The Climate Change Act 2008: Something to be Proud of After All?

Harriet Townsend*

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At the heart of the Climate Change Act 2008, slightly obscured by the many targets, budgets and reporting requirements which together make up its first two parts, lies an old-fashioned, some would say British, aspiration to do the right thing. Pragmatism may also be found there, as perhaps is recognised by the Climate Change Committee (CCC)[1] when they say: "It is difficult to imagine a global deal which allows developed countries to have emissions per capita in 2050 which are significantly above a sustainable global average."

So, what is "a sustainable global average"? At the time of writing there is a general consensus that:

> "Climate change resulting from CO_2 and other greenhouse gas emissions poses a huge threat to human welfare. To contain that threat the world needs to cut emissions by about 50% by 2050, and to start cutting emissions now. A global agreement to take action is vital. But a global agreement will not be possible unless the countries of the rich, developed world provide leadership."[2]

It is in that context that the ambitious targets within the Climate Change Act 2008 were enacted by the United Kingdom.

2009 is a crucial year for treaty making, and will conclude with the United Nations Climate Change Conference in Copenhagen in December. There, it is hoped, an agreement to govern global emissions reductions from 2013 will be reached, a Kyoto Part II. The importance of a global deal of this sort is underlined by the fact that the European Union is committed to reducing greenhouse gas emissions by 30 per cent of 1990 levels in 2020 in the context of a global deal, but by only 20 per cent in its absence. The CCC has taken the same approach—making the more ambitious "intended" budgets it recommends conditional upon achieving a global deal.

The principal duty within the Act applies to whoever may be Secretary of State in 2050. He or she is to be subject to a statutory duty to "ensure that the net UK carbon account for the year 2050 is at least 80% lower than the 1990 baseline" (s.1). Any law student could tell the Government that a duty of this kind is essentially unenforceable but, as ministers insisted during the Bill's passage through Parliament, they might just be missing the point.[3] The Government's objective in setting this statutory target[4] is to give greater certainty as to the scale of change required than could be

* Barrister, 2–3 Grays Inn Square. The author is not qualified to express views about the science of climate change and has no desire to do so. She assumes that the "general consensus" about which she speaks is correct, while recognising that the science underpinning the predictions about global warming is developing constantly. The views expressed in this article about the legislation are the author's own.

[1] The statutory body responsible for giving independent and informed advice to Government established by the Climate Change Act 2008—see Pt II and Sch.1.

[2] CCC First Report, published December 1, 2008, Executive Summary.

[3] For example Lord Rooker; see *Hansard*, HL, November 27, 2007 at second reading of Climate Change Bill as quoted in the article on the Climate Change Bill published at [2008] J.P.L. 450.

[4] This is how the Act itself refers to it; e.g. in s.36: "the target in section 1 (the target for 2050)".

[2009] J.P.L., Issue 7 © 2009 Thomson Reuters (Legal) Limited and Contributors

achieved by more traditional means. In doing so they seek international credibility for the United Kingdom in treaty negotiations, and the platform for a gear change in policy formulation at home.

The focus of this article is the Climate Change Act itself, and the author's main task is therefore to set out the main provisions and concepts which it introduces. It is generally a more coherent and robust set of measures than was the original Bill. For example, it includes all greenhouse gases within the net UK carbon account (s.24), and requires the Secretary of State to limit the use of international carbon credits to offset UK emissions[5] (s.11).

The net UK carbon account

This highly artificial and ultimately abstract accounting concept is defined by s.27 of the Act. The net UK carbon account is expressed in million tonnes of CO_2 and by reference to a specific period (e.g. a year, or a five-year budget period).

The Government's consultation on the detailed process of carbon accounting ended on January 19, 2009.[6] Draft Carbon Accounting Regulations were laid before Parliament in April 2009. They are due to come into force on May 31, 2009 (if approved in accordance with the affirmative resolution procedure) and will make the system of carbon accounting within the United Kingdom compatible with UNFCCC rules under Kyoto and the EU Emissions Trading Scheme.

Given the timing involved, this article will stick to the main points about carbon accounting, and refer readers to the Regulations themselves which should have been made by the time this article is published. To become familiar with the carbon accounting process it is important to understand that:

1. "Net UK emissions" are defined in s.29 and exclude emissions from international aviation and shipping unless they are specifically included in Regulations (s.30). The CCC recognises "complexities that currently make it difficult sensibly to allocate international emissions to the national level" and recommends that carbon budgets (and by implication the net UK carbon account) should exclude them for the time being, while keeping that recommendation under review.[7]
2. The net UK carbon account is not simply a way of expressing UK emissions. It is calculated from the net UK emissions figure by a prescribed formula involving carbon units.
3. Regulations will define carbon units (see s.26) and how they may be taken into account in order to calculate the net UK carbon account from the figure for net UK emissions. These Regulations may, for example, permit greenhouse gas allowances (for example within a cap and trade scheme) to act as credits, but will be subject to a limit set by the Secretary of State under s.11. At present Government proposes to permit all carbon units recognised under the Kyoto Protocol and the EU Emissions Trading Scheme to be taken into account. The net UK carbon account is therefore related to, but not the same as, net UK emissions.
4. Although it is expressed in CO_2 the account represents the aggregate of all targeted greenhouse gas emissions (as defined in s.24) over the period in question. The practice of converting emissions of, for example, methane, to their CO_2 equivalent (CO_2e) is well developed and not controversial.

