Committee on Climate Change

Independent advice to government on building a low-carbon economy and preparing for climate change

Building a zero-carbon economy – Call for Evidence

Responses from Climate Outreach

Background

On 15 October 2018 the governments of the UK, Scotland and Wales asked the Committee on Climate Change (CCC) to provide advice on the UK and Devolved Administrations' long-term targets for greenhouse gas emissions and the UK's transition to a net zero-carbon economy. Specifically: when the UK should reach net zero emissions of carbon dioxide and/or greenhouse gases as a contribution to global ambition under the Paris Agreement; if that target should be set now; the implications for emissions in 2050; how such reductions can be achieved; and the costs and benefits involved in comparison to existing targets.

The advice has been requested by the end of March 2019.

The UK's long-term emissions target is currently for at least an 80% reduction in greenhouse gas emissions from 1990 to 2050. It covers all sectors, including international aviation and shipping and is measured on a 'territorial' basis (i.e. based on emissions arising in the UK). On a comparable basis, emissions in 2017 were estimated to be 38% below 1990 levels.

The current target was set in 2008 based on advice from the Committee. That advice considered that to avoid the worst impacts of climate change, the central expectation of global temperature rise should be limited "to, or close to, 2°C", while the probability of crossing "the extreme danger threshold of 4°C" should be reduced to an extremely low level. That meant global emissions would roughly have to halve by 2050. The 2008 advice made the assumption that the UK should not plan to have a higher level of per capita emissions in 2050 than the global average.

The long-term target guides the setting of carbon budgets (sequential five-year caps on emissions that currently extend to 2032 and require a reduction in emissions of 57% from 1990 to 2030). Both the 2050 target and the carbon budgets guide the setting of policies to cut emissions across the economy (for example as set out most recently in the 2017 Clean Growth Strategy).

Any change to the long-term targets would therefore be expected to have significant implications, not just in the long-term but on current policies to drive the transition.

The CCC will advise based on a thorough consideration of the relevant evidence. We expect that to cover:

- The latest climate science, including as contained in the IPCC Special Report on 1.5°C.
- The terms of the Paris Agreement.

- Global pathways (including those reported by the IPCC) consistent with limiting global average temperature rise in line with the goals of the Paris Agreement.
- International circumstances, including existing plans and commitments to cut emissions in other countries, actions to deliver on those plans and opportunities for going further.
- An updated assessment of the current and potential options for deep emissions reductions in the UK and emissions removals from the atmosphere, including options for going beyond the current 80% target towards net zero.
- An appraisal of the costs, risks and opportunities from setting a tighter long-term target.
- The actions needed in the near term that would be consistent with achieving the long-term targets.

This Call for Evidence will contribute to that advice.

Responding to the Call for Evidence
We encourage responses that are brief and to the point (i.e. a maximum of 400 words per question, plus links to supporting evidence, answering only those questions where you have particular expertise), and may follow up for more detail where appropriate.

You do not need to answer all the questions, please answer only those questions where you have specific expertise and evidence to share. It would be useful if you could use the question and response form below and then e-mail your response to: communications@theccc.gsi.gov.uk using the subject line: 'Zero carbon economy – Call for evidence'. Alternatively, you can complete the question and answer form on the CCC website, available here.

If you would prefer to post your response, please send it to:

The Committee on Climate Change – Call for Evidence
7 Holbein Place
London
SW1W 8NR

The deadline for responses is 12 noon on Friday 7 December 2018.

Confidentiality and data protection
Responses will be published on our website after the response deadline, along with a list of names or organisations that responded to the Call for Evidence.

If you want information that you provide to be treated as confidential (and not automatically published) please say so clearly in writing when you send your response to the consultation. It would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded by us as a confidentiality request.

All information provided in response to this consultation, including personal information, may be subject to publication or disclosure in accordance with the

access to information legislation (primarily the Freedom of Information Act 2000, the Data Protection Act 1998 and the Environmental Information Regulations 2004).

Question and response form

When responding, please provide answers that are as specific and evidence-based as possible, providing data and references to the extent possible. Please limit your response to a maximum of 400 words per question.

Part 1: Climate Science

Question 1 (Climate Science): The IPCC's Fifth Assessment Report and the Special Report on 1.5°C will form an important part of the Committee's assessment of climate risks and global emissions pathways consistent with climate objectives. What further evidence should the Committee consider in this area?
ANSWER:

Question 2 (CO_2 and GHGs): Carbon dioxide and other greenhouse gas gases have different effects and lifetimes in the atmosphere, which may become more important as emissions approach net-zero. In setting a net-zero target, how should the different gases be treated?
ANSWER:

Part 2: International Action

Question 3 (Effort share): What evidence should be considered in assessing the UK's appropriate contribution to global temperature goals? Within this, how should this contribution reflect the UK's broader carbon footprint (i.e. 'consumption' emissions accounting, including emissions embodied in imports to the UK) alongside 'territorial' emissions arising in the UK?
ANSWER:

