

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

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Carbon budgeting

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- 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

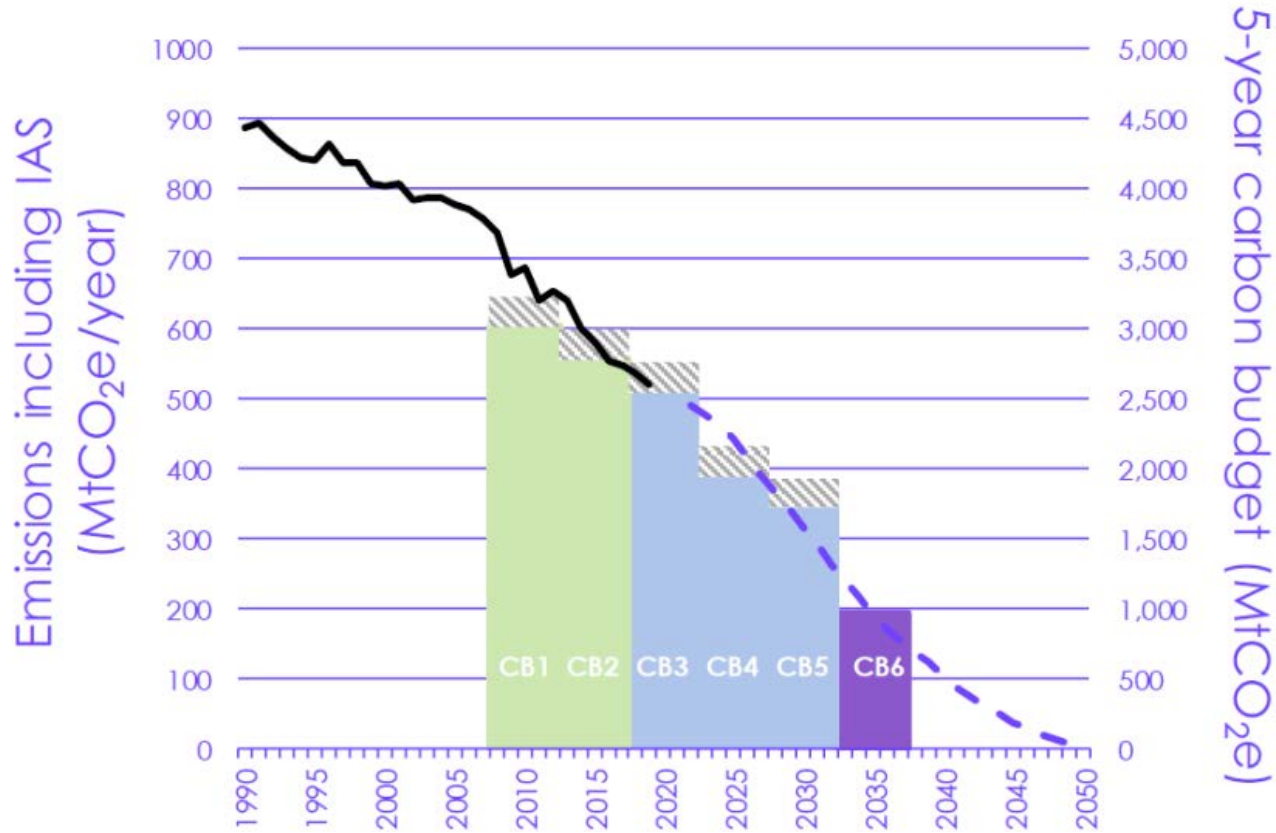
- 12 Duty to provide indicative annual ranges for net UK carbon account

