



Energy Efficiency 2017

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Key messages

2016 confirmed the recent step up in global energy efficiency gains

This is generating economic, social and environmental benefits

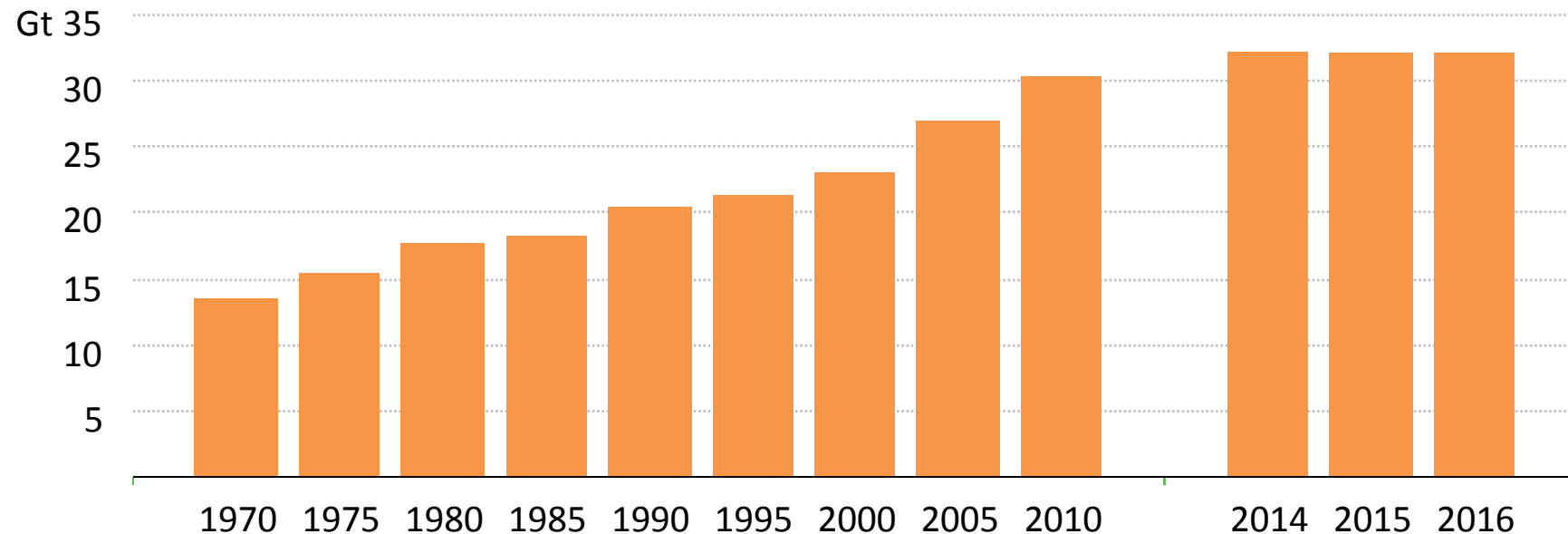
- Energy intensity improvement is the main reason energy related emissions have levelled off
- Because of energy efficiency, global energy use was 12% lower in 2016, resulting in global economic gains and significant savings for households

