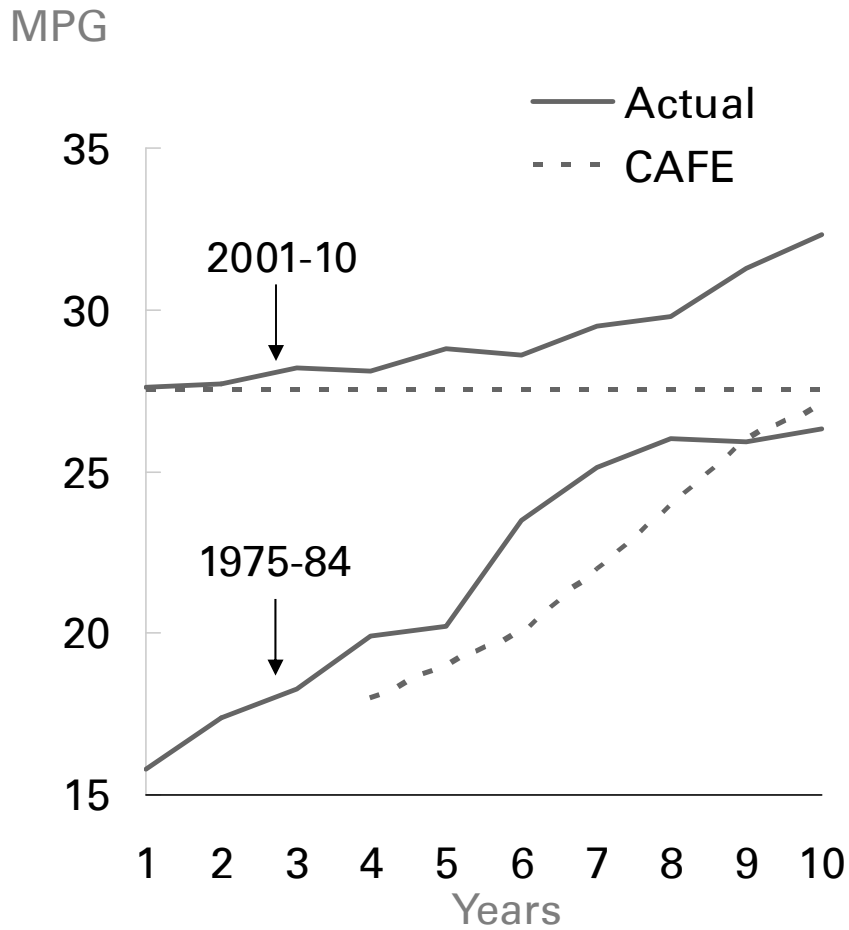
High oil prices are reducing oil's share of primary energy

Oil's share by sector in the US



Fuel economy of new cars



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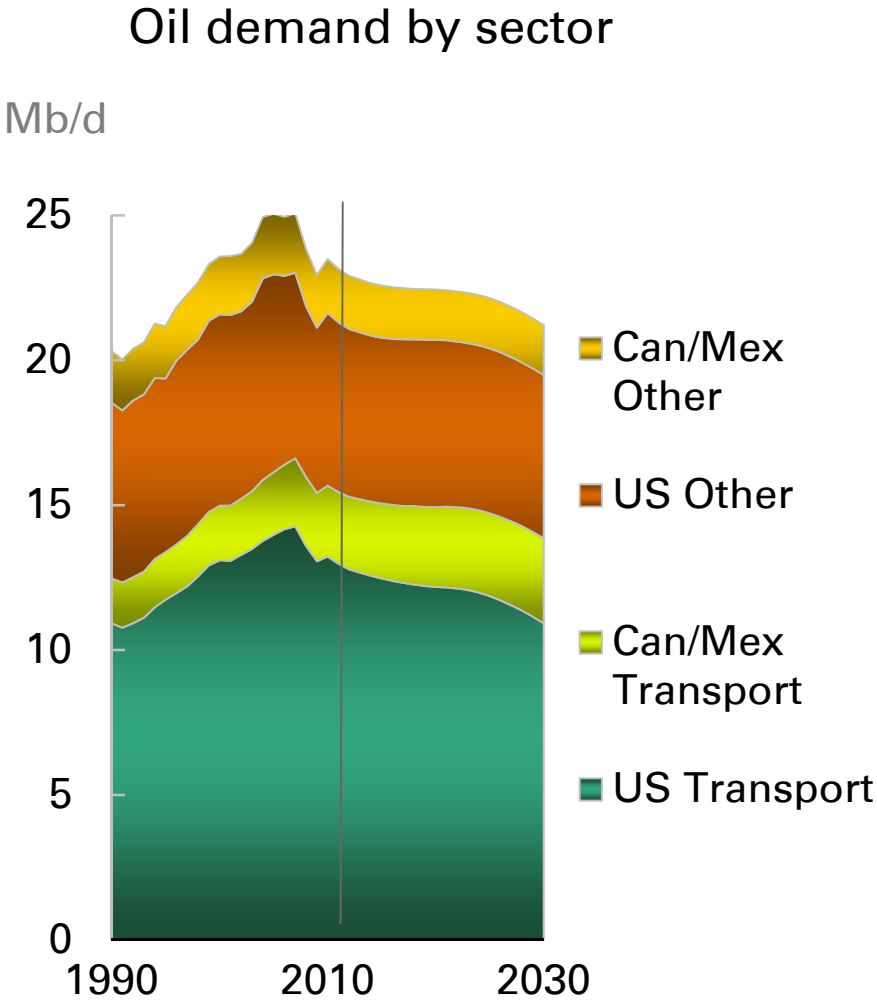
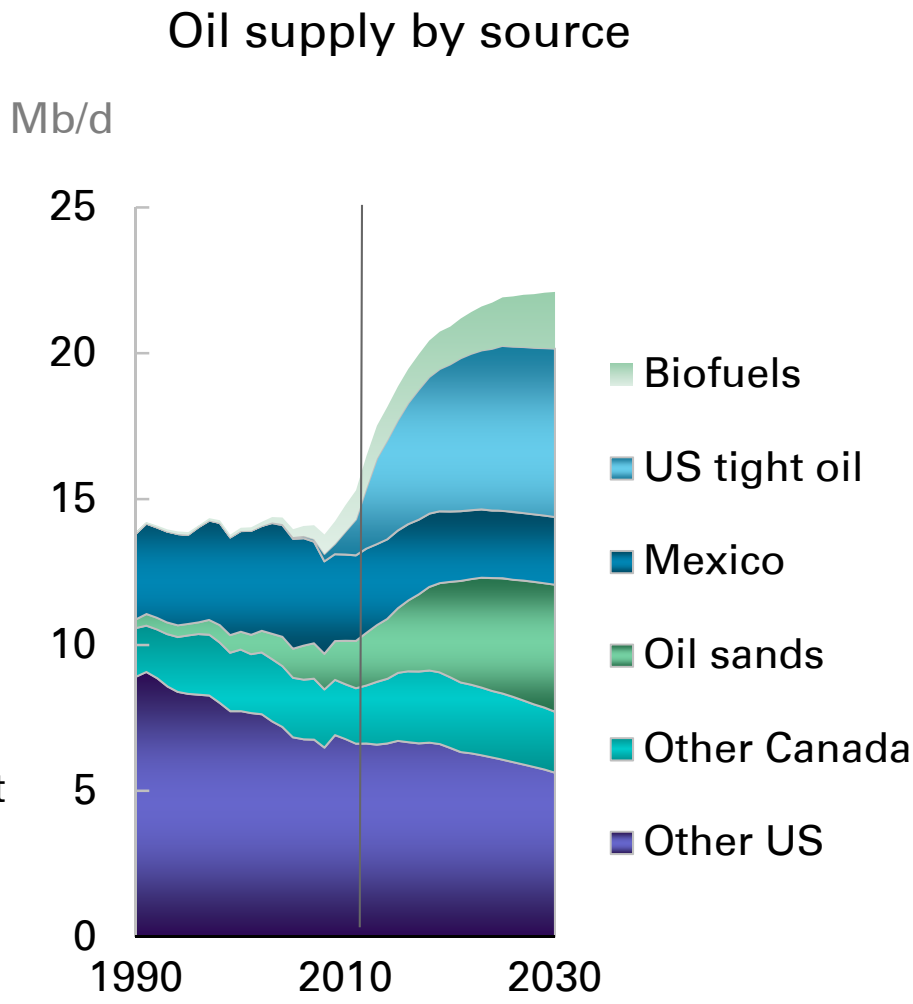
North American liquids demand and supply