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

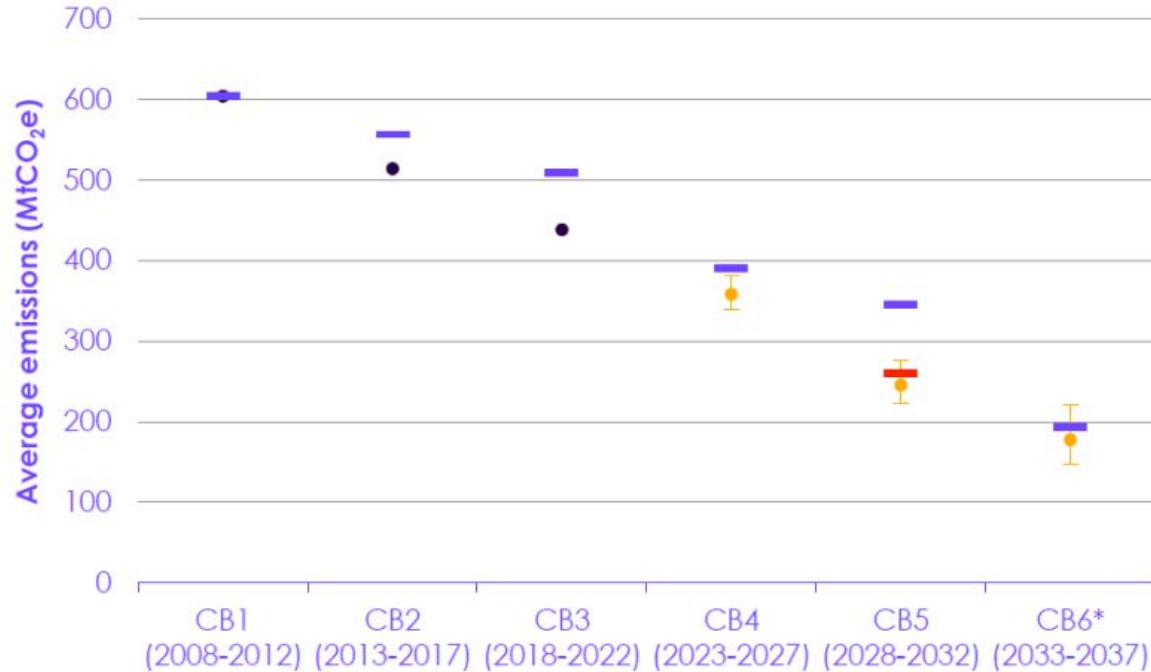
And a target for 2050



Policy development

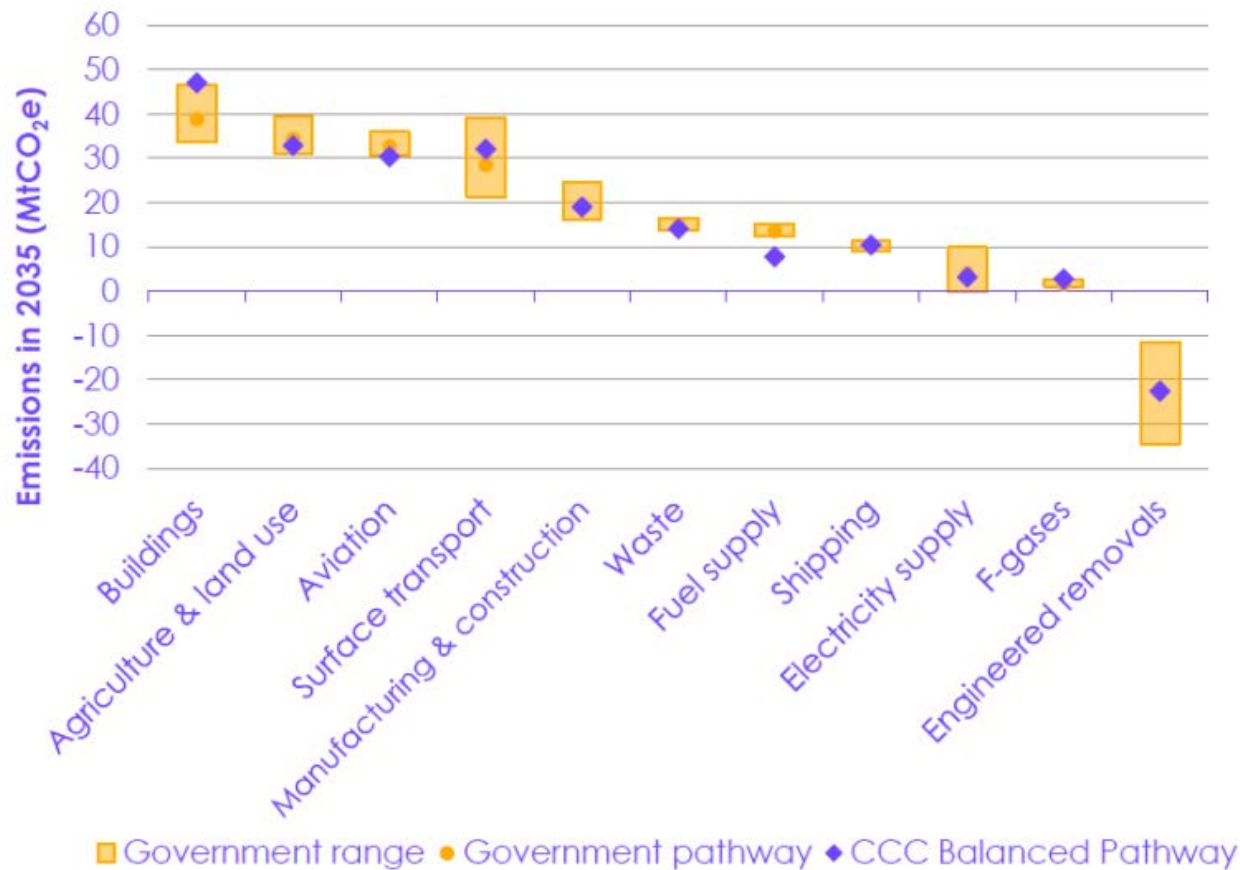
