

BP Energy Outlook

2016 edition



Spencer Dale, group chief economist

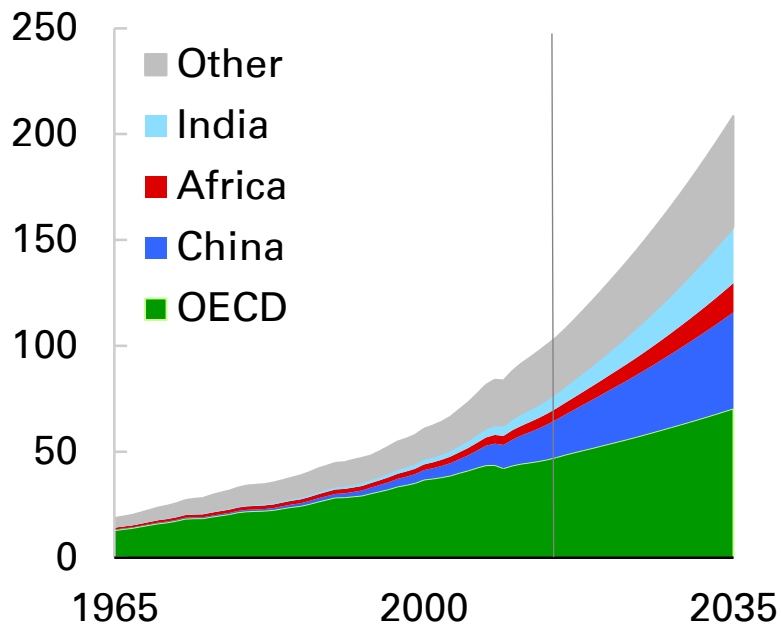
Outlook
to 2035



Economic backdrop

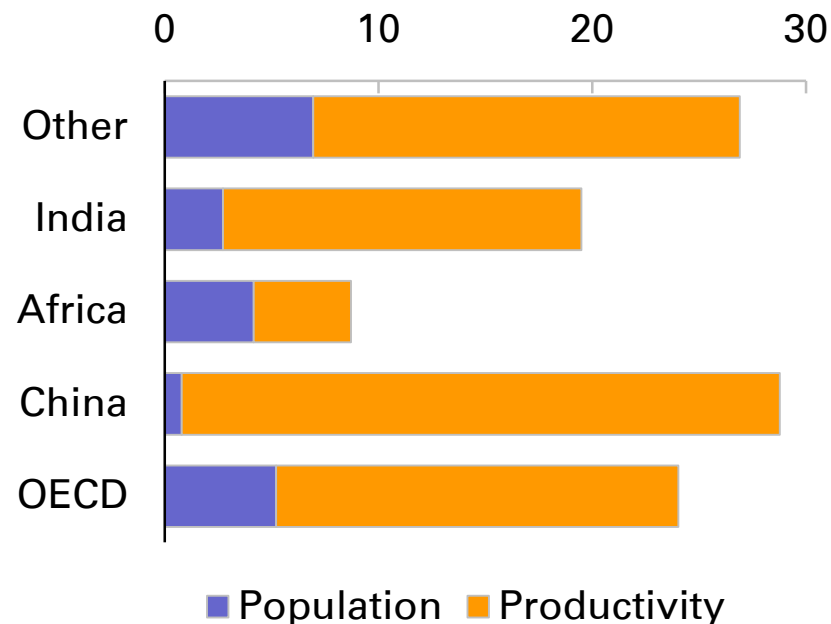
GDP

Trillion, \$2010



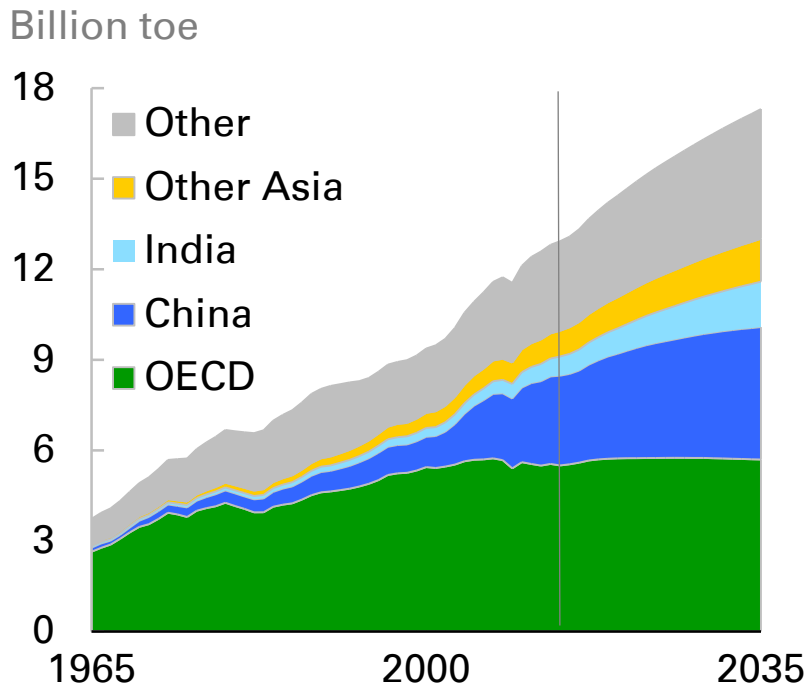
Contribution to GDP growth 2014-35

