



**Taking Forward the UK Climate Change Bill:
The Government Response to
Pre-Legislative Scrutiny and
Public Consultation**

October 2007



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This document sets out the Government response to the public consultation on the draft Climate Change Bill and to the reports of the following Parliamentary Committees:

- The Ad Hoc Joint Committee on the Draft Climate Change Bill
- The Fifth Report of the Environment, Food and Rural Affairs Committee
- The Environmental Audit Committee, as part of its inquiry entitled *Beyond Stern: From the Climate Change Programme Review to the Draft Climate Change Bill*

*Presented to Parliament
By the Secretary of State for Environment, Food and Rural Affairs
By Command of Her Majesty
October 2007*

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Secretary of State's Foreword

Climate change is the greatest challenge facing our generation. It is the ultimate expression of our interdependence and its effects will be felt by all of us, in every corner of this small and fragile planet.

The debate about the science is over. The economic message is just as stark: doing nothing will cost us far more than dealing with the problem now. Collective and decisive action is needed if we are to deal with this threat and create a global low carbon economy. The urgency of the situation was underlined by the largest ever meeting of world leaders on climate change, hosted by the UN Secretary-General in New York in September.

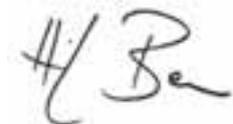
This Climate Change Bill demonstrates the UK's strong leadership on climate change, both at home and abroad. It puts in place a statutory goal of at least a 60% reduction in carbon dioxide emissions by 2050, with real progress by 2020. The targets will be supported by a new system of five-yearly "carbon budgets", set at least fifteen years ahead, with progress reported annually to Parliament. These will help us deliver our share of the European emissions reduction targets for 2020 that were agreed at the March 2007 European Summit. And as the Prime Minister announced in September, we will look to see whether our 60% target, which is already bigger than most other countries, should be even stronger still.

The Bill will create a new expert Committee on Climate Change to advise the Government on the best pathway to 2050, and will put in place new powers to set up schemes to reduce emissions. It also recognises that we are already feeling the impact of climate change, and sets out a sustainable approach to adaptation, with a commitment to produce a UK Government programme to deal with the risks posed by that impact.

The Bill was published in draft in March for public consultation and parliamentary scrutiny. Responses to the draft Bill have been very positive, reflecting the wide and increasing support for action on climate change. And the breadth of the public response – from youth groups through to major businesses – shows how important this issue is to so many people. I am also very grateful to the members of each of the parliamentary committees who scrutinised the draft Bill, and for the efforts of all those who provided evidence to support their inquiries.

This paper sets out our response to the parliamentary committees and the views expressed during the public consultation on the draft Bill. The committees' reports, together with these views, have helped significantly to strengthen the Bill and the transparency it will bring to our efforts to reduce emissions. A revised Bill, incorporating these changes, will be published shortly.

Other countries have been following the progress of the draft Bill with interest, and I hope it will encourage all of us as we tackle the greatest challenge we face as a world.



Hilary Benn
Secretary of State for Environment, Food and Rural Affairs
October 2007

Executive Summary

Overview

The UK Government is committed to tackling climate change, and has therefore proposed a Climate Change Bill. The Bill will introduce a clear, credible, long-term framework for the UK to achieve its goals of reducing emissions and taking steps to adapt to the impact of climate change.

A draft Bill was published for public consultation and parliamentary scrutiny in March.¹ This document responds to the views expressed by the parliamentary committees and during the public consultation, and sets out the main changes we intend to make before introducing the Bill to Parliament.

Context

The scientific case for action to tackle climate change is ever more compelling. As the UN's Intergovernmental Panel on Climate Change (IPCC) reported earlier this year, warming of the climate system is now "unequivocal". Eleven of the twelve warmest years since 1850, when records began, occurred between 1995 and 2006.²

The economic case for action is equally clear. As shown by the Stern Review of the economics of climate change, published in October 2006, and more recently by UN work on financing and investment flows, the costs of doing nothing are significantly greater than the expected costs of co-ordinated global action.³ Without efforts to tackle climate change, Stern predicts that it could cost the global economy between 5% and 20% of gross domestic product (GDP) now and forever, compared to much lower estimated costs of global action of around 1% of GDP by 2050, within a range of +/- 3%. And there will also be economic opportunities arising from the transition to a low carbon economy.

Early and decisive collective action is therefore needed if we are to tackle climate change. The European Union has already committed itself to reducing greenhouse gas emissions by 20% from 1990 levels by 2020, regardless of what happens in international negotiations. And the EU is prepared to go to a 30% reduction by 2020 as our contribution to a global and comprehensive agreement for the period beyond 2012, if others make their contribution. Domestically, the UK has made considerable progress in reducing emissions and is committed to moving to a low-carbon economy over time.

The Climate Change Bill will provide a clear, credible framework to support emissions reductions in the UK, in a way which maximises the social and economic benefits and minimises costs. The Bill also sets an international precedent, reinforcing the UK's

¹ CM7040, available from: www.official-documents.gov.uk/document/cm70/7040/7040.asp

² For further detail on the IPCC and copies of their reports, please see: www.ipcc.ch. Methodical thermometer-based records began in 1850.

³ The Stern Review, supporting papers and additional research are available from: www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm. Details on the UNFCCC work on finance and investment flows is at http://unfccc.int/cooperation_and_support/financial_mechanism/items/4053.php

position as a consistent leader in the field of climate change and energy policy. And by putting longer-term targets in legislation, it provides greater clarity for UK industry to plan effectively and invest in the technology needed in order to move towards a low carbon economy. The Bill will also take steps to help the UK to adapt to the impact of climate change.

Key elements of the Bill

In summary, the Bill:

- puts into statute the UK's domestic targets to reduce carbon dioxide emissions through domestic and international action by at least 60% by 2050 and 26-32% by 2020, against a 1990 baseline;
- requires us to set, in secondary legislation, binding limits known as carbon budgets on aggregate carbon dioxide emissions over five-year periods – with three budgets set ahead to help businesses plan and invest with increased confidence;
- creates a new independent body – the Committee on Climate Change – to advise on the setting of carbon budgets and the pathway to the 2050 target and to report annually on progress;
- contains enabling powers to introduce new trading schemes through secondary legislation, increasing the policy options which Government could use to stay within budgets and meet emissions targets;
- increases the transparency and accountability of UK action on climate change by introducing a new system of annual Government reporting to Parliament in response to the annual report by the Committee on Climate Change on the UK's progress; and
- requires the Government to assess the risks that climate change poses to the UK, and to report to Parliament on these risks and on its programme to address them.

Consultation and pre-legislative scrutiny

Nearly 17,000 individuals and organisations responded to the public consultation on the draft Bill, which closed on 12 June. An overwhelming majority of respondents were supportive of the Bill's aim to set and enable the achievement of ambitious emissions reduction targets. Three separate parliamentary committees (an ad hoc Joint Committee of MPs and Peers, the Environment, Food and Rural Affairs Select Committee, and the Environmental Audit Committee) also took evidence and made recommendations on the draft Bill.

This document explains the main changes the Government intends to make to the Bill before introducing it to Parliament, taking into account responses to the public consultation and the recommendations of the parliamentary committees. It also sets out a full response to each of the parliamentary committees' recommendations, and to individual comments made to the Joint Committee inquiry.

The Government intends to build on the proposals in the draft Bill by making the principal changes set out below. Following agreement with the Devolved Administrations, the revised Bill provides a UK-wide framework for tackling climate change.

Increasing the strength of the UK's carbon management framework

As announced by the Prime Minister in September, we will ask the Committee on Climate Change to report on whether the 60% reduction in emissions by 2050 should be even stronger still. This report will also look at the implications of including other greenhouse gases in our targets, and we will take powers to allow us to do this at a future stage if necessary. In addition, the report will also examine the implications of including international aviation and shipping emissions in our targets. The Government believes that these emissions should ideally be addressed at an international level. We are also pressing for the inclusion of aviation in the EU Emissions Trading Scheme (EU ETS) as soon as possible, as the most effective means of controlling aviation emissions. This will ensure that total emissions from aviation and other EU ETS sectors are kept below a fixed limit, with trading allowing this environmental goal to be met at least cost. When the EU ETS rules have been finalised, we will also ask the Committee on Climate Change for its advice on whether there is a methodology for including international aviation emissions in our targets which is workable and compatible with the EU ETS and takes account of progress in the United Nations Framework Convention on Climate Change (UNFCCC) and the wider international context, and on the impacts of adopting it.

Increasing the transparency and accountability of the UK's carbon management framework

The draft Bill proposed a strong system of annual accountability, under which every year the Committee on Climate Change would provide an independent report to Parliament on progress towards meeting targets and budgets, and every year the Government would respond to this report. We intend to further strengthen the transparency and accountability of the Bill's framework, by:

- requiring the Committee on Climate Change to publish its analysis and advice to Government on setting the budgets, as well as the minutes of its meetings;
- requiring the Government to explain its reasons to Parliament if it does not accept the Committee's advice on the level of the carbon budget, or if it does not meet a budget or target;
- rationalising and increasing the coherence of the current reporting requirements on carbon dioxide and other greenhouse gas emissions; and
- reporting annually to Parliament on emissions from international aviation and shipping in line with UNFCCC practice.

We believe this approach – five-year carbon budgets, which ensure that every year's emissions count, backed by strong annual accountability and independent scrutiny – provides the best balance between predictability and flexibility in ensuring that emissions are reduced as we make progress towards our 2050 target.

Strengthening the role and independence of the new Committee on Climate Change

The independent, expert Committee on Climate Change will play a vital role in advising Government on how to reduce emissions over time and across the economy, and in reporting annually to Parliament on progress. We intend to strengthen the Committee's role by requiring Government to seek the Committee's advice before amending the 2050 or 2020 targets in the Bill, before introducing the first set of regulations on the use of carbon credits, and before establishing any trading schemes under the Bill. This should further ensure that decisions are robust and based on a high level of transparent scrutiny. In addition, we intend to strengthen the Committee's independence of Government by confirming that it will appoint its own chief executive and staff, and plan to increase the resources which will be available to it in the light of the parliamentary committees' recommendations.

Ensuring greater impact on the UK's emissions

The Climate Change Bill will provide an overall framework for tackling climate change. In tandem with the proposals in the Energy White Paper, and the forthcoming Energy and Planning Bills, it will be part of a package of action to progress the UK's transition to a low carbon economy. We will also use the Climate Change Bill to: implement the Carbon Reduction Commitment – a mandatory cap-and-trade scheme covering energy use emissions from large, non-energy-intensive organisations; improve the operation of the Renewable Transport Fuel Obligation (RTFO); and provide a power to pilot local authority incentives for household waste minimisation and recycling. We will announce proposals in due course. Together, these policies could save the equivalent of up to 9.4-13.9 million tonnes of carbon dioxide equivalent per year by 2020. And the Bill will contain further powers allowing us to introduce new trading schemes through secondary legislation, following full public consultation and parliamentary scrutiny.

Adapting to the consequences of climate change

Tackling climate change requires a two-pronged effort: action to reduce greenhouse gas emissions in order to avoid future dangerous levels of climate change, and action to deal with the impact that we are already experiencing and will continue to experience over coming decades. The UK's economic, environmental and social direction over the coming years will be significantly affected by our ability to adapt to these changes. The Bill will therefore require the Government, on a regular basis, to assess the risks to the UK from the impact of climate change and report to Parliament. In addition, the Bill will also require the Government to publish and regularly update a programme covering England and reserved matters setting out how we will address this likely impact. This adaptation programme will be based on the principles of sustainable development, which will help ensure that environmental, economic and social issues are all fully considered.

The Government believes that the Bill has been substantially improved by the process of pre-legislative scrutiny, and is most grateful to the parliamentary committees for their work and to all those who responded to the public consultation. We plan to introduce the revised Bill in the forthcoming parliamentary session.

Introduction

Context

- i. The draft Climate Change Bill was launched by the Prime Minister on 13 March 2007, and was widely welcomed for providing a clear, flexible framework to support reductions in carbon dioxide emissions in the UK. The draft Bill also set an international precedent, reinforcing the UK's position as a consistent leader in the field of climate change and energy policy.
- ii. This document takes the Climate Change Bill one step further. It explains the main changes the Government intends to make to the Bill before introducing it to Parliament, taking into account responses to the public consultation and the recommendations of three separate parliamentary committees.

Key elements of the Bill

- iii. The Bill provides a framework for tackling climate change through the following main elements:

Setting targets in statute and carbon budgeting

- iv. It is intended that the Bill will establish an economically credible emissions reduction pathway to 2050 and beyond, by putting into statute medium and long-term targets. These targets already exist on a non-statutory basis. In addition, a system of carbon budgeting is proposed. This means that for successive five-year periods, starting with the period 2008-12, there will be a limit on total carbon dioxide emissions. The Bill proposes that carbon budgets be set at least three periods (i.e. for fifteen years) ahead. This approach provides for both certainty and flexibility in the system: emissions can vary between years provided the total over a five-year period does not exceed the budget. The series of five-year carbon budgets will provide a trajectory from now to 2050, thereby providing a clear framework of expected emissions reductions over time.

Establishing a Committee on Climate Change

- v. The Bill proposes to create a new institutional framework within which to manage the UK's transition to a lower carbon economy, through establishing a new independent body, the Committee on Climate Change ("the Committee"), to advise the Government and Devolved Administrations on how to reduce emissions over time and across the economy. This expert body will advise on the trajectory to 2050 by giving advice on the level of carbon budgets, on how much effort should be made in the UK and overseas, and on how much effort should be made by the part of the economy covered by cap and trade schemes and by the rest of the economy.

Creating enabling powers

- vi. This part of the Bill proposes new powers to enable Government to introduce new domestic emissions trading schemes through secondary legislation. This increases the policy options which Government could use to reduce emissions and meet the medium and long-term targets in the Bill.

Reporting requirements

- vii. The reporting element of the Bill will enhance the overall transparency and accountability of UK action on climate change. It is proposed that the Committee on Climate Change will have a specific role in reporting annually to Parliament on progress towards budgets and targets, with the Government required to lay before Parliament an annual response to this independent report.

Adaptation

- viii. The Bill will also set out a procedure for assessing the risks of the impact of climate change for the UK, and a requirement on the UK Government to develop an adaptation programme on matters for which it is responsible. This adaptation programme will be based on the principles of sustainable development.

Responses to the draft Bill

- ix. Nearly 17,000 individuals and organisations responded to the public consultation, which closed on 12 June. A wide spectrum of the public, including scientific bodies, environmental groups, businesses, religious organisations and many others gave their support to the draft Bill. The overwhelming majority of respondents were supportive of the Bill's aim to set and enable the achievement of ambitious emissions reduction targets.

- x. Commenting on the publication of the draft Bill, the Confederation of British Industry (CBI) said,

British businesses are already cutting emissions but they can do more, and this bill is a big step forward in combining the two things we really need: long-term clarity on policy direction and flexibility in its delivery. Setting legally binding targets for 2020 and 2050 shows the UK is serious in leading the global response to climate change. Five year carbon budgets support this by giving us scope to review how quickly we can move to those targets in the light of economic, scientific and international developments.

- xi. Environmental groups were also supportive – for instance, Friends of the Earth said,

We are delighted that the Government has recognised the need for a new law to tackle climate change. The UK will be the first country in the world to introduce a legal framework for reducing carbon emissions.