Government pathway

Compared to carbon budgets



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

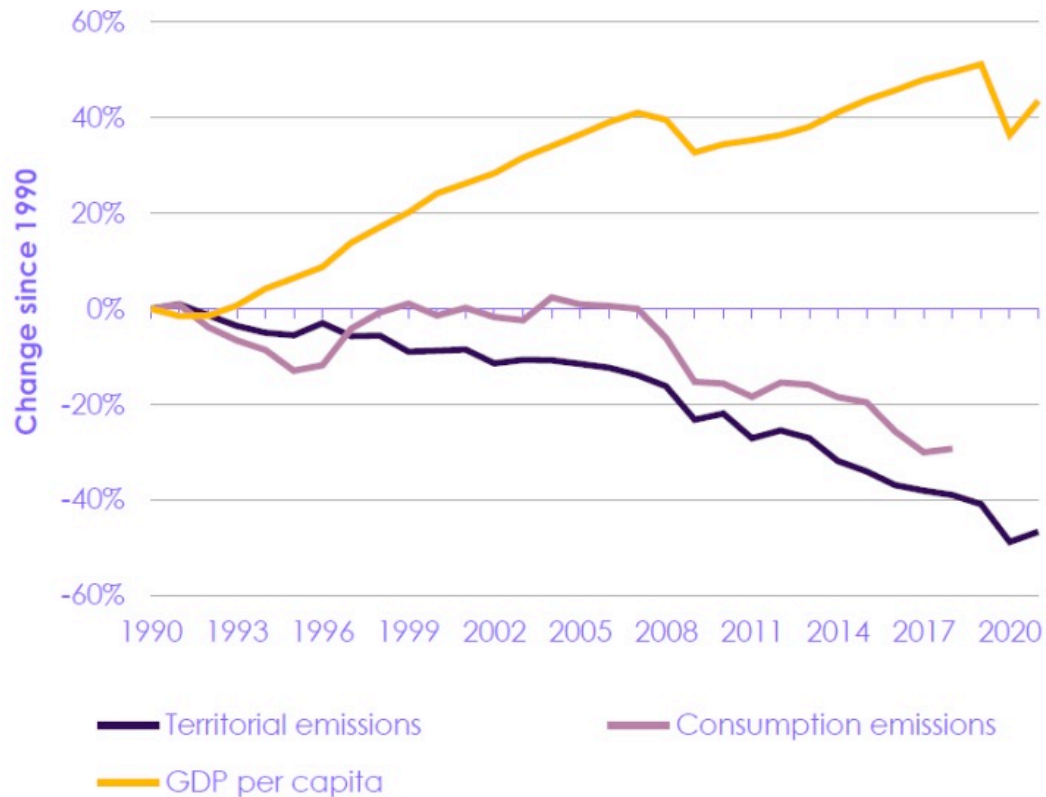
Comparison by sector in 2035



