



## Committee on Climate Change 5<sup>th</sup> Carbon Budget call for evidence

Response from Friends of the Earth England, Wales and Northern Ireland, June 1<sup>st</sup> 2015

### Question 1

We repeat our concern in evidence to the 4<sup>th</sup> carbon budget review that the CCC's global target is very risky, and repeat our request for the CCC to base its targets on a safer global carbon budget.

The UK's carbon budgets are based on a global carbon budget which has a greater than 50% chance of exceeding two degrees, and also a 10% chance of exceeding three degrees:

- 50% is very high risk for a temperature rise we “*must...not exceed*”<sup>i</sup>. Reducing the risk to 33% (the IPCC definition of “unlikely”) would reduce the carbon budget considerably.
- 2 degrees is in any case already very risky –James Hansen in May 2013, giving evidence to the Environmental Audit Committee, describes it as “an upper bound” of what is acceptable; Tyndall Centre describe 2 degrees as “*the boundary between dangerous and extremely dangerous*”<sup>ii</sup>. Many countries advocate a 1.5 degree target.
- Above 2 degrees increases risks of irreversible tipping points, as well as worse droughts, floods and other impacts.
- The CCC's budget has a greater than 50% chance of exceeding 2 degrees; a 10% chance of exceeding 3 degrees; and a less than 1% chance of exceeding 4 degrees. We believe that mainstream climate science shows that 3 degrees would have exceptionally severe implications for humanity: a 10% chance of exceeding three degrees seems an extremely risky course to accept.
- The CCC should assess whether a less than 1% chance of 3 degrees is a more appropriate target.

In summary:

- 2 degrees is too risky.
- A 10% chance of 3 degrees is too risky
- A >50% chance of exceeding two degrees is not compatible with an aim to not exceed two degrees
- Global carbon budgets should be set at the very highest at the IPCC definition of “unlikely” for 2 degrees.

## Question 2 and 4

The Paris talks should aim to agree contributions from countries which will keep temperature rises below 2 degrees. In this context, do individual nations' pledges sum up to keep to that goal, and is the UK's 80% contribution adequate? We argue that the CCC's analysis is very clearly based on a minimum-contribution approach for the UK. This led to "at least 80%" recommendation, which led to the 80% target. But the consequences of staying at just 80%, with a now much clearer global carbon budget, would mean unacceptably small carbon budgets for developing countries, which would not be compatible with the UNFCCC's core principle of "differentiated responsibility". We believe therefore that the UK is taking far too high a share of the world's remaining carbon budget, and should both adopt a tougher 2050 target, and a steeper pathway to meeting it. We set our argument below – this issue is in our view the most important for the CCC to address in the 5<sup>th</sup> Carbon Budget review.

### The UK's contribution:

In 2008 the CCC discussed various options for deciding what would be an appropriate UK contribution to meet global climate objectives, and concluded that an "at least 80% target" was appropriate because: *"it is difficult to imagine a global climate deal which is either pragmatically achievable or fair which does not involve the UK and other developed countries reducing their emissions, over the long-term, to a per capita level which if applied across the world would be compatible with our climate objectives, that is just over 2 tonnes of CO<sub>2</sub>-equivalent per capita."*(p30)

The idea that contributions from countries should be "fair" is pragmatic politics, written into the UNFCCC convention, and accepted by the UK Government:

- *The UNFCCC convention is clear that equity is an essential consideration in determining appropriate contributions from nations. Principle 1 states: "The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof."*
- This principle is formally acknowledged by the UK Government, whose 9<sup>th</sup> September 2014 strategy for international climate states that *"the new agreement should involve credible and fair emissions reduction commitments from all countries"* and David Cameron and the then leaders of the Labour and Liberal Democrat party's joint pledge in February 2015 to *"seek a fair, strong, legally binding, global climate deal"*. (our emphasis).

The critical question is "what would be a fair contribution"? The 2008 CCC report argued that *"it is not part of the Committee's remit to propose a specific methodology for the purposes of international negotiations. Nor do we make a judgement about which methodology is ethically preferable"*. However, the CCC did and does have to make some

judgement about these issues in order to set a UK contribution. The 2008 position was to argue a minimum position, reflected in the “at least” wording - that emissions would be equal between countries, but only by 2050.

