

Welsh emissions targets

Summary of responses to Call for Evidence



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1. Background to the Welsh Third Carbon budget and interim targets

Under the Environment (Wales) Act 2016, there is a duty on Welsh Ministers to set a maximum total amount for net Welsh greenhouse gas emissions (Welsh carbon budgets). The first budgetary period is 2016-20, and the remaining budgetary periods are each succeeding period of five years, ending with 2046-50.

The Committee is due to provide advice to the Welsh Government on the level of the third Welsh carbon budget (covering 2026-30) in 2020, and to provide updated advice on the levels of the second carbon budget (2021-25) and the interim targets for 2030 and 2040.

The Committee launched a [Call for Evidence](#) to inform its advice on the Sixth Carbon Budget and Welsh interim targets which ran between 5 December 2019 and 5 February 2020. The Call for Evidence included 37 questions on five topics:

- A. Climate science and international circumstances
- B. The path to the 2050 target
- C. Delivering carbon budgets
- D. Wales, Scotland and Northern Ireland
- E. Sector-specific questions

The Call for Evidence was an important part of the Committee's ongoing engagement programme for the Sixth Carbon Budget, but not the only one. We also held a large number of roundtable and bilateral meetings, including with relevant groups that did not respond to the Call for Evidence.

This report contains a high-level summary of the responses to the Call for Evidence received by the Committee that are relevant to the Welsh Third Carbon Budget and interim targets, and a list of respondents. Responses can be found in full on the [Committee's website](#).

2. The response to the Call for Evidence

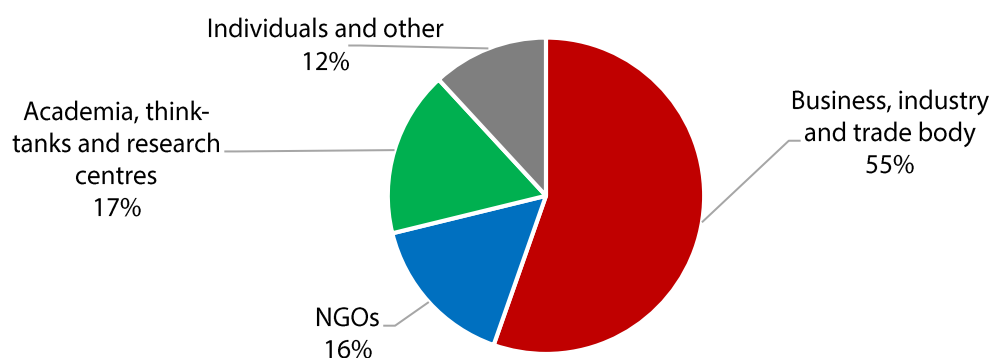
The Call for Evidence received **177 responses** from across business and industry, NGOs, academia and from individuals (Figure 1). Of the 177 responses, 59 respondents provided evidence in response to questions on the Devolved Administrations. Within this respondents provided evidence in response to Welsh specific questions, with 19 responses to question 14, and 11 to question 15. A full list of respondents to the questions on Wales is available in the Annex at the end of this report.

This Call for Evidence included for the first time a large number of sector-specific questions (20 in total).

We urged respondents only to submit responses to questions in their particular areas of interest or expertise. As a result, no respondent submitted a response to every question, with some sections receiving more responses than others (Figure 2):

- 18% of respondents answered at least one question in all five sections.
- The vast majority of respondents (nearly 80%) answered at least one sector-specific question.
- One third of respondents answered questions relating to Wales, Scotland and Northern Ireland (section D).

