Committee on Climate Change

Rt Hon Chris Huhne
Secretary of State
Department for Energy and Climate Change
3 Whitehall Place
London SW1A 2AW

22nd March 2011

Dear Chris

Use of offset credits to meet the second carbon budget (2013-2017)

We are required to advise you on the use of offset credits to meet the second carbon budget, prior to a limit on credit use being set in secondary legislation before June 2011.

We have already recommended that you should commit not to bank outperformance of the first carbon budget (2008-2012) resulting from the impact of the recession, and that you should tighten the second and third carbon budgets (2013-2017 and 2018-2022) such that these embody a level of ambition consistent with the fourth carbon budget (2023-2027) we recommended in December.

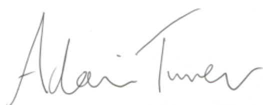
The basis for these recommendations is analysis showing that the Intended budgets for the non-traded sector could be achieved through implementation of measures that are cost-effective and that are required to lay the foundations for meeting the fourth carbon budget (see attachment).

The implication of this analysis is that there should be no use of credits in the second budget period to meet either the currently legislated or the Intended level of ambition for the non-traded sector. Use of credits would substitute for appropriate domestic ambition.

In the traded sector, where the budget is defined by the EU ETS cap, the use of offset credits should be limited to a level consistent with allowed use in the EU ETS. The focus in the traded sector should be on delivering domestic emissions reductions through investment in renewable and other forms of low-carbon power generation, and reducing emissions in energy-intensive industries through energy efficiency improvement, investment in renewable heat and development of CCS technology.

I would be happy to discuss these recommendations in more detail with you if that would be useful.

Yours ever,



Adair Turner
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Attachment

In this attachment we present the analysis underpinning our recommendations for the use of offset credits to meet the second carbon budget.

We show that, given the impacts of the recession, the Intended budgets for the non-traded sector could be achieved through implementation of measures that are cost-effective and that are required to lay the foundations for meeting the fourth carbon budget.

We recommend that:

- In the non-traded sector, the aim should be to outperform the currently legislated second budget and to achieve the Intended budget through domestic action, without the purchase of offset credits. The legislation should reflect this.
- In the traded sector, credit purchase should be limited to levels allowed in the EU ETS, and the focus should be on implementation of measures to decarbonise the power sector (investment in renewable and other forms of low-carbon generation) and to reduce emissions in energy intensive industries (energy efficiency improvement, investment in renewable heat and development of CCS technology).

We set out this attachment in four sections:

1. Previous advice on the first three carbon budgets
2. The impact of the recession
3. Required domestic action in the context of the fourth budget
4. Specific implications for the second budget period

1. Previous advice on the first three carbon budgets

Interim versus Intended budgets

In December 2008 the Committee recommended two sets of carbon budgets:

- The Interim budget embodied a 34% GHG reduction on 1990 levels in 2020 and represented the UK's share of the EU's target to reduce emissions by 20% by 2020. This is the currently legislated budget.
- The Intended budget, to be enacted in the context of a new global deal to reduce emissions, reflected a higher level of ambition with a GHG reduction in 2020 of 42% relative to 1990 levels. This corresponded to the UK's expected share of the EU's proposed target to reduce emissions by 30% in 2020[1].

[1] Under the 2008 draft EU package; a new package is now expected to be negotiated following a global deal.

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Meeting Interim budgets

We set out a range of measures to reduce emissions (our Extended Ambition scenario) which were feasible, cost-effective and required on the path to achieving the UK's 2050 emissions reduction target (an 80% cut on 1990 levels).

In the non-traded sector, we showed that this scenario was sufficient to meet the Interim budget domestically. We therefore recommended that there should be no planned use of offset credits to meet the non-traded sector Interim budget. This would maintain incentives for implementation of measures, and prepare for deep domestic cuts in the period to 2050 when availability of credits in international carbon markets will be very limited.

In the traded sector, where achievement of the budget is defined by the EU ETS cap, we concluded that use of credits up to the limit allowed in the EU ETS is acceptable provided this does not undermine the carbon price.

