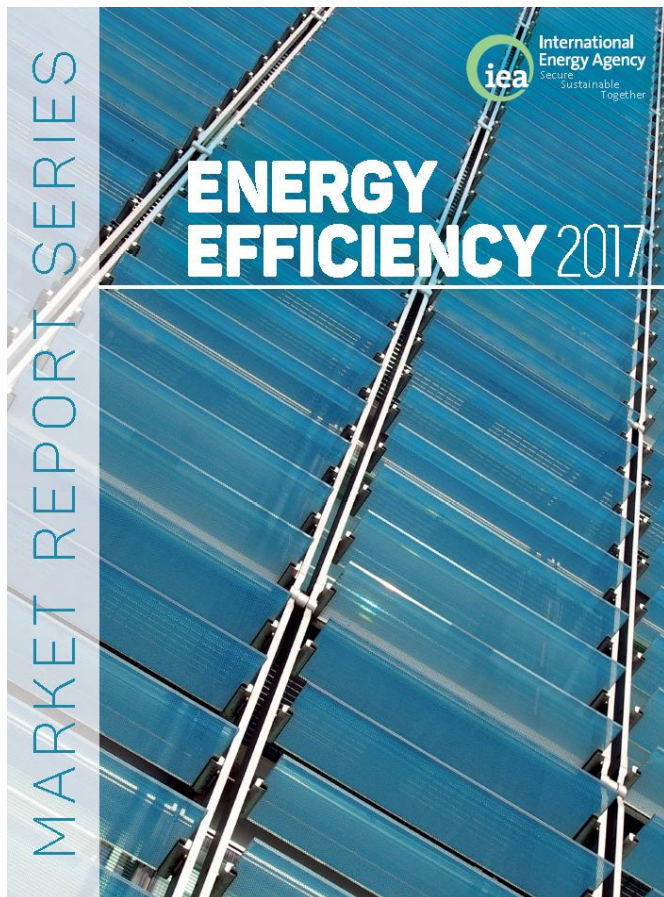




Energy Efficiency 2017

Brian Dean

Energy Efficiency Division

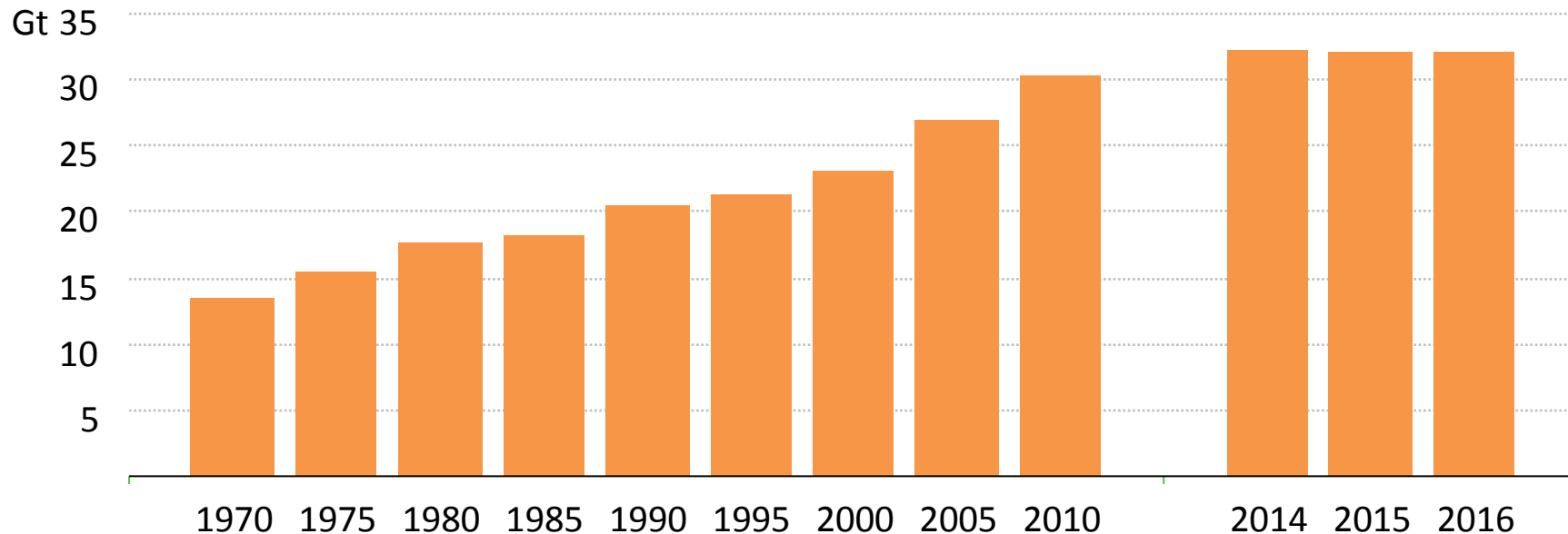


- **2016 confirmed the recent step up in global energy efficiency gains**
