

World Energy Outlook 2007

Expert Meeting on Bioenergy Policy, Markets and Trade
and Food Security
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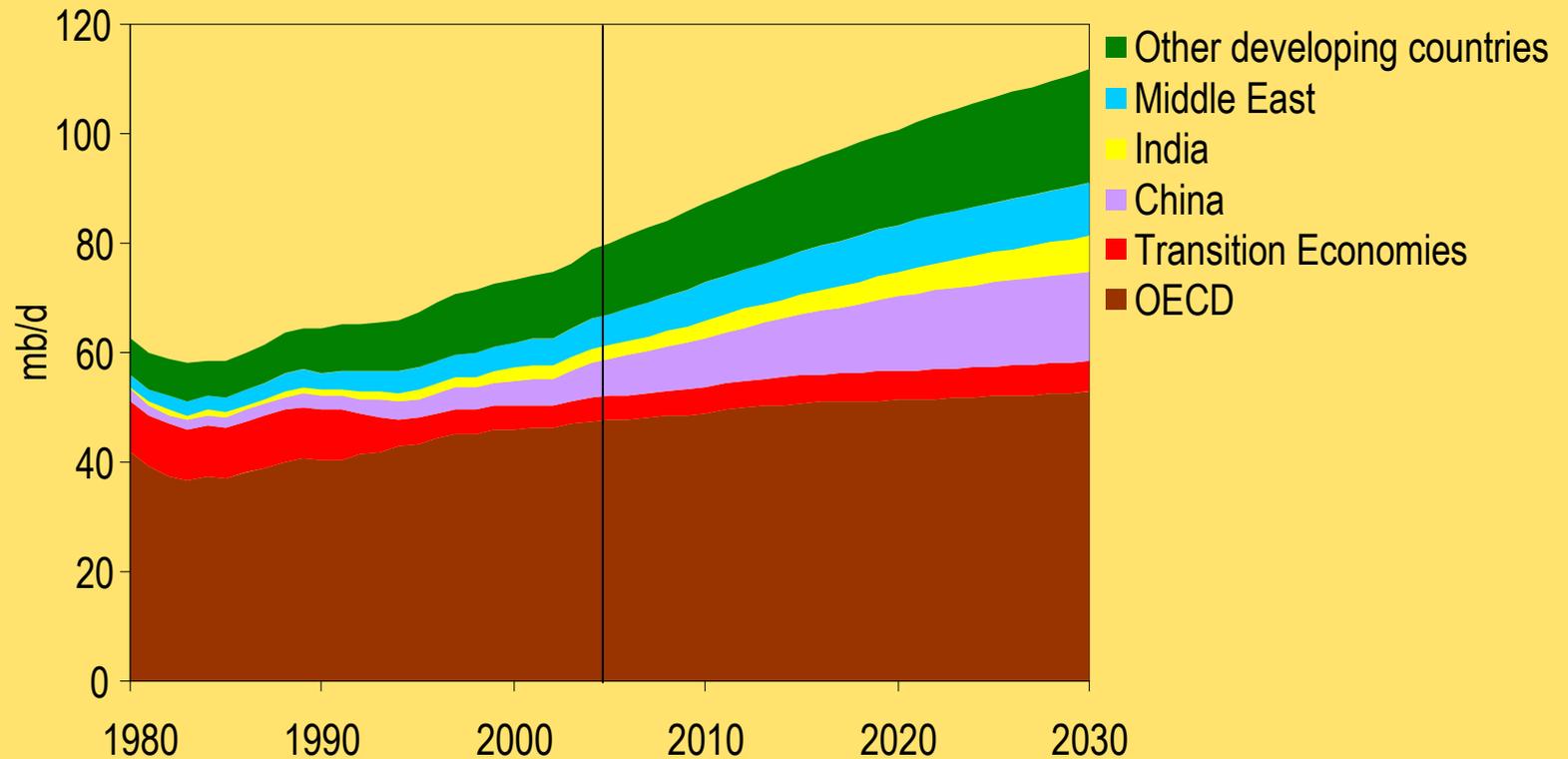


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Reference Scenario: World Oil Demand



