

Innovative Climate Policy

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Climate Change Act 2008

The world's first legislated target



Climate Change Act 2008

CHAPTER 27

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PART 1

CARBON TARGET AND BUDGETING

The target for 2050

- 1 The target for 2050
- 2 Amendment of 2050 target or baseline year
- 3 Consultation on order amending 2050 target or baseline year

Carbon budgeting

- 4 Carbon budgets
- 5 Level of carbon budgets
- 6 Amendment of target percentages
- 7 Consultation on order setting or amending target percentages
- 8 Setting of carbon budgets for budgetary periods
- 9 Consultation on carbon budgets
- 10 Matters to be taken into account in connection with carbon budgets

Limit on use of carbon units

- 11 Limit on use of carbon units

Indicative annual ranges

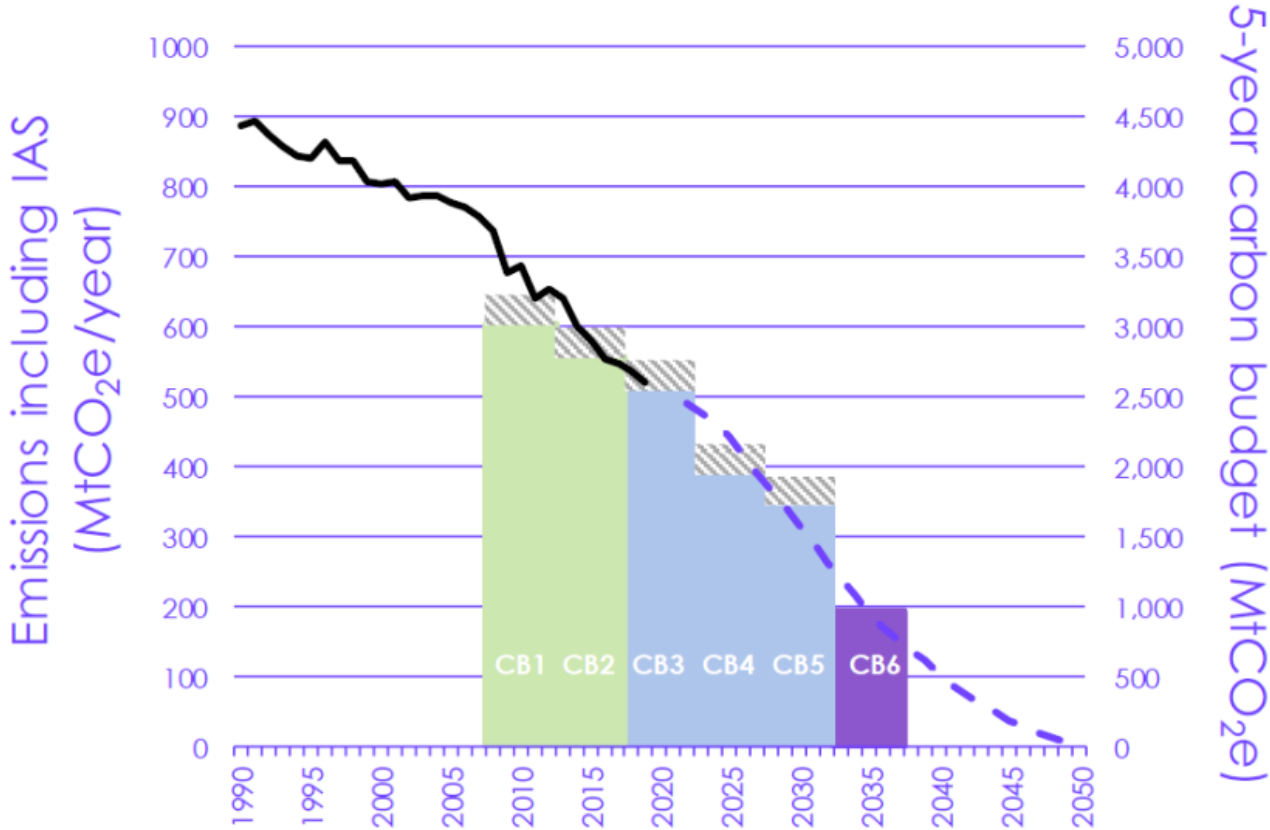
- 12 Duty to provide indicative annual ranges for net UK carbon account

Proposals and policies for meeting carbon budgets

- 13 Duty to prepare proposals and policies for meeting carbon budgets
- 14 Duty to report on proposals and policies for meeting carbon budgets
- 15 Duty to have regard to need for UK domestic action on climate change