[5] The purchaser of offset credits acquires the benefit of a reduction in emissions which takes place elsewhere.
[6] The Consultation document may be found at *http://www.defra.gov.uk/corporate/consult/carbon-accounting/consult-doc.pdf* [Accessed April 2, 2009].

5. It is an account which is *reduced* by credits and *increased* by debits (see s.27) in a manner to be prescribed by Regulations and subject to the limit on net credits set under s.11. In short, the lower the account for a given period the lower the notional figure for net emissions over the period. Put another way, the lower the net UK carbon account the better.

The carbon budget

A series of five-yearly carbon budgets, each in effect an interim target, are to be set by order of the Secretary of State and in response to the advice of the CCC (s.9). Although the Secretary of State is free not to follow their advice, he is required to publish his reasons for any such decision when setting the budget (s.9(4)). The first three budgets will cover the period 2008–22 and must have been set by June 1, 2009 [see the Carbon Budgets Order 2009 and the Climate Change Act 2008 (2020 Target, Credit Limit and Definitions) Order 2009 (which I will call "the draft Definitions Order"), laid before Parliament in April 2009, and due to come into force on May 31 if approved in accordance with the affirmative resolution procedure]. The definitions Order proposes an amendment to s.5 of the Climate Change Act which I will reflect in the text by italicised script within square brackets. I have had to sacrifice simplicity of presentation for the sake of accuracy and transparency.

The budget is set "with a view to meeting" the target for 2050 and the requirements of s.5. So it is that the budget for 2018–22 must be such that the annual equivalent of the carbon budget is at least 26 per cent *34 per cent* lower than the 1990 baseline, but for these purposes greenhouse gases other than CO_2 are effectively left out (s.5(4)) [*since s.5(4) is to be omitted by Regulation 2 of the draft Definitions Order, greenhouse gases are not treated differently in the 2018-2022 budget*].

This highlights a curious feature of the Act, namely that the two principal statutory targets within the Act (s.1 and s.5) both use the phrase "the 1990 baseline", but define it in different ways [*a curiosity proposed to be removed by the draft Definitions Order*]. For the 2050 statutory target the 1990 baseline is the aggregate amount of net UK emissions of CO_2 for 1990 with the net UK emissions for each of the other targeted greenhouse gases for the year that is the base year for that gas (s.1(2) refers). Sections 24 and 25 reveal that the 1990 baseline is:

- the net UK emissions of CO_2 and methane and nitrous oxide for 1990; plus
- the net UK emissions of hydrofluorocarbons and perfluorocarbons and sulphur hexafluoride for 1995.

The Secretary of State may amend the list of greenhouse gases and the base year in prescribed circumstances.

For the 2020 statutory target (s.5(1)(a)) all gases save carbon dioxide are to be discounted (see s.5(4)) [*unless the draft Defintions Order comes into force, in which case all greenhouse gases are taken into account in the same way as they are for other budgets*]. Thus, although the carbon budget should be set by reference to all the targeted greenhouse gases, it must be set in such a way that carbon dioxide emissions (specifically) are at least 26 per cent below the 1990 baseline for that gas [*unless the draft Definitions Order comes into force in which case the carbon budget for all greenhouse gases is required to be at least 34 per cent below the 1990 baseline as defined in ss.24 and 25.*

[7] The EU Aviation Directive which came into force on February 2, 2009 includes flights taking off from or landing in any aerodrome within the EU in the Emissions Trading Scheme. All flights save those specifically excluded are covered by the Directive. It is seen as a first step towards the necessary global mechanism for accounting for international aviation.

The Committee gave its advice on the first three budgets, as it was required to do, in its first Report, published on December 1, 2008. It may be summarised as follows[8] :

	Budget 1 2008–12	**Budget 2 2013–17**	**Budget 3 2018–22**
Interim budget $mtCO_2e$	3018[9]	2819	2570
Intended budget $mtCO_2e$	3018	2679	2245

It splits its recommendations into two—the "intended budget" is recommended if a global agreement is reached and represents in 2020 a reduction of 42 per cent relative to 1990 levels, whereas the interim budget is less ambitious at 34 per cent (incorporating a reduction in CO_2 emissions of 29 per cent).