- **This is generating economic, social and environmental benefits**
- **But stronger policy implementation is essential**

Free download: www.iea.org/efficiency

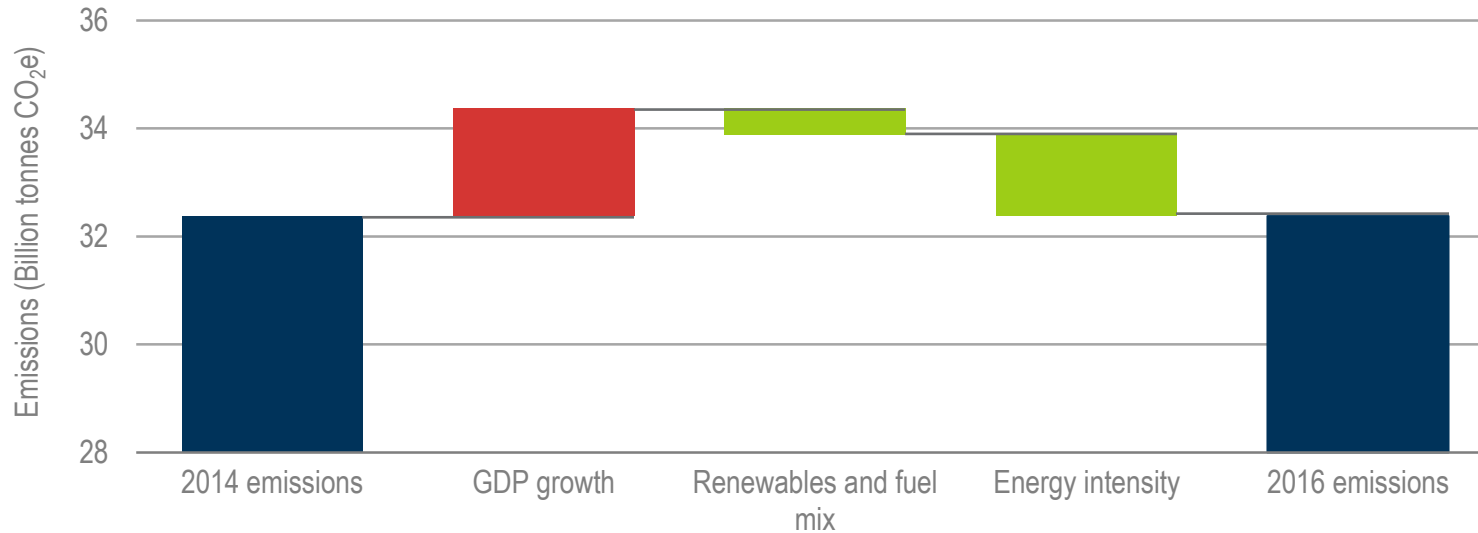
Energy-related CO₂ emissions have been flat since 2014