- xii. We are very grateful to all the organisations, sectors and individuals who took time to submit responses to the consultation. A summary of responses is available at: www.defra.gov.uk/corporate/consult/climatechange-bill/index.htm

- xiii. Parliament has taken a strong interest in the Bill, and three separate parliamentary committees scrutinised the draft Bill: a Joint Committee of Peers and MPs, the Environment, Food and Rural Affairs Committee, and the Environmental Audit Committee (as part of its enquiry entitled *Beyond Stern*:

From the Climate Change Programme Review to the Draft Climate Change Bill).⁴ In its report on the draft Bill, the Joint Committee said,

*We warmly welcome the introduction of a Climate Change Bill. It is heartening to see the UK continue to take a lead in tackling global issues relating to climate change by providing the world's first comprehensive legislation in this area.*⁵

- xiv. The reports of the scrutiny committees, in tandem with the consultation responses, have been enormously useful in enhancing the carbon management framework set out in the Bill. Section A of this document explains the main changes we propose to make to the Bill as a result of this scrutiny process and the public consultation. Detailed responses to the recommendations of each parliamentary committee are provided in section B, and responses to evidence submitted to the Joint Committee in section C.
- xv. In many cases the recommendations of the parliamentary committees highlight policy issues which do not fit within the scope of the Bill, but which are still important to look at in more general terms. We will take these considerations into account when developing overall Government policies to tackle climate change, including those needed to meet the targets and budgets in the Bill.
- xvi. Since the draft Bill was published, the Government has been working closely with the Devolved Administrations to ensure that the Bill is consistent with each Devolved Administration's respective devolution settlement. A separate concordat is being developed by the UK Government and Devolved Administrations setting out the detailed handling of specific issues. An overview of the changes we propose to make to the Bill to take account of devolution is set out in section A of this publication.

⁴ These reports are available on the Parliament website as follows:

- Joint Committee [HL 170-I/HC 542-I; HL 170-II/HC 542-II]: www.publications.parliament.uk/pa/jt/jtclimate.htm#reports
- EFRA Committee [HC534-I /HC534-II]: www.publications.parliament.uk/pa/cm/cmenvfru.htm#reports
- EAC [HC-460]: www.publications.parliament.uk/pa/cm/cmenvaud.htm#reports

⁵ HL Paper 170-I / HC 542-I, August 2007; available from: www.publications.parliament.uk/pa/jt200607/jtselect/jtclimate/170/170i.pdf

Part A

Enhancing the UK's carbon management framework

This section sets out the main changes we intend to make to the Bill before its introduction. It is organised by theme, addressing the issues which came out most strongly from the parliamentary committees' recommendations and in responses to the public consultation.

Since publication of the draft Bill, we have worked with the Devolved Administrations to clarify how the Bill will operate, given the complex interplay of reserved and devolved responsibilities in this area. We are pleased that a way forward has been agreed, so that the revised Bill will reflect the contributions of all four administrations and will provide a clear UK-wide framework for tackling climate change. The situation is summarised in paragraphs 6.1-6.4 below, and further details will be set out in the revised Bill when it is published.

1. Targets and budgets

The 2050 target

- 1.1 The central focus of the Climate Change Bill is the long-term target to reduce the UK's carbon dioxide (CO₂) emissions by at least 60% by 2050. This target was established in the 2003 Energy White Paper in response to a recommendation from the Royal Commission on Environmental Pollution, in their 2000 report *Energy – the Changing Climate*.⁶ The target is also consistent with the conclusions of the February 2007 EU Environment Council, which state that global greenhouse gas emissions need “to peak within the next 10 to 15 years, followed by substantial global emission reductions of up to 50% by 2050 compared to 1990”, and the March 2007 Spring European Council conclusions, which state that,

*The European Council reaffirms that absolute emission reduction commitments are the backbone of a global carbon market. Developed countries should continue to take the lead by committing to collectively reducing their emissions by 60% to 80% by 2050 compared to 1990.*⁷

- 1.2 There is considerable stakeholder consensus around 60% as an ambitious commitment for the UK, in line with our leading position internationally. It is also consistent with the view taken by the Stern Review that developed countries will need to make cuts through domestic and international action of 60-80% in greenhouse gases by 2050 consistent with a 450-550 parts per million (ppm) stabilisation scenario.⁸
- 1.3 Reactions to the draft Bill underlined the importance of the 2050 target. In particular, there was detailed discussion of the following key elements:

⁶ Available from: www.rcep.org.uk/newenergy.htm

⁷ Paragraph 30 of the Presidency Conclusions, available from: www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/ec/93135.pdf

⁸ See the Stern Review on the economics of climate change, available from: www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm

- Is 60% the right level?
- Is it appropriate to focus on CO₂, or should the target also include emissions of other greenhouse gases?
- Should the target also include emissions from international aviation and shipping?

i) Is 60% the right level?

- 1.4 Views on the target level were put forward in two broad groups: those who supported the existing target, as long as it is kept under review; and those pressing for a higher percentage. The rationale behind the second position was largely based on the changing scientific picture in recent years, and on calculations about the likely reductions in global emissions which will be needed if we are to achieve particular stabilisation goals.
- 1.5 We recognise that understanding of both the science and the economics of climate change has improved significantly since the 60% target was originally set in 2003. The Working Group reports of the Intergovernmental Panel on Climate Change which have been published this year confirm that atmospheric concentrations of the major greenhouse gases have all increased significantly since pre-industrial times. The reports show that CO₂ concentrations have risen by over one third between 1750 and 2005, to 379 ppm; when the other major greenhouse gases are taken into account this is equivalent to around 430ppm CO₂e.⁹
- 1.6 The Stern Review of the economics of climate change, published last year, estimated that the costs of inaction on climate change significantly outweigh the expected costs of co-ordinated global action. Without efforts to tackle climate change, Stern predicts that it could cost the global economy between 5% and 20% of gross domestic product (GDP) now and forever, compared to much lower estimated costs of global action to stabilise atmospheric concentrations (at 550ppm CO₂e) of around 1% of GDP by 2050, within a range of +/-3%.
- 1.7 In considering the most appropriate way forward, we are also mindful of the fact that climate change is a global problem which demands a global solution. The UK has been a consistent leader in the field of climate change and energy policy by setting bold targets and pursuing policies, both domestically and internationally, relating to mitigating and adapting to the impact of climate change. Ultimately, co-ordinated global action will be essential to tackling the problem.
- 1.8 The UK is therefore committed to securing a strong multilateral agreement for the post-2012 period that achieves the overarching UNFCCC objective of avoiding dangerous climate change. Securing multilateral agreement is not in the UK's gift alone, and the outcome is difficult to predict, but we and other developed countries can make it more likely by effectively influencing the actions and positions of others. The UK has therefore successfully pressed for ambitious action at EU level, with agreement at the 2007 Spring European

⁹ Source: IPCC, 2007: *Climate Change 2007: the Physical Science Basis*. Available from: www.ipcc.ch

Council on the emissions reduction targets required by both 2050 and 2020.¹⁰ The targets in the Bill are consistent with these stated ambitions.

- 1.9 In considering the level of the 2050 target, the Government also needs to take account of the economic costs and benefits of any new target. Initial analysis, to be published alongside the revised Bill, indicates a potentially increased impact on GDP for a higher 2050 target, but this would clearly depend on the trajectory towards the target and the policies implemented to reach it. However, this analysis is very preliminary, and limitations within the model used mean that a far more sophisticated exploration is needed of the potential impacts of different 2050 targets.
- 1.10 We also need to consider whether the scope of the 2050 target should be broadened, for instance to include other greenhouse gases as well as CO₂ (as discussed below in paragraphs 1.15-1.18). If the scope of the 2050 target was to be changed (e.g. to include other greenhouse gases), we would also need to consider the implications for the level of the target.
- 1.11 It is important that the 2050 target is set at a level which reflects all these considerations and which is based on thorough, expert and independent analysis. As the Prime Minister announced on 24 September 2007, we will therefore ask the independent Committee on Climate Change “to report on whether the 60% reduction in emissions by 2050, which is already bigger than most other countries, should be even stronger still.” We believe that this is the most thorough and credible means of ensuring that the target remains both ambitious and realistic. The Committee on Climate Change will have the independence and the right expertise and resources to produce such a report. Armed with this technical analysis, Ministers will be a position to take a balanced view of the most appropriate level, taking account of international progress.
- 1.12 The Joint Committee and EFRA Committee were among those who supported this approach. The Joint Committee stated,
- Recognizing how very demanding the target set out in the draft Bill for 2050 is, and facing up to both the complexity of domestic budgeting and international requirements, we conclude that the approach adopted by the Government is appropriate provided that it is understood that this is but the first step along a path towards a low-carbon future for the UK.*
- We believe that as soon as possible after it is established, the Committee on Climate Change should review the most recent scientific research available and consider to what extent the target should be higher than 60%, with a view to making recommendations on the appropriate amendment to the long term target.*
- 1.13 Furthermore, to ensure that all decisions on the long-term targets are based on the best possible evidence and independent analysis, we intend to amend the Bill so that the 2050 target can only be amended once the Committee’s advice has been sought and taken into account.

¹⁰ See paragraphs 30 and 31 of the Presidency Conclusions, available from: www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/ec/93135.pdf

1.14 We intend that the Committee should undertake this work as soon as it has made recommendations on the first three budgets, and should report by autumn 2009. This will ensure that the first carbon budgets are in legislation as soon as possible, and that these budgets act as a cap on UK emissions from the earliest possible stage. By the time the Committee reports on the 2050 target, we will hopefully also have a clearer picture of the direction of travel internationally, which will provide additional context for the Committee's analysis.

ii) Should the target also include other greenhouse gases?

1.15 There have been strong calls for the target to be amended so that it includes all greenhouse gases rather than only CO₂. We recognise the logic for this: a number of greenhouse gases contribute to climate change. International negotiations and abatement mechanisms are based on a "basket" of gases, reflecting the broader picture.¹¹ Including a wider basket of gases within the target would also allow for the most cost-effective abatement options to be considered.

1.16 The draft Bill focussed on CO₂ because this is where the deepest cuts are needed. In 2005 CO₂ made up slightly less than 85% of all UK greenhouse gas emissions, and climate change mitigation will not be possible without specific actions focussed on reducing CO₂ emissions. We therefore believe that introducing the Bill on a CO₂-only basis remains a credible approach, and note that the Joint Committee also agreed with this approach. In addition, there is still significant uncertainty about the cost-effective abatement potential for non-CO₂ gases, particularly in the longer term.

1.17 However, to ensure that we are able to move quickly to include other greenhouse gases in our targets, we intend to amend the Bill so that it is possible to include other greenhouse gases in the targets in future. We will also ask the Committee, as part of their analysis of the 2050 target, to consider the implications of including other gases on the level of the target.

1.18 In addition, as recommended by the Joint Committee, we intend to report annually to Parliament on emissions of all greenhouse gases, to ensure maximum transparency.

iii) Emissions from international aviation and shipping

International aviation emissions

1.19 Emissions from domestic aviation are included in the Bill's targets: in 2005, emissions from domestic aviation accounted for approximately 0.4% of the UK's CO₂ emissions. The draft Bill allowed for emissions from international aviation and shipping to be included in our targets following a change in international practice.

¹¹ The basket of greenhouse gases covered by the Kyoto Protocol are: CO₂, nitrous oxide (N₂O), methane (CH₄), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆).

- 1.20 Emissions from international aviation are not currently included in the UK's targets due to the particular nature of aviation as an international industry. Aviation operates in large part in international airspace and is governed by international organisations, treaties and laws under which states have to operate. Given aviation's international nature, the Government believes that an international solution would be ideal. However, there is currently no agreement on how to allocate these emissions to individual countries. For example, it is not immediately obvious how to allocate responsibility for emissions from a flight by an Australian-owned airline from London to Sydney, stopping only to refuel in Dubai.
- 1.21 The UK is therefore pressing internationally through the United Nations Framework Convention on Climate Change to establish an agreed basis for allocating international aviation emissions and for international aviation to be brought within a global post-2012 framework for addressing climate change. Formal discussions on such a future framework will continue at the UNFCCC 13th Conference of the Parties in Bali in December this year.
- 1.22 With our European partners we will continue to press the International Civil Aviation Organization (ICAO) to develop comprehensive measures to address aviation emissions. The 36th ICAO Assembly in September 2007 produced an outcome that was not as ambitious as we would have hoped. Nevertheless, Europe ensured that it was able to continue with its emissions trading proposal and pushed ICAO into setting up a high level Group on Aviation and Climate Change that will develop a programme of action to address aviation emissions.
- 1.23 We acknowledge that global agreement in relation to international aviation emissions may be difficult to achieve in the form we would like. While we want to allow time for these discussions to take place, and potentially for agreement to be reached, we cannot afford to wait indefinitely.
- 1.24 In the meantime, and in addition to action at the global level, the UK is therefore continuing to press for the inclusion of aviation in the EU Emissions Trading Scheme as soon as possible, ideally within Phase II (2008-2012). The UK has led this debate within Europe since the UK Presidency of the EU in 2005 when, under our chairmanship, the EU Environment Council agreed that emissions trading seemed to be the best way forward and called upon the Commission to produce a legislative proposal by the end of 2006, which was achieved.
- 1.25 The terms of aviation's inclusion in the EU ETS are still subject to negotiation, but the current Commission proposal is that aviation would be included from 2011,¹² and that each year to 2020 the aviation sector would only be allocated allowances equivalent to its emissions at the average of 2004-6 levels. This would mean that any growth in aviation emissions above 2004-6 levels would be fully offset by requiring airlines to pay for the equivalent emissions reductions from elsewhere. This would be the case regardless of whether this growth in emissions was from new airports or provision of new routes. According to the Commission's Impact Assessment, this could be reflected in higher prices for flying, potentially reducing demand. The Government's view is that the EU ETS provides a strong policy lever to tackle aviation emissions,

¹² The Commission proposal is to include intra-EU flights from 2011 and all flights arriving at or departing from EU airports from 2012.

ensuring that total emissions from aviation and other EU ETS sectors are kept within limits while minimising any impact on the competitiveness of the UK aviation industry. The EU ETS also provides flexibility, so that emissions are reduced in the sectors and in the locations where it is most cost-effective to do so.