Question 4 (International collaboration): Beyond setting and meeting its own targets, how can the UK best support efforts to cut emissions elsewhere in the world through international collaboration (e.g. emissions trading schemes and other initiatives with partner countries, technology transfer, capacity building, climate finance)? What efforts are effective currently?
ANSWER: Limiting temperature rise to 1.5C means rapid and transformative action across the world. Achieving this will require public engagement at a scale that will need to be delivered by governments, informed by a global evidence base on how to do it well. So far, most in depth research on communication and engagement has been carried out in a narrow and fairly unrepresentative set of nations - UK, North America and Australia particularly. Global research of public awareness around the world provides valuable insights but doesn't always attend to the more local cultural and social factors, which are important in understanding how best to communicate climate change in different parts of

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the world.[1] Countries such as China, Russia and Turkey[2] are critical for achieving a 1.5 degrees world, but research suggests little effort has been made to engage their populations with the challenges of climate change. Often, the initiatives that do exist are focused on local environmental problems and do not make a link to the global context of climate change, or are not of sufficient quality to effectively engage across their citizens.[3] The UK government should therefore support:

- Extending programmes such as the Global Narratives Project[4], to research how to engage with citizens outside the narrow range of countries where research has been carried out so far. The Global Narratives approach creates a simple, low-input method of training climate communicators in different countries around the world, and building capacity for delivering communications programmes.
- Strengthening Article 6 of the United Nations Framework Convention on Climate Change - this commits all the world's nations to engaging their citizens on climate change.[5] The measure has been included in the 2015 Paris Agreement and has initiated an ongoing dialogue[6], including the release of guidelines for accelerating solutions through education, training, and public awareness[7], but so far has not attracted objective assessment of how different countries compare and limited discussion at the international level. Currently it has no mechanisms for enforcement or performance monitoring and it is highly likely that all governments are in breach - finding ways to raise the level of government action is crucial one, enabling sharing of best practise, capacity building and raising of ambitions. One idea would be a global communications league of nations to act both as a carrot and stick.

Question 5 (Carbon credits): Is an effective global market in carbon credits likely to develop that can support action in developing countries? Subject to these developments, should credit purchase be required/expected/allowed in the UK's long-term targets?

ANSWER:

Part 3: Reducing emissions

Question 6 (Hard-to-reduce sectors): Previous CCC analysis has identified aviation, agriculture and industry as sectors where it will be particularly hard to reduce emissions to close to zero, potentially alongside some hard-to-treat buildings. Through both low-carbon technologies and behaviour change, how can emissions be reduced to close to zero in these sectors? What risks are there that broader technological developments or social trends act to increase emissions that are hard to eliminate?

ANSWER: Radical policy change in new sectors (transport, aviation and industry) will not be introduced or successfully implemented without public consent. At the moment public awareness of the link between emissions and agricultural practices, aviation and industry is limited, and research suggests members of the public are less willing to undertake many of the more impactful behaviour changes that progress in these sectors (transport, dietary

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change) requires[8]. Sectoral changes are unlikely to be possible until public awareness and engagement around these issues has reached a much higher level, and willingness to undertake more impactful behavioural changes has shifted too.

Emissions reduction in the agriculture and aviation sectors also requires lifestyle change. Research is still needed to understand how to shift attitudes and behaviours around totemic and identity-driven behaviours like meat-eating or flying. Up to now, social science has often focused on less impactful - but easier to study and change - pro-environmental behaviours like recycling or reusing coffee cups. The government should now support research focusing on effective ways to encourage rapid and wide-scale changes in these areas.[9]

Government communications needs to move beyond promoting 'simple and painless' lifestyle changes or the 'nudge' approach grounded in behavioural economics, which tend to encourage isolated and unthinking behavioural change.[10] Instead, a values based communication strategy will be necessary in order to broaden and deepen public support for 'near zero' technologies and build new social norms[11]. All this means getting beyond focusing on minor individual behaviours and towards engaging hearts and minds. Instead the UK government should support collaboration between social sciences at scale, improve shared understanding and tracking of public attitudes, identifying and training new climate spokespeople, and creating peer to peer support.

Question 7 (Greenhouse gas removals): Not all sources of emissions can be reduced to zero. How far can greenhouse gas removal from the atmosphere, in the UK or internationally, be used to offset any remaining emissions, both prior to 2050 and beyond?

ANSWER:

Question 8 (Technology and Innovation): How will global deployment of low-carbon technologies drive innovation and cost reduction? Could a tighter long-term emissions target for the UK, supported by targeted innovation policies, drive significantly increased innovation in technologies to reduce or remove emissions?

ANSWER: The most carefully considered policy interventions and new technologies will backfire if they don't take account of how people will respond.[12] Unfamiliar technologies will need to be matched with innovations in public engagement strategies if they are to be implemented successfully.

Question 9 (Behaviour change): How far can people's behaviours and decisions change over time in a way that will reduce emissions, within a supportive policy environment and sustained global effort to tackle climate change?