Progress

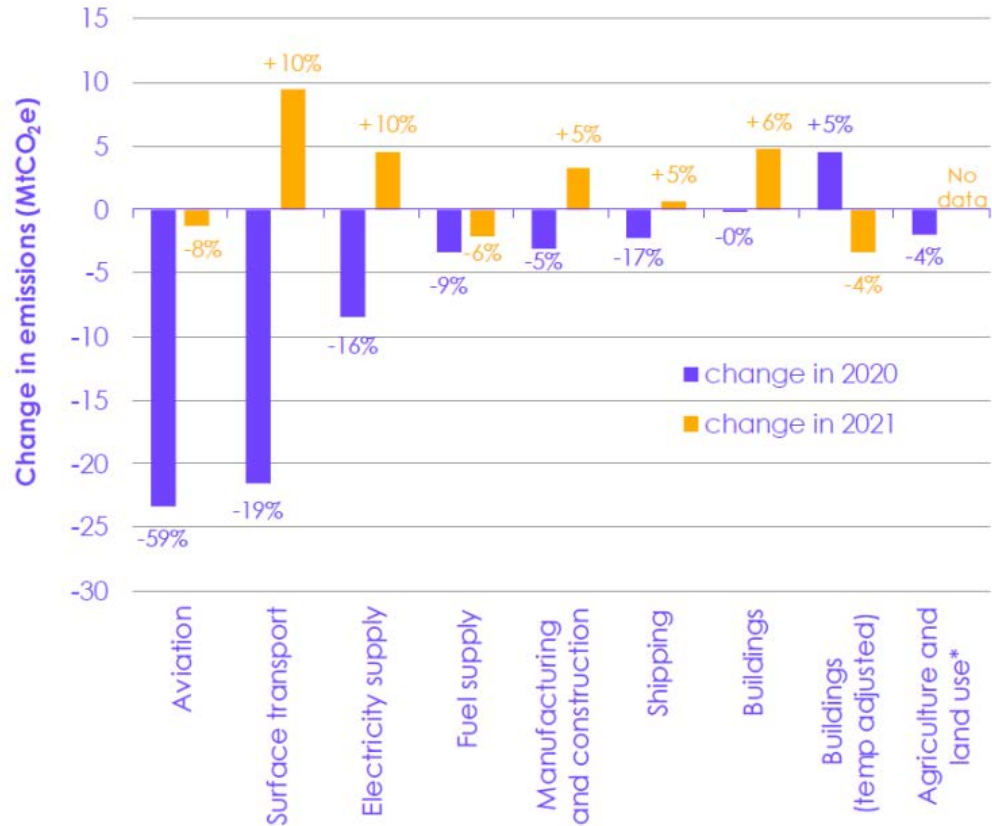
Emissions and GDP

Increasingly decoupled



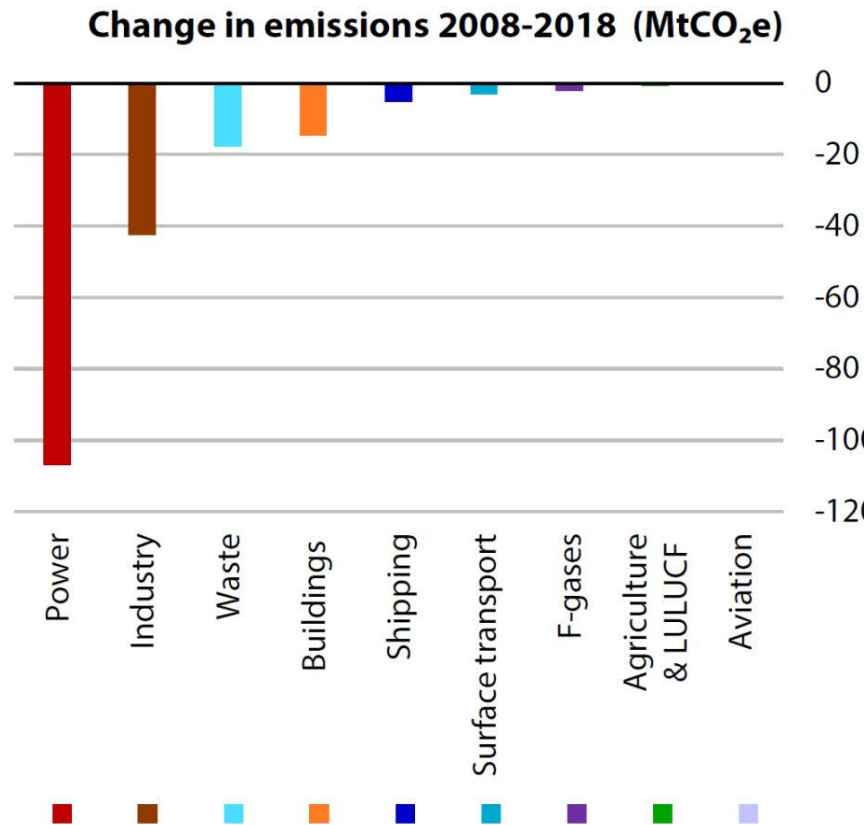
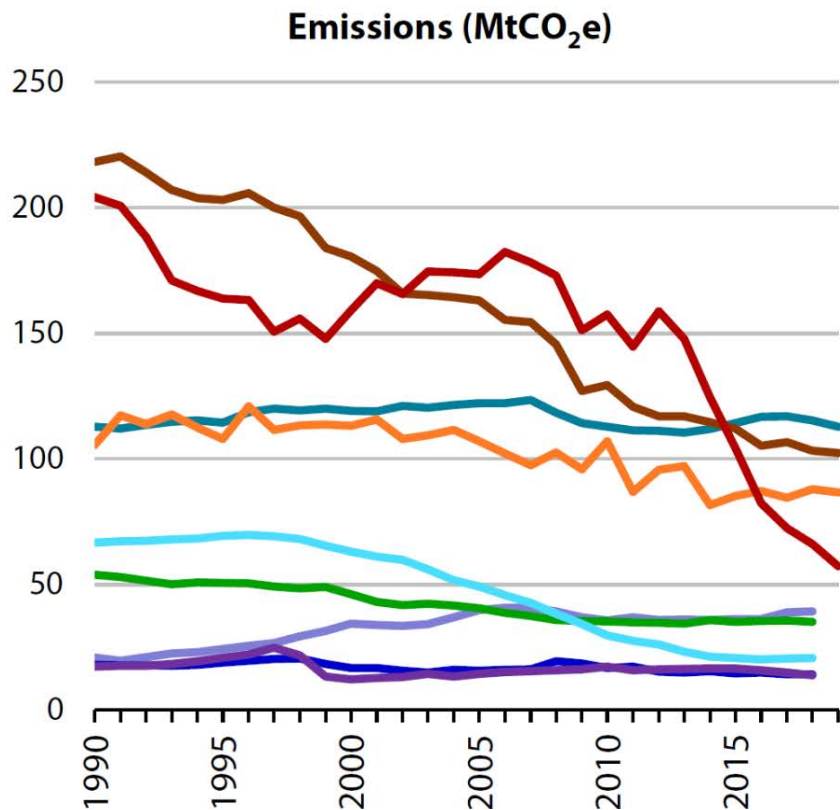
