



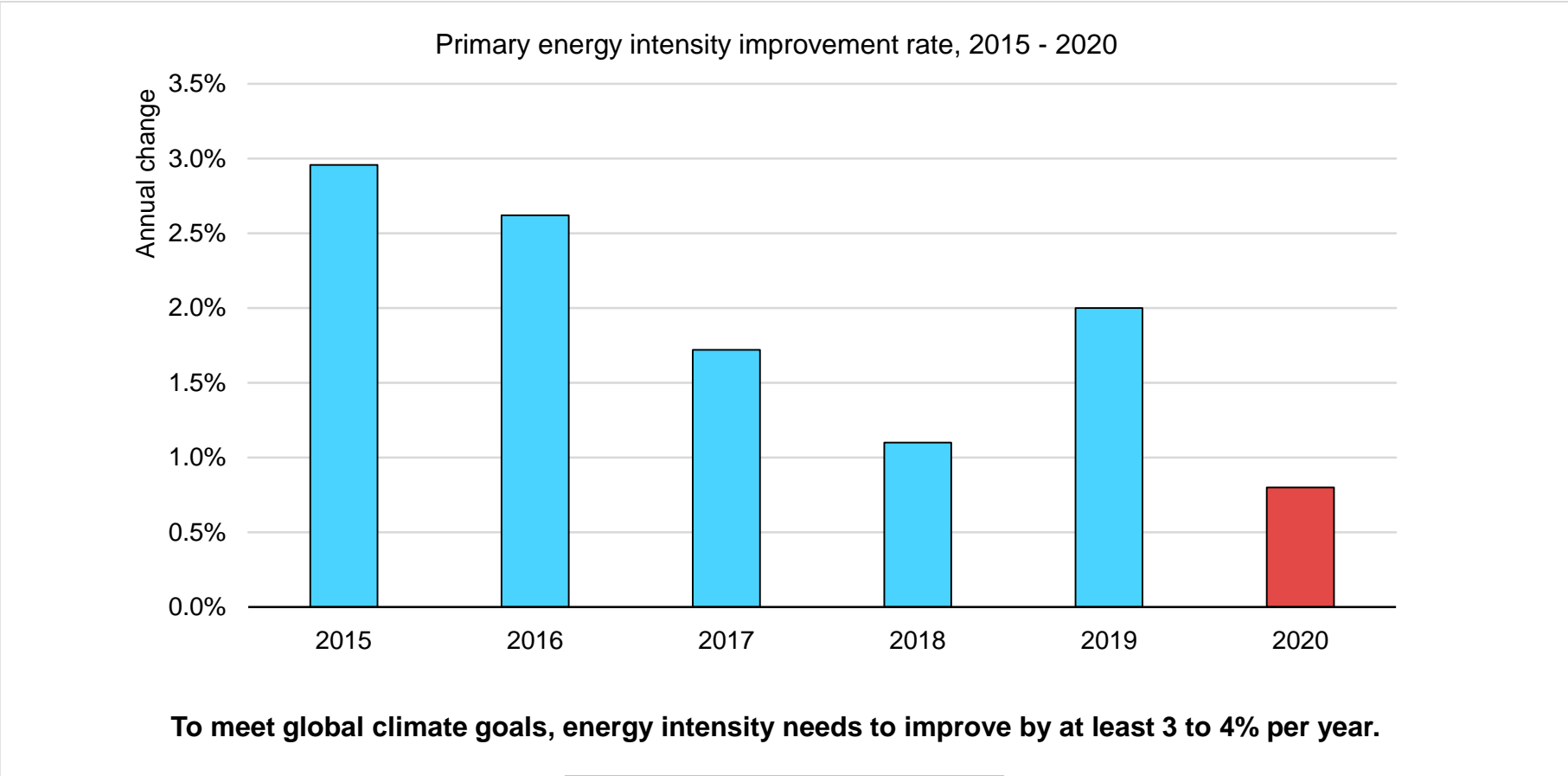
Energy Efficiency 2020

Jeremy Sung

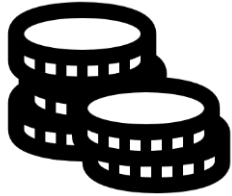
SE Europe Energy Dialogue, 10 December 2020

- The pandemic threatens to set back already-weakened energy efficiency progress
- **Investments** in efficient technologies have fallen
- Short-term **structural shifts** are likely to make the economy more energy intensive
- **Behaviours** are changing, which could have future benefits, but will need policy support
- **Energy efficiency is at a crossroads** – near-term decisions will lock in its future path
- **Policy actions** in the next three years will determine the next decade of efficiency progress

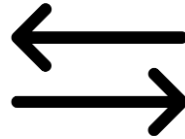
Efficiency progress, already weakened, faces setbacks from the pandemic