Global energy-related CO₂ emissions



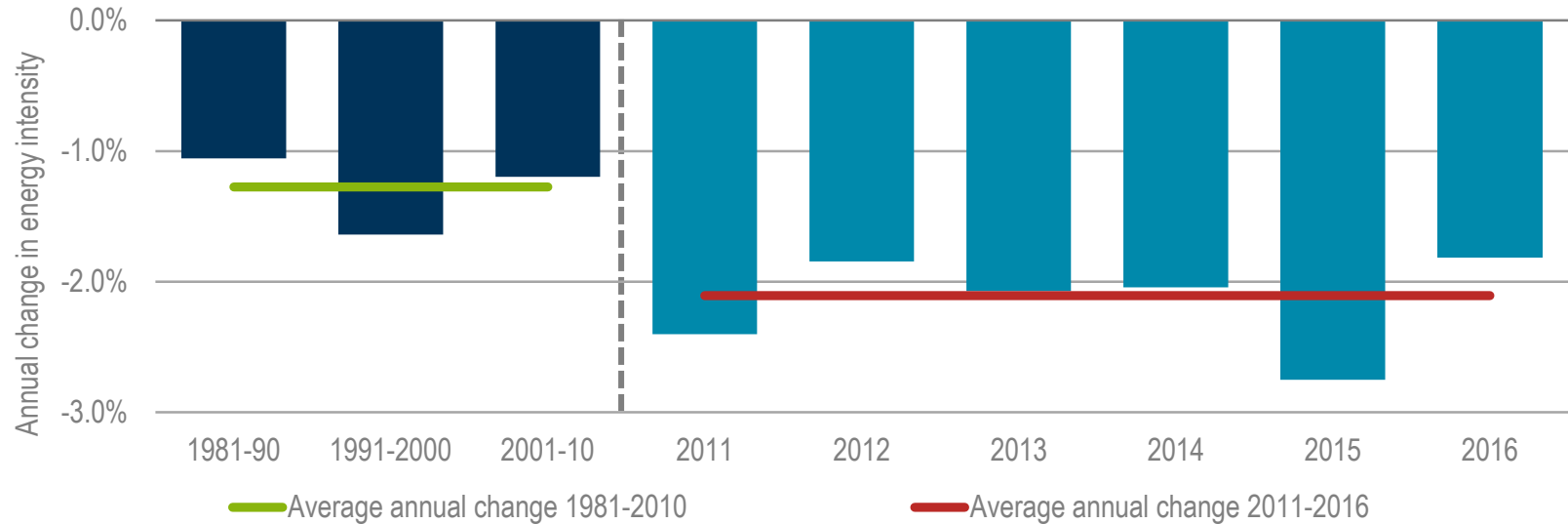
IEA analysis shows that global energy-related CO₂ emissions remained flat in 2016 for the third year in a row, even though the global economy grew

Factors influencing greenhouse gas emissions, 2014-16



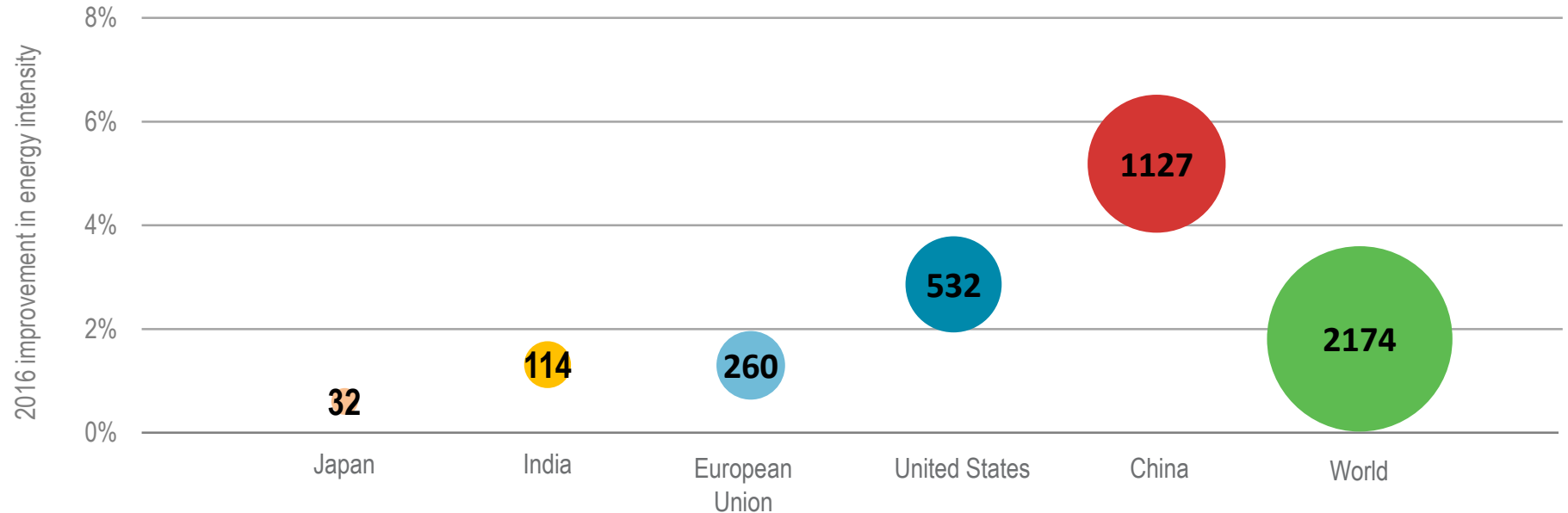
The combination of energy efficiency improvement and the move towards renewables and cleaner fuels has been key to avoiding 2 billion tonnes of additional greenhouse gas emissions

