



INTERNATIONAL ENERGY AGENCY

World Energy Outlook 2004: Focus on Transport



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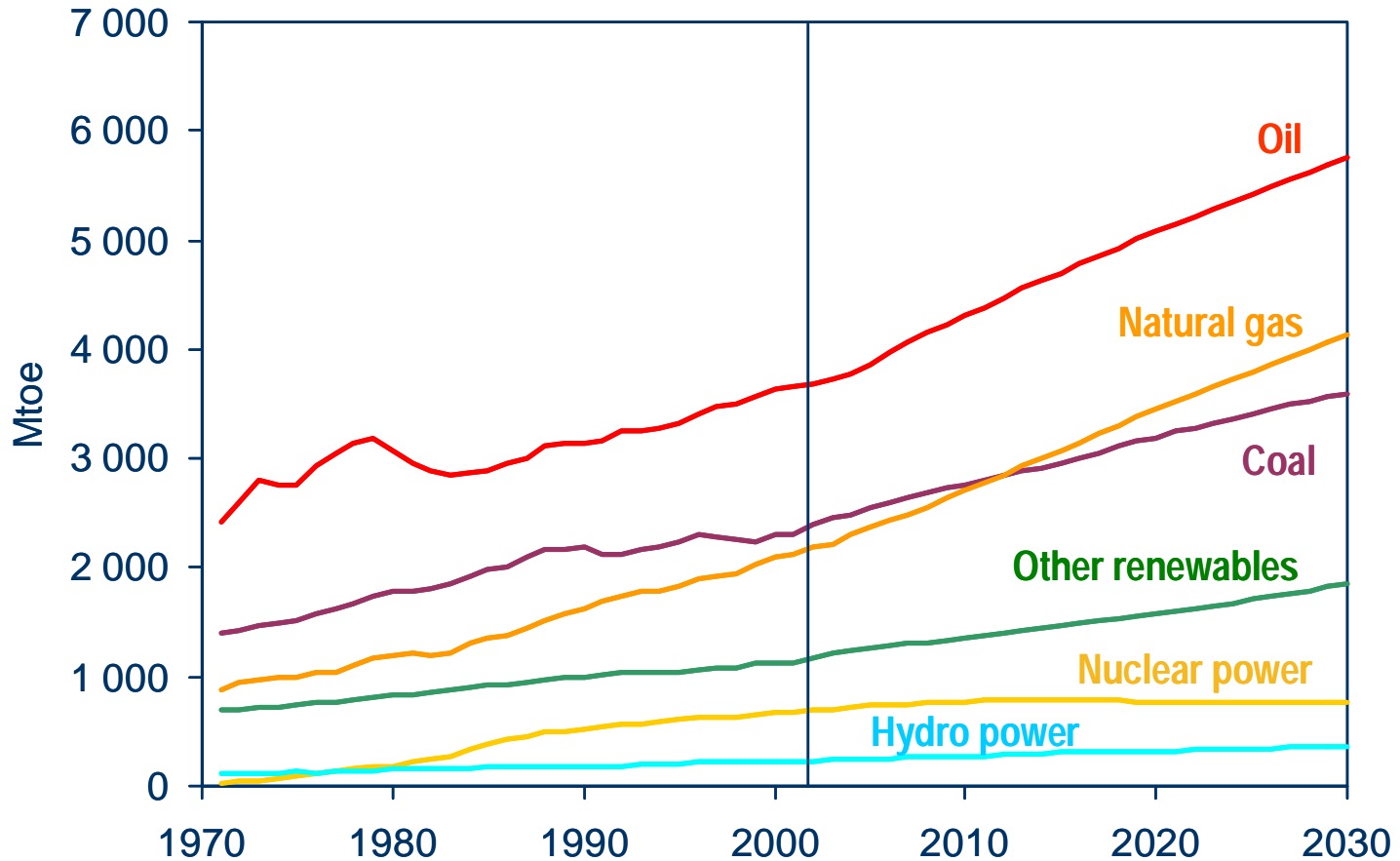
Reference Scenario



