



# Energy Efficiency 2017

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## Key messages

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### **2016 confirmed the recent step up in global energy efficiency gains**

#### **This is generating economic, social and environmental benefits**

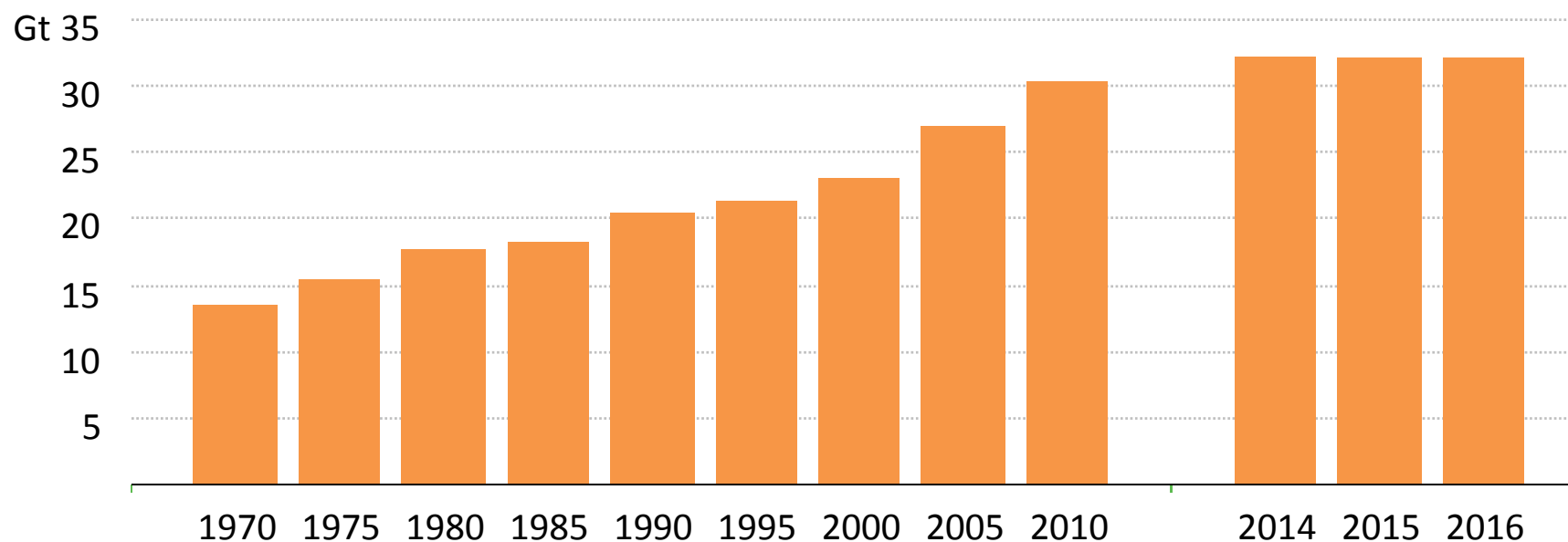
- Energy intensity improvement is the main reason energy related emissions have levelled off
- Because of energy efficiency, global energy use was 12% lower in 2016, resulting in global economic gains and significant savings for households