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



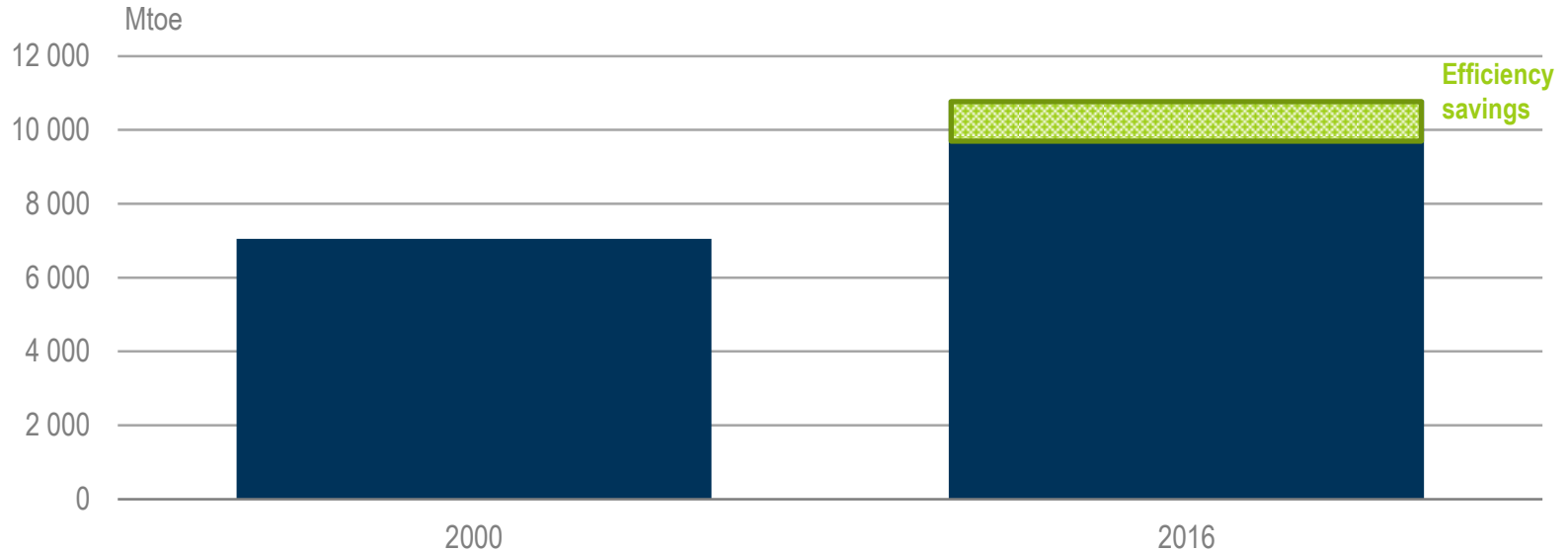
This decade has seen intensity improvement rates at almost double the historic average, suggesting that the world has entered a new era of faster intensity gains.