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World Primary Energy Demand



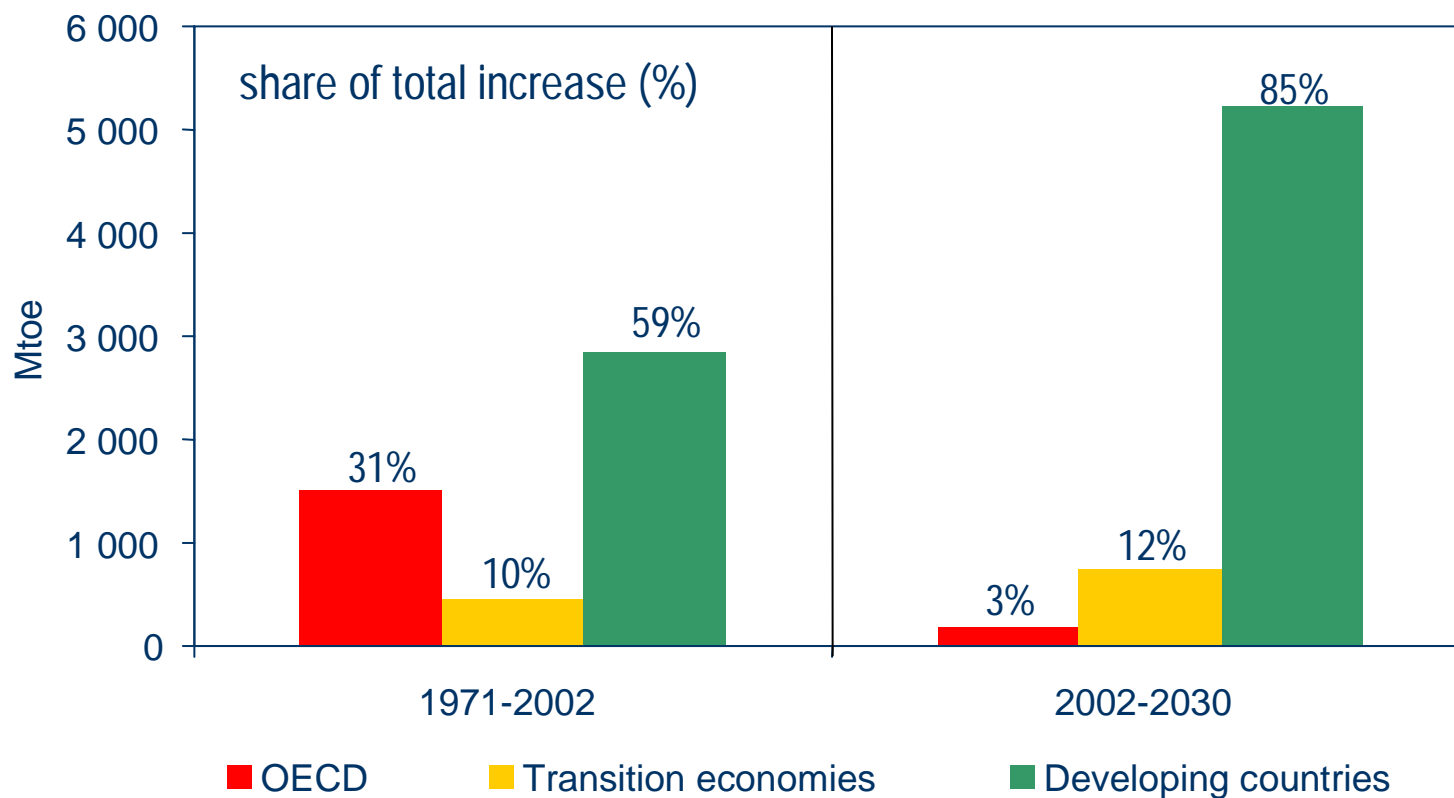
***Fossil fuels will continue to dominate the global energy mix,
while oil remains the leading fuel***



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Increase in World Primary Energy Production by Region



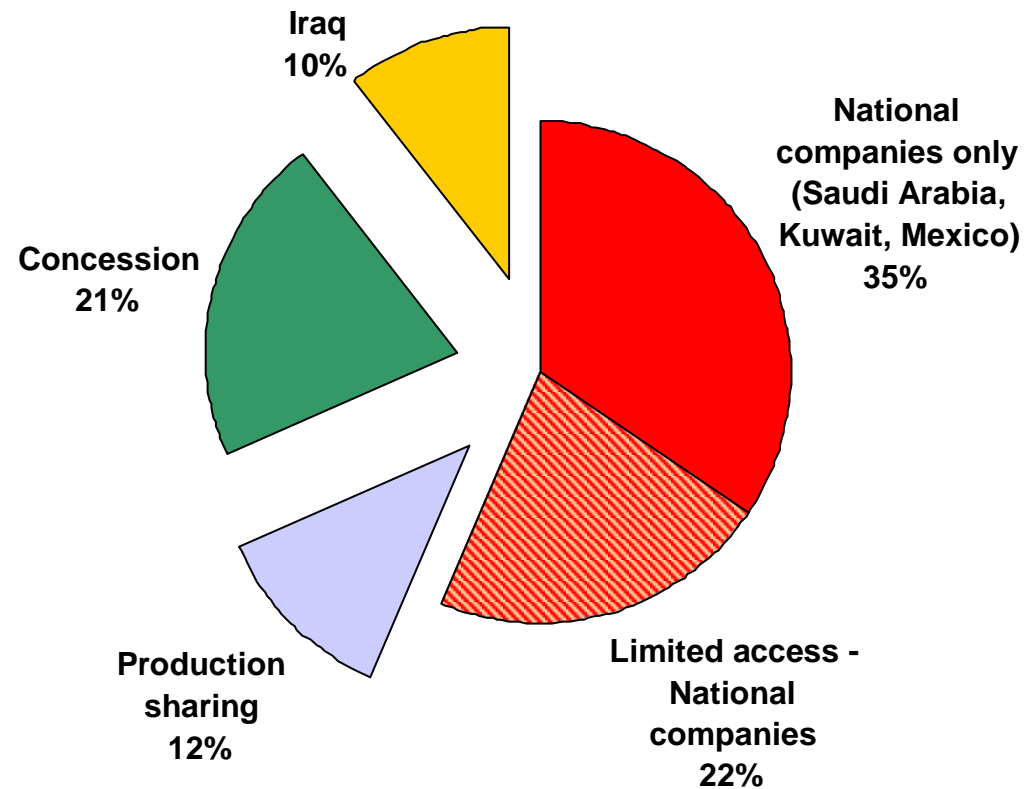
**Almost all the increase in production to 2030
occurs outside the OECD**