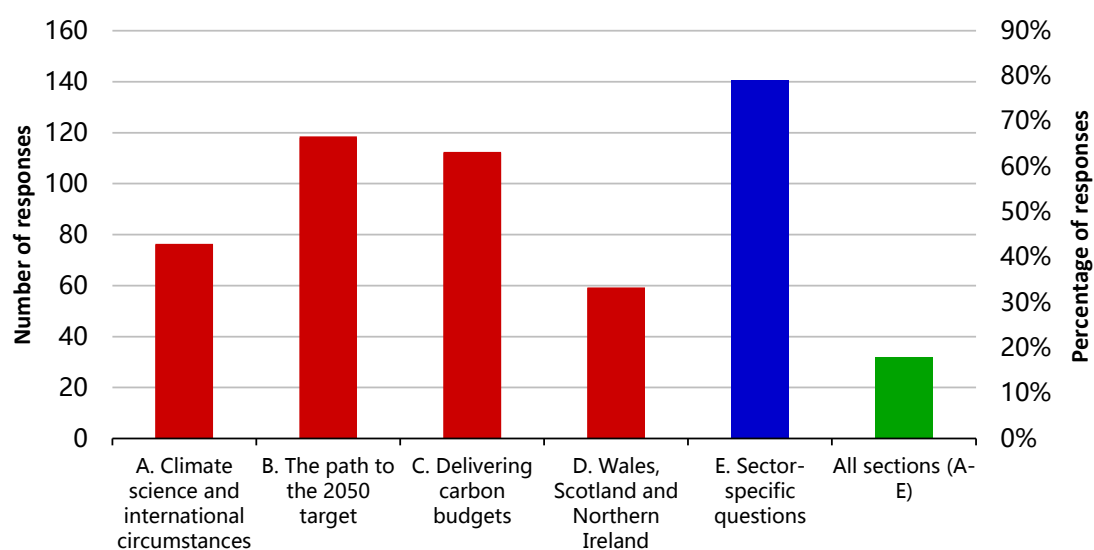
Figure 1. Responses to the Call for Evidence by type of respondent



Source: CCC analysis.

Notes: 'Business, industry and trade body' includes consultancies; 'Individuals and other' includes public bodies.

Figure 2. Number of responses by section



Source: CCC analysis.

Notes: Number of responses by section correspond to a response to at least one question in a given section; percentage of responses corresponds to responses by section proportionate to total responses received.

3. Overview of responses

This section provides a summary of evidence related to Wales, which includes responses to questions 13, 14, 15 and 17 within section D and a summary of respondents providing answers to questions in section E. The evidence submitted in response to questions in section E was considered by the CCC's sector teams and reflected in our Sixth Carbon Budget scenarios, where relevant, but is not summarised here.

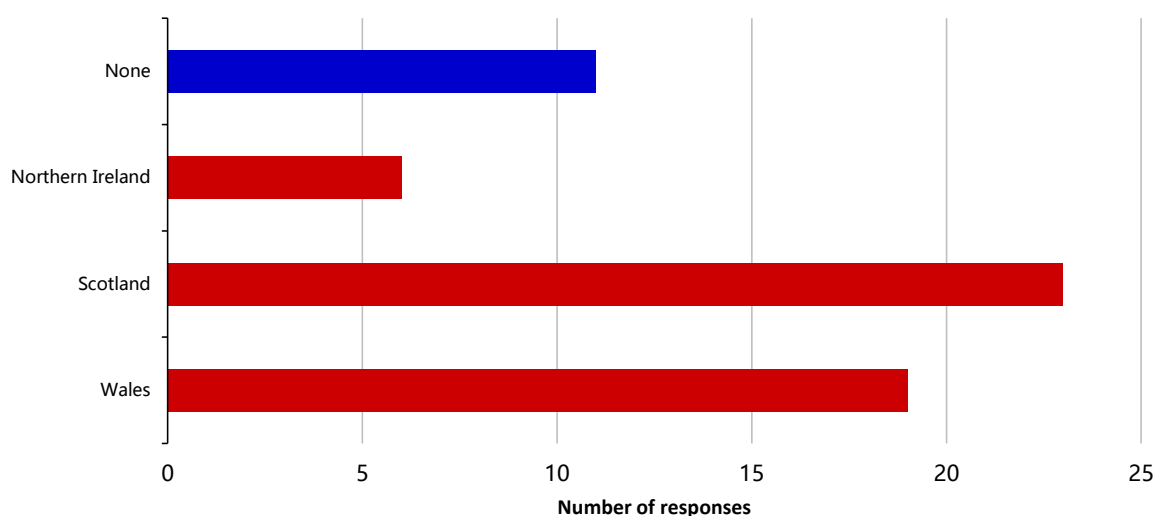
This report does not reflect every response submitted, but is rather an attempt to provide an unbiased summary of the evidence and views received. These do not necessarily reflect the views of the Committee. Responses can be downloaded in full on the [Committee's website](#).