Economic value of improved energy intensity, 2016 (USD billion)



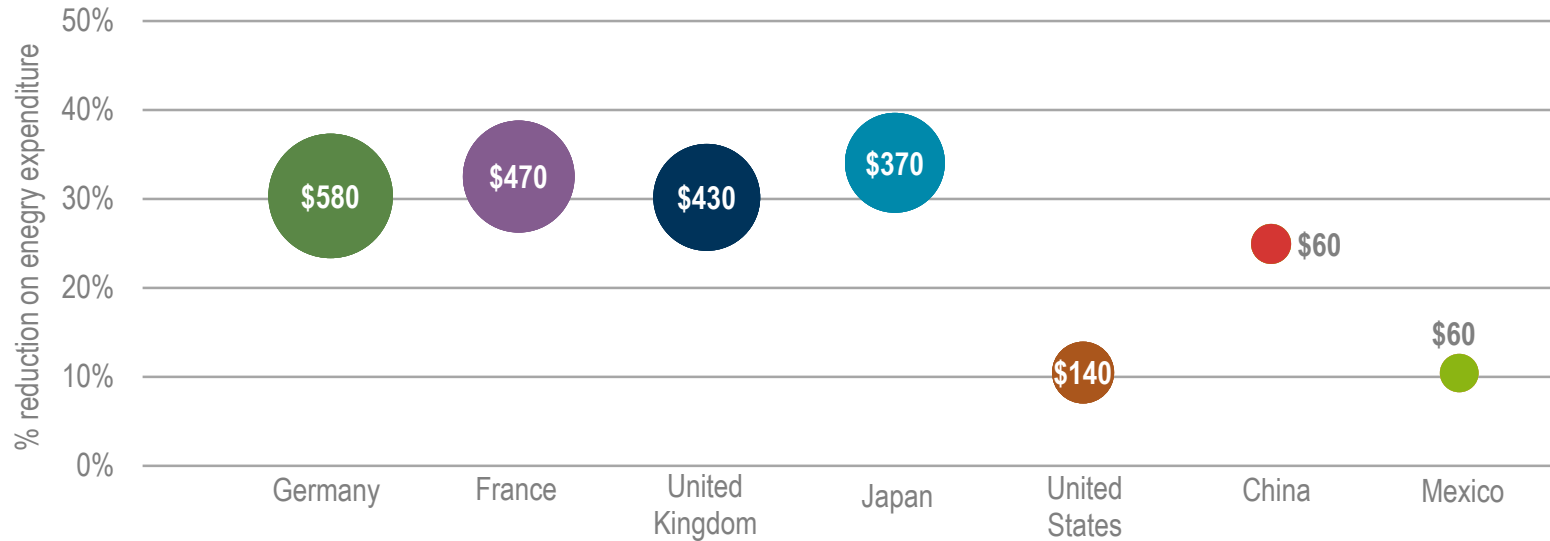
The 2016 intensity improvement represents an additional USD 2.2 trillion of value created from global energy use, equivalent to twice the size of the Australian economy.