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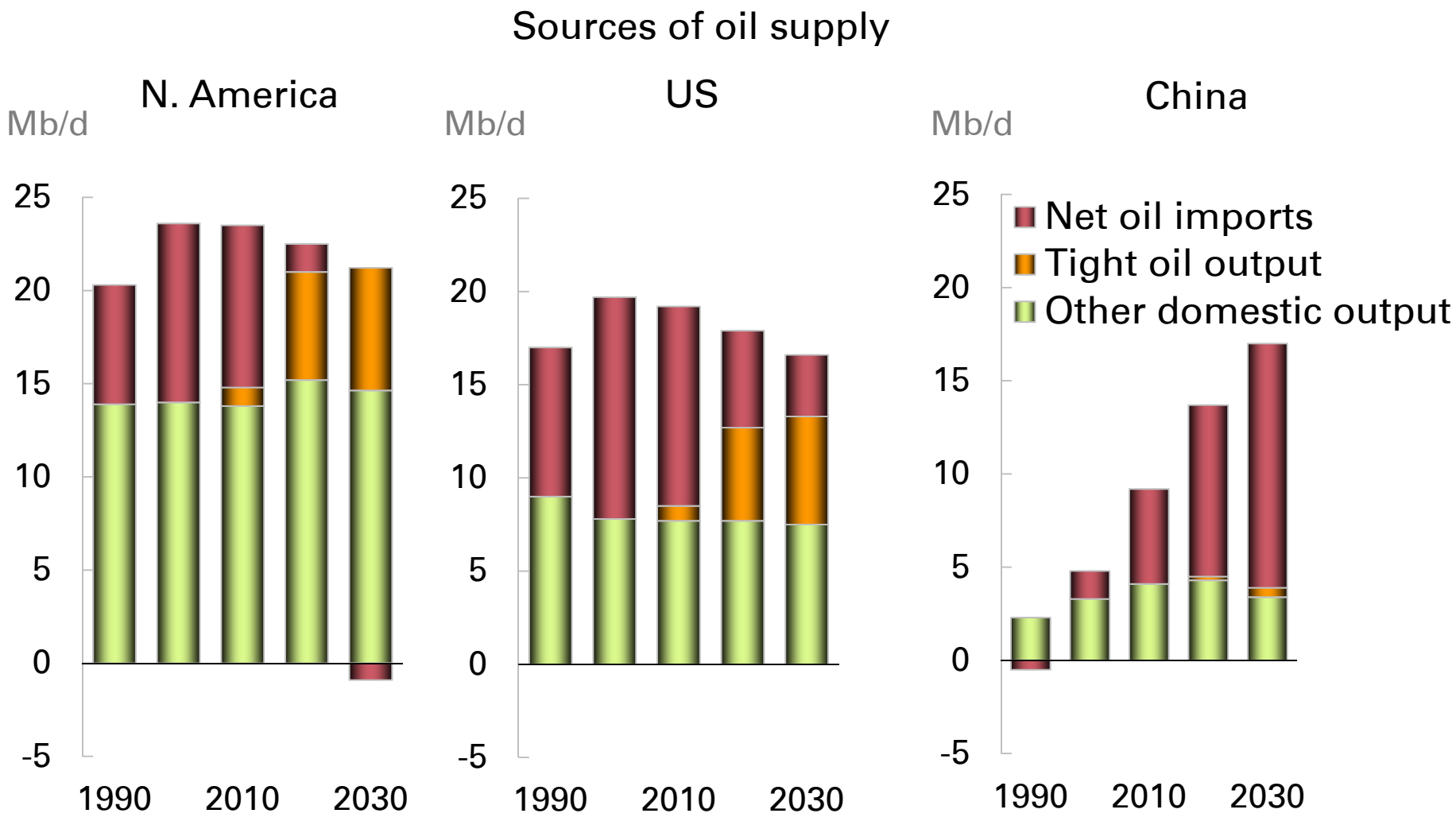
Tight oil brings self-sufficiency to North America