Moving from Interim to Intended budgets

We then set out three options for moving to the Intended budget:

- Increasing effort in existing policy areas (e.g. solid wall insulation)
- Introducing new policies (e.g. road pricing)
- Purchasing credits in international carbon markets – EUAs or offset credits

Acknowledging the more stretching nature of the additional domestic measures, we concluded that use of offset credits to meet the incremental effort needed in moving to the Intended budget could be acceptable, subject to restrictions within the EU framework.

2. The impact of the recession

Our 2008 carbon budget recommendations were based on emissions projections which did not include the impacts of the recession. In our subsequent reports to Parliament – October 2009 and June 2010 – and in our December 2010 advice on the fourth carbon budget, we highlighted recession impacts, showing that these will make the first three carbon budgets easier to achieve, given that emissions remain a function of economic activity[2].

- Economy-wide emissions fell by around 9% in 2009, largely due to the recession.

[2] The substantial reduction in emissions in 2009 suggests that emissions remain linked to growth and, therefore, a permanent reduction in output may be taken to imply a permanent reduction in emissions.

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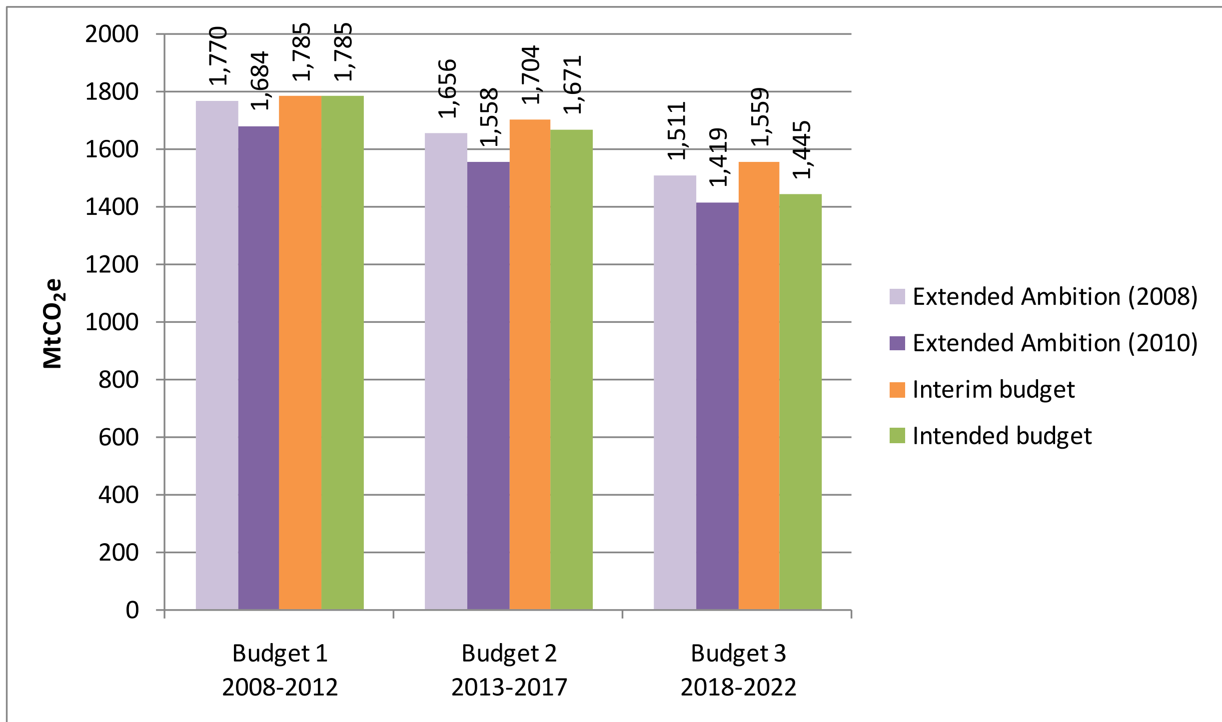
- In the non-traded sector, we estimated that the impact of the recession together with appropriate implementation of measures (i.e. as in our Extended Ambition scenario), would result in outperformance of the first budget by up to 75 $MtCO_2e$. Further, given the Office of Budget Responsibility projection that GDP in 2020 will be around 10% lower than projected before the recession, we estimated that appropriate implementation of measures would result in achievement of the Intended budget for the non-traded sector across all budget periods (Figure 1).
- Emissions in the traded sector also fell during the recession. Although this will not affect achievement of the traded sector part of the carbon budget, which is defined by the EU ETS cap, it will reduce the need for the UK to purchase European Union Allowances or offset credits.