- 1.26 In their reports, the different parliamentary committees examining the Bill recognised that this was a complex area. The EFRA Committee recommended that *“once international agreement is reached, the Committee on Climate Change should include the UK’s share of emissions from international aviation and shipping in its recommendations for the targets”* (recommendation 24), while the Joint Committee believed that international aviation emissions should be included in the UK’s targets once they are incorporated into the EU ETS, and the EAC said that *“we do not believe the Government needs to wait until the terms under which aviation will enter the EU ETS are fully confirmed”* (recommendation 24).
- 1.27 As set out in our evidence to the different parliamentary inquiries, the Government believes that there are a number of important issues which need to be addressed, and we are already taking steps to do so. As the parliamentary committees recognised in their reports, including international aviation emissions in the UK’s targets could have an impact on both the level of the targets and on the effort required from other sectors of the economy. We will therefore ask the new, independent Committee on Climate Change to look at the implications of including international aviation in the UK’s targets, as part of its overall review of the 2050 target.
- 1.28 In addition, as noted above there is not yet international agreement on how to allocate international aviation emissions to individual countries. To include these emissions in the UK’s targets, we would therefore need a workable methodology to calculate “the UK’s share” of these emissions, and which took account of the international context. In addition, given that aviation emissions are likely to be included in the EU ETS soon, any methodology to include these emissions in the UK’s targets would also need to be compatible with the way that emissions and credits are allocated under the EU ETS rules.¹³ Therefore, once the EU ETS rules have been finalised, we will ask the Committee for its advice on whether there is a methodology for including international aviation emissions which was workable and compatible with the EU ETS and takes account of progress in the UNFCCC and the wider international context, and on the impacts of adopting it.
- 1.29 To ensure transparency and in response to the recommendations of the parliamentary committees, we intend to place a requirement on the Secretary of State to report annually to Parliament on emissions from international aviation, in line with UNFCCC practice. In addition, revised aviation emissions forecasts

¹³ For instance, it is expected that under the EU ETS, emissions and credits would be allocated to airlines rather than countries. It is not yet clear how this would sit with the system of national responsibility under the Bill. Furthermore, it is likely that the cap on aviation emissions would be set centrally, at an EU-wide level. This raises issues about the scope for the UK to reduce “the UK’s share” of these emissions beyond its share of the EU-wide cap as, given the nature of emissions trading, reducing emissions in one country covered by an EU-wide cap would free up emissions credits to be used elsewhere within the scheme.

will be published later this year, building on the Air Transport White Paper Progress report.¹⁴

International shipping emissions

- 1.30 Emissions from domestic shipping are included in the UK's targets and budgets under the Bill. In 2005, emissions from domestic shipping accounted for approximately 0.8% of the UK's CO₂ emissions.
- 1.31 The Government's view is that international shipping emissions (as with international aviation emissions) are best addressed at an international level. The UK is therefore continuing to press for international action for the maritime sector via the International Maritime Organization (IMO). The main focus of this work is in the IMO's Marine Environment Protection Committee. This Committee's meeting in July 2007 considered control measures for greenhouse gas emissions from ships, and set up a correspondence group with a remit to examine possible technical, operational and market-based measures to address them. It is to report at the Committee's next meeting in March 2008.
- 1.32 Should discussions at international level not proceed sufficiently quickly, the UK is also looking at other options, such as the possibility of regional action on the part of the EU – perhaps through including shipping emissions within the EU ETS. In the meantime, the UK will continue to investigate other options for reducing emissions from ships, such as improved technology and better operator practices.
- 1.33 As the Joint Committee recognised, international discussions on how best to deal with international shipping emissions are less far advanced than in the aviation sector. Data are uncertain and incomplete and the methodological issues are also more complex, as ownership and registration of ships and freight carried by ships are more flexible; ships have far greater capacity than planes to store fuel bought elsewhere (rather than refuelling in every port); and they can also refuel from tankers in international waters. Historic emissions from UK international shipping bunker fuel sales have shown no discernable trend since 1980, despite significant increases in global seaborne trade and activity at UK sea ports. It is thought that UK bunker fuel sales are largely determined by the relative price of fuel between international ports, rather than reflecting the UK's share of international seaborne trade.
- 1.34 Our current "best estimate" of future emissions from bunker fuel sales is a continuation of the current "long-term average", although we would not describe such an estimate as a forecast as it contains a significant degree of uncertainty. However, to increase the transparency of this sector's contribution to climate change, we accept the Joint Committee's recommendation that the Government should report annually to Parliament on emissions from international shipping, in line with UNFCCC practice. In addition, we will ask the Committee on Climate Change to look at the implications of including international shipping emissions in the UK's targets, as part of its overall review of the 2050 target.

¹⁴ Available from:

www.dft.gov.uk/about/strategy/whitepapers/air/aviationprogressreportsection/aviationprogressreport

- 1.35 Furthermore, and again as recommended by the Joint Committee, we can confirm our commitment to decouple “aviation and shipping”, so that it would be possible to include one sector’s international emissions within the UK’s targets, even if issues remained to be resolved over the other sector.

Annual milestones

- 1.36 The Bill creates a duty for the Government to set carbon budgets, defined as an amount for the net UK carbon account for a given period. Three carbon budgets must be in legislation at any one time, providing a clear ongoing fifteen-year trajectory which provides UK businesses and households with improved certainty for future planning and investment.
- 1.37 The five-year budgets will ensure that the first budget period, 2008-12, runs concurrently with international timescales: the first commitment period under the Kyoto Protocol and the second phase of the EU ETS. There is flexibility under the Bill to amend the length of budget periods if international practice changes.
- 1.38 We welcome the support of each of the parliamentary committees for the system of five-year budgets set out in the draft Bill. In addition, the degree of certainty provided by the proposed approach has been supported by businesses in responding to the consultation. This clear statement of intent at the UK level helps to mitigate the effects of current uncertainty about the international situation post-2012.
- 1.39 Some commentators have proposed annual targets or milestones in addition to the five-year budgets. However, the Government believes strongly that the longer budget period is appropriate. An annualised approach would be inconsistent with the UK’s international obligations, which are based on five-year budgets. In particular, it would be impractical to manage annual budgets for those businesses covered by EU ETS, representing around half of the UK’s emissions, since that system operates on five-year periods and firms can trade freely within the period and across the EU to meet their obligations.
- 1.40 In addition, a carbon budget makes very clear that every year’s emissions count towards the overall budget. There are no consequences for high emissions in an individual year, as long as the aggregate emissions for the five-year period do not exceed the limit set out in the budget. This provides essential flexibility within the system, as annual emissions figures will vary naturally from year to year. Evidence shows for instance that annual fluctuations in the weather can have big impacts on emissions, as people turn up their heating. Lower temperatures in 1996 and 2001, for example, correlated with increases in emissions of around 3-4% compared to the years either side. It would be illogical for the UK to “miss its target” as a result of such normal annual variation; this would undermine the credibility of the system.
- 1.41 There are also considerable time-lags in the availability of emissions data which would make annual targets or milestones even more impractical. Provisional emissions figures are not available until after the year in question has already finished, and the final emissions figures are not available until more than a year later. Given these time-lags and uncertainties, and the circumstantial fluctuations outlined above, annual targets or milestones would therefore

increase the risk of greater mitigation costs (for example, costly policies might be rushed through towards the end of a year to achieve short-term reductions, or international emissions credits might need to be purchased after the year had already finished), when effort might instead be more effectively deployed in ensuring that emissions are reduced more smoothly over time to ensure that the budget as a whole was met.

- 1.42 However, we recognise and strongly agree with the need for the Government to be held accountable on an annual basis for progress against the budget. The five-year budgets will therefore be backed by a strong annual emissions reporting system which builds on our existing EU and international commitments. In addition, every year the Committee on Climate Change will be required to give its independent report on progress towards meeting the targets and budgets, and every year the Government must respond to these reports. Both the Committee's report and the Government's response must be laid before Parliament, to ensure a high level of scrutiny. Furthermore, when setting each budget, Government must also produce a report on its policies and proposals for ensuring that the required emissions reductions are made. And after the end of each budget, the Committee will be required to give its independent assessment of the way in which the budget was or was not met.
- 1.43 The concept of five-year budgets for national emissions reductions is already ground-breaking, as has been widely recognised. It is also a credible approach, providing a good balance between predictability and flexibility, while avoiding costly one-off reductions in target years only. And we will back it up with an enhanced framework of annual Government accountability to Parliament, scrutinised by the independent Committee. We therefore do not believe that annual targets or annual milestones are either necessary or helpful.

2020 target

- 1.44 The 2020 target – to reduce CO₂ emissions by 26-32% by 2020 compared with 1990 levels – is included in the Bill to provide a useful “way-point” on the path to the 2050 target. It helps to define the possible trajectory, and therefore cumulative emissions reductions, to 2050. The different parliamentary committees supported the inclusion of a 2020 target in the Bill, and it is clear from responses to the public consultation that business welcomes this clear and credible interim target, given the long-term nature of the trajectory to 2050.
- 1.45 Each of the committees has recognised that achieving the lower end of the 2020 target range (a 26% reduction in CO₂ emissions) is likely in itself to be challenging. Including an upper limit to this range (a 32% reduction in CO₂ emissions) also serves to provide greater and earlier certainty to business as to the likely path of the trajectory to 2050. This should help facilitate the investment decisions that will be necessary to pave the way to a low carbon economy.
- 1.46 The importance of the 2020 target in driving investment decisions in the short term can be demonstrated for instance by the fact that the UK will need around 20-25GW of new power stations by 2020, if we are to maintain levels of

electricity generation capacity equivalent to those available today.¹⁵ These new power stations will need to be built in good time to replace the closures of capacity and to meet increases in demand. As a plant will typically have a lifetime of some 25-60 years, decisions about how this capacity is provided will be crucial in setting our emissions reduction trajectory to 2050 and beyond. The predictability provided by a clear, stretching 2020 target will be important in ensuring that the need to tackle climate change is properly taken into account in these investment decisions.

1.47 In addition, we would note that the Bill does not rule out reducing emissions by more than 32% in 2020, as any surplus effort could be banked into the subsequent budget period. Although the Committee will examine this further as part of its review of the 2050 target, we would also note that initial analysis suggests the current 2020 range is consistent with progress towards both the existing 2050 target and a range of other possible 2050 target levels. For the reasons set out above, we therefore intend to retain the 2020 target range as set out in the draft Bill. However, as part of the review of the 2050 target, we will also ask the Committee on Climate Change to consider the implications for the level of, and greenhouse gases covered by, the 2020 target, and provide advice accordingly.

Use of international credits

1.48 The Bill includes trading of international emissions credits within the UK net carbon account, just as is done for the Kyoto Protocol, including allowing Government to trade international emissions reduction credits as part of its approach to meeting the targets and budgets. This binds UK and international effort together. We also believe it is important that the Government and UK organisations can make effective use of international mechanisms for achieving emissions reductions at least cost to avoid making our targets needlessly expensive. The Kyoto Protocol's "flexible mechanisms" and the EU ETS are based on this principle, to provide this option and to act as a means of securing and coordinating international action and as a way of helping developing countries achieve low carbon economies.

1.49 A number of consultation responses and parliamentary committee recommendations raised concerns about the purchase of international credits in relation to targets in the Bill. Some questioned the quality and genuine "additionality" of these credits.¹⁶ We agree that it is essential that any credits bought by the UK represent real emissions reductions which would not have taken place otherwise. For this reason we are working hard at international level to support continued improvement in the procedures governing the international mechanisms, such as in the setting of baselines and for the establishment of additionality. Increased transparency and public scrutiny can also play an important role in ensuring high standards are met.

1.50 Other respondents called for a limit to be set on the number of credits that can be purchased overseas. We have given this proposal careful consideration, acknowledging that one of the Bill's key aims is to set a framework for domestic

¹⁵ Source: *Meeting the Energy Challenge. A White Paper on Energy*; 2007. Available from: www.berr.gov.uk/files/file39387.pdf

¹⁶ This pertains to whether the project reduces emissions more than would have occurred in the absence of the project.

action. There is considerable potential for cost-effective measures to reduce emissions in the UK and bring benefits to the UK economy, and the Government's detailed policies and proposals for meeting each five-year budget will be set out in a report to Parliament. However, as the EAC recognised this is a complex area,

This must not become an "either/or": the Government should ensure that the UK's targets are sufficiently challenging that they drive decisive emissions reductions at home and abroad.

- 1.51 We agree with the EAC's view that the key factor in determining how far emissions are reduced under the Bill will be the level of the UK's targets and budgets. In terms of the balance between domestic and international action, the Committee will advise on the use of international emissions reduction credits when making recommendations on each budget, and we anticipate that this advice will take into account the most recent international circumstances and best practice. We would also note that the UK remains strongly committed to the international principle of complementarity, which states that "the use of the [Kyoto] mechanisms shall be supplemental to domestic effort and...domestic action shall thus constitute a significant element of the effort made by each Party..."¹⁷ We therefore envisage that the final decision on the level of credits purchased will need to be taken in the context of the Government's overall policy framework for meeting targets and budgets. Given the existing international rules on complementarity, and on the use of overseas credits in the EU ETS, we do not believe that it would be appropriate to place further limitations in the Bill on the number of credits that can be purchased overseas.
- 1.52 Other respondents were concerned about the transparency and accountability with which the use of emissions credits will be reported. A number of provisions within the Bill ensure a high level of transparency and accountability in relation to the purchase of credits. The Committee on Climate Change will report annually to Parliament on progress towards meeting the budget, including the amount and type of credits used in doing so.
- 1.53 Some respondents, including the House of Lords Delegated Powers Committee, were concerned about the level of parliamentary scrutiny of the framework for using credits. As recommended by the Delegated Powers Committee, we will therefore require the first set of regulations on credits and debits to be subject to the affirmative procedure, to provide additional reassurance that the basic framework for managing carbon credits is satisfactory.

Accountability and compliance

- 1.54 The Bill puts the Government's ambitions to cut emissions on a statutory footing. Ministers have a duty to abide by the law and this fact in itself gives the targets and budgets very great importance. As the EFRA Committee recognised, there will be political pressure on Government beyond the legal framework itself:

¹⁷ This is stated in the Marrakesh Accords, a set of agreements reached in 2001 on the rules for meeting the targets set out in the Kyoto Protocol. The text on complementarity was reported in Decision 15 (15/CP.7), available from: <http://unfccc.int/resource/docs/cop7/13a02.pdf> - page=2

by institutionalising the targets, the political pressure to achieve them will be increased. The Government of the day will also be subject to 'the court of public opinion'.

- 1.55 Our view is that the duties in the Bill – including the requirement to meet the targets and budgets – are stringent and legally enforceable. The statutory basis means that any failure to meet a target or budget carries the risk to Government of judicial review, with sanctions at the discretion of the courts. No Government will take this risk lightly.
- 1.56 We intend to enhance the Bill's leverage further by introducing a new duty on the Secretary of State to report to Parliament explaining the reasons for not accepting the advice of the Committee on Climate Change on the level of the carbon budget, where this is the case. We agree with the Joint Committee that this mechanism will "increase the Government's level of accountability within Parliament". We also intend to amend the Bill to require Government to provide an explanation to Parliament in the event that the targets and/or budgets in the Bill are not met, thereby enhancing the role that political and public embarrassment will have in compelling Government to comply with these duties.
- 1.57 This new duty to explain to Parliament is not intended to be an alternative to compliance with the targets and budgets in the Bill. Judicial review could still be sought against the Secretary of State for failing to comply with the Bill's requirements, and the court would still be able to order an appropriate remedy.
- 1.58 We do not consider that other compliance mechanisms which have been proposed would, in reality, strengthen the framework introduced by the Bill. In addition, some of them (for instance, a proposal to suspend the right of the Government and UK business to participate in international emissions trading) could run counter to the rules of the EU ETS. Furthermore, attempting to set out specific sanctions within the Bill itself carries a risk that whatever sanction was specified might be *less* stringent than one which could be prescribed by a court of law.
- 1.59 The revised Bill therefore reflects our strongly-held view that the duties in the Bill are legally enforceable and that the threat of judicial review is an appropriate sanction to ensure the obligations in the Bill are adhered to.

2. Committee on Climate Change

- 2.1 The establishment of the new, independent Committee on Climate Change is a key pillar of the Bill. The Committee will play a crucial role in the UK's effort to tackle climate change by providing independent, expert advice on how the UK can best achieve its climate change goals. Its main duty will be to advise Government on:
- the level of the carbon budgets consistent with the UK's 2020 and 2050 targets and its international obligations;
 - the extent to which carbon budgets should be met by domestic emissions reductions versus emissions purchased overseas; and
 - the respective aggregate contributions towards meeting the budgets of that part of the economy covered by trading schemes and that part not covered by trading schemes.
- 2.2 Responses to the public consultation on the draft Bill overwhelmingly agreed with the proposals to establish a new, independent, expert, analytical body to advise Government. All three parliamentary committees were also keen to emphasise the need for a strong, transparent, independent and credible Committee on Climate Change. As the Joint Committee acknowledged, *"the new Committee on Climate Change has the potential to be an extremely influential and important body."*

Strengthening the role of the Committee on Climate Change

- 2.3 As set out elsewhere in this document, we will strengthen the role of the Committee on Climate Change in a number of ways in response to recommendations from the parliamentary committees. In addition to the Committee's vital role on carbon budgets (set out above), we will also now ensure that the Government is required to seek the Committee's advice before amending the 2050 or 2020 targets in the Bill: as the Prime Minister announced in September, we will do this at an early stage. The Government will also be required to consult the Committee before making the first set of regulations on carbon credits and debits, to provide further reassurance that these regulations will be robust and transparently scrutinised. The Committee must also be consulted before any trading schemes are established – again to provide the same reassurance.