ANSWER: Limiting warming to 1.5C means rapid policy change in a wide diversity of sectors (e.g. agriculture, the built environment, transport). Governments in democratic

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nations are extremely unlikely to put these changes - which may involve significant short-term costs - in place without public consent. Seemingly 'win-win' technologies and ideas, such as free home insulation schemes, are not taken up if they are unpopular or deemed irrelevant. The 1.5C target also requires lifestyle change on a range of totemic issues like diet, personal travel and home heating in a relatively short period of time. The new initiative Rapid Transition Alliance[13] offers a promising take on the challenge of 'shifting gear' on low-carbon behaviour change.

The following communications approach can help build public support:

- Messages about energy and climate change are more effective in building meaningful public engagement if framed around shared communal values rather than narrow economic self-interest.[14]
- Introducing a system of regulation and enforcement that people can trust and perceive to be fair.
- Framing messages to engage with people who hold diverse sets of values across the political spectrum is essential.[15] Communications must tell relatable human stories to shift climate change from a scientific to a social reality.
- Diversifying the imagery and spokespeople associated with climate change in the public mind, to allow wider audiences to see themselves in the climate story.[16]
- Climate change needs new communicators who can speak with authenticity and integrity, using language and themes that lift the issue out of the margins and into the mainstream.
- Creating participatory public engagement - climate conversations - through existing social networks. Building and supporting community engagement in order to create effective engagement.
- Putting the infrastructure of public engagement in place. This is needed just as much as infrastructure of policy change. For example, facilitating collaborations between social scientists and communicators - with practitioners helping to play a role in shaping research questions, and researchers orienting their studies towards practical questions and ambitious decarbonisation goals.

Question 10 (Policy): Including the role for government policy, how can the required changes be delivered to meet a net-zero target (or tightened 2050 targets) in the UK?

ANSWER: While governments and advocates have largely focused on the technological, economic and political changes needed to reduce greenhouse gas emissions, far less attention has been paid to engaging the public with the question, 'What does it mean to live in a changing climate?'

Government policies and communications approaches could include:

- Support for research exploring and driving best practice focused on changing behaviour around high emission activities.
- Understanding and tracking public attitudes - some governments and academic institutions - for example the UK government[17] and Yale University[18] in the USA - carry out regular surveys tracking public attitudes towards climate and energy issues, but this is never developed along key variables (e.g. divided by left/right political ideology, age, or geographical region).
- Advertising campaigns informed by the best research.[19]

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- Creating and supporting peer to peer dialogue - Evidence from public engagement campaigns around challenging social issues like health shows that broadcast approaches - such as advertising campaigns - should be complemented by community and peer to peer initiatives.[20] In an effort to build on this understanding, the devolved Scottish Government, for example, has included the community Climate Conversations model developed by Climate Outreach in its 2018 Climate Change Plan.[21]
- Avoid lengthy and technical descriptions of what net zero policies are and what they are trying to achieve. Don't assume the public will be willing to give a lot of time and attention to finding out about net zero. A sense of pride about our national identity and love for the countryside and landscape will help ground net zero in what is familiar and close to home.[22]
- Transparency and immediacy (letting people see that we have begun moving towards a net zero future) will give people confidence in the strategy and a sense of momentum.
- Point to positive public opinion (where it exists) on key aspects of net zero policies. Co-benefits need to be very clearly connected to existing values and identities or they will be dismissed.
- Use frames which promote a sense of continuity with the past. Many of the net zero narratives currently being used do this very well, for example relating the new industries and technologies to the UK's history of innovation.
- Consistency and repetition of the strongest and most relatable topics will be key to building public engagement and understanding around net zero. Waste, plastics and pollution are key areas of concern. Phrases such as 'reducing waste is common sense' resonate across the political spectrum.
- Explain how policies will avoid penalising those already struggling. For example, concern that rising electricity bills may make life harder for struggling families or the elderly should be addressed[23].

Part 4: Costs, risks and opportunities

Question 11 (Costs, risks and opportunities): How would the costs, risks and economic opportunities associated with cutting emissions change should tighter UK targets be set, especially where these are set at the limits of known technological achievability?

ANSWER: It will be important to sustain public support for tighter targets and help mitigate any backlash. Demonstrating that the changes will be implemented fairly (we are all in this together) should be a high priority.[24] Highlighting the co-benefits of such changes, connecting the policies with the things that matter to people (not, for example, selling the policy on the basis that atmospheric concentrations of CO2 need to be get below a certain level) and communicating the policies through trusted messengers are recommended strategies for addressing public concerns.

Question 12 (Avoided climate costs): What evidence is there of differences in climate impacts in the UK from holding the increase in global average temperature to well below 2°C or to 1.5°C?

ANSWER:

Part 5: Devolved Administrations

Question 13 (Devolved Administrations): What differences in circumstances between England, Wales, Scotland and Northern Ireland should be reflected in the Committee's advice on long-term targets for the Devolved Administrations?
ANSWER:

Part 6: CCC Work Plan

Question 14 (Work plan): The areas of evidence the Committee intend to cover are included in the 'Background' section. Are there any other important aspects that should be covered in the Committee's work plan?
ANSWER:

References

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[18] Yale Program on Climate Change Communication. (2016) Global Warming's Six Americas. http://climatecommunication.yale.edu/about/projects/global-warmings-six-americas/. Viewed October 2018.
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