Trillion, \$2010

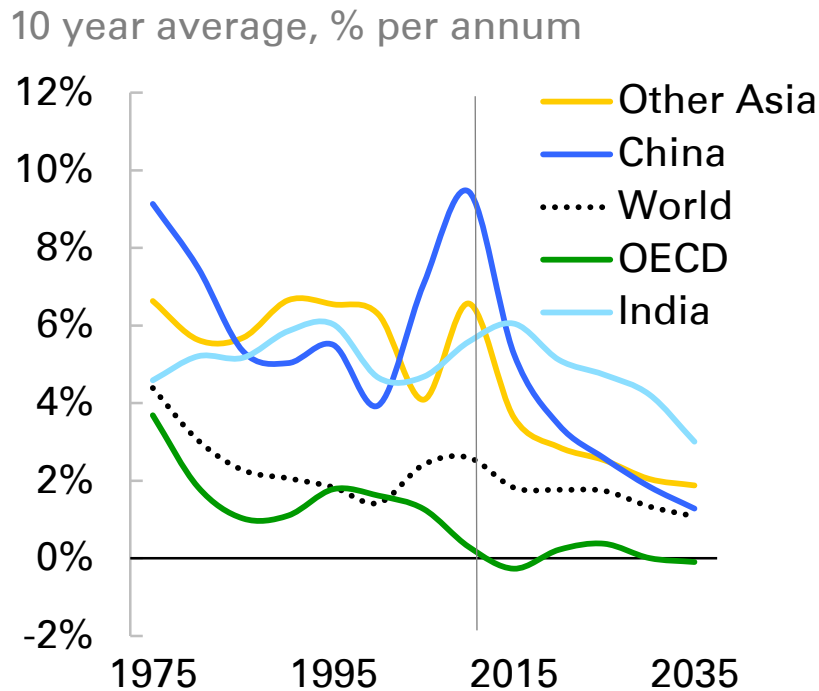


Global energy demand

Consumption by region

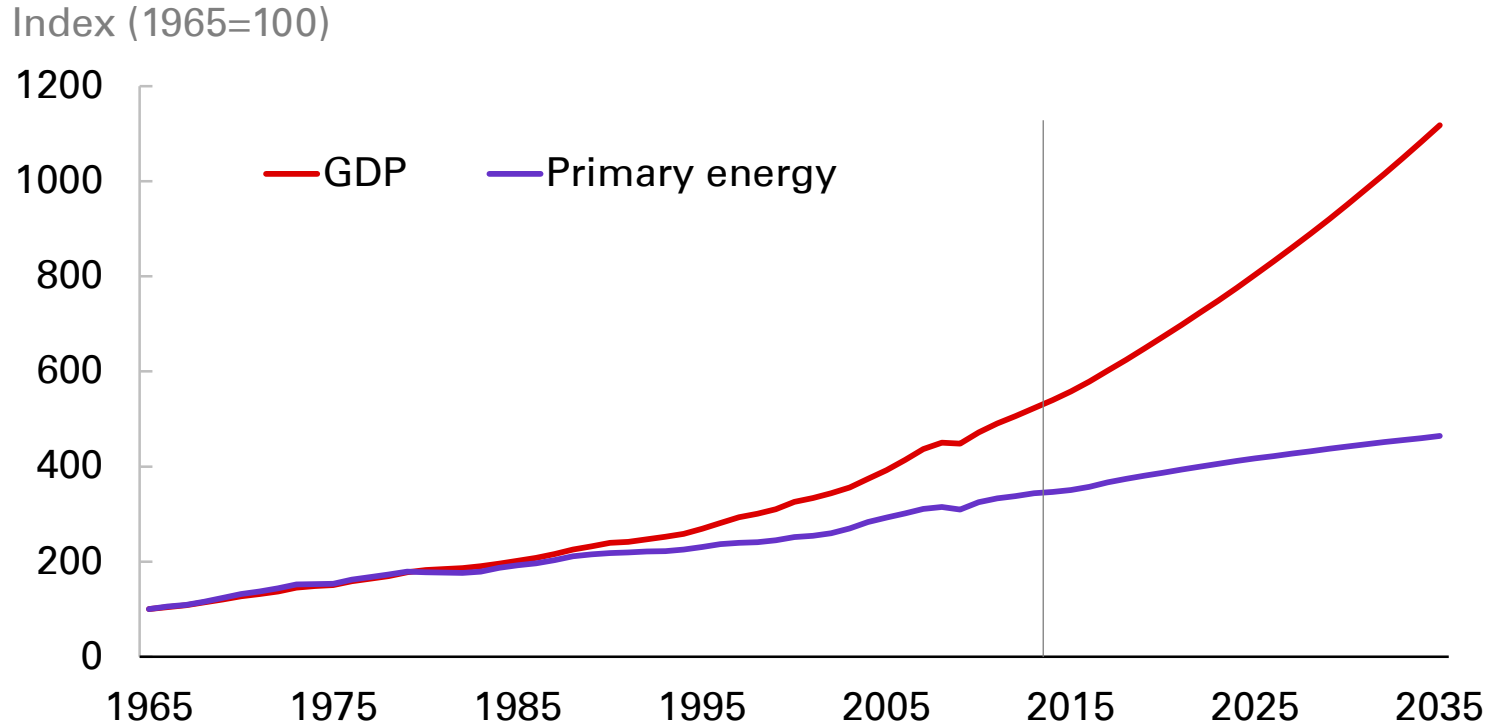


Consumption growth by region



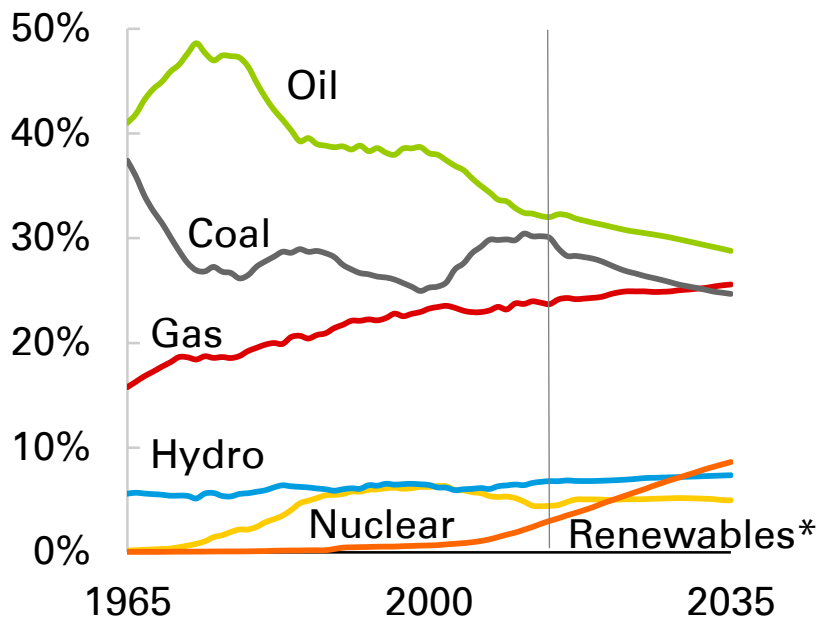
What drives energy demand?

Global GDP and energy



Fuel mix

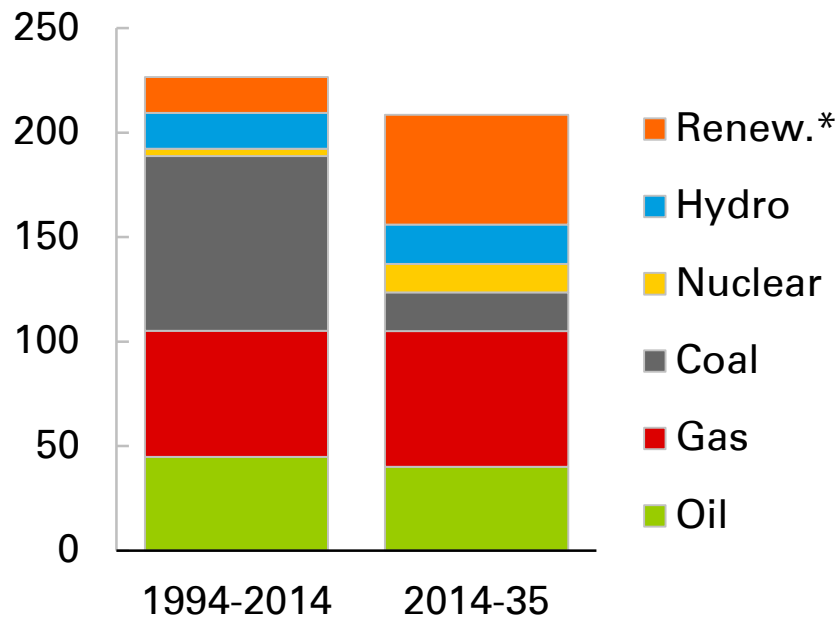
