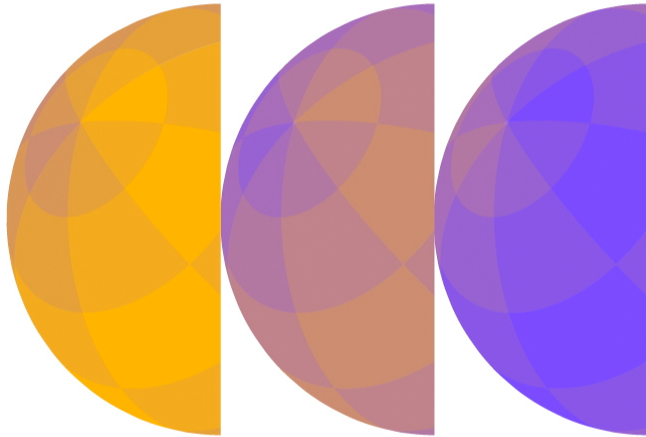


9th March 2021

Climate Change Committee: The UK's Sixth Carbon Budget – the pathway to Net Zero

Vivian Scott, Richard Millar - Climate Change Committee

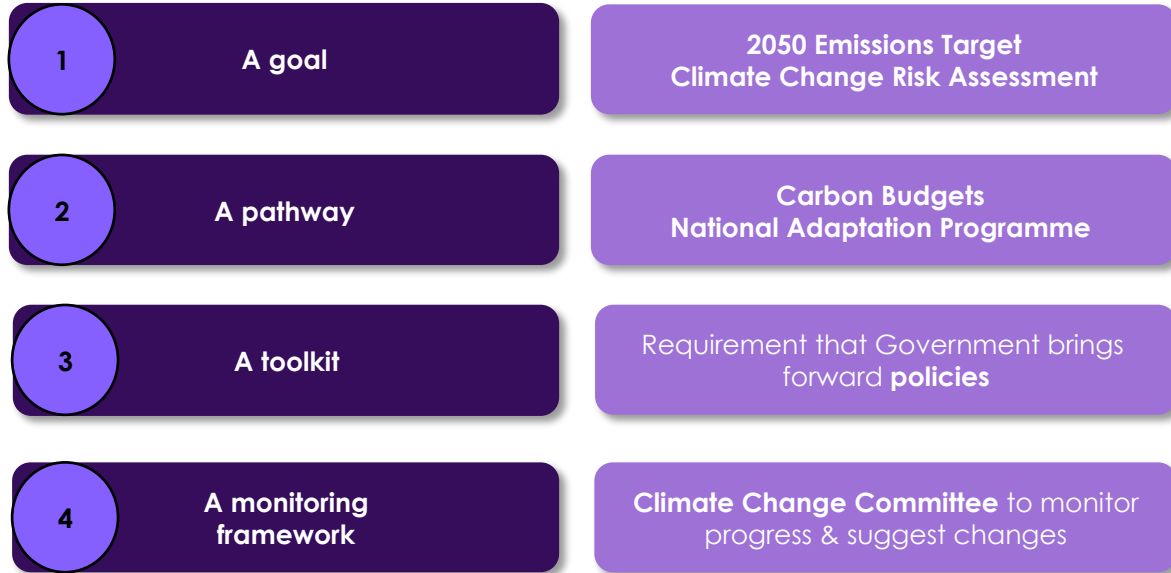


Climate
Change
Committee

The CCC's role under the UK Climate Change Act

UK Climate Change Act

Four pillars underpin the UK Climate Change Act



UK Climate Change Committee

Independent, Expert-led, Evidence-based

Mitigation Committee



Lord Deben
Chair
(Fmr Minister)



Baroness Brown
Vice Chair
(Engineering)



Prof Piers Foster
(Climate Science)



Prof Corinne Le Quéré
(Climate Science)



Prof Keith Bell
(Energy systems)



Paul Johnson
(Economics)



Prof Nick Carter
(Behaviour)



Dr Rebecca Heaton
(Business)