Change in emissions 2019-2021

Impact of Covid



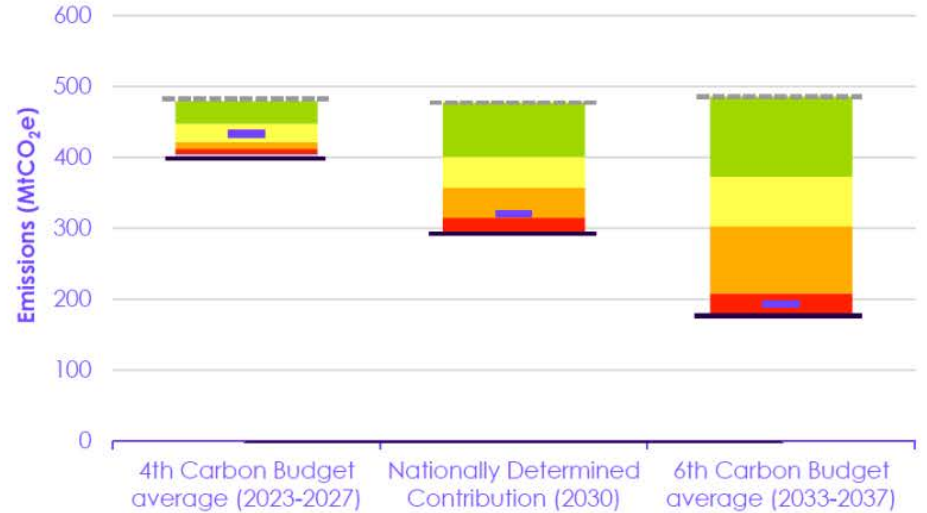
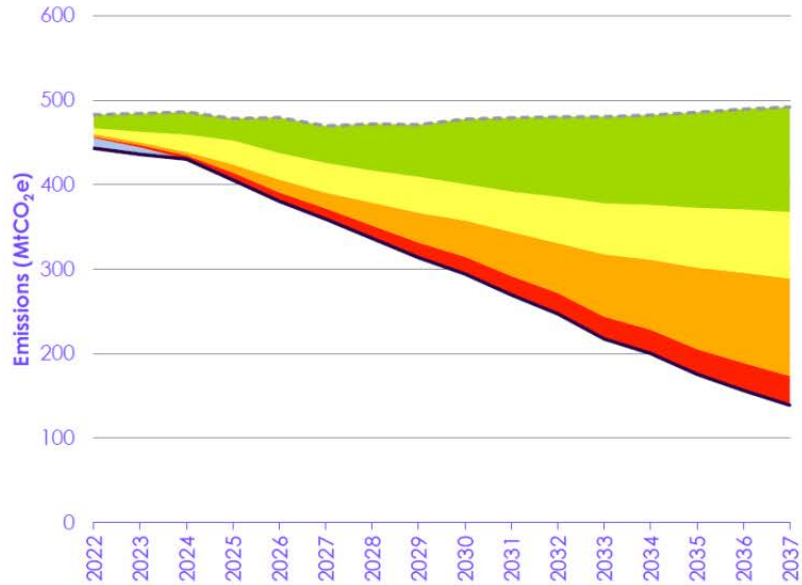
Emissions reduction trends to 2019