Oil demand increases most rapidly in China, India & other developing countries



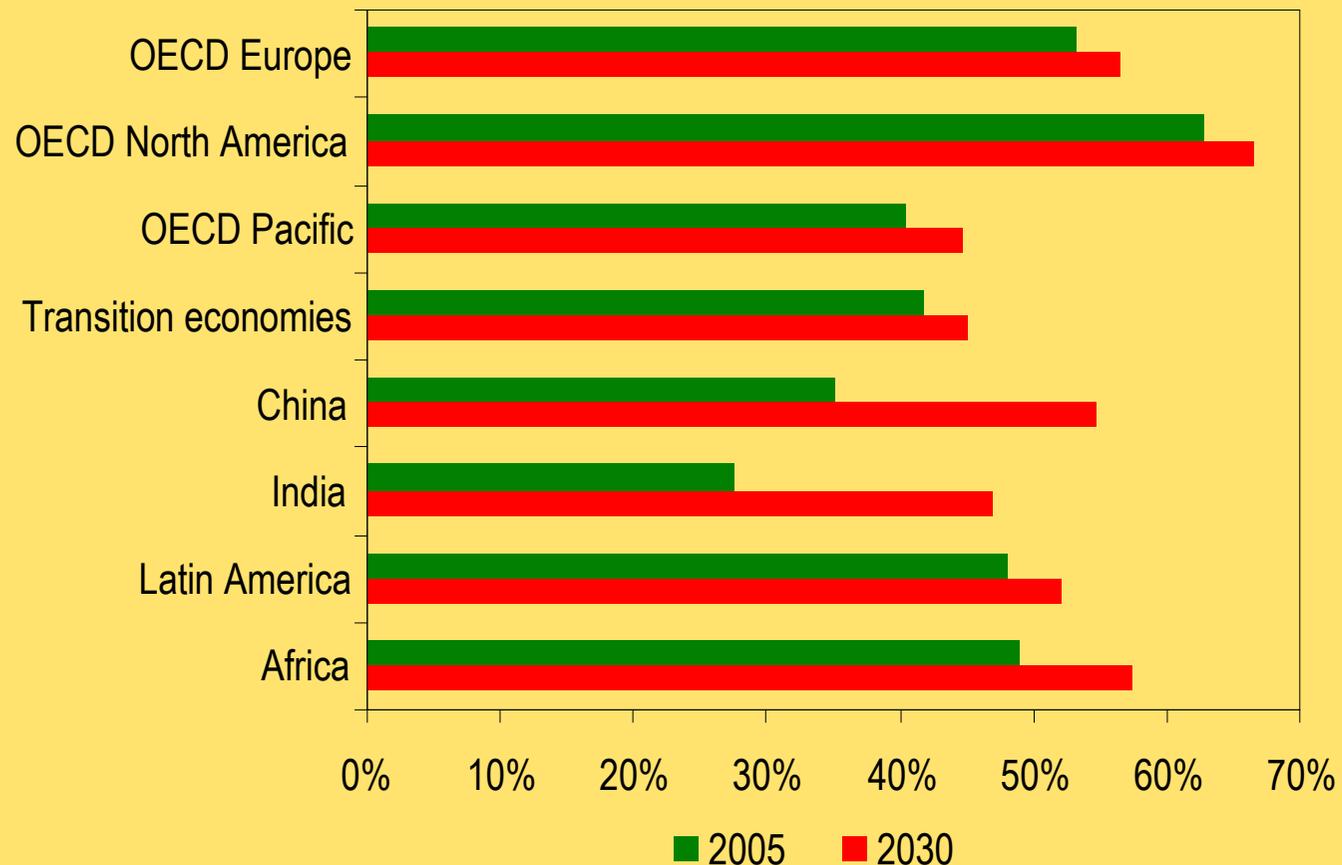
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Reference Scenario: Share of Transport in Primary Oil Demand



