



Limiting climate change requires "accelerated action this critical decade"

K HM Government



Net Zero Strategy: Build Back Greener

October 2021



UK emissions have fallen while the economy has grown







Not included is international aviation & shipping which account for 2.4% of total global GHG emissions

UK emissions are now almost half (47%) their 1990 levels

Territorial UK Greenhouse Gas emissions by sector 1990-2020 (MtCO2e)



Note: Other includes Public, Industrial Processes and Land Use, Land Use Change and Forestry (LULUCF) sectors

Emissions reductions need to speed up & happen in wider range of sectors





Surface transport (23% emissions in 2021)

- Emissions reductions 2019-2035:
- 69% CCC balanced pathway
- 66-77% NZS delivery pathway



Also air pollution, including PM2.5 & 10 from breaks, tyres & road





Cars 55% domestic transport emissions; vehicle miles grew 40% from 1993-2019 (drop in 2020-21 due to pandemic)



In Dec 2021, **over a quarter** of all new cars sold in the UK were battery electric vehicles



Policy to **end sale** of new petrol/diesel vehicles by 2030 & all new cars/vans to be fully zero emission at tailpipe by 2035



Already **30K public charge points;** estimate # will increase at least 10-fold by 2030



Active travel has additional health benefits



Buildings (20% emissions in 2021)

Emissions reductions 2019-2035:

• 48% CCC balanced pathway





UK has **30 million buildings** & most emissions arise from **heating**. Decarbonisation needs whole-system approach



ONS found **three-fifths** of assessed homes in England & Wales have **low energy efficiency ratings**, but most people are not considering making any improvements



Improvements needed to reduce heat loss (e.g. insulation) & switch to low-carbon heating systems (e.g. heat pumps)



Intent to **phase out** the installation of new and replacement natural gas boilers from 2035



Could support 240,000 jobs by 2035, but **lack of installers & retrofitters** is major barrier to decarbonising buildings.





Landscape regeneration East Anglian Fenlands

Whole-system approach





<1% original wetland remains as fragments



Drained peat vulnerable to erosion; 4-5% national GHG emissions from peat



Flood risk as a third of Fens below sea level



One of driest parts of country with water shortages



£3bn farming economy

10% most deprived communities

"It starts with listening. People often have solutions themselves, but if they feel things are imposed on them they think, 'this isn't fair'."





Climate change is most predictable & preventable global crisis



2,500+ heat-related deaths were recorded during the summer of 2020 in England



2018 hot dry summer led to 20-40% losses of yields for onions, carrots and potatoes



£1.6 billion - **overall cost** of the 2015-16 **winter floods**



Risks to **infrastructure networks** (water, energy, transport, ICT) from **cascading failures**



Increasing frequency of unusually hot days impacts **bumble bees**



Climate aware and resilient national security: Challenges for the 21st Century Risks to UK from international **violent conflict**

Climate change is most predictable & exploitable innovation opportunity