Transparency

- 2.4 The purpose of the Committee is to provide independent, expert analysis to Government and the Devolved Administrations. It is imperative that this analysis is clear, transparent and independent of Government so that – irrespective of the Government of the day – it is seen as objective and free from undue interference, which could otherwise potentially damage its credibility.
- 2.5 The Government would like to ensure the Committee is fully transparent in its workings and in the advice that it gives, and that the budget-setting process is fully transparent. We will therefore amend the Bill to require the Committee to publish its advice on the level of the carbon budget, the reasons for this advice

and the minutes of its meetings.¹⁸ In addition, we intend to amend the Bill so that, in the event that the Secretary of the State rejects the Committee's advice on the level of a carbon budget and sets it at a different level, the Government must give a full, public explanation of the reasons for reaching a different decision. We continue to believe that the Committee's role should be to provide advice on budgets but that the Government should be responsible for setting them: as the Joint Committee argued, giving the responsibility for setting budgets to the Committee would probably be unworkable and would mean devolving significant policy decisions to an unelected body.

- 2.6 The Joint Committee also recommended that the Bill should require the Government to table substantive, amendable motions for debate in each House to allow Parliament to consider and approve the report of the Committee. Debates on the Committee's progress reports would further increase transparency and we think it is highly likely that they will take place. However, it would be very unusual to stipulate the need for one on the face of a Bill. While the Government is sympathetic to the idea of regular debates on climate change, this is an issue for parliamentary Business Managers to consider through the usual channels.

Independence

- 2.7 As the EFRA Committee recognised, to strengthen the independence of the Committee – and public perceptions of its independence – it is essential that members are appointed for their individual expertise and serve in a personal capacity, rather than representing specific stakeholder groups. It will also be important for the Committee as a whole to have the right mix of skills, to ensure that its analysis of the different scientific and economic issues is robust and comprehensive. Following discussions with the Devolved Administrations, we therefore intend that the Committee's overall composition should also include an awareness of the differences across the UK and the devolved context of climate change policy. With this amendment, we believe that the list of expertise desirable for the Committee will be comprehensive and cover all relevant factors. In addition, as recommended by the EFRA Committee, we intend to list the desirable expertise in alphabetical order, to avoid giving any impression that one particular area of expertise is more important than any other.
- 2.8 To increase the independence of the Committee, we have also – from the start – made provision for it to appoint its own staff (a power that normally applies to executive, rather than advisory, NDPBs). On reflection, we also agree with the Joint Committee that the Committee should appoint all its own Chief Executives, which will further strengthen its independence. The role of the Committee Chair and Chief Executive will be key, especially at the start of the Committee's life, so that they can effectively steer the preparatory work on the carbon budgets, alongside establishing the Committee's governance and accountability arrangements and its strategic direction.

¹⁸ The Committee will not be required to publish information it could refuse to disclose in response to a request under the Freedom of Information Act or the Environmental Information Regulations 2004, or information whose disclosure is prohibited by any enactment.

Issues the Committee should take into account

- 2.9 The Committee will be asked to provide its assessment of the best pathway which is consistent with the 2020 and 2050 targets and the UK's international obligations. The Bill sets out a number of specific factors which the Committee will need to take into account in providing its advice on this emissions reduction pathway. Following further consideration with the Devolved Administrations, the Bill will be amended to ensure that the Committee also takes into account economic, social and other variations across the UK.
- 2.10 As the Joint Committee recognised, the Committee is already required to take into account a wide range of scientific and economic issues in providing its advice, and its task will therefore be a complex one. In this context, we have considered proposals for further factors to be added to the list of issues the Committee is required to consider – including environmental impacts, sustainable development, and biodiversity.
- 2.11 The Government welcomes the concern to ensure that the wider questions of sustainable development and environmental impacts are not overlooked in setting carbon budgets, and is strongly committed to promoting sustainable development and protecting and improving the environment. However, we question whether these are issues which can be considered by the Committee in a meaningful way in its advice on the overall level of the carbon budget. Instead, we believe that these are issues which are more properly considered by Government in its development of the specific policies which will be necessary to achieve the carbon budgets, and note that there are already measures in place in all Government Departments to consider sustainable development in policy-making.
- 2.12 On the question of biodiversity, we consider that it would be very difficult for the Committee to assess the impact of different UK budget levels on biodiversity in a meaningful and robust way in its advice on the level of the carbon budget. Again, we believe that this issue is more properly considered by Government in its development of the specific policies which will be necessary to achieve the carbon budgets, and believe that the measures to ensure this (such as the Impact Assessment process) are already in place. Where biodiversity may be relevant to any advice given by the Committee, it will (as a public body) already be under a statutory duty to “have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity”¹⁹ and we therefore see no need to address biodiversity further by including it as a specific issue in the Bill.

Policy Evaluation, Modelling and Analysis

- 2.13 Balancing the factors behind the carbon budgets is a complex and technical task – and the Committee is intended to have a strongly analytical role. It is also important that the distinction between the role of the Committee and the role of Government is set out clearly from the start. The parliamentary committees therefore rightly looked in some detail at the Committee's remit and whether it was appropriate for it to have greater involvement in policy-making or modelling than had been envisaged in the draft Bill.

¹⁹ Under Section 40 of the Natural Environment and Rural Communities Act 2006.

- 2.14 The Government agrees with the EFRA Committee that the Committee should not be a policy-making body, and we feel strongly that it should not be able to offer unsolicited advice on individual policies at any time. Instead, it is important that its resources are focused on the analytical role it is intended to provide. Should it become apparent that the Committee's advice on a particular policy would be beneficial, the Bill already makes provision for the Secretary of State and/or Devolved Administrations to request the Committee's advice on any issue relating to the Bill or climate change more generally.
- 2.15 Given that the Committee is intended to have this strongly analytical role, the quality of its analysis and modelling will be fundamental in establishing its credibility. As the Joint Committee acknowledged, a key issue for the Committee is the extent to which it will be able to develop its own modelling and forecasting capacity, in order to provide analysis that is – and is seen to be – independent.
- 2.16 The EFRA Committee recommended that the Committee should develop its own “bespoke” emissions forecasting model. However, we agree with the Joint Committee that to avoid duplicating, at public expense, work that is already being done in Government departments, the Committee should be free to make use of Government modelling, supplemented by such further independent research as the Committee judges appropriate. The Committee will be able to commission runs of the Government's energy and transport models and, as discussed below, it will be resourced to undertake or commission any analysis it feels necessary to supplement the outputs of these models. It is conceivable that in the future the Committee may want to develop and enhance its own in-house models: the Government would not discourage this if the Committee felt it to be necessary.
- 2.17 The parliamentary committees also recommended that the Committee be given oversight for Government energy and transport modelling and a duty to audit the Government's publication of emissions statistics. We do not agree that the Committee should be given oversight of Government modelling as this could undermine the Committee's independence and potentially blur its responsibilities. Similarly, we do not accept the need for the Committee to have an audit role on the publication of emissions statistics. The emissions inventory publication currently produced on the Government's behalf is respected, subject to peer-review, and supplied according to international guidelines.²⁰ It would be costly and potentially confusing if the Committee were to duplicate this work.
- 2.18 However, we also recognise that the Committee members will be experts in their field and, as noted by the EAC, will be in a unique position to provide independent feedback on the Government's policy appraisals and modelling. We are therefore considering how best to ensure a constructive dialogue on these issues – for instance, by involving members of the Committee secretariat in relevant analytical groups, in a similar way to how other expert NDPBs contribute on these issues. We also expect that the Committee may wish to set

²⁰ The UK's greenhouse gas emissions inventory is available from the National Atmospheric Emissions Inventory website: www.naei.org.uk/reports.php

out its views on the analysis it has used, when setting out the reasons for its advice on the level of the carbon budget, which will be publicly available.

Timing of the Committee's advice

- 2.19 The Committee's first task will be to provide advice on the level of the first three carbon budgets (2008-12, 2013-17, 2018-22) before 1 September 2008. To ensure that the Committee is able to provide high quality advice by this deadline, and so that it is fully up and running as soon as possible after it gains its full legal responsibilities and status, the Government is setting up the Committee in shadow form this year as a non-statutory advisory body. We consider that this achieves the best balance between establishing the Committee in sufficient time to begin its analysis and ensuring it has sufficient resource to discharge its duties effectively, while retaining flexibility to respond to any changes as the Bill passes through Parliament.
- 2.20 While supporting the Government's desire to ensure that action is taken at the first opportunity, the Joint Committee suggested that the Government amend the Bill so that the Committee need only advise on the first budget by September 2008, and that it should then advise on the subsequent two budgets at a later date. By setting up the Committee in shadow form now, we have sought to provide it with the maximum amount of time so that it can prepare its advice for all three carbon budgets by 1 September 2008.
- 2.21 We believe that the Committee should provide advice on the first three carbon budgets together, as envisaged in the draft Bill. This is because much of the analysis required for the second and third budgets will also be required for the Committee's advice on the first budget. We also consider it is important that we signal clearly – from the start – that in the future the UK will be increasingly carbon constrained and that business must become accustomed to operating within a fifteen-year framework of carbon budgets.
- 2.22 The Joint Committee also recommended that, in order to further strengthen the Committee's role, the Government should be required to respond to its advice within a certain time period. The draft Bill already provides for the budgets to be set by a particular date, but having reviewed this issue further, we have reached the view that in order to provide sufficient time for the Secretary of State to fully consult the Devolved Administrations on the contents of the Committee's advice before setting the budgets, the Bill will be amended to require the Committee to give its advice at least six months before the last date for setting the carbon budget for the period. This is a UK-wide Bill and it is therefore right that the Devolved Administrations should have sufficient time to consider the advice of the Committee and participate fully in the decision-making process.

Setting Up the Committee on Climate Change

Size of the Committee

- 2.23 The draft Bill proposes that the Committee will consist of 5-8 members and a Chair. We believe that this strikes the right balance between ensuring that the Committee contains a good mix of the relevant expertise, and creating a committee which is focused and dynamic. Should the Committee – once

established – consider it necessary to increase its size, we have made provision in the Bill for the Secretary of State with the consent of the Devolved Administrations to amend the number of Committee members. To provide further flexibility, there is also provision in the Bill to allow for sub-committees to be established, including persons not on the Committee, to consider issues in more detail if the Committee deems this necessary.

Appointments

- 2.24 In establishing the shadow Committee, we intend to make a limited number of early appointments – only appointing four members along with the Chair Designate. This approach will allow for the remaining appointments to the Committee to reflect the final text of the Act.
- 2.25 The appointments process will be regulated and monitored by the Commissioner for Public Appointments to ensure the appointments are made on merit against established criteria and after fair and open competition. These appointments will also be made in accordance with the Nolan Principles.
- 2.26 Once the Committee Chair has been appointed, they will be consulted on the appointment of the remaining Committee members. The role of the Deputy Chair will also be important, given that they would effectively have to take on the running of the Committee in the Chair's absence. Therefore, we propose that the Secretary of State and Devolved Administrations retain responsibility for appointing any Deputy Chair, but that they will only do so after consulting the Committee Chair.

Terms of appointment

- 2.27 The Committee will exist as an upper-tier statutory advisory NDPB following Royal Assent. In practical terms this means that the appointments are restricted to two terms and that overall these terms cannot exceed ten years. Both the Joint Committee and the EFRA Committee recommended that appointments be for a minimum of five years (and perhaps longer to allow their contracts to expire at different times), renewable once.
- 2.28 We welcome the parliamentary committees' thoughts on this issue and agree there is logic in aligning the appointments to marry with the carbon budget cycle. We are also looking into how appointments are staggered to ensure there is sufficient continuity between budget periods so that Committee members' appointments do not all end at the same time. However, we would also note that it is possible that the length of carbon budgets may need to change at some future point (reflecting changes in international practice), and there are therefore risks around stipulating precise terms of appointment in the Bill.

Role of the Shadow Committee

- 2.29 Once the shadow Committee is in place, it will begin work on the first set of advice, alongside considering how it will operate once it becomes a statutory body. This will include agreeing the NDPB's Framework Document (which sets out the relationship with the sponsor Department and the respective roles and

responsibilities of each party), a Concordat with the Devolved Administrations, and its work plan for the first year.

- 2.30 The Joint Committee recommended that the Government sets out a clear idea of the role it envisages the Committee playing over the next forty and more years. The Committee's statutory duties are set out in the Bill, and these further documents, which will be publicly available, will explain in detail the role and priorities of the Committee.

Establishing the statutory Committee

- 2.31 Following Royal Assent, the Committee will become a statutory NDPB. In the interim its members will be employed as consultants to Defra, as is usual procedure for shadow bodies. The EAC recommended that all Committee appointments should be subject to scrutiny by the EAC, and the Joint Committee recommended that the Committee Chair, Deputy Chair and Chief Executive should be subject to Parliamentary scrutiny. Our proposed approach – recruiting members to a shadow Committee according to OCPA procedures – does not prevent this.

Committee Resource Requirements

- 2.32 It is essential that the Committee has the ingredients for success right from the start. The Committee will have to develop its own assessment of the best emissions reductions pathway, a task which will require drawing on a variety of resources from inside and outside of Government. Each of the parliamentary committees emphasised the importance of ensuring the Committee is adequately resourced, and commented on the indicative figures set out in the draft Regulatory Impact Assessment (RIA). The Joint Committee in particular commented,

It is essential that the Committee's budget is large enough to provide a secretariat of the right size and calibre to ensure it can carry out the work required of it.

- 2.33 The Committee will be a UK body, and it will therefore be jointly funded by the Government and the Devolved Administrations.

Analytical Resources

- 2.34 Together with the secretariat to the shadow Committee, the Government has undertaken considerable scoping work since the publication of the draft Bill to better assess the analytical requirements of the Committee. The initial estimate put forward in the draft RIA totalled £820k as ongoing costs for the Committee's secretariat, based on 10-15 analysts. While it is only an estimate at this stage, our scoping exercise suggests that the analytical resources made available to the Committee should be increased by around 50%. We now anticipate that the secretariat will consist of about 20 people, representing a larger and more senior secretariat than envisaged in the draft Climate Change Bill, and of a similar size and make-up to the team that carried out the Stern Review.
- 2.35 The Joint Committee questioned whether the proposed research budget for the Committee was sufficient. We continue to believe that the proposed ongoing

research budget is sufficient, especially given the substantial increases envisaged for the secretariat. It is also likely that the Committee's research budget will need to be increased in the short-term, to support its review of the 2050 target which was announced by the Prime Minister in September. In addition, as the former Secretary of State indicated in his evidence to the Joint Committee, we will invite the shadow Committee to comment on the proposed budget arrangements before they are finalised.