D. Wales, Scotland and Northern Ireland

Question 13: What specific circumstances need to be considered when recommending an emissions pathway or emissions reduction targets for Scotland, Wales and/or Northern Ireland, and how could these be reflected in our advice on the UK-wide Sixth Carbon Budget?

Forty-four responses to this question were submitted. Most respondents provided answers which mentioned one or more of the devolved administrations (DAs), with 23 responses referencing Scotland, 19 referencing Wales and 6 referencing Northern Ireland (Figure 6).

Figure 6. Responses mentioning each of the devolved administrations



Source: CCC analysis.

Notes: 'None' refers to responses which mention issues to be taken into account across all of the devolved administrations without mentioning a particular one.

A quarter of responses (11) did not reference any of the DAs in particular, but rather mentioned circumstances that should be taken into account in all of them:

- **Coordination and consistency:**
 - Ensure UK legislative/regulatory frameworks in areas the DAs are reliant on do not present a barrier in pursuing greater climate ambitions, by providing additional flexibility and support.
 - Encourage similar targets across the UK, where possible, as different rules and obligations increase costs and administrative burdens for businesses operating throughout the UK and could lead to competitive distortions between the DAs.
- **Land use and geographical characteristics.** Including subsurface geology, access to feedstocks for anaerobic digestion, access to the grid (e.g. harder for rural areas), land use characteristics, proximity to industry/potential CCS clusters.
- **Socio-economic characteristics.** Including fuel poverty, availability of skills and supply chains, and housing market conditions.
- **Industrial composition:**
 - Varying contribution of industry to national emissions between the DAs set against the need to coordinate elements of industrial policy at UK level (e.g. replacement to the EU ETS after Brexit).
 - Emissions from offshore oil and gas production count against the UK-wide targets but DAs will be affected differently by policies which affect the sector.

The specific circumstances mentioned by respondents, for Wales, were:

- **Institutions and current ambition.** Many responses pointed to Wales' ability to increase its ambition in light of several factors, such as:
 - The Wellbeing of Future Generations Act suggests political appetite for strong action and long-term, sustainable thinking across public bodies in Wales. It can also help to work against siloed decision-making that occurs elsewhere in Government.
 - Strong communities and networks in Wales can facilitate behaviour change; expertise such as at CAST, based at Cardiff University, can be easier to deploy in a smaller country with close connections across civil society.
 - Wales has committed to end fossil fuel extraction and the last remaining coal-fired power station (Wales' largest single emitter) is about to close.
 - The Welsh Government has declared an ambition to achieving Net Zero by 2050, which goes further than the CCC's recommendation for Wales. The CCC should provide pathways in the Sixth Carbon Budget to achieve this ambition (as well as to achieve the CCC's recommended target).
- **Surface transport:**
 - Rural transport issues and lack of public fuelling infrastructure for hydrogen and electric vehicles means significant investment is needed to enable operators to transition to alternative fuels and power.

- Some respondents also mentioned the lack of compressed natural gas (CNG) refuelling infrastructure, but we note that CNG does not feature in CCC scenarios as it still involves significant CO₂ emissions.
- **Industry.** The industrial makeup of Wales, which is more dominated by hard-to-abate industrial sectors than England and Scotland, will heavily impact on the ability to decarbonise.
- **Power:**
 - Significant onshore wind potential.
 - Need to consider planning and grid adequacy to support onshore wind potential (particularly pertinent in mid-Wales which is not well served by the high voltage national electricity transmission network) – i.e. by ensuring access to proximate and robust transmission and distribution grid infrastructure.
 - Onshore wind in Wales is more expensive than e.g. offshore wind in Scotland. It is suggested that Wales is penalised by being the location that balances the intermittency of renewable supply with flexible generation for Scotland and England. Wales' targets should reflect interconnection with England – regionalising carbon emissions is not appropriate and drives expensive local policy and decisions.
- **Agriculture and Land use:**
 - Wales has large areas of land which would be suitable for forestry and natural regeneration, which also offer scope for productive forests and woodlands and opportunities for use of wood in construction.
 - Wales has 30% of Britain's sheep population and the environment is increasingly over-burdened with methane, ammonia and other pollutants. Large reductions in stock numbers are required and through other use of the land would also allow rural areas to contribute to Net Zero with additional potential benefits (e.g. no dependency on bioenergy with CCS (BECCS); reducing food imports; carbon sequestration).