Global final energy consumption and savings from energy efficiency



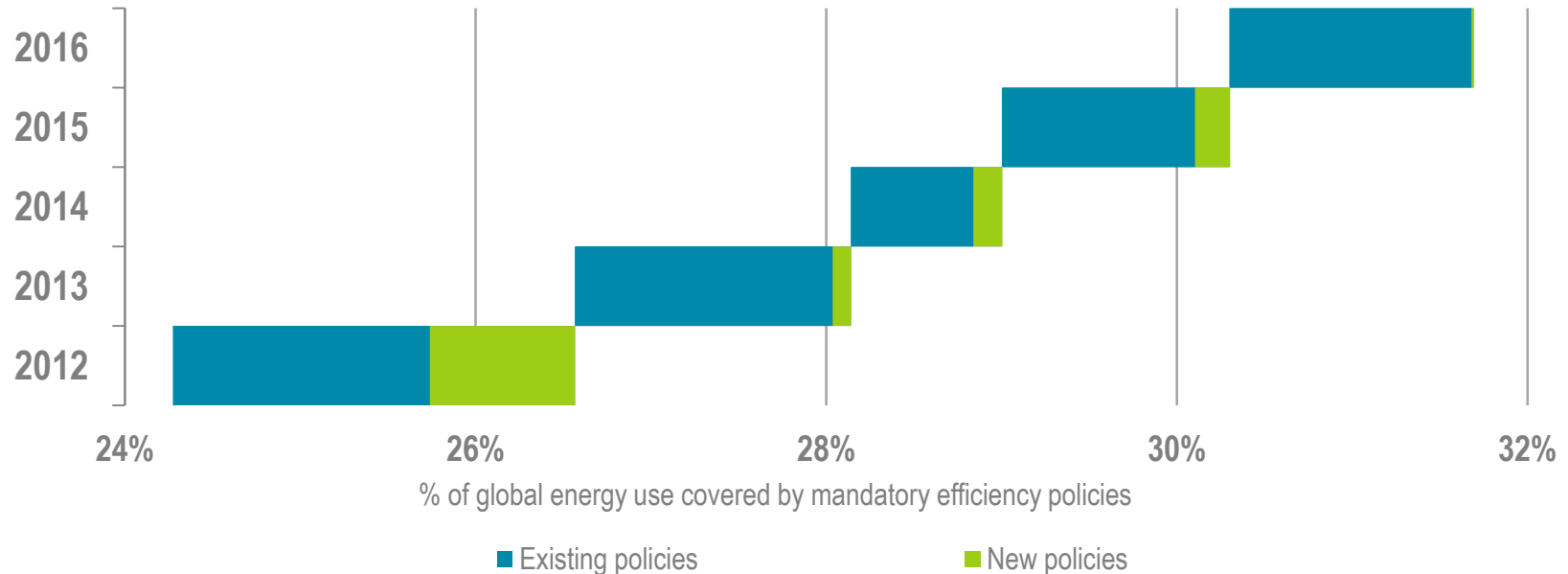
Energy efficiency reduced global energy use by 12% in 2016, an amount equivalent to the energy use of the European Union.

Per capita household energy expenditure savings in 2016 due to efficiency



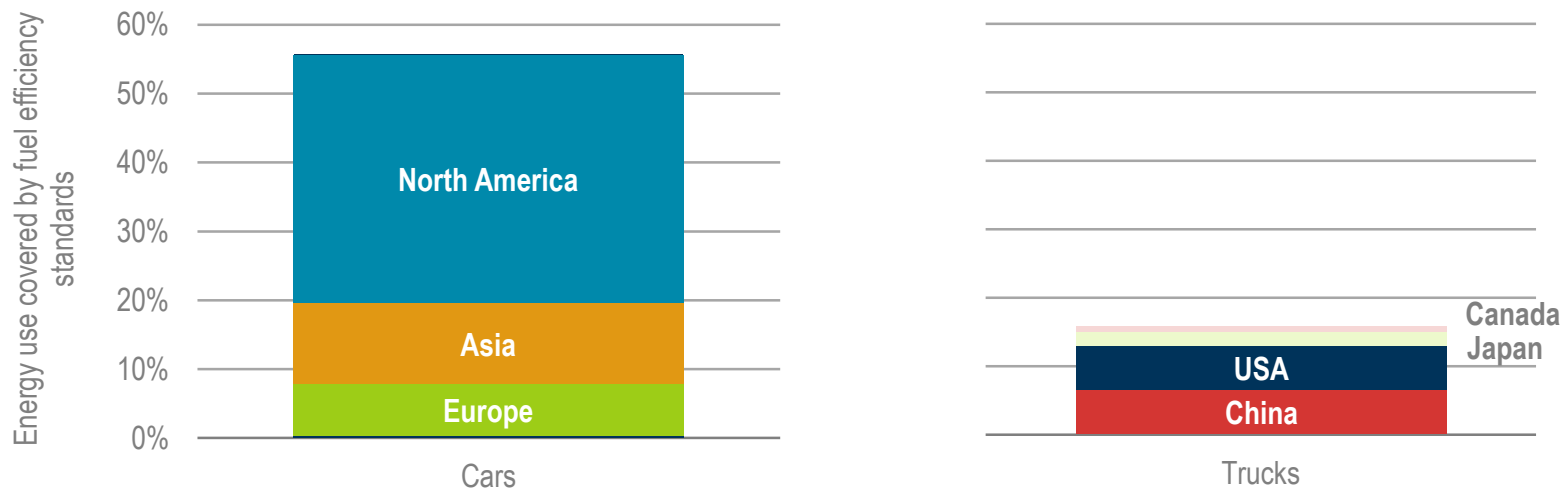
Efficiency improvements made since 2000 reduced energy spending in 2016. German consumers saved nearly USD 50 billion on their annual home and travel energy costs.