The intended and interim budgets are the same for the first five-year budgetary period (which began in 2008). By way of an illustration of how onerous are the recommendations of the CCC, the initial estimate of annual UK emissions for 2008 recently published by DECC is 623.8 $mtCO_2e$. This was two per cent lower than the 2007 figure of 636.6 million tonnes. By reducing UK emissions and making such use of carbon units as is permissible under the forthcoming Regulations, the annual average for 2008–12 needs to be about 600 $mtCO_2e$. It can be seen that the role played by carbon units is critical to the question whether the carbon budget is exceeded.

The draft Definitions Order proposes that only carbon units which are attributable to EU ETS allowances may be credited to the UK carbon account [see Regulation 3] and until the EU ETS figures for 2008 have been published it remains uncertain what effect this may have on the initial estimate for 2008 given above. The draft Carbon Budgets Order 2009 proposes values for the first three budgets which follow very closely the figures recommended by the CCC as interim budgets:

	Budget 1 2008–12	Budget 2 2013–17	Budget 3 2018–22
Proposed Budget $mtCO_2e$	3018	2782	2544

Staying within budget

The Secretary of State is subject to a duty "to ensure that the net UK carbon account for a budgetary period does not exceed the carbon budget" (s.4(1)). The CCC's First Report[10] advises:

> "Achieving this path requires strong policies; some of these are already in place, some need to be reinforced, and some new ones will be required. But the path is attainable at manageable cost, and following it is essential if the UK is to play its fair part in avoiding the far higher costs of harmful climate change."

The principal measures recommended by the CCC in the short term are:

- energy efficiency improvement in buildings and industry;

[8] The author has given total figures but the report divides these into sectors and gases. Section 6 of Ch.9, p.360, shows the figures for CO_2 alone—and shows the recommended "interim" budget to be an average of 29% below 1990 levels for the period 2018–2022 (compared to the statutory requirement of 26%).

[9] An annual average of just over 600 $mtCO_2e$.

[10] Published December 1, 2008 and available at *http://www.theccc.org.uk* [Accessed April 2, 2009].

- fuel efficiency improvement in road vehicles;
- a significant shift towards renewable and nuclear power generation and renewable heat (principally through the use of biomass and heat pumps).

Even before the Climate Change Act was passed, the Government was required to set out in some detail what was being done to meet the various emissions reduction targets already in place (and how successful their policies had been in relation to those targets). The Second Annual Report to Parliament published on July 17, 2008[11] includes a comprehensive list of the various initiatives being promoted by Government at that time, together with a note on progress.

Some of these are too significant to pass over without at least a mention.

The Planning Act 2008 includes an entirely new system for obtaining development consent which is designed to facilitate the development of nationally significant infrastructure projects. These include the construction or extension of generating stations, and the Government believes that "Over the next two decades we will need to replace around a third of our electricity generating capacity".[12] The basis of any need for additional facilities will be addressed within the National Policy Statements which are intended to set the policy framework for the determination of applications by the Infrastructure Planning Commission (the decision-makers are still to be appointed at the time of writing this article, albeit recruitment is underway). Sir Michael Pitt's appointment as Chair was confirmed on March 30, 2009.

The first tranche of policy statements is to include an NPS for non-nuclear energy. Notably six of the 12 NPSs listed in the Route Map concern energy, and it is intended to publish them for consultation in the summer of 2009 with designation "early in 2010". The nuclear energy NPS is due to follow, with designation "spring 2010". In addition to consultation on NPSs, some 15 statutory instruments and guidance documents are to be introduced as Government works its way through the colourful Route Map towards full implementation of the Planning Act 2008.

The EU Emissions Trading Scheme has recently been amended to include aviation and this amended Directive must be transposed into UK law in full by February 2010. The Department of Energy and Climate Change has published draft Regulations to transpose the first stage of this process, which must be achieved by August 2009. The new Directive is seen as an essential first step towards a global mechanism to account for the greenhouse gas emissions caused by international aviation. In this country the Environment Agency is to be the regulator of the scheme.

The Environment Agency is also to be the administrator of the Carbon Reduction Commitment introduced under Pt III of the Climate Change Act 2008 and designed to encourage energy efficiency improvements in large commercial and public sector organisations. The CRC is a cap and trade scheme and will apply to commercial and public sector organisations from April 2010. It is designed to target emissions from energy use by large organisations, emissions which make up some 10 per cent of current UK emissions, and the scheme is expected to generate annual savings of 4.4mtCO_2 by 2020.[13]

Those organisations which have at least one meter settled on the half-hourly market and whose total half-hourly metered electricity use is greater than 6,000 megawatt-hours (MWh) during a qualifying

[11] Published under the Climate Change and Sustainable Energy Act 2006, available at *http://www.defra.gov.uk/environment/climatechange/uk/ukccp/index.htm* [Accessed April 2, 2009].