3. Trading schemes

- 3.1 The scale and long-term nature of climate change, and the continuing evolution in understanding of how to tackle it, mean that new policies and changes to existing policies are likely to be needed over the coming decade and beyond. A key element of the Bill is therefore the creation of powers to introduce new domestic trading schemes which aim to help us stay within our carbon budgets and meet our targets. These powers will enable new trading schemes to be set up under secondary legislation, rather than needing further primary legislation, and thus form a key part of the framework in the Bill to manage greenhouse gas emissions over time and across the economy.
- 3.2 Using secondary legislation will reduce the time and resource needed to introduce new trading schemes. However, we will continue to ensure that there would be full public consultation and parliamentary scrutiny before a new scheme is introduced. In addition, the creation of these enabling powers does not mean that a trading scheme will always be the most appropriate policy instrument: full consideration will be given on a case by case basis to whether another kind of measure (e.g. tax, regulation, voluntary agreement) is the most suitable approach instead.
- 3.3 In the first instance, we envisage using these powers for the following specific purposes:
 - The first application of the new powers will be to support the introduction of the Carbon Reduction Commitment, a new UK cap and trade scheme which will apply to large non-energy-intensive organisations in the public and private sectors;²¹
 - The powers may also be used to introduce a household energy supplier obligation, to succeed the Carbon Emissions Reduction Target (CERT) which ends in 2011;
 - As the then Secretary of State explained during pre-legislative scrutiny, we do not envisage using the powers to support the introduction of personal carbon trading.
- 3.4 These examples are not exhaustive as it is difficult to specify further at this stage how the powers might be used; it instead provides an indication, since the purpose of these powers is to maintain flexibility in supporting activities which will enable us to meet the targets set in the Bill, while ensuring appropriate levels of public and parliamentary scrutiny.

²¹ This scheme, announced in the Energy White Paper 2007, will apply mandatory emissions trading to cut carbon emissions from large commercial and public sector organisations. Please see: www.defra.gov.uk/environment/climatechange/uk/business/crc/index.htm for further details.

3.5 The parliamentary committees made a number of recommendations in relation to the enabling powers, largely to reinforce the need for full consultation and scrutiny of any proposed new schemes. We intend to make a number of adjustments to the powers which take these recommendations into account and refine the details relating to the set-up of new schemes.

3.6 The main changes are as follows:

- The advice of the Committee must be sought before making any new trading scheme under the Bill;
- The Bill will clarify that the requirement for trading scheme allowances to be allocated free of charge does not affect any power under other legislation to require payment;
- All new enforcement powers will be subject to the affirmative resolution procedure; and
- Penalty provisions will be clarified, including specifying maximum penalties.

3.7 In addition, the Joint Committee proposed that the “super-affirmative resolution” procedure should be required in making regulations for new trading schemes, to ensure an increased level of parliamentary scrutiny. We agree that thorough scrutiny is essential, which is why use of the Bill’s trading scheme powers would be subject to full public consultation and the affirmative resolution procedure. In addition, as noted above we will amend the Bill to add a requirement that the Committee on Climate Change should be consulted before a scheme is put in place, further strengthening the scrutiny of these powers.

3.8 However, the super-affirmative resolution procedure is intended for very specific applications under the Legislative and Regulatory Reform Act 2006. We do not feel that it would be helpful or appropriate to apply this tailored procedure to the oversight of trading schemes introduced by the powers in the Bill. Furthermore, an important aim of the trading scheme powers is to allow effective policies to be introduced more expeditiously: the increased time and resource required for an additional procedure would run counter to this objective. It is also very difficult to see how the super-affirmative resolution procedure could be used where a scheme is put in place by two or more UK administrations acting jointly.

4. Adaptation

4.1 The draft Bill included a requirement for Government to publish regular risk assessments and policies and proposals in relation to climate change adaptation in the UK. We recognise the need to ensure that the Bill provides the best possible support for adaptation to the impacts of climate change; this needs to be balanced with maintaining flexibility to adapt in different ways as needs change in future years.

4.2 We intend to make changes to reinforce the adaptation provisions in the Bill. This will include a requirement on Government, within three years of the Bill’s enactment and at least every five years thereafter, to publish an assessment of the risks climate change poses to the UK. After producing the risk report, the Government will have to set out how it intends to respond to those risks in an adaptation programme. This programme will set out policies and proposals for

England and reserved matters to address the risks identified in the risk assessment report, identifying clear objectives and timelines. The addition of a specific requirement to address sustainable development in this adaptation programme will help ensure that environmental, economic and social issues are all fully considered as the Government responds to the inevitable impact of climate change on the UK.

- 4.3 To reflect the importance of a strong approach to adaptation, we have also increased its profile within the structure of the Bill by adding adaptation specifically to the long title, and by giving it a separate Part.
- 4.4 A number of additional suggestions have been put forward for ways in which adaptation could be taken into account within the Bill. Given the recent rapidly changing pressures in relation to adaptation, it has been difficult to address these many different issues within the time available for amending the Bill. We are therefore taking forward work to look at existing relevant legislation which covers elements of adaptation, as well as non-legislative provisions (such as planning guidance). We aim to identify where the most pressing needs are, and to bring forward any resulting proposals as soon as possible.

5. New clauses

- 5.1 The Climate Change Bill is primarily intended to be framework legislation. It will be supported by policy provisions in the Energy Bill (which applies to the UK) and Planning Bill (which applies to England only), which are being brought forward on a similar timetable. However, we also intend to use this Bill to underpin some specific measures which will support emissions reductions. These areas were not considered by the parliamentary committees as part of their scrutiny of the Climate Change Bill, but separate public consultations have been carried out, including on the Renewable Transport Fuel Obligation and waste incentives provisions. Together, these measures could save the equivalent of up to 9.4-13.9 million tonnes of carbon dioxide equivalent per year by 2020.

Carbon Reduction Commitment

- 5.2 The Government's first use of the trading scheme powers within the Bill will be to introduce the Carbon Reduction Commitment (CRC) – a new mandatory cap-and-trade scheme. The CRC is designed to drive energy efficiency and carbon savings by giving organisations a financial incentive to do so through emissions trading. This is combined with Corporate Social Responsibility incentives through publishing organisations' performance in a league table.
- 5.3 The CRC will deliver emissions savings of 4 million tonnes of carbon dioxide per year by 2020 from approximately 4,000-5,000 large non-energy-intensive business and public sector organisations (such as supermarkets, hotel chains, large local authority buildings, banks and government departments). The large non-energy intensive sector accounts for roughly 51.3 million tonnes of carbon dioxide per annum – nearly 10% of total UK CO₂ emissions – and emissions from this sector are growing. The CRC will therefore help ensure that the effort for addressing climate change is spread better across the UK economy.

Renewable Transport Fuel Obligation (RTFO)

5.4 The RTFO is due to come into effect in April 2008 and to become the UK's primary mechanism to develop a market for transport biofuels. We propose including provisions in the Bill which adjust the workings of the RTFO, provided for by Chapter 5 of Part 2 of the Energy Act 2004.²² These will give more prominence to the environmental impact and the sustainable development criteria associated with use of biofuels, and include:

- a new duty on the Administrator of the scheme to encourage transport fuel suppliers to improve the performance of the biofuels they supply, in terms of their carbon emissions and sustainability;
- specific powers for the Secretary of State to give directions to the Administrator, which could be used in order to help deliver the Government's intention that the RTFO should reward biofuels on the basis of carbon savings and sustainability;²³ and
- creating an information gateway to allow HMRC to disclose data relating to fuel sales that assist enforcement of the RTFO.

5.5 Overall, the RTFO is projected to save 3.4-3.9 million tonnes of carbon dioxide in 2020.²⁴

Incentives for waste minimisation

5.6 Landfill is responsible for 3% of all UK greenhouse gas emissions. The Government plans to tackle further the issue of landfilling waste by providing a power to pilot local authority incentives for household waste minimisation and recycling. We will announce proposals in due course. These plans are being taken forward through the Climate Change Bill and, if replicated more widely, could save up to 2-6 million tonnes of carbon dioxide equivalent in 2020.²⁵

Welsh Assembly Government reporting duty

5.7 In order to increase the transparency of its approach to addressing climate change, the Assembly Government has requested the introduction of a duty on Welsh Ministers to report to the National Assembly for Wales on progress on tackling the causes and consequences of climate change. This has been included in the Bill.

²² Available from: www.opsi.gov.uk/acts/acts2004/40020-be.htm

²³ The Secretary of State for Transport announced this intention on 21 June 2007; further details are available from: www.gnn.gov.uk/environment/fullDetail.asp?ReleaseID=293554&NewsAreaID=2&NavigatedFromDepartment=False

²⁴ The Renewable Transport Fuels Obligation Order 2007 is at www.opsi.gov.uk/si/si2007/draft/20078818.htm

²⁵ These benefits relate to the reductions in methane emissions escaping from landfill over the lifetime of the landfill site that occur due to lower landfilling in 2020. As methane escapes from landfill sites over time, the actual CO₂e saving from lower landfilling in 2020 will depend on the profile of landfilling over previous years and so is more difficult to predict as it will depend on the extent to which local authority incentives are replicated more widely.

Changes to the Climate Change and Sustainable Energy Act in relation to Wales

- 5.8 The Bill also includes clauses which amend the Climate Change and Sustainable Energy Act as it applies to Wales. The duty upon local authorities under section 3 of the Climate Change and Sustainable Energy Act 2006 to have regard to the Secretary of State's energy measures report will cease to apply in relation to Wales. Instead, there will be a duty upon Welsh local authorities to have regard to a report published by the Welsh Ministers.
- 5.9 The scope of the Welsh Ministers' report is to be slightly broader than that of the energy measures reports. The report should be a document containing information on local authority measures which would or might, in the opinion of the Welsh Ministers, have any of the following effects:
- improving efficiency in the use of electricity, heat, gas, fuel and other descriptions or sources of energy;
 - increasing the amount of electricity generated, or heat produced, by microgeneration or otherwise by plant which relies wholly or mainly on low-emissions sources or technologies;
 - reducing emissions of greenhouse gases;
 - reducing the number of households in which one or more persons are living in fuel poverty; and
 - increasing resilience to the impact of climate change, including increased flood risk, more extreme weather and their consequent impacts on people and the environment. In this context, the "environment" includes the built environment as well as the natural environment.

6. Devolution

- 6.1 Climate change is a global challenge, and will require a global response. The UK is leading the way, with all four countries of the UK playing a part in tackling climate change.
- 6.2 The Climate Change Bill will put the UK on course to be the first country to set a long-term legal framework for reducing emissions over the next 45 years and beyond. When the draft Bill was published in March, we noted that further work was required with the Devolved Administrations to clarify their roles and responsibilities. We are pleased that agreement has now been reached between the UK Government and the Devolved Administrations on this issue and that the contributions of all four administrations are reflected in the Bill.
- 6.3 The devolution settlement with respect to climate change policy is complex: while elements of energy policy²⁶ and international relations are reserved matters, environmental policy is devolved, to varying degrees, to each of the Devolved Administrations. To reflect this devolution settlement, the UK Government and the Devolved Administrations have agreed that:

²⁶ Generally energy policy is not reserved for Northern Ireland.

- the Committee on Climate Change will be set up as a jointly-sponsored body, and its membership as a whole will include an understanding of the differences across the UK and the devolved context of climate change;
- in establishing carbon budgets, both the Committee and the Government will need to take into account the differences across the UK;
- the Government will consult the Devolved Administrations prior to taking decisions on targets and budgets under the Bill. The period for consultation will be specified in the Bill, to ensure that the Devolved Administrations have sufficient time to consider the Committee's advice and participate fully in the decision-making process. The Secretary of State will remain ultimately responsible for meeting the targets and carbon budgets under the Bill; and
- the enabling powers under the Bill will be available to all four administrations to establish trading schemes within their existing competence, and for trading schemes to be set up jointly by more than one administration.

6.4 These provisions will be backed up by a strong Concordat, which will set out the roles and responsibilities of the different administrations in more detail. The Concordat will be finalised once the Bill has completed its passage through Parliament, and will demonstrate further how all four countries of the UK are committed to working in partnership to reduce greenhouse gas emissions and tackle climate change.

Part B

Government responses to the recommendations of the parliamentary committees

Response to recommendations of the Joint Committee

This part of the document sets out the Government's responses to the recommendations of the ad hoc Joint Committee of MPs and Peers on the Draft Climate Change Bill.²⁷

- 1. We recommend that the Bill should be amended to require both the Government and the Committee on Climate Change to include within their monitoring and reporting a clear analysis of all emissions which contribute to global warming, including non-CO₂ greenhouse gas emissions. We further recommend that this be done with the explicit intention of providing a stepping stone to a more comprehensive approach to setting targets across the whole range of greenhouse gases, were that approach to emerge as a result of future international negotiations. (Paragraph 24)**

We agree with the need for full transparency, and therefore propose to accept the recommendation that the Government should be required to report against emissions of all greenhouse gases consistent with UNFCCC practice.

Although there are potentially strong scientific and economic arguments in favour of defining the UK's long-term goal in terms of greenhouse gases, the draft Bill focussed on CO₂ because this is where the deepest cuts are needed if we are to tackle climate change. In addition, there is still significant uncertainty about the cost-effective abatement potential for non-CO₂ gases, particularly in the longer term.

However, to ensure that we are able to move quickly to include other greenhouse gases in our targets, we intend to amend the Bill so that it is possible to include other greenhouse gases in the target in future. We will also ask the Committee on Climate Change ("the Committee"), as part of their review of the 2050 target, to look at the potential effects of including other greenhouse gases.

- 2. We are concerned that the Department for Transport appears to have done so little to update its analysis of predicted growth in aviation emissions since the information it provided in 2003-04 to the Environmental Audit Committee. Although officials told us that updated forecasts would be made available later in the year, we would have expected this to have been carried out before the introduction of the draft Bill. It is also disappointing, in view of the importance of the topic, that the DfT has not carried out any analysis on the impact of including international aviation within the scope of the draft Bill. (Paragraph 31)**

The Future of Air Transport Progress Report, published in December 2006, included revised passenger forecasts for the period to 2030. It also included a commitment that revised aviation emissions forecasts would be published during 2007, and we expect to publish new demand and CO₂ forecasts by the end of this year. The primary use for our forecasts is to inform strategic aviation policy decisions, which tend to be longer-term in nature, and we have therefore tended to produce new forecasts every three years. In future, we would wish to align our forecasts with Air Transport White Paper Progress Reports, the next one of which is due in the period 2009-11. However, we will also consider how future forecasts could best fit with the Committee on Climate Change's emerging plans. As noted below, we will ask the new, independent

²⁷ www.publications.parliament.uk/pa/jt200607/jtselect/jtclimate/170/17002.htm

Committee on Climate Change to look at the implications of including international aviation in the UK's targets, as part of its overall review of the 2050 target.

- 3. The draft Bill currently does not include within the scope of the targets, and the net UK carbon account, emissions from international aviation. We consider this to be a serious weakness which, in view of the significant likely growth of such emissions, has the effect of reducing the credibility of the 60% carbon reduction target. Given the clear expectation of the Secretary of State that international aviation emissions could be included in the net UK carbon account once they are incorporated within the EU ETS, we expect the Government to take all necessary steps to ensure that this is achieved. The draft Bill should be amended in such a way that it requires both the Government and the Committee on Climate Change to include separately international aviation emissions within the scope of their monitoring and reporting, including projections of future emissions – in a manner similar to the parallel reporting we are recommending in relation to non-CO₂ greenhouse gases. (Paragraph 32)**
- 4. The Bill should clearly provide for the inclusion of international aviation emissions in the carbon budget once EU agreement is reached on the measurement and allocation of such emissions. (Paragraph 33)**

In response to recommendations 3 and 4, as an international industry aviation should ideally be dealt with at international level. However, there is currently no agreement on how to allocate these emissions to individual countries. The UK is therefore pressing internationally to establish an agreed basis for allocating international aviation emissions, and for international aviation to be brought within a global post-2012 framework for addressing climate change.

