

The Rt. Hon. Edward Davey MP
Secretary of State
Department of Energy and Climate Change
3 Whitehall Place London
SW1A 2AW

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Review of the fourth carbon budget (2023-27): Developments in European circumstances

Dear Ed

I am writing to you about our emerging conclusions on the review of the fourth carbon budget, for which we will provide our full advice in December. Responses to our recent *Call for Evidence* have suggested the need to clarify at an early stage the implications of European circumstances for the budget, which we are now able to do.

The assumptions regarding EU circumstances upon which the fourth carbon budget decision was made have not changed, and therefore there is no legal or economic justification to change the budget in this respect at this time. Rather, the budget remains cost-effective, with manageable costs and impacts, given our assessment of EU developments.

- The assumption on 2020 emissions underpinning the budget is consistent with the EU's current target to reduce emissions in 2020 by 20% on 1990 levels. If a 30% target were to be agreed, which is the UK Government's objective, tightening of the budget might be justified. We set out more detail on this in Annex 1.
- The budget is consistent with the EC's *Low-Carbon Roadmap*, published in 2011, which identifies cost-effective decarbonisation pathways. It is also at the centre of the range of possible outcomes of current EU discussions on 2030 ambition. We set out more detail on this in Annex 2.
- The incremental competitiveness impacts of meeting the budget are limited, and manageable under current policies (see our April 2013 report on managing competitiveness risks due to carbon budgets).

It is essential that the UK continues to push for an ambitious EU 2030 package, which is required as part of an effective global response to climate change. We will closely monitor the EU process, and revisit the budget as required when this is resolved.

We will provide more details on the EU context and a broader assessment of developments across the full set of factors relevant to reviewing the budget in November and December:

- In November we will publish our full analysis on EU circumstances, together with an assessment of international progress more generally, and an update on climate science including consideration of the IPCC's latest assessment.
- In December we will provide our advice on whether the budget remains the cost-effective path to the 2050 target, including possible impacts of reduced projections for GDP and emissions, and of shale gas.

Following conclusion of our review in December, you will then have the full evidence to make a decision on the level of the budget, and whether the Government will make a proposal to Parliament. Our strong feedback from investors is that a decision should be made as soon as possible in the New Year, in order to reduce current uncertainties.

Yours,



Lord Deben,

Chairman, Committee on Climate Change

Annex 1: Consistency of the fourth carbon budget with the EU's 2020 emissions reduction target

The fourth carbon budget was designed to reflect the cost-effective path to the 2050 target in the Climate Change Act (i.e. to reduce emissions by 80% on 1990 levels) subject to the impacts being manageable.

Our approach was to project UK emissions in 2020, and then to assess the cost-effective path through the 2020s, of which the fourth carbon budget formed part.

Under the current accounting rules of the Climate Change Act, performance against the traded sector part of this budget – covering energy-intensive industries and power generation – will be judged against the UK's share of the EU ETS cap once this is known.

If it were the case that the UK's share of the EU ETS cap in 2020 was above the level of UK emissions assumed in designing the fourth carbon budget, this would raise questions about whether the budget could be achieved in practice under the current accounting rules.

However, the projection of UK traded sector emissions underpinning the fourth carbon budget is above the UK's share of the EU ETS cap in 2020 under the current EU target to reduce emissions by 20% in 2020 on 1990 levels; it is well above the UK's share of the more ambitious EU target to reduce emissions by 30% in 2020 on 1990 levels (Table 1).

Table 1: UK 2020 emissions assumed in fourth budget analysis compared to UK share of EU ETS cap under possible EU climate packages for 2020

	MtCO ₂ e in 2020
UK emissions assumed in fourth budget analysis	206
UK share of ETS cap in '20% world'	175
UK share of ETS cap in '30% world'	140

Source: CCC analysis based on published EC information.

Note: '20% world' and '30% world' refer to EU 2020 packages involving overall reductions in EU emissions of 20% and 30% by 2020 relative to 1990.

In advising on the fourth carbon budget, we suggested that if the EU ETS cap were to be tightened, then a tighter budget would be appropriate. The Government came to a similar conclusion in its Carbon Plan.