Adaptation Committee



Baroness Brown
Chair
(Engineering)



Ece Ozdemiroglu
(Economics)



Rosalyn Schofield
(solicitor)



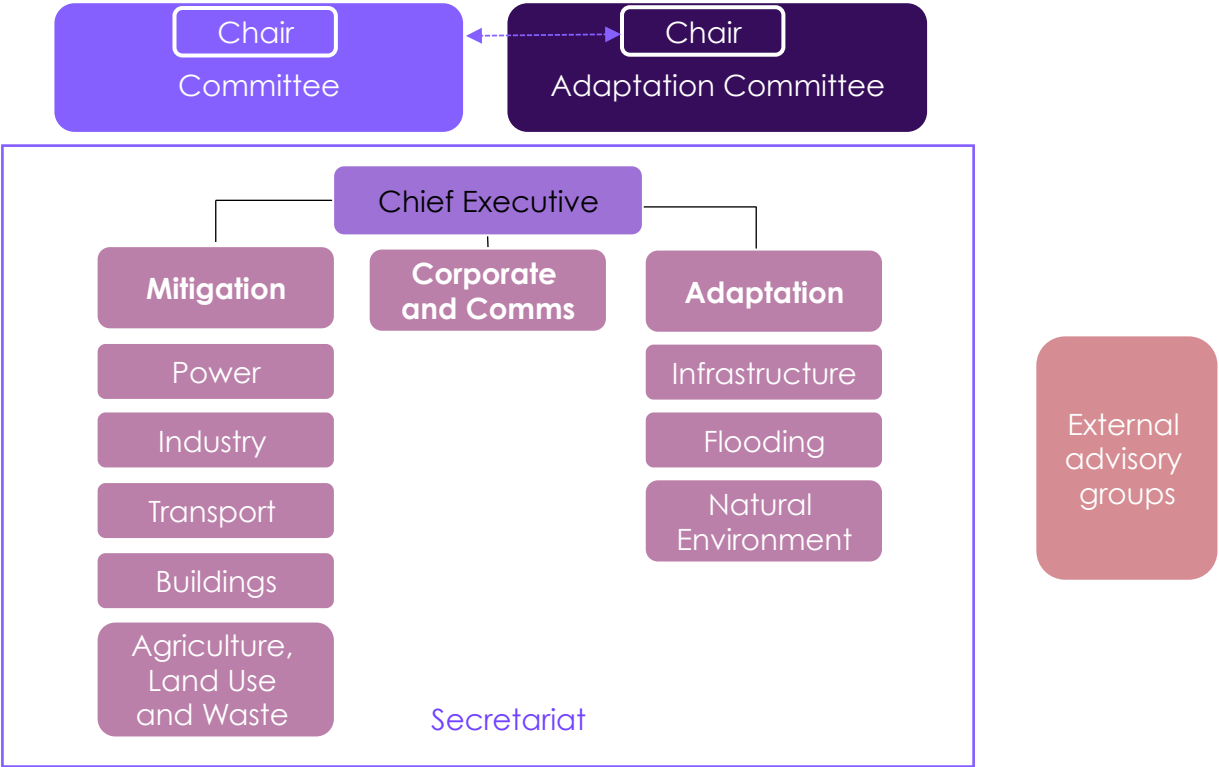
Prof Michael Davies
(Building Physics)