The crisis has affected energy intensity in three main ways



Changes to investment
in efficient technologies



Structural shifts in the
economy

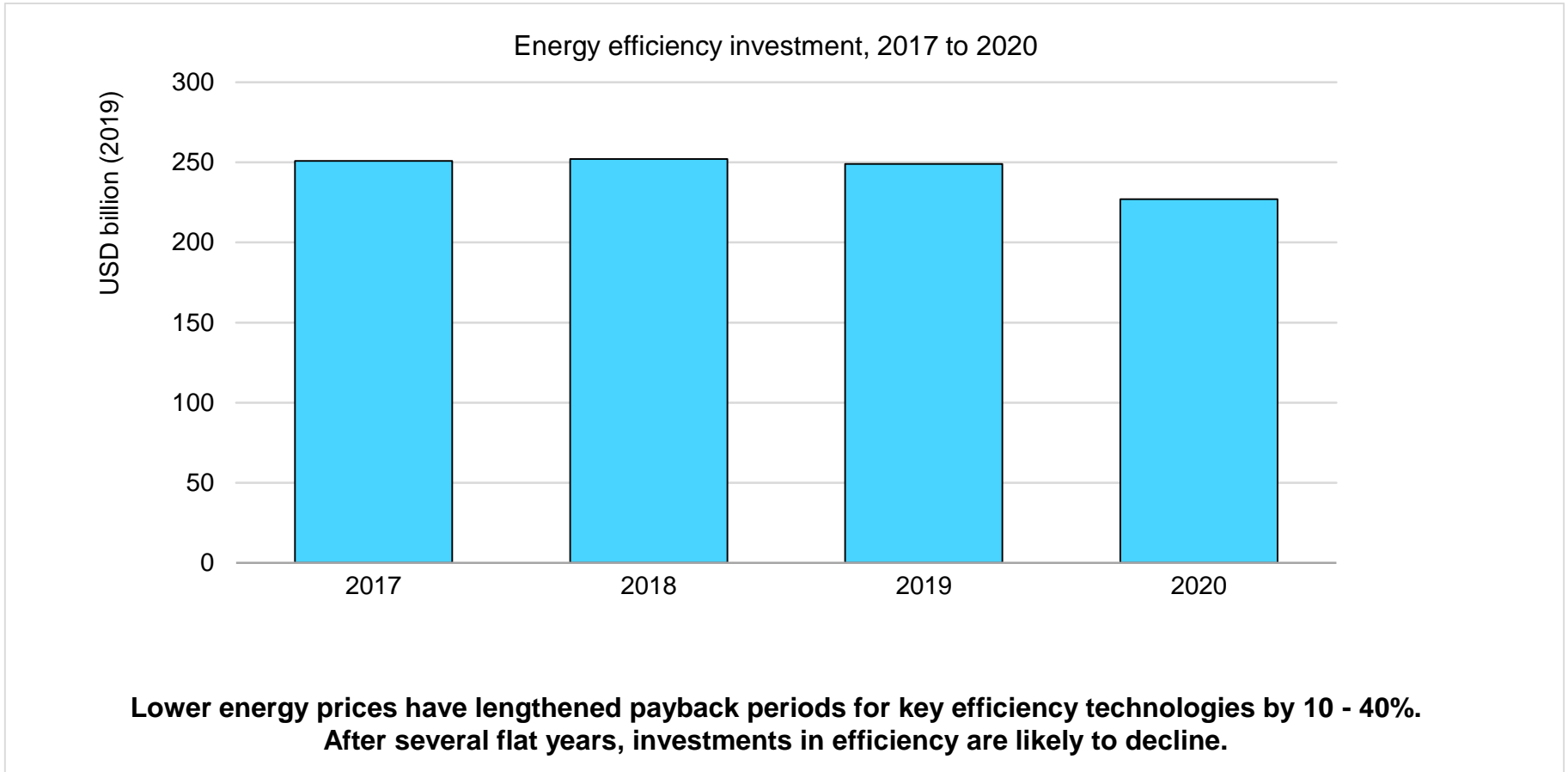


Changes to energy
using behaviours

These factors have combined to halve the global energy intensity improvement rate in 2020.