Shares of primary energy



*Includes biofuels

Annual demand growth by fuel

Mtoe per annum



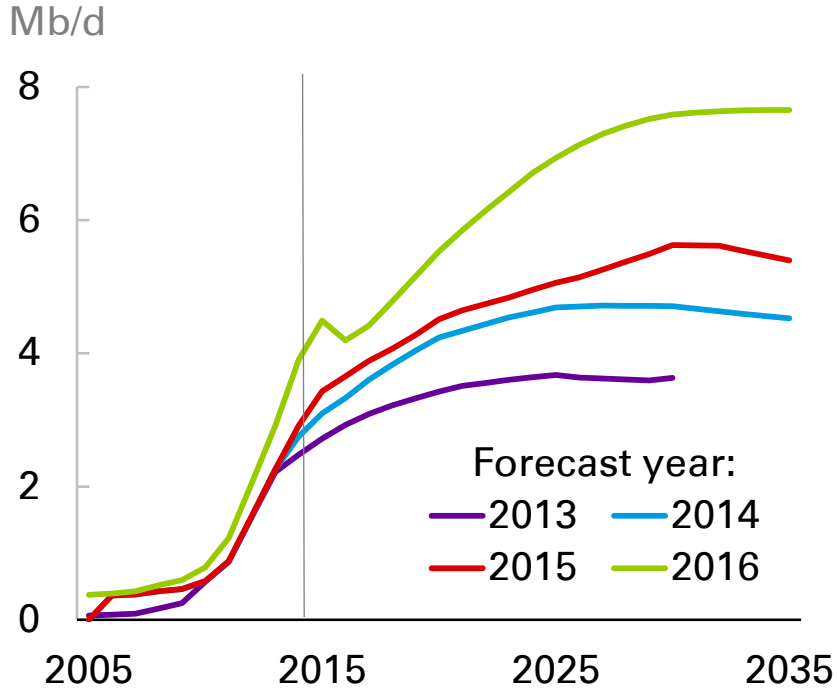
Key factors shaping the fuel mix

- What have we learned about US shale?
- China's changing energy needs
- Changing outlook for carbon emissions