Figure 1: Projected emissions in each budget period in the non-traded sector



Source: DECC (2010) *UK Emissions Statistics 2009 Provisional UK figures*; CCC run of DECC Energy Model, CCC analysis

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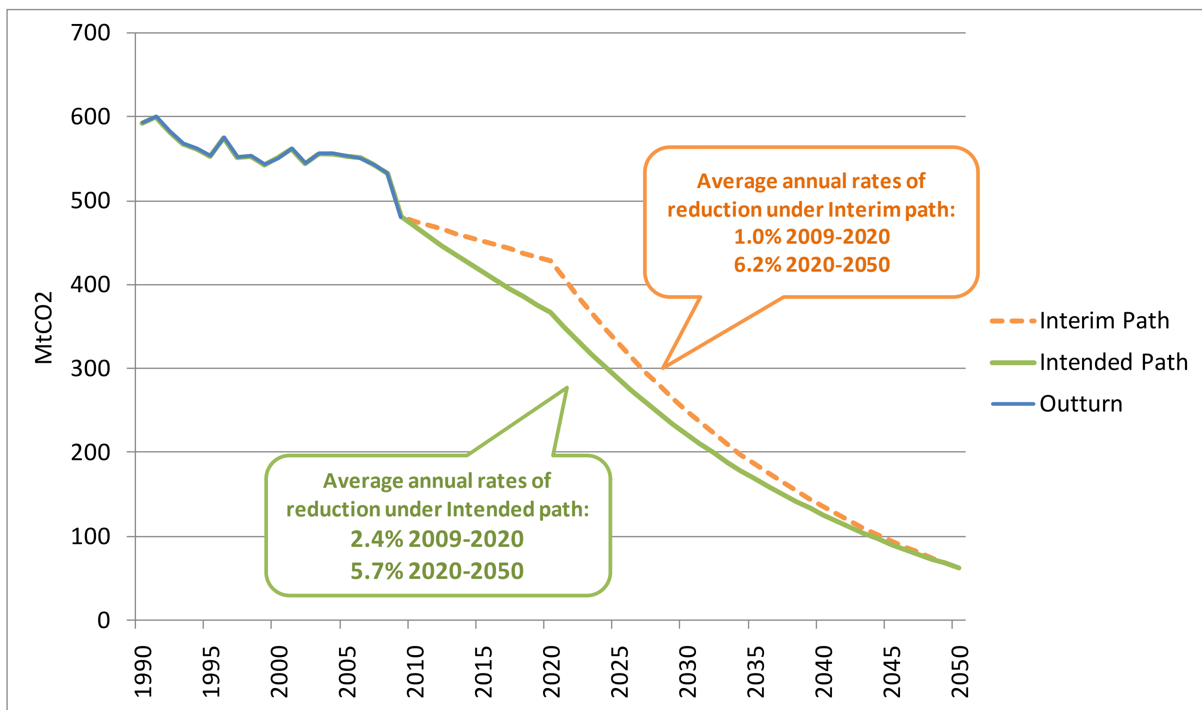
3. Required domestic action in the context of the fourth budget

Implications of the fourth budget for 2020 ambition

We argued in our December 2010 advice on the fourth carbon budget that entering the 2020s under the Intended (rather than Interim) budget was necessary to bring forward technologies for deployment in the 2020s, mitigating risks and costs for meeting future budgets and avoiding an expensive and potentially unfeasible acceleration in the annual rate of emissions reduction after 2020 (e.g. from 1% for 2009 to 2020 to 6% for 2020 to 2050 for CO_2, Figure 2).