But stronger policy implementation is essential



Energy-related CO₂ emissions have been flat since 2014

Global energy-related CO₂ emissions

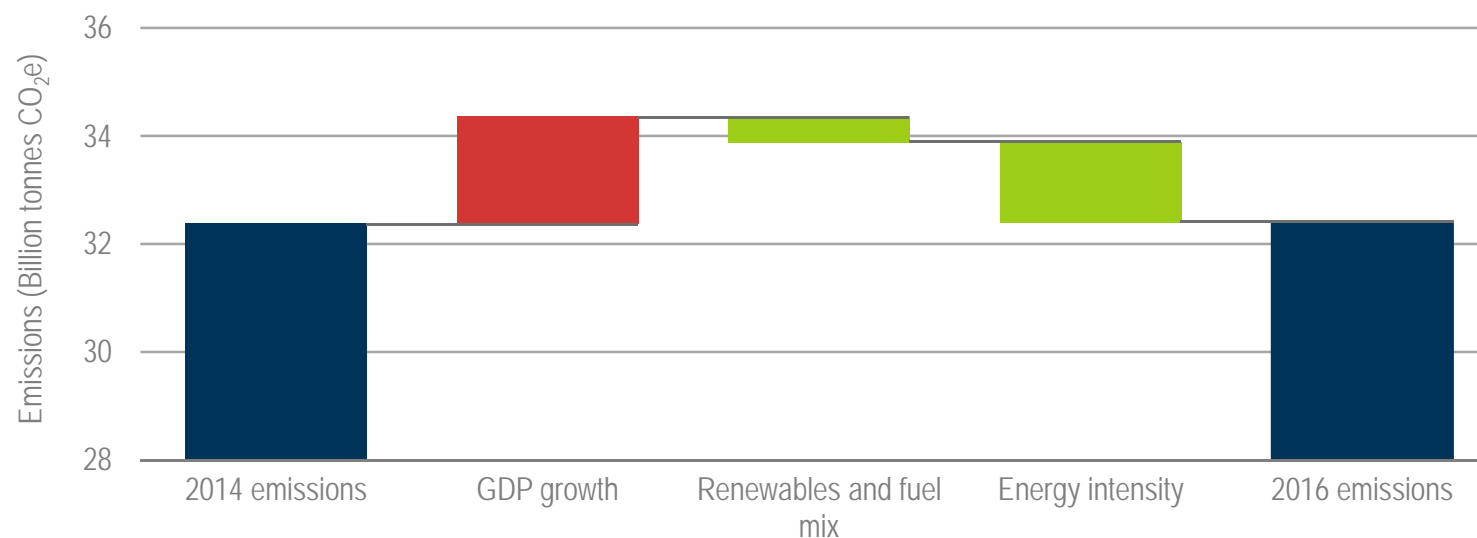


IEA analysis shows that global energy-related CO₂ emissions remained flat in 2016 for the third year in a row, even though the global economy grew



Energy efficiency is helping to keep emissions down

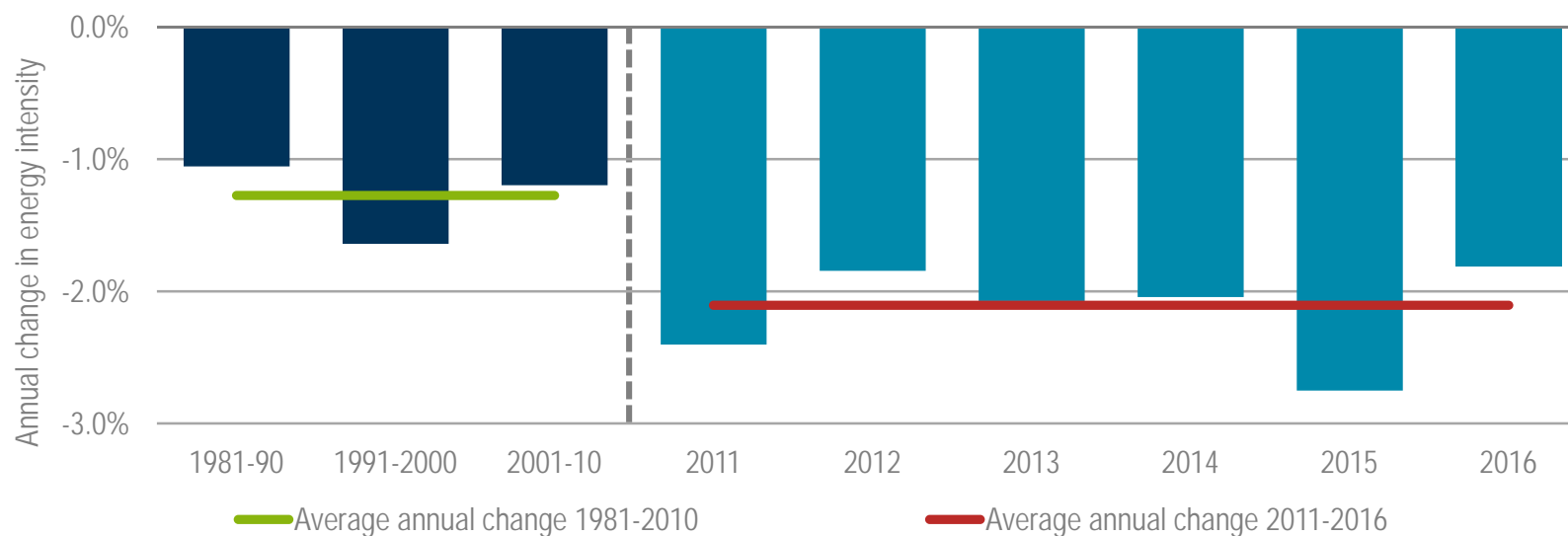
Factors influencing greenhouse gas emissions, 2014-16