Questions on Welsh emissions targets

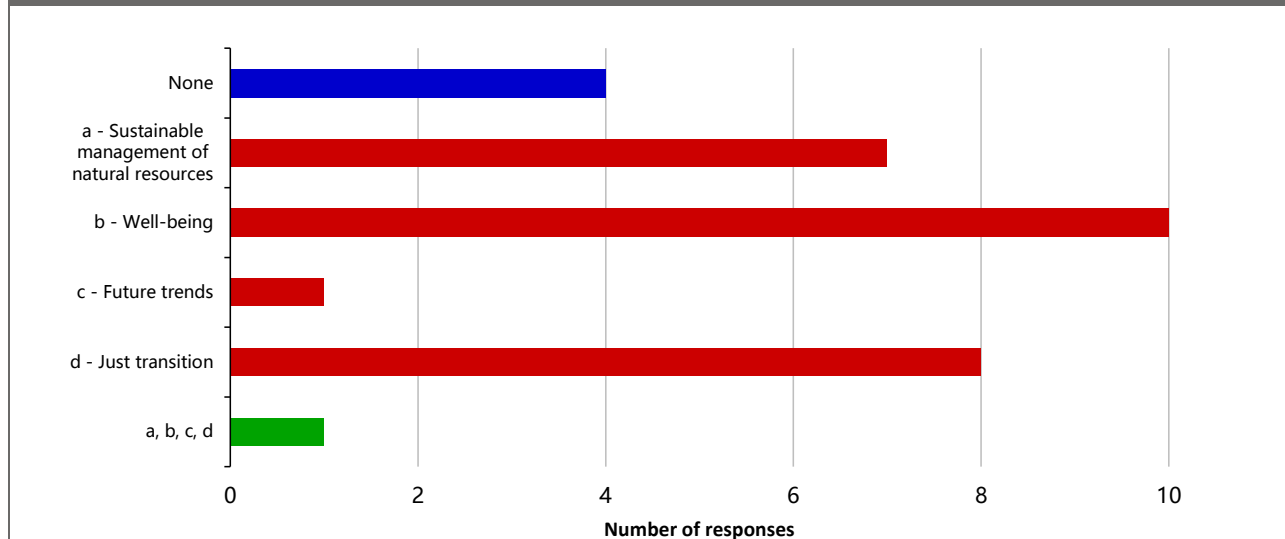
Question 14: The Environment (Wales) Act 2016 includes a requirement that its targets and carbon budgets are set with regard to:

- ***The most recent report under section 8 on the State of Natural Resources in relation to Wales;***
- ***The most recent Future Trends report under section 11 of the Well-Being of Future Generations (Wales) Act 2015;***
- ***The most recent report (if any) under section 23 of that Act (Future Generations report).***

Views were requested on each element of these requirements and about achievement of a just transition in Wales. Nineteen responses were submitted to this question. Proportionately more responses were received from NGOs (32%) and individuals (11%) than in the Call for Evidence as a whole. Most respondents (63%) did not cite particular pieces of evidence.

Section b) of the question (which relates to well-being) received the most responses. Only one respondent addressed all four parts of the question (Figure 7).

Figure 7. Responses to each section of question 14



Source: CCC analysis.

Notes: 'None' refers to general responses which do not address any section of the question in particular.

a) What evidence should the Committee draw on in assessing impacts on sustainable management of natural resources, as assessed in the state of natural resources report?