Figure 2: Required CO2 emissions reduction to 2050 under Interim and Intended budgets



Source: DECC (2010) *UK Emissions Statistics 2009 Provisional UK figures*; CCC analysis

Note: 2020 emissions based on annual average of Interim or Intended third budget, less projected non-CO2 emissions under our Extended Ambition scenario, reaching indicative CO2 emissions excluding international aviation and shipping of 60-70 MtCO2 in 2050.

Moving to the Intended budget

Given the importance of delivering measures in the period to 2020 on the path to the 2050 target, the ideal response would be now to legislate a move from the Interim to Intended budget. This would reflect consistency in policy effort through the recession.

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In practice, there are two complexities related to the fact that the EU has not yet moved from a 20% to a 30% emissions reduction target in 2020:

- It would not be possible to deliver the Intended budget for the traded sector without a tightening of the EU ETS cap, given the definition of the net carbon account under the Climate Change Act.
- It is not clear how the EU will move from 20% to a tighter target, and whether the balance of effort between non-traded and traded sectors will be appropriate in a UK context on the path to the 2050 target. For example, if increased EU ambition were to be achieved solely through tightening of the EU ETS cap, required non-traded sector effort from the UK would be low relative to what is required in the context of the 2050 target.

Moving to the Intended budget for the non-traded sector

Given these complexities, we made four recommendations:

- The Government should tighten the second and third carbon budgets to reflect the Intended budget for the non-traded sector (Table 1 and Figure 3). This would require policy effort to be maintained and measures required on the path to 2050 to be successfully implemented. It would result in a 37% cut in emissions in 2020 relative to 1990 levels.
- Any outperformance in the first carbon budget period should not be banked through to the second budget period; the Government has not yet committed to this recommendation, and should now do so.
- The Intended budget, covering both the traded and non-traded sectors, should be legislated as the EU moves to a tighter emissions reduction target in the context of a global deal, and should reflect the impact of tightening of the EU ETS cap.
- The Government should plan to deliver the Intended budget in the non-traded sector only through domestic emissions reductions, and in the traded sector largely through domestic emissions reductions (i.e. with limited purchase of credits).

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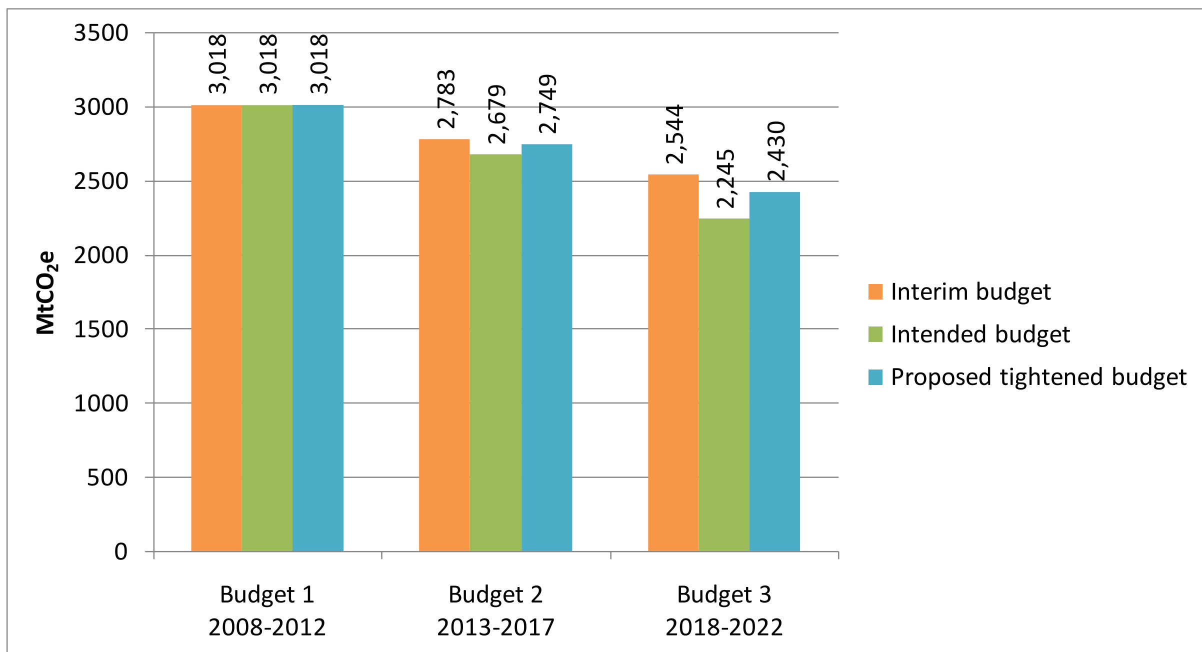
Table 1: Proposed tightening of first three budgets to include Intended budget for non-traded sector