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Access to Oil Reserves



1,032 billion barrels

Access to much of the world's remaining oil reserves is restricted



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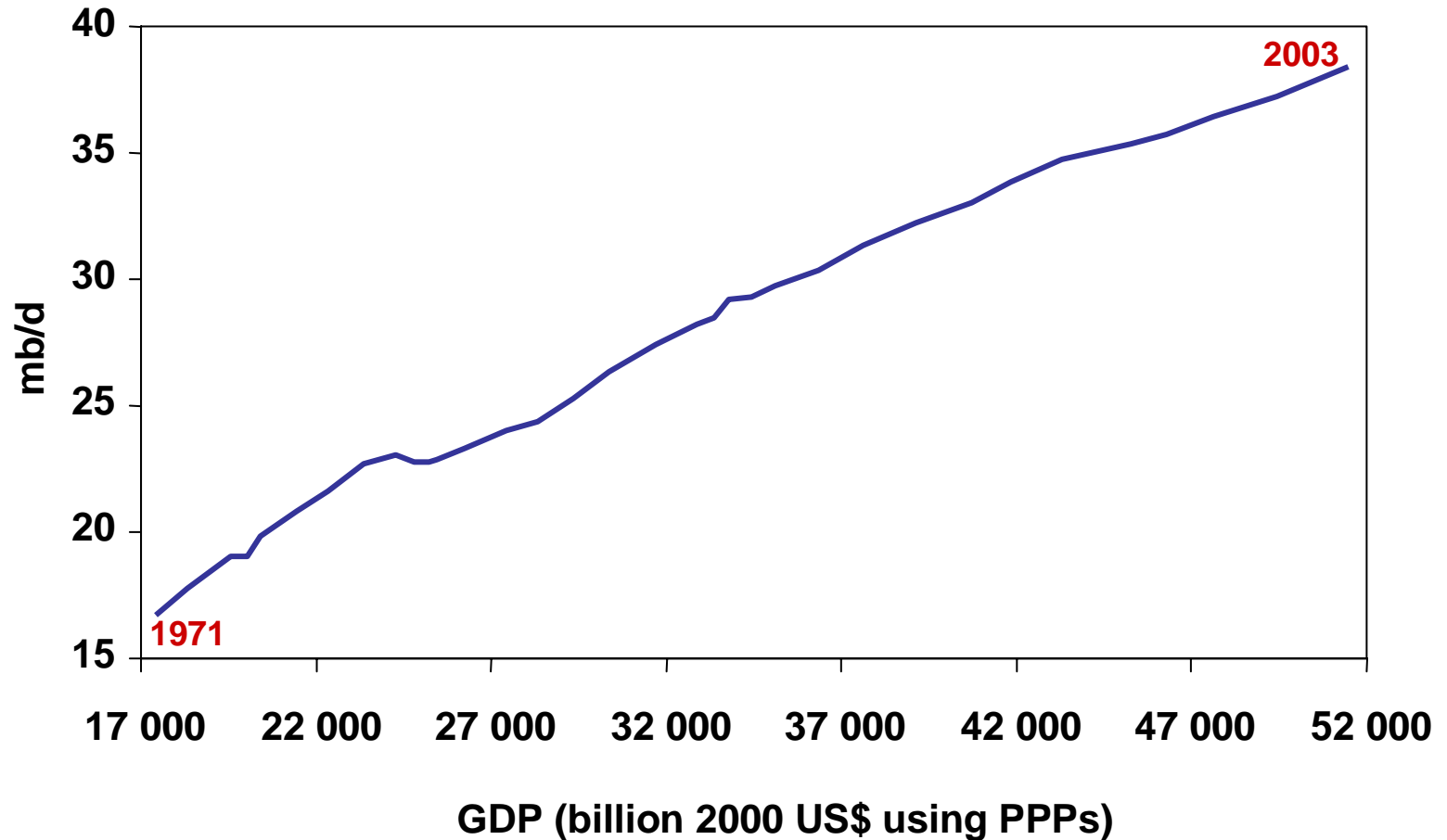
Transport Energy Demand



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World Transport Oil Demand



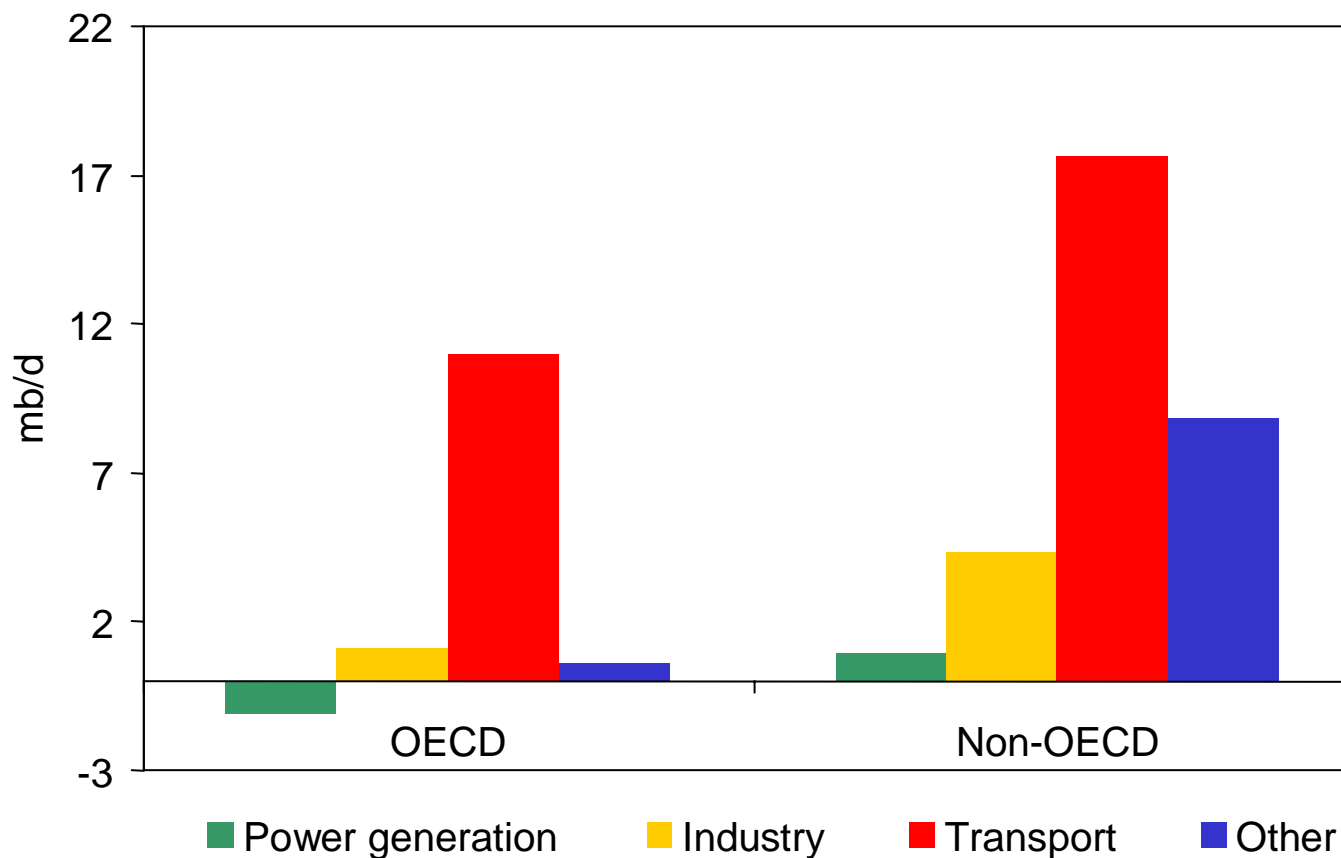
Global oil demand for transport increases very closely in line with GDP