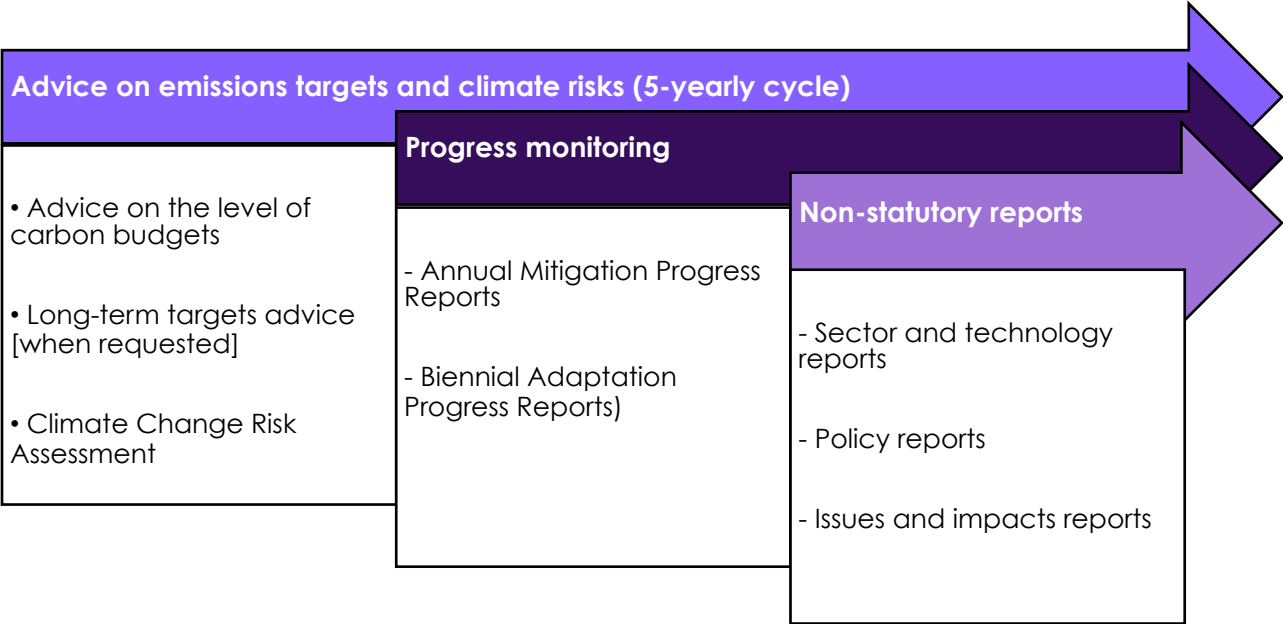


Prof Richard Dawson
(Climate Risk)