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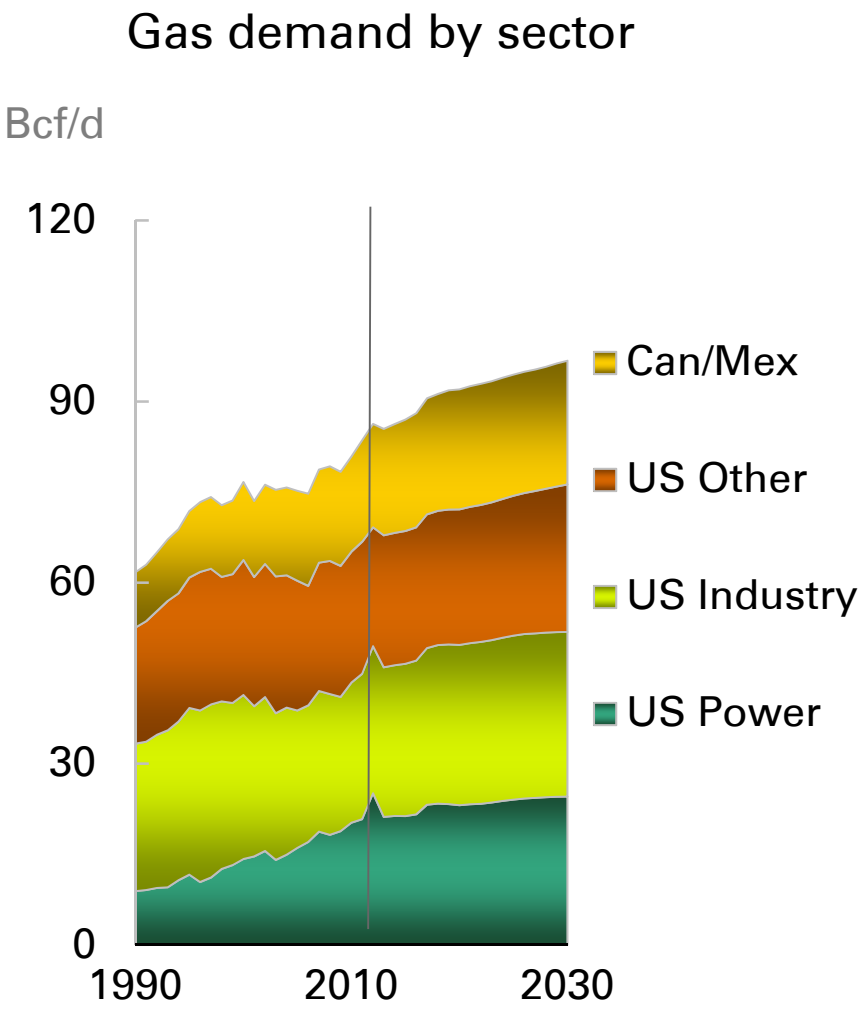
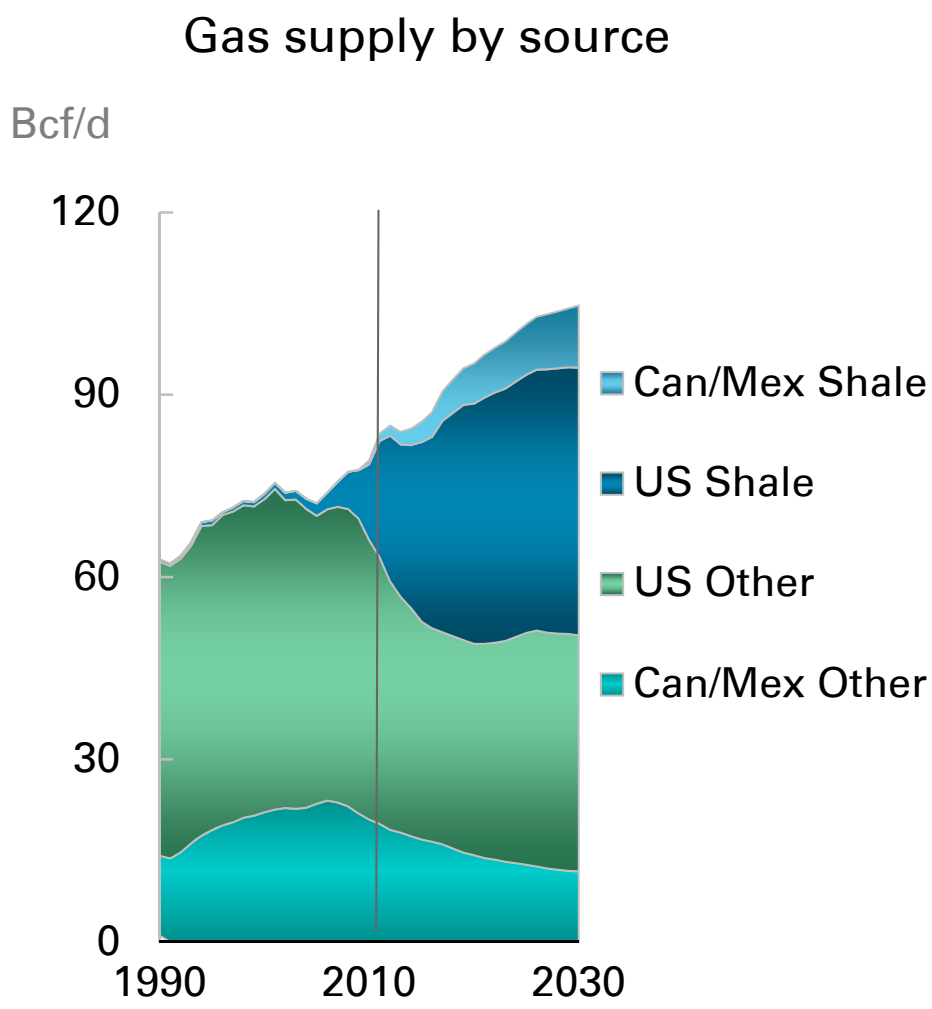
North American natural gas demand and supply