Oil demand becomes increasingly concentrated in transport



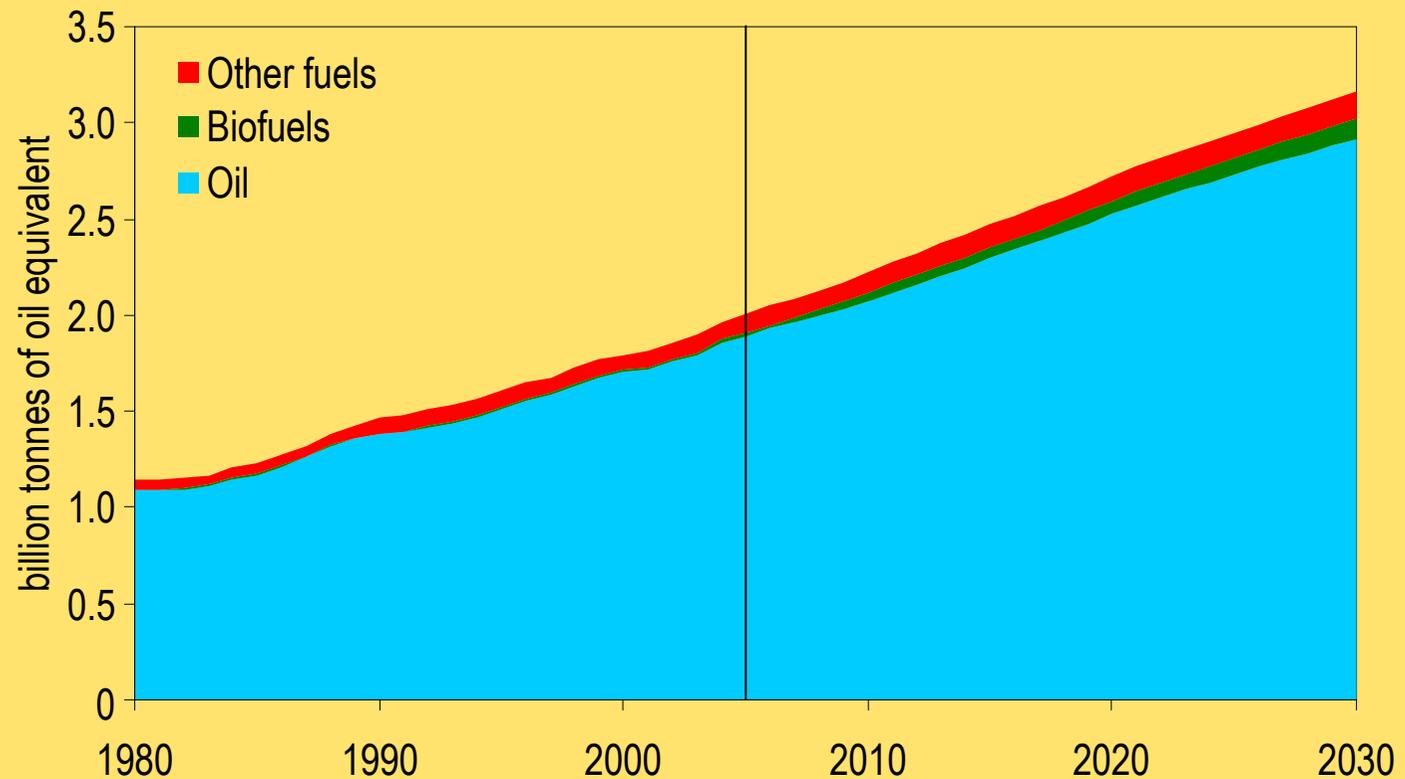
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Reference Scenario: Transport Energy Demand by Fuel



Oil continues to dominate energy use for transport, while the contribution of biofuels remains marginal

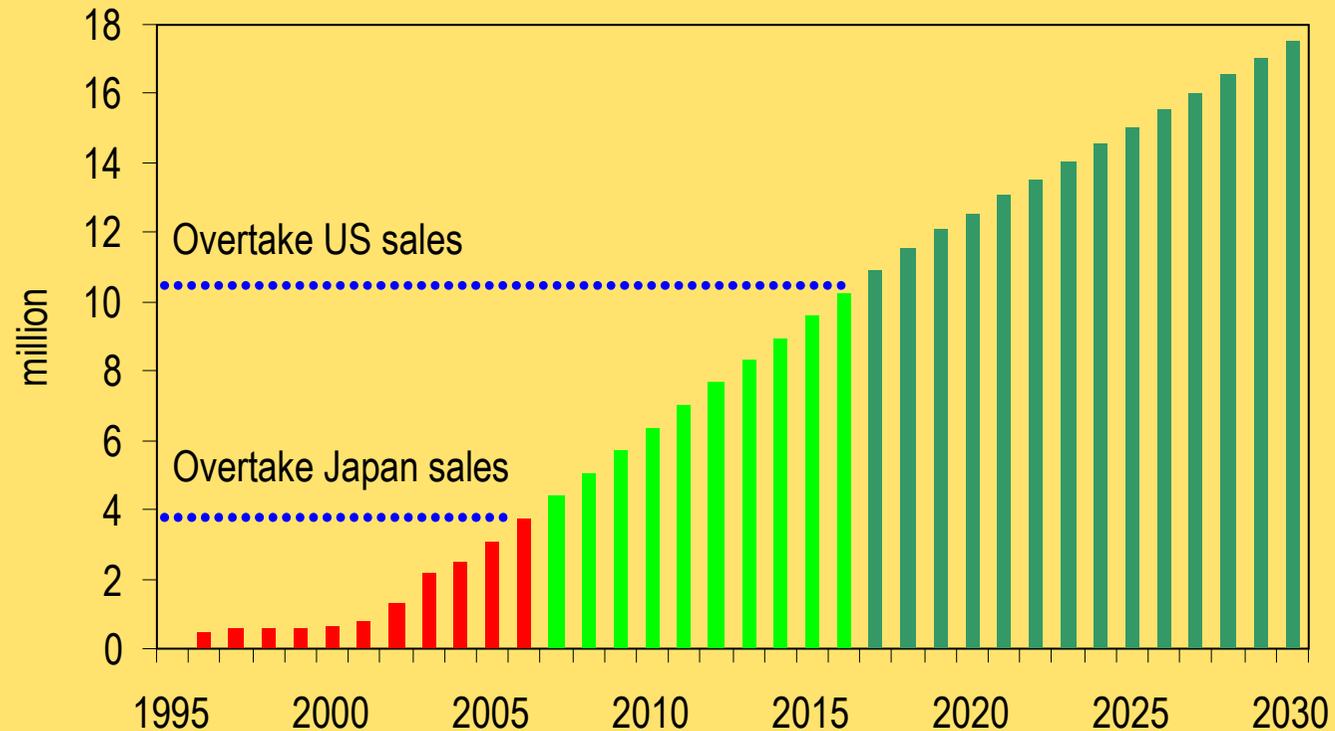


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New Light-Duty Vehicle Sales in China