UK Climate Change Committee

Independence, Expertise, Evidence-Led





UK Climate Change Committee

Since 2008 we have published over 70 reports



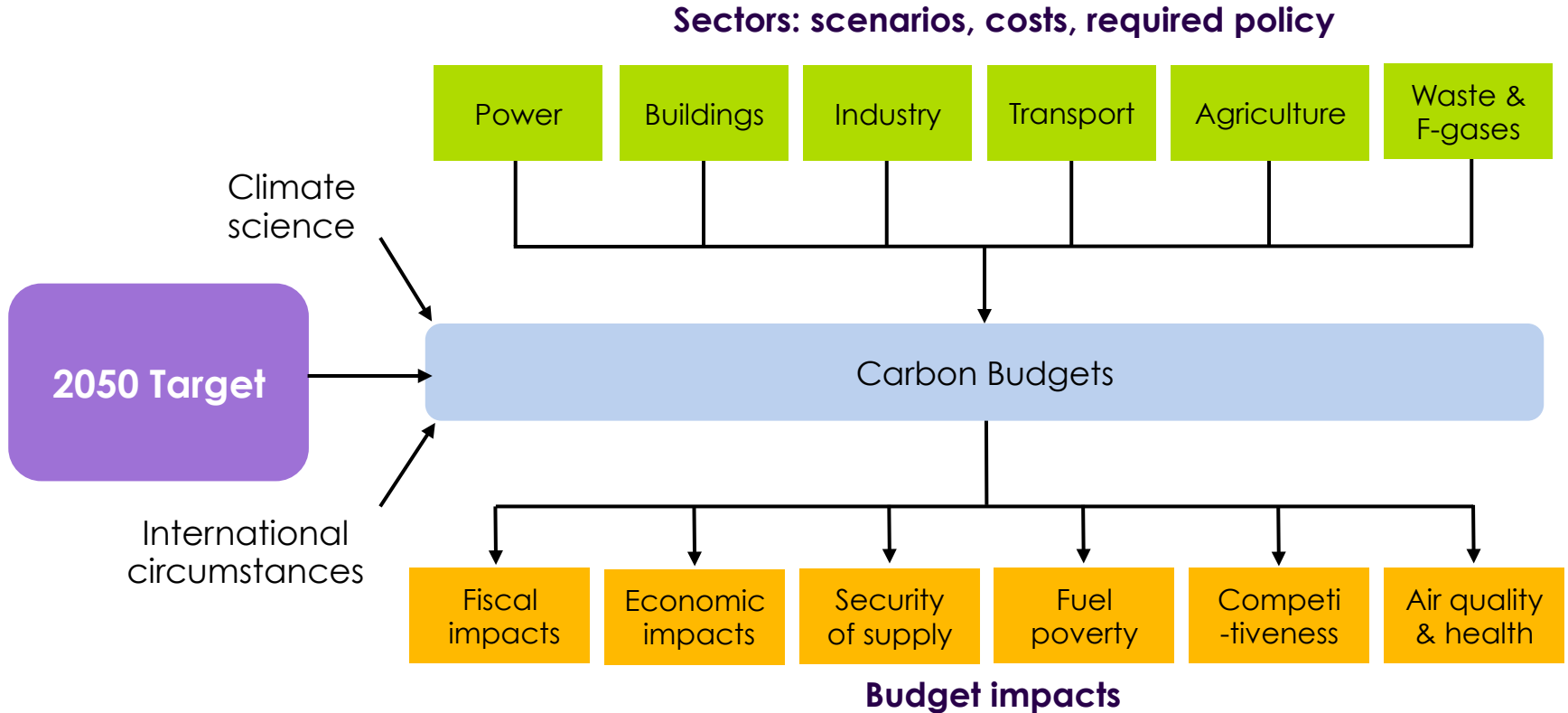
- Clear targets and a transparent framework has improved public and business engagement.
- Legal obligation on specific Minister ensures climate change has high profile in Government.
- An evidence-led independent advisor has helped resolve political differences.
- The Net Zero Target has focussed minds (no 'free' 20%).

“The CCC has had a strong influence on UK climate policy. Its analysis is used and trusted by stakeholders on all sides of the debate, and its statutory advice has generally been followed.” London School of Economics - Grantham Research Institute on the role of the CCC (2018)