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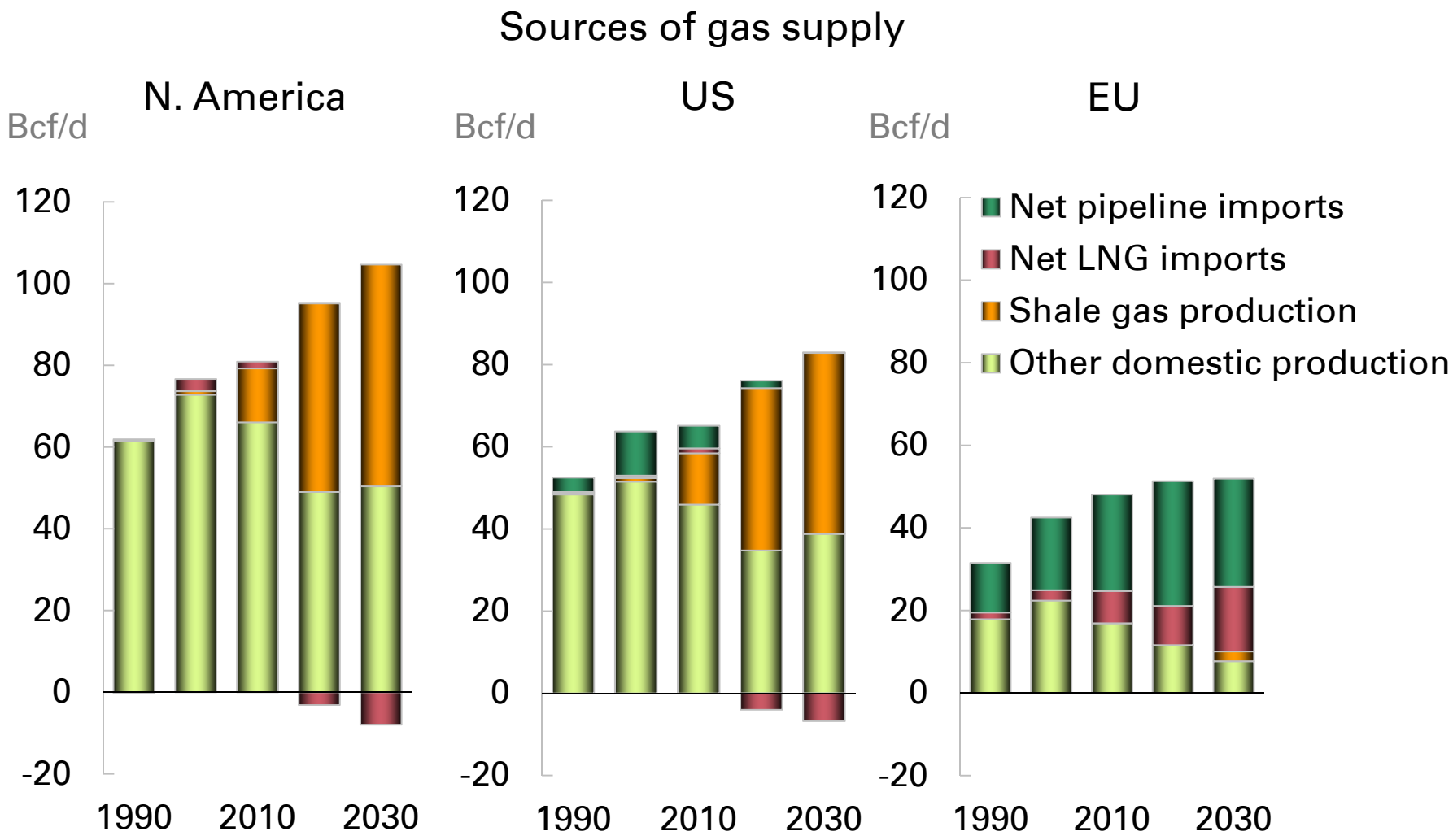
Shale gas improves North America gas balances



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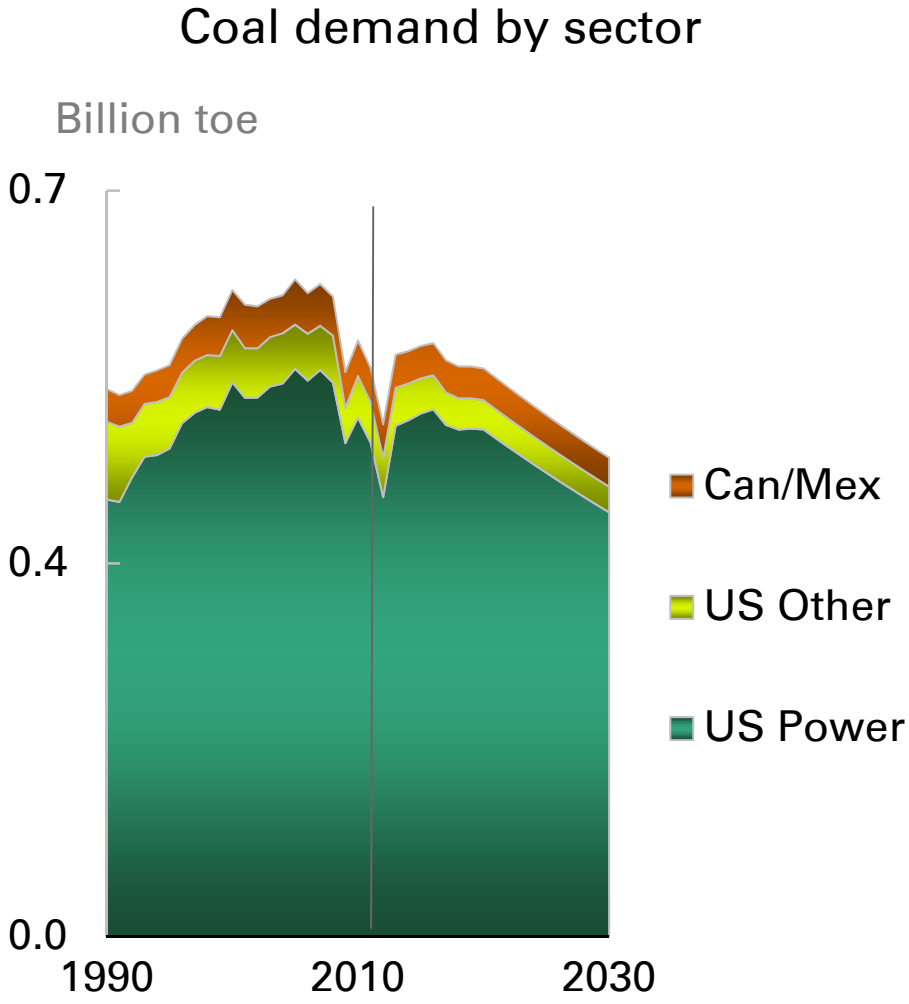
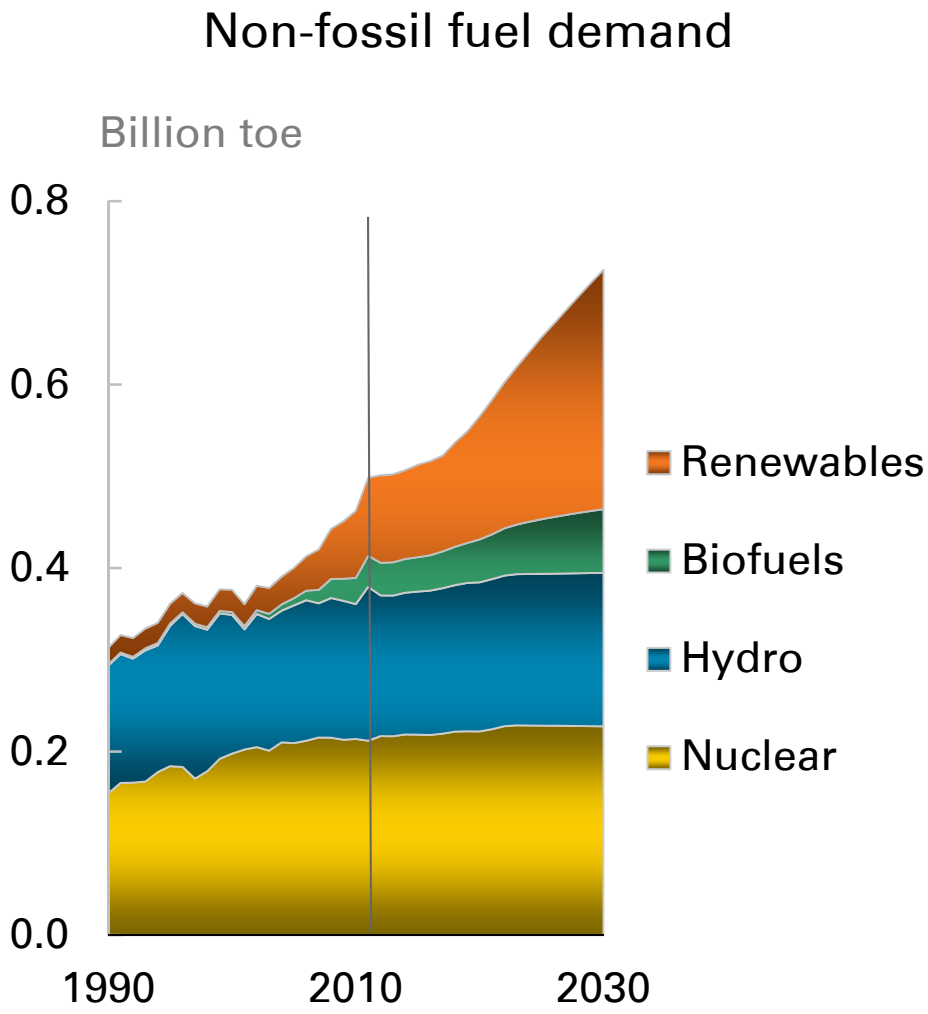
Coal demand falls, renewables on the rise