Emissions would have been 2 billion tonnes higher in 2016 without the combination of energy efficiency improvement and the move towards renewables and cleaner fuels.

The world is generating more value from its energy

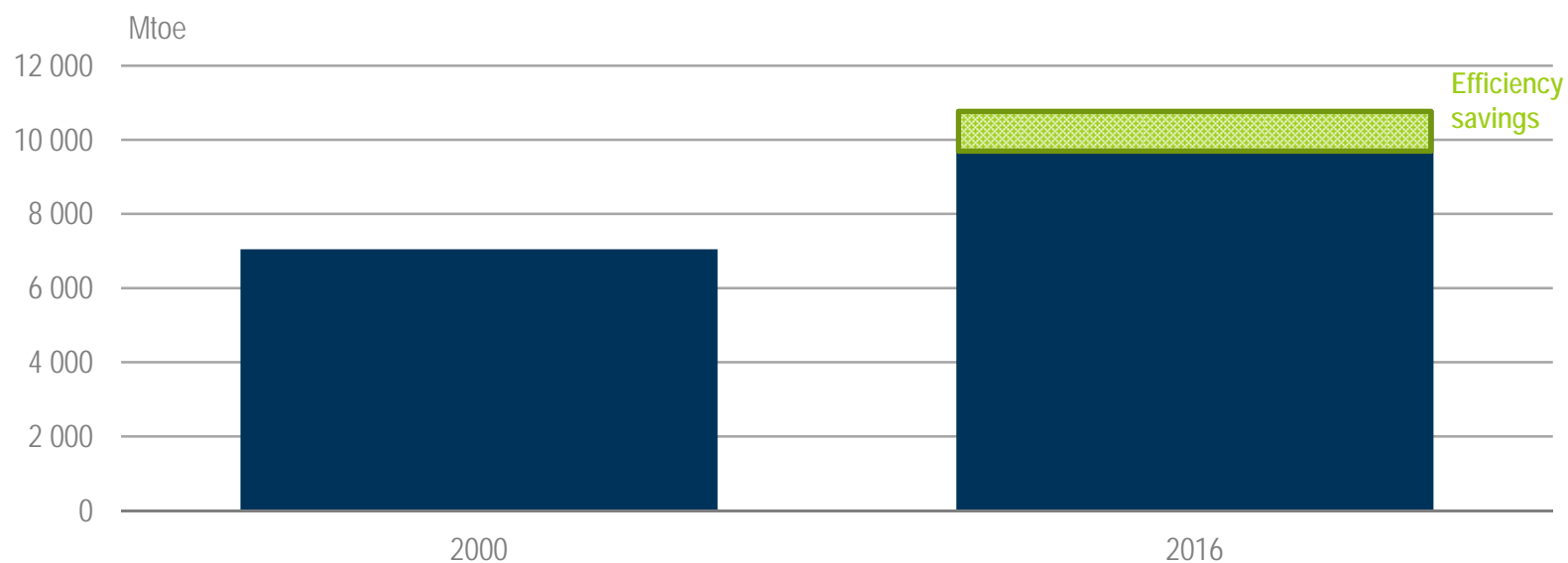
Changes in global energy intensity (energy per unit of GDP)



This decade has seen intensity improvement rates at almost double the historic average, suggesting that the world has entered a new era of faster intensity gains.

