Committee on Climate Change

UK climate action and the fifth carbon budget

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Where we are heading and the role of the fifth carbon budget.

- History – where have we come from?
- Future – where are we heading?
- Fifth carbon budget

Where we come from: The Climate Change Act and now the Paris Agreement provide important context for UK decisions.

	Climate Change Act	Paris Agreement
Objective	Reduce GHG emissions by at least 80% by 2050	Limit warming to between 1.5C and much less than 2C; and balance sources and sinks of emissions before 2100
Mechanism	5 yearly carbon budgets with annual review	National commitments aimed at 2030 target with updates to commitments every 5 years
Implication	Not in business of forecasting the future but of creating the future, using most cost-effective tools available.	

Where are we heading: a risky transition to a carbon neutral world

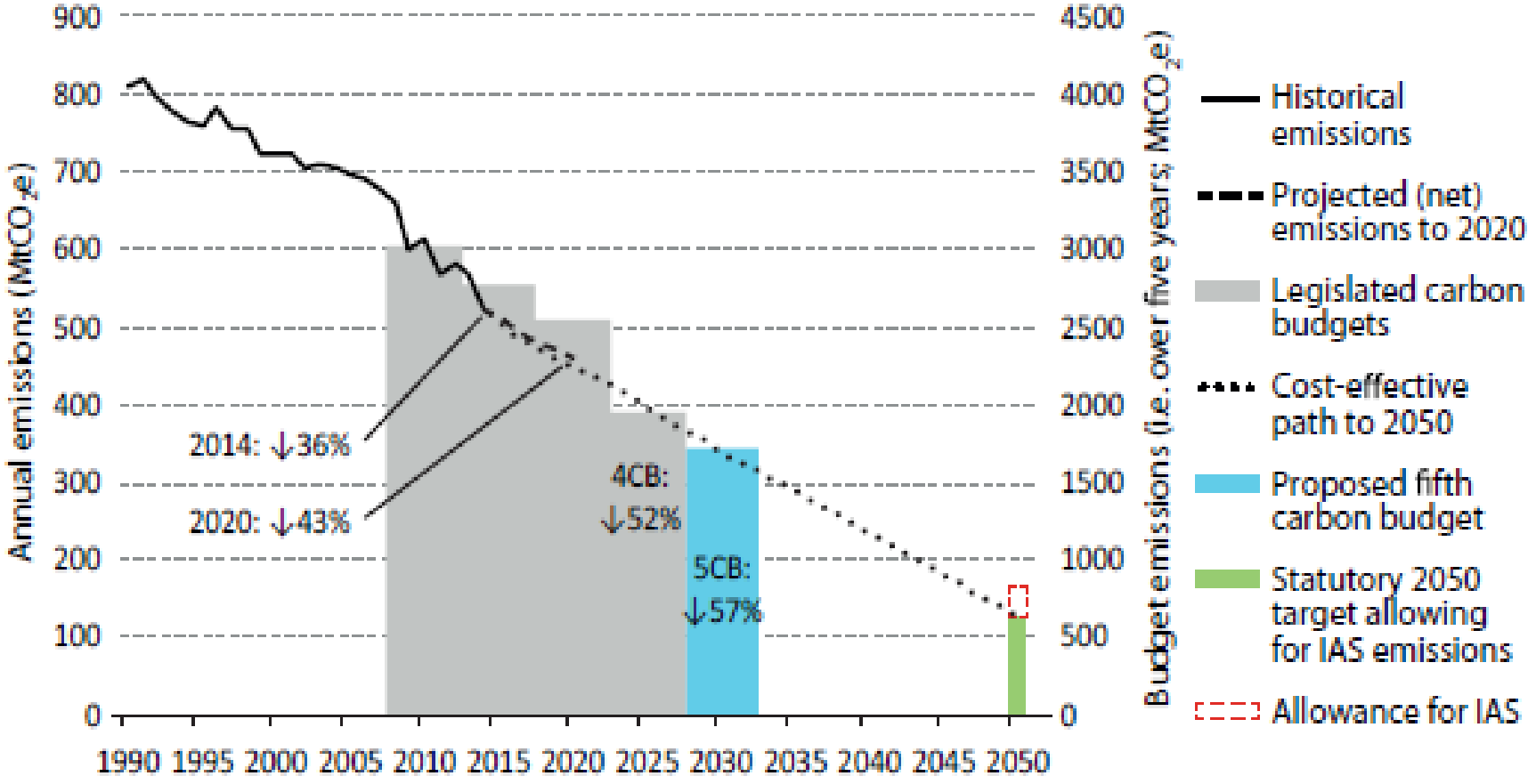
- Risks:
  - Uncertainty of impacts: of action and of no action
  - Winners and losers: of action and of no action
  - Cost-effectiveness of different actions: "deployment", "R&D", "innovation" spurred by "markets", "regulation", "taxation"