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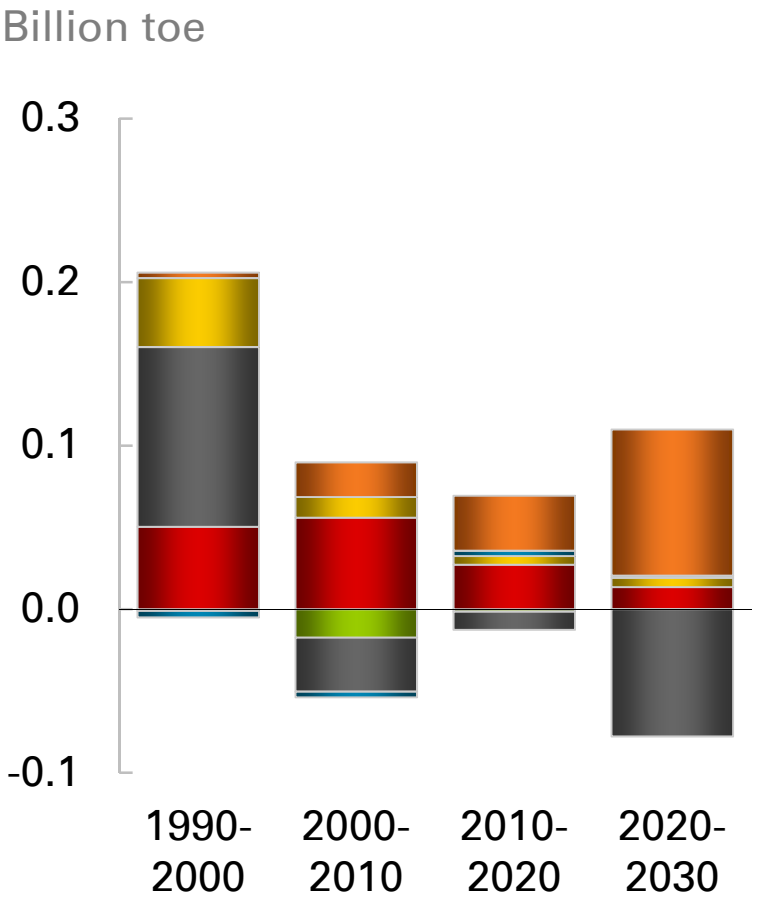
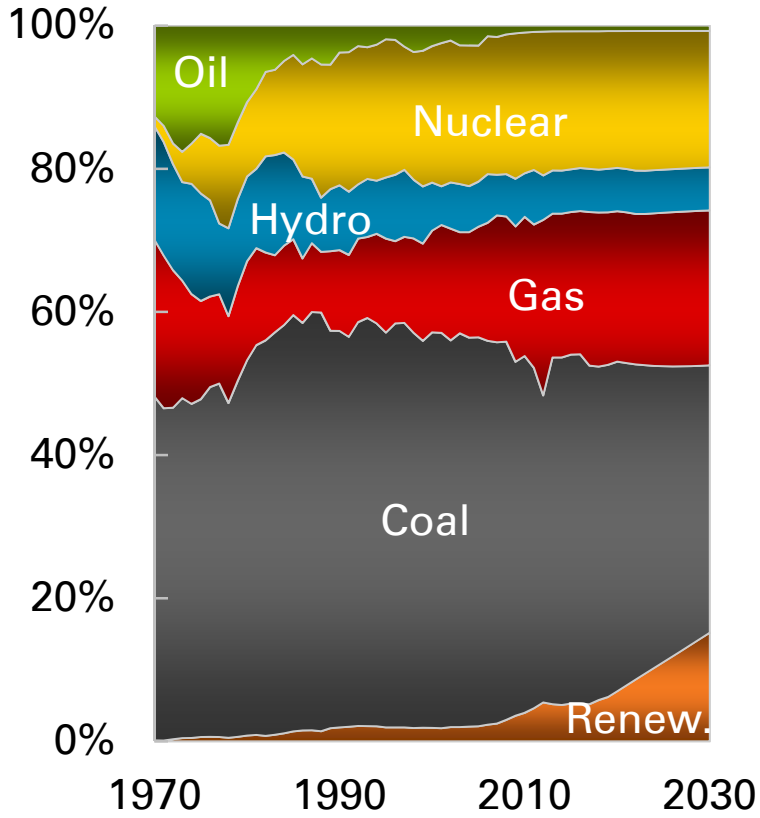
US power use grows as the fuel mix continues to evolve