Annual additions to the global policy coverage of mandatory codes and standards



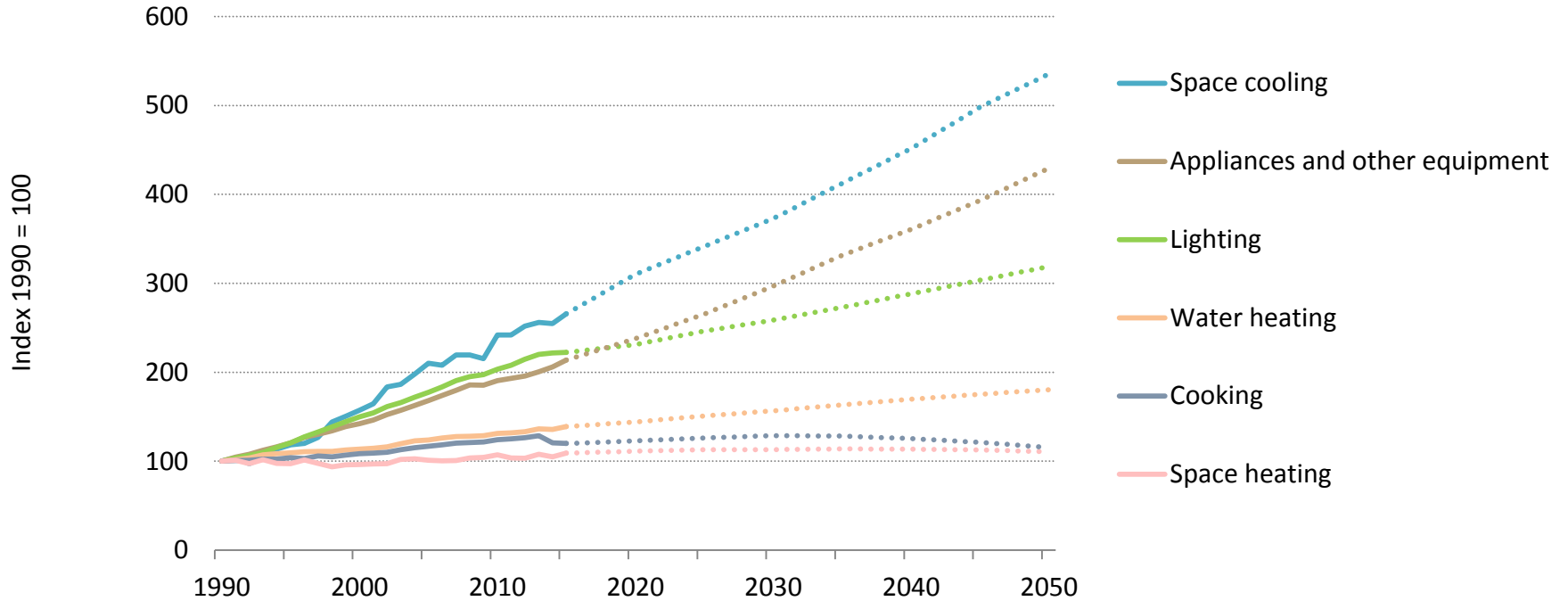
The amount of global energy use covered by mandatory efficiency policies grew in 2016, but 68% of energy use remains uncovered. We owe the efficiency gains of today to the policies of the past.