China's oil imports reach 13 mb/d in 2030 as car ownership jumps to 140 per 1 000 people from 20 today

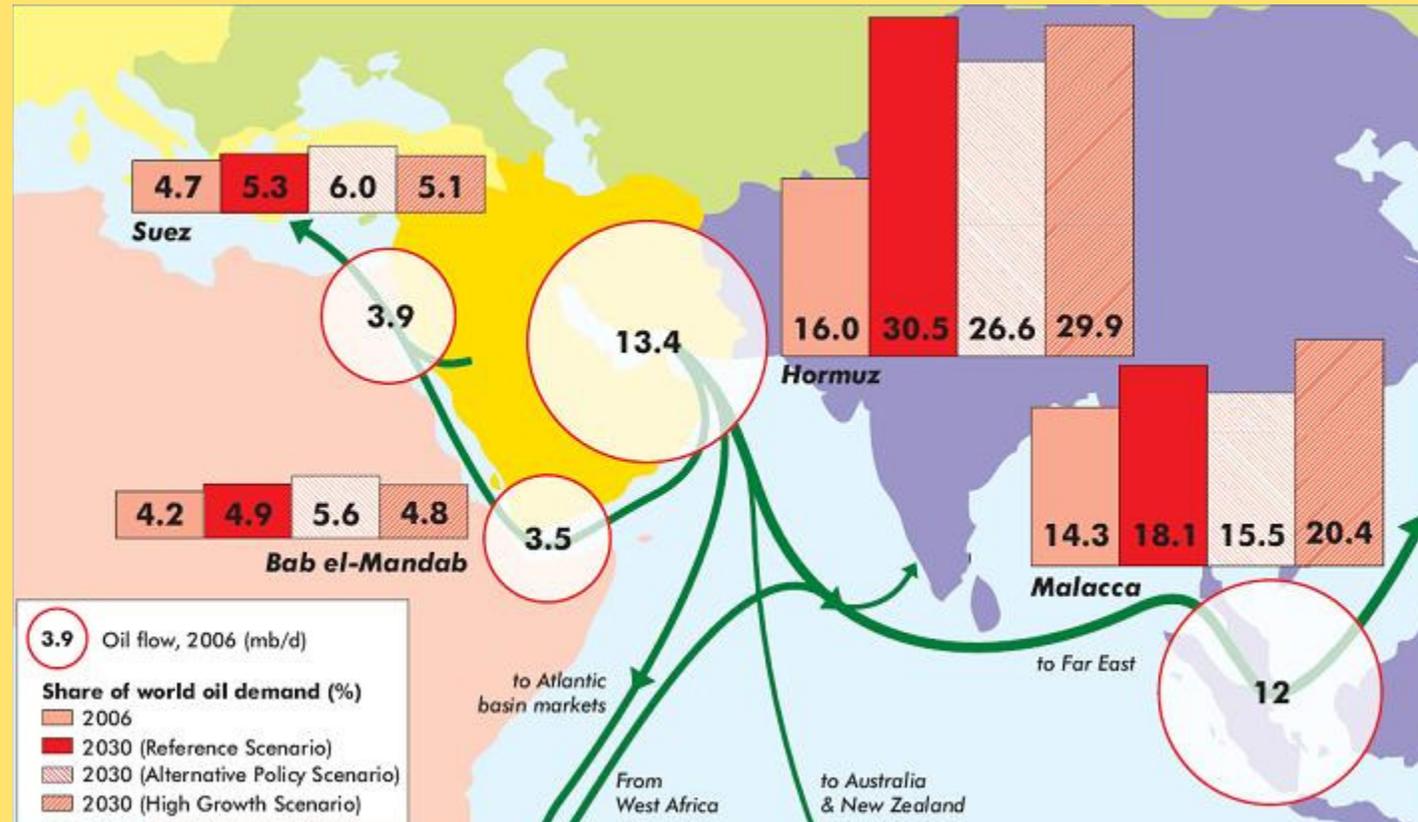


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The "Dire Straits": Oil Export Flows from the Middle East



Rising reliance on Middle East oil will increase flows through vulnerable chokepoints – heightening the risk of a supply disruption