This is however an extreme minimum position - it is an exceptionally favourable for the UK. For example,

- **It gives a far greater share of what is still burnable to countries like the UK.** It is only by 2050 that emissions are equal – this means that from now to 2050, the UK and other developed countries take a far greater share of what is still safely burnable.
- **Second, it ignores all historical responsibility.** This is hugely beneficial to the UK, who like the USA and other developed countries are more responsible for historical emissions.

This issue was further acknowledged by the CCC in 2010 in their 4<sup>th</sup> Carbon Budget report. They said that the UK should make a “global offer”: “as a richer developed nation, the UK should as a minimum match global abatement effort”, and that doing so would lead to a 63% offer for 2030. This is greater than the 60% advocated in that report as being progress towards the 80% 2050 target. The UK merely matching global effort does not appear to be consistent with the UNFCCC requirement for “differentiated responsibilities”. The CCC acknowledged this, saying: “*approaches which put a greater burden on developed countries (eg approaches with more emphasis on historical responsibility) would require a larger contribution from the UK in the 2020s*”.

In effect the 2008 approach appropriates a deeply unequal share of the remaining global carbon budget to the UK. The consequence is that keeping to even a 2 degree global carbon budget with this level of cuts from developed countries would mean extreme early peaking from developing countries from already very low per capita emissions – this is not compatible with the UNFCCC’s equity principles.

The issue of national contributions is increasingly and rightly under the spotlight – will the sum of individual national pledges be sufficient, and if not, whose should be increased? The work of the IPCC since 2008 has greatly strengthened the understanding of safe global carbon budgets. In this respect it is total emissions from now onwards, rather than just the view at 2050, which is important.

We argue that the CCC should, publishing in advance of Paris, set out an analysis of what would be a fair contribution for the UK from 2015-2050, under different assumptions. One comprehensive treatment of equity issues is set out by the Stockholm Environment Institute - <http://www.gdrights.org/scorecard/>

We believe that an updated treatment of equity in-line with the UK’s pledges to deliver a fair climate deal would see both much tougher targets for the UK for both 2030 and 2050, as well as major financial and technological support for developing countries.

Treating equity adequately would in our view mean:

- The CCC should strengthen the UK 2050 target to 95% – this is compatible with the “at least 80%” wording in their original advice
- A steeper pathway to the 2050 target, to ensure the UK takes a lower proportion of the global carbon budget - the CCC should set an 80%+ 2030 target

Further detail is set out in our April 2015 briefing<sup>iii</sup>.

The UK's current offer into Paris, of just the EU 40% 2030 target, is even lower, and we urge the CCC recommend that the UK increases this offer substantially before Paris, on equity grounds.

7 years on from the CCC's original report, the issue of equity and fairness is now far more centre stage we feel it is necessary and appropriate that the CCC do revisit this issue.

### Question 3

For similar reasons as set out above, we believe that the EU 2030 “at least 40%” target, while it remains at just 40%, does not reflect a fair contribution to tackling climate change. It is not even sufficiently down the line to meet the 80% target, and backloads too much effort to the 2030-2050 period. It also suffers from the problem of being based on equity-only-by-2050 issue, which means that an overly high per-capita share of the remaining safe 2015-2050 budget goes to the EU. The EU needs to increase its offer substantially in the run-up to Paris, as do individual EU nations.

### Question 5

We believe that far more progress in the UK is needed by 2030 than currently assumed. It is total greenhouse gas emissions over the whole period from now to 2050 that matters, not solely the end point. As set out above, we believe that if the aim is to keep below 2 degrees it is neither fair nor pragmatic to assume a UK pathway to 2050 which has per capita emissions only by 2050 – this simply leaves insufficient carbon budget for developing countries. We should be setting a far steeper trajectory to 2050 than at present, to reduce our appropriation of a now very limited safe global carbon budget.