Six legislated carbon budgets

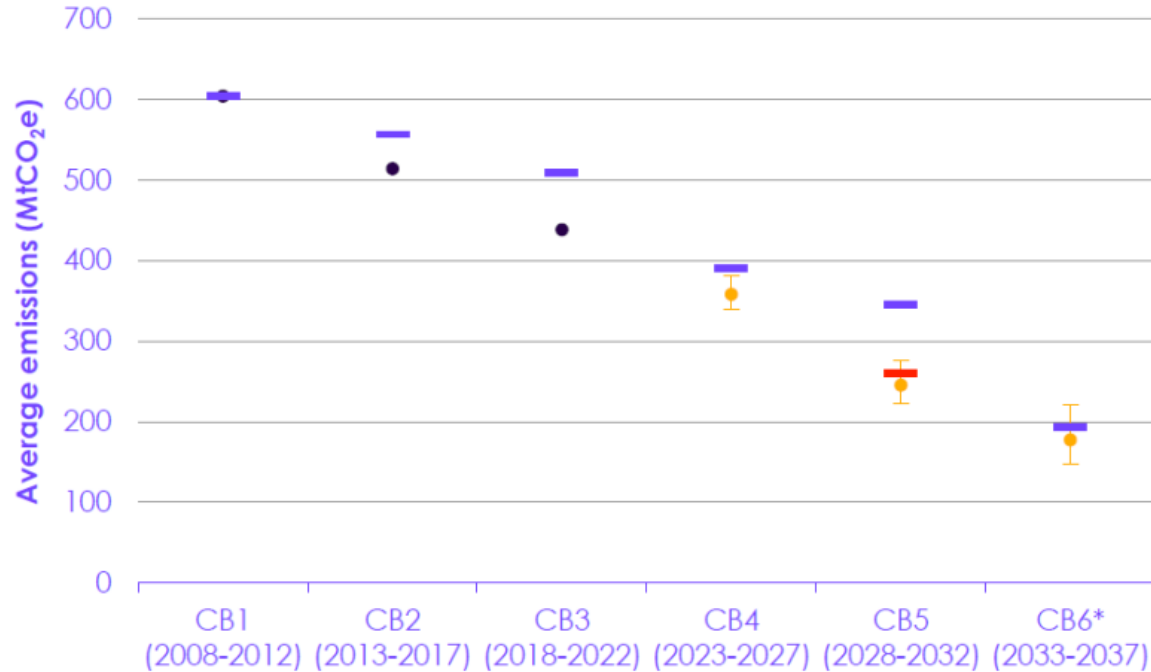
And a target for 2050



Policy development

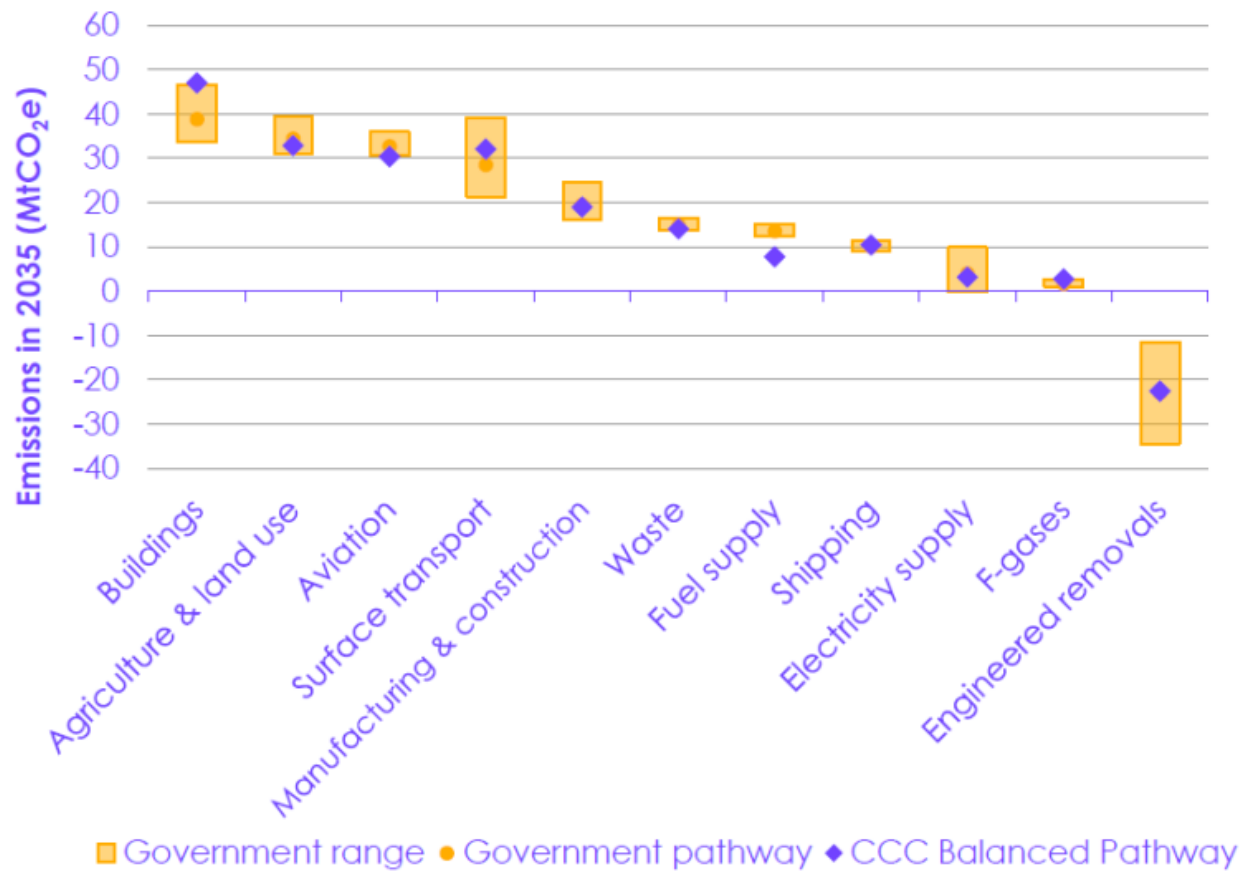
Government pathway

Compared to carbon budgets



● Government pathway (*IAS in CB6 only) ● Historical emissions (no IAS) — NDC (2030) — Carbon Budgets