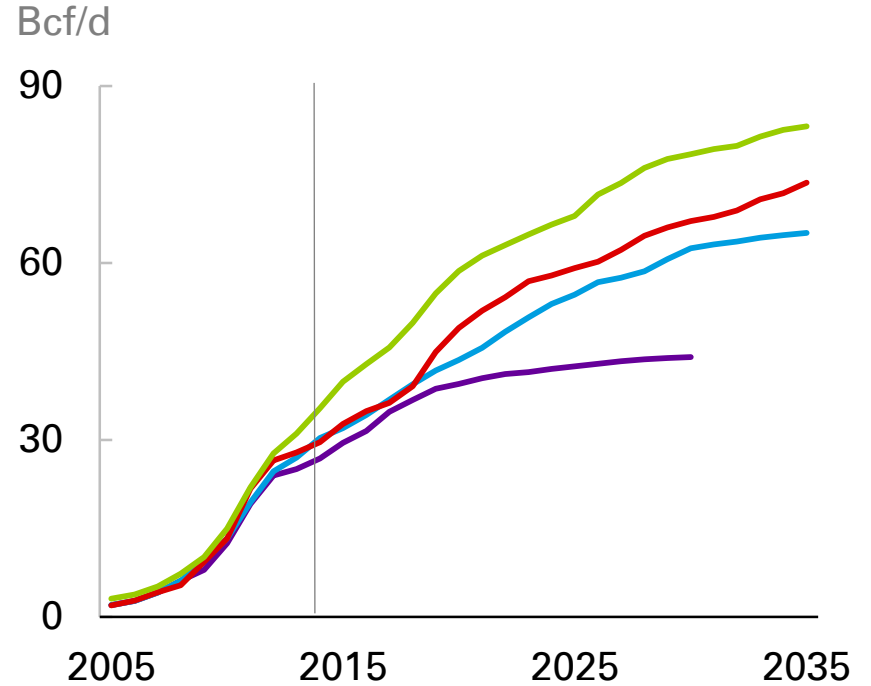
US tight oil and shale gas



US tight oil forecasts



US shale gas forecasts



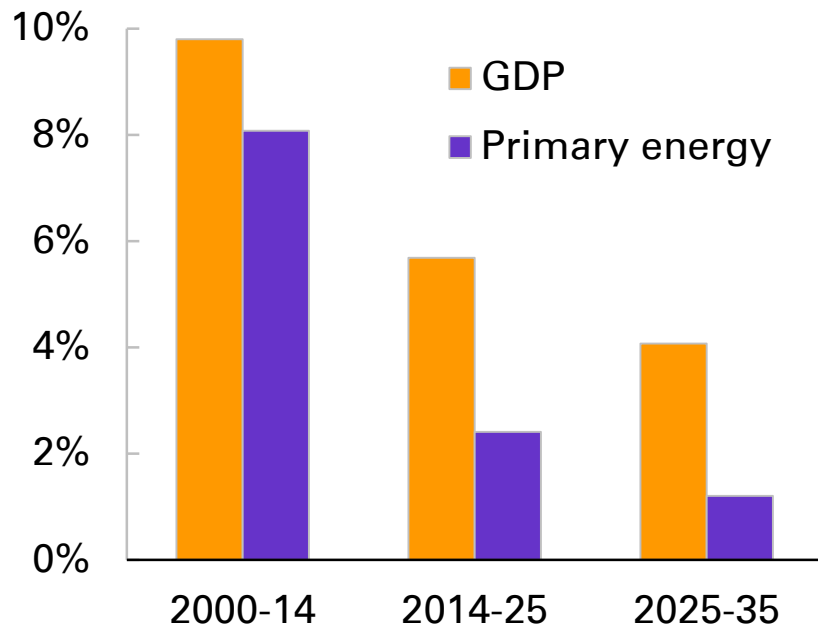
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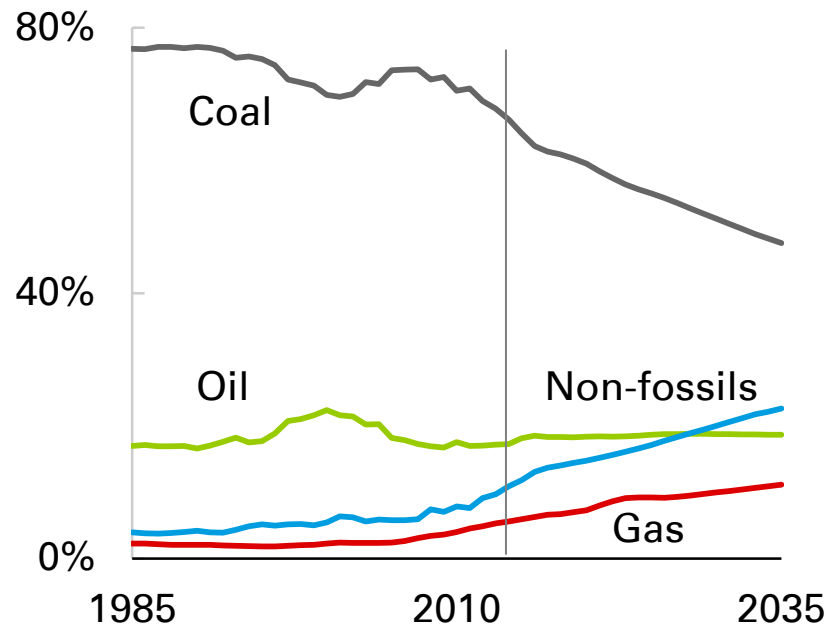
China's changing energy needs