In our view, set out above, the UK should be aiming for at least an 80% cut in emissions by 2030. This is achievable – see

[www.foe.co.uk/sites/default/files/downloads/decc\\_pathways.pdf](http://www.foe.co.uk/sites/default/files/downloads/decc_pathways.pdf). However, it has three major implications for current policy:

- It becomes essential for a **more rapid switch away from gas and oil in heating and transport**, mainly towards electrification. Government policy must drive rapid growth in technologies and deployment for electric vehicles, electric heating and upgrading grids.
- This has a major implication for electricity supply – and makes it even more imperative that **electricity is decarbonised**. We note the new Government's

unwillingness to set a decarbonisation target for the power sector; there is a great concern that this, coupled with manifesto commitments for a major expansion in gas, will lead to power sector intensity in 2030 nearer the Treasury's 200g/kWh rather than 50g/kWh. We note the CCC's analysis that a dash-for-gas should be "Plan Z" - expansion of gas and no decarbonisation target is even more problematic with the need for tougher overall 2030 targets.

- It becomes even more imperative for the UK to focus on **cutting energy demand, and on energy efficiency**. We are deeply concerned with the continuing lack of priority shown to domestic energy efficiency, which is all the more inexcusable given that saving energy is in general the cheapest way to cut emissions. The corollary of this is that the Government remains obsessed with maximising supply – formalised for example in the recent Infrastructure Act's requirement to "maximise economic recovery" of North Sea oil and gas. We believe that the Government needs to reverse this strategy, and have "minimising energy demand" as a driving priority aim and underlying principle for energy policy, delivered by all departments.

## Cost

It is right to focus on cost-effective means to meet climate targets. We are concerned that the Treasury uses a very narrow model of economic costs and benefits to look at the issue of climate change, and moreover uses that model to make a judgement about what level UK climate targets should be set at. The UK should set its targets based on the climate science, acceptable risk, and an appropriate contribution from the UK, and use its economic modelling to help determine how to meet the targets, not to determine what level they should be set at. Friends of the Earth has commissioned and published an analysis of HMRC's "CGE" economic model from Synapse economics<sup>iv</sup>, which argues that the CGE model has a heavily skewed focus on costs, and argues for inclusion of other effects such as employment impacts and impacts of co-benefits, such as reductions in air pollution.

## Question 12

We remain very concerned that despite repeated annual warnings from the CCC that a "step-change" is required from Government to deliver future budgets, the policies in place or planned are not strong enough. DECC have not updated the Carbon Plan to set out how the policy shortfall to meet the 4<sup>th</sup> Carbon Budget, identified by Government in 2010, will be addressed. Stronger governance is needed between Government Departments to ensure greater policy join-up.

## Question 13

We believe that there are energy security risks from the combination of the possible major expansion of gas power stations outlined in the new Government's manifesto, and the relative lack of Government importance attached to energy efficiency. Building large amounts of new high-carbon infrastructure not only locks us into a high-carbon future, it increases our likely dependence on fossil fuel imports, given that North Sea gas production is falling rapidly, and shale gas is unlikely to make an appreciable difference. The alternative

is to move away from a strategy of “maximising supply” to focus heavily on “minimising demand”. Friends of the Earth has recently published “No need to step on the gas” <https://www.foe.co.uk/sites/default/files/downloads/no-need-step-gas-76983.pdf> which compares various gas scenarios against energy security objectives.

## **Question 14**

### **14.1 Cymru/Wales**

We note the Environment Bill which has been introduced in the National Assembly for Wales, with its welcome focus on carbon targets and budgeting. We assume that the CCC will advise the Welsh Government on this, and that the Welsh Government will get support on data gathering, policy assessment, and that the Welsh and UK budgeting timetables and reporting will be integrated.

The National Assembly for Wales has also passed the Well-being of Future Generations Act, and the Future Generations Commissioner for Wales will have an advisory function in relation to climate change. The work of the Commissioner and bodies working on climate change are overlapping and how they work together and avoid duplication should be considered.

### **14.2 Northern Ireland**

We note that although all the Northern Ireland MPs who took their seats at Westminster during the 2005-10 Parliament voted in favour of the 2008 Climate Change Act, the Stormont Assembly has failed to pass complementary legislation for Northern Ireland, unlike both Scotland and Wales, which is necessary due to the fact that almost all legislative and administrative mechanisms for lowering Northern Ireland’s CO<sub>2</sub>e emissions are devolved matters.