- Most likely outcome:

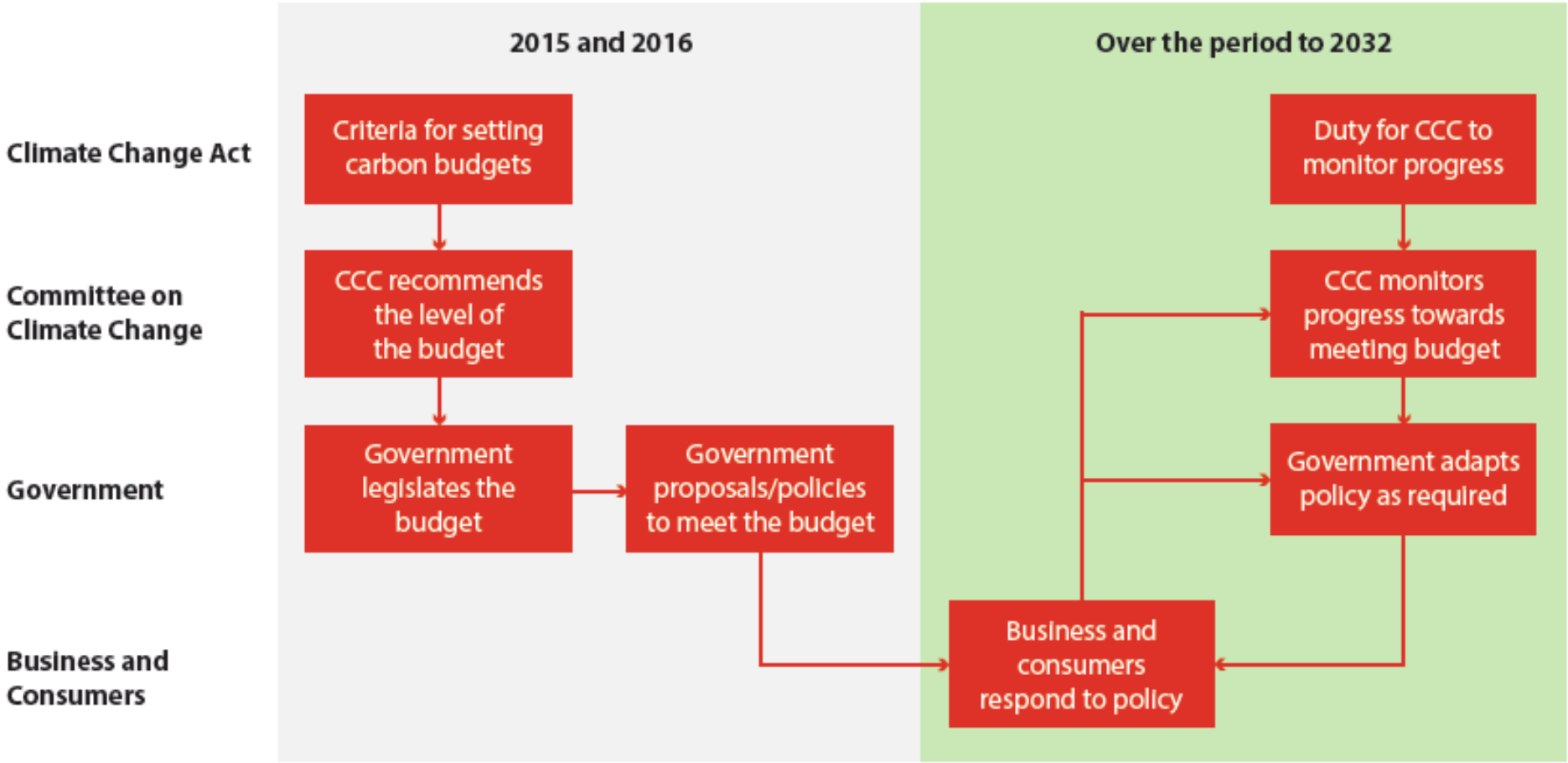
  Very significant de-coupling of global growth and greenhouse gas emissions leading to carbon neutral world…