Growth of fuel inputs to power



Shares of US power output



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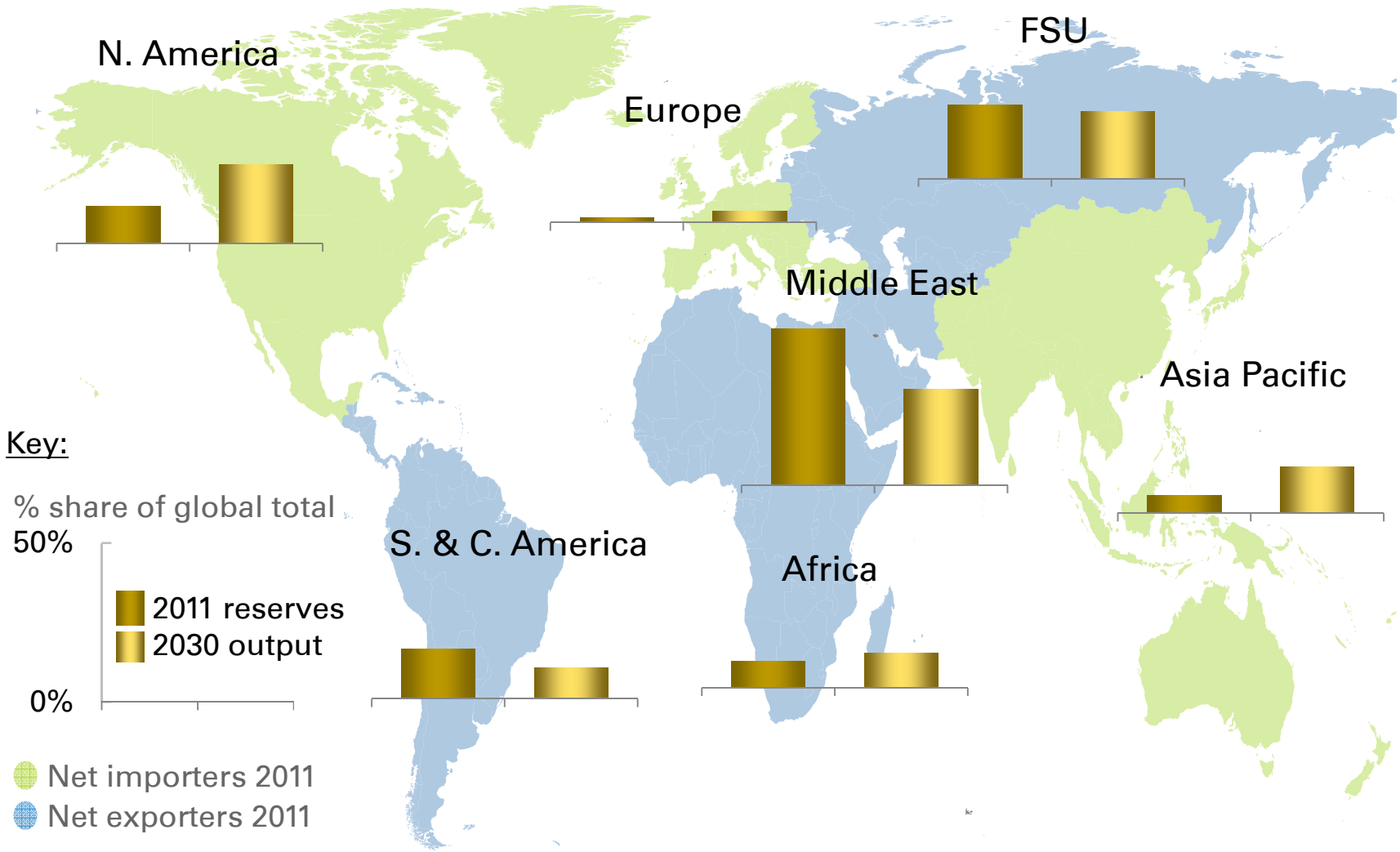
Oil and gas: reserves and production



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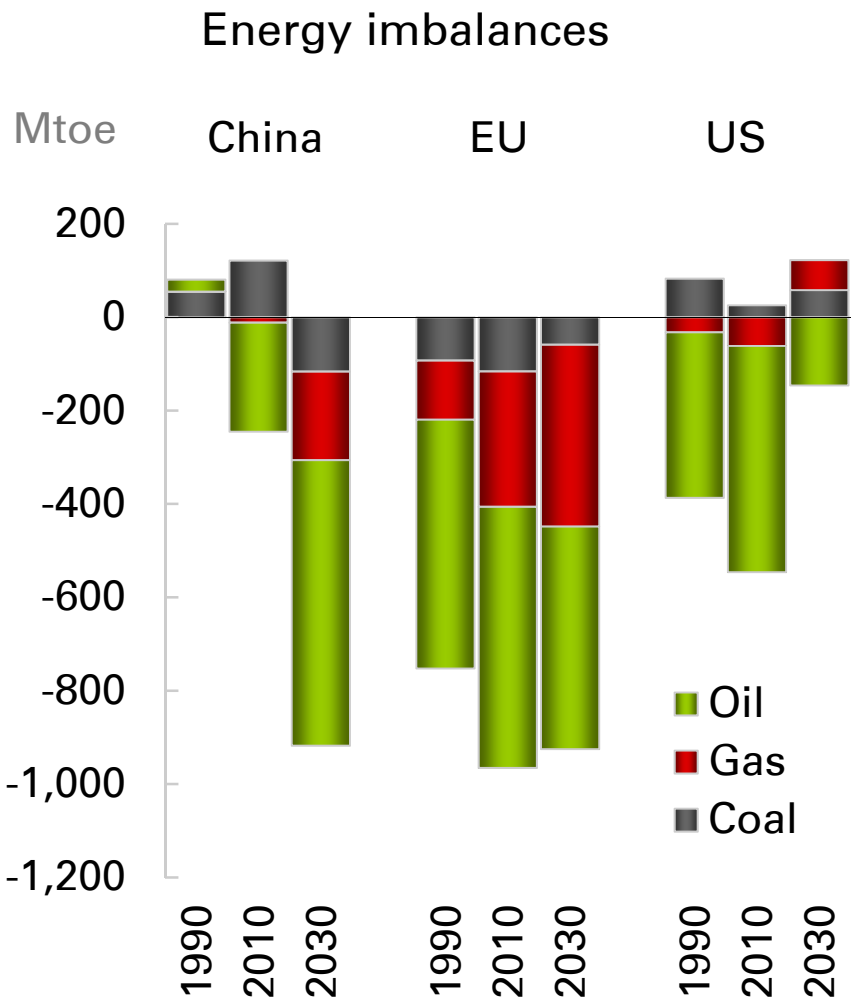
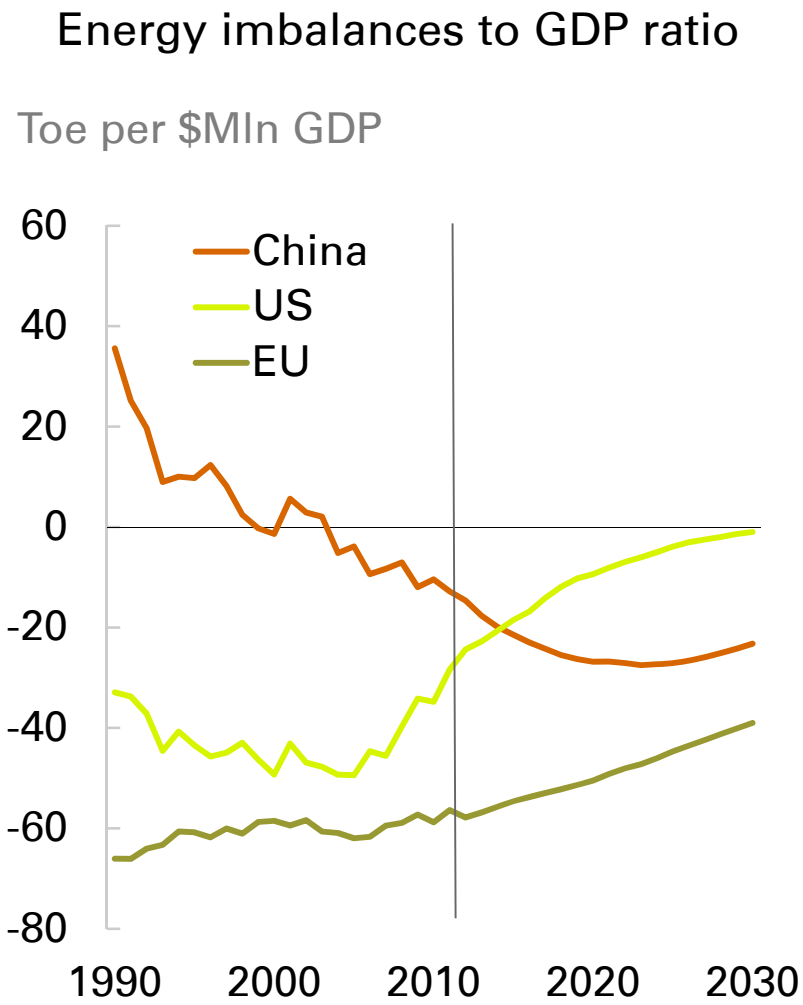
Energy imbalances: import profiles