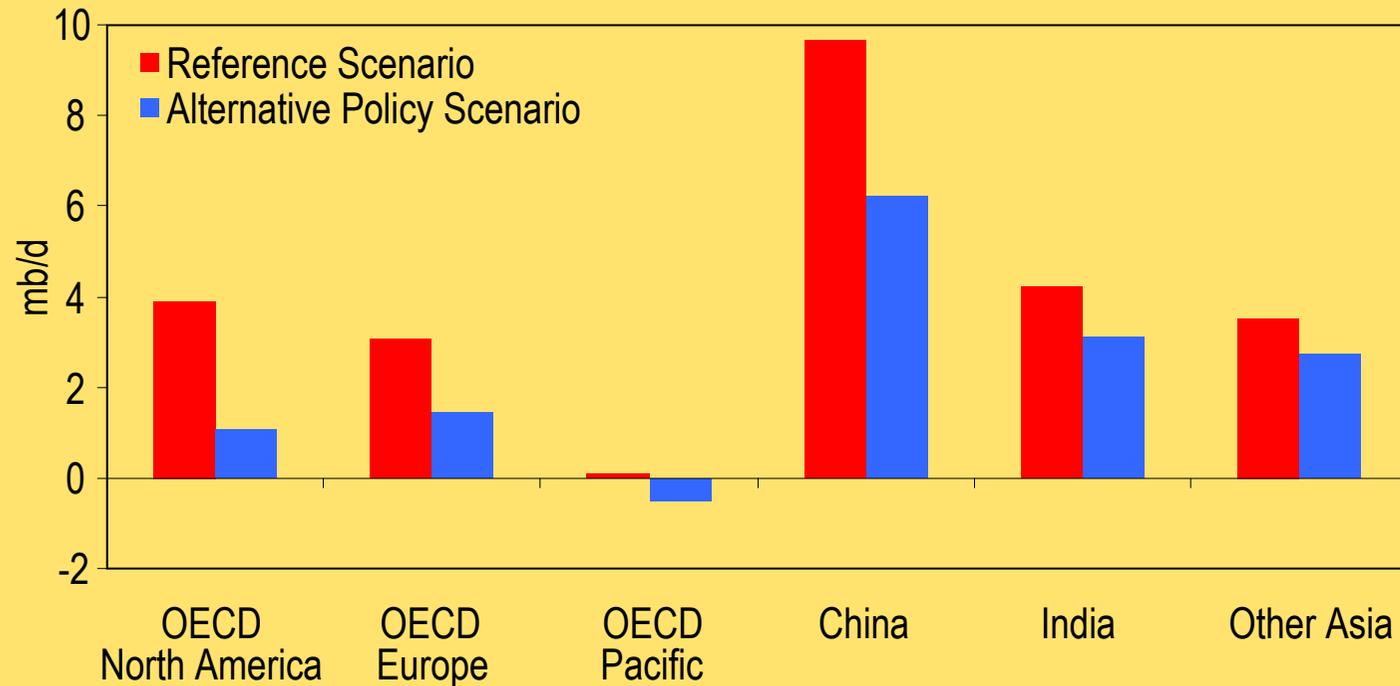
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Increase in Net Oil Imports, 2006-2030



New policies reduce global oil demand by 14 mb/d by 2030, cutting sharply the need for imports