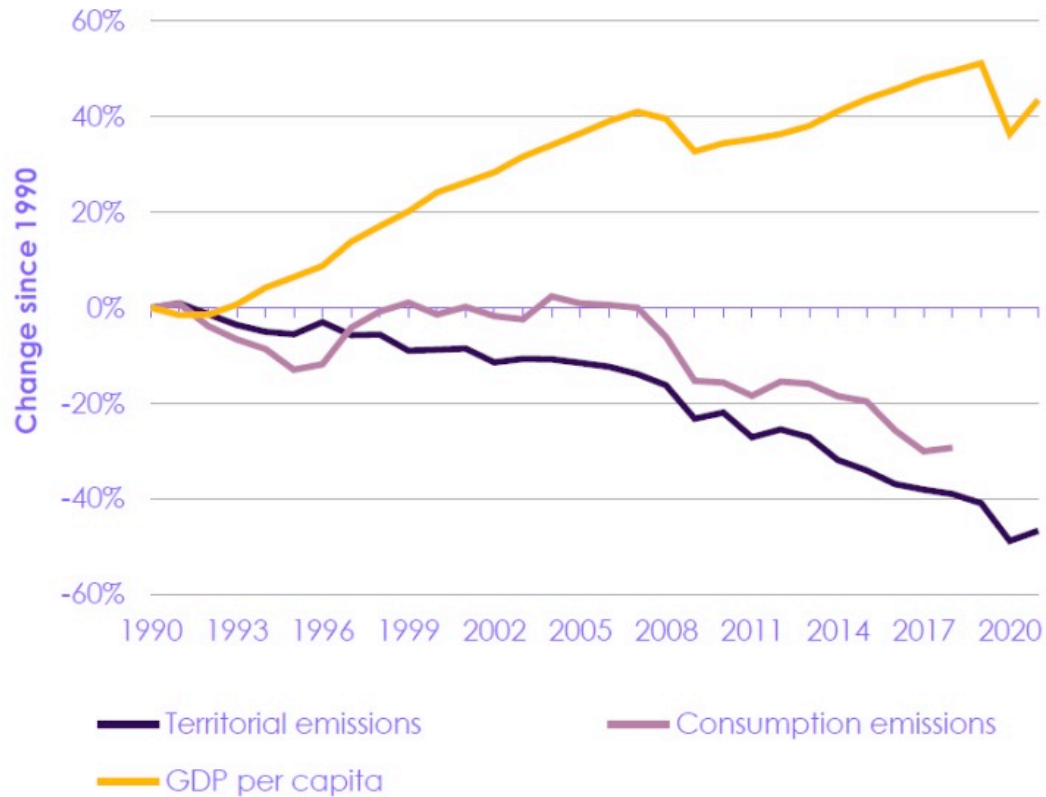
Comparison by sector in 2035



Progress

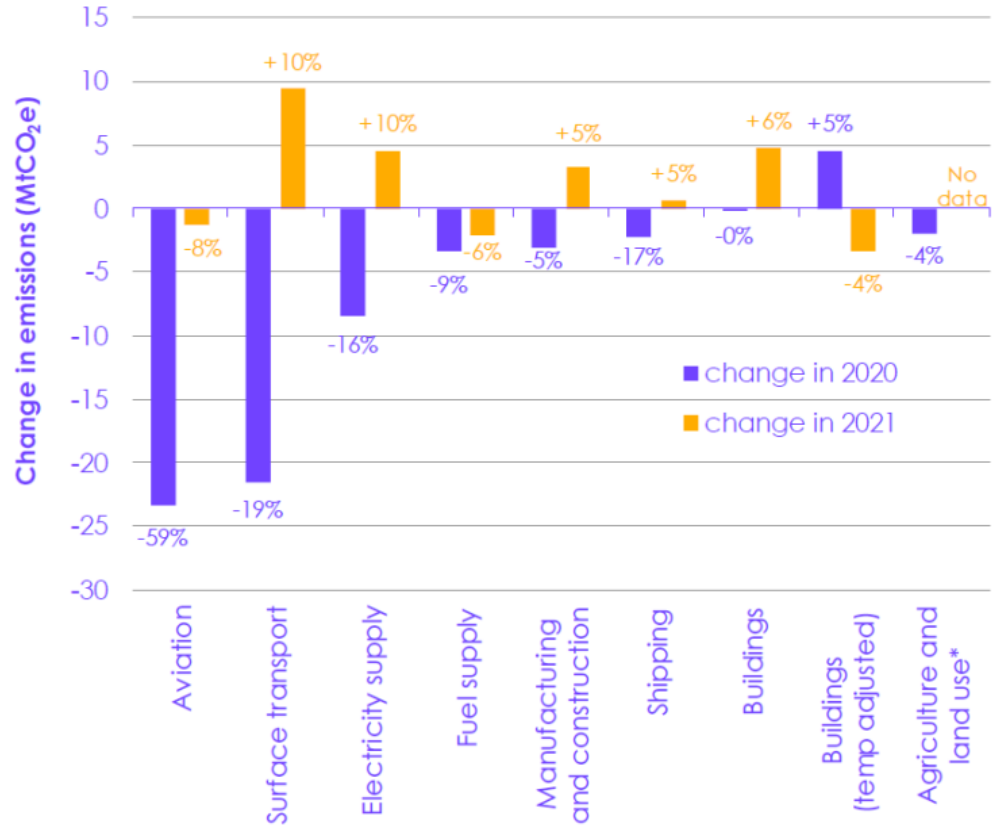
Emissions and GDP

Increasingly decoupled



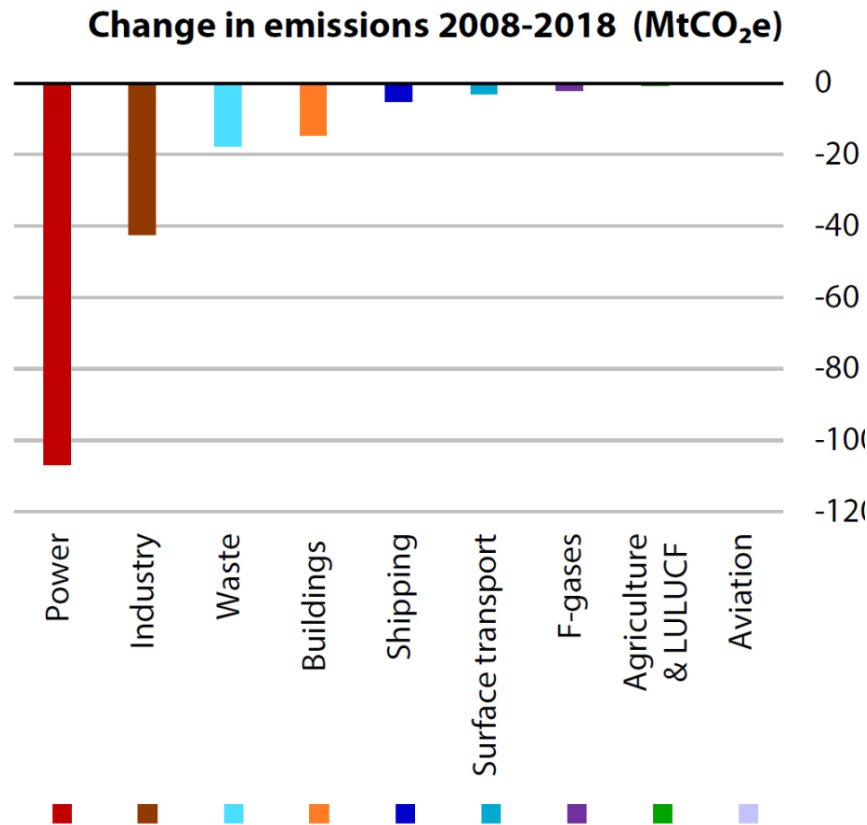
