

Climate
Change
Committee

The Path to Net Zero in Wales

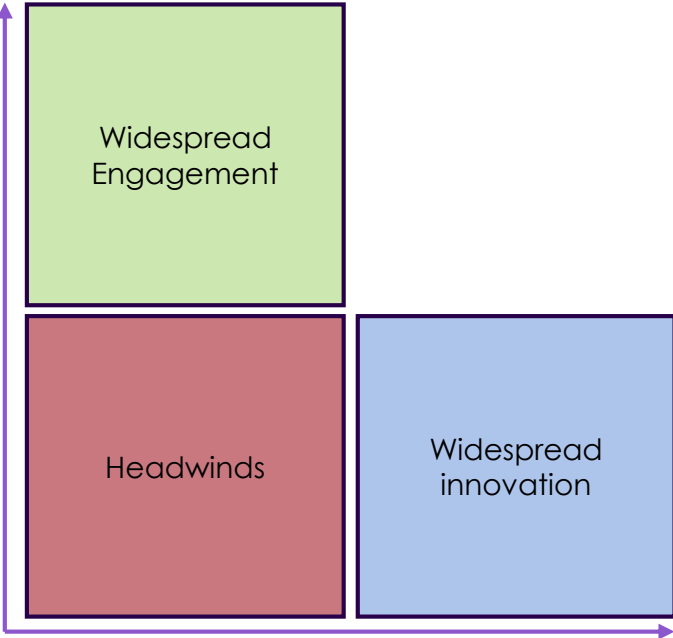
Advice on Wales climate targets

Our approach

Our approach

A balanced pathway to keep options open

Further
behaviour
change



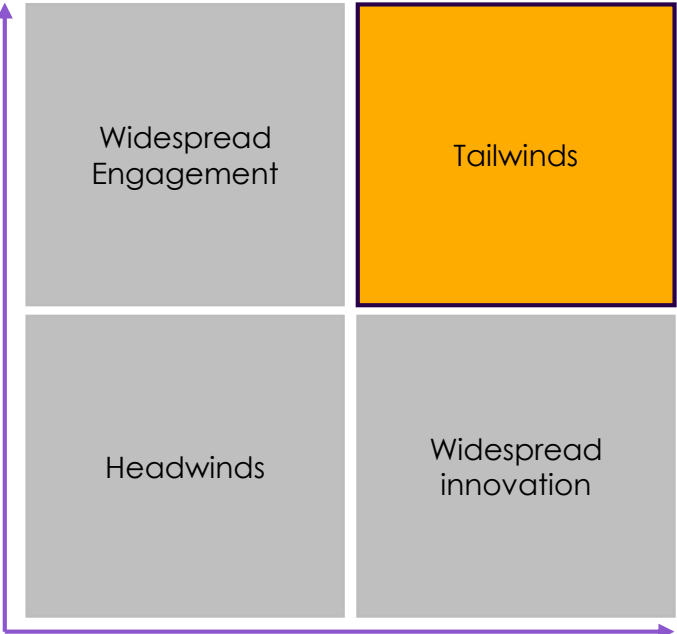
High
innovation

Further
innovation

Our approach

A balanced pathway to keep options open

Further
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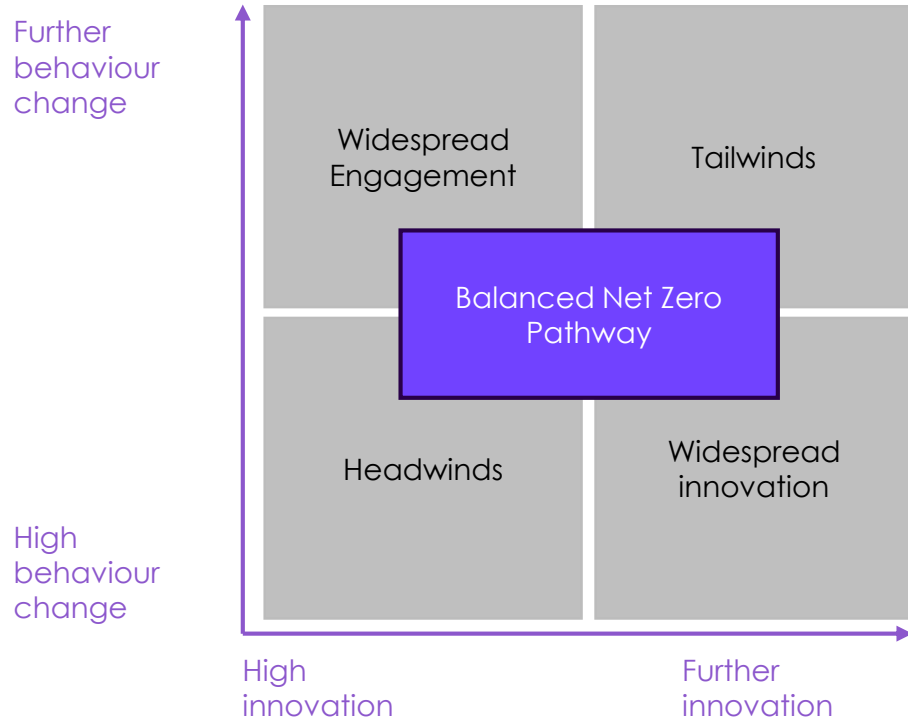