Responses to this section ranged from suggested areas of work the CCC should look into, stakeholders to reach out to, as well as pieces of evidence to consider:

- **Evidence** cited by respondents included Natural Resources Wales' State of Natural Resources Reports from 2016, 2019 and the Interim Report for 2020.
- **Stakeholders** that respondents suggested the CCC should reach out to included National Trust (who are large landowners in Wales and may have carried out/have plans to carry out climate impact assessments on their properties) and the NGO Wood Knowledge Wales (which has a work stream on biodiversity and submitted a response to this Call for Evidence).
- **Areas of work** to look into mentioned by respondents included:
 - Flood alleviation by catchment area and the impact of sea level rise on coastal communities.
 - Where Wales' natural resources (existing and potential, through nature restoration) can provide emission reduction and adaptation to make up Wales' contribution to the sixth carbon.
 - The possibility to promote silvopasture as a means of enhancing economic opportunities in Less Favoured Areas whilst delivering carbon sequestration and biodiversity gains.

b) What evidence do you have of the impact of acting on climate change on well-being? What are the opportunities to improve people's well-being, or potential risks, associated with activities to reduce emissions in Wales?

For this section, answers included suggested pieces of evidence as well as views on risks/opportunities for well-being from acting on climate change in Wales:

- **Evidence** cited by respondents included:
 - The Active Travel (Wales) Act 2013
 - Welsh Government (2019) The impact on health of the Welsh Government Warm Homes Schemes, <https://gov.wales/impact-health-welsh-government-warm-homes-schemes.html>
- Views on **opportunities** to improve people's well-being from emissions reducing activities in Wales included:
 - Providing people with stable employment (e.g. in green industries; through localised efforts to conserve/restore natural ecosystems) and generating local economic benefits.
 - Improving health (from e.g. better air quality, more access to green space, more tree cover on streets).
- Views on **risks** to well-being from emissions reducing activities included:
 - Afforestation and reduced ruminant production could impact the well-being of farmers and rural communities in Wales.
 - Risk of carbon leakage in industry (particularly due to the Welsh Government's approach to measuring carbon budgets on a net rather than gross basis).

c) What evidence regarding future trends as identified and analysed in the future trends report should the Committee draw on in assessing the impacts of the targets?

Only one response to this section was provided which suggested as useful evidence the National Infrastructure Commission for Wales' first Annual Report (2019) and accompanying baseline data.

d) Question 12 asks how a just transition to Net Zero can be achieved across the UK. Do you have any evidence on how delivery mechanisms to help meet the UK and Welsh targets may affect workers and consumers in Wales, and how to ensure the costs and benefits of this transition are fairly distributed?

Evidence cited by respondents in relation to this section included:

- European Environment Agency (2011) Air pollution impacts from carbon capture and storage, <https://www.eea.europa.eu/publications/carbon-capture-and-storage>
- Liquid Gas UK (2019) A Practical Approach: Analysis of Off-Grid Heat Decarbonisation Pathways, <https://www.liquidgasuk.org/resources/a-practical-approach-analysis-of-off-grid-heat-decarbonisation-pathways>
- Liquid Gas UK (2019) Biopropane: Feedstocks, Feasibility and our Future Pathway, <https://www.liquidgasuk.org/uploads/DOC5DA5B52BBA49F.pdf>

Question 15: Do you have any further evidence on the appropriate level of Wales' third carbon budget (2026-30) and interim targets for 2030 and 2040, on the path to a reduction of at least 95% by 2050?

Eleven responses to this question were submitted, the vast majority of which (82%) did not submit evidence to support their views. Amongst the comments made relating to the appropriate level of Wales' third carbon budget and interim targets:

- **Emissions trajectories and budget level.** Respondents had differing views on the level of ambition that may be possible in Wales:
 - Some respondents felt that decarbonisation in Wales may be more challenging than elsewhere in the UK (e.g. because of the role of the agricultural and industrial sectors in Wales) and that this needs to be reflected in the UK-wide Sixth Carbon Budget.
 - Others consider that the Committee has taken too negative a view on the possible emissions trajectory in Wales and steeper reductions than for the UK as a whole are possible (e.g. due to the Wellbeing of Future Generations Act, commitment to end fossil fuel extraction).
- **Industry.** The share of burden put on energy intensive industries in Wales should not go beyond the UK as a whole so as not to risk putting Welsh industry at a disadvantage.
- **Power:**
 - There is scope to increase the Welsh Government's target to meet 70% of Welsh electricity demand from renewables by 2030 in light of the new long-term target (of 95% reduction in emissions relative to 1990 levels by 2050).
 - Wales is well interconnected with the rest of UK and generates more power than it consumes. Wales' renewable ambition should be set as a share of total generation (not just Welsh demand) to reflect its renewable potential relative to other areas of the UK.
- **Agriculture and Land use.** Carbon budgets for Wales must take into account the importance of the agricultural sector and policy proposals must take care not to impact food security and disproportionately impact rural and farming communities.