However, we acknowledge that global agreement in relation to international aviation emissions may be difficult to achieve. While we want to allow time for these discussions to take place, and potentially for agreement to be reached, we cannot afford to wait indefinitely.

That is why making progress in the EU is the best multilateral option currently available. The UK is therefore pressing for aviation to be included in the EU Emissions Trading Scheme (EU ETS) as soon as possible, ideally within Phase II (2008-2012). While the terms of aviation's inclusion are still subject to negotiation, the current proposal is that aviation would be included from 2011 and that the aviation sector would only be allocated allowances equivalent to its emissions at average 2004-6 levels. This would mean that any growth in aviation emissions above this level would be fully offset by requiring airlines to pay for the equivalent emissions reductions from elsewhere.

To include these emissions in the UK's targets, we would need a workable methodology to calculate "the UK's share" of these emissions, and one which took account of the international context. In addition, given that aviation emissions are likely to be included in the EU ETS soon, any methodology to include these emissions in the UK's targets would also need to be compatible with the way that emissions and credits are allocated under the EU ETS rules.

Therefore, once the EU ETS rules have been finalised, we will ask the Committee for their advice on whether there is a methodology for including international aviation

emissions which was workable and compatible with the EU ETS and takes account of progress in the UNFCCC and the wider international context, and on the impacts of adopting it. In addition, as set out below in our response to recommendation 5, we will also ask the Committee on Climate Change to examine the implications of including international aviation emissions in the UK's targets, as part of its overall review of the 2050 target.

In addition, as recommended by the Joint Committee, we intend to place a requirement on the Secretary of State to report annually to Parliament on the UK's international aviation emissions as part of the annual statement of UK emissions in line with UNFCCC practice. We will also publish revised aviation emissions forecasts before the end of the year

5. The Government must clarify whether it intends, when bringing international aviation within the regime established by this Bill, for aviation emissions to fit within the UK's existing targets and budgets (thereby increasing the pressure on other sectors to reduce emissions), or for the targets and budgets to be inflated so as to accommodate it. If the latter, the Government must publish at an early stage, a proposed baseline for the inclusion of aviation emissions, an analysis of how this would affect the UK's share of global cumulative emissions, and the basis on which it decides the level of its 2050 target. (Paragraph 34)

As the Joint Committee recognises, including international aviation emissions in the UK's targets could have an impact on both the level of the targets and on other sectors of the economy. An initial analysis of this will be set out in the Impact Assessment, which will be published alongside the revised Bill. As indicated in our evidence to the Joint Committee, our view is that we would need to look again at our targets if we were going to include additional emissions. We will therefore ask the Committee on Climate Change to examine the implications of including international aviation emissions in the UK's targets, as part of its overall review of the 2050 target.

6. We recognise that both the methodology required to allocate international shipping emissions to individual countries, and the policy mechanisms which individual governments could use to constrain emissions from this sector, may need further thought. We do not want to see progress held back by any coupling of 'aviation and shipping', and therefore recommend that the Government press on with plans to include international aviation within the UK's targets, even if issues remain to be resolved over international shipping. At the same time, the Government should make it a priority to address these issues, and both it and the Committee on Climate Change should include international shipping emissions within their annual projections and reporting processes. (Paragraph 37)

We share the Joint Committee's view that the issues regarding emissions from international shipping are also complex. We are pressing for action on international shipping emissions through the International Maritime Organization, at EU level, and through operational improvements.

To ensure greater transparency, we accept the Joint Committee's recommendation on annual reporting of international shipping emissions, in line with UNFCCC reporting practice. Given the uncertain data and the methodological difficulties in this sector, the Government does not currently forecast the UK's international shipping emissions.

Our current "best estimate" of future emissions from bunker fuel sales is a continuation of the current "long-term average", although we would not describe such an estimate as a forecast as it contains a significant degree of uncertainty. We will ask the Committee to examine the implications of including international shipping emissions in the UK's targets, as part of its overall review of the 2050 target. We also confirm our commitment to decouple "aviation and shipping", so that it would be possible to include one sector's international emissions within the UK's targets, even if issues remained to be resolved over the other sector.

7. We understand, and sympathise with, the argument in favour of setting a higher target for the long-term reduction of carbon dioxide emissions. But recognizing how very demanding the target set out in the draft Bill for 2050 is, and facing up to both the complexity of domestic budgeting and international requirements, we conclude that the approach adopted by the Government is appropriate provided that it is understood that this is but the first step along a path towards a low-carbon future for the UK. We make further recommendations later about reinforcing this direction of travel. We also recommend that the long title of the Bill should be amended to state explicitly, as the Environment Secretary of State emphasised several times in his evidence to us, that the target should be at least 60% and subject to review. (Paragraph 44)

We agree with the Joint Committee on the context for the Bill, which is designed for precisely that purpose: in tandem with the proposals in the 2007 Energy White Paper, to equip the UK with the conditions needed for a successful transition to a low-carbon economy.

On the long title of the Bill, as noted below in our response to recommendation 13, we would need to look again at our targets if additional emissions were to be included, based on advice from the Committee on Climate Change and following parliamentary scrutiny through the affirmative procedure.

8. Bearing in mind however the weight of scientific evidence before the Committee that a target of more than 60% is likely to be necessary, we believe that as soon as possible after it is established, the Committee on Climate Change should review the most recent scientific research available and consider to what extent the target should be higher than 60%, with a view to making recommendations on the appropriate amendment to the long term target. (Paragraph 45)

The figure of 60% was arrived at by the Royal Commission on Environmental Pollution (RCEP) in 2000, following extensive research and analysis. We recognise the significant recent advances in scientific understanding, but also note that no comparable cross-cutting research and analysis has been done since the RCEP report and there is no broad consensus around what the figure should be, if it is not 60%.

It is important that the 2050 target is set at a level which reflects all these considerations and which is based on thorough, expert and independent analysis. As the Prime Minister announced on 24 September 2007, we will therefore ask the independent Committee on Climate Change to report on whether the 60% reduction in emissions by 2050, which is already bigger than most other countries, should be even stronger still.

We believe that this is the best means of ensuring that the target remains both ambitious and realistic. The Committee will have the independence and the right expertise and resources to carry out a review, and will be able to provide robust scientific and economic analysis to underpin a different target. With this technical evidence, Ministers will be in a position to take a balanced view of the most appropriate level, particularly in the context of progress internationally.

We intend that the Committee should undertake this work as soon as it has made recommendations on the first three budgets, and should report by autumn 2009. This will ensure that the first carbon budgets are in legislation as soon as possible, and that these budgets act as a cap on UK emissions from the earliest possible stage. By the time the Committee reports, we will hopefully have a clearer picture of the direction of travel internationally, which will provide additional context for the Committee's analysis.

9. The draft Bill places responsibility on the Committee on Climate Change to determine the optimal shape of the emissions trajectory to 2050, but it does not include any target or specific provision for monitoring the level of cumulative emissions over that period. We recommend that the Bill should be amended to require the Committee, in recommending carbon budgets, to publish a forecast of the cumulative amount of emissions implied by the emissions trajectory it is recommending; and for the Government to set out the impact on cumulative emissions if it fails to follow the advice of the Committee. (Paragraph 47)

The Committee is required to take into account scientific knowledge about climate change as part of its advice to Government on the level of carbon budgets and is therefore already required, implicitly, to consider cumulative emissions.

We do not consider that this level of detail is appropriate in the Bill itself; however there are no reasons why the Committee cannot publish cumulative emissions data or forecasts in providing its advice.

We propose amending the Bill to require Government to explain to Parliament if it is not taking the advice of the Committee on the level of the budget. This will add to the transparency of the process of Committee advice and Government decision making. We do not feel this explanation should be restricted in the way the Joint Committee has recommended.

10. To ensure that the UK's statutory targets remain in line with the best scientific understanding of the level of effort required, the Government should publish the rationale behind them. This should make clear the stabilisation target for global atmospheric concentrations of greenhouse gases, and the resulting projected temperature rises, which the Government is aiming for, along with the central assumptions used to correlate between these goals and the UK's targets. The Bill should also state that if the Secretary of State proposes to revise the 2020 or 2050 targets, he or she must publish the rationale for the new target. (Paragraph 49)

We recognise that understanding of both the science and the economics of climate change has improved significantly since the 60% target was originally set in 2003. The Working Group reports of the Intergovernmental Panel on Climate Change (IPCC) which have been published this year confirm that atmospheric concentrations of the

major greenhouse gases have all increased significantly since pre-industrial times. The reports show that CO₂ concentrations have risen by over one third between 1750 and 2005, to 379 parts per million (ppm); when the other major greenhouse gases are taken into account this is equivalent to around 430ppm CO₂e.

The Stern review of the economics of climate change, published last year, estimated that the costs of inaction on climate change significantly outweigh the expected costs of co-ordinated global action. Without efforts to tackle climate change, Stern predicts that it could cost the global economy between 5% and 20% of gross domestic product (GDP) now and forever, compared to much lower estimated costs of global action to stabilise atmospheric concentrations (at 550ppm CO₂e) of around 1% of GDP by 2050, within a range of +/-3%.

In considering the most appropriate way forward, we are also mindful of the fact that climate change is a global problem which demands a global solution. The UK has been a consistent leader in the field of climate change and energy policy by setting bold targets and pursuing policies, both domestically and internationally, relating to mitigating and adapting to the impact of climate change. Ultimately, co-ordinated global action will be essential to tackling the problem.

The UK is therefore committed to securing a strong multilateral agreement for the post-2012 period that achieves the overarching UNFCCC objective of avoiding dangerous climate change. Securing multilateral agreement is not in the UK's gift alone, and the outcome is difficult to predict, but we and other developed countries can make it more likely by effectively influencing the actions and positions of others. The UK has successfully pressed for ambitious action at EU level, with agreement at the 2007 Spring European Council on the emissions reduction targets required by both 2050 and 2020. The targets in the Bill are consistent with these stated ambitions.

In considering the level of the 2050 target, the Government also needs to take account of the economic costs and benefits of any new target. Initial analysis, to be published alongside the revised Bill, indicates a potentially increased impact on GDP for a higher 2050 target, but this would clearly depend on the trajectory towards the target and the policies implemented to reach it. However, this analysis is very preliminary, and limitations within the model used mean that a far more sophisticated exploration is needed of the potential impacts of different 2050 targets.

As the Prime Minister announced on 24 September 2007, we propose to ask the independent Committee on Climate Change to report on whether the 60% reduction in emissions by 2050, which is already bigger than most other countries, should be even stronger still. The Committee's workings will be published as far as possible. We do not believe that it is appropriate to legislate for the Government to publish further details of the rationale for the current long-term target, or for any new target in the future.

11. We support the inclusion of a minimum interim target to reduce the level of uncertainty about the direction of travel and to stimulate investment in low-carbon technologies. (Paragraph 51)

We welcome the Committee's support for an interim target.

12. Although we support the inclusion of a minimum interim statutory target for 2020, we note that it raises troubling issues about the independence of the Committee on Climate Change in determining for itself the optimal emissions trajectory. We also note that the target – as currently drafted – places a maximum level on the carbon budget which might be set for 2018 to 2022. We see no compelling reason for such a limit and therefore recommend that it be deleted from the draft Bill. (Paragraph 53)

The 2020 target is included in the Bill to provide a useful “way-point” on the path to the 2050 target. It helps to define the possible trajectory, and therefore cumulative emissions reductions, to 2050. It is clear that business welcomes this clear and credible interim target, given the long-term nature of the trajectory to 2050.

Each of the parliamentary committees has recognised that achieving the lower end of the 2020 target range (a 26% reduction in CO₂ emissions) is likely in itself to be challenging. Including an upper limit to this range (a 32% reduction in CO₂ emissions) also serves to provide greater certainty to business as to the likely path of the trajectory to 2050. This should help facilitate the investment decisions that will be necessary to pave the way to a low carbon economy.

The importance of the 2020 target in driving investment decisions in the short-term can be demonstrated for instance in the fact that the UK will need around 20-25GW of new power stations by 2020 if we are to maintain levels of electricity generation capacity equivalent to those available today.²⁸ These new power stations will need to be built in good time to replace the closures of capacity and to meet increases in demand. As this plant will typically have a lifetime of some 25-60 years, decisions about how this capacity is provided will be crucial in setting our emissions reduction trajectory to 2050 and beyond. The predictability provided by a clear, stretching 2020 target will be important in ensuring that the need to tackle climate change is properly taken into account in these investment decisions.

In addition, we would note that the Bill does not rule out reducing emissions by more than 32% in 2020, as any surplus effort could be banked into the subsequent budget period. Although the Committee will examine this further as part of its review of the 2050 target, we would also note that initial analysis suggests the current 2020 range is consistent with progress towards both the existing 2050 target and a range of other possible 2050 target levels. For the reasons set out above, we therefore intend to retain the 2020 target range as set out in the draft Bill.

13. Given the weight of scientific opinion and for the reasons set out above, it is clear to us that the draft Bill should include provisions to increase the statutory emissions targets for 2020 and 2050. However, to allow for reductions in the target seems to us seriously to undermine the fundamental purpose of the Bill in terms of providing greater certainty to business and industry on the scale of reductions required and incentivising investment in low-carbon technologies. We therefore recommend that the Bill be amended to restrict the order-making power in Clause 1 to increasing the target. This could be achieved by replacing “amend” with “increase” in Clauses 1(3) and 3(3); any reduction of the targets for 2020 and 2050 should require primary legislation. (Paragraph 55)

²⁸ Source: *Meeting the Energy Challenge. A White Paper on Energy*; 2007. Available from: www.berr.gov.uk/files/file39387.pdf

As drafted the Bill allows for Government to increase the statutory emissions targets for 2020 and 2050. We consider that to constrain future Governments to only allow them to increase these targets would reduce the flexibility provided in the Bill. Including emissions from international aviation and international shipping in our targets, for example, could impact on our ability to meet increased targets given the limited technological potential to reduce emissions in these sectors (at least in the short term). As noted above, we will ask the Committee to look at the implications of including international aviation and international shipping emissions in the UK's targets, as part of its overall review of the 2050 target.

The draft Bill stated that the targets may only be amended with regard to scientific knowledge about climate change or international law or policy. Under our new proposals, amendments to the target would also be subject to the advice of the Committee (as recommended by the Joint Committee in paragraph 59 of its report). As any amendment to the targets would also be subject to parliamentary scrutiny through the affirmative procedure, we therefore consider there are sufficient checks and balances to prevent inappropriate amendments to the targets.

14. We recommend that the power to amend the targets for 2020 and 2050 is made subject to a greater level of Parliamentary scrutiny than is offered by the affirmative resolution procedure. (Paragraph 58)

As noted above, we consider the range of tests that must be met prior to any change to the targets in the Bill are sufficient.

15. It is unclear how the interim target will relate to the EU's overall target of a 20% cut in greenhouse gases by 2020 (or 30%, subject to other developed countries adopting similar measures). It is possible that a burden sharing agreement could result in the UK being asked to adopt a higher target than the maximum currently proposed within the draft Climate Change Bill. It will be important to ensure that any domestic targets set will be at least as challenging as EU targets or those set internationally. (Paragraph 61)

We agree with the Joint Committee's points here, as we would be breaching EU and international law if we did not meet our EU and international targets. This is the reason for providing in the draft Bill that our targets could be amended following "developments in international law or policy". We expect that our domestic target will always be at least as challenging as our international commitments. The Bill will also require carbon budgets to be set with a view to complying with the UK's international obligations.