#### **But stronger policy implementation is essential**

## Energy-related CO<sub>2</sub> emissions have been flat since 2014



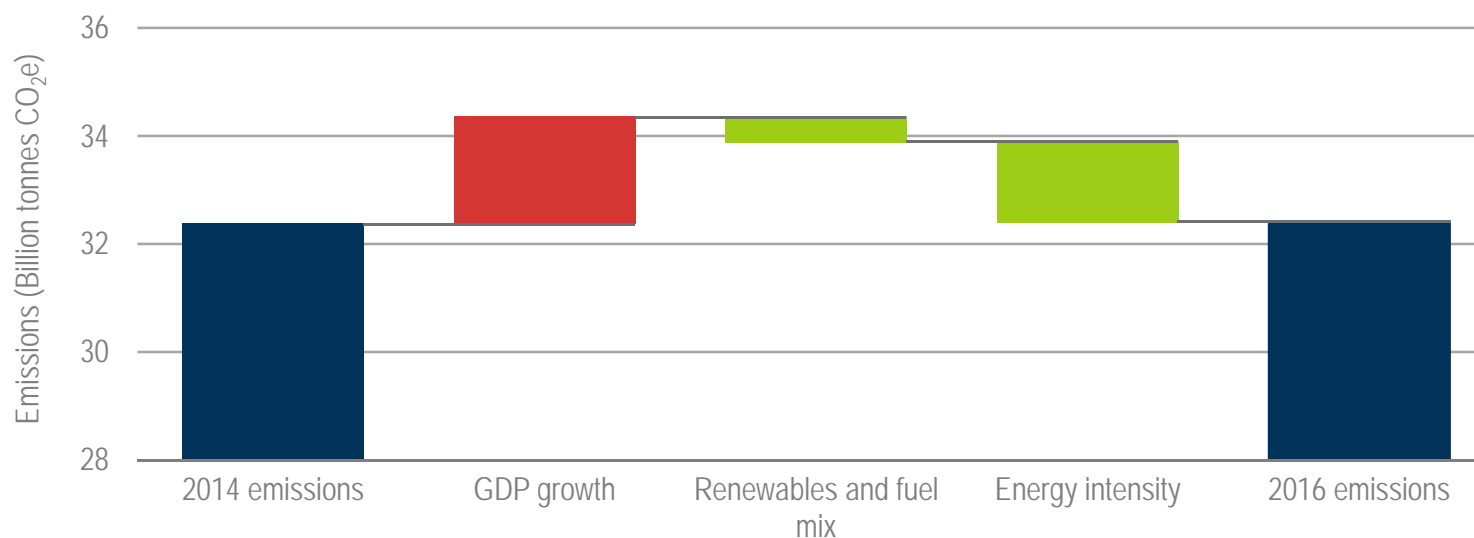
### Global energy-related CO<sub>2</sub> emissions



**IEA analysis shows that global energy-related CO<sub>2</sub> 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

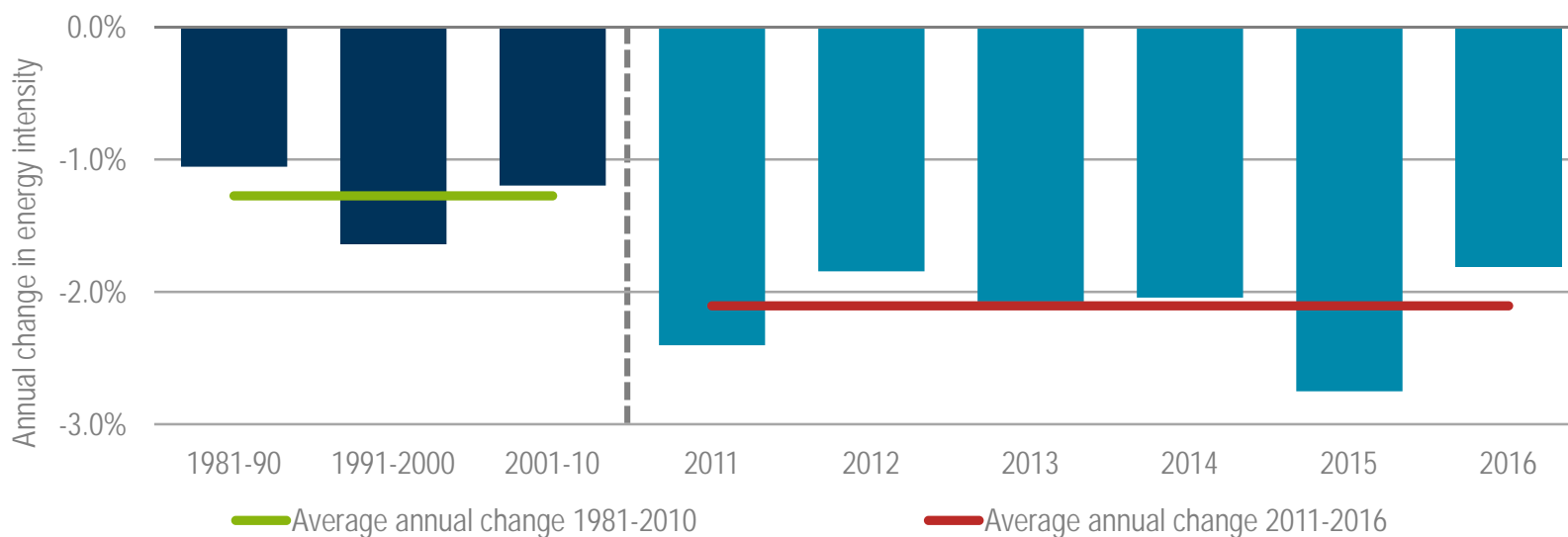
### Factors influencing greenhouse gas emissions, 2014-16