Efficiency is reducing global energy use

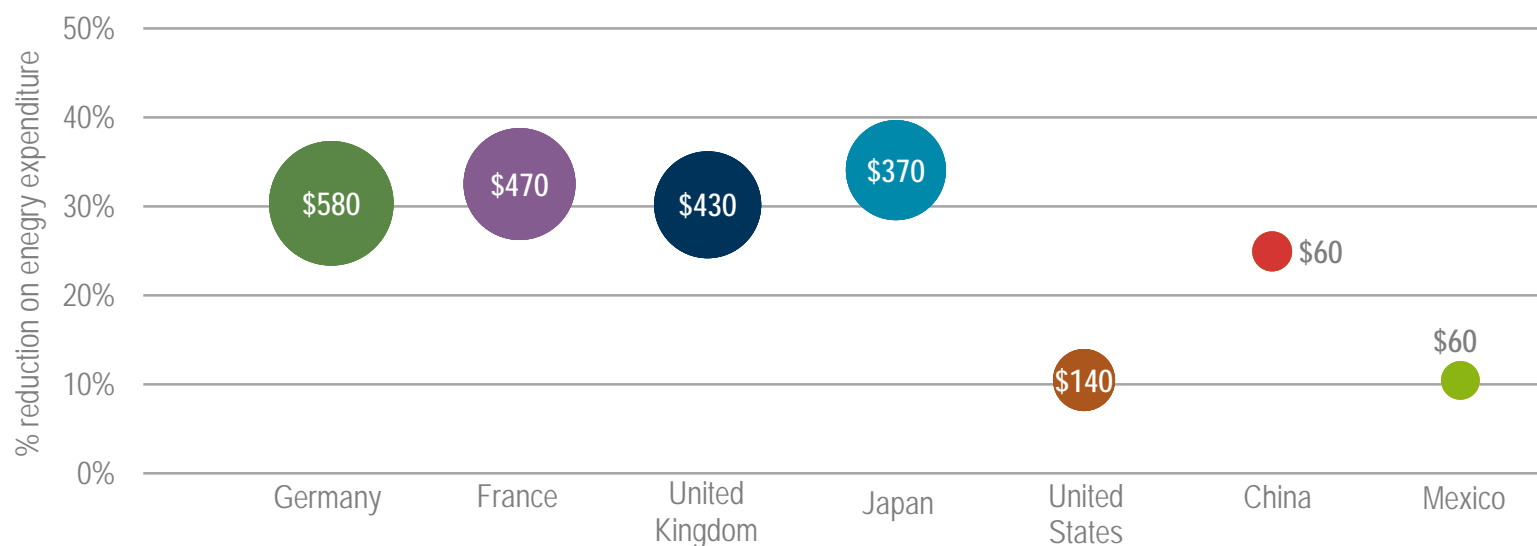
Global final energy consumption and savings from energy efficiency



Energy efficiency reduced global energy use by 12% in 2016, an amount equivalent to the energy use of the European Union.