The continued opposition of the DUP, and their ability to use the Petition of Concern mechanism to veto any attempt to pass a Northern Ireland Climate Change Act, means that Northern Ireland could find itself left behind other countries in decarbonising its economy, and losing out on the economic, social and environmental benefits that this would bring.

Northern Ireland comprises 2.9% of the UK population, but emitted 3.7% of the country’s CO<sub>2</sub>e in 2012. <https://www.gov.uk/government/statistics/annual-statement-of-emissions-for-2013>

In the interests of equity Northern Ireland needs to rapidly decarbonise, with a particular emphasis on energy efficiency and eradicating fuel poverty early in this process.

The Climate Change Committee should issue a strong recommendation for the Northern Ireland Assembly to set its own binding targets, and demand that they at least match the national targets recommended by this consultation response.

## Question 15

We would like to raise four issues – fossil fuel production, the EUETS, electricity sector decarbonisation and biomass:

### 15.1 Fossil Fuel production

We hope that the CCC will address the issue of UK fossil fuel production. UK fossil fuel production is not relevant for strict compliance with the Act, as the Act only records end-use emissions. However, the Act's purpose is to help the UK do its part in tackling global climate change, so we feel that if there are issues which affect this broader goal, but which are not strictly covered by the Act, then it is squarely within the CCC's role to assess them and advise Government, as it has done for other issues, such as emissions embodied in imported and exported products.

On UK fossil fuel production's impact on global climate change there are two issues – around practical international politics, and actual global emissions:

On politics, the issue is of unburnable carbon - highlighted by Carbon Tracker and recently in Nature that most of the world's fossil fuel reserves need to stay unburned, even with high deployment of CCS, to keep within 2 degrees warming. In this context, we are concerned that the UK's policy position regarding its oil and gas reserves and resources - to "maximise economic recovery" will be damaging to global efforts to ensure that most reserves do stay unburned. What hope is there for persuading other countries not to drill and mine for more coal, oil and gas if our explicit policy is to do the opposite? This maximise recovery position damages any leadership role on climate we might espouse internationally.

On the issue of actual global emissions, the Treasury's position on UK production on fossil fuels is that it is an issue that is not relevant to climate policy. Their argument is that UK North Sea fossil fuel production simply means the UK not importing an equivalent amount of oil, ie it is substituting for foreign fossil fuel, which then wouldn't get burned. Our view is that in the absence of a global carbon cap, then this is not the case; UK's production is additional fossil fuel being burned globally. We believe that in the absence of any Treasury evidence to the contrary, the UK should take a precautionary approach and assume that the UK's production is not displacing production elsewhere, but is additional and makes climate change worse. This question has been raised by Lord Deben<sup>v</sup>; it is clear from his response that the answer is uncertain, and one that greater assessment is required. We request that this is part of the 5<sup>th</sup> Carbon Budget review. These issues are also considered in a broader recent paper: "Conditions for environmentally-sound UK shale gas development" by McGlade and Ekins<sup>vi</sup>

### 15.2 EUETS

We support the CCC's view that for purposes of assessment of progress towards carbon budgets, the UK should measure actual emissions in the EUETS traded sectors, rather than allocation of emissions, whatever UK emissions in those sectors actually are. We hope that the Government will accept this recommendation.

### 15.3 Electricity sector decarbonisation

We strongly support the CCC's repeated recommendation<sup>vii</sup> for power sector decarbonisation to around 50g/kWh by 2030. Friends of the Earth believes that this target should and can be met without new nuclear power – new nuclear power would add to the UK's unresolved nuclear waste problem, and represents unnecessary risks of very high impact catastrophic events.