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Increase in World Oil Demand, 2002-2030



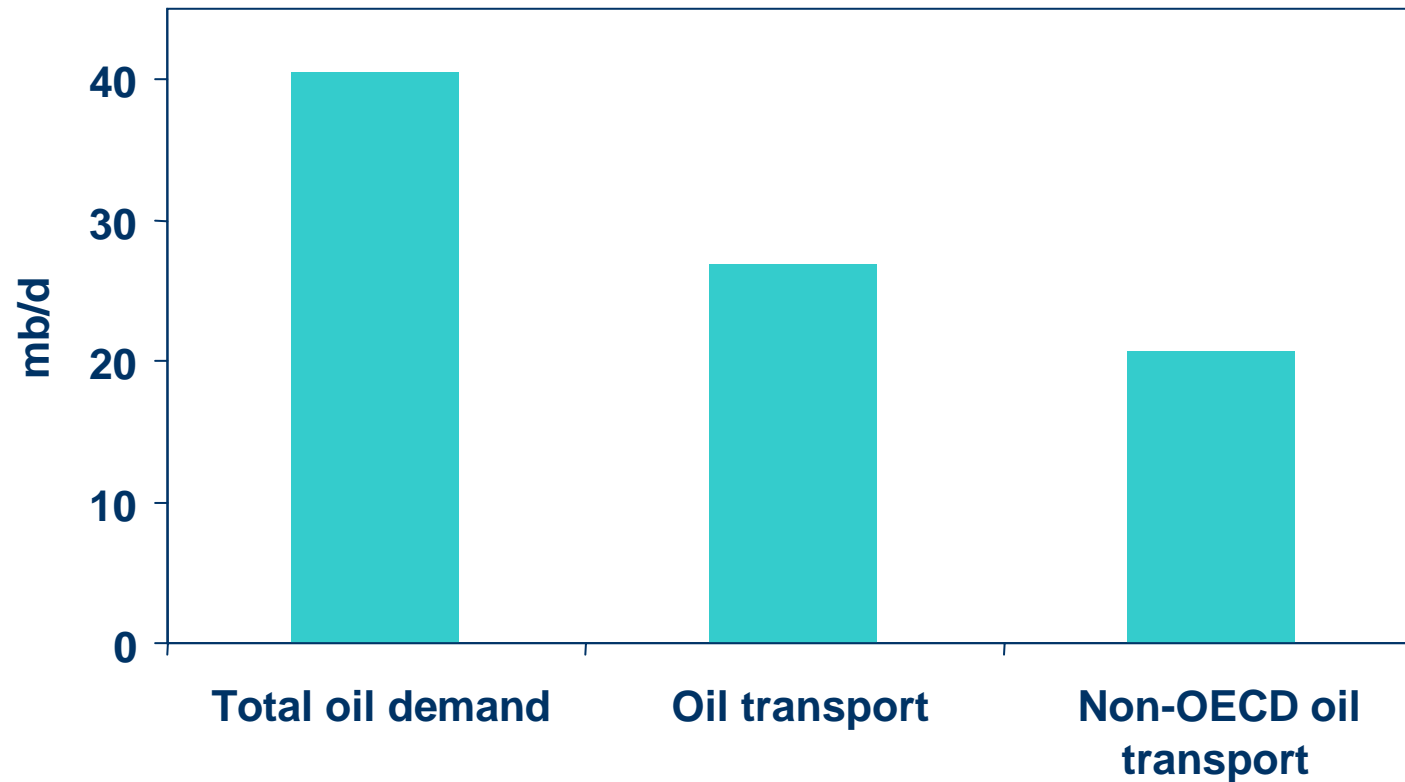
Most of the increase in oil demand comes from the transport sector – especially in OECD countries



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Incremental Oil Demand in the Transport Sector, 2002-2030



Transport oil demand in Non-OECD countries will increase three times more than in the OECD