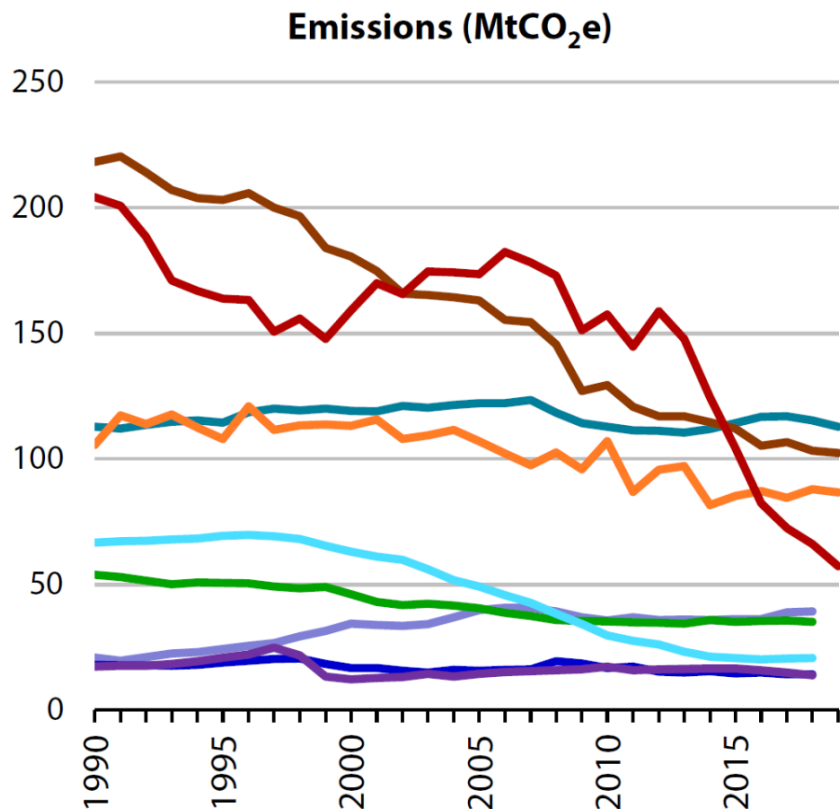
Change in emissions 2019-2021

Impact of Covid



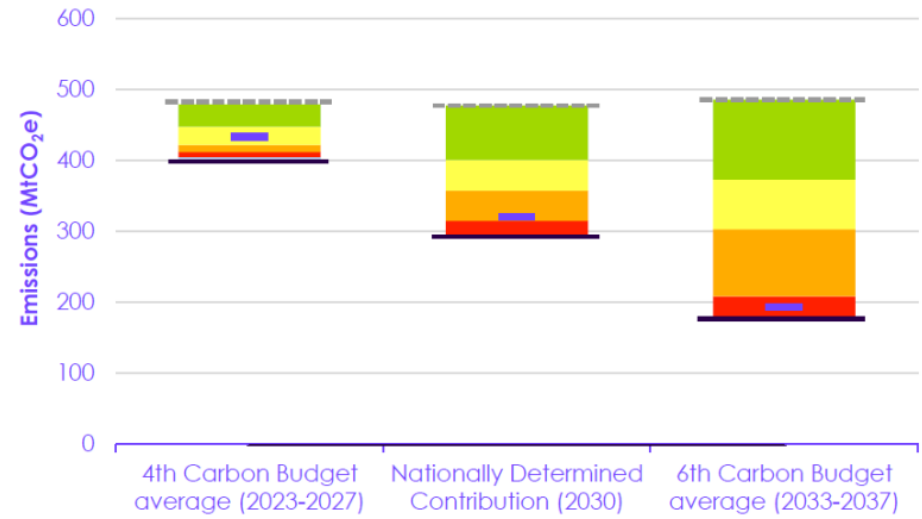
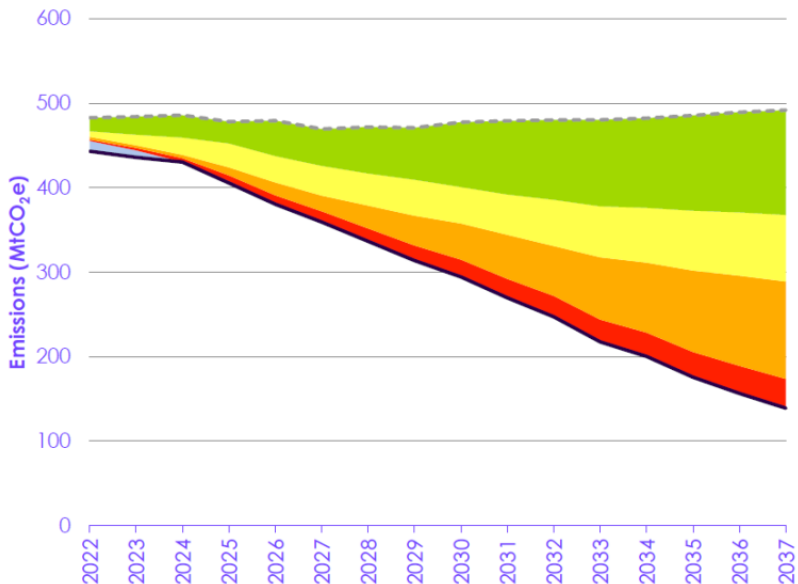
Emissions reduction trends to 2019