Energy consumers are making big savings

Per capita household energy expenditure savings in 2016 due to efficiency

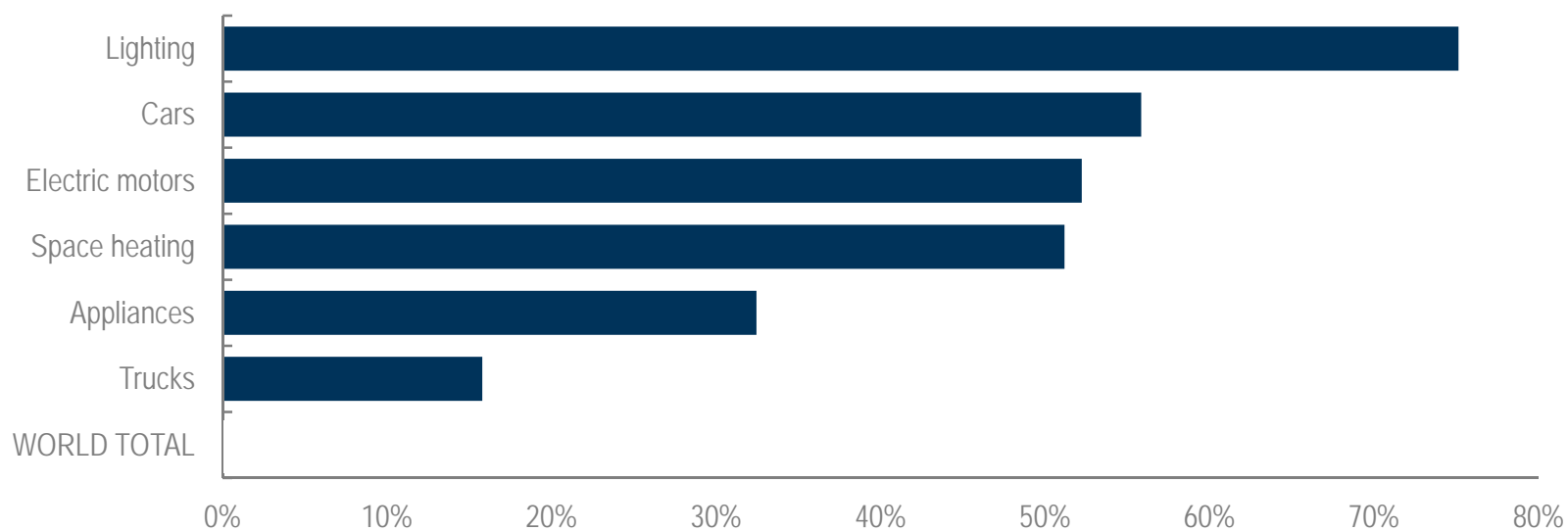


Efficiency improvements made since 2000 reduced energy spending in 2016. German consumers saved nearly USD 50 billion on their annual home and travel energy costs.



Policies of the past drive progress of today

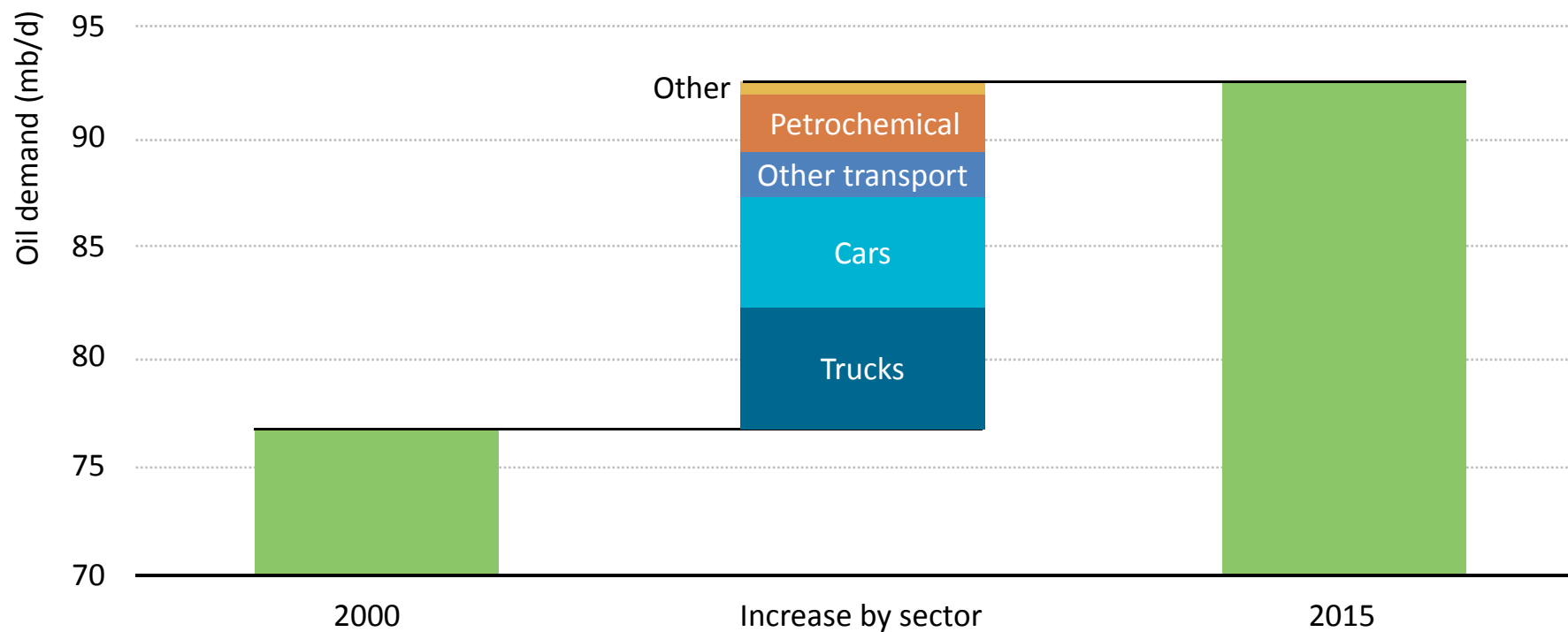
Share of global energy use covered by mandatory efficiency policies, 2016