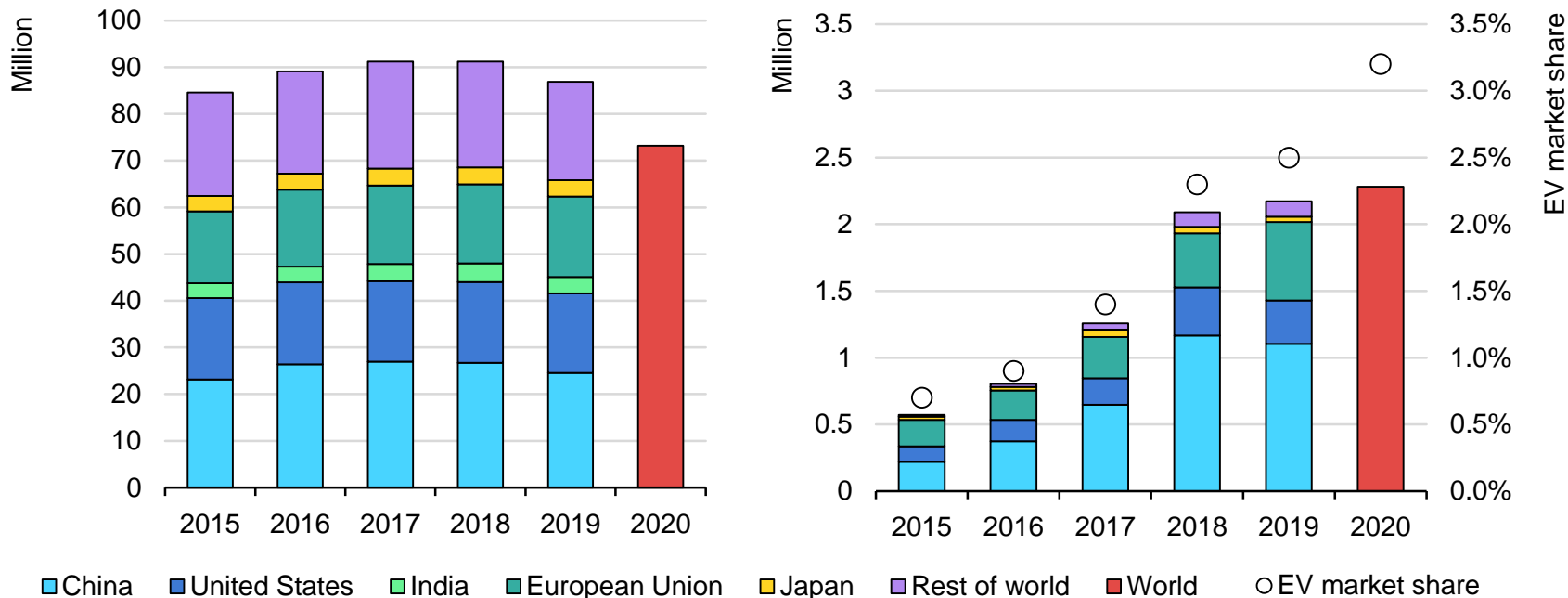
Impacts on energy efficiency investment

Overall investment in efficiency is expected to decline 9% in 2020



Some bright spots remain, despite lower overall investment

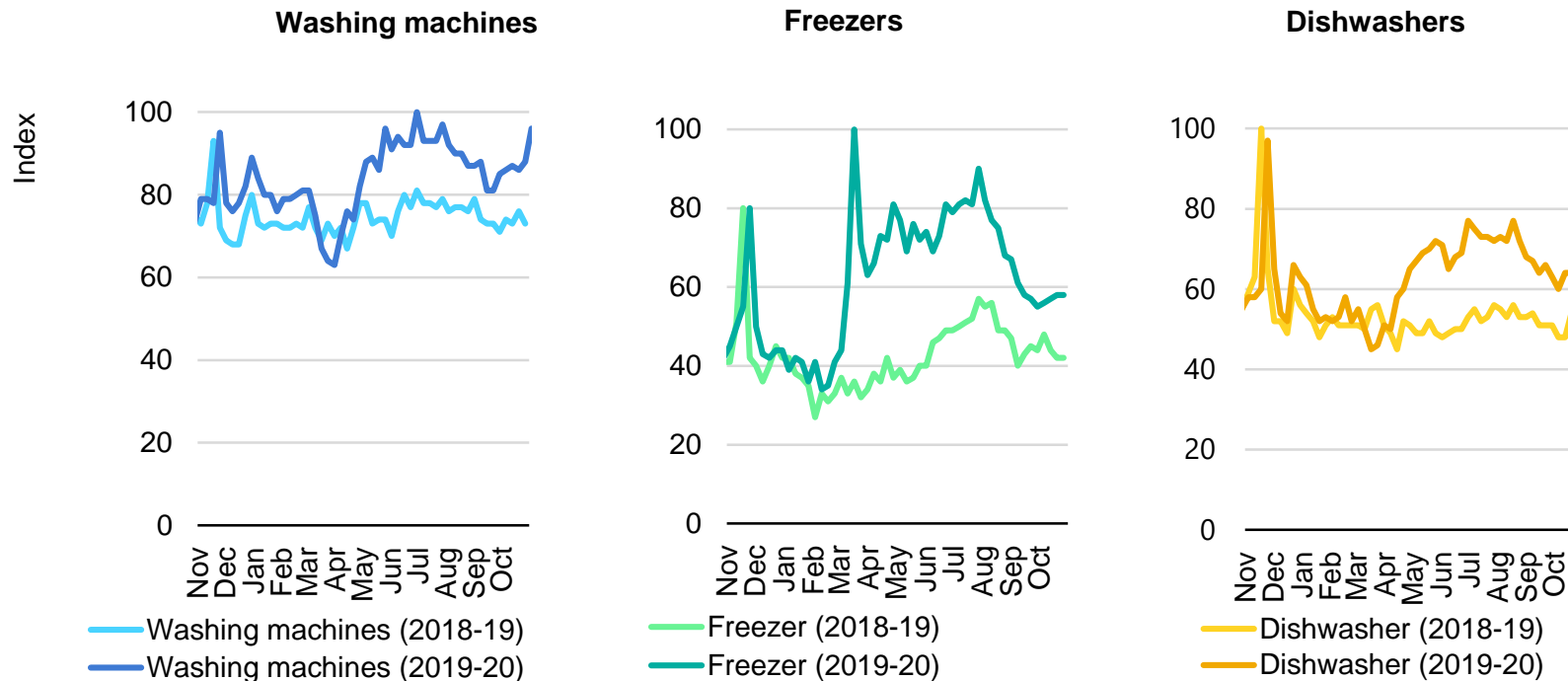
Global car sales (left) and electric car sales (right) by key markets, 2015-20



**Despite lower car sales overall, new cars added to the fleet will be more efficient.
3.2% of sales are expected to be electric in 2020.**

Investments in new appliances maintained in the short-term

Worldwide weekly online shopping search indices for selected whitegoods, 2018-19 and 2019-20



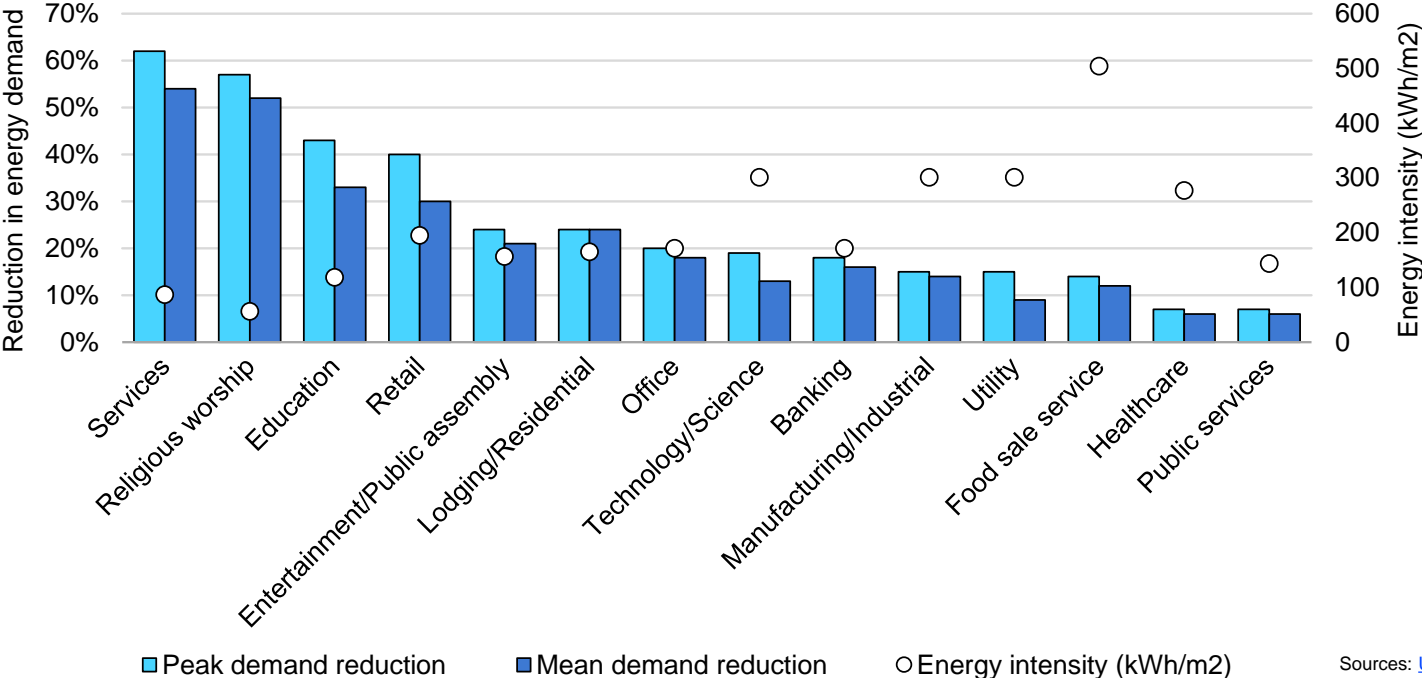
With more time at home, appliance purchases may have increased in 2020, helping to maintain or even increase the efficiency of the stock.