The pieces of **evidence** suggested were:

- Government Office for Science (2011) Foresight. Future of Food and Farming Report, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/288329/11-546-future-of-food-and-farming-report.pdf
- National Grid's Zero2050 Project which aims to speed up progress in decarbonising South Wales, <https://www.zero2050.co.uk/>
- Wales and West Utilities' Hybrid-Hydrogen (HyHy) Project, https://www.smarternetworks.org/project/nia_wwu_060

Question 17: In what particular respects do devolved and UK decision making need to be coordinated? How can devolved and UK decision making be coordinated effectively to achieve the best outcomes for the UK as a whole?

Thirty-seven responses to this question were submitted, the majority of which (nearly 70%) came from business and industry.

Amongst the areas most mentioned where devolved and UK decision making need to be coordinated:

- **Defining budgets.** Welsh and Scottish budgets are defined on a gross basis whilst UK budgets are on a net basis. Several respondents felt that if decision making between the UK and the DAs were not coordinated effectively to account for this, there could be a risk of leakage of activity, jobs and emissions within the UK.
- **Environment.** Although much is devolved in this area, a common framework and approach to environmental regulation is needed to ensure coordination of aims between the UK government and the DAs on matters of environment, emissions reduction and biodiversity and environmental net gain.

Many sector-specific issues were also mentioned:

- **Surface transport:**
 - Consistency on HGV refuelling stations across the UK will be important to enable nationwide journeys. Businesses should be able to purchase vehicles that can be used throughout the UK.
 - Emissions standards should be consistent across the DAs. Given the need for consistency also between Northern Ireland and the Republic of Ireland, emissions standards will have to consider both UK and EU rules. Consistent policies are also important to avoid consumer confusion on vehicle technologies.
- **Buildings:**
 - Although regional solutions may emerge due to characteristics of particular areas, an uncoordinated approach to the decarbonisation of heat could put the net-zero target at risk if the different infrastructure requirements are not in place to support different solutions.
 - A piecemeal approach could also increase costs (e.g. reducing economies of scale, resulting need to invest in multiple infrastructure networks).
- **Industry.** Decarbonising industry relies on policies on CCS, hydrogen, electricity prices, and carbon border mechanisms, which are designed on a UK basis. Lack of coordination also increases the risk of increased administrative burdens for industry and competitive distortions within the UK.
- **Power:**
 - Land availability and renewable generation potential differ across the DAs. Coordination will be critical to maximise opportunities and minimise costs. Ambitions of the DAs on this area also differ and UK-level decisions and mechanisms will be needed to ensure the delivery of these ambitions.

- Coordinating electricity transmission and distribution requirements between the DAs will be important. The DAs have different decarbonisation ambitions but a single settlement for electricity distribution via RII O-2.
- **Agriculture and Land use.** Devolved and UK decision making in land use should be coordinated across the UK as a whole to achieve targets, as the DAs have different mitigation options available.
- **Infrastructure.** Some industrial clusters (e.g. South Wales) do not have nearby CO₂ storage availability. CCS policy and utilisation of strategic resource should be coordinated.