Advice on the path to Net Zero

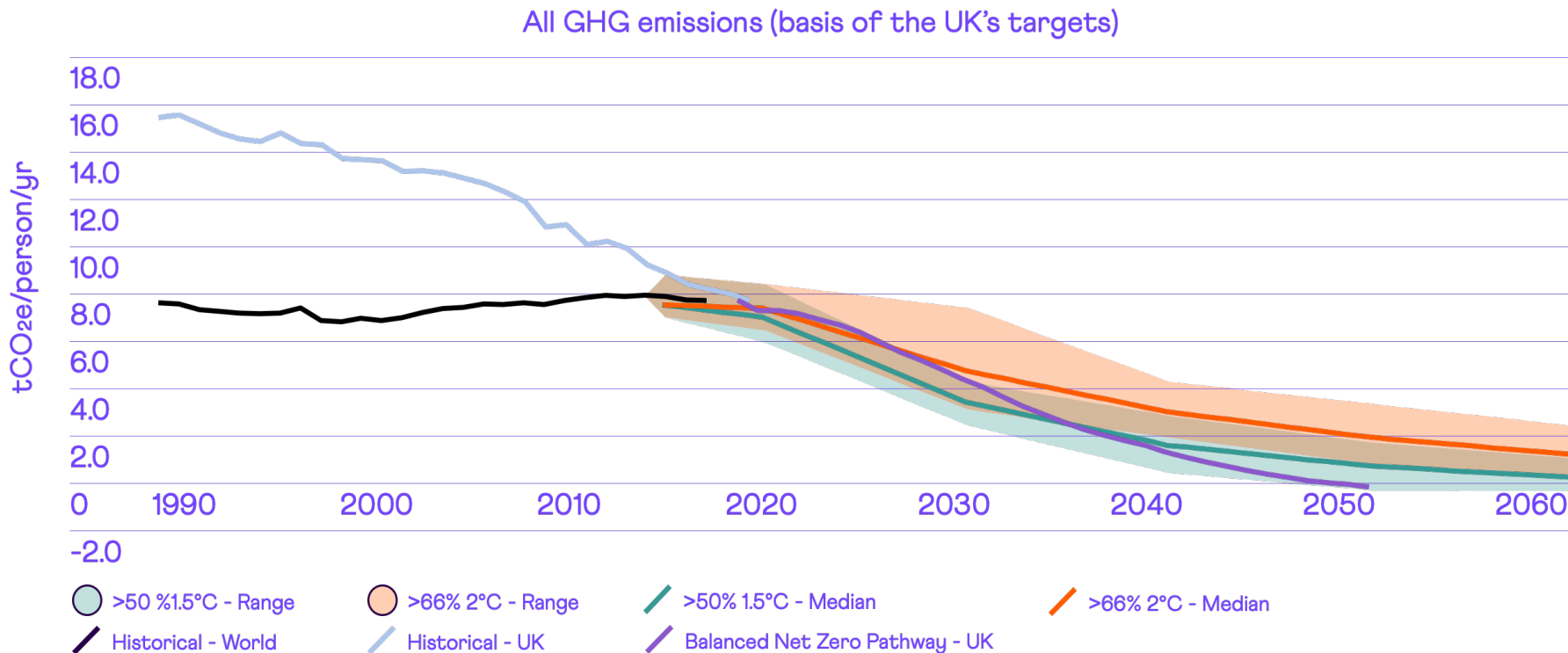
Setting the path to Net Zero – an approach defined by the Climate Act