GDP and primary energy growth

% per annum



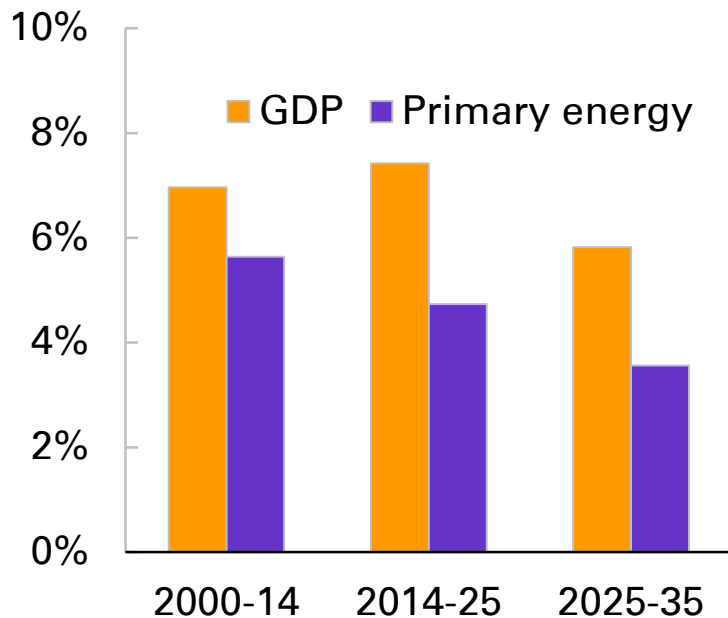
Shares of primary energy



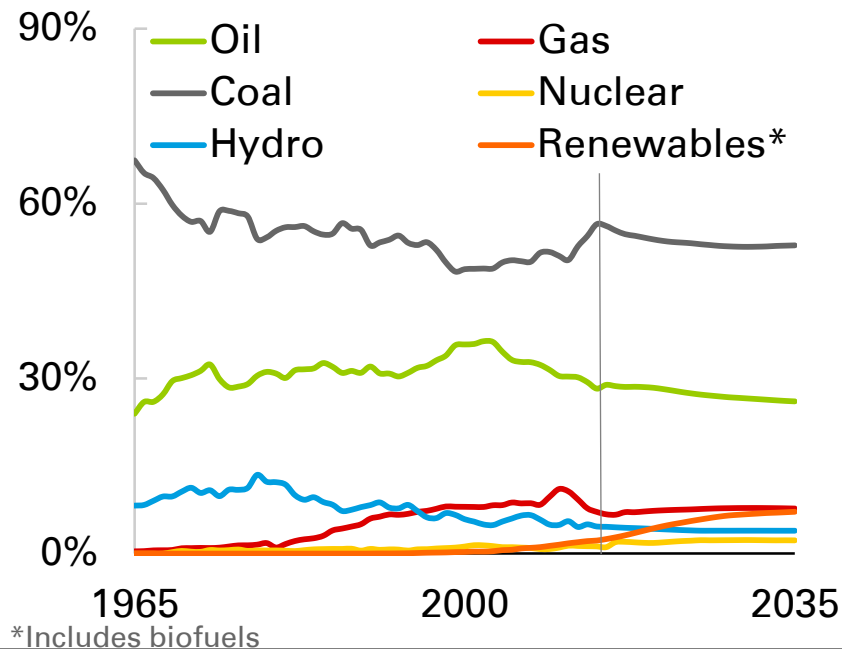
India: GDP and energy growth; and fuel mix