- In addition to the currently legislated budget of 1,950 MtCO₂e, we proposed a "Global Offer" budget, with an emissions limit of 1,800 MtCO₂e, to be adopted in the context of a new global deal to reduce emissions. Part of the reason for

the tighter emissions limit in the Global Offer budget was that this assumed a 2020 level of emissions consistent with increased EU ambition, and the tighter EU ETS cap that this would imply. Specifically, it assumed that the EU moves from a 20% to a 30% greenhouse gas emissions reduction target in 2020.

- The Government in its Carbon Plan stated that “*if the EU agreed to a target to reduce emissions by 30% from 1990 levels by 2020, this could potentially mean a tighter EU ETS cap...In this instance, the fourth carbon budget could be amended to 1,850 MtCO₂e*”¹.

Therefore the emissions assumed for the traded sector in 2020 in the fourth carbon budget are consistent with the current situation in the EU, and an increase in EU ambition could require a tightening of the budget.

Given that this is the case, the key issue is consistency of emissions paths underpinning the fourth carbon budget and possible EU emissions paths through the 2020s. We consider this issue in Annex 2.

¹ HM Government (December 2011), *The Carbon Plan: Delivering our low carbon future*, p. 111.

Annex 2: Consistency of the fourth carbon budget with possible EU paths in the 2020s

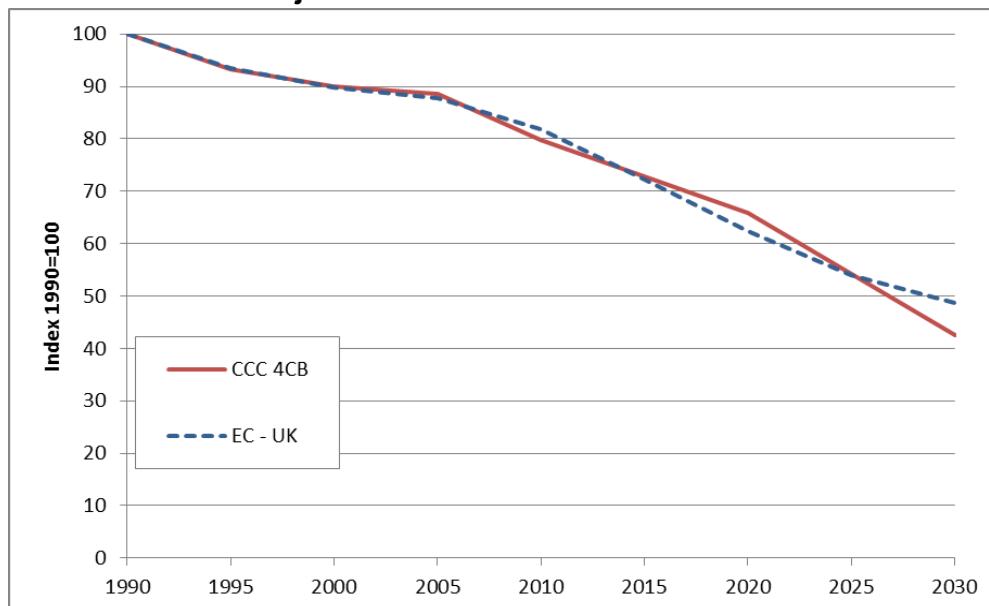
A. EC Roadmap to 2050

The EC *Low-Carbon Roadmap*², published in 2011, set out the cost-effective path to meet the EU objective of reducing GHG emissions by 80-95% by 2050 relative to 1990 levels. It concluded that the aim should be to achieve a 25% reduction in EU emissions in 2020, and a 40-44% emissions reduction in 2030.

In 2012, the EC published additional analysis based on the *Roadmap*³ which presented implications for emissions in each Member State. This showed that the cost-effective EU path embodies a 46% reduction in UK emissions in 2025 relative to 1990.⁴

This is the same reduction currently legislated for in the UK's fourth carbon budget (Figure 1). It reinforces our confidence that the fourth carbon budget reflects the cost-effective path to the 2050 target in the Climate Change Act taking the EU context into account.