Evidence-based, bottom up, whole economy approach



Comparison to global pathways

Per person emissions vs global requirements of Paris



The path of least disruption

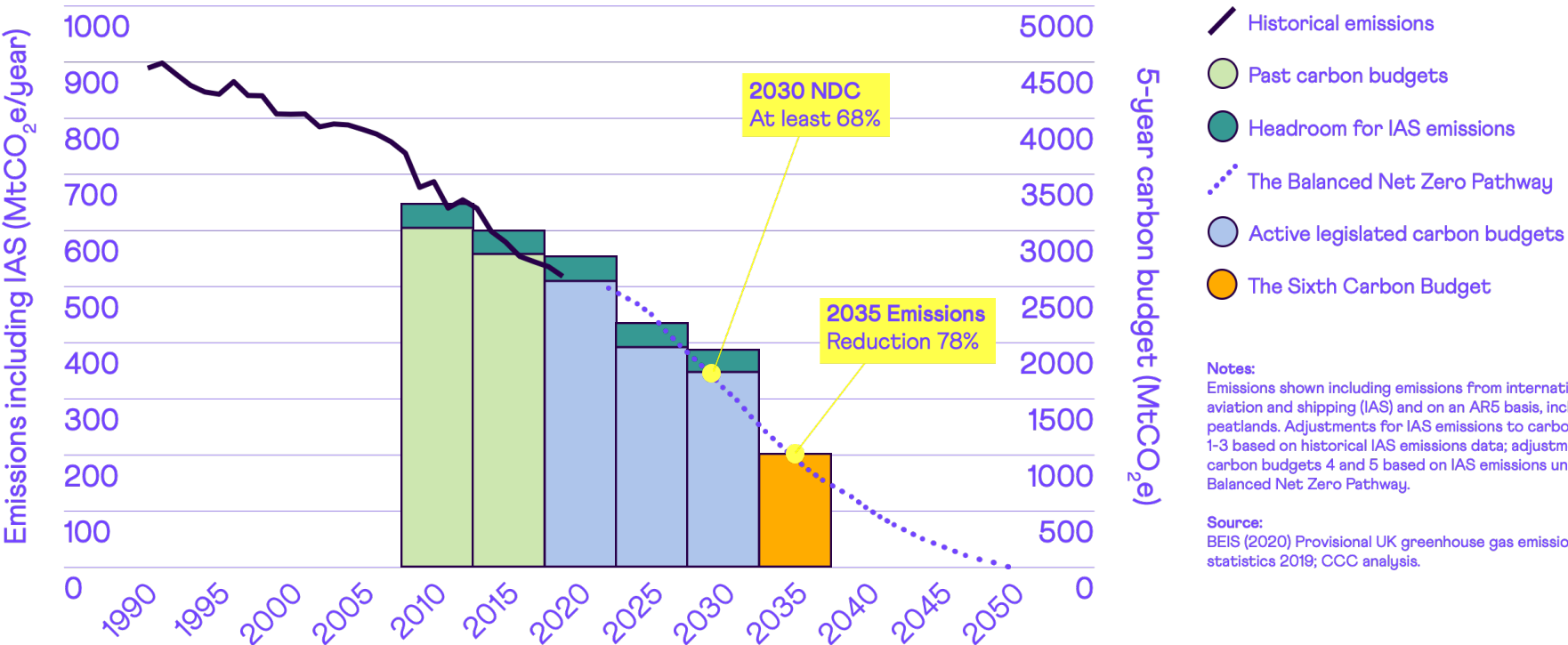
A real-world constraint: asset lives

Sector	Asset	Lifetime
Transport	Light Vehicle HGV	14 years (average) 8 – 13 years
Manufacturing and Construction	Combustion (Boilers, furnaces, mobile machinery, generators, kilns, compressors, dryers, heaters, ovens, Other process assets.	10-35 years
Buildings	Fossil fuel boiler	15 years
	Air Source Heat Pump	15 years
	Ground Source Heat Pump	20 years
	Loft and cavity insulation	42 years
	Solid wall insulation	36 years
	New build home	60 years
Power generation	Gas plant	25 years
	Offshore wind	30 years
	Nuclear plant	60 years
Aviation	Aircraft	30 year technical
Shipping	Ships	30 years technical

Sector	Asset	Lifetime
Fuel Supply	Offshore platforms, flaring, compressors, generators	25-35 years
	Biofuel plants	30 years technical
	BioH2 plants	30 years technical
	Biogas, biomethane plants	20 years technical
	Waste to jet plants	20 years technical
Wastes/Bio	Refuse collection vehicles	8 years technical
	Landfill methane capture and biocovers	20 years technical
	Waste water treatment equipment	25 years technical
	Composting equipment	20 years technical
Removals	DACCS	25 years technical
	Biomethane displacing natural gas	20 years technical
	Wood in construction	Set by buildings sector
	BECCS	Set by asset lifetimes in each sector