UK sectoral emissions 2019



Assessment of risk in Government plans

Are they credible?



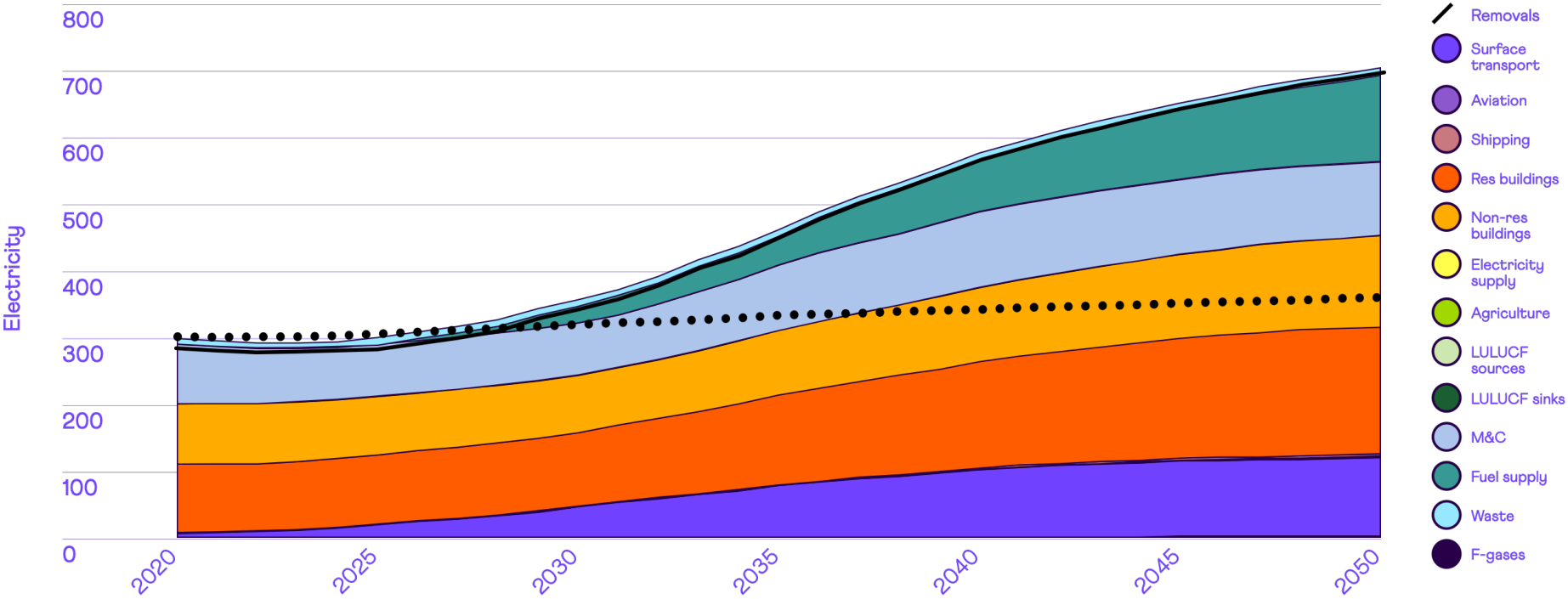
- Credible plans
- Significant risks
- Unexplained emissions reductions
- - - Baseline
- Some risks
- Insufficient plans
- Targets (including IAS*)
- Government pathway