  …either relatively cost-effectively (through consistent, timely action) or very expensively (through inconsistent, late action)

Fifth carbon budget: advice intended to continue on path of timely UK action.

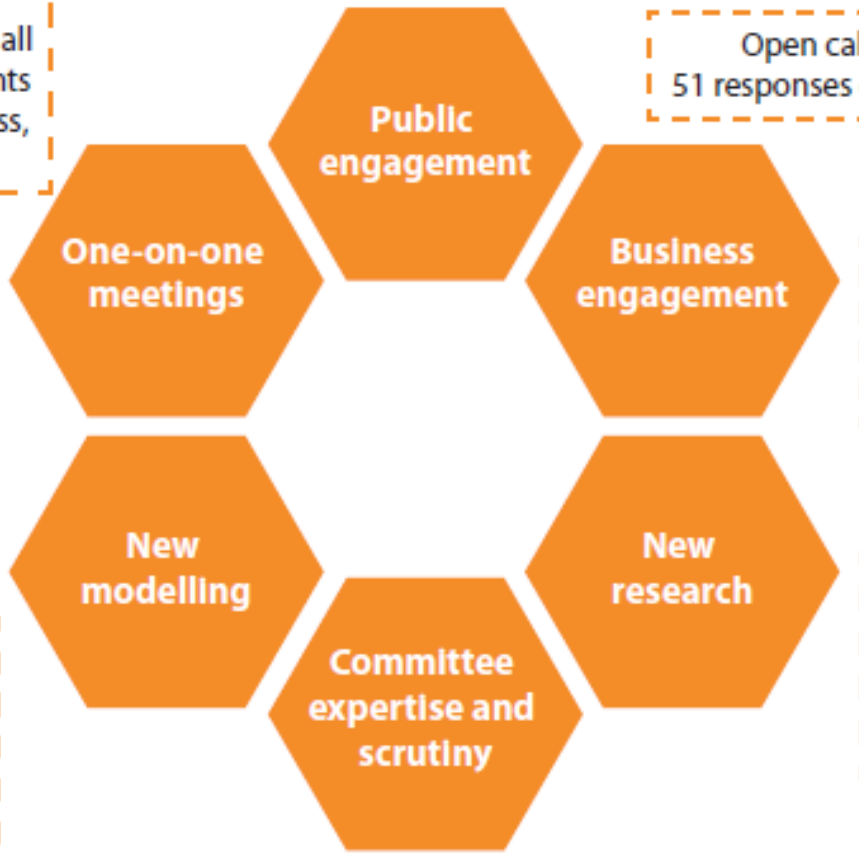


The advice stems from the legal framework …



…and a very wide range of evidence.