The amount of global energy use covered by mandatory efficiency policies grew in 2016, but 68% of energy use remains uncovered. We owe the efficiency gains of today to the policies of the past.



Trucks drive global oil demand

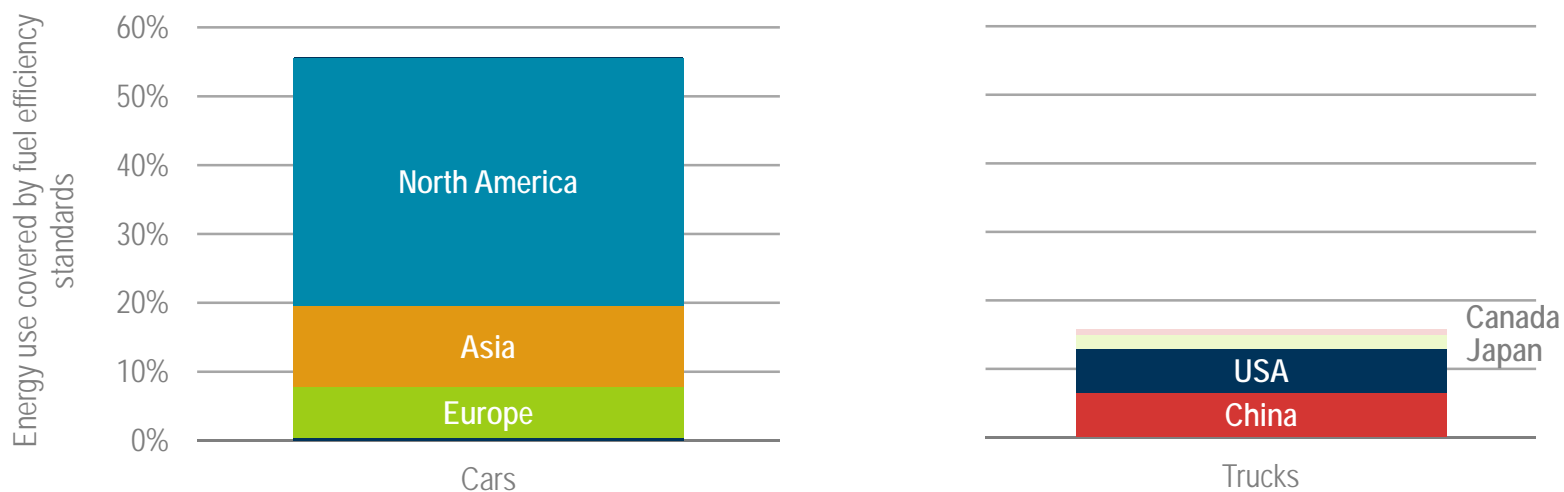


Trucks were responsible for nearly 40% of the growth in global oil demand since 2000; they are the fastest growing source of oil demand, in particular for diesel.