[12] See "The Route Map" published by Communities and Local Government document in January 2009. Website address: *http://www.communities.gov.uk/documents/planningandbuilding/pdf/routemap.pdf* [Accessed April 2, 2009].

[13] See the consultation document at *http://www.decc.gov.uk/en/content/cms/consultations/crc/crc.aspx* [Accessed April 2, 2009].

year (for present purposes this is 2008) are qualifying participants. Government participants include all government departments, the Scottish Executive, and the Welsh Assembly Government.

Keeping informed

For those monitoring progress against emissions reduction targets there will be no shortage of information, for the Act prescribes in sometimes agonising detail the series of reports required as part of the budget process. These are just some of them:

- "As soon as is reasonably practicable" after setting the budget, but after consulting the other national authorities, the Secretary of State must lay before Parliament a report setting out the range of figures within which he expects the net UK carbon account to fall for each year within the period of the budget (s.12(1)).
- Annually, the CCC must lay before Parliament a report on progress towards meeting the budgets, further progress needed, and whether the budgets are likely to be met. The first such report must be published by September 30, 2009 (s.36).
- The Secretary of State must lay before Parliament a response to the points raised by each of these reports of the CCC, after consulting the other national authorities, and within three-and-a-half months of the CCC's report (the first such response is due by January 15, 2010).
- The Secretary of State must lay before Parliament an annual statement containing the information particular to a given year as specified within s.16. The annual statement for 2008 is due by March 31, 2010 (s.16(10)).

In this way the Government is likely to get at least some advance warning of a failure to stay within budget (which would of course be a breach of statutory duty given the way the Act is framed—s.5). In that event there is some, albeit limited, room for manoeuvre:

- First, the Secretary of State may amend the budget at any time up to the end of the budgetary period itself, but only after taking, and taking into account, the advice of the CCC and consulting with the other national authorities. Amendments after the statutory date for setting the budget may only be made if it appears to the SoS that "there have been significant changes affecting the basis upon which the previous decision was made" (s.21(2)). If the budgetary period has already begun amendment may only be made if it appears to the Secretary of State that there have been such changes since the period began (s.21(3)).
- Secondly, the Secretary of State can bring forward a maximum one per cent of the next budget, so increasing the current budget. On the figures presented above (recommendations of the CCC) this would enable the Secretary of State to increase the interim budget for 2008–12 by a maximum 28 $mtCO_2$, although he would have to reduce the budget for 2013–17 by the same amount.

If the budget is not met, the final statement for the budgetary period (that for 2008–12 is due by May 31, 2014) will need to acknowledge the fact. As soon as is reasonably practicable thereafter the Secretary of State must lay before Parliament a report setting out proposals and policies "to compensate in future periods for the excess emissions" (s.19). What compensation will require is not specified.

Will it do the trick?

Some of the effects of global warming are, it is said, unavoidable, which make it necessary to address the question of adaptation. Recognising this, Pt IV of the Act imposes yet more advisory duties on the CCC and reporting duties on the Secretary of State (and "reporting authorities"[14]) designed to develop an appropriate programme for adaptation.

The CCC anticipates that cutting global greenhouse gas emissions by 50 per cent, so that total global emissions are 20–24 billion tonnes CO_2e in 2050, would limit their central expectation of temperature rise by 2100 to as close to 2 °C as possible, and reduce the risk of extremely dangerous climate change to very low levels. CO_2e concentrations would be expected to peak at around 500ppm by the end of the century before falling towards 450 ppm.[15]

They say: "The analysis clearly shows that the required reduction path is feasible." Nevertheless, it depends in large part on the success of behaviour-shaping policies and the availability of adequate investment, and the stakes could not be higher. As Lord Puttnam memorably put it at the second reading of the Climate Change Bill:

> "Should we fail to get to grips with this impending crisis, there will be no need to ask for whom the bell tolls. It will be tolling for every man, woman and child on this once quite beautiful planet."

The Climate Change Act is only a very small part of this global picture. Nevertheless, if it succeeds in bolstering the case for an equitable global deal; if it gives government the platform to make the policy decisions necessary to achieve the statutory targets it sets; and if it provides sufficient certainty and reassurance of this to businesses, individuals, and the public sector, so that they alter those millions of individual decisions that will between them be represented by the net UK carbon account, it may yet prove to be important. It may yet prove to be a powerful affirmation of our desire, and our ability, to do the right thing.

[14] See Climate Change Act s.70. These include local authorities.

[15] Sir Nicholas Stern's report was based on an estimate of current greenhouse gas concentrations of about 430 ppm CO_2e.