UK sectoral emissions 2019



Assessment of risk in Government plans

Are they credible?

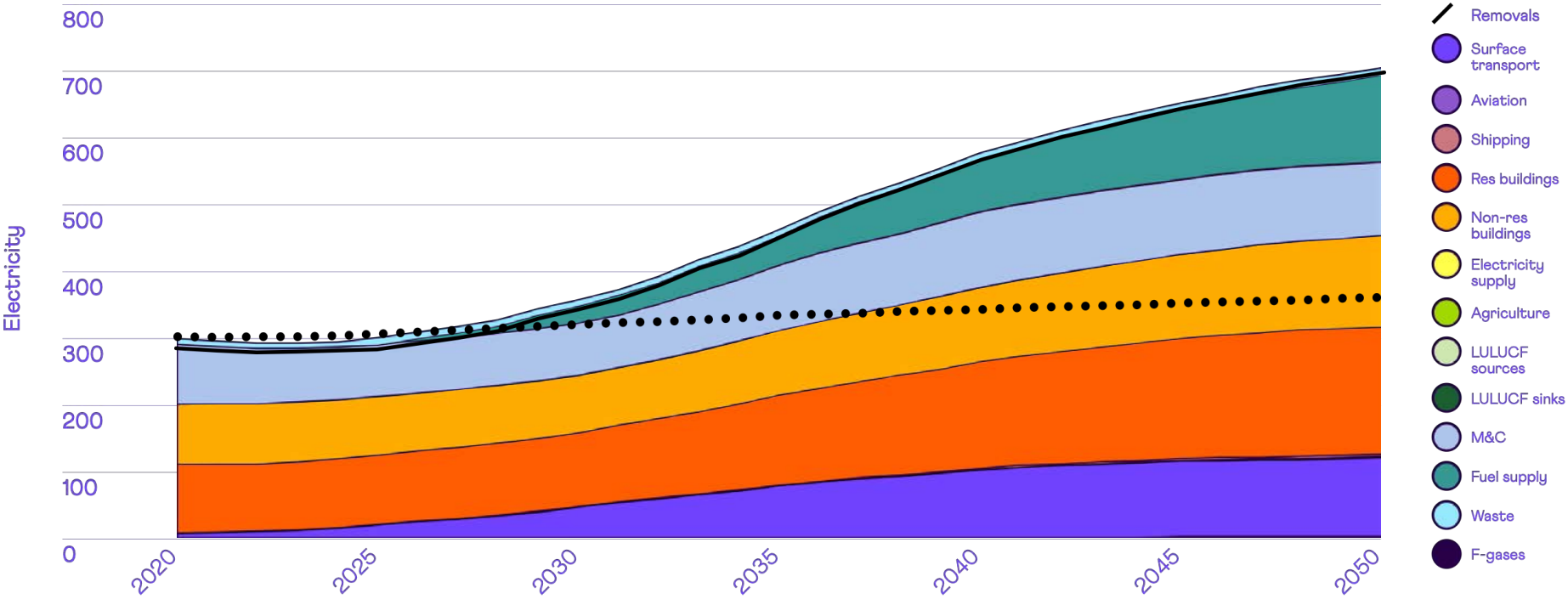


Energy

Changes in energy demand

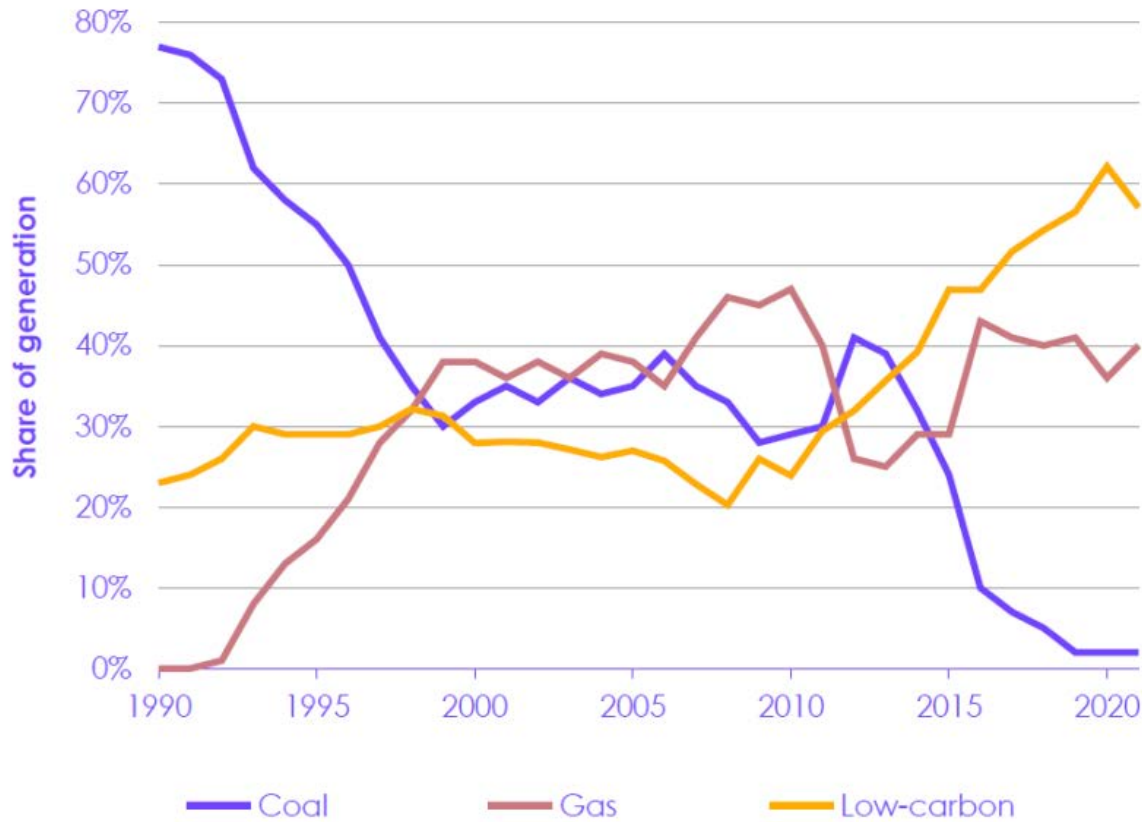
Electricity (TWh)