It should be noted that on the basis of current policies and projections, the target in the Bill to cut UK CO₂ emissions by 26-32% from the 1990 level by 2020, including the effect of emissions trading, corresponds to about a 32-37% cut in greenhouse gas emissions. If a similar methodology were used to distribute effort within the EU as was used for the first commitment period of the Kyoto Protocol, then with the EU committed to a 20% cut in greenhouse gas emissions, the UK's share of effort would be around a 25% cut, which is less than the UK's domestic commitment under the Bill. If the EU commits to a 30% cut in greenhouse gas emissions from the 1990 level by

2020, the UK's share of effort would be about a 35% cut, which is within the range set by the Bill.²⁹

16. We support the proposed system of five-yearly budgets provided there is a strong system of annual reporting on progress. We recommend that, in setting the level of future budgets, the Government should also provide indicative annual milestones to help assess progress on an annual basis. (Paragraph 69)

The Bill creates a duty for the Government to set carbon budgets, defined as an amount for the net UK carbon account for a given period. Three carbon budgets must be in legislation at any one time, providing a clear ongoing fifteen-year trajectory which provides UK businesses and households with improved certainty for future planning and investment.

The five-year budgets will ensure that the first budget period, 2008-12, runs concurrently with international timescales: the first commitment period under the Kyoto Protocol and the second phase of the EU ETS. There is flexibility under the Bill to amend the length of budget periods if international practice changes.

We welcome the support of the Joint Committee for the system of five-year budgets set out in the draft Bill. In addition, the degree of certainty provided by the proposed approach has been supported by businesses in responding to the consultation. This clear statement of intent at the UK level helps to mitigate the effects of current uncertainty about the international situation post-2012.

In response to the proposal for annual targets or milestones in addition to the five-year budgets, the Government believes strongly that a longer budget period is more appropriate. An annualised approach would be inconsistent with the UK's international obligations, which are based on five-year budgets. In particular, it would be impractical to manage annual budgets for those businesses covered by EU ETS, representing around half of the UK's emissions, since that system operates on five-year periods and firms can trade freely within the period and across the EU to meet their obligations.

In addition, a carbon budget makes very clear that every year's emissions count towards the overall budget. There are no consequences for high emissions in an individual year, as long as the aggregate emissions for the five-year period do not exceed the limit set out in the budget. This provides essential flexibility within the system, as annual emissions figures will vary naturally from year to year. Evidence shows for instance that annual fluctuations in the weather can have big impacts on emissions, as people turn up their heating. Lower temperatures in 1996 and 2001, for example, correlated with increases in emissions of around 3-4% compared to the years either side. It would be illogical for the UK to "miss its target" as a result of such normal annual variation; this would undermine the credibility of the system.

There are also considerable time-lags in the availability of emissions data which would make annual targets or milestones even more impractical. Provisional emissions figures are not available until after the year in question has already finished, and the final emissions figures are not available until more than a year later. Given these time-

²⁹ Based on latest projected reductions in UK emissions of non-CO₂ greenhouse gases (Energy White Paper 2007).

lags and uncertainties, and the circumstantial fluctuations outlined above, annual targets or milestones would increase the risk of greater mitigation costs (for example, costly policies might be rushed through towards the end of a year to achieve short-term reductions, or international emissions credits might need to be purchased after the year had already finished), when effort might instead be more effectively deployed in ensuring that emissions are reduced more smoothly over time to ensure that the budget as a whole was met.

However, we recognise and strongly agree with the need for the Government to be held accountable on an annual basis for progress against the budget. The five-year budgets will therefore be backed by a strong annual emissions reporting system which builds on our existing EU and international commitments. In addition, every year the Committee will be required to give its independent report on progress towards meeting the targets and budgets, and every year the Government must respond to these reports. Both the Committee's report and the Government's response must be laid before Parliament, to ensure a high level of scrutiny. Furthermore, when setting each budget, Government must also produce a report on its policies and proposals for ensuring that the required emissions reductions are made. And after the end of each budget, the Committee will be required to give its independent assessment of the way in which the budget was or was not met.

The concept of five-year budgets for national emissions reductions is already groundbreaking, as has been widely recognised. It is also a credible approach, providing a good balance between predictability and flexibility, while avoiding costly one-off reductions in target years only. And we will back it up with an enhanced framework of annual Government accountability to Parliament, scrutinised by the independent Committee. We therefore do not believe that annual targets or annual milestones are either necessary or helpful.

17. We would be concerned if the budgetary period were lengthened to maintain alignment with international reporting and emissions trading periods, given that this could reduce the frequency of the Government's strategy reports and outturn assessments. (Paragraph 69)

We consider that it is of paramount importance that the timeframe of the carbon budgeting system matches the international context. This is provided for by the power to amend the length of budgetary periods in the event of changes to reporting periods under any international agreement to which the UK is party. In addition, we consider the annual reporting framework proposed will ensure Parliament has sufficient oversight of performance to date and progress towards meeting the targets and budgets in the Bill. This is enhanced by the annual reporting duties of the Committee, which will provide an independent, expert overview of progress.

18. We recommend that the draft Bill compels the Secretary of State to make an order under Clause 12(4) that requires strategy reports under Clause 6 to be prepared at least every five years in the event that the existing five-year budgeting period is lengthened. (Paragraph 69)

As discussed in response to recommendation 17, the length of budget periods is to be determined in accordance with international practice. This being the case, it would be inappropriate to bind the Government's production of strategy reports to what could become a different timetable.

19. The draft Bill has it right in simply instructing the Secretary of State and Committee on Climate Change that they must take a range of issues, including climate science and economic and social circumstances, into account when considering the level of UK carbon budgets, without prescribing the means with which they do so. At the same time, in order for the statutory injunction that these disparate factors be taken into account to be meaningful, both the Government and the Committee on Climate Change should clearly document how in practice they have balanced these issues in making their decisions. (Paragraph 72)

The Committee will need to consider how to balance the factors set out in clause 5 of the draft Bill when developing its advice on the level of the carbon budget. To make this process transparent, we intend to amend the Bill to require the Committee to set out the reasons for its advice on budgets and for this advice to be published. In addition, we will amend the Bill to require the Secretary of State to explain, if applicable, why Government has not accepted the Committee's budget advice.

20. We recommend that impacts on the environment, especially biodiversity, be added to the list of factors which the Secretary of State and the Committee on Climate Change must take into account. (Paragraph 73)

The Government welcomes the Joint Committee's concern to ensure that wider questions of sustainable development and environmental impacts are not overlooked in the setting of carbon budgets, and is strongly committed to promoting sustainable development and protecting and improving the environment. As set out by the Chancellor earlier this month, one of the new Public Service Agreements (which set out the Government's priorities for the period to March 2011) is "*securing a healthy natural environment for today and the future*".

However, we question whether these are issues which can be considered by the Committee in a meaningful way in its advice on the overall level of the carbon budget. Taking biodiversity as an example, we consider that it would be very difficult for the Committee to assess the impact of different UK budget levels on biodiversity in a meaningful and robust way in its advice on the level of the carbon budget. Where biodiversity may be relevant to any advice given by the Committee, it will (as a public body) already be under a statutory duty under section 40 of the Natural Environment and Rural Communities Act to "*have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity*".³⁰

Instead, we believe that these are issues which are more properly considered by Government in its development of the specific policies which will be necessary to achieve the carbon budgets, and note that there are already measures in place in all Government Departments to ensure that they are fully considered during policy development.

21. If budgetary targets are to have any credibility, they must be based on a detailed analysis of the scope and potential for carbon reductions in specific sectors. To that extent we recommend that the Government, as a minimum, both makes publicly available the detailed analyses and forecasts which

³⁰ Section 40 of the Natural Environment and Rural Communities Act 2006; available from: www.opsi.gov.uk/acts/acts2006/pdf/ukpga_20060016_en.pdf

underpin the targets which are recommended and set, and lays out indicative figures for reductions in each sector. (Paragraph 76)

It is envisaged that the Government's report on policies and proposals for meeting carbon budgets would discuss these issues. We also intend to provide for the Committee's analysis and advice on budgets to be made public, and for the Government to explain to Parliament why, where it has not accepted this advice. We envisage that this explanation will necessarily involve setting out the reasons for the decision that it has taken.

We do not consider it appropriate that Government should set out indicative figures for reductions in each sector. While it may be argued that a sectoral breakdown would enhance transparency and show how much effort each sector of the economy would need to make to meet the targets and budgets, it reduces the Government's flexibility regarding where effort should be made. It also risks increasing costs for individual sectors.

22. We recommend that Clause 13 be amended so as to prohibit any alteration to a carbon budget after the budgetary period has ended. (Paragraph 77)

We intend to remove the relevant provisions from the Bill, as recommended by the EFRA Select Committee (recommendation 9).

23. We note that the draft Bill represents an important development in the nature of UK targets for carbon reduction. The concept of the net UK carbon account includes emission reductions arising from non-UK sources; therefore, the carbon targets for budgetary periods which the Bill defines cannot be regarded simply as UK domestic targets. This contrasts with the original definition of the Government's 2010 target, to reduce UK CO₂ emissions by 20% from a 1990 baseline. (Paragraph 82)

We note the Joint Committee's points. When the 2010 target was originally set, there was no EU Emissions Trading Scheme and the Kyoto Protocol had not come into force and hence the Kyoto mechanisms were not in operation. It would be illogical to exclude international emissions reductions credits purchased by UK organisations from counting towards meeting UK domestic targets and would increase the economic costs of meeting the targets.

24. We recommend that Clause 21 be amended, to give the Committee on Climate Change a duty to report annually on the use of carbon credits in the preceding year. In doing so, the Committee should be required to give an opinion on the robustness of the schemes under which these credits have been issued, the effectiveness of these credits in reducing global greenhouse emissions, and the transparency with which the Government has reported their use. Additionally, regulations (under Clause 16) which define the types and values of different carbon credits, and the circumstances in which they are to be set against the UK carbon budget, ought to be added to the features subject to the super-affirmative resolution procedure. (Paragraph 87)

The Government will report annually on its use of credits as part of its annual statement of UK emissions. We consider it would be both disproportionate and repetitive to require the Committee to report annually on the robustness, effectiveness and transparency of

the use of overseas credits. The Committee is required to provide advice on the use of overseas credits as part of its advice on each budget, and we envisage it would consider these issues in providing that advice.

To further strengthen transparency and oversight on this issue, we will amend the Bill so that the Government is required to seek the advice of the Committee on the first set of regulations regarding use of credits and debits, and that these regulations will be subject to affirmative resolution.

25. Regarding the issue of ‘supplementarity’, it is important to bear in mind that the fundamental basis of the Kyoto protocol is the principle that developed nations should take primary responsibility for the problem of climate change and should lead the way by setting themselves targets to reduce emissions. However, by not specifying an absolute cap on the use of foreign emissions credits in order to meet UK carbon budgetary requirements, the Bill as currently drafted would still theoretically allow all the savings to be made externally to the UK, notably in developing countries, and thereby postponing the decarbonisation of the UK economy. We are somewhat surprised that the Government appears to be relaxed that 70% of the UK emission savings anticipated under Phase 2 of the ETS are likely to be derived from international credits. As the Environment, Food and Rural Affairs Select Committee says, there would be “serious implications of over-utilising this facility in terms of the UK’s credibility on the international stage”. (Paragraph 92)

26. We are somewhat reassured that Clause 20 gives the Committee on Climate Change a duty to advise the Secretary of State on the extent to which each carbon budget should be met by the use of carbon credits. However, we recommend that these provisions be strengthened, with the Secretary of State being given a duty, under this advice, to set caps on the use of international credits against the UK’s carbon budget for each budgetary period. (Paragraph 93)

27. We still remain concerned by the absence in the Bill of any firm principles to guide the Committee’s advice in respect of the use of foreign credits. As we understand it, the scope for the use of international credits should reduce, tending towards net zero as we move towards 2050 under any successful global emissions reduction regime, given that in order for any nation to have surplus credits to sell it must be over-achieving its own targets – something which will prove necessarily more and more challenging for all nations as binding caps become ever more stringent. Therefore, in addition, we recommend that the Bill should place a duty on the Secretary of State, on advice from the Committee, to publish the rationale on which the cap on the use of international credits is based. This should make clear the proportion of emissions cuts that must be made from within developed nations such as the UK – or to put it the opposite way, the extent to which richer nations can buy their way out of making emissions cuts – in order for the world as a whole to stay within its global emissions budget to 2050. (Paragraph 94)

In response to recommendations 25, 26 and 27, the Bill includes trading of international emissions credits within the UK net carbon account, just as is done for the Kyoto Protocol, including allowing Government to trade international emissions reduction credits as part of its approach to meeting the targets and budgets. We

believe it is important that the Government and UK organisations can make effective use of international mechanisms for achieving emissions reductions at least cost to avoid making our targets needlessly expensive. The Kyoto Protocol's "flexible mechanisms" and the EU ETS are based on this principle to provide this option and to act as a means of securing and coordinating international action and as a way of helping developing countries achieve low carbon economies.

The pre-legislative scrutiny process and consultation on the draft Bill raised some concerns about the purchase of international credits in relation to targets in the Bill. Some questioned the quality and genuine "additionality" of these credits.³¹ We agree that it is essential that any credits bought by the UK represent real emissions reductions which would not have taken place otherwise. For this reason we are working hard at international level to support continued improvement in the procedures for the international mechanisms, such as in the setting of baselines and for the establishment of additionality. Increased transparency and public scrutiny can also play an important role in ensuring high standards are met.

Other respondents called for a limit to be set on the number of credits that can be purchased overseas. We have given this proposal careful consideration, acknowledging that one of the Bill's key aims is to set a framework for domestic action. There is considerable potential for cost-effective measures to reduce emissions in the UK and bring benefits to the UK economy, and the Government's detailed policies and proposals for meeting each five-year budget will be set out in a report to Parliament. We consider the key factor in determining how far emissions are reduced under the Bill will be the level of the UK's targets and budgets. In terms of the balance between domestic and international action, the Committee will advise on the use of international emissions reduction credits when making recommendations on each budget, and we anticipate that this advice will take into account the most recent international circumstances and best practice.

We would also note that the UK remains strongly committed to the international principle of complementarity, which states that "the use of the [Kyoto] mechanisms shall be supplemental to domestic effort and...domestic action shall thus constitute a significant element of the effort made by each Party...". We therefore envisage that the final decision on the level of credits purchased will need to be taken in the context of the Government's overall policy framework for meeting targets and budgets: given the existing international rules on complementarity, and on the use of overseas credits in the EU Emissions Trading Scheme, we do not believe that it would be appropriate to place further limitations in the Bill on the number of credits that can be purchased overseas.

Other respondents were concerned about the transparency and accountability with which the use of emissions credits will be reported. A number of provisions within the Bill ensure a high level of transparency and accountability in relation to the purchase of credits. The Committee will report annually to Parliament on progress towards meeting the budget, including the amount and type of credits used in doing so.

There were also concerns raised about the level of parliamentary scrutiny of the framework for using credits. As recommended by the House of Lords Delegated Powers Committee, we will therefore require the first set of regulations on credits and

³¹ This pertains to whether the project reduces emissions more than would have occurred in the absence of the project.

debits to be subject to the affirmative procedure, thereby ensuring strong transparency and robustness.

28. We therefore consider that the borrowing provision should be retained in the Bill. (Paragraph 95)

We welcome the Joint Committee's support for this provision.