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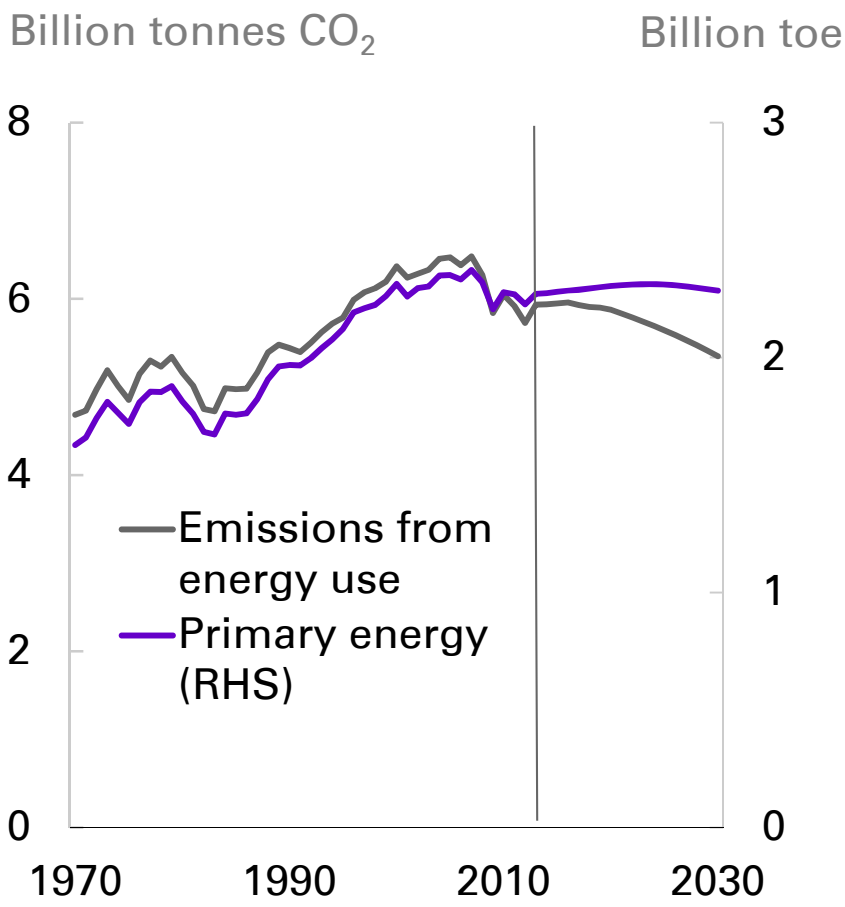
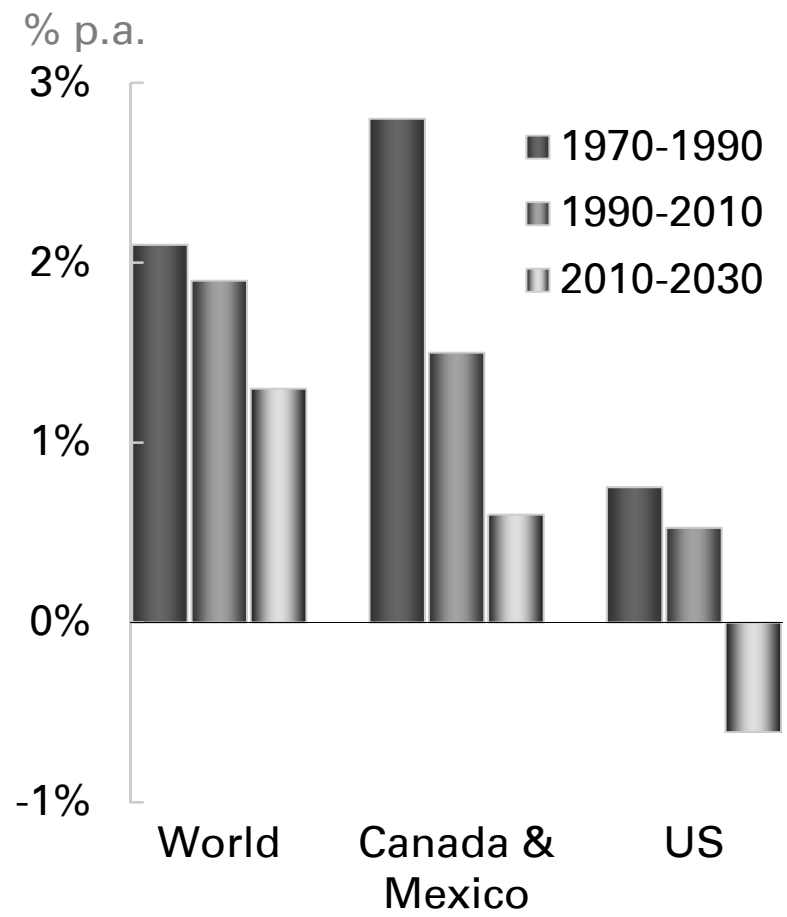
Energy and carbon emissions