Over 200 meetings with individual stakeholders covering all sectors and statutory requirements (e.g. fuel poverty, competitiveness, technological progress)



Open call for Evidence, 51 responses covering all sectors

Over 10 roundtables and workshops, e.g. CBI, EEF, Energy UK, financing institutions and 3 wider business discussions

5 independent research projects covering cost-effective approaches in power, heat, hydrogen and agriculture; and overall analysis of uncertainty

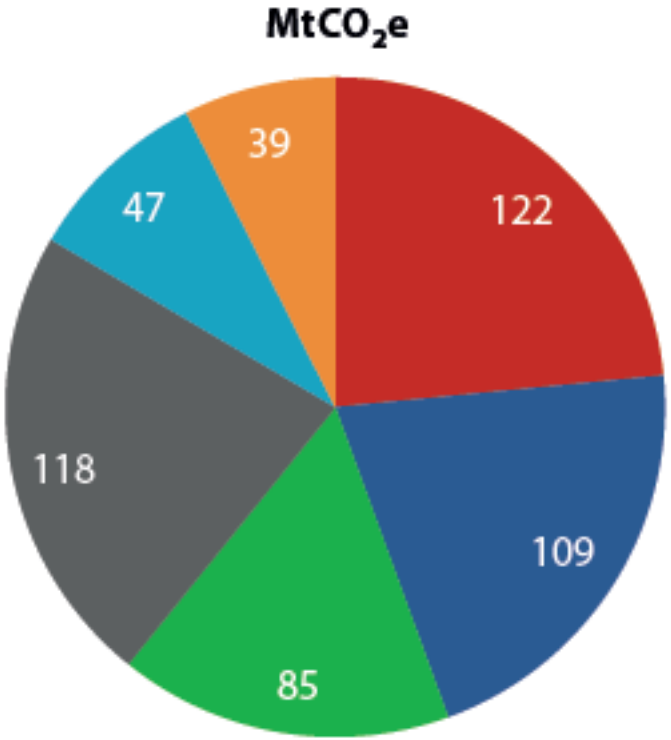
Bespoke model runs of key government models: National Transport Model, National Household Model, Emission Projections Model, UK TIMES

Monthly Committee meetings to scrutinise analysis

It reflects the balanced nature of UK emissions…

Emissions in 2014

Total:
520 $MtCO_2e$
*Excl. IAS (see *)*



* Emissions from **international aviation and shipping** are not available for 2014 but in 2013 they were 41 $MtCO_2e$

Note: on temperature adjusted basis buildings would be 94$MtCO_2e$.

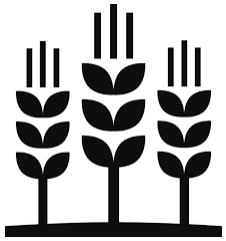
…with the corresponding need for action across all sectors.

- Heat networks, heat pumps, etc
- Insulation, efficiency & behaviour change
- By 2030s: 1 in 7 homes, half of public and commercial use, low-carbon heat

- Further conventional fuel efficiency improvement
- By 2030 around 60% new cars & vans electric (hybrid or full)
- Travel behaviour change: mobility choices, driving styles

- Options: wind, nuclear, CCS, interconnection, gas, storage
- Demand-side behaviour
- By 2030s: <100 g/kWh, smart demand

- Adjusting industrial processes, energy efficiency, heat recovery
- Development of CCS
- Through 2020s: apprx. 1%/yr fall emissions from measures



- efficient fertiliser use, animal diets, breeding, fuel efficiency
- Through 2020s: apprx. 1%/yr decrease emissions

- All main biodegradable waste diverted from landfill, alternatives to F-gases
- By 2030s: apprx. 50% decrease emissions from today

The advice contains 5 specific recommendations.

Five specific recommendations that follow from the requirements under the Act:

1.Budget: Fifth carbon budget to be set at 1,765 MtCO2e including emissions from international shipping (57% reduction) ; or 1,725 MtCO2e on current basis

2.Aviation: emissions from aviation continue to be allowed for in budgets by setting them consistent with their inclusion in the 2050 target.

3.Credits: budget to be met without the use of international credits (beyond the EU ETS); credits could be used to go beyond the budget to support stronger international action.

4.Low carbon power: develop policies consistent with reducing power sector to below 100 g/kWh (compared to 450 g/kWh now and 200 to 250 g/kWh expected around 2020)

5.Other sectors: policies that result in average annual rate of emission reduction of 2% per year from now until 2030, to achieve emissions of 1,175 MtCOe (within the overall budget) from non-ETS sectors by the fifth carbon budget period. Carbon Accounting Regulations should be set to ensure the level of emissions from these sectors.