Energy

Changes in energy demand

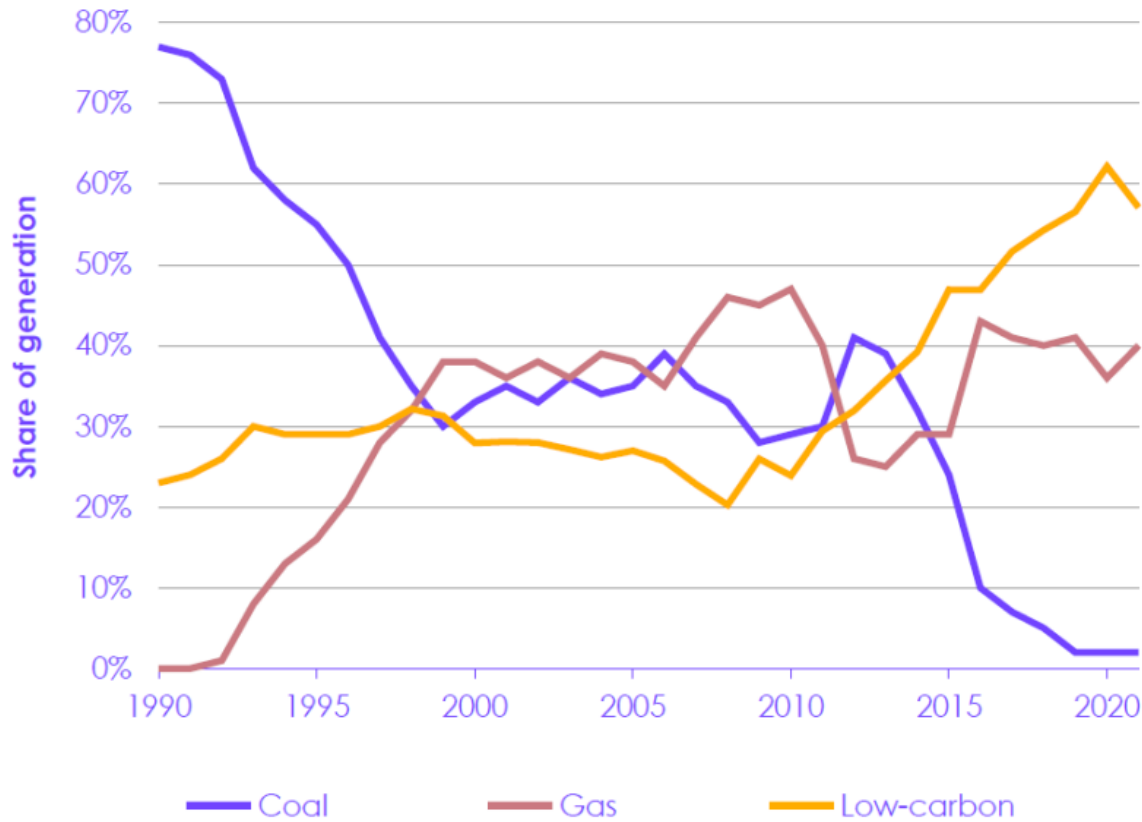
Electricity (TWh)

Source:
CCC Analysis



Progress with decarbonising electricity

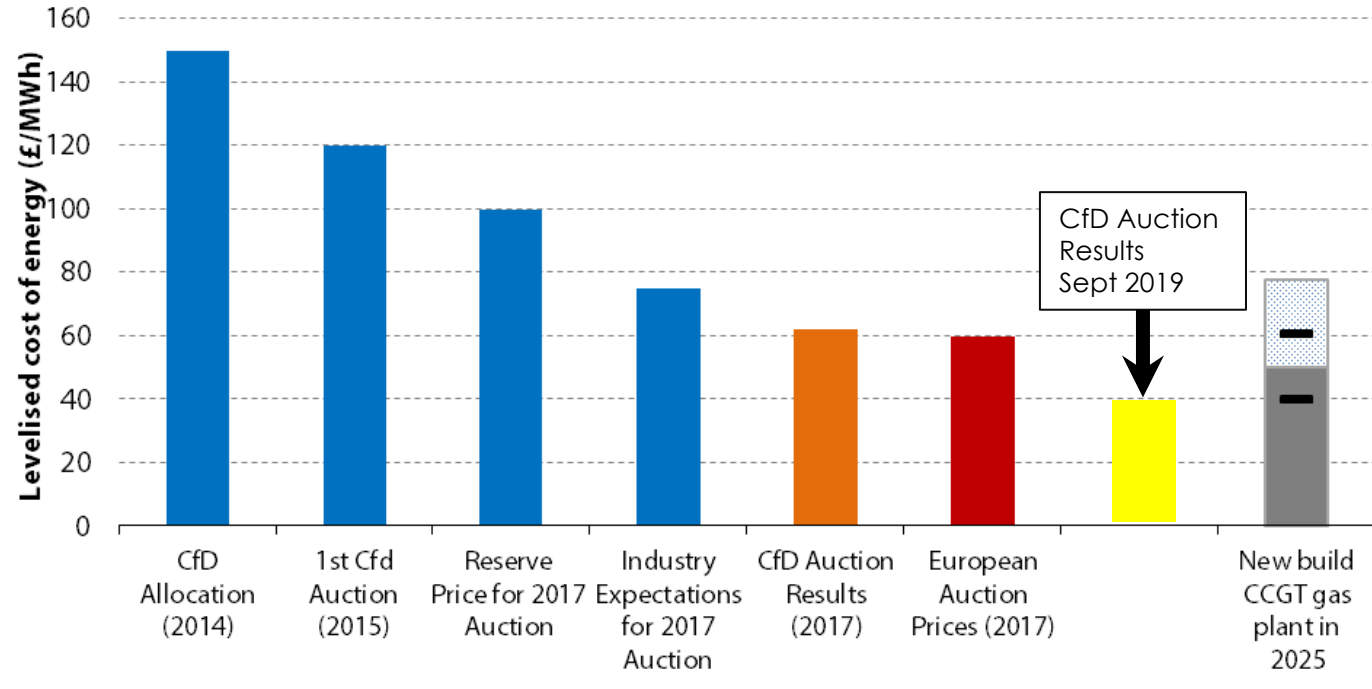
Share of electricity generation by source 1990-2021