Structural impacts

Energy intensive structural shifts in commercial buildings



Reduction in energy demand under stay-at-home orders and average energy intensity (by building type), two US regions

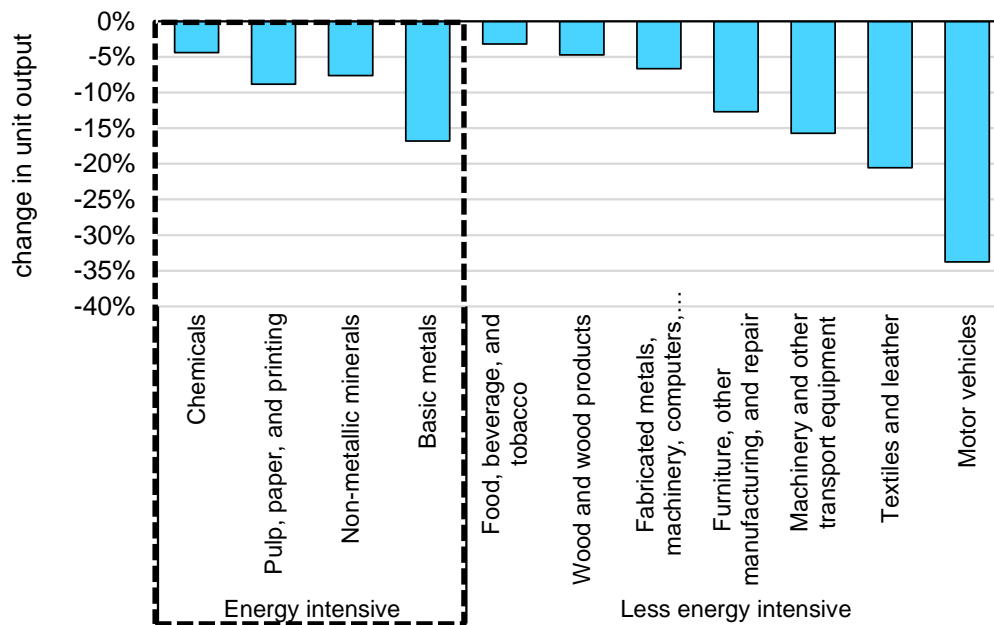


Sources: [Uplight](#); [EIA](#)

Essential services, which tend to be more energy intensive, have been more active during the crisis, meaning commercial building energy intensity is likely to increase in the short term.

Short-term structural shifts in industry also increasing energy intensity

Average change in industrial subsector output in the EU-27 and US, H1 2020 vs H1 2019

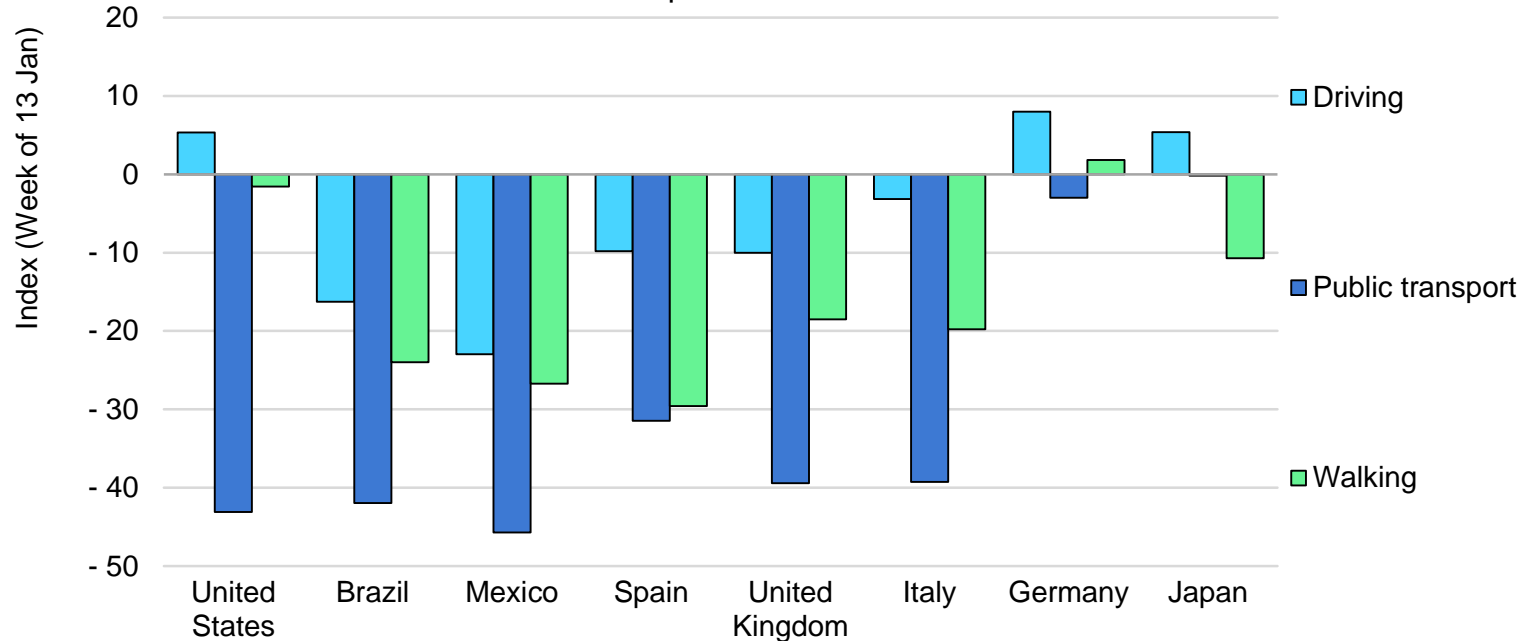


Energy intensive industries appear to have been less affected by the crisis, meaning industry energy intensity is likely to increase in the short term.