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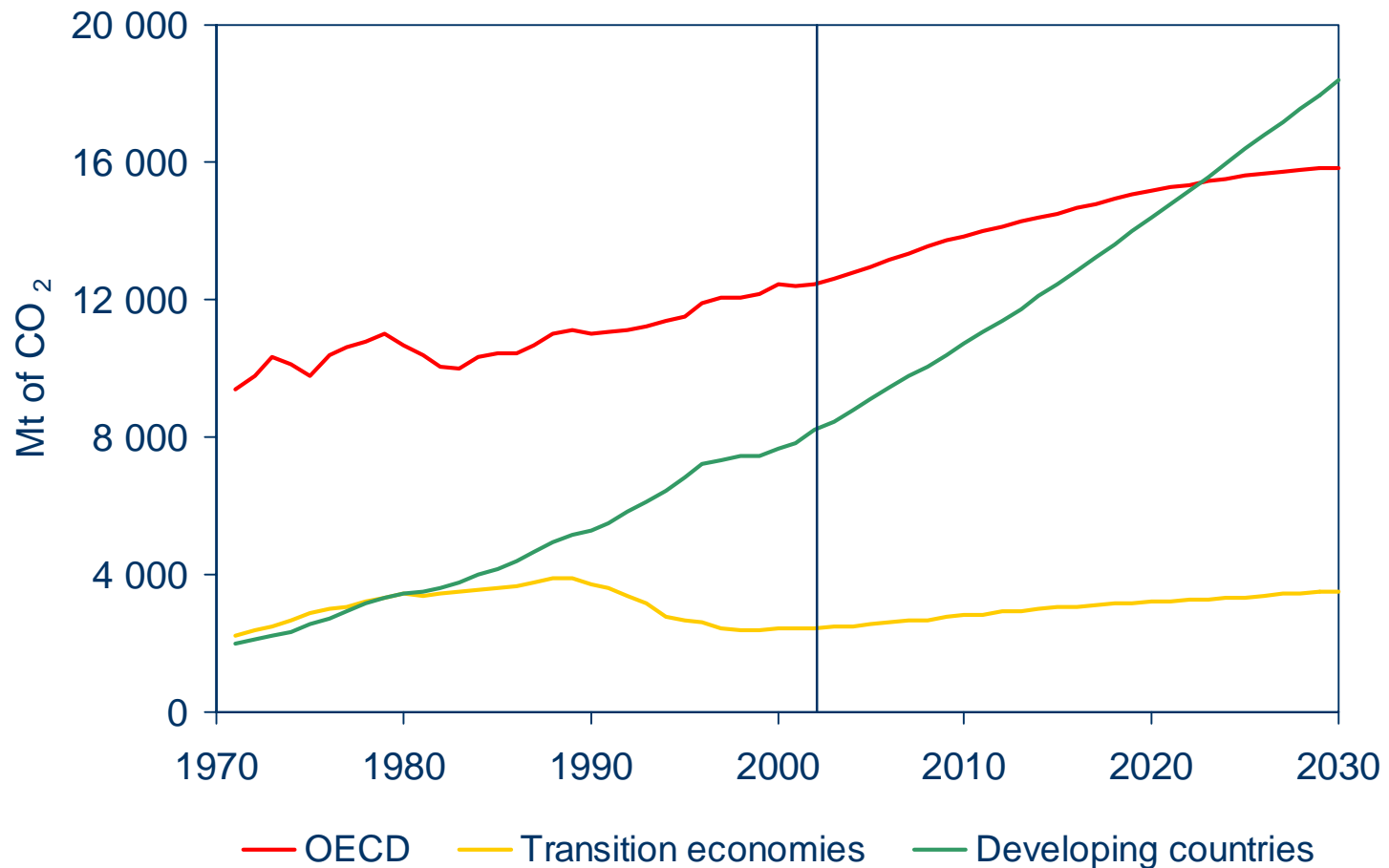
Environmental Implications