The CCC's first report notes the non-climate issues around new nuclear, and argues that *"if, however, nuclear power is in principle acceptable, it is likely that cost economics will argue for a significant nuclear role within the generation mix"*. It also argues that *"there is a strong economic case for nuclear power"*, based on estimates of new nuclear levelised cost of 4-5p/kWh. The CCC's 4<sup>th</sup> carbon budget report in 2010 revised these costs upwards to 7p/kWh and argued that still *"nuclear new build is highly likely to be a cost-effective form of low-carbon generation"*. Since then, new nuclear has got more expensive. It does not look as though the original assumptions of cheap new nuclear power hold, and is increasingly not the case that nuclear power is cheaper than renewables options. For example, the recent CfD auctions are showing that onshore wind and large solar already have lower strike prices than nuclear, for electricity generated at least 7 years before new nuclear would come on stream. By then, new solar and onshore wind will be even cheaper.

We also note the CCC's 4<sup>th</sup> Carbon Budget analysis that *"Solar PV is expected to cost around 28 p/kWh in 2020 for large applications (around 5MW) and 45 p/kWh for small residential-scale deployment, compared to around 7 p/kWh for nuclear and between 11-13 p/kWh for offshore wind. Given the underlying economics, the contribution of solar PV to sector decarbonisation in the 2020s is likely to be limited, although a larger role is possible in the longer term if costs fall significantly."* Comparing strike prices with levelised costs is not simple, but solar's costs for large and small projects are now far lower than 28p/kWh and 45p/kWh. Costs for solar now are lower than even in the latest CCC 2014 progress report, which quoted £122/MWh (12.2p/kWh). The economic arguments against solar appear to be in need of revision.

We believe that the CCC should consider non-climate issues in their assessment of preferable electricity mixes, and that this should weigh strongly against new nuclear. But if the assessment is solely on cost grounds, then in light of the falling costs of onshore and offshore wind, and the plummeting costs of solar, and the increasing costs and delays to new nuclear, we request that the CCC assess the latest cost data and projections for renewable technologies and nuclear, and revise 2030 electricity mix projections accordingly.

The UK could meet the CCC's 50g/kWh target, and provide a cost-effective, secure and balanced electricity system, without new nuclear – see Friends of the Earth's briefing based on DECC's 2050 pathway calculator<sup>viii</sup>.

## 15.4 Biomass

Please see separate joint submission from Friends of the Earth England, Wales and Northern Ireland, the Dogwood Alliance and the NRDC.

ENDS.

Contact:           simon.bullock@foe.co.uk

---

<sup>i</sup> Eg, EU Council, 2007. Limiting Global Climate Change to 2 degrees Celsius The way ahead for 2020 and beyond. *“The EU must adopt the necessary domestic measures and take the lead internationally to ensure that global average temperature increases do not exceed pre-industrial levels by more than 2°C.”*

<sup>ii</sup> Tyndall Centre, 2011. Written evidence to Environmental Audit Committee on Carbon Budgets. 27<sup>th</sup> June

<sup>iii</sup> Friends of the Earth, 2015. Why the UK must commit to its fair share of emissions cuts.

<https://www.foe.co.uk/sites/default/files/downloads/uks-fair-share-emissions-cuts-76425.pdf>. April

<sup>iv</sup> Synapse Economics, 2014. (Mis)understanding climate policy

<https://www.foe.co.uk/sites/default/files/downloads/synapse-misunderstanding-climate-policy-low-res-46332.pdf>

<sup>v</sup> “...is this replacement from other gas, or is it an addition too? Well, I’m not sure you can ever say that very clearly...”

<http://www.carbonbrief.org/blog/2015/02/the-carbon-brief-interview-lord-deben-part-one/>

<sup>vi</sup> And see Ekins, 2015. **Future Energy – Thoughts on conditions for environmentally sound UK shale gas development**

<http://blogs.ucl.ac.uk/sustainable-resources/2015/01/28/future-energy-thoughts-on-conditions-for-environmentally-sound-uk-shale-gas-development/>

<sup>vii</sup> CCC, 2012. Letter: The need for a carbon intensity target in the power sector.

<http://www.theccc.org.uk/publication/letter-the-need-for-a-carbon-intensity-target-in-the-power-sector/>

<sup>viii</sup> Friends of the Earth, 2012. A Plan for Clean British Energy.

[www.foe.co.uk/sites/default/files/downloads/plan\\_cbe\\_report.pdf](http://www.foe.co.uk/sites/default/files/downloads/plan_cbe_report.pdf)