GDP and primary energy growth

% per annum



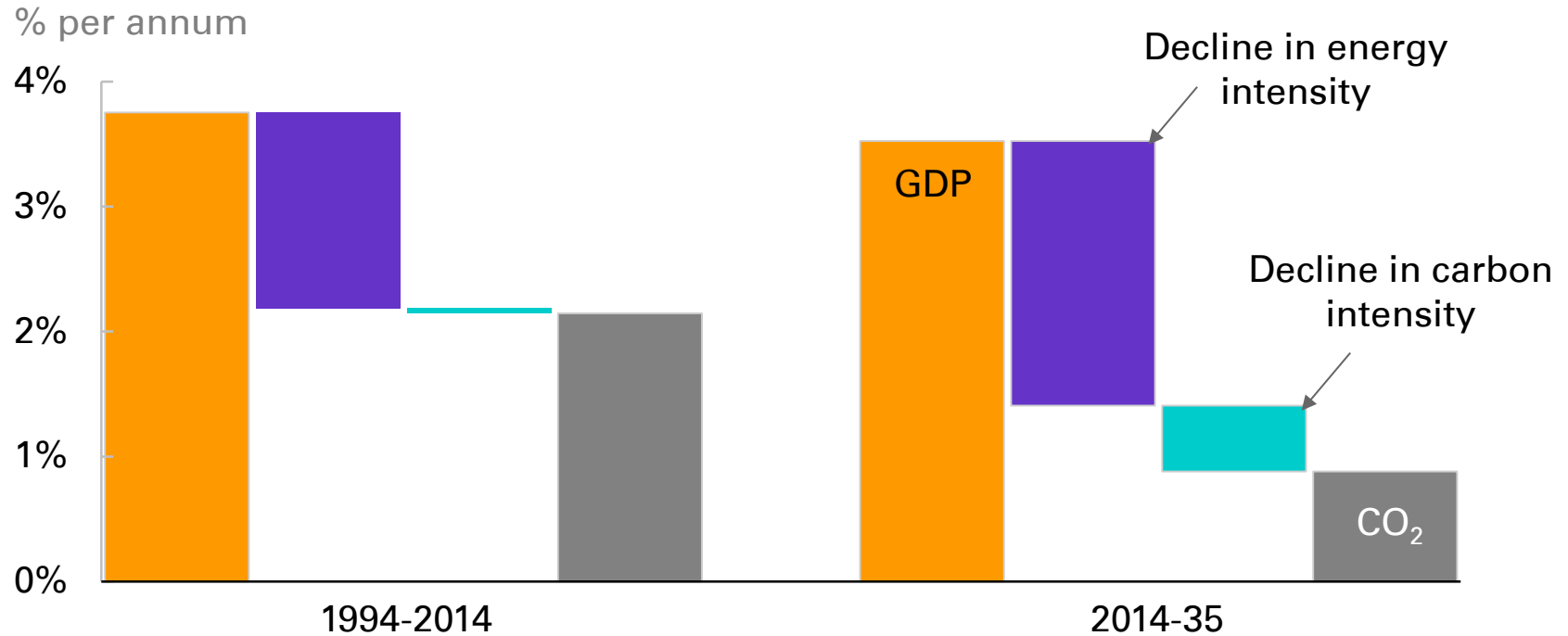
Shares of primary energy



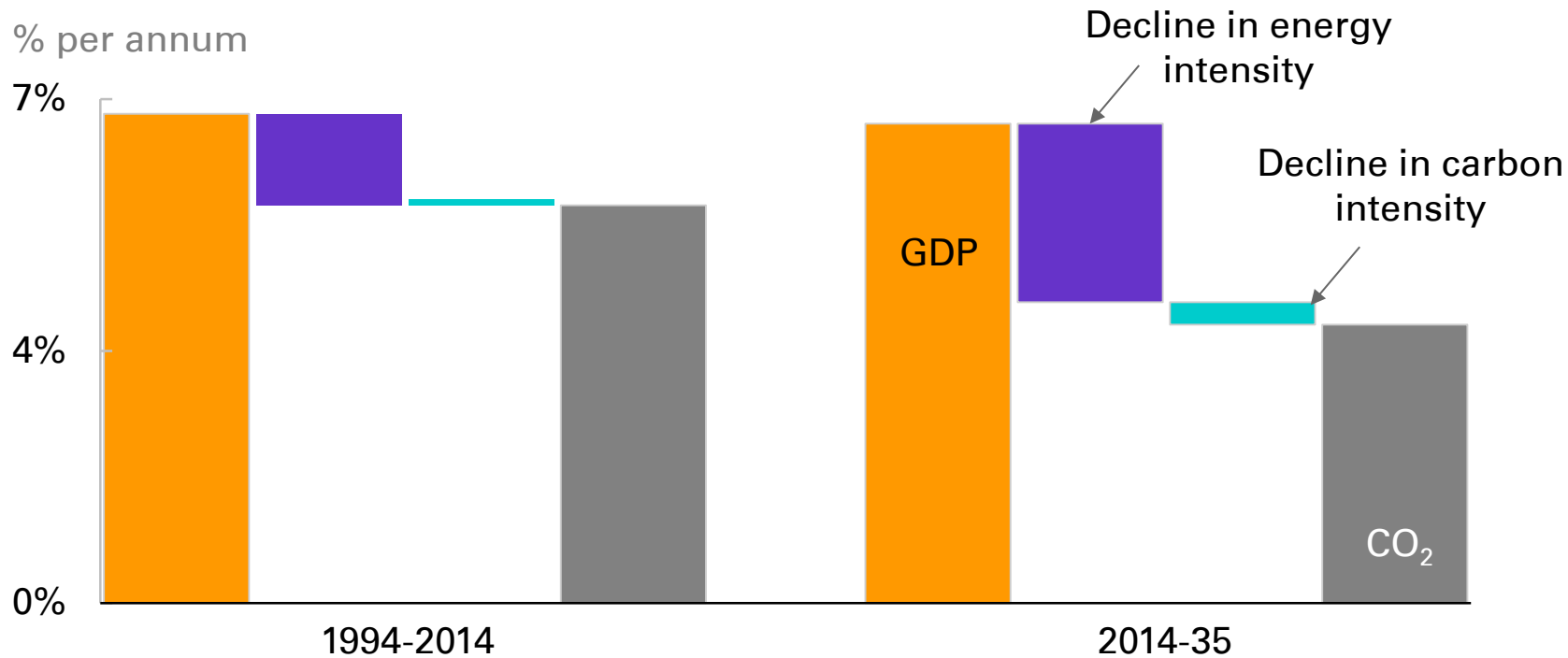
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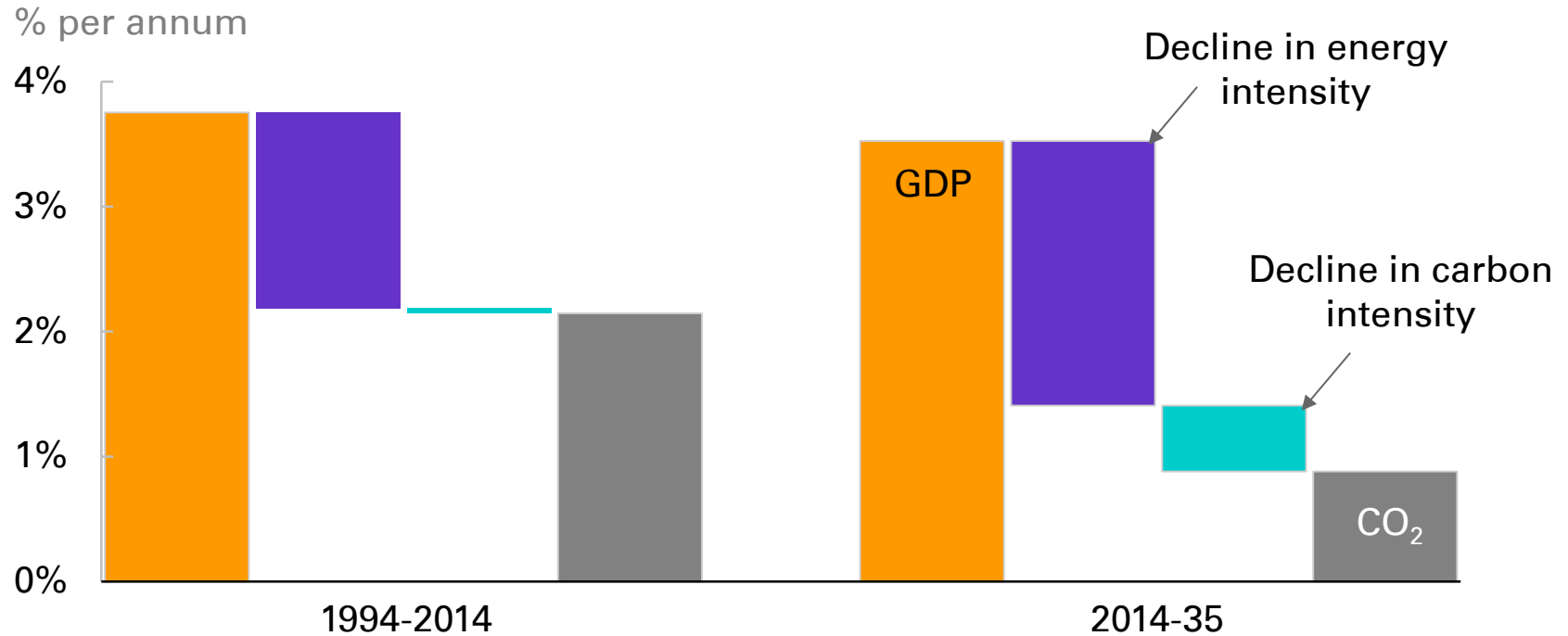
Carbon emissions: Global