Our recommended path to Net Zero

The recommended sixth carbon budget and 2030 NDC

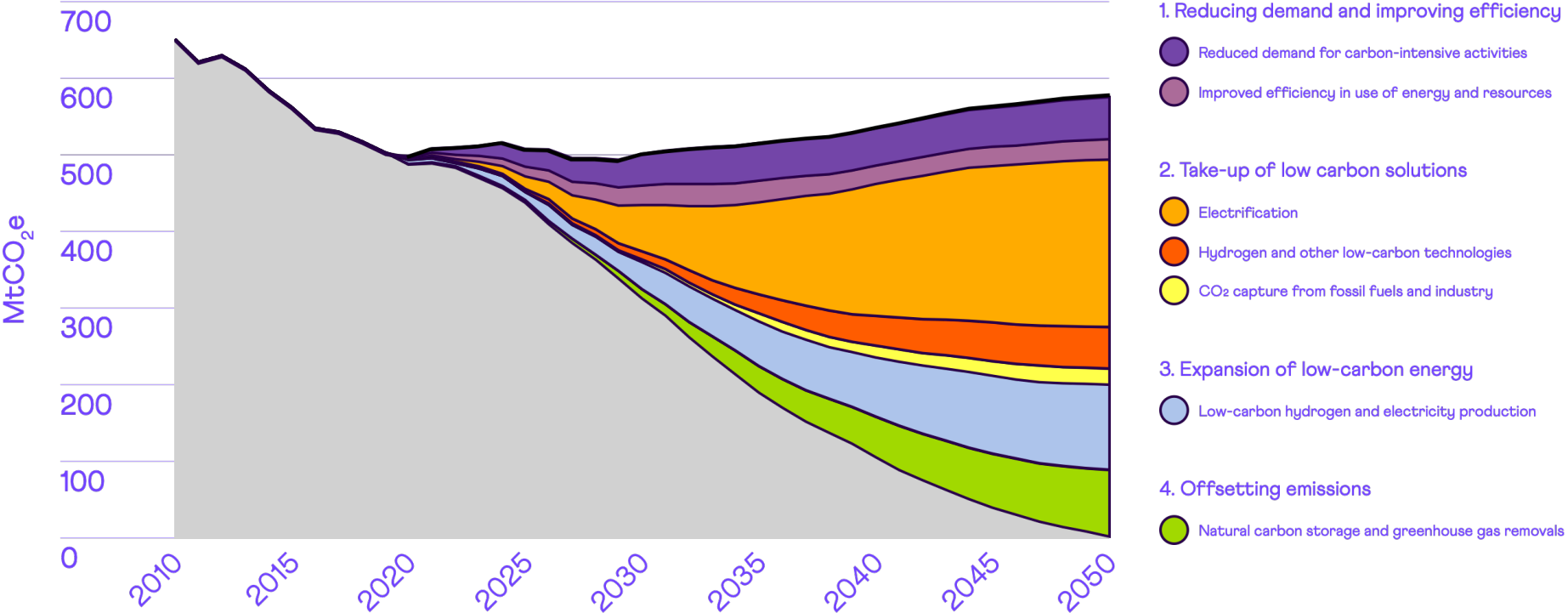


Notes:
Emissions shown including emissions from international aviation and shipping (IAS) and on an AR5 basis, including peatlands. Adjustments for IAS emissions to carbon budgets 1-3 based on historical IAS emissions data; adjustments to carbon budgets 4 and 5 based on IAS emissions under the Balanced Net Zero Pathway.

Source:
BEIS (2020) Provisional UK greenhouse gas emissions national statistics 2019; CCC analysis.