US CO_2 emissions and primary energy



Growth of CO_2 emissions



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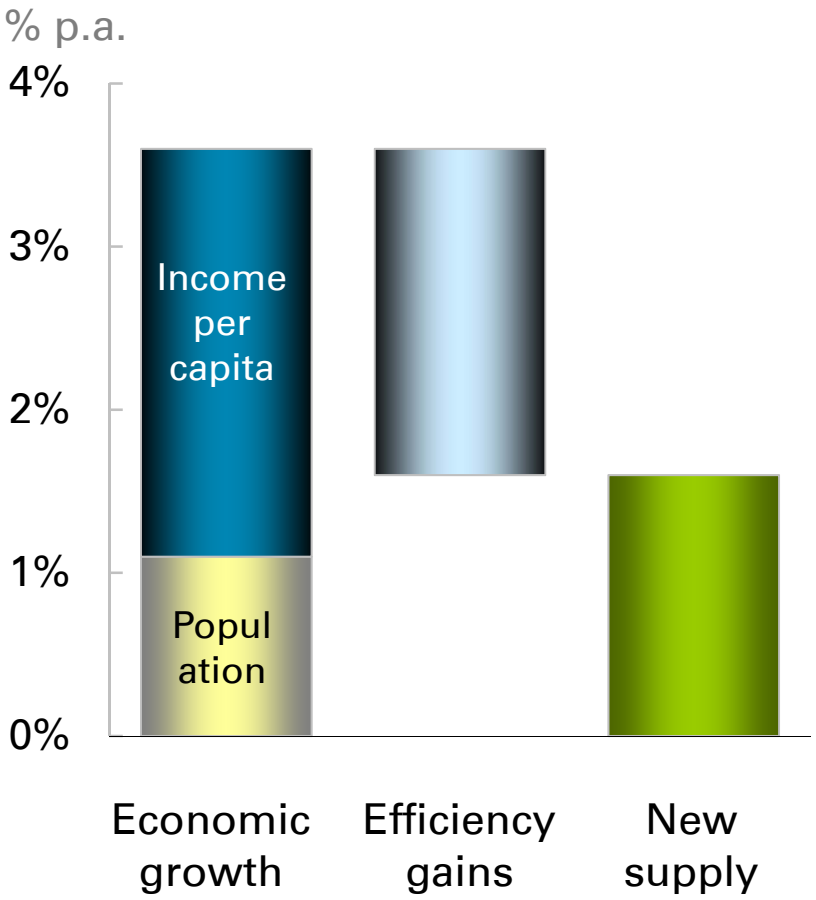
Conclusion

Global changes in GDP and energy



- Economic growth needs energy
- Competition and innovation are the key to meeting this need
  - energy efficiency
  - new supplies
- Energy security and climate change remain challenges

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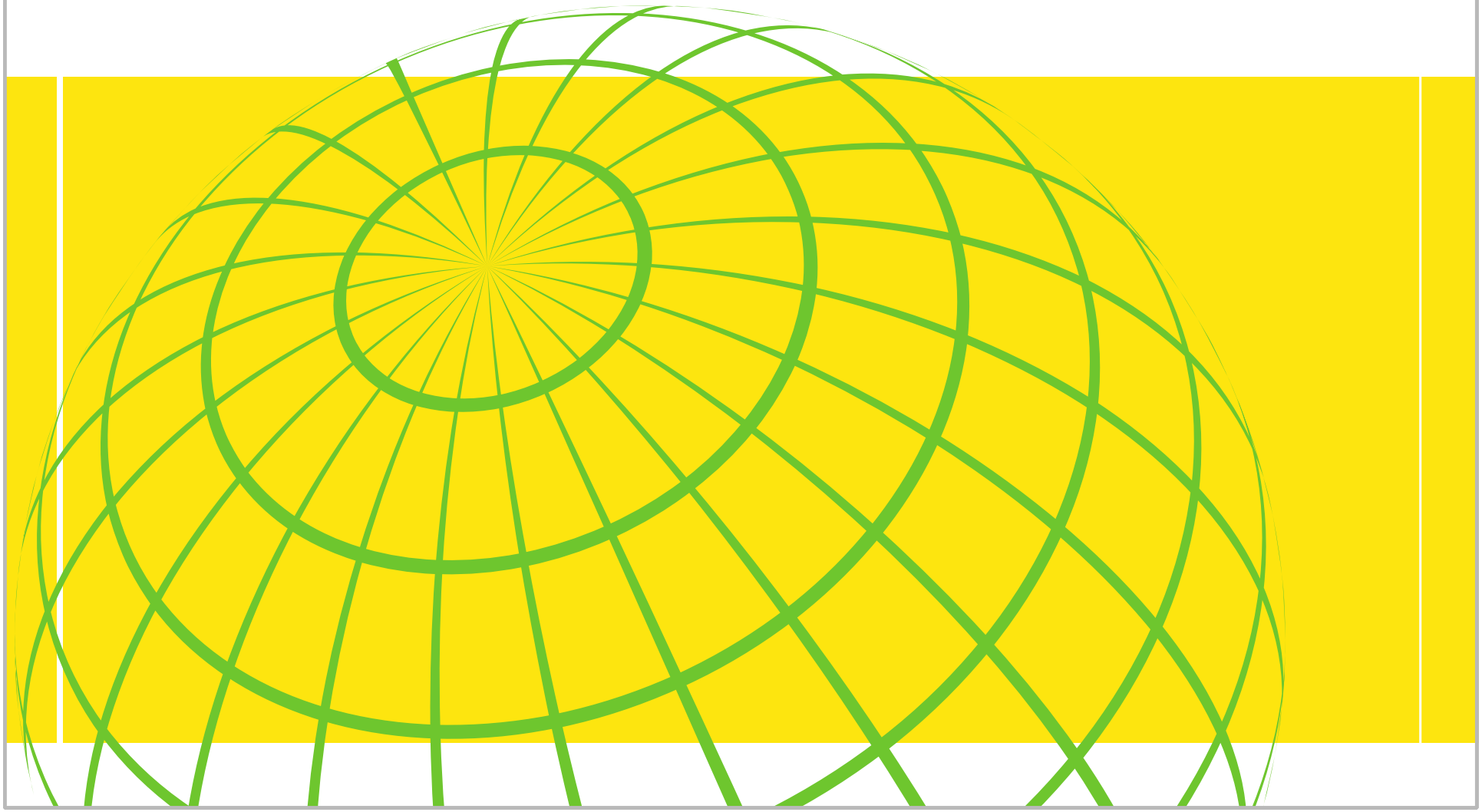
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