High
innovation

Further
innovation

Our approach

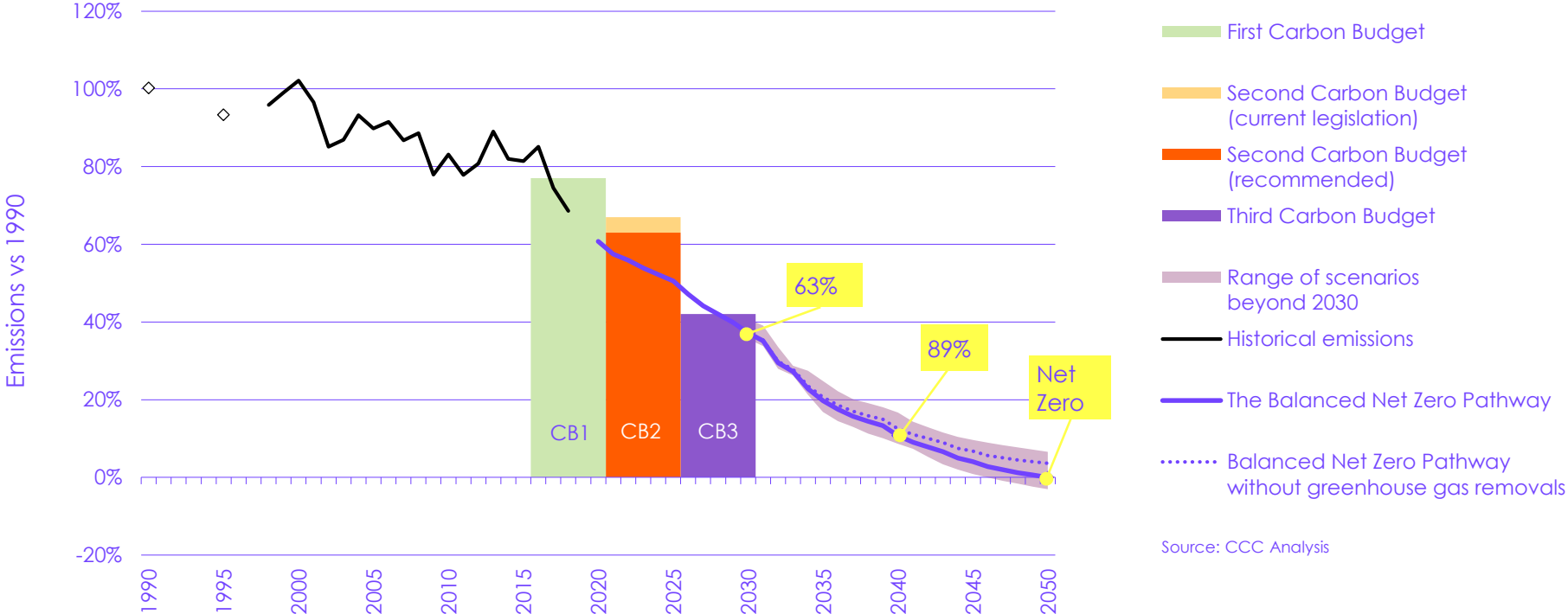
A balanced pathway to keep options open



Our recommended pathways

Our recommended path for Wales

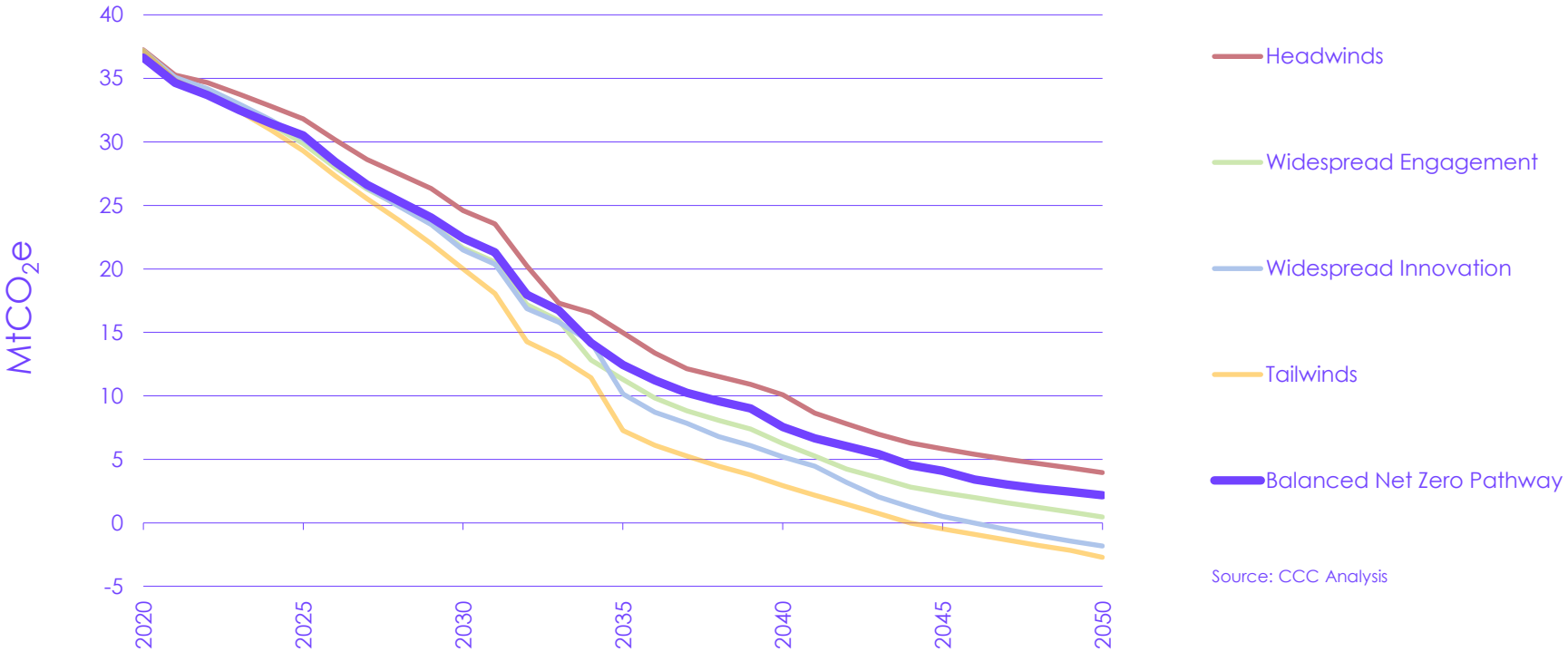
The recommended 2050 target and interim targets



Source: CCC Analysis

Our recommended path for Wales

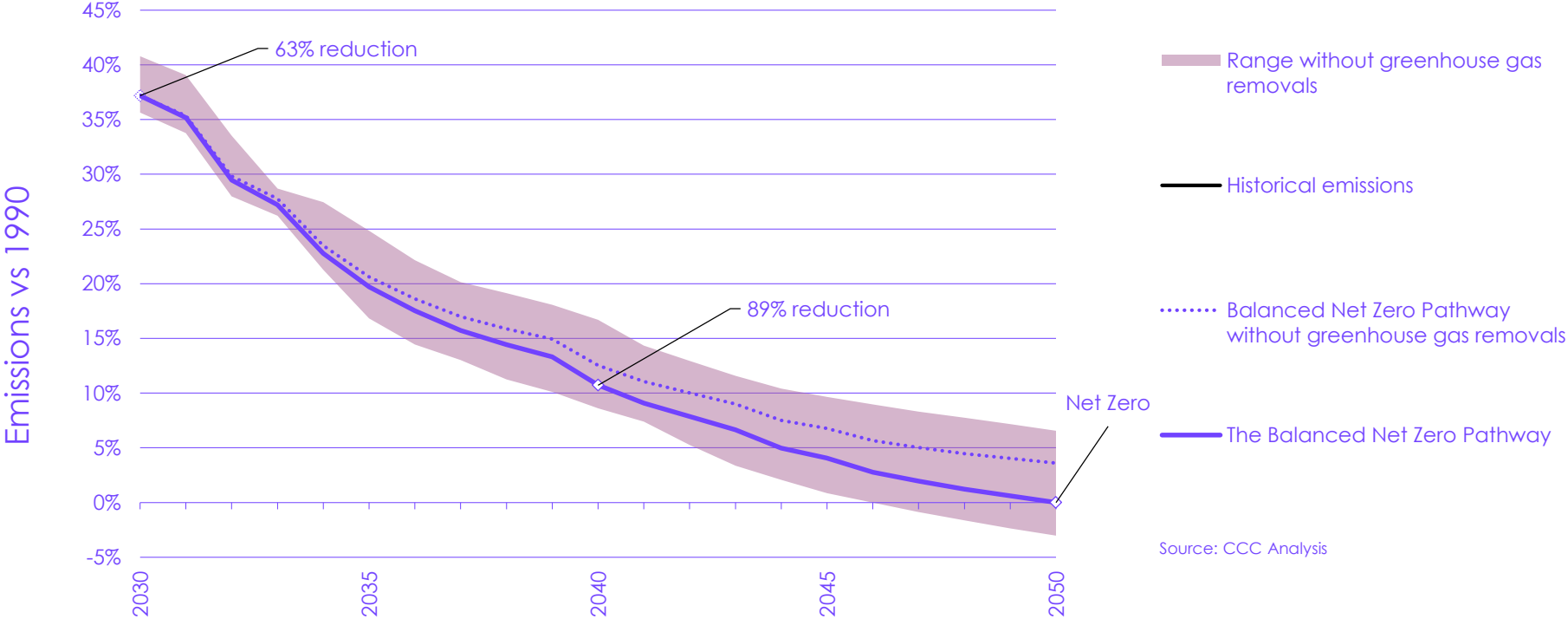
Scenarios for Wales without engineered removals