**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

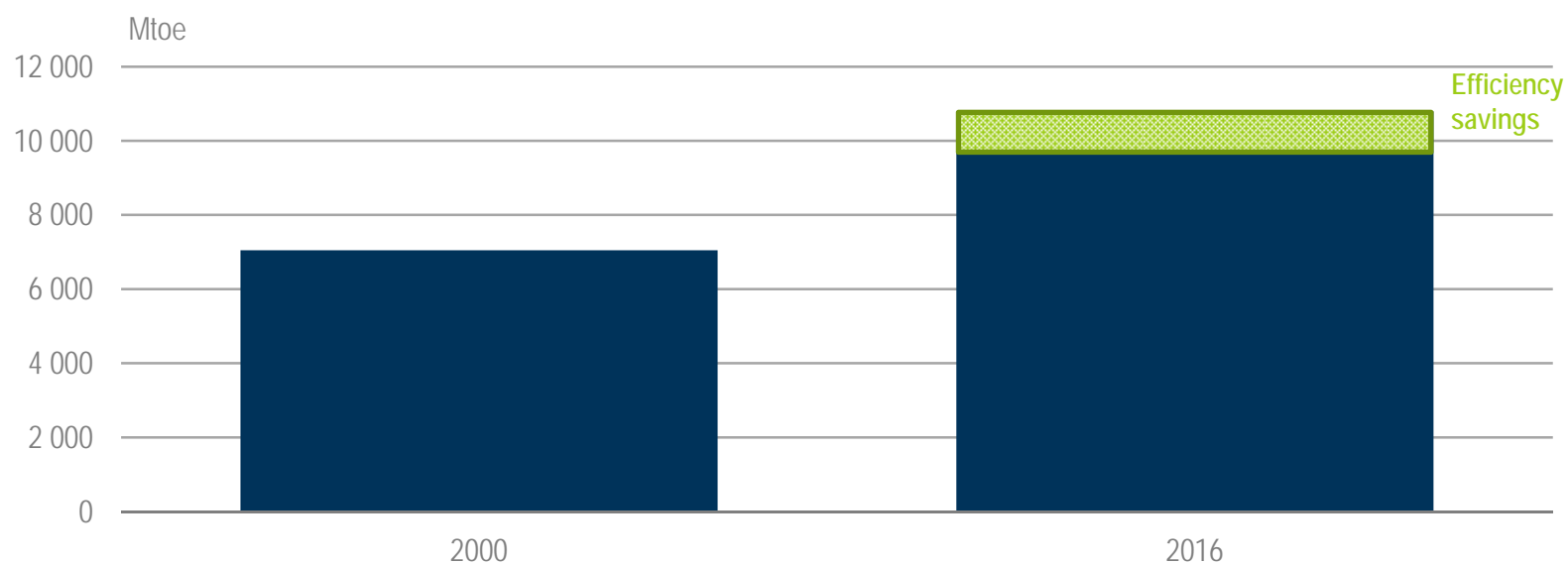
### Changes in global energy intensity (energy per unit of GDP)