	Budget 1 (2008-2012)	Budget 2 (2013-2017)	Budget 3 (2018-2022)
Interim budget	**3018**	**2783**	**2544**
Interim traded	1233	1078	985
Interim non-traded	1785	1704	1559
Intended budget	**3018**	**2679**	**2245**
Intended traded	1233	1009	800
Intended non-traded	1785	1671	1445
Proposed tightened budget	**3018**	**2749**	**2430**
Interim traded	1233	1078	985
Intended non-traded	1785	1671	1445

Source: CCC analysis

Figure 3: Proposed tightened budgets



Source: CCC analysis

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4. Specific implications for the second budget period

Given the impacts of the recession, and the need for implementation of measures in the context of the fourth budget, the aim in the non-traded sector should be to outperform the currently legislated second budget and to achieve the Intended budget through domestic action, without the purchase of offset credits. Our recommendation is that the legislation reflects this.

In the traded sector, credit purchase should be limited to levels allowed in the EU ETS, and the focus should be on implementation of measures to decarbonise the power sector (investment in renewable and other forms of low-carbon generation) and to reduce emissions in energy intensive industries (energy efficiency improvement, investment in renewable heat and development of CCS technology), in order to lay the foundations for the required path through the 2020s.

Specific measures to be implemented in the second budget period are summarised in Table 2; we will track progress on these measures in our annual reports to Parliament, with the next report due in June 2011.

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Table 2: Key measures to be implemented in the second budget period

			Progress required over second budget period (incl. progress expected in reference case)	Abatement (relative to reference case) in 2017 ($MtCO_2e$)
Power	Wind	Onshore capacity	+5 GW	5*
		Offshore capacity	+5 GW	5*
	Nuclear		3 plants enter construction	n/a
	CCS		At least 2 demonstrations operational by 2017	n/a
	Transmission		All but one grid reinforcements operational	n/a
Energy efficiency	Residential buildings	Loft insulation	+6.2 m homes	1
		Cavity wall insulation	+4.2 m homes	2
		Solid wall insulation	+0.7 m homes	1
		Most efficient boilers	+4.4 m homes	- **
		Most efficient appliances (stock penetration)	+15 percentage points (cold), +23 percentage points (wet)	0.2
Low-carbon heat	Overall	Proportion of heat demand	+4 percentage points	6
Transport	Conventional vehicle efficiency	New car gCO2/km	16% improvement (-23 gCO_2/km)	4
	Biofuels	Proportion of fuel (by [energy])	+2.7% percentage points	3
	Electric vehicles	Cars	+620,000 cars	1
		Vans	+33,000 vans	0.2
	Eco driving	Drivers trained	+1.75 m	1
Total from these measures(excluding power)				20
Other measures implemented in second budget period (excluding power)				10
Measures implemented in first budget period (excluding power)				20
TOTAL (excluding power)				**50**

*savings from 5GW wind compared to new CCGT generation - illustrative figure (not included in total)

** all progress built into reference case

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Notes: This is not the Committee's full set of indicators, as set out in our progress reports to Parliament (October 2009 and June 2010), which we will continue to track. We concentrate here on a subset of implementation / forward indicators. Numbers do not sum to totals due to rounding.

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