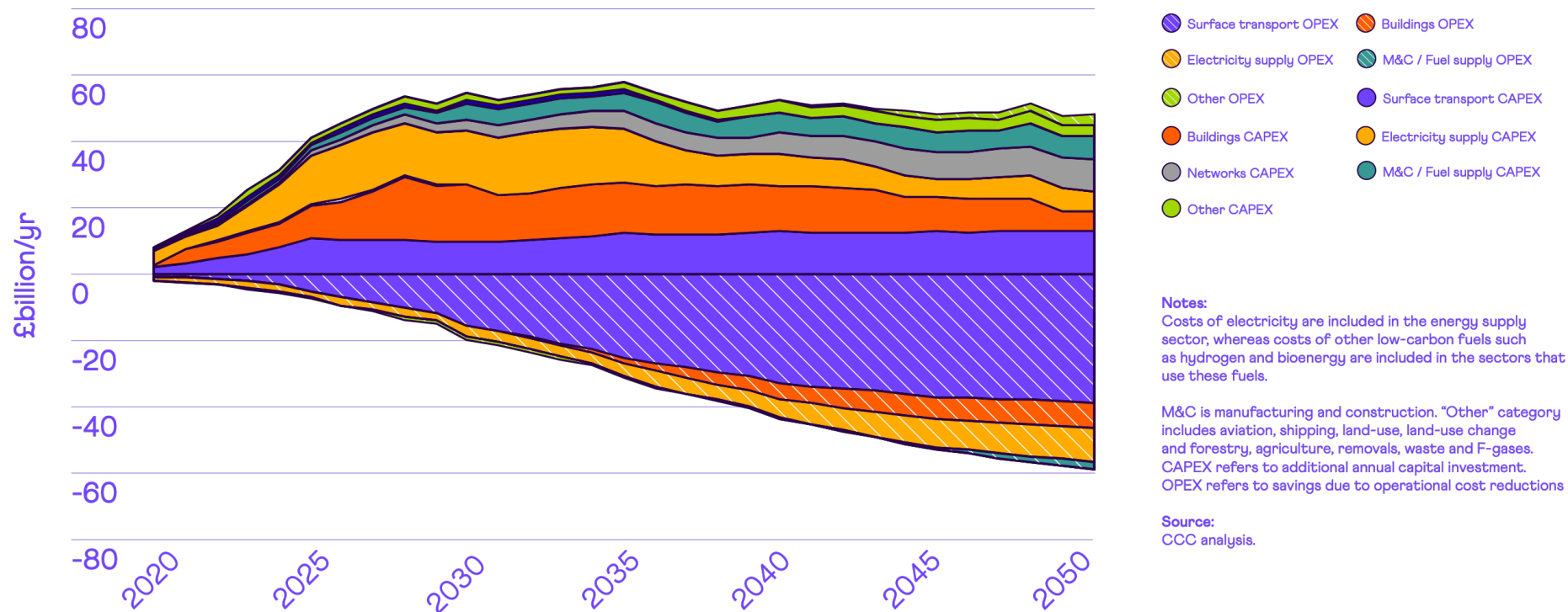
Our recommended path to Net Zero

The path to Net Zero requires actions across four key areas



Investing for Net Zero

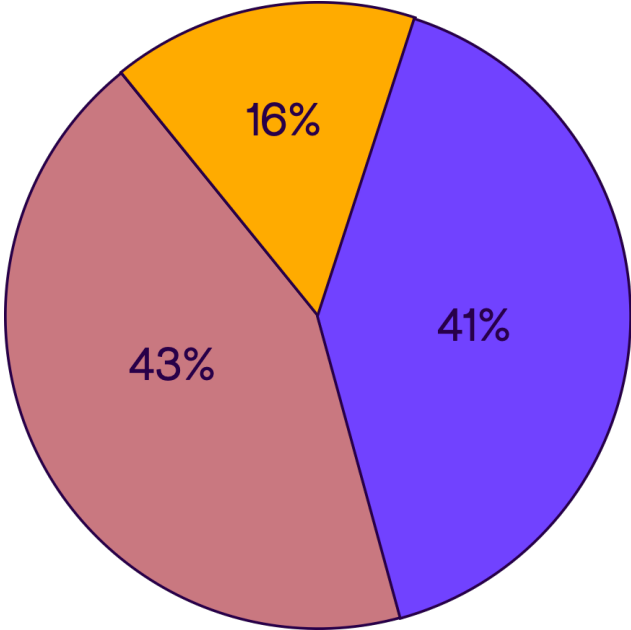
Major investment programme, delivering offsetting operating cost savings



Source: CCC analysis.

Delivering Net Zero

Role of behavioural and societal change in meeting the Sixth Carbon Budget



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

Source: CCC Analysis

Ten Point Plan

1. Offshore wind: 40GW by 2030
2. Low carbon Hydrogen: 5GW by 2030
3. Delivering New and Advanced Nuclear Power
4. Zero Emission Vehicles: light-duty ICE sales end 2030
5. Green Public Transport, Cycling and Walking
6. Jet Zero and Green Ships
7. Greener homes including phase out of fossil gas heating.
8. Investing in Carbon Capture, Usage and Storage – 2030 10Mt CO₂ per year
9. Protecting Our Natural Environment
10. Green Finance and Innovation

UK NDC:

At least 68% by 2030 compared to 1990.





www.theccc.org.uk/publication/sixth-carbon-budget/



www.theccc.org.uk/publication/insights-briefings-sharing-the-uk-approach-to-addressing-climate-change/

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