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CO₂ emissions, 1971-2030



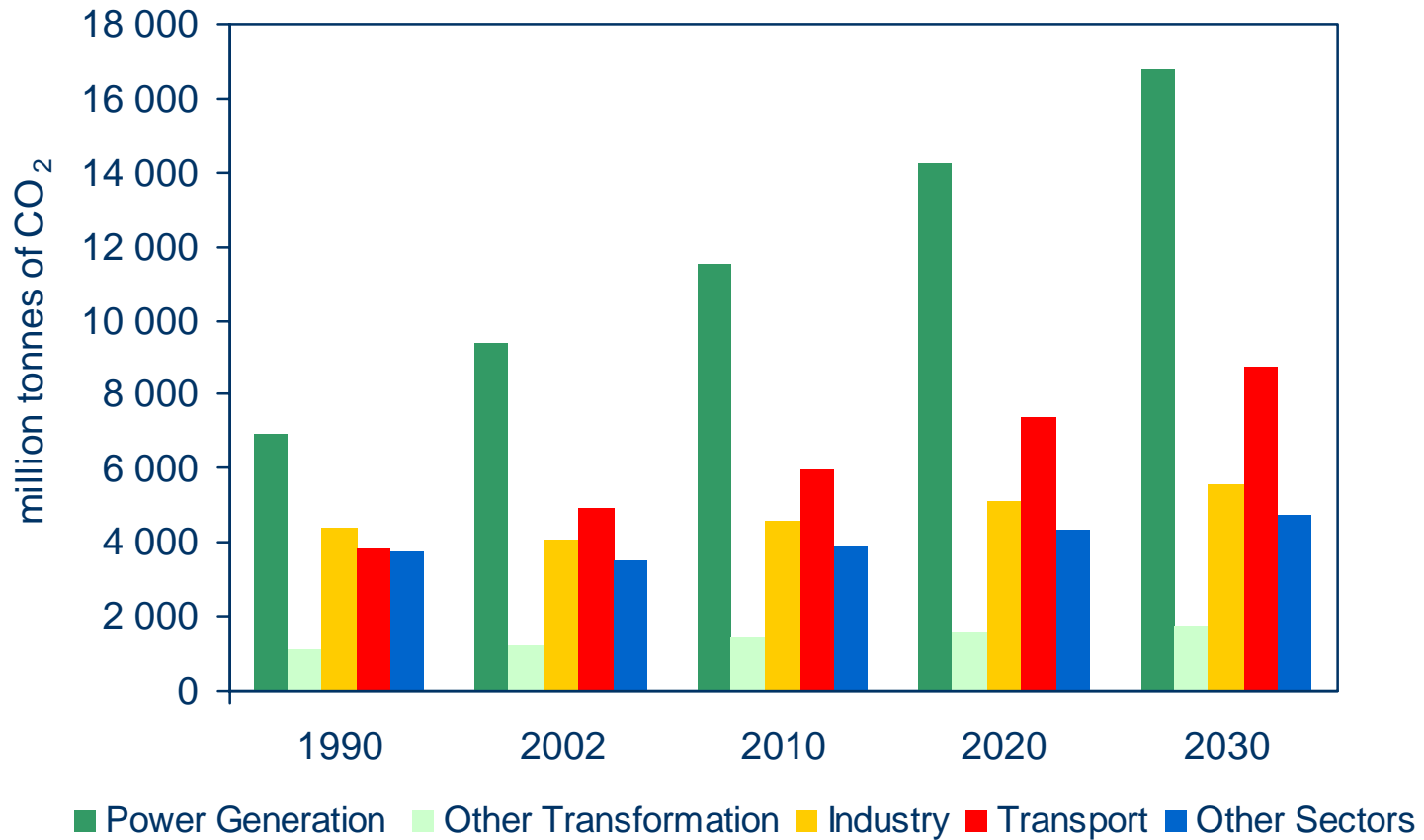
CO₂ emissions will increase fastest in developing countries, overtaking OECD in the 2020s



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CO₂ emissions by sector, 1990-2030



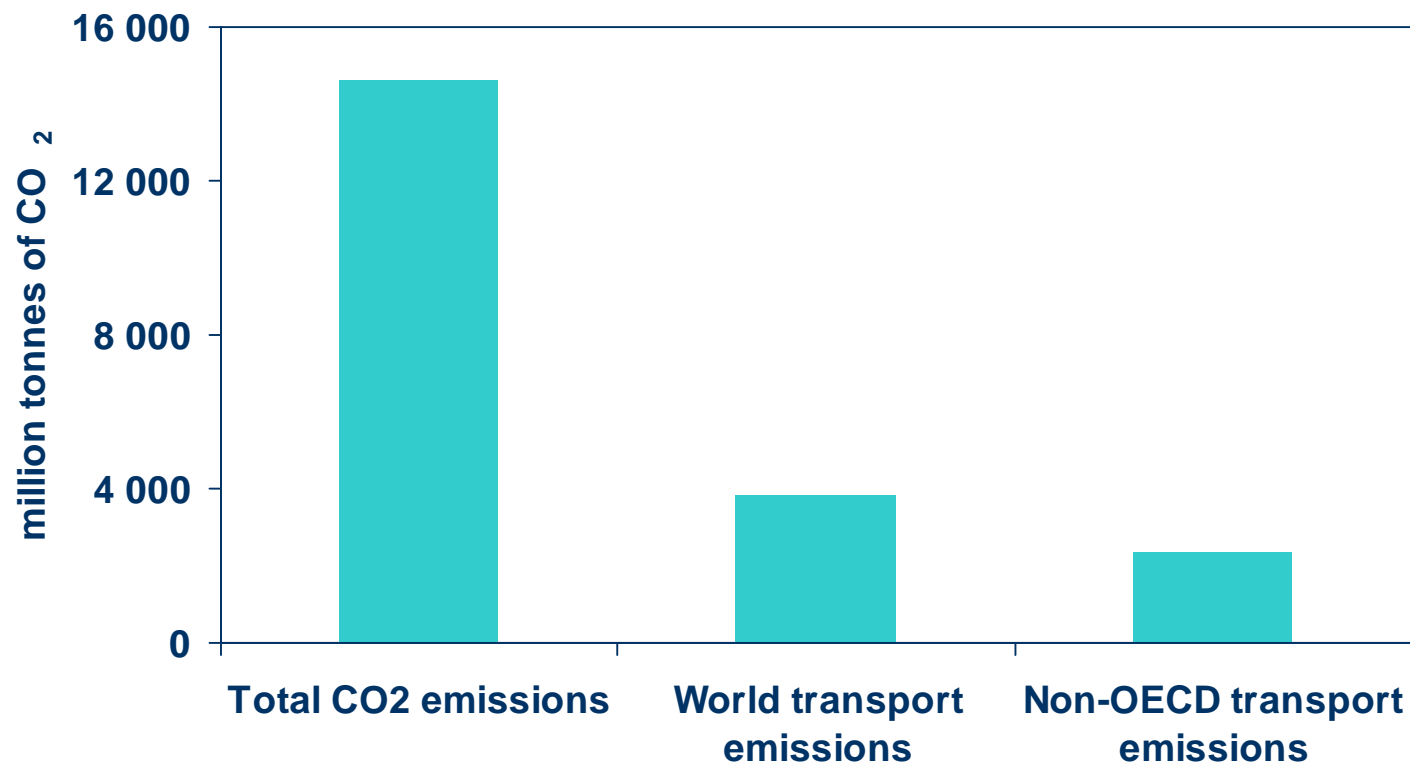
CO₂ emissions in power generation and transport are expected to increase the most