**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

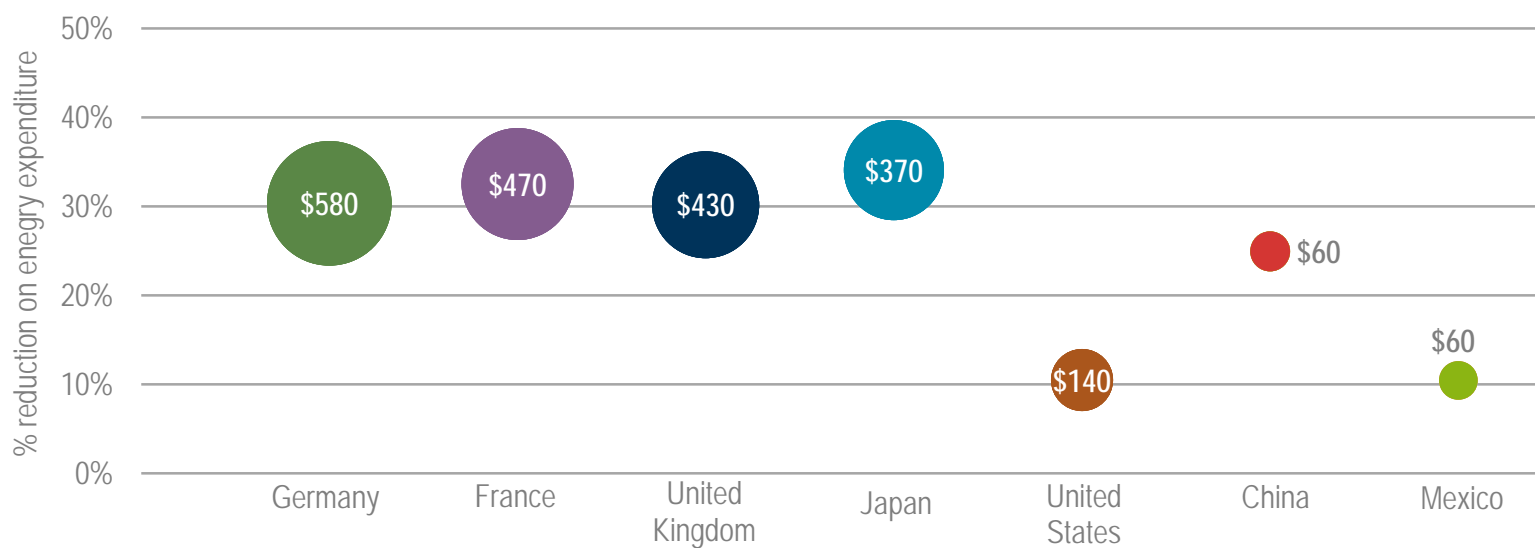
### Global final energy consumption and savings from energy efficiency