Source: CCC Analysis

Our recommended path for Wales

A route to Net Zero in Wales

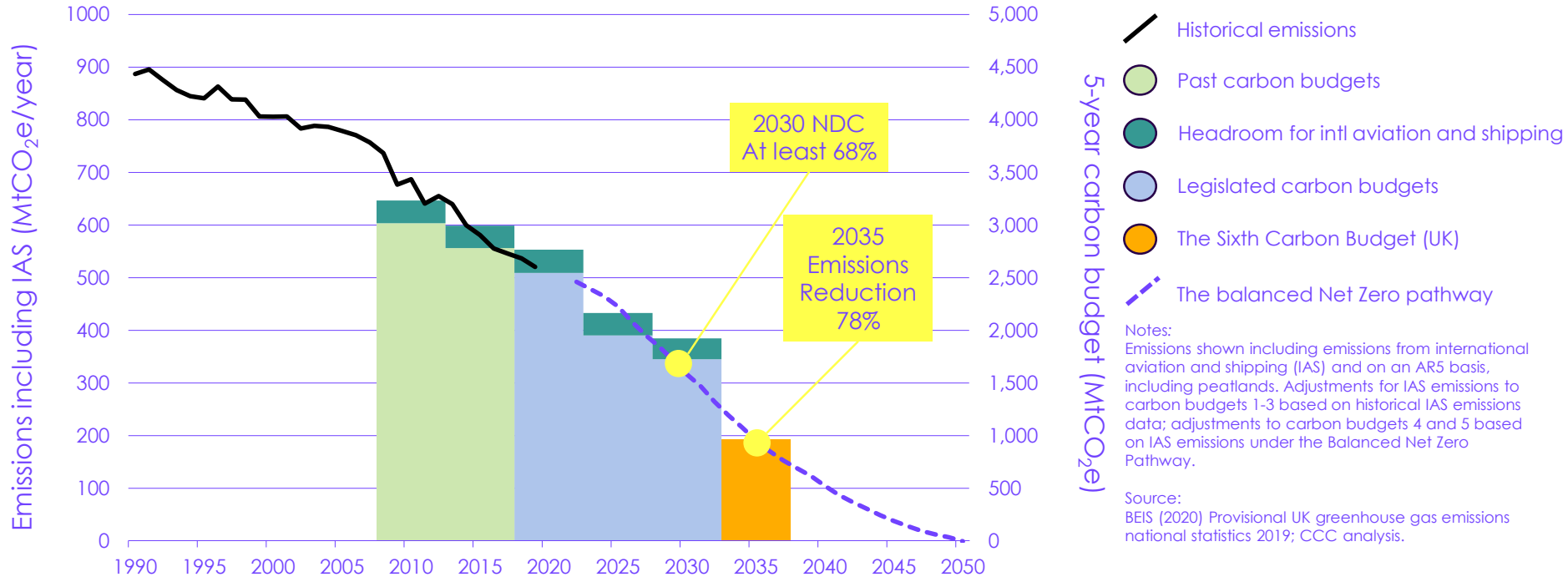


Source: CCC Analysis

Supporting UK targets and international efforts

Wales supporting the UK's Sixth Carbon Budget

The recommended Sixth Carbon Budget and the 2030 NDC already submitted by the UK

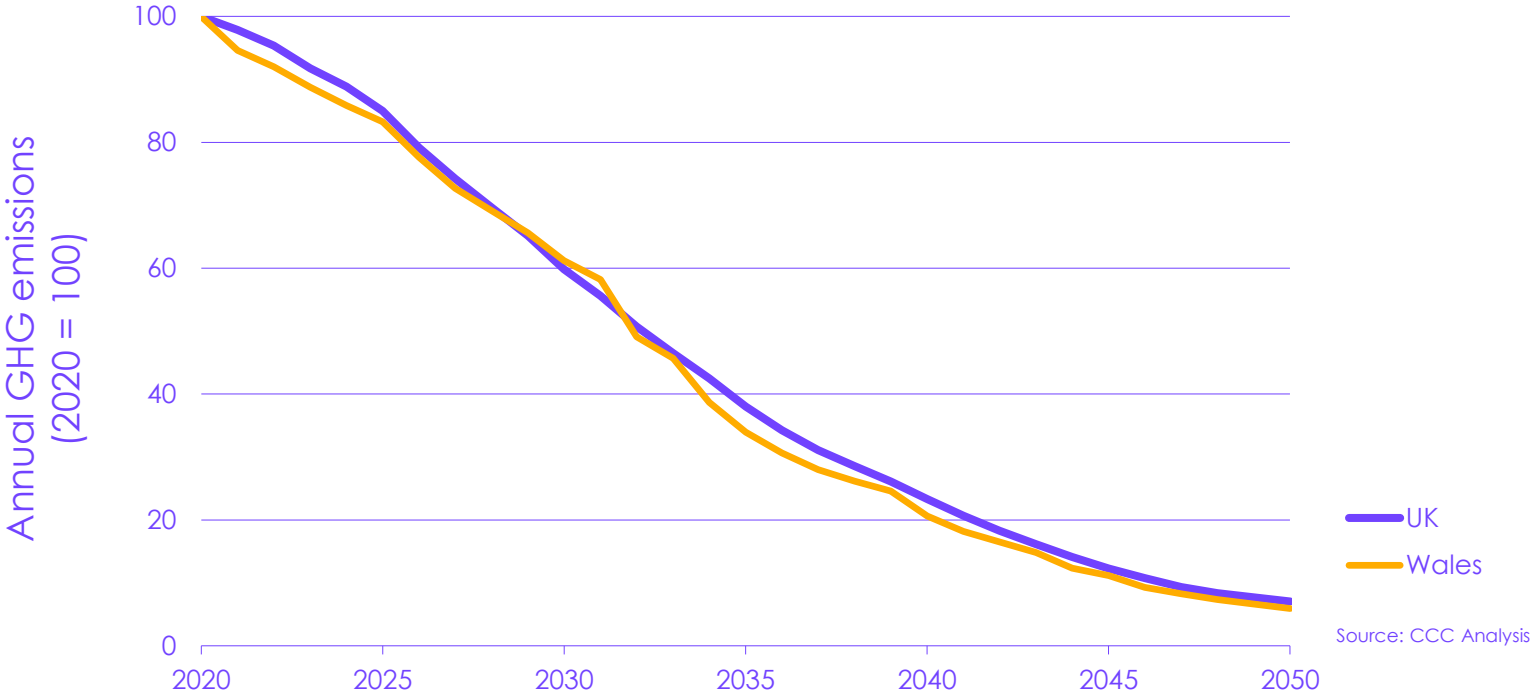


Notes:
Emissions shown including emissions from international aviation and shipping (IAS) and on an AR5 basis, including peatlands. Adjustments for IAS emissions to carbon budgets 1-3 based on historical IAS emissions data; adjustments to carbon budgets 4 and 5 based on IAS emissions under the Balanced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

