

CCC Climate Change Consultation – December 2018

Evidence from the Climate Change Policy Working Group (CCPWG) of the Green Party of England and Wales – 7 December 2018

We will be happy to amplify any of our answers if required. The CCPWG convener is David Flint.

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?

The Committee should assess carbon budgets which offer a greater than 66% chance of limiting temperature rises to 1.5C. This is both to ensure that the 1.5C target is actually met but also to minimise the possibility of catastrophic temperature rises (over 2C).

The Special Report on 1.5C, Summary for Policymakers section C.1.3, lists very large uncertainties relative to the remaining carbon budgets for 50% and 66%. Also, the fifth assessment report (Summary for Policy Makers for WG1, section D.2 2nd bullet) makes a similar point about equilibrium climate sensitivity and the wording allows for a 5 to 10% chance that it is higher than 6C.

The Committee should consider the implications of the outlier high temperature rises that could occur if the chosen world carbon budget proves to be too large. How high could a temperature rise be, for a given world carbon budget, even with just 1% probability? Should the risks of such a temperature rise be acceptable to the UK and the world?

The precautionary principle should apply when setting the world carbon budget. After considering all the uncertainties, it should provide a minimal probability of going over 2C.

It is unacceptable to select a world carbon budget that has a 1 in 3 chance of not meeting the 1.5C temperature target when there is a significant chance of a catastrophically high temperature outcome.

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?

Under the bottom-up architecture of the Paris Agreement, countries pledge Nationally Determined Contributions (NDCs). Current NDCs individually align, at best, with divergent concepts of equity and are collectively inconsistent with the Paris Agreement. If each country uses a self-interested bottom-up concept of equity, we can expect a large overshoot over the Paris agreement temperature targets – even if each individual country target is ostensibly compatible with the Paris agreement.

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Evidence should be considered on different measures of equity to ensure that the UK's effort share is truly equitable and shows world leadership rather than self-interest. In particular, evidence of the UK's high historical emissions and relative wealth should be taken into account when determining the UK's share of the remaining world carbon budget.

The method of counting UK emissions should also be truly equitable and should include consumption emissions as well as production, international air and shipping and unsustainable biofuel uses. The current exclusions have given a false impression of how well the UK has done in addressing climate change. The UK needs to be clear on its responsibility to show world leadership.

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?

There's a danger that we spend too long analysing the options when the need is to act. In each of these cases there are things that the government should do, or forbid, immediately.

Aviation

We agree that technology can produce only modest improvements in emissions per passenger mile by 2050, let alone by the earlier date required to meet our moral obligations (see Q 1 and 3). That leaves a major reduction in flying as the only way of meeting our target. It follows that there should be no new runway construction nor work to increase airport capacity.

To make this more acceptable the government should increase investment in railways and, for business travellers, fund R&D on telepresence technology and the social barriers to its use.

Agriculture

We think the decarbonisation of the food system is rather easier than generally supposed. Most of the emissions are related to the production of beef, sheepmeat and dairy products.

We note that:

- Methane emissions from cows can be greatly reduced by adding encapsulated fumaric acid or the seaweed *Asparagopsis taxiformis* to their feed.
- Low-carbon meats such as pork and chicken can replace high carbon meats.

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- Meat analogues can also replace meat. There's rapid progress in this area at the moment.
- Cultured meat also has potential.
- Finally, traditional vegan diets provide many nutritious dishes.

Given this range of options the right question is not which to pursue but how to motivate consumers and farmers and their suppliers to make the shift. Whilst no single measure can do the job we believe that a carbon tax would drive changes in both consumer behaviour and farm practices. We recognise that specific agricultural policies would be needed to help farmers make the changes needed.

Industry

This is probably the hardest of the three. Much has been written about the possibilities for decarbonising specific industrial processes, especially cement and steel-making, and for moving to alternative low-carbon materials. These options should be pursued more vigorously.

To support them the government should:

1. Commission a pilot CCS system immediately.
2. Commission R&D on ways of capturing CO₂ from process exhausts and of moving the gas to the CCS beachhead.

We doubt that these measures will be enough. We will only reach our climate change targets if we accept that we have to make and buy less stuff. We believe that the committee should commission research on how to maintain, indeed improve, the wellbeing of our people at a lower level of material throughput.

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?

Consideration of the remaining uncertainties (see Q1) and equity (see Q3) implies that the UK should reach net zero very much earlier than 2050. This in turn requires immediate alteration of the third, fourth and fifth carbon budgets.

Peter Drucker, the most famous management thinker of the 20th century, said that the most important management decisions are always decisions to stop doing something. That's overwhelmingly the case for climate change which should now be treated as a crisis.

Therefore:

- A) The UK should stop building high-carbon infrastructure immediately. Specifically, no fracking, no airport expansion, no new trunk roads and no new fossil-fuelled

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electricity power stations.

Going forward many of the Committee's policy proposals should be pursued but at a much faster pace. The government should:

- B) Set stretch goals for all sectors.
- C) Commit to low carbon infrastructure. In particular it should commission a Carbon Capture and Storage (CCS) pilot scheme and more grid-based energy storage and increase the grid's ability to accept additional renewable generation. It should expand rail and tram networks and the number of charging points for electric vehicles.
- D) Set tough environmental standards for buildings and energy-using equipment including cars. New buildings should be to passivhaus standard.
- E) Introduce a rising carbon tax covering all greenhouse gases, not just carbon dioxide. The tax should apply to imports as well as to domestic production.
- F) Allocate substantial public funds to transitional work that cannot be funded in the private sector. This will include a large-scale programme of housing retrofit and R&D on negative emissions technologies (NETs). Large-scale NET deployment will probably be needed by 2030.
- G) Encourage much greater R&D (both public and private) to make the UK a world leader in a zero carbon economy.