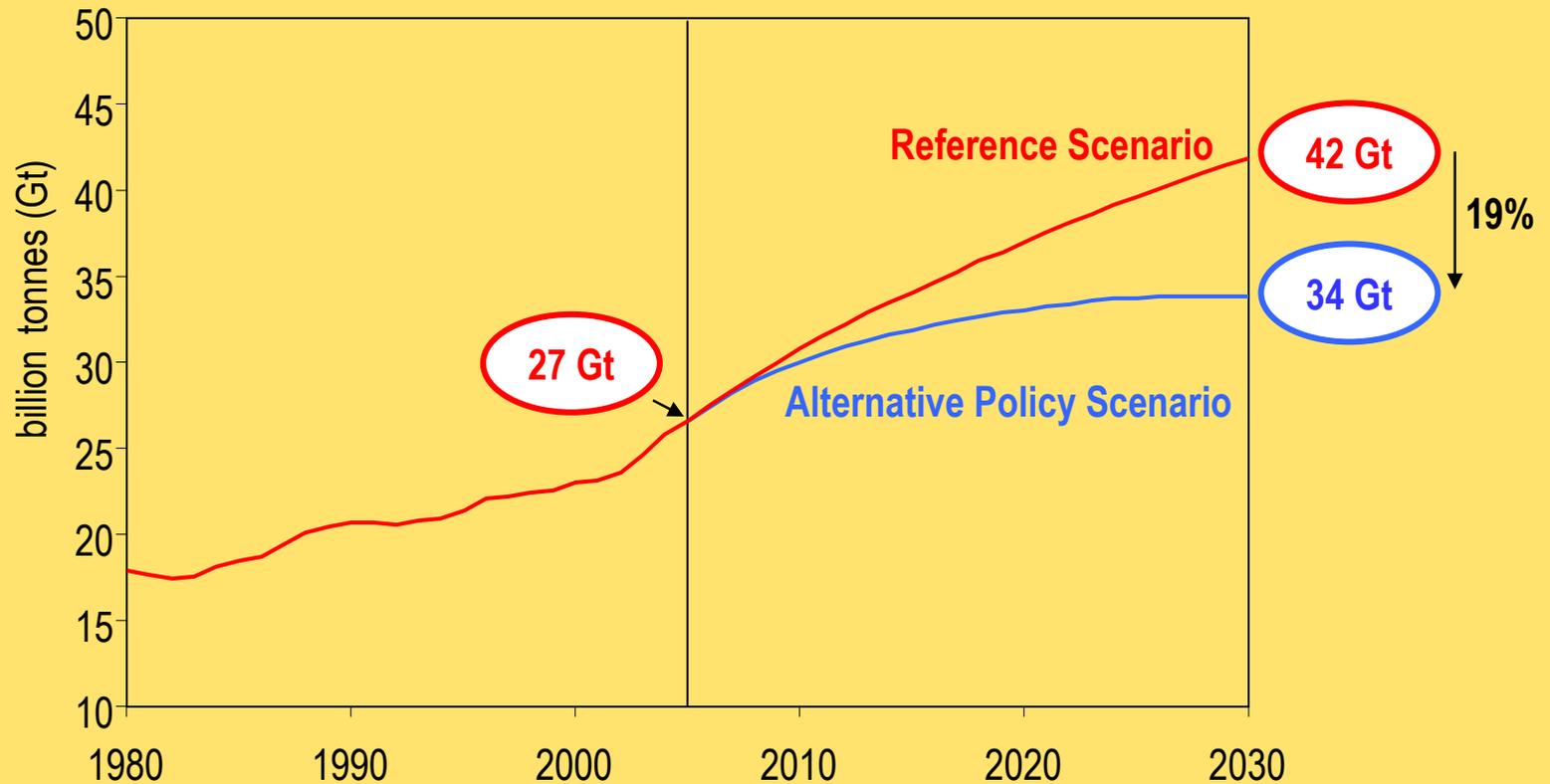


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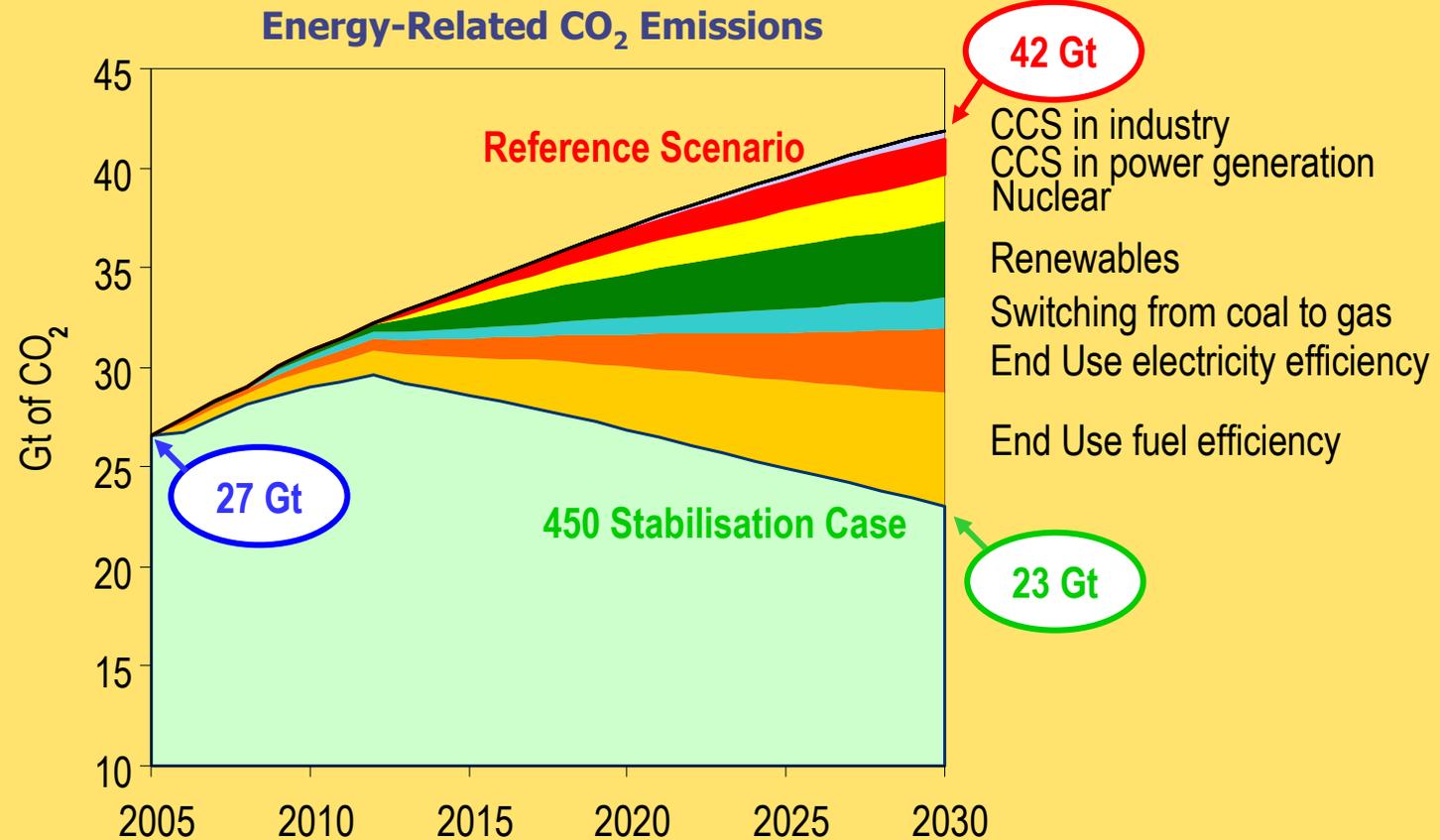
Global Energy-Related CO₂ Emissions