Carbon emissions: India

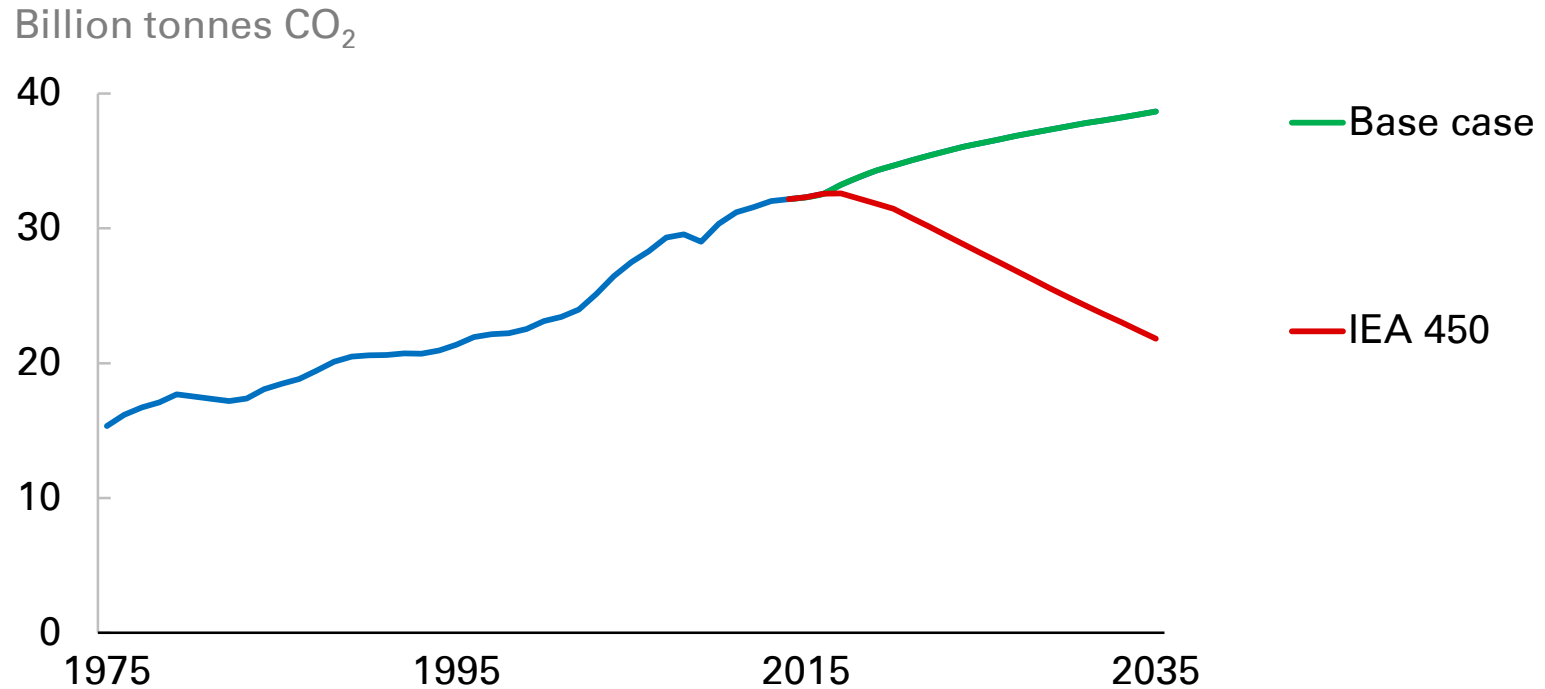


Carbon emissions: Global



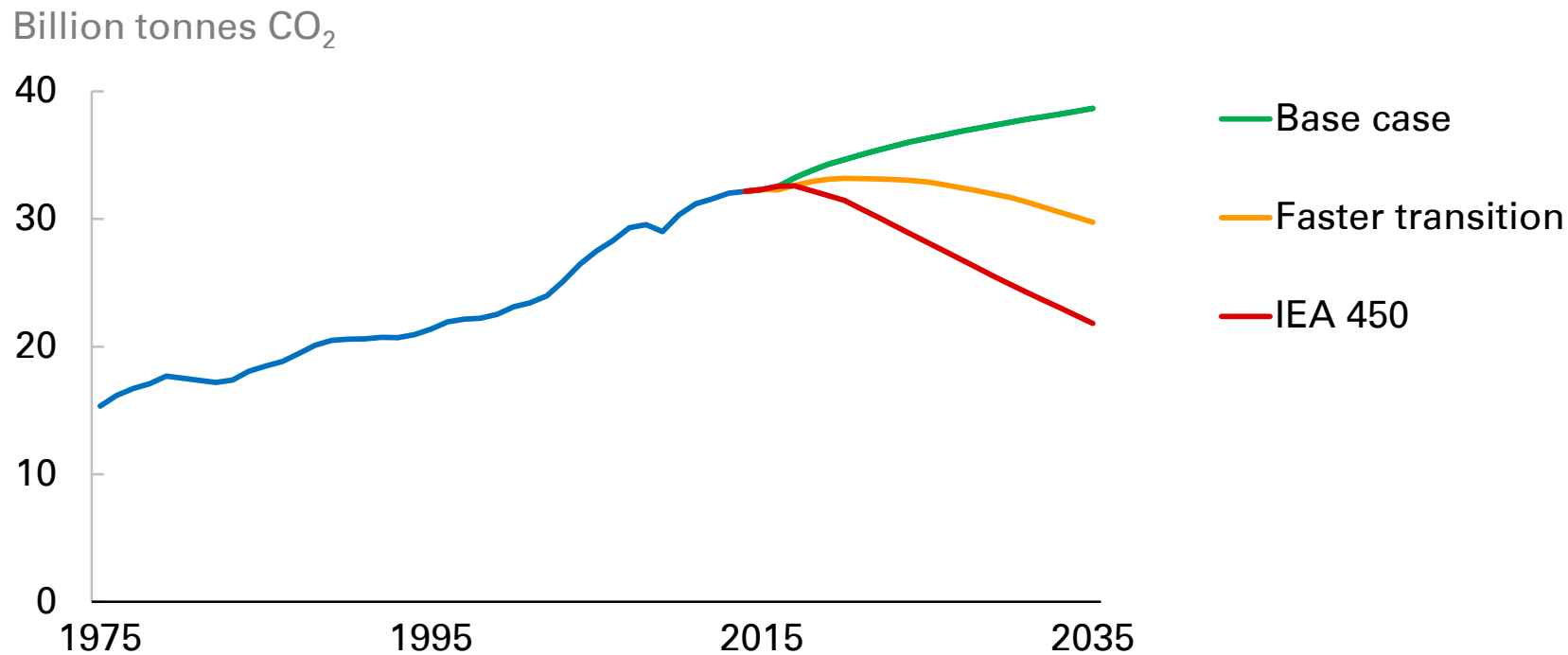
Outlook for carbon emissions

Carbon emissions



Outlook for carbon emissions

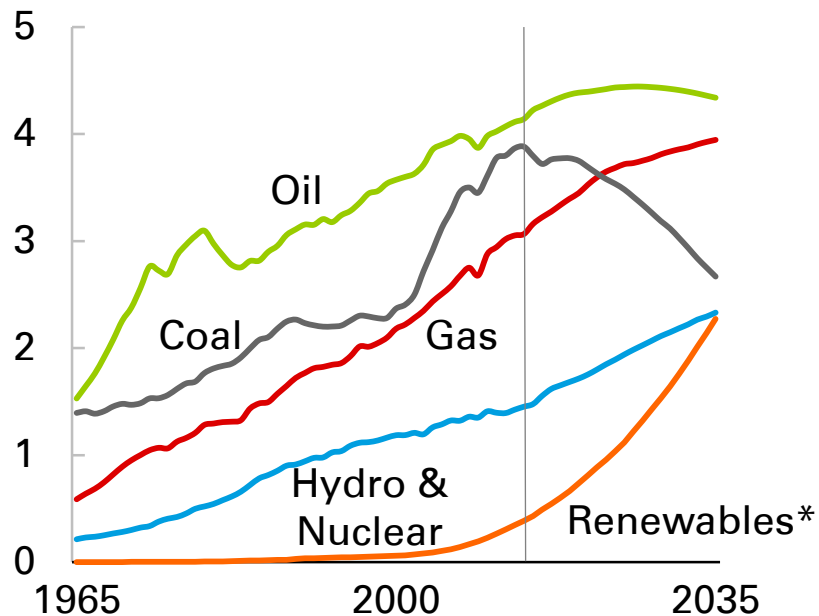
Carbon emissions



Impact of faster transition case

Consumption by fuel

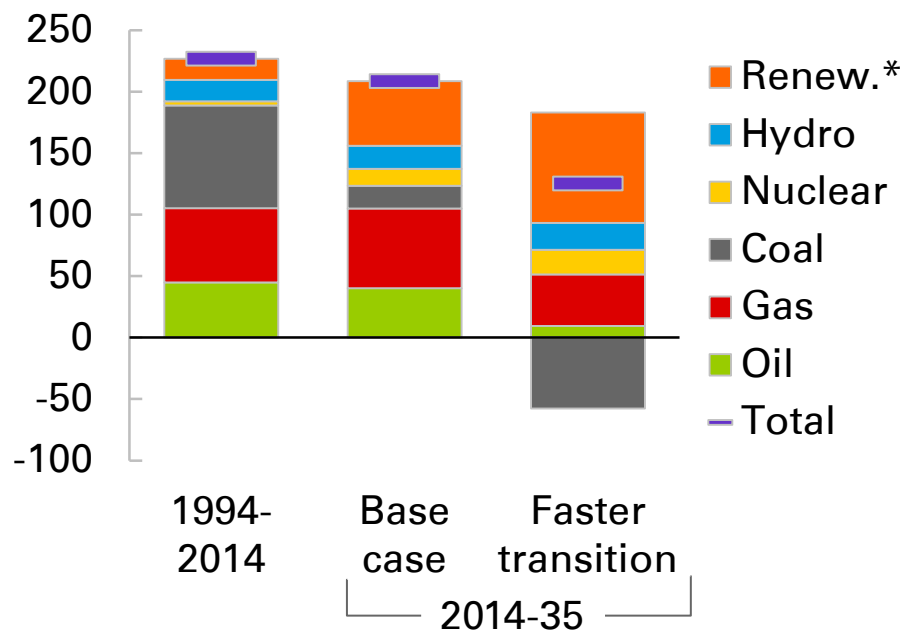
Billion toe



*Includes biofuels

Annual demand growth by fuel

Mtoe per annum



Conclusions

- Global demand for energy continues to rise
 - to power increased levels of activity as the world economy continues to grow
- Fuel mix changes significantly
 - coal losing, renewables gaining, and oil and gas combined holding steady
- Growth rate of carbon emissions slows sharply
 - but further policy changes are needed



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