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

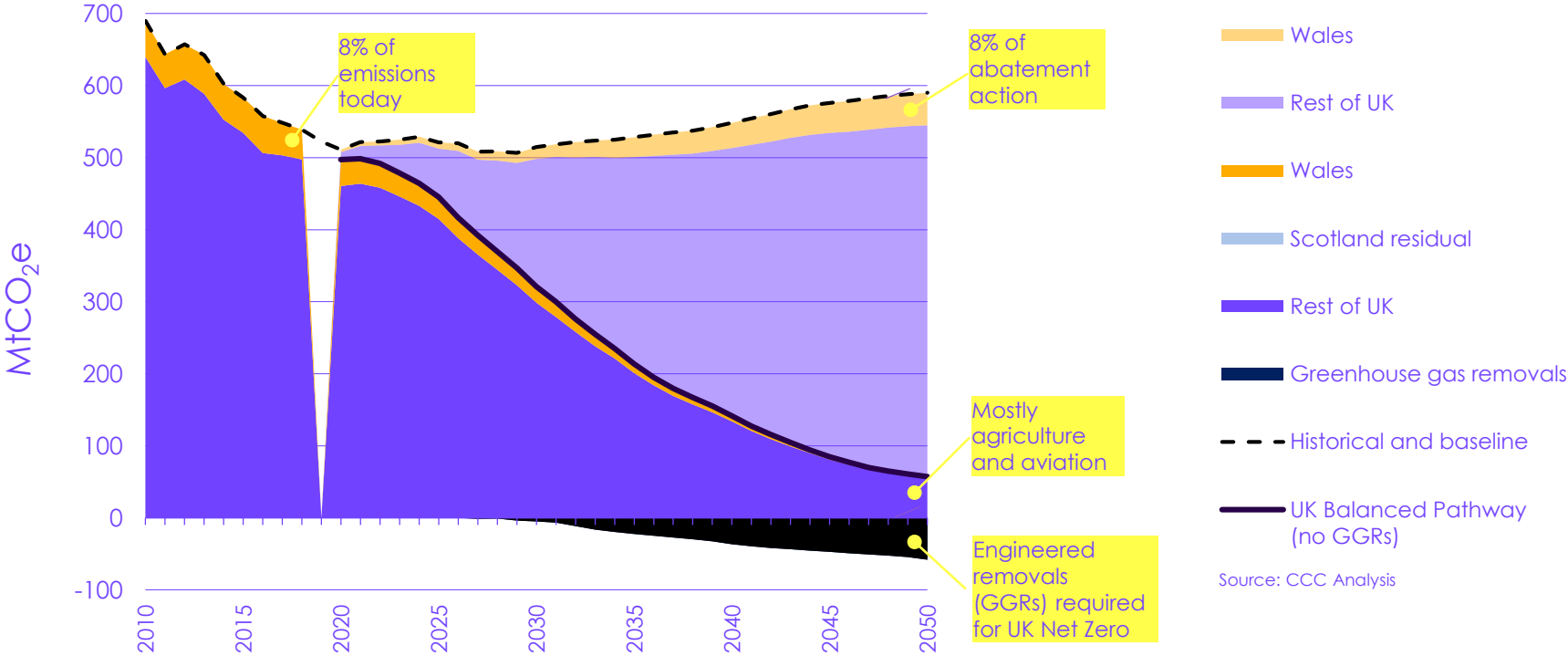
Wales supporting the UK's Sixth Carbon Budget

Like-for-like comparison of emissions pathways, excluding aviation and greenhouse gas removals



Wales supporting the UK's Sixth Carbon Budget

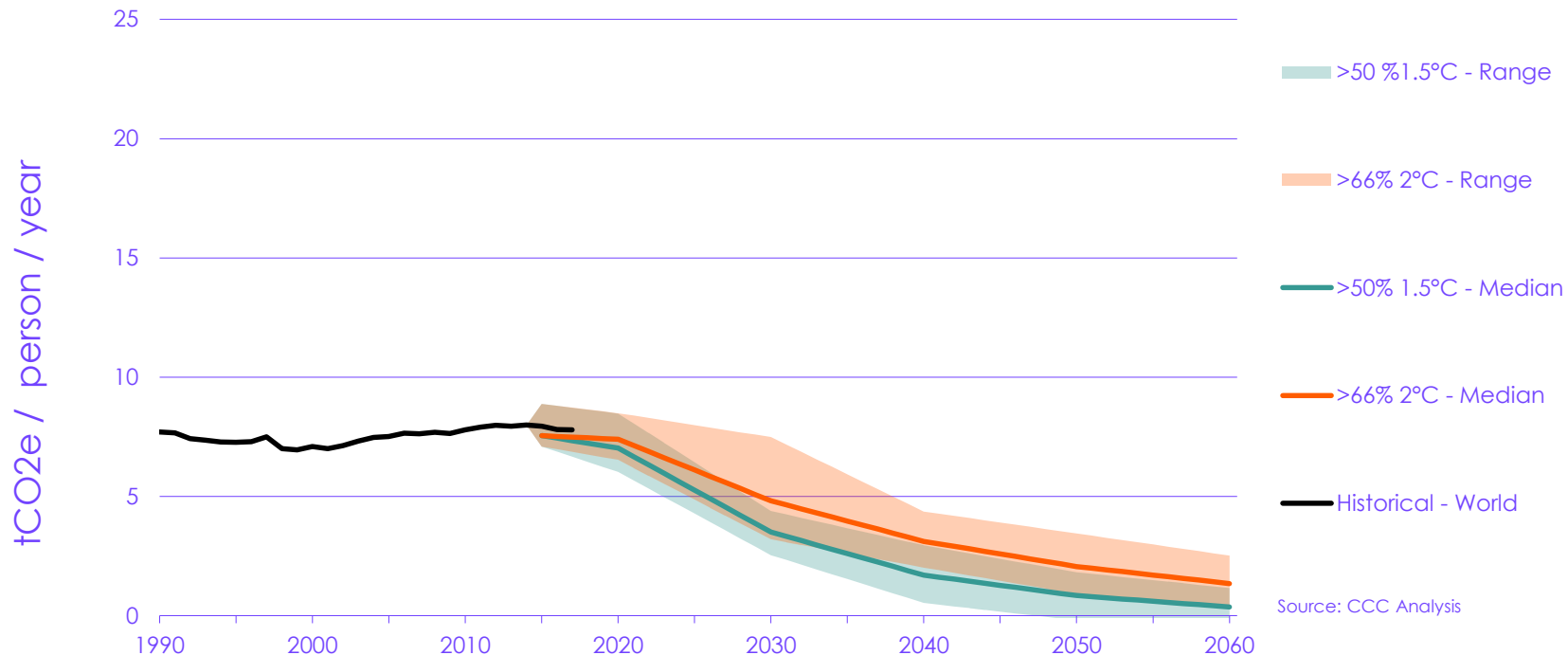
Contributing to UK targets



Source: CCC Analysis

Wales supporting the UK at COP26

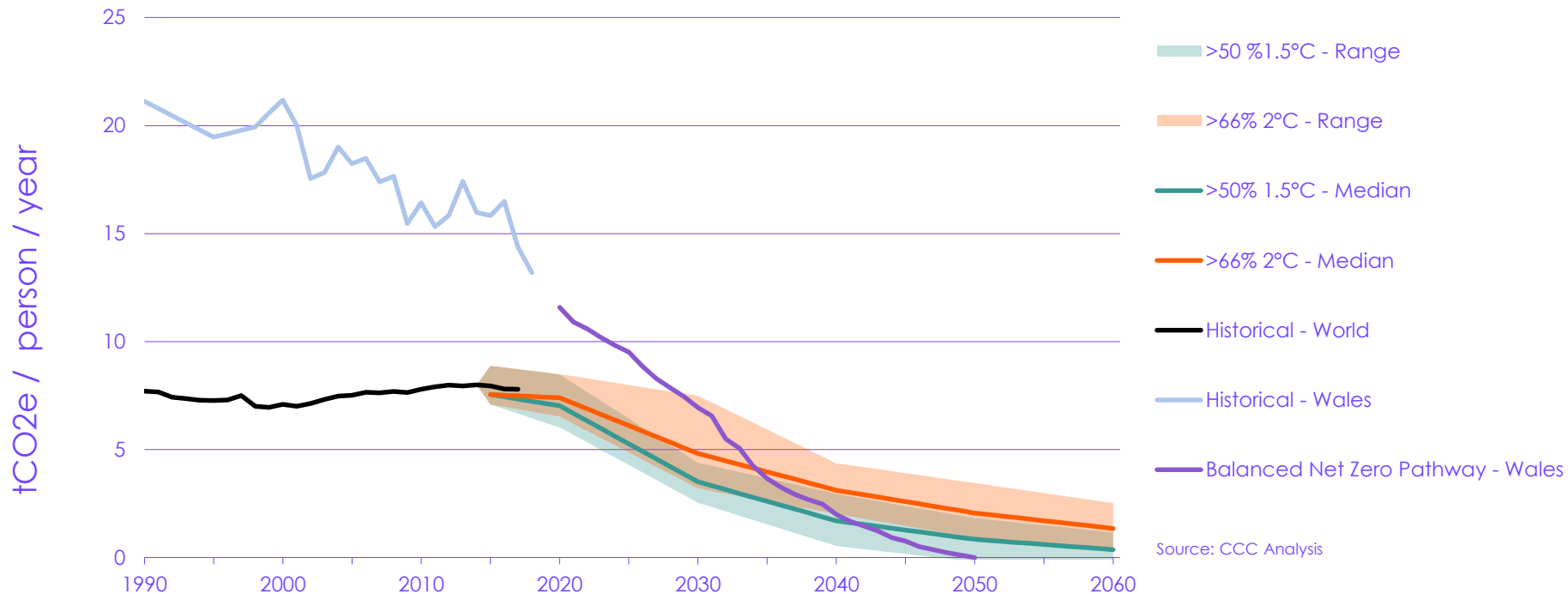
Per person emissions in Wales vs global requirements of Paris