Figure 1: Cost-effective GHG emissions pathways for the UK consistent with 2050 climate objective – EC and CCC estimates.



Source: Technical report accompanying the analysis of options to move beyond 20% GHG emission reduction in the EU by 2020: Member State results. Report to DG Climate Action, EC, 2012.

² http://ec.europa.eu/clima/policies/roadmap/index_en.htm

³ http://ec.europa.eu/clima/news/articles/news_2012013002_en.htm

⁴ Includes emissions from International Aviation. Excluding these (as in the UK carbon budget accounting) equates to a 50% reduction in UK emissions in 2025 relative to 1990.

B. EU discussions on 2030 target and pathways through 2020s

Building on its Roadmap, the EC published a Green Paper⁵ in March 2013, which highlighted the cost-effective path through 2030 would be a 40% reduction in EU emissions on 1990, and consulted on EU 2030 ambition.

The UK's response to the Green Paper was that the EU should:

- Adopt a minimum ambition to cut EU emissions by 40% in 2030 on 1990 levels, therefore reflecting the cost-effective path.
- Commit to increase ambition to a 50% cut contingent on an ambitious global agreement, with some of the additional effort to be delivered through possible purchase of offset credits in global carbon markets.

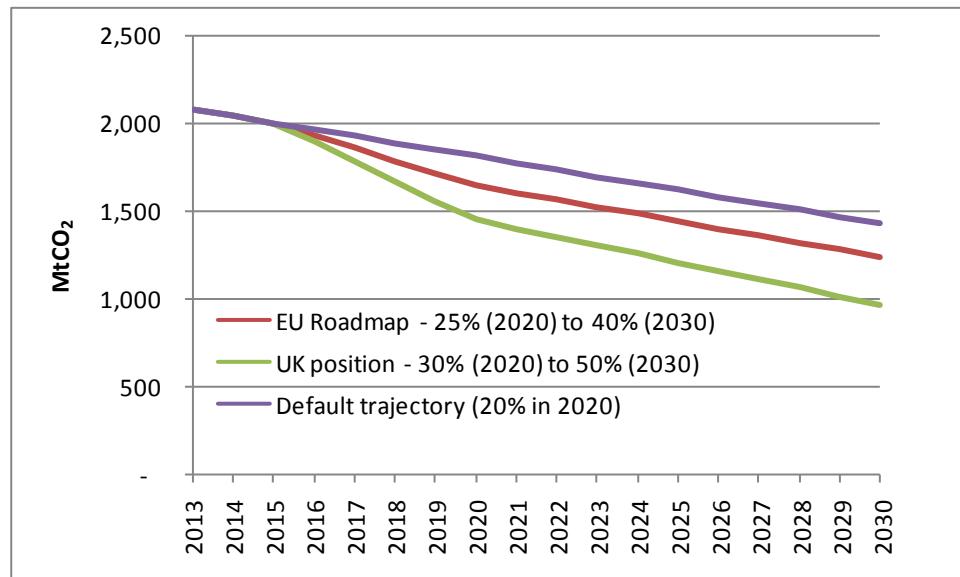
We showed above consistency of the fourth carbon budget with the cost-effective path identified by the EC. It is also important to assess consistency of the traded sector part of the budget with the UK's share of the EU ETS cap, given current accounting rules under the Climate Change Act.

Currently the EU ETS has a default trajectory, which is not consistent with the EU's longer-term objectives. The default trajectory involves a continuation of the current annual rate of decline for the pre-2020 ETS cap. If the EU fails to agree a package for 2030, then the default trajectory would persist in the EU ETS.

The UK position and the default trajectory therefore define the range for possible EU ETS pathways in the 2020s, with the cost-effective pathway from the Roadmap in the middle (Figure 2).

⁵ <https://www.gov.uk/government/publications/response-to-the-european-commissions-consultation-on-the-eus-2030-climate-and-energy-framework>

Figure 2: Range of EU ETS caps to 2030



Source: CCC analysis based on published EC information

Translating the EU ETS trajectories to the UK level requires assumptions on the allocation of free allowances, auction allowances and the new entrant reserve; Table 2 shows UK shares of different EU ETS trajectories under assumptions used by DECC.