Respondents also suggested ways in which decision-making could be coordinated to ensure the best outcomes:

- **Central Government planning and coordination:**
 - The UK Government should set the overall trajectory to Net Zero through strong long-term policy and be well attuned to requirements of devolved regions and how they can be incorporated into a national strategy.
 - Central Government should consult with the DAs to help to achieve targets and provide funding to supplement local and private funding and ensure all parts of the country are in a position to deliver on Government policy.
 - Institutional fora can provide platforms to coordinate climate change plans and actions – e.g. COP26, the existing Joint Ministerial Committee.
- **Devolution.** Several respondents highlighted the need for greater devolution of powers to deliver against decarbonisation ambitions:
 - "We recognise that different geographies have different demands and can therefore a 'one size fits all' approach is not sufficient to address climate change issues. Devolved and local government should be given the ability (through funding and relevant powers) to better support growth in specific areas – for example heat and the electrification of transport – to meet local needs (albeit within a national framework)." – Vatenfall
 - "Devolution to regional bodies will be an important mechanism to drive decarbonisation at a regional level and focus the decarbonisation pathway to best suit the industries and communities in those regions." – The Carbon Capture and Storage Association
- **Standards and consistency:**
 - Decarbonisation pathways chosen by DAs must be consistent with national pathways.
 - Agreeing shared or mutually-recognised standards across DAs (e.g. from the International Standards Organisation, product standards, competence schemes) where these are crucial challenges to decarbonisation (e.g. relating to heat pumps, building retrofit works).
 - Standards will also be important in relation to trade. Commonly agreed frameworks are required (particularly with respect to food) to avoid regulatory divergence, preserve integrity of the internal UK market and enable trade deals post Brexit.
 - Local and devolved administrations have power over planning process and regulation. These processes can add significantly to project timelines. Streamlined, coordinated and transparent processes will encourage projects to progress and facilitate decarbonisation.