Source: CCC Analysis

Wales supporting the UK at COP26

Per person emissions in Wales vs global requirements of Paris

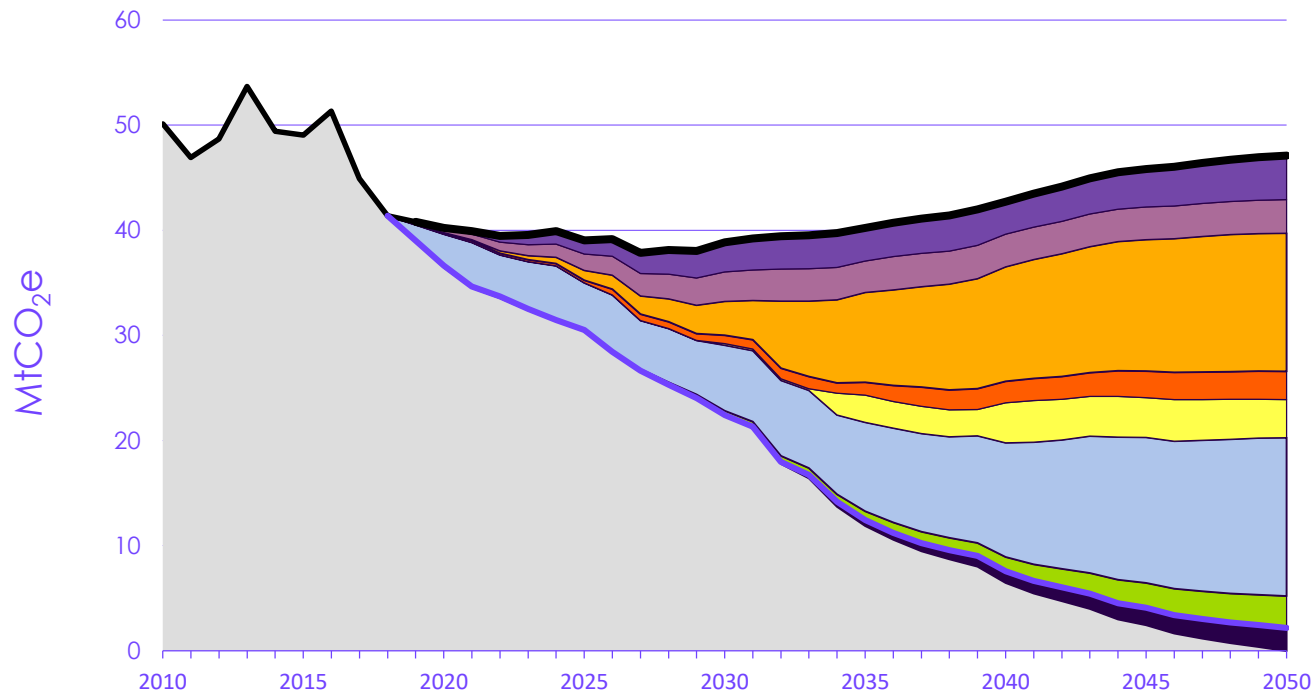


Source: CCC Analysis

Delivering Net Zero in Wales

Emissions abatement

Meeting the Net Zero requires actions across four key areas – with some additional flexibility required to meet the Net Zero



1. Demand reduction and efficiency

- Reduced demand for carbon-intensive activities
- Greater efficiency in use of energy and resources

2. Take-up of low-carbon solutions

- Electrification
- Hydrogen and other low-carbon technologies
- CO₂ capture from fossil-fuels and industry

3. Expansion of low-carbon energy

- Low-carbon hydrogen and electricity production

4. Offsetting emissions

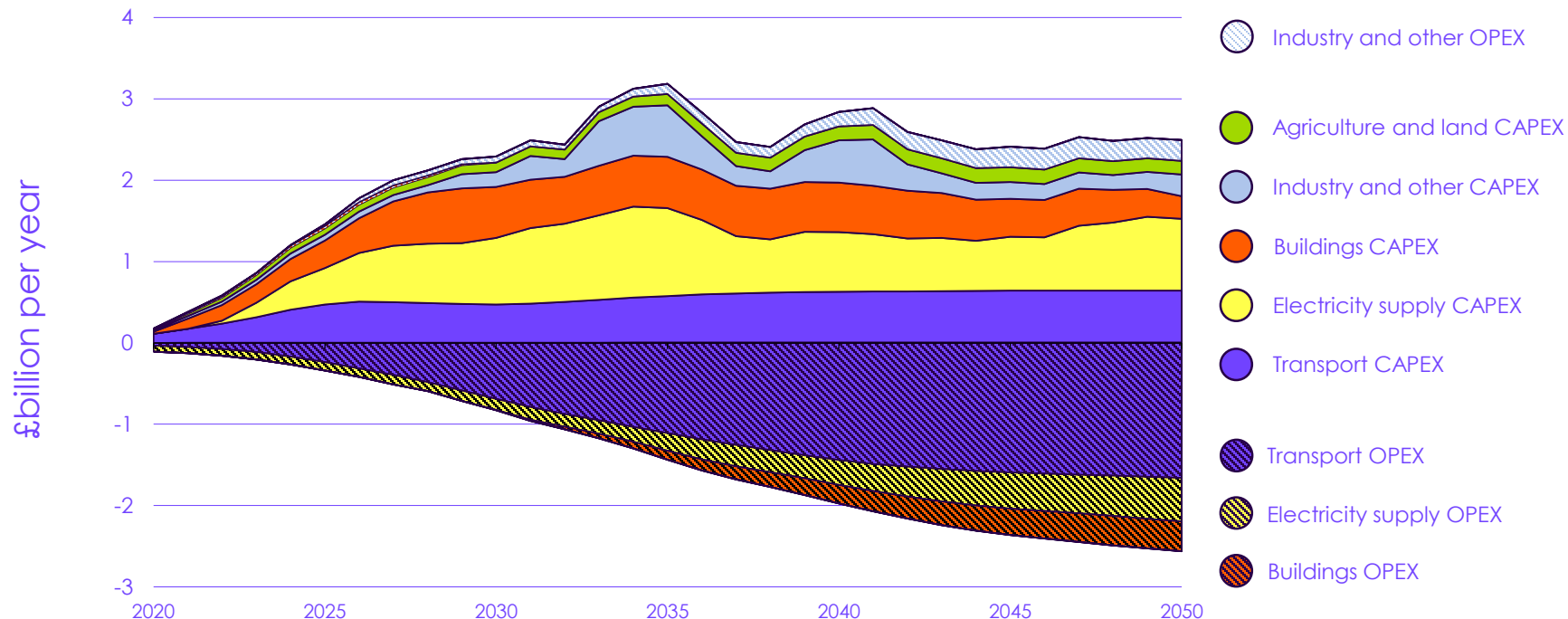
- Natural carbon storage and greenhouse gas removals