Vehicle efficiency policy is two-speed

Efficiency standard coverage by transport end-use, 2016

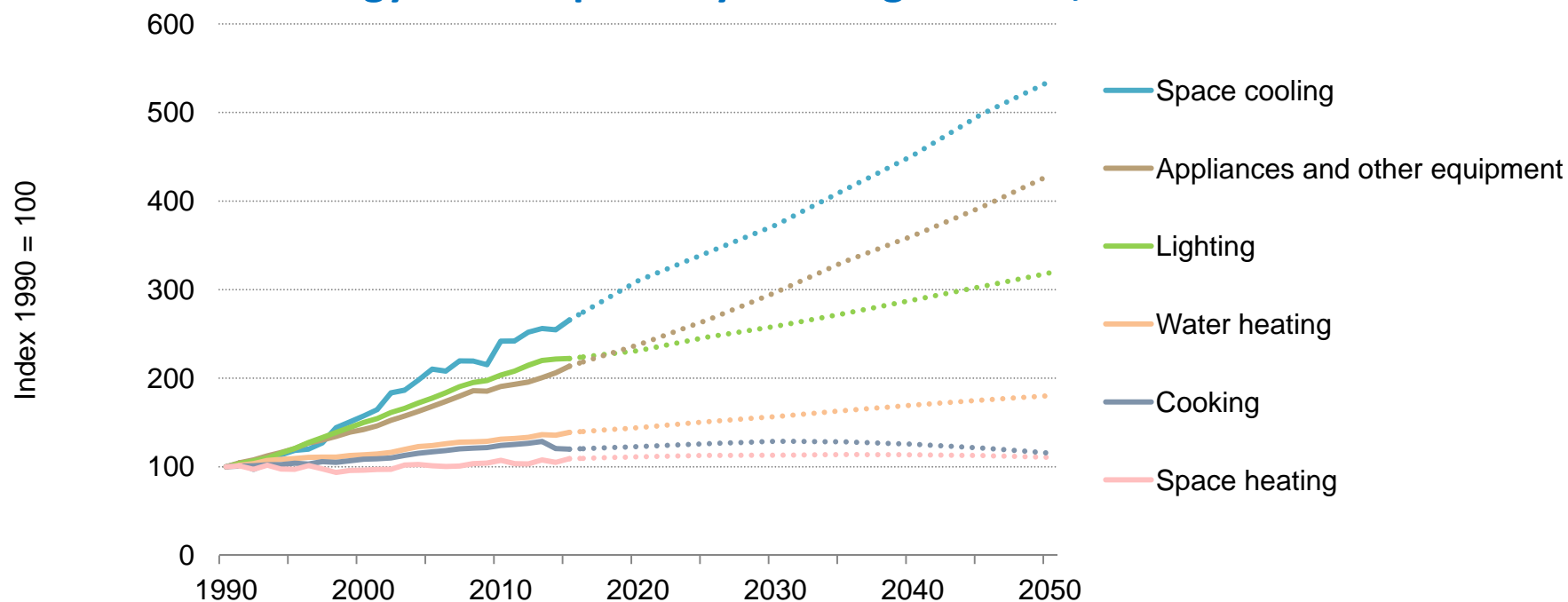


**Nearly 40 countries have fuel efficiency standards for cars.
Only Canada, China, Japan and the United States have standards for trucks.**



Space cooling energy use growth

Global energy consumption by building end-use, 1990-2050



Space cooling will continue to be the fastest growing source of energy demand in buildings. Efficiency policy is weakest in countries where demand is rising fastest.



Concluding points

- *Energy Efficiency 2017* shows the critical importance of energy efficiency to economies, households and the environment.
- There has been a step up in efficiency gains in recent years, despite lower energy prices, and this is having many positive impacts.
- Governments must renew their focus on policy implementation and attacking the 68% of energy use that is not covered by mandatory efficiency policies.
- Decarbonisation requires the integration of efficiency and renewables into the energy system through a harmonised policy approach.
- The IEA is helping countries realise unmet energy efficiency potential by training policy makers, facilitating knowledge sharing and providing policy advice.