**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

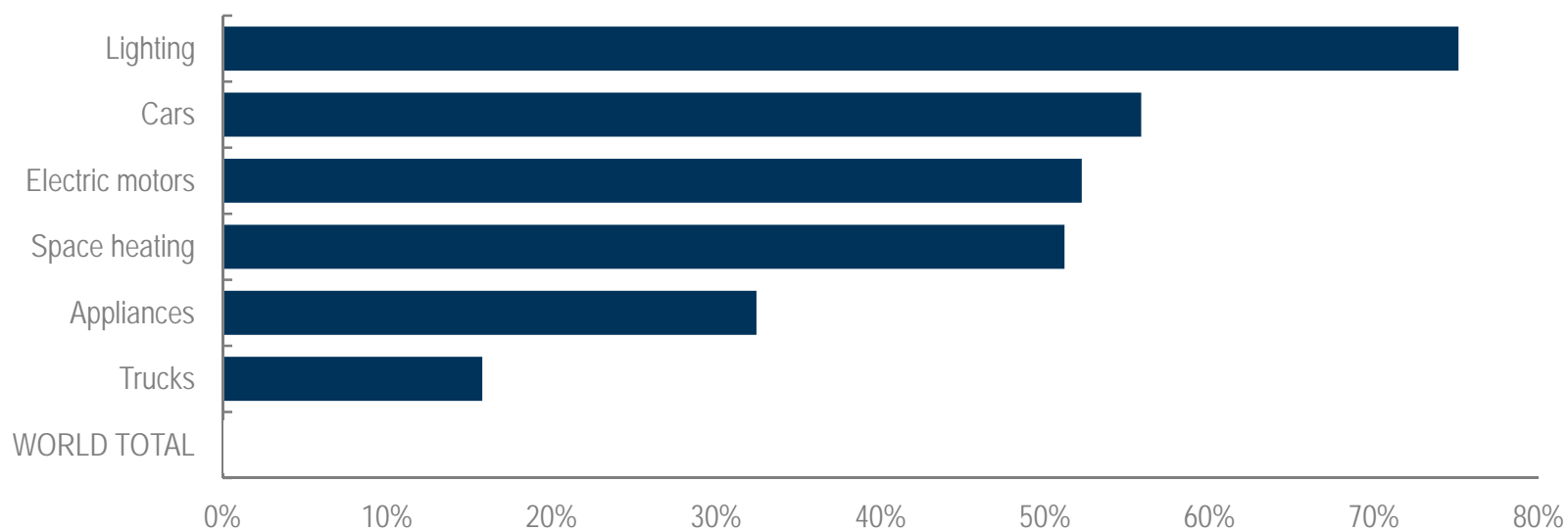


**Efficiency improvements made since 2000 reduced energy spending in 2016. German consumers saved nearly USD 50 billion on their annual home and travel energy costs.**