5. Flexibility to meet Net Zero

- Through greenhouse gas removals or further action

Investing for Net Zero

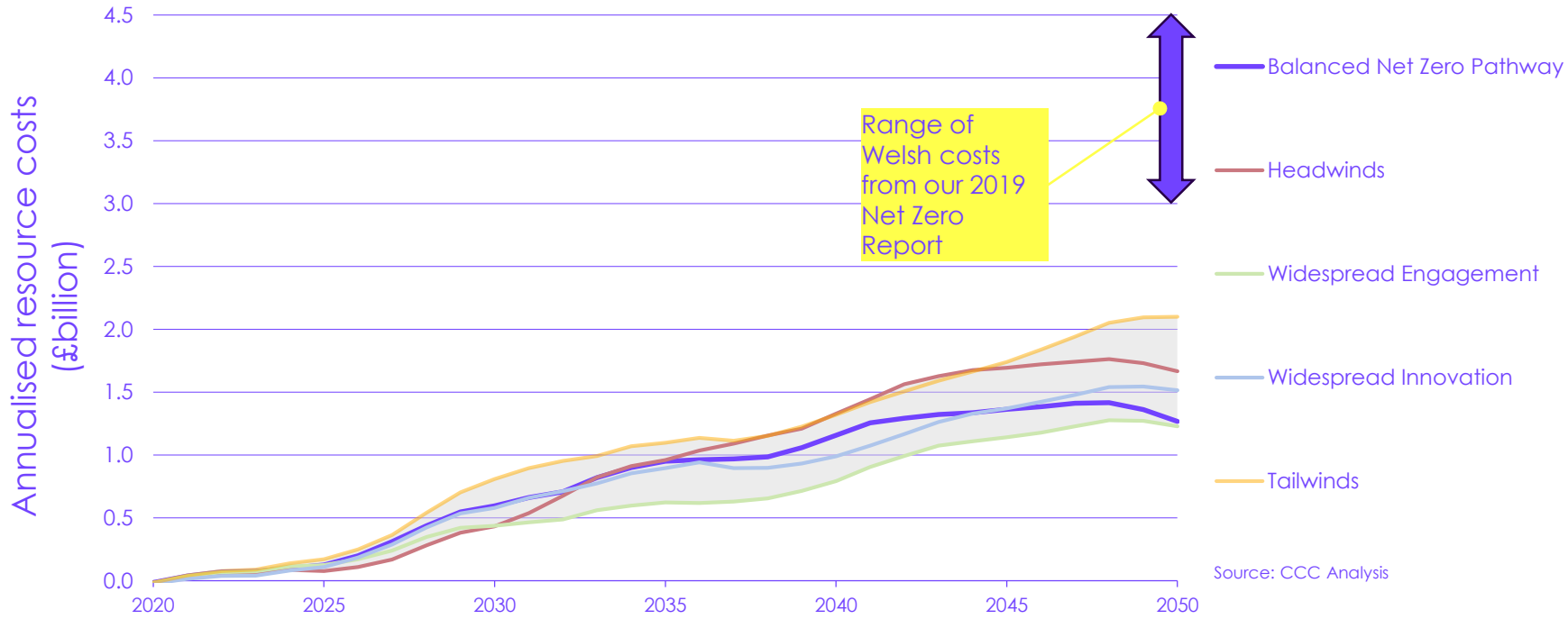
Major investment programme in Wales, delivering offsetting operating cost savings



Source: CCC analysis.

Resource costs

Change in resource costs over time in Wales



Source: CCC Analysis

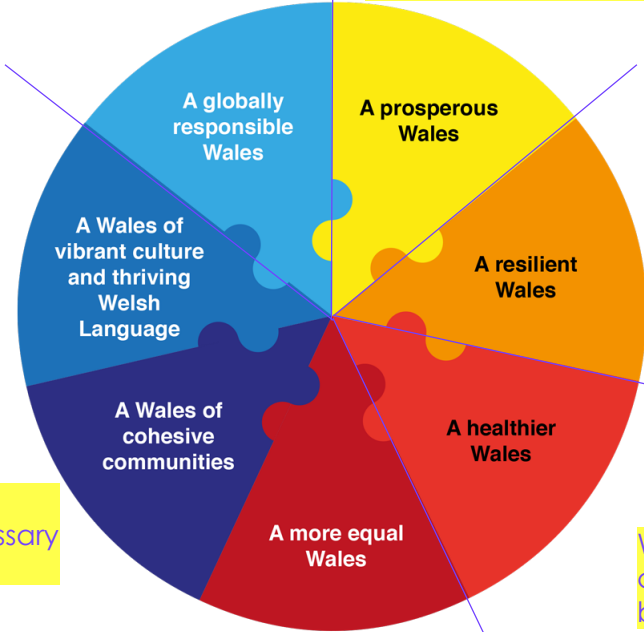
Source: CCC analysis.

Well-being of Future Generations

Net Zero is consistent with Wales' Well-being Goals

Consistent with Paris Agreement and Wales' SDGs

Investment programme will boost economic recovery and create new jobs



Increased domestic energy security

Recommendations can support preparations for a changing climate

A Just Transition for all people in Wales is necessary to support these goals

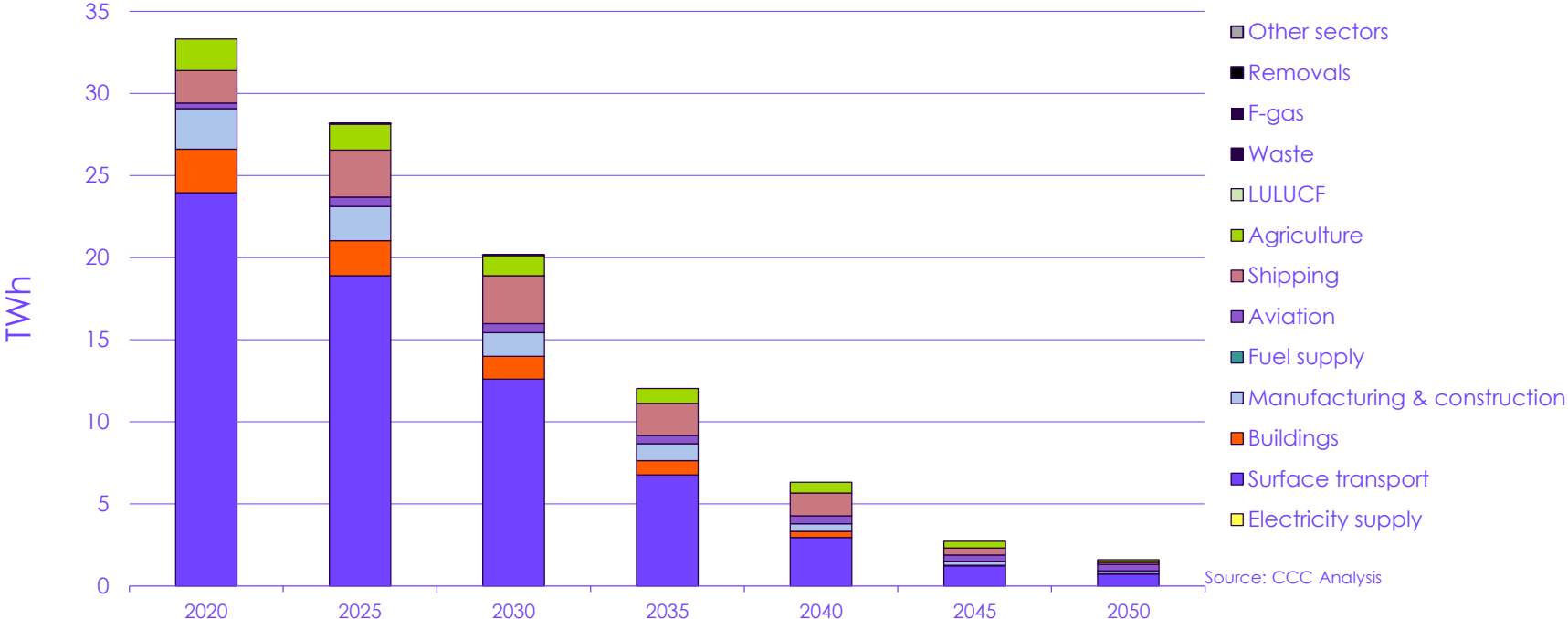
Warmer homes, healthier travel, cleaner air, new ways of working, better quality diets

Source: CCC Analysis

What does Net Zero look like?