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Incremental CO₂ emissions in the Transport Sector, 2002-2030



Transport accounts for a quarter of total CO₂ emissions increase, most of which will come from Non-OECD



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World Alternative Policy Scenario



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Alternative Policy Scenario Main Policies for Transport

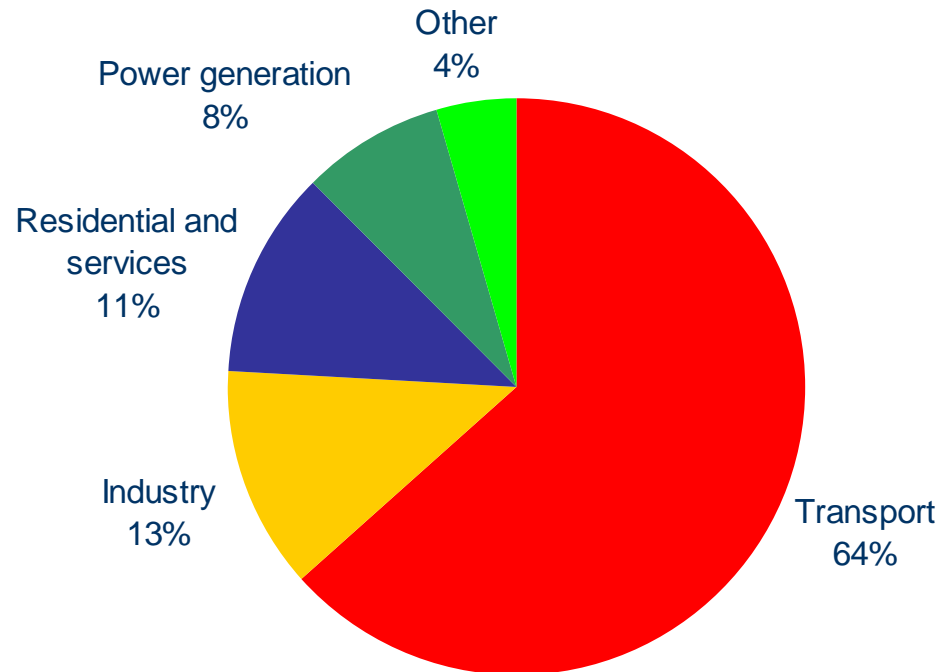
- Improve vehicle fuel efficiency (e.g. strengthen of US CAFE standards, prolongation of Chinese standards)
- Increased sales of alternative fuel vehicles and fuels (e.g. biofuels in Europe, Brazil)
- Mode switching (e.g. increased high speed rail in Japan)



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Reduction in World Oil Demand in the Alternative vs. Reference Scenario, 2030



Oil savings = 12.8 mb/d

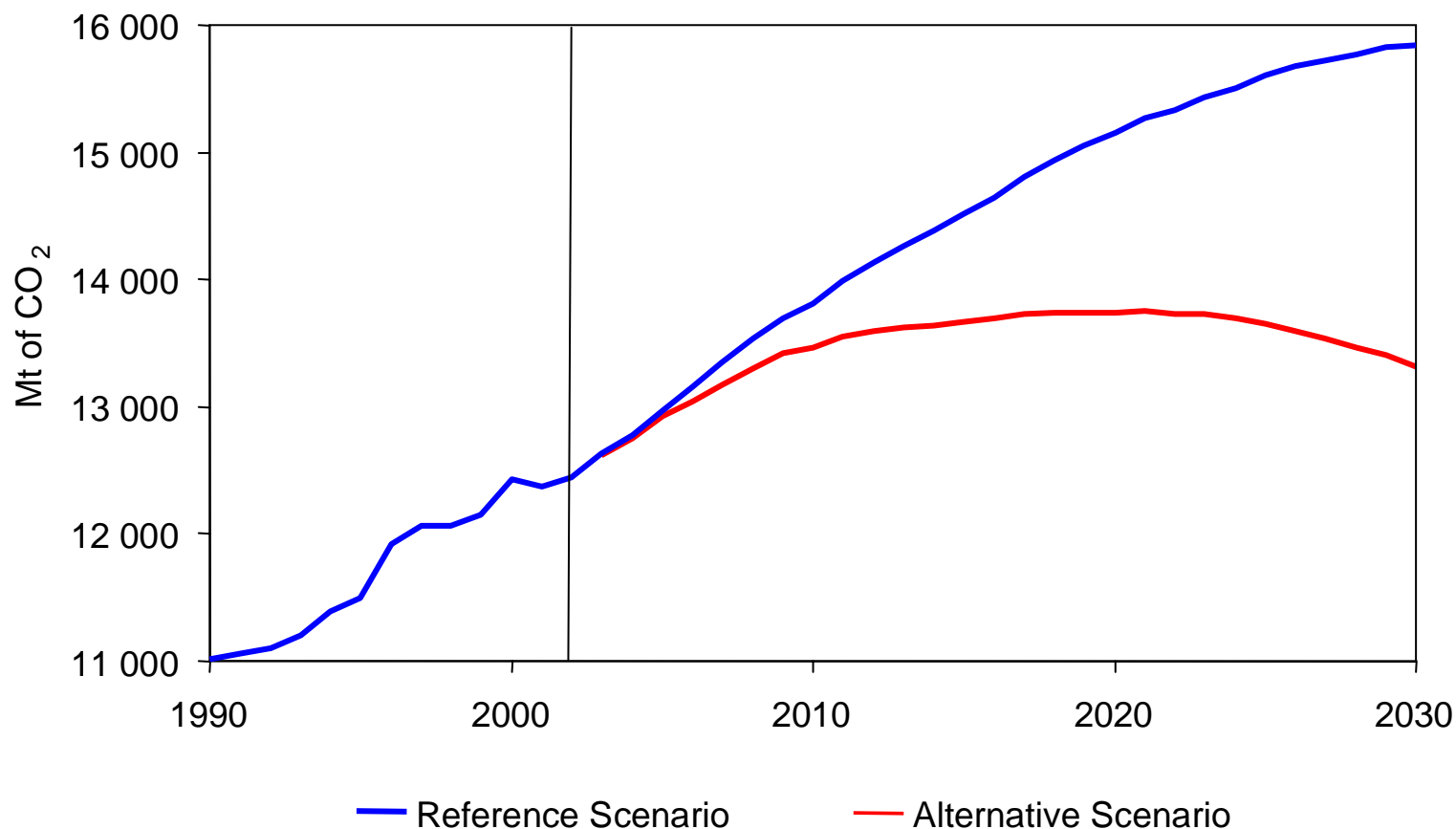
Oil savings in 2030 would be equivalent to the combined current production of Saudi Arabia, UAE and Nigeria