## Policies of the past drive progress of today

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

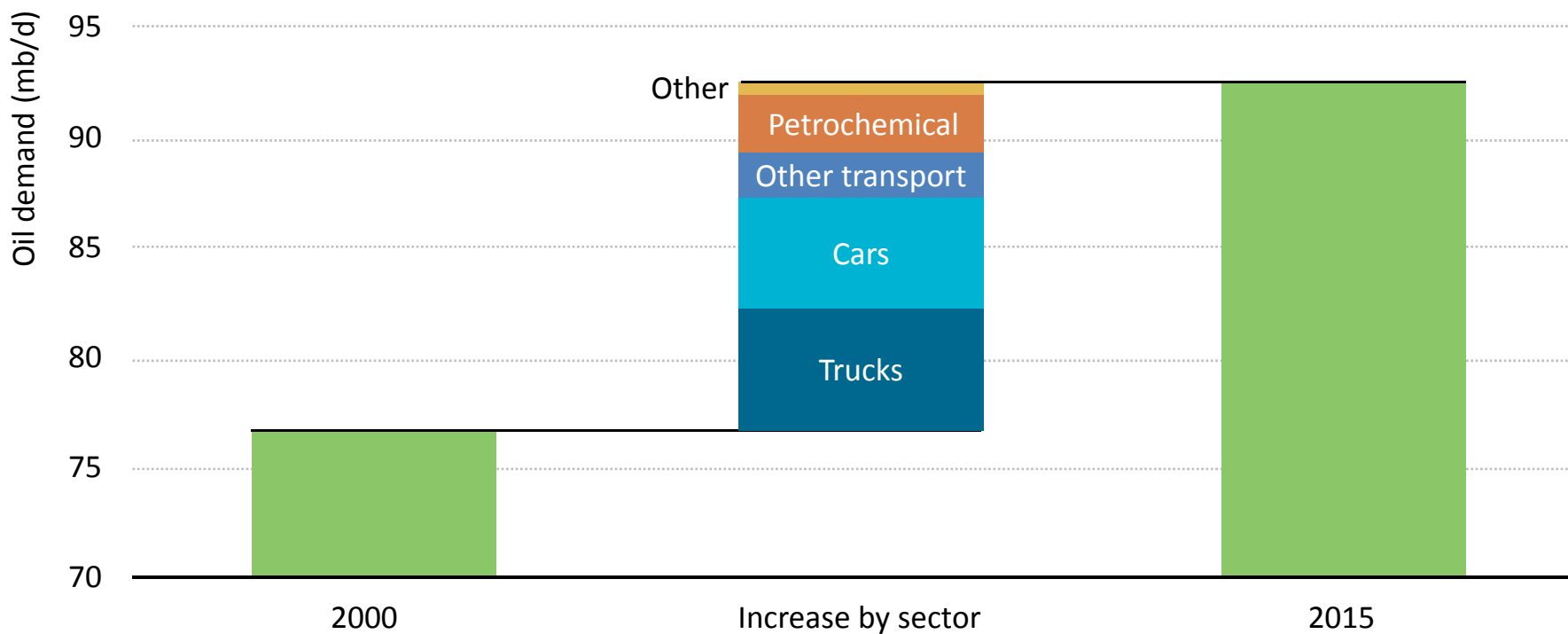


**The amount of global energy use covered by mandatory efficiency policies grew in 2016, but 68% of energy use remains uncovered. We owe the efficiency gains of today to the policies of the past.**