Changes in energy demand

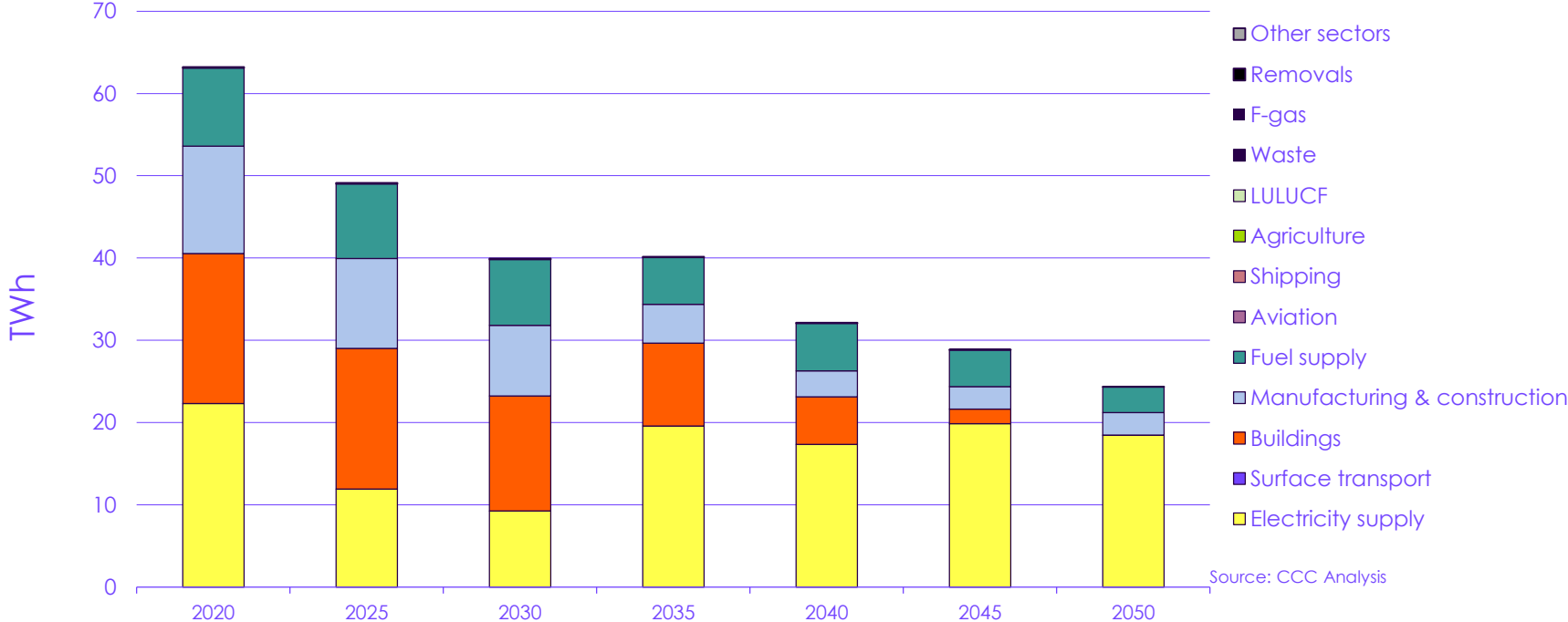
Oil (TWh)



Source: CCC Analysis

Changes in energy demand

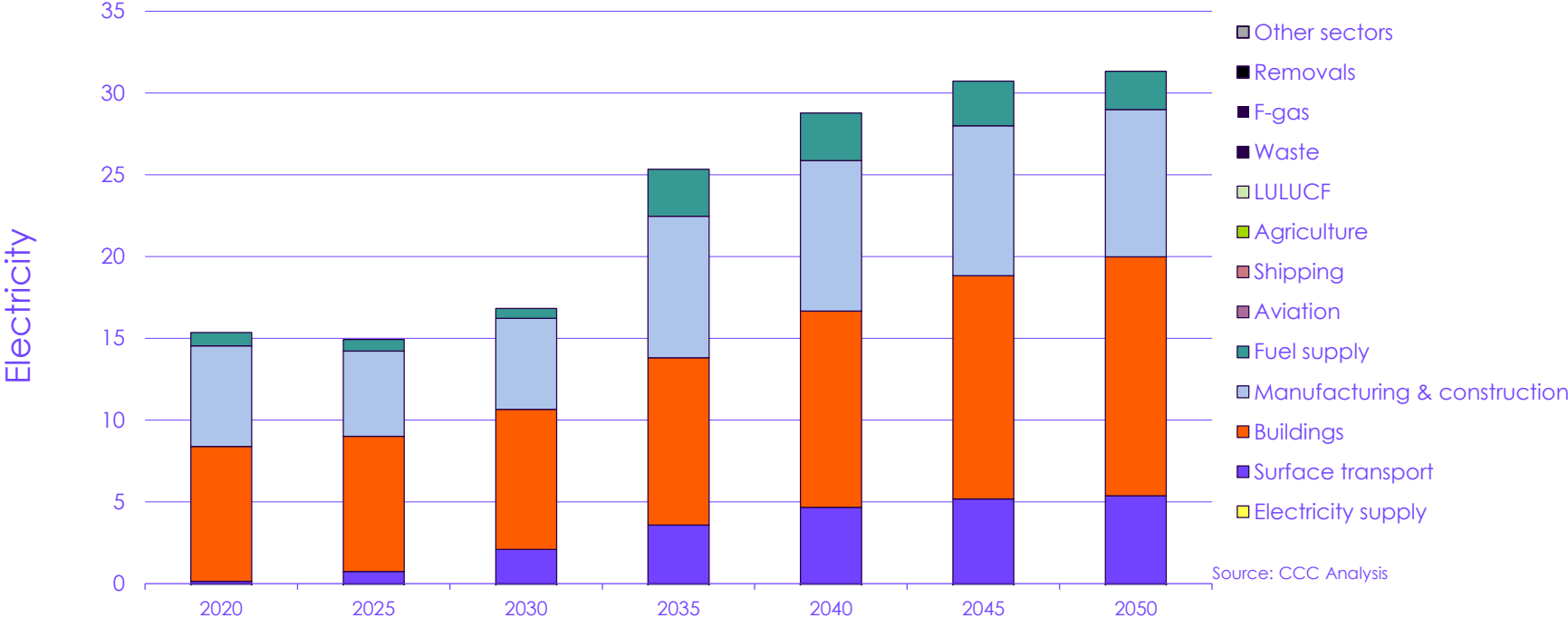
Natural gas (TWh)