Source:
CCC Analysis



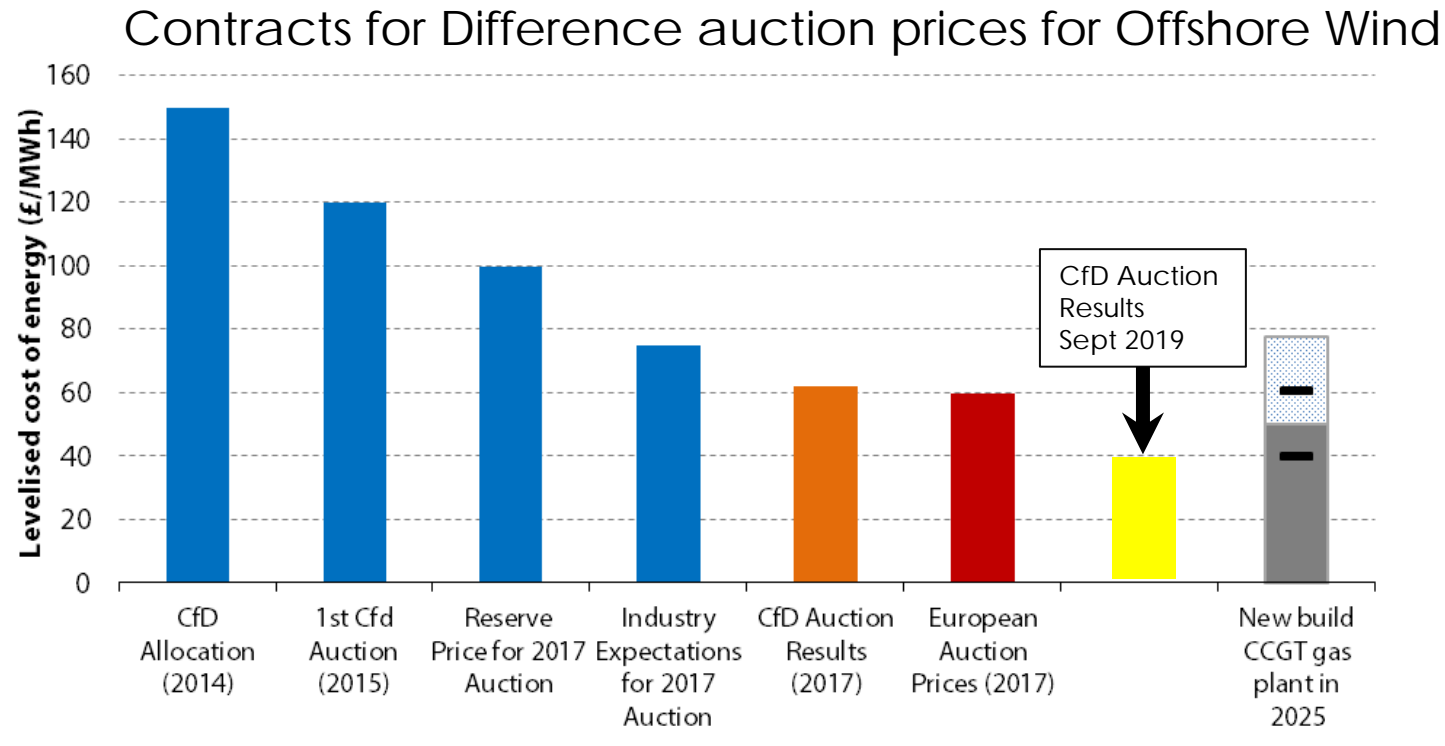
Progress with decarbonising electricity

Share of electricity generation by source 1990-2021



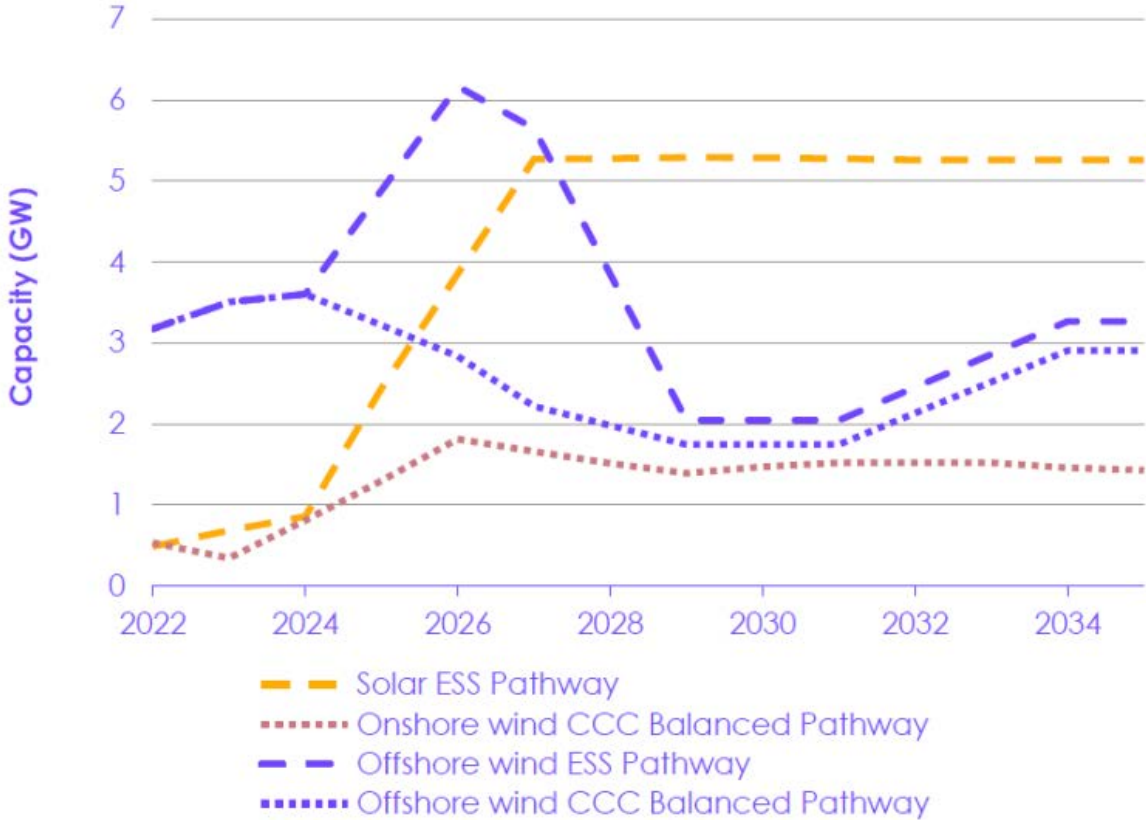
Successful policy: CfD

Driving costs down steeply and speedily



Will CfD continue to deliver?

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



More innovation needed

Delivering Net Zero

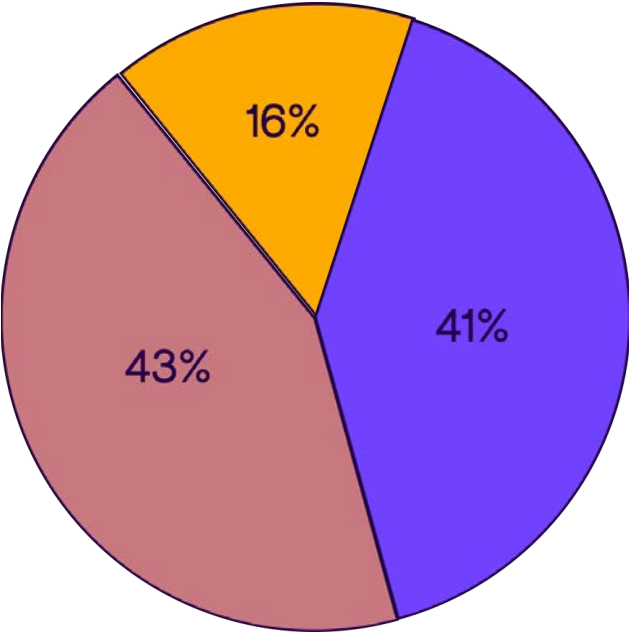
In the next 27 years...

- 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%
- ...