Efficiency standard coverage by transport end-use, 2016



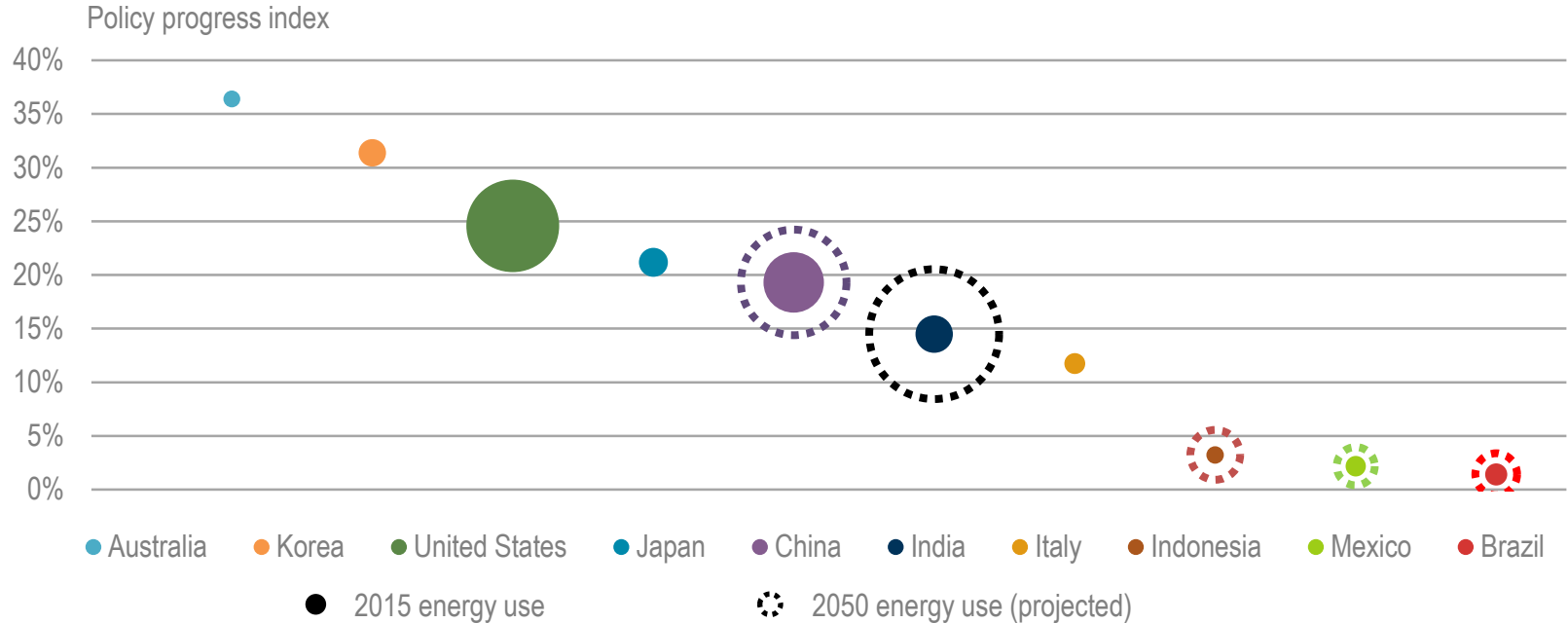
**Nearly 40 countries have fuel efficiency standards for cars.
Only Canada, China, Japan and the United States have standards for trucks.**

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



Space cooling will continue to be the fastest growing source of energy demand in buildings.

Space cooling energy use and policy progress



There is significant future cooling energy growth that has minimal policy progress today

- *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.
- However, 68% of global energy use remains uncovered by mandatory efficiency policy and the current low rate of policy implementation needs to accelerate.
- Decarbonisation requires the integration of efficiency and renewables into the energy system through a harmonised policy approach.
- The IEA is attacking the unmet energy efficiency potential by facilitating knowledge sharing and providing concrete policy recommendations.