Source: CCC Analysis

Changes in energy demand

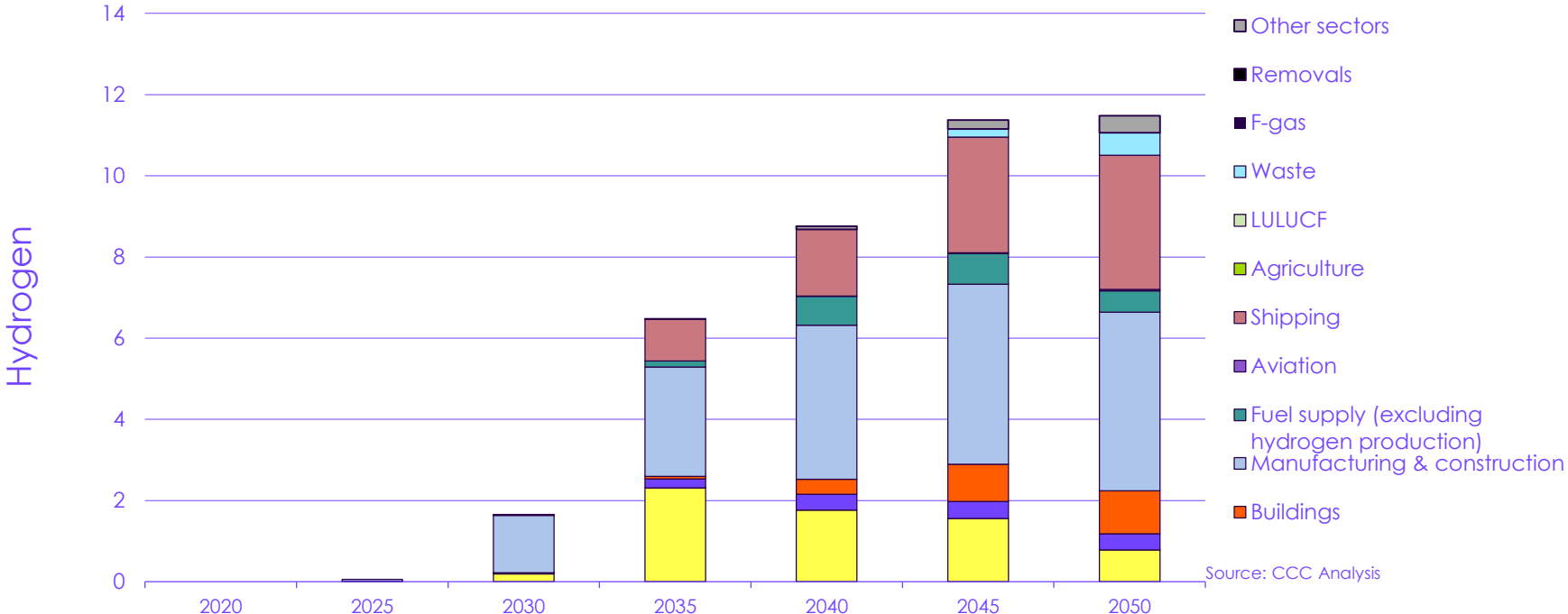
Electricity (TWh)



Source: CCC Analysis

Changes in energy demand

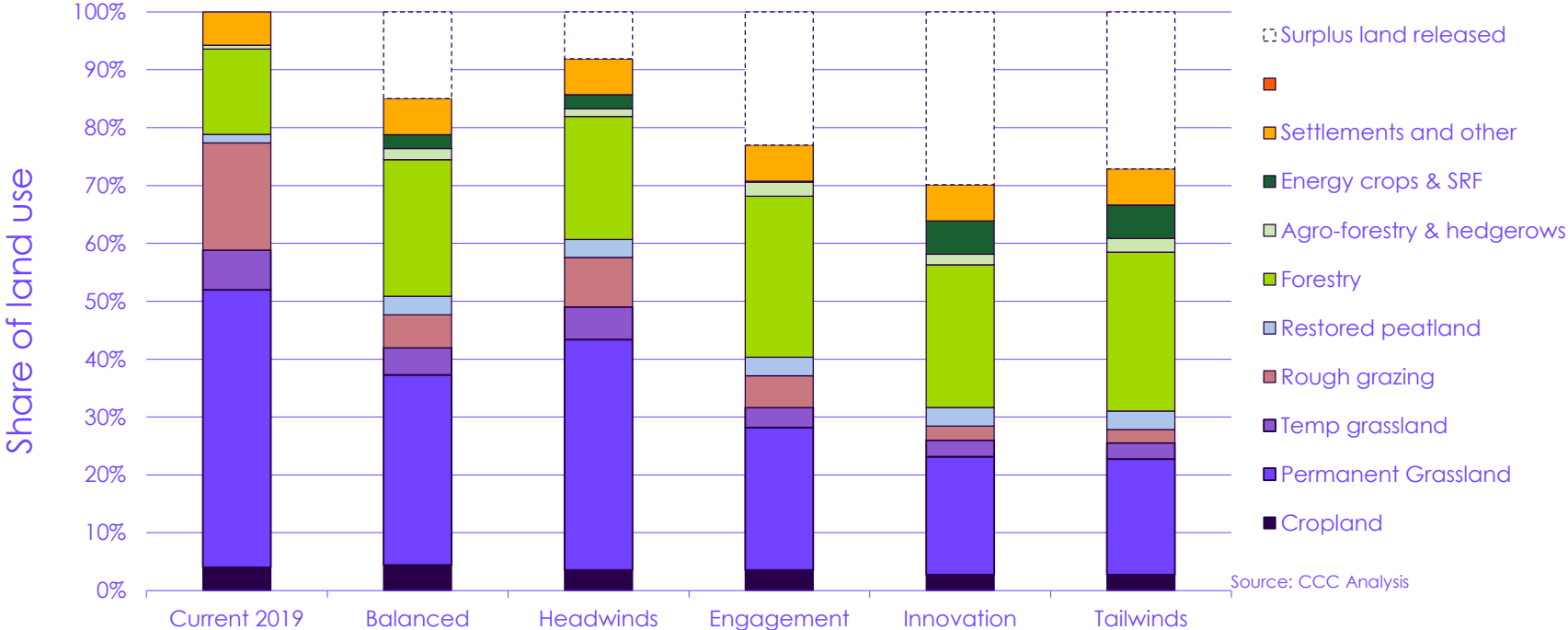
Hydrogen (TWh)



Source: CCC Analysis

Changes in land use

Land area in 2050 (%)



Policy timeline

2021 will be busy

Date	Outcomes and Milestones
Before COP 26 (November 2021)	<ul style="list-style-type: none">• Wales to legislate Net Zero and interim targets• 2021 Senedd election• Wales' next Low Carbon Delivery Plan• UK to legislate the Sixth Carbon Budget at 965 MtCO₂e, including emissions from International Aviation and Shipping (IAS)• Net Zero strategy• Energy White Paper• Heat and Buildings Strategy• New carbon pricing regime following EU ETS• Transport decarbonisation plan• Final HMT Net Zero review• Hydrogen strategy, and consultation on hydrogen business models• Rail decarbonisation strategy• Industrial decarbonisation strategy• Net Zero carbon hospital standard, and further commitments towards delivering a Net Zero NHS• Publication of Greening Government Commitments• Ofgem's final business model approvals for the RII0-ED2 period should accommodate network upgrades for EVs and heat pumps• Aviation decarbonisation strategy• Next Contract-for-Difference allocation round, targeting large volumes of renewables, towards 40 GW offshore wind by 2030• Build on the UK's NDC to increase global climate ambition in the run up to COP26• Strengthened UK Adaptation Plans• Updated Green Book guidance on climate change• Decision on funding model for CCS infrastructure• MOD review of climate change and defence• Call for evidence on policy for GHG Removals (GGRs)• Consultation on mandatory food waste reporting• Consultation on including maritime in Road Transport Fuel Obligation (RTFO)• Conclusion of Green Jobs Taskforce• Environmental Land Management pilots• Implementation of minimum device standards for EV chargers

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