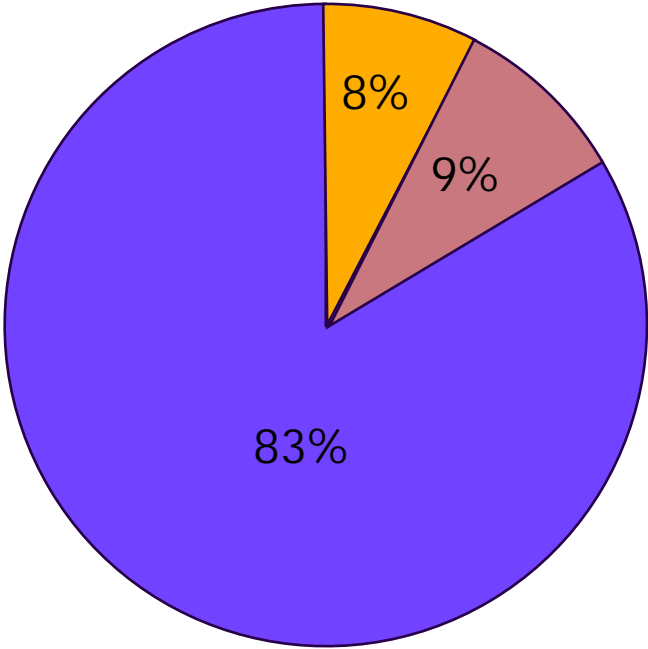
Engaging people

Behavioural change

2020 to 2050



2008 to 2019*



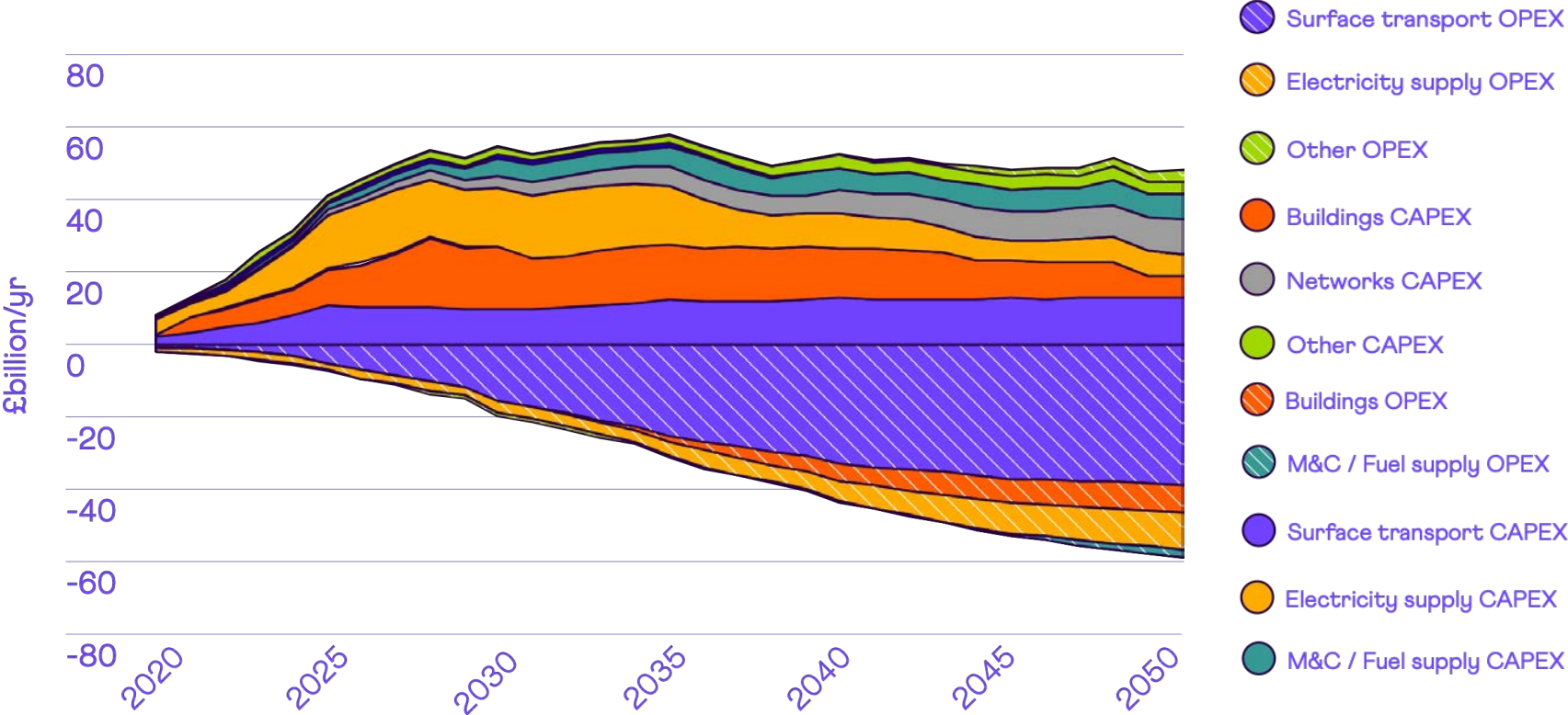
- Low-carbon technologies or fuels, not societal/behavioural changes
- Measures with a combination of low-carbon technologies and societal/behaviour changes
- Largely societal or behaviour changes

Source: CCC Analysis

* Author's estimates

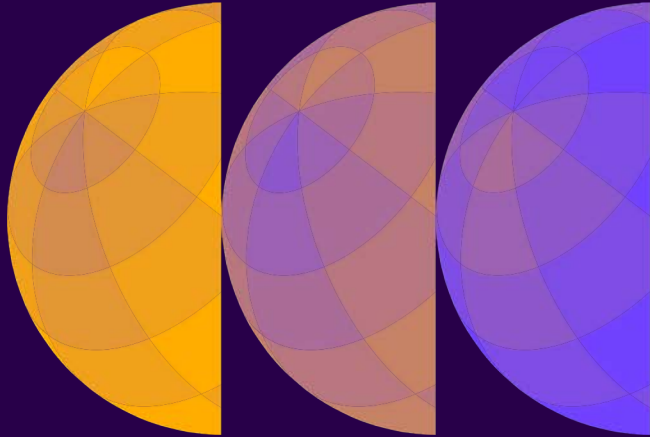
Investing for Net Zero

Capital investment and offsetting operating cost savings



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