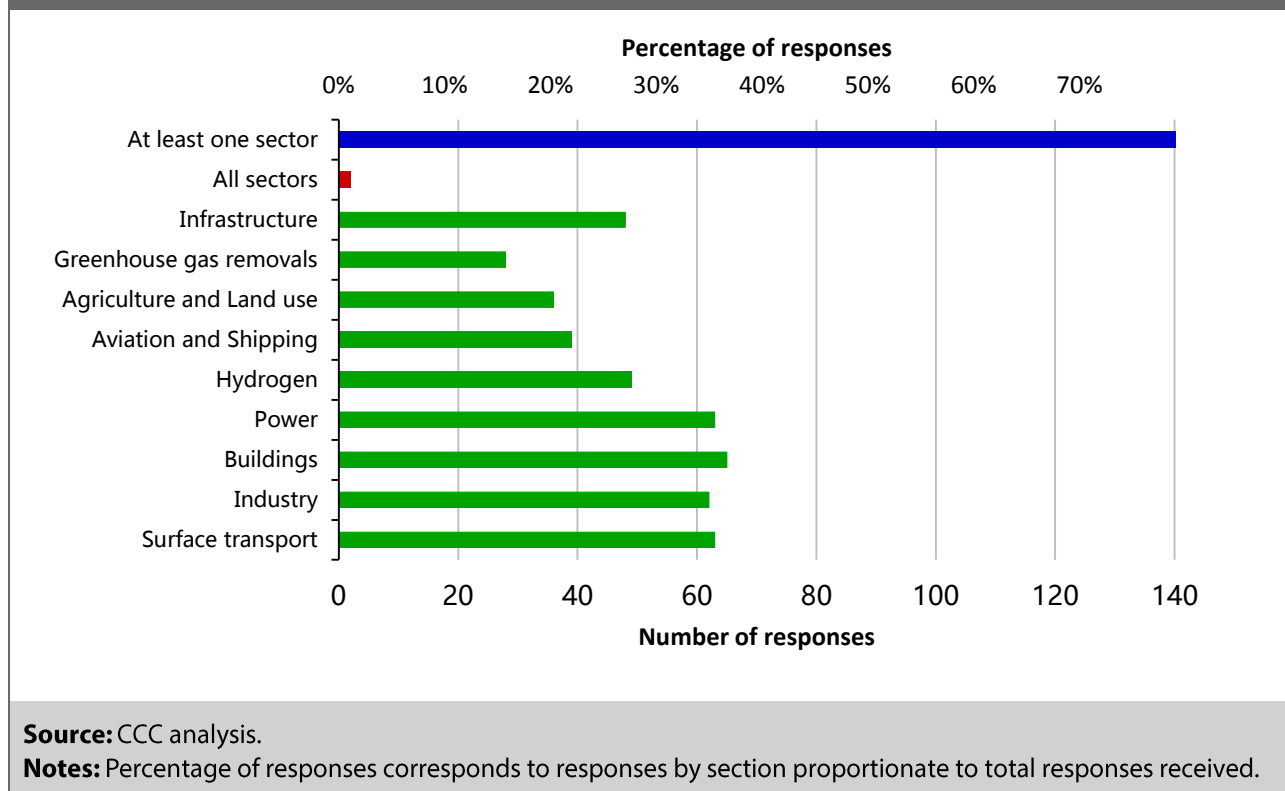
E. Sector-specific questions

Most respondents (nearly 80%) answered at least one sector-specific question (Figure 8). The sector which received answers from the most respondents was Buildings (65 respondents) followed by Surface transport (63 respondents) and Power (63 respondents).

The evidence submitted in response to questions in section E was considered by the CCC's sector teams and reflected in our Sixth Carbon Budget scenarios, where relevant. We will also reflect them in developing our advice on policy and progress in each sector. Although the sector-by-sector evidence is not summarised in this document, many of the key themes are already picked up in the earlier sections (especially sections B-D).

A table of respondents alongside the sectors questions they provided answers to and their full responses are available on the [CCC's website](#).

Figure 8. Number of responses by sector



Annex - Call for Evidence respondents

Annex - Call for Evidence respondents

The table below shows every respondent to Question 14 and 15 about Wales as part of the Call for Evidence along with the sections they provided answers to. For section E we also show the sectors that were addressed by each respondent. A table of respondents alongside the questions they provided answers to and their full responses are available on the [CCC's website](#).

Table A.1. Complete list of respondents and sections of the Call for Evidence they responded to

Respondent	A. Climate science and international circumstances	B. The path to the 2050 target	C. Delivering carbon budgets	D. Wales, Scotland and Northern Ireland	E. Sector-specific questions								
					Surface transport	Industry	Buildings	Power	Hydrogen	Aviation and shipping	Agriculture and land use	Greenhouse gas removals	Infrastructure
Academia, think-tanks and research centres													
Active Building Centre	X	X	X	X	X	X	X	X		X			X
Centre for Alternative Technology (CAT)	X	X	X	X		X	X	X	X		X		X
Business, industry and trade body													
ADS Group	X	X	X	X		X							
Chartered Institution of Building Services Engineers	X	X	X	X		X	X		X	X	X		X
Country Land and Business Associations	X	X	X	X	X		X						

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Energy Networks Association		X	X	X	X		X		X				X
Energy UK		X	X	X	X	X	X	X				X	X
Liquid Gas UK		X	X	X		X	X						
Mineral Products Association	X	X	X	X	X	X	X	X	X		X	X	X
National Farmers Union Cymru	X	X		X		X				X	X	X	X
Royal Town Planning Institute		X	X	X	X		X						
RWE and Innogy		X	X	X				X	X				X
The Carbon Capture and Storage Association	X	X	X	X	X	X	X	X	X	X		X	X
Vatenfall	X	X	X	X		X	X	X	X				X
Wales and West Utilities		X	X	X	X		X	X	X	X		X	X

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Respondent	A. Climate science and international circumstances	B. The path to the 2050 target	C. Delivering carbon budgets	D. Wales, Scotland and Northern Ireland	E. Sector-specific questions								
					Surface transport	Industry	Buildings	Power	Hydrogen	Aviation and shipping	Agriculture and land use	Greenhouse gas removals	Infrastructure
Non-governmental organisations (NGOs)													
Friends of the Earth	X	X	X	X	X	X	X	X	X	X	X	X	X
RSPB	X	X	X	X			X	X			X	X	X
Size of Wales	X	X	X	X							X		
Trees and Design Action Group	X	X	X	X	X		X		X	X	X		
Other and individuals													
Glenn Strachan	X	X	X	X			X				X		
Richard Ebley	X	X	X	X	X	X	X	X					
Source: CCC analysis. Notes: 'Business, industry and trade body' includes consultancies. Some respondents did not answer specific questions, but submitted general views/evidence. Many academics are individuals rather than research groups. These individuals have been listed in the 'Academia, think-tanks and research centres' section.													