Impacts on behaviours

The crisis is changing energy using behaviours

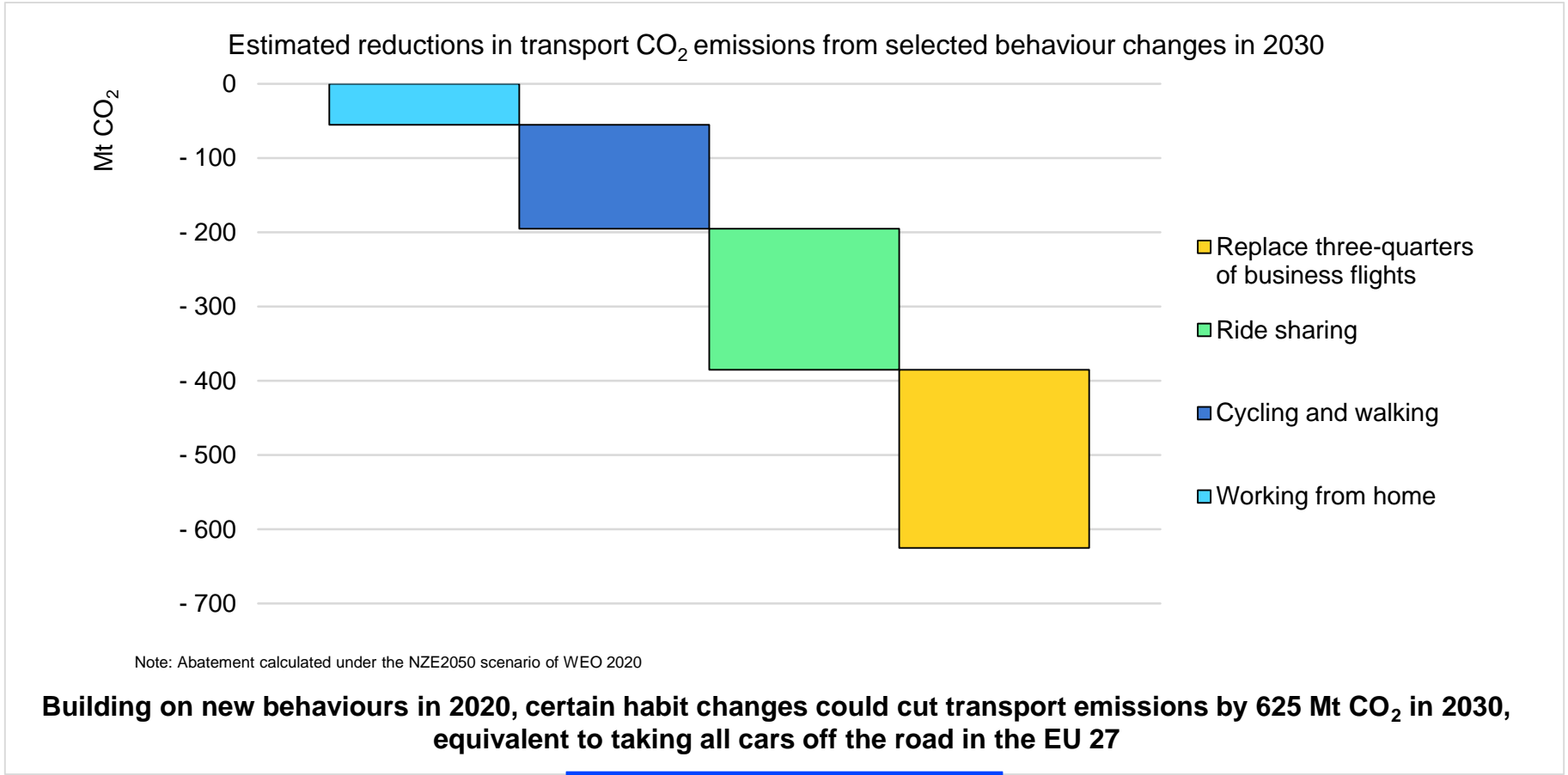
Average working week transport trip requests by mode (average of all weeks, 13 Jan to 31 Oct 2020 inclusive), compared with baseline



Note: Baseline is average over the working week beginning 13 January. A trip request is a request for routing directions made via the Apple Maps smartphone application.

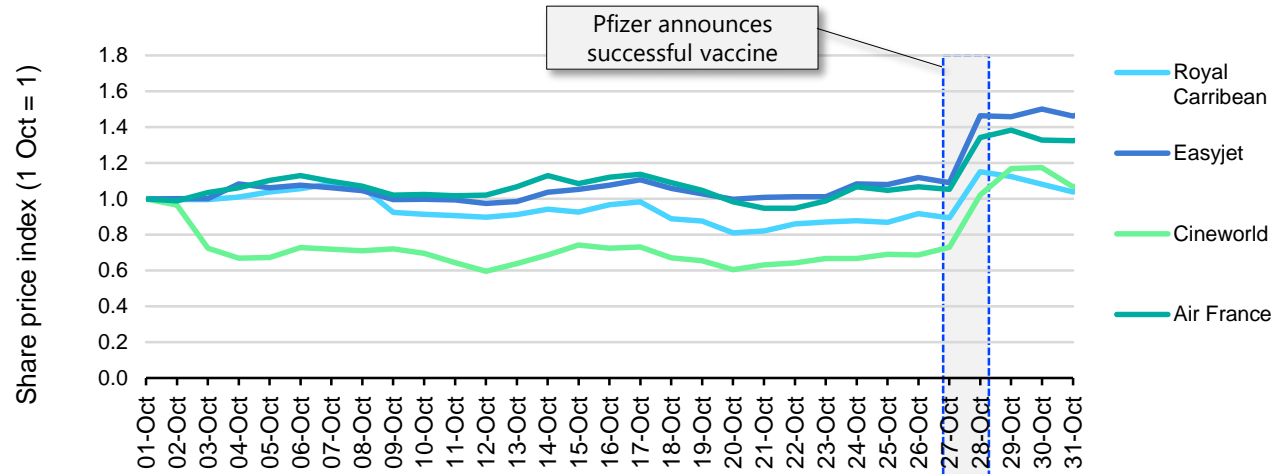
In many countries, public transport use has plummeted by 40% on normal levels, while car use, walking and cycling are less affected, and sometimes higher than usual.

Positive impacts from behaviour changes are possible...

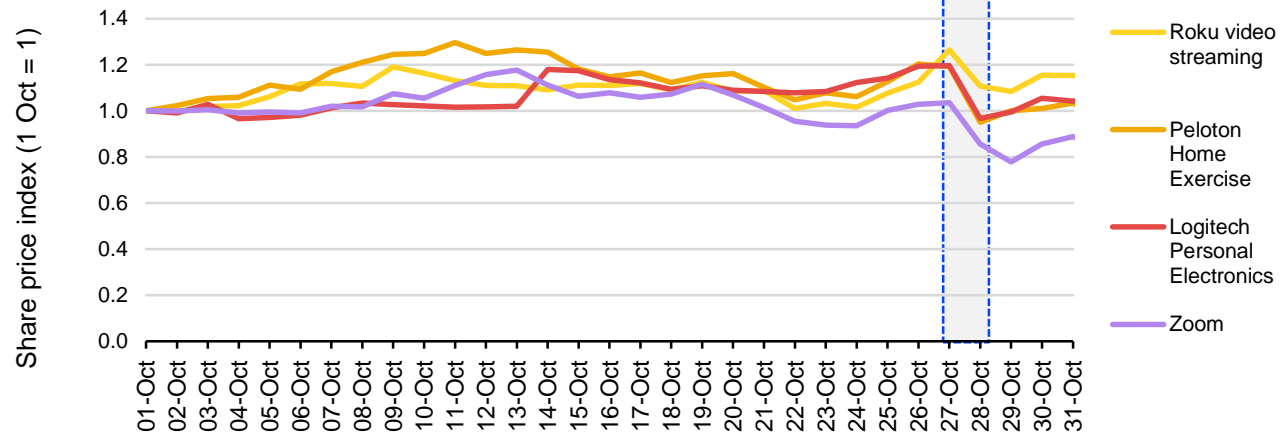


...but will old habits return?