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OECD CO₂ Emissions in the Reference and Alternative Scenarios



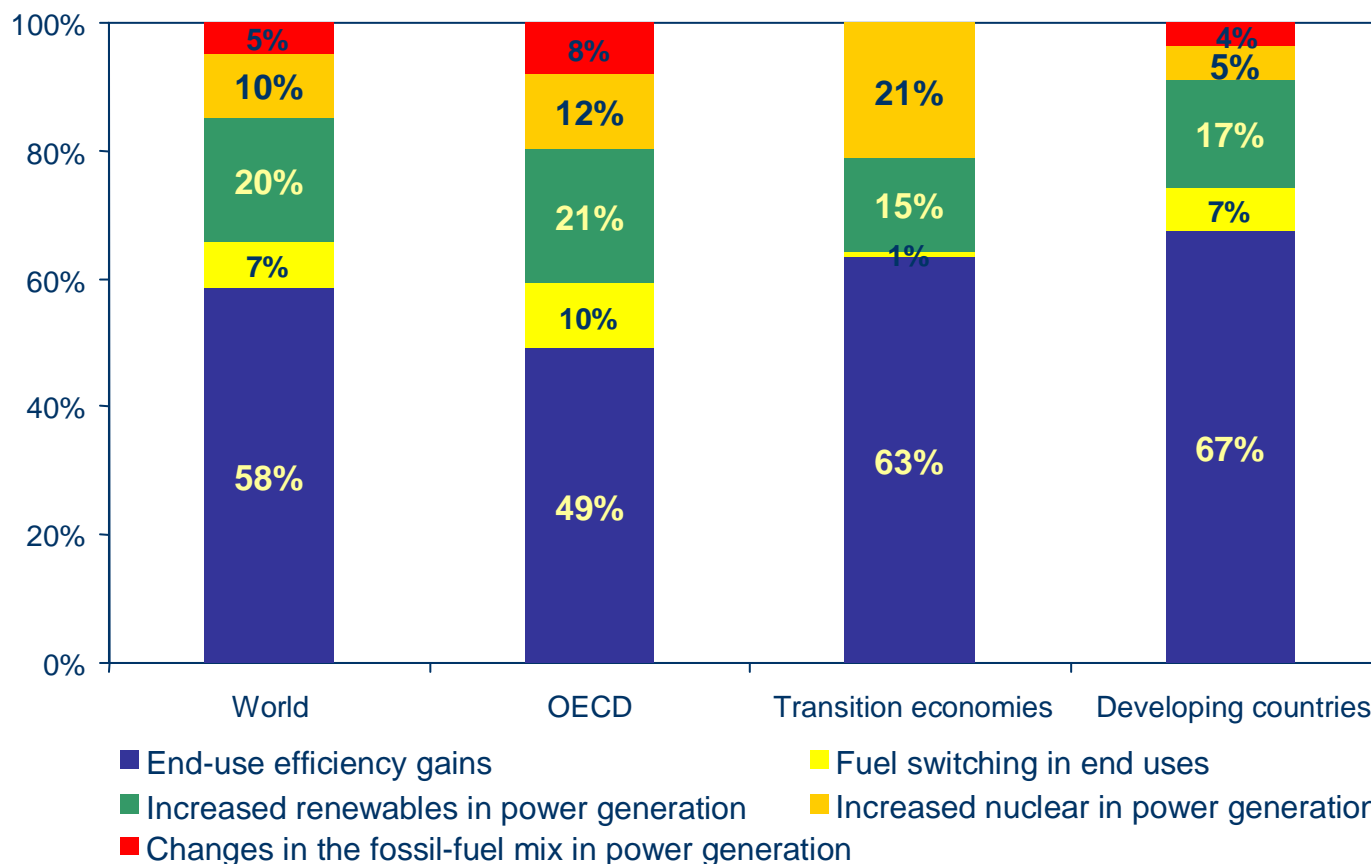
OECD CO₂ emissions peak around 2020 – 25% higher than in 1990



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Contributory Factors in CO₂ Reduction 2002-2030



Improvements in end-use efficiency contribute for more than half of decrease in emissions, and renewables use for 20%



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Concluding remarks

- World energy demand in transport will climb faster than any other end-use sector
- Oil demand in transport will be three times higher in developing countries than in the OECD
- Two rigidities emerge in the oil market:
 - demand will be increasingly concentrated in transport
 - supply will be increasingly concentrated in few countries
- Share of transport in global CO₂ emissions is set to increase
- New government policies can alter these trends significantly