Our analysis suggests that if the UK were successful in achieving its negotiating position, the current fourth budget would have to be tightened by around 100 MtCO₂e. If a 40% target were agreed for 2030, the budget should stay at the current level, depending on the path agreed for the 2020s. Only for a significant departure from what has been proposed would there be a case to lower the ambition in the budget.

Table 2: UK emissions under different EU paths for the 2020s (MtCO₂e)

Scenario ³	UK traded sector ¹	Implied 4 th budget ²
Default ETS cap ⁴	790	2050
EU Roadmap - 25% (2020) to 40% (2030)	700	1960
CCC 4th budget⁵	690	1950
UK position - 30% (2020) to 50% (2030)	590	1850

Notes:

1. Traded sector reflects UK's share of the EU ETS cap for covered sectors.
2. Assumes non-traded sector emissions of 1260 MtCO₂e over the 4th budget period, as in our original advice.

3. CCC estimates rounded to nearest 10 MtCO₂e. All scenarios assume 2013 EU ETS cap of 2084 MtCO₂e and UK share of 9.7%.
4. Default EU trajectory falls at 38.3 MtCO₂e per year.
5. Our original advice on the level of the 4th carbon budget reflected the UK cost-effective emissions pathway, and did not make any specific assumptions on the EU ETS cap. For comparison the table reports emissions in sectors covered by the EU ETS: 690 MtCO₂e.

C. Implications for UK carbon budget

The Climate Change Act states that in order to change a legislated budget the circumstances under which the budget was set must have changed.

This letter focuses on EU circumstances in particular. Our assessment is that EU developments have been in line with what was assumed at the time the budget was set:

- We envisaged that there would be a process to agree a path for EU emission reductions to 2030.
- This has moved forward, with cost-effective paths identified and discussions around the pathways underway.
- Paths identified and subsequent discussions are consistent with the currently legislated fourth carbon budget.

Therefore, EU developments reinforce the current budget rather than provide a basis to change it.

Although uncertainty remains as to the outcome of discussions, it would be inappropriate to respond to this by aligning now to the EU default trajectory and then realigning later to an agreed EU position for 2030.

Such an approach would not meet the criteria under the Climate Change Act. It would undermine investor confidence without any benefits for competitiveness or UK contribution to the EU targets. Moreover, it would undermine credibility of the UK in EU negotiations.

- Compliance with the Climate Change Act:
 - As noted above, it would amount to a change in the budget without a corresponding change in circumstances; this is not allowed under the Act.
 - A trajectory in line with the EU default path would be inconsistent with the requirement in the Climate Change Act for carbon budgets to prepare for meeting the UK's 2050 target. The Government

recognised this in its 2011 Impact Assessment for the fourth carbon budget:

“The [default] trajectory is inconsistent with the UK meeting its 2050 target – net traded sector emissions by 2050 would require almost full decarbonisation in the non-traded sector (or significant purchase of ICUs) which is not feasible.”

- Frequent changes would reduce the certainty provided by carbon budgets and therefore undermine investor confidence; this is the very strong feedback that we have had from a wide range of investors.
- It would not help the position of energy-intensive firms in the UK at risk of competitiveness impacts. This is because the EU already has a robust process in place to manage the competitiveness risks (i.e. granting of free allowances in EU ETS), and the UK Government has set out compensation packages available to firms at risk of both direct and indirect impacts of climate change policies.
- It would not help the UK in getting a better deal in the EU effort sharing negotiations given the EU ETS rules are independent of commitments made by individual countries.
- It would severely undermine UK credibility in the discussions over the EU 2030 package. Given the important role of the UK in these discussions, it would reduce the likelihood of an outcome consistent with cost-effective routes to tackling climate change.

The economically sensible and legally compliant approach is therefore for the Government to continue to push for a strong and cost-effective EU package and not revise the fourth budget at the current time on the basis of EU circumstances. We will continue to monitor these circumstances and identify any implications for carbon budgets as the EU process is resolved.