Travel and leisure stocks suffered due to lockdowns, but were boosted by vaccine news



“Stay-at-Home” Stocks that benefitted from lockdowns saw prices drop



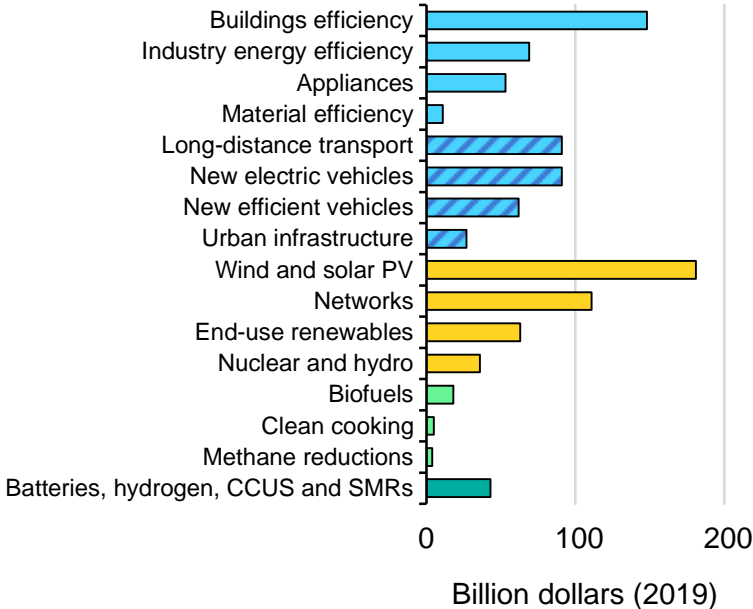
Government responses to the crisis

Energy efficiency is at the heart of a sustainable recovery

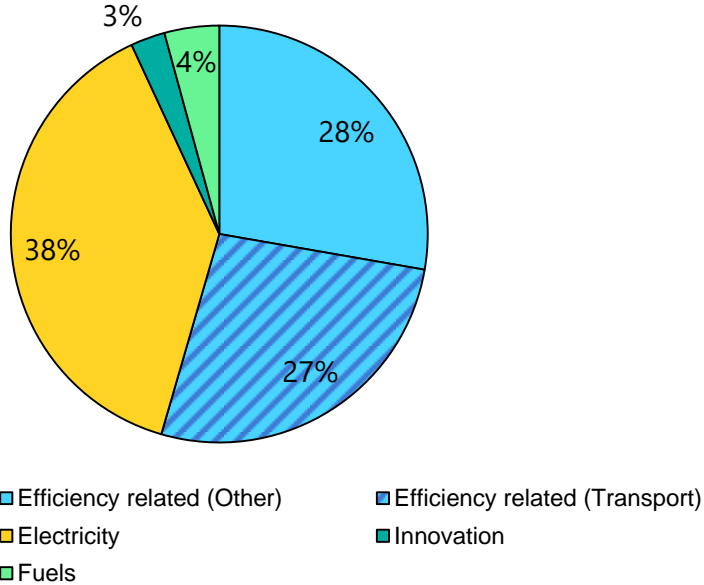


Proposed allocation of average annual spending under the Sustainable Recovery Plan by measure and category

By measure, grouped by category

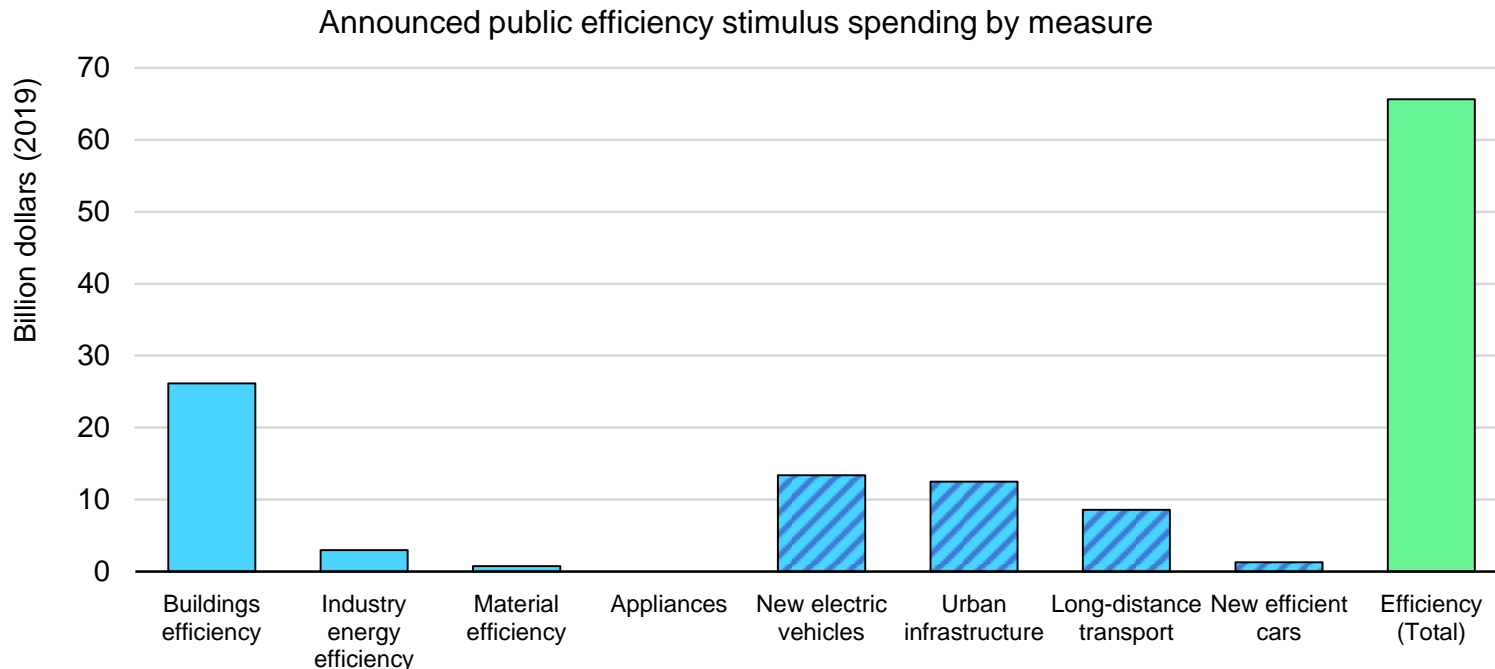


By category



The IEA Sustainable Recovery Plan envisions average annual investments of USD 1 trillion for the next three years. Energy efficiency related investments are the largest category of spending.