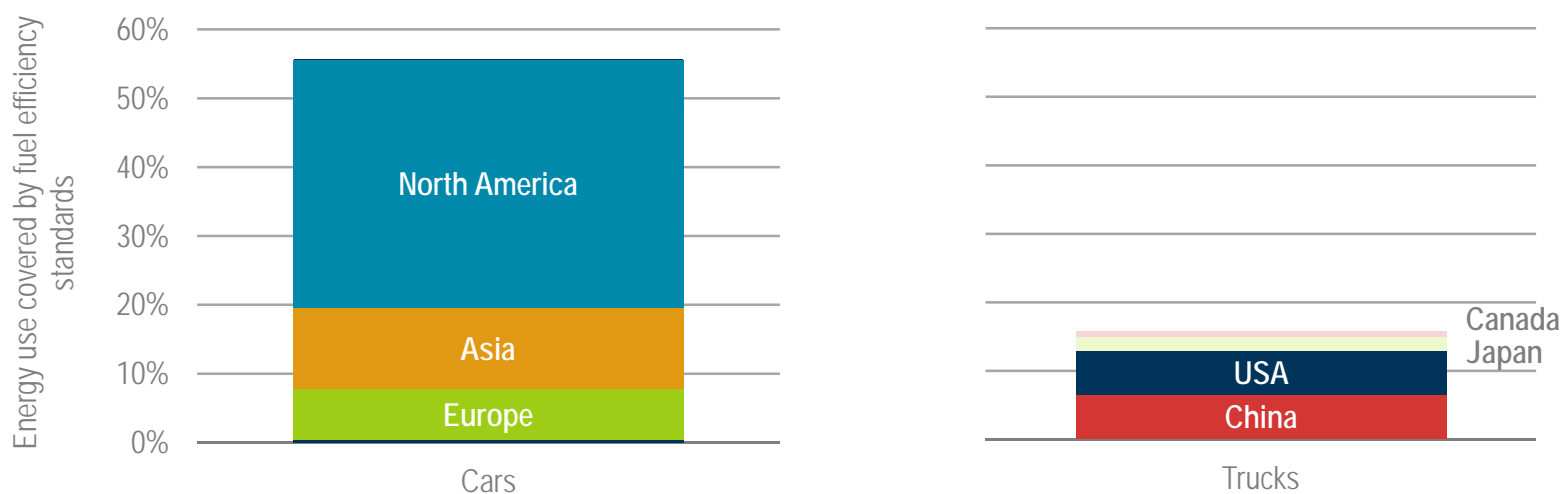
## Trucks drive global oil demand



**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.**

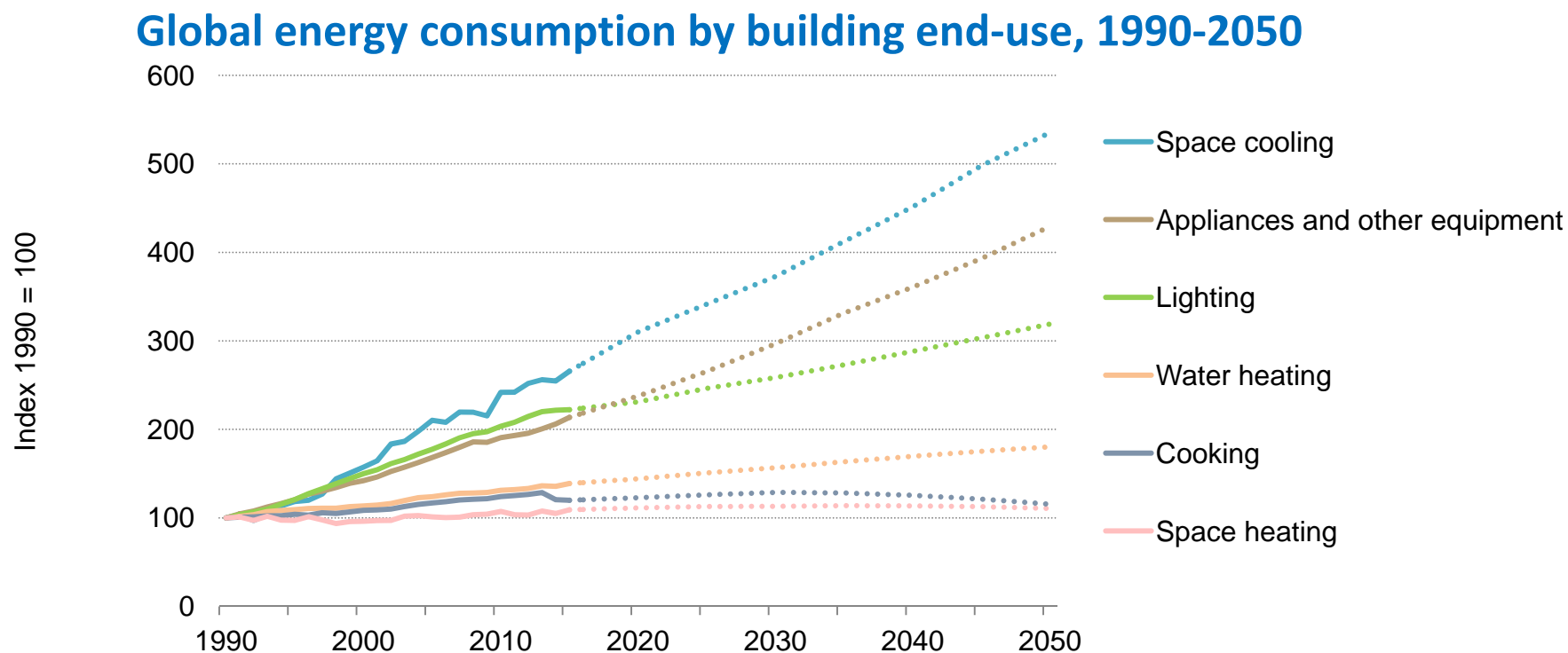
## Vehicle efficiency policy is two-speed

### 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



**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

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- *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.