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: The CCC should be providing the best advice to Government on the fugitive methane from Fracking.

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: 1.CCC should be advising on 'gas' as a bridging fuel and on when this bridge will have to end. This is crucial to the development of the fracking industry. It does seem unlikely that gas can continue far beyond 2030 if the whole economy is required to become net zero. 2. Of the consumption emissions food is probably the most important. It is essential that Government and the public understand the carbon emissions attributable to imported food in terms of production techniques and land use changes. UNCTAD attributes 50% of emissions to the food production, processing and distribution (including land use changes). 3. CCC need to understand and advise on the carbon implications of import substitution, diet changes and the comparisons between industrial agricultural systems and agro-ecology/agro-forestry/forest farming. A path needs to be identified that our national diet is carbon neutral (or even negative – given the potential for sequestration in plants and soils.

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: (see Qu.3) The importing of food has very serious carbon impacts and food exporting countries should be advised at the earliest stage (now) that the UK are very likely to be introducing measures to be limiting imports that are carbon neutral (inc land use).

There will need to be similar scrutiny if manufactured goods that will also need to be carbon neutral.

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:

1. Harness the power in the land use planning system https://drive.google.com/file/d/0B2VqOwDufNpbeVE3alBCRnJ4NjA/view

https://www.ukgbc.org/wp-content/uploads/2018/07/Driving-sustainability-in-new-homes-UKGBC-resource-July-2018-v4.pdf

2. Housebuilding: half of the carbon emissions (much more when direct emissions are reduced) are attributable to those embodied in the building and infrastructure (Whole Life Carbon Assessment for the Built Environment). Sub-dividing existing dwellings is essential and desirable; heating and insulating the space being occupied, down-sizing in place, using existing services and facilities, no loss of green space and bio-diversity. Custom-splitting utilises the appetite for custom-building. http://dantheplan.blogspot.com/2017/08/migrating-to-problematic-future.html. This form of 'new' housing should be incentivised for social, economic and environmental reasons.

3. Transport: reduce the national speed limit to 50mph (ie approx the optimum speed for all vehicles (freight, ICEs and EVs). See Environmental Audit Committee Reduciong Carbon Emissions from Transport 2005/6, UKERC Quick Hits, Vibat

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?

2005, Plowden and Hillman 1996, CCC stretching targets etc.
https://sites.google.com/site/pauseforthought/home/greenspeed

4. Agriculture: it is more than likely that agro-ecology (growing local, nutritious food on carbon rich soils) would have a lower carbon footprint than industrial systems dependent on large machinery and chemicals.

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: The sequestration associated with organic agricultural systems, and agro-forestry should be explored. Given that all buildings will have to be carbon neutral there will be need for a significant increase in the use of timber (based) products.

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:In agro-ecology and timber based building products. The transition to an electricity based transport system will be stimulated by a lower national speed limit (equivalent to the optimal sped for EVs). The technologies associated with EVs is still evolving but it seems that there is also an optimal battery size due to weight power ratios so range might continue to be limited.

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:

1. Diet is crucial and ways will have to be found to frame a fair transition to a lower meat diets. This should not be 'if' but 'how' and 'when'.
2. A lower speed limit explained by the need to reduce carbon emissions and remove the competitive advantage of ICEs over EVs and PSVs will show that the Government is serious about climate change (see EAC recommendations in 2005/6).
3. A house will need to be seen as space to be lived in and enjoyed rather than as an investment and hedge against social care costs and under-occupied meanwhile.

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:

1. Change policy for housing to concentrate on sub-divisions (and some increase in densities) and away from new building. Custom-splitting might be the only way to avoid the Planning Housebuilding Act 2015 being brought into disrepute due to the lack of serviced plots being provided.
2. Lower the national speed limit; immediately, at no public expense, and being fair to all road users. All calculations regarding the costs of lower speeds failed to see the freight industry lowering their max speeds (and creating the danger associated with differential speeds) or the £20billion associated with congestion that would be significantly reduced (as well a costs to NHS) and road building.
3. Agriculture support should be targeted at agro-ecology and agro-forestry.

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:

1. A lower speed limit would have net economic benefits (see impact on congestion, road building, health, public transport).
2. Residential-subdivisions (including custom-splitting) would have environmental, social and economic benefits compared to any other way of meeting the shortage and/or inequitable distribution of housing.
3. Agro-ecological based food systems have social, economic and environmental benefits.

   These three principles could be part of virtuous circles reducing carbon emissions to zero with no net costs to the economy or society.

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: There should be some estimate of the carbon emissions from the military (at home and abroad). Even if the CCC is restrained from recommending how these might be reduced, it should ensure that 'space' is left for these emissions when making recommendations for sectors within its remit. This could mean that emissions from buildings and agriculture will have to be carbon negative.