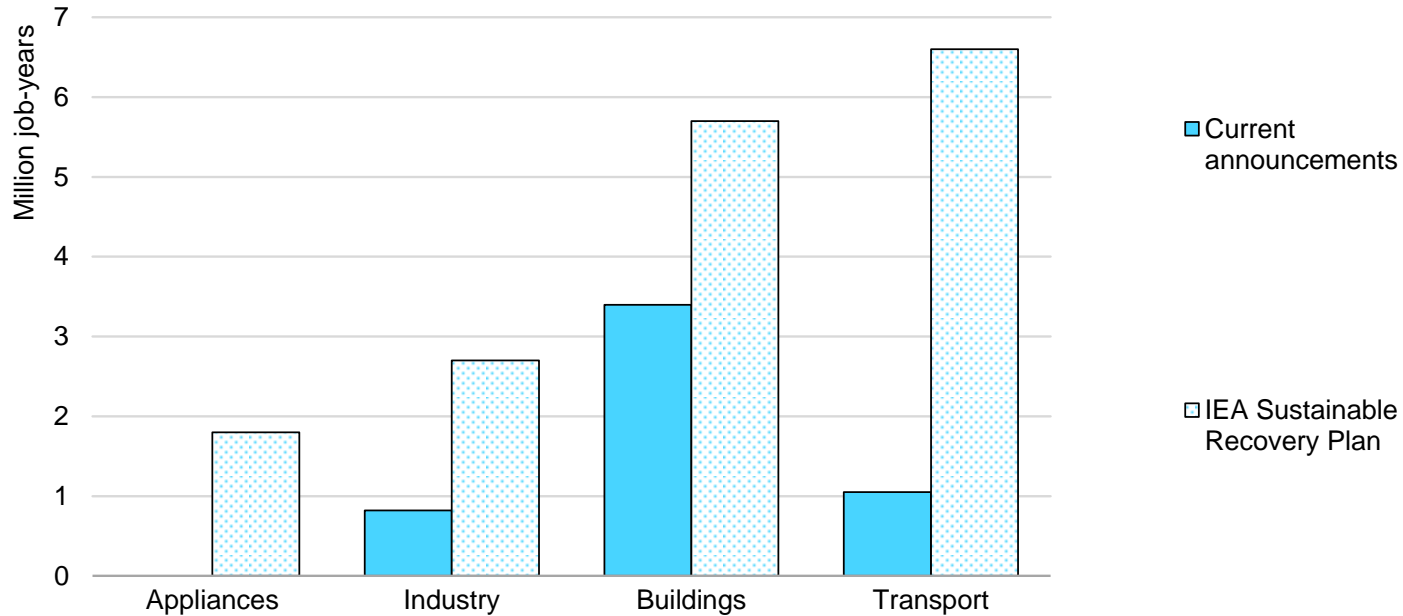
Governments are supporting efficiency, but spending is uneven



European countries are responsible for 85% of announced spending for efficiency, even before accounting for the new Next Generation EU package, which could add USD 200 billion more.

5 million job-years could be created, but 10 million remain untapped

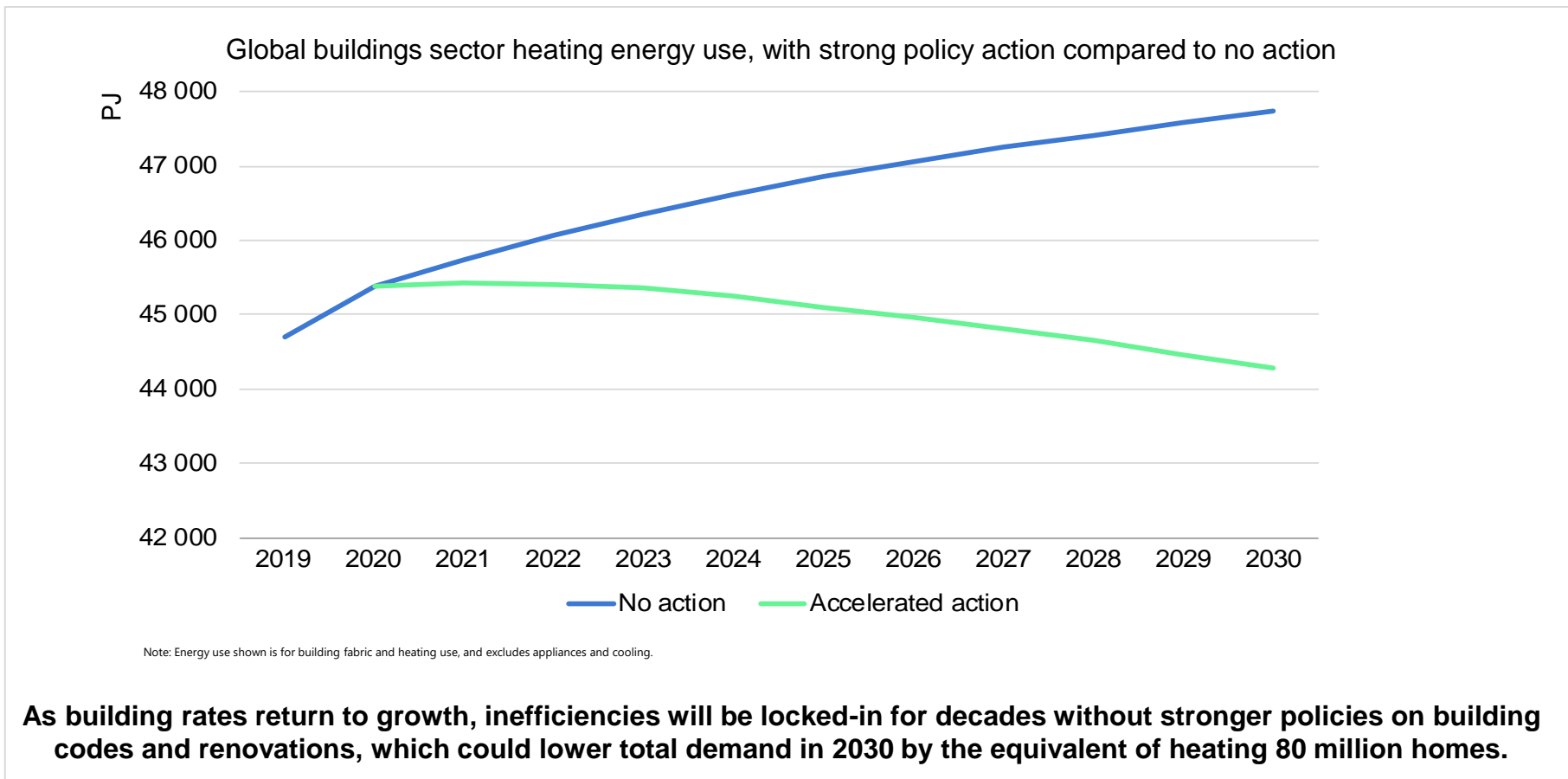
Estimated energy efficiency job creation potential from announced stimulus investments to date and in the IEA Sustainable Recovery Plan