Successful policy: CfD

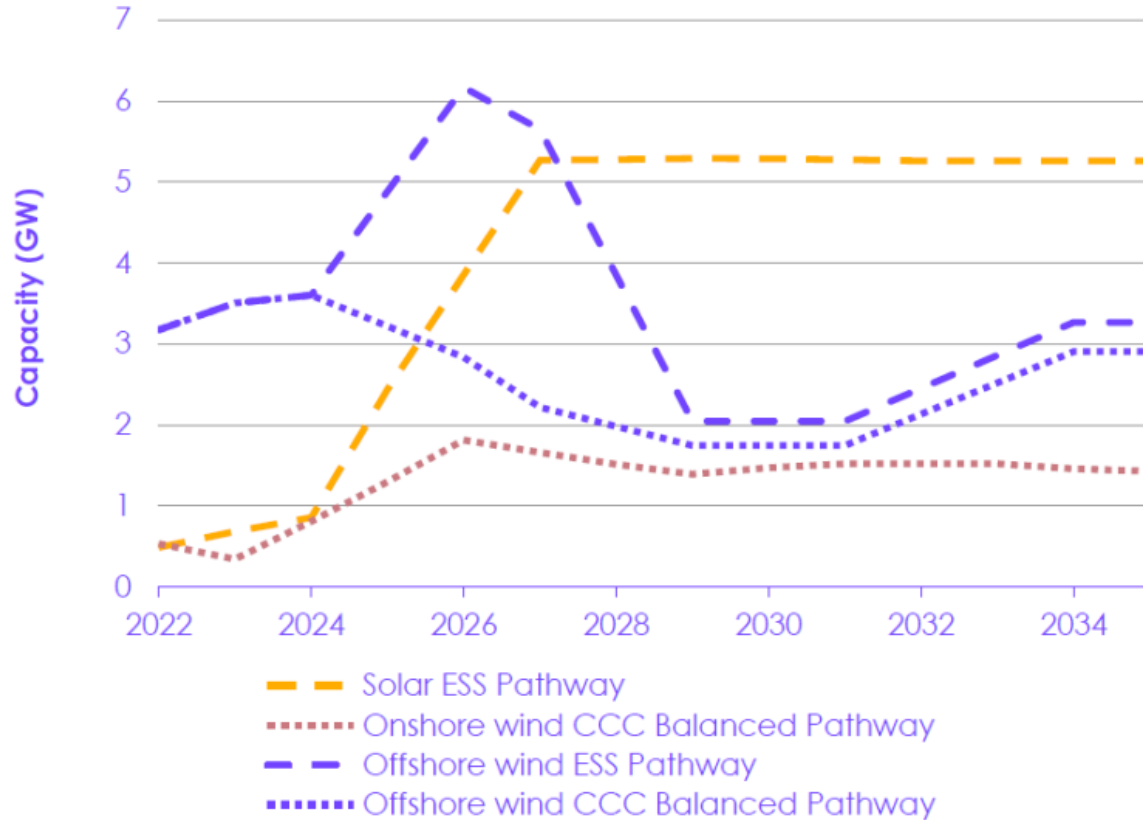
Driving costs down steeply and speedily

Contracts for Difference auction prices for Offshore Wind



Will CfD continue to deliver?

High interest rates, high inflation, sudden changes in demand...



More innovation needed

Delivering Net Zero

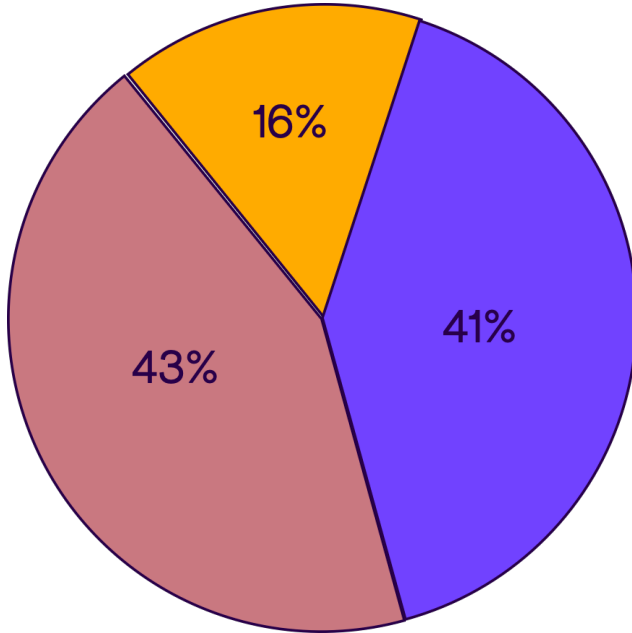
In the next 27 years...

- Electricity system more than doubles in size
- Offshore wind 14 GW to around 100GW
- Transformation of the grid: scale
- Low carbon hydrogen production from 0 to over 220TWh
- Carbon Capture and Storage CCS 0 to 180 Mt CO₂
- 29 million existing buildings installed with low carbon heat
- Zero carbon cars 700,000 to 35 million
- Afforestation 10,000 to up to 50,000 hectares pa
- Major changes in agriculture
- Major changes to diet: beef, lamb and dairy consumption down 20-50%
- ...