Global emissions will increase by 57% in the Reference Scenario, but they level off in the Alternative Policy Scenario

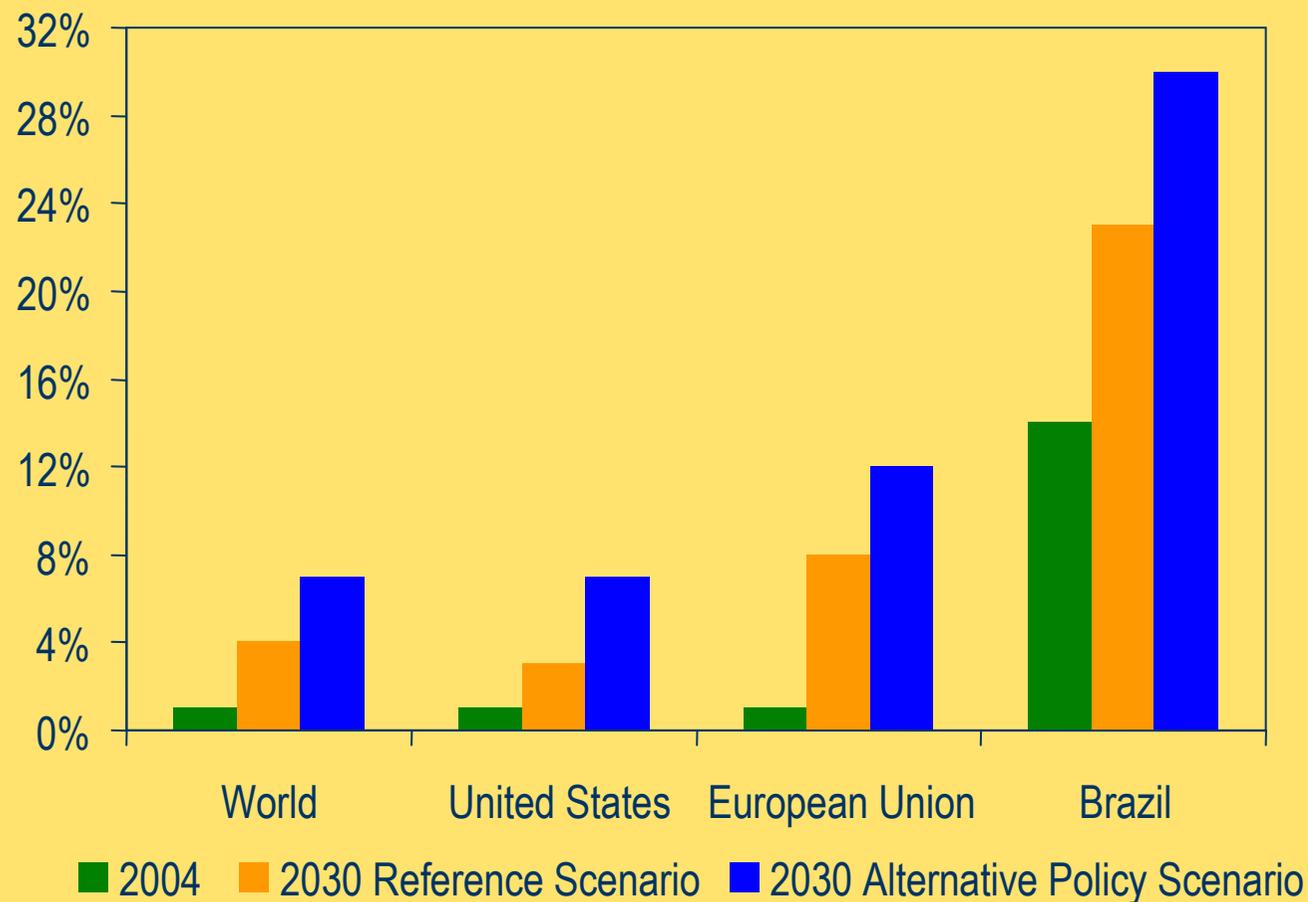


CO₂ Emissions - 450 Stabilisation Case



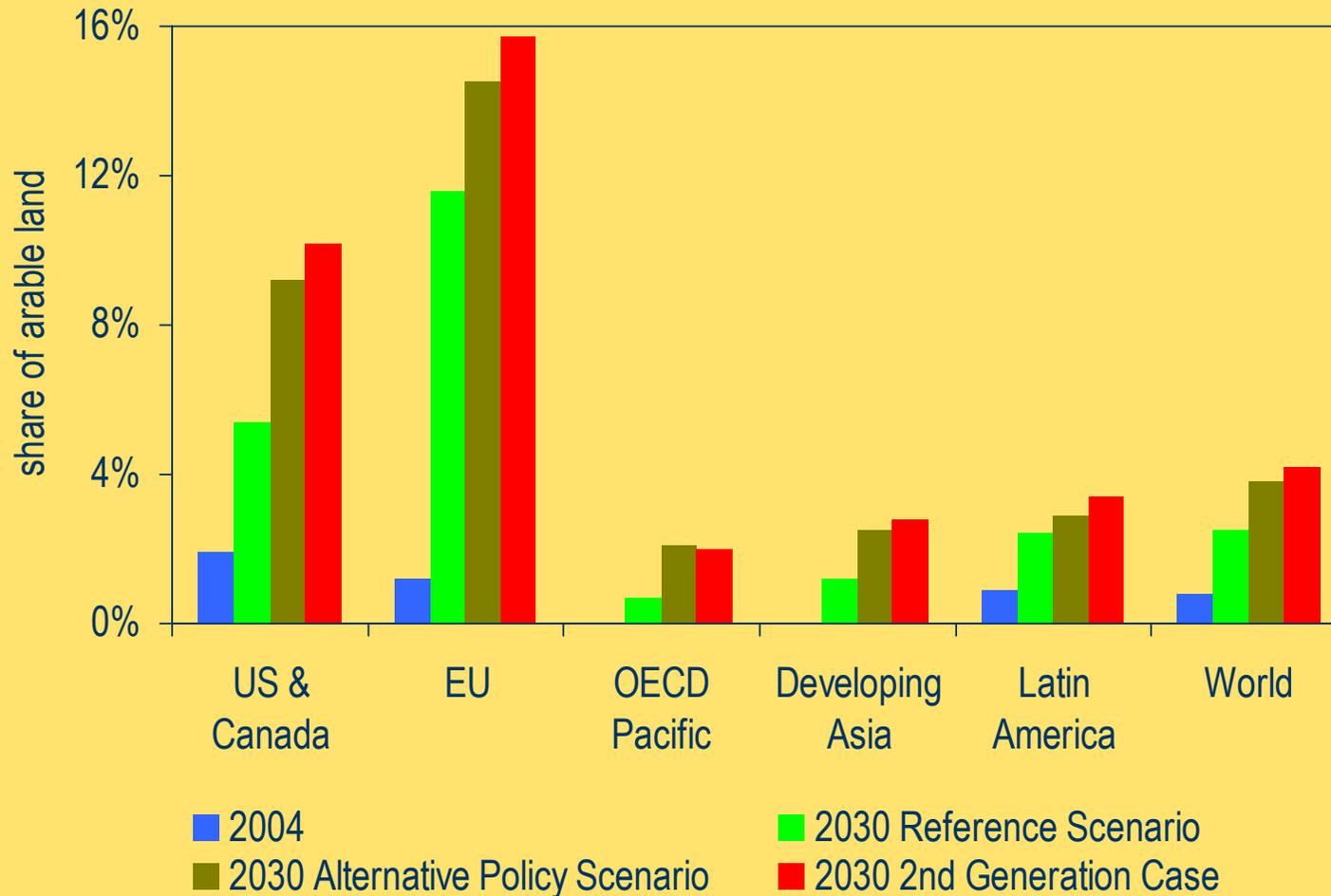
By 2030, emissions are reduced to some 23 Gt, a reduction of 19 Gt compared with the Reference Scenario

Share of Biofuels in Road-Transport Fuel Consumption



Biofuels are set to play a much larger role in meeting world road-transport fuel demand

Land Requirements for Biofuels



A significant proportion of the world's arable land is turned over to biofuels production – even in the Reference Scenario



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Conclusions

- Global energy system is on an *increasingly* unsustainable path
- Improving energy security and combating climate change are tremendous challenges for *all* countries
- Biofuels can be helpful in enhancing oil security
- But there are barriers:
 - *Cost of biofuels production is still high*
 - *Land requirements are estimated to be very large*
 - *Environmental impacts need to be better understood*
- Technological breakthroughs will likely help to address these barriers