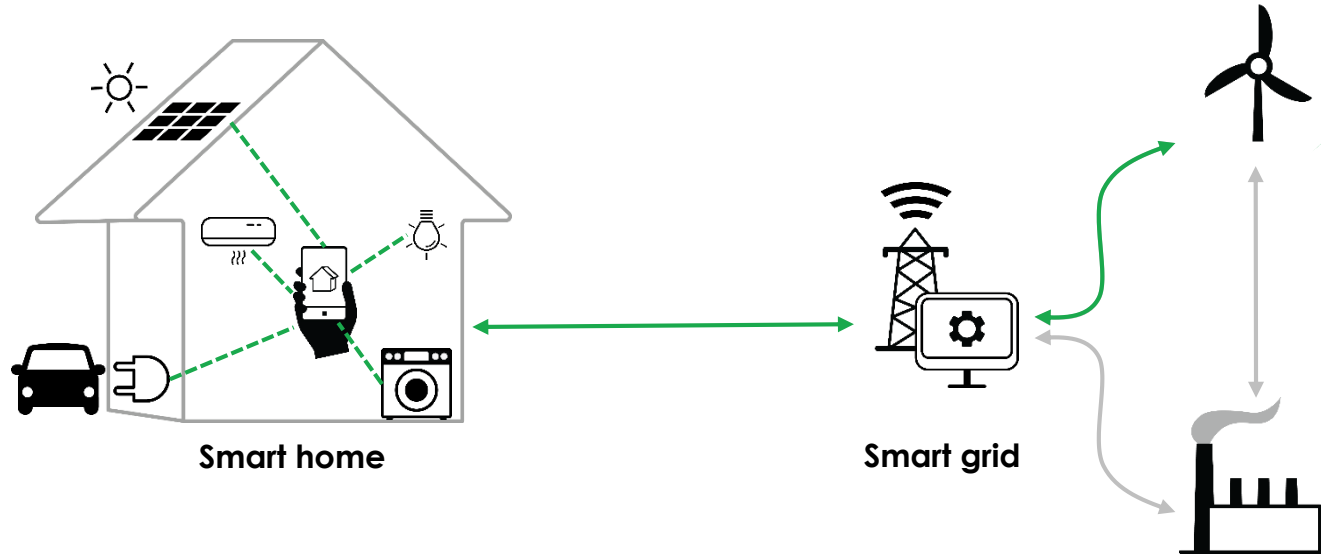


Announcements to date are estimated to create over 1.8 million jobs in the next three years. Increasing investment to the levels in the IEA Sustainable Recovery Plan could triple that.

Efficiency at a crossroads

What we build next will shape future energy demand

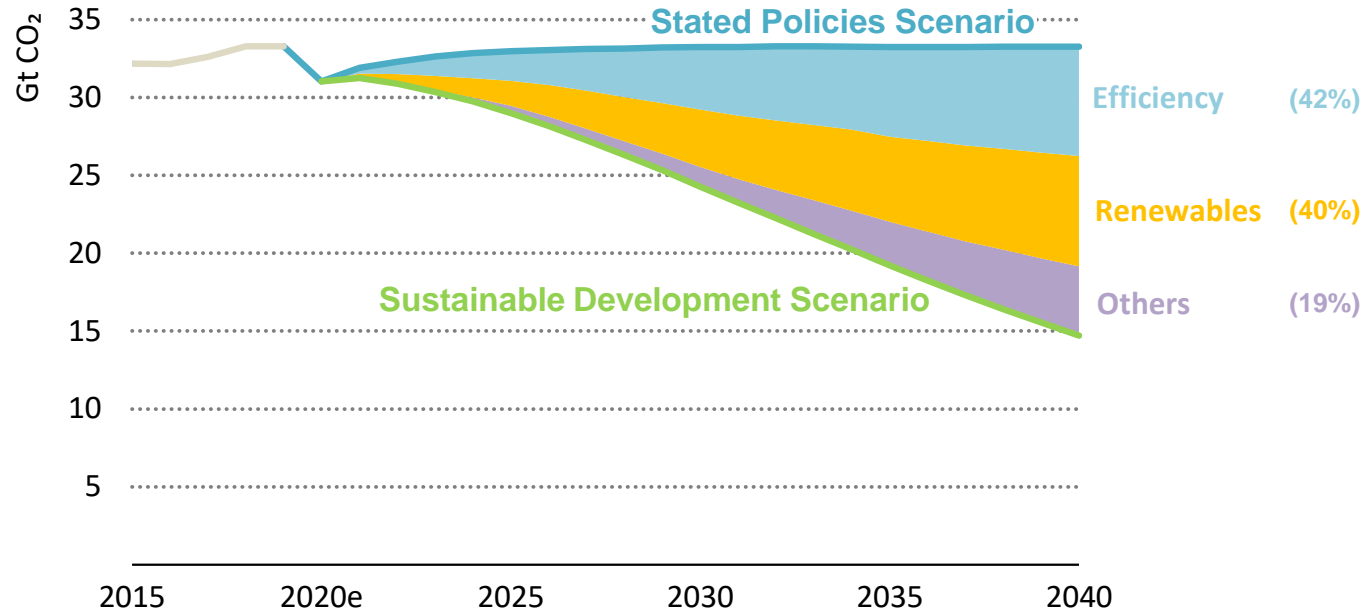




Digital and smart technologies can unlock new efficiency potential and enable a systems approach to the efficiency of the whole energy system.

Without energy efficiency, we cannot achieve global climate goals

CO₂ emissions reductions in the Sustainable Development Scenario relative to the Stated Policies Scenario



**Energy efficiency is expected to contribute over 40% of energy sector GHG abatement up to 2040.
A slowdown in energy efficiency today lessens the chance of meeting long-term climate goals.**

- The recent slowdown in energy efficiency progress has been exacerbated by the 2020 crisis
- Energy efficiency is at a crossroads, and the next three years are crucial
- Scaling up efficiency action has the potential to create millions more jobs as well as ensure lower energy bills and lower emissions in the future
- Yet government actions on energy efficiency are uneven: opportunities to boost efficiency are being foregone
- Firm policy action can ensure that returns to growth lock in energy efficiency, not higher costs and emissions

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