Engaging people

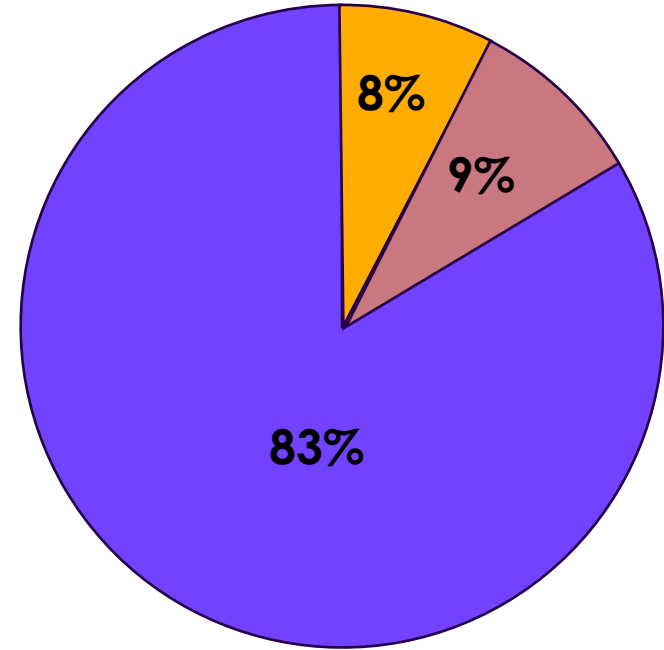
Behavioural change

2020 to 2050



- Low-carbon technologies or fuels, not societal/behavioural changes
- Measures with a combination of low-carbon technologies and societal/behaviour changes
- Largely societal or behaviour changes

2008 to 2019*

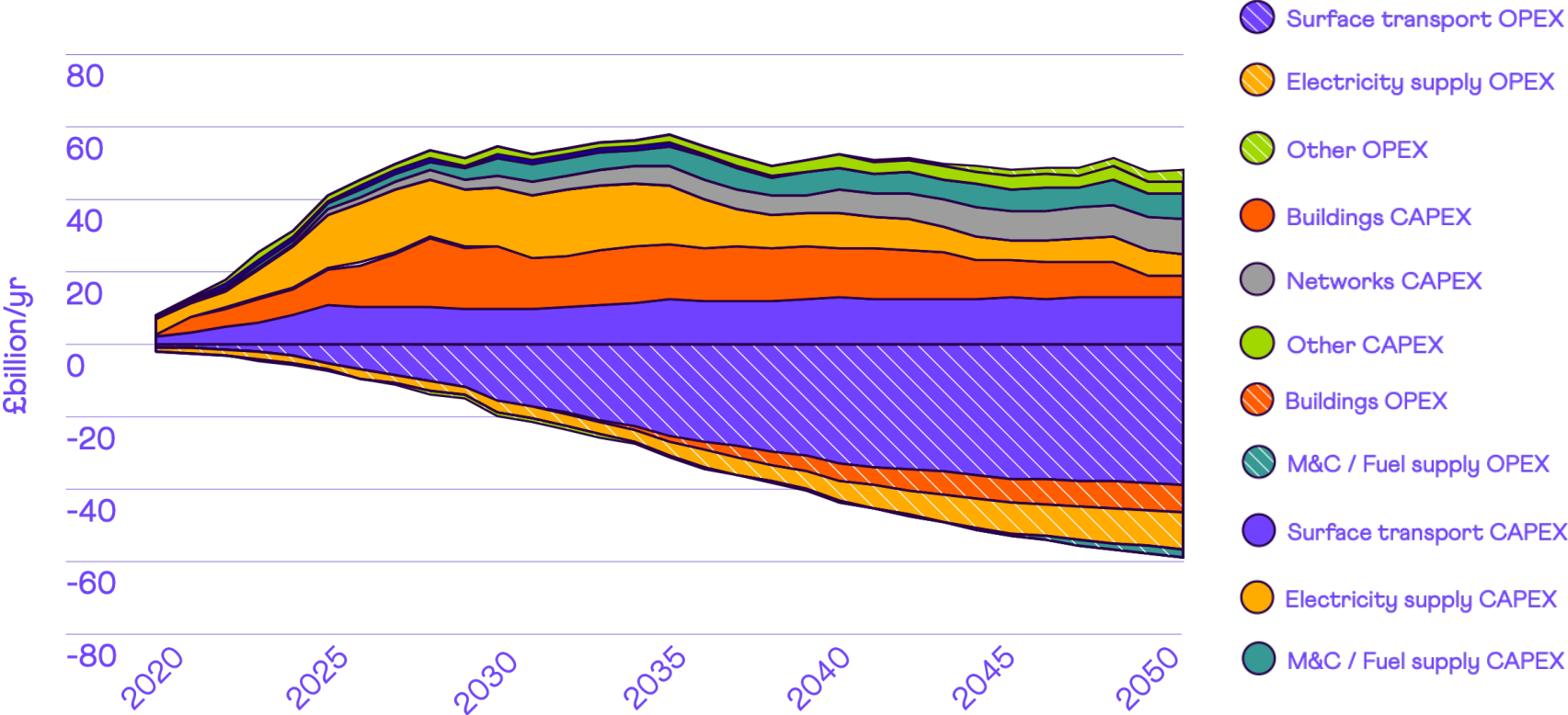


Source: CCC Analysis

* Author's estimates

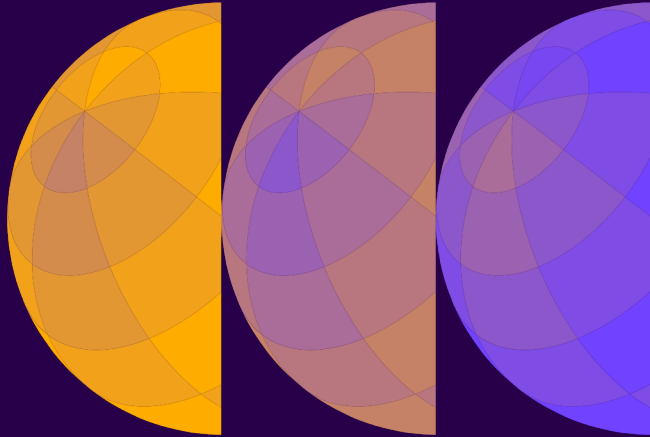
Investing for Net Zero

Capital investment and offsetting operating cost savings



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