29. The banking of credit purchased by the Government from overseas should be explicitly excluded from the banking provisions in the Bill. (Paragraph 97)

The Bill takes a flexible approach to emissions reductions. As explained in the response to recommendations 25-27, there are a number of safeguards in the Bill and in Government policy which will ensure a robust and transparent use of international credits. We take the view that excluding the banking of overseas credits would be unduly restrictive, and inconsistent with the approach taken in the Bill as a whole.

30. While we support the principle of banking of domestic over-achievement for use in a subsequent budgetary period, we recommend that the draft Bill be amended so as to place a limit on the extent to which carbon credits can be banked for use in this way. (Paragraph 98)

We do not propose to limit the banking of carbon credits, as this would run counter to the flexibility provided by the Bill.

31. We recommend that the draft Bill be amended to include a deadline of six months from the date the budget period is set for the Government to lay its policy proposals for meeting the target before Parliament with only a limited power to extend this period by an order subject to the negative resolution procedure, (Paragraph 101)

The Government is required to set out its policies and proposals "as soon as is reasonably practicable" after deciding the budget. To maintain credibility, and in line with normal procedure, the Government will be under a strong incentive to publish proposals; we believe that a specific (extendable) deadline in addition to this pressure is unnecessary.

32. We recommend that the Bill ensure that the Government must table substantive, amendable motions for debate in each House to allow Parliament to consider and approve the report of the Committee on Climate Change. (Paragraph 102)

We imagine that it is highly likely that there will be parliamentary debates on the progress reports of the Committee, but it would be very unusual to stipulate the need for one on the face of the Bill. While the Government is sympathetic to the idea of regular debates on climate change, this is an issue for Business Managers to consider through the usual channels.

33. We have concerns regarding the legal enforceability of Clauses 1(1) and 2(1)(b), which impose a duty on the Secretary of State to ensure targets and budgets are met. We believe, therefore, that these provisions need to be altered or strengthened. (Paragraph 115)

The Bill puts the Government's ambitions to cut emissions on a statutory footing. Ministers have a duty to abide by the law and this fact in itself gives the targets and budgets very great importance.

Our view is that the duties in the Bill – including the requirement to meet the targets and budgets – are stringent and legally enforceable. The statutory basis means that any failure to meet a target or budget carries the risk of judicial review, with remedies available at the discretion of the courts. No Government will take this risk lightly.

We also intend to introduce a new duty on the Secretary of State to report to Parliament explaining the reasons for not accepting the advice of the Committee on Climate Change, where this is the case. We agree with the Joint Committee that this mechanism will “increase the Government's level of accountability within Parliament”. We also intend to amend the Bill to require Government to provide an explanation to Parliament in the event that the targets and/or budgets in the Bill are not met, thereby enhancing the role that political and public embarrassment will have in compelling Government to comply with these duties.

The duty to explain to Parliament is not intended to be an alternative to compliance with the targets and budgets in the Bill. Judicial review could still be sought against the Secretary of State for failing to comply with the Bill's requirements, and the court would still be able to order an appropriate remedy.

The revised Bill therefore reflects our strongly-held view that the duties in the Bill are legally enforceable and that the threat of judicial review is an appropriate sanction to ensure that the obligations in the Bill are adhered to.

34. One option is to replace the Secretary of State's duty to “ensure” with a duty “to take steps with a view to ensuring” the targets and budgets are met. This type of purpose clause would reflect the likelihood that the courts are unable to enforce the existing form of duty. (Paragraph 116)

We agree with the Joint Committee in rejecting this option.

35. An alternative, which is our strong preference, is to introduce a compliance mechanism within the Bill that will give both meaning and strength to the duty to “ensure” by compelling the Secretary of State to redress any failure to meet a target or budget, where necessary through court intervention based on the compliance mechanism. (Paragraph 117)

As discussed above in response to recommendation 33, we propose to amend the Bill to require Government to provide an explanation to Parliament in the event that the targets and/or budgets in the Bill are not met.

36. We recommend that Government introduces into the draft Bill a similar type of compliance mechanism to the arrangements under the Kyoto Protocol. (Paragraph 120)

We do not consider that other compliance mechanisms which have been proposed would, in reality, strengthen the framework introduced by the Bill. Attempting to set out specific sanctions within the Bill itself carries a risk that whatever sanction imposed might be *less* stringent than one prescribed by a court of law.

37. We recommend that failure by the Government to meet a carbon budget or an annual milestone should trigger a duty to prepare a report explaining the reasons for the non-compliance and an action plan for remedying the situation. The action plan should cover any necessary policy changes, legislative proposals and resources needed to implement it; any public funds identified should be paid into a 'climate change compliance fund'. (Paragraph 123)

We propose amending the Bill so as to require Government to explain in Parliament why it has failed to meet a carbon budget.

38. If a carbon budget is exceeded, we recommend that the excess emissions are deducted from the carbon budget for the subsequent period (Paragraph 126)

We do not consider that a compliance mechanism of this kind would, in reality, strengthen the framework introduced by the Bill. Attempting to set out specific sanctions within the Bill itself carries a risk that whatever sanction was specified might be *less* stringent than one which could be prescribed by a court of law.

The revised Bill therefore reflects our strongly-held view that the duties in the Bill are legally enforceable and that the threat of judicial review is an appropriate sanction to ensure the obligations in the Bill are adhered to.

39. We also recommend that serious consideration is given to suspending the sale of carbon credits and debits by the Government during a period of default, in a similar way to paragraph (5c) of the Kyoto Protocol compliance procedure. (Paragraph 126)

This approach would lead to significant difficulties in the international context, for example with regard to trading under the EU ETS, and for this reason we do not feel this is an appropriate enforcement sanction. Unilaterally suspending the right of UK entities to participate in international emissions trading would risk running counter to European and international law.

40. We recommend that the duties in the draft Bill are placed on the Prime Minister instead of the Secretary of State. (Paragraph 129)

The current situation follows convention. Traditionally the Secretary of State has been the person named in legislation because it is Secretaries of State acting through their departments who actually carry out functions on a day to day basis. Although the Prime Minister has been named in legislation, this is not in the form of substantive duties. In addition, the implementation of emissions reductions policies is resource intensive work which would be carried out by departments.

41. The Government needs to ensure that it sets out a clear idea of the role it envisages the Committee on Climate Change playing over the next forty and more years. (Paragraph 134)

The Committee's statutory duties are set out clearly in the Bill – any significant changes to its roles and duties would require further primary legislation. The Committee's activities and priorities will be described fully in its Framework Document and Business Plans, which will be made publicly available.

42. We recommend that the Bill explicitly set out that the Committee on Climate Change is required to advise the Secretary of State on contributions by each sector towards meeting the carbon budget. (Paragraph 139)

The Committee is required to advise on the contribution towards meeting the carbon budget that should be made by sectors of the economy covered by trading schemes on the one hand, and by other sectors of the economy on the other.

As discussed in the second part of our response to recommendation 21, Government does not intend to set sectoral targets. In line with this approach, we therefore do not believe that the Committee should be required to set out indicative figures for reductions in each sector: it will be for Government to make policy decisions on where effort should be made.

43. We recommend that the draft Bill place a statutory duty on the Committee on Climate Change to publish the analysis that supports its recommendations on sectoral targets. More broadly, we recommend that the draft Bill be amended to require the Committee on Climate Change to publish the advice and analysis it gives to the Government, and its formal minutes. (Paragraph 141)

We agree that the Committee should be as transparent as possible and propose amending the Bill to require the Committee to publish the reasons for its advice on the level of the carbon budget (subject to provisions in Freedom of Information and other relevant legislation).

However, we do not consider it appropriate to require the Committee to set out indicative figures for reductions in each sector, or to require it to publish analysis of this kind.

44. We recommend that the draft Bill include a power for the Committee to carry out an evaluation of current and potential policy when advising the Secretary of State. (Paragraph 144)

The Government agrees with the EFRA Committee that the Committee should not be a policy-making body, and we feel strongly that it should not be able to offer unsolicited advice on individual policies at any time. Instead, it is important that its resources are focused on the analytical role it is intended to provide. Should it become apparent that the Committee's advice on a particular issue would be beneficial, the Bill already makes provision for the Committee's advice to be requested on any issue relating to the Bill or climate change more generally.

45. We recommend that the Government be required to respond within two months to the advice of the Committee on Climate Change, setting out how it intends to act upon the recommendations and, in the event that the Committee's advice is rejected, giving a full explanation of the reasons for reaching a different decision. (Paragraph 148)

We agree with the need for Government to explain, where applicable, why it is rejecting the advice of the Committee on the level of the carbon budget and will amend the Bill to make provision for this.

The draft Bill already provides for the budgets to be set by a particular date. Having reviewed this issue further, we have reached the view that in order to provide sufficient time for the Secretary of State to fully consult the Devolved Administrations on the contents of the Committee's advice before setting the budgets, the Bill will be amended to require the Committee to give its advice at least six months before the last date for setting the carbon budget for the period. This is a UK-wide Bill and it is therefore right that the Devolved Administrations should have sufficient time to consider the advice of the Committee and participate fully in the decision-making process.

46. It is important that the legislation gives the Committee on Climate Change a clear indication of which factors it is expected to consider when making its progress report. (Paragraph 149)

The format of the progress report will be an issue for the Committee to consider once it is appointed, in discussion with Government.

47. It is essential that the Committee should have access to whatever form of truly independent modelling it feels necessary to fulfil its remit, and that its budget should be sufficient to allow this. (Paragraph 154)

We agree that the Committee should be able to undertake any modelling it feels necessary, and will provide resources for it to do this, within the usual budget constraints.

48. We recommend the Government consider a role for the Committee on Climate Change in assuming oversight for government energy and transport modelling, in order to ensure that it is transparent to climate change researchers. (Paragraph 155)

The Committee is being established as an independent, expert body to provide analytical advice to Government. We do not agree that the Committee should be given oversight of Government modelling as this could compromise the independence of the Committee and potentially blur the proposed relationship with Government.

49. The provision for the Secretary of State to appoint the first chief executive should be removed from the Bill. (Paragraph 156)

On reflection, we agree with the Joint Committee. We therefore intend to remove the provision enabling the Secretary of State to appoint the first chief executive from the Bill. We agree that the Chair and Chief Executive will need a close working relationship, especially at the start of the Committee's life, so that they can effectively steer the preparatory work on the carbon budgets, alongside establishing the governance and accountability arrangements and strategic direction.

50. We recommend that the Deputy Chair be appointed by the Committee, and that the Bill be amended to reflect this. (Paragraph 157)

The Chair will be appointed by the Secretary of State, and a deputy Chair would effectively take on the Chair's role in their absence. Therefore the Secretary of State and the Devolved Administrations should still retain the overall power to appoint the deputy Chair, given the importance of the position.

We understand the importance of a good working relationship between the Chair and deputy Chair, and therefore propose to amend the Bill to require the Secretary of State to consult the Chair before appointing a deputy Chair.

51. We are pleased that the Committee will benefit from the work of a shadow Committee, and that this Committee will be appointed in accordance with OCPA and Cabinet Office guidelines. However the transparency of the Committee's appointments, and its independence, must not be compromised by the existence of such a body, or the haste with which it is established. (Paragraph 158)

We fully agree with the Joint Committee that the shadow Committee should not be established in haste. We are currently recruiting the shadow Chair and four members of the shadow Committee according to the full OCPA appointments procedure.

52. We recommend that the appointment of the Chair, Deputy Chair and chief executive of the Committee on Climate Change be subject to Parliamentary scrutiny. (Paragraph 160)

Our proposed approach for recruitment does not prevent this, but we need to consider this further in the light of the recent Government Green Paper, *The Governance of Britain*.³²

53. The Bill should specify a minimum five-year appointment term for Committee members, renewable once. (Paragraph 161)

We welcome the parliamentary committees' thoughts on the most appropriate terms of appointment and agree there is logic in aligning the appointments with the carbon budget cycle. We are now looking into how appointments are staggered to ensure there is sufficient continuity between budget periods so that Committee members' appointments do not all end at the same time. However, we would also note that it is possible that the length of carbon budgets may need to change (reflecting changes in international practice), and there are therefore risks around stipulating precise terms of appointment in the Bill.

54. The Committee on Climate Change would suffer if its members could not cover all required areas of expertise, and therefore the membership should be set at a minimum of eight people. We recognise however the value of keeping the Committee to a manageable size and therefore recommend that it have a maximum of twelve members. (Paragraph 162)

The draft Bill proposes that the Committee will consist of 5-8 members and a Chair. We believe that this strikes the right balance between ensuring that the Committee contains a good mix of the relevant expertise, and creating a committee which is focused and dynamic. Should the Committee – once established – consider it necessary to increase its size, we have made provision in the Bill for the Secretary of State (with the approval of the Devolved Administrations) to amend the number of Committee members. To provide further flexibility, there is also provision in the Bill to allow for sub-committees to be established, including persons not on the Committee, to consider issues in more detail if the Committee deems this necessary.

³² CM7175. Available from:
www.official-documents.gov.uk/document/cm71/7175/7175.asp

55.If the Committee is to advise in detail on sectoral targets, as we have recommended, it will require a broader base for formal consultation than currently envisaged. (Paragraph 164)

As discussed in our response to recommendation 42, we do not accept that the Committee should advise in detail on sectoral targets. We agree that it is very important for the Committee to consult properly with stakeholders, and further detail will be set out in the Framework Document. If it considers it to be necessary, the Committee is also able to establish sub-committees (including people who are not members of the Committee) through which it can discuss and consult on particular issues.

56.We recommend that the Government should ensure that both engineering and environmental expertise are included in the required Committee specialisms, and that this is made explicit on the face of the Bill. (Paragraph 165)

The list of desirable expertise for the Committee is not exhaustive.

Following discussions with the Devolved Administrations, we are amending the Bill to ensure that the Committee's overall composition should also include an awareness of the differences across the UK and the devolved context of climate change policy.

With this amendment, we believe that the list of expertise desirable for the Committee will be comprehensive and cover all relevant factors and therefore do not consider it appropriate to amend the list of specialisms in the draft Bill.

57.The budget for the Committee on Climate Change must be large enough to enable the Committee to have sufficient, well-qualified staff to support its work. (Paragraph 167)

We agree that it is important that the Committee is appropriately resourced. The initial estimate put forward in the draft RIA totalled £820k as ongoing costs for the secretariat, based on 10-15 analysts. While it is only an estimate at this stage, our scoping exercise suggests that the analytical resources available to the Committee should be increased by around 50%.

58.We recommend that the Committee have an annual research budget that is substantially higher than the £500,000 per annum currently proposed in order to carry out truly authoritative and independent advice and to ensure that it establishes the greatest possible credibility with government, local government, business and the general public. (Paragraph 169)

We continue to believe that the proposed ongoing research budget is sufficient (especially given the substantial increases envisaged for the secretariat). It is also likely that the Committee's research budget will need to be increased in the short-term, to support its review of the 2050 target which was announced by the Prime Minister in September. In addition, as the former Secretary of State indicated in his evidence to the Joint Committee, we will also invite the shadow Committee to comment on the proposed budget arrangements before they are finalised.

59. We recommend a funding mechanism is established for the Committee outwith the Defra budget. (Paragraph 170)

The Committee will be established as an advisory NDPB, sponsored by Defra. However, we fully expect the Devolved Administrations to agree to contribute to the funding of the Committee.

60. We recommend that the Bill be amended so that the September 2008 deadline applies only to the carbon budget for 2008-2012, and that the Committee be required to advise on the subsequent two budgets by September 2009, with the power to revise the 2008-2012 budget if this is necessary to ensure the coherence of the 15 year period. (Paragraph 175)

We believe that the Committee should provide advice on the first three carbon budgets together as envisaged in the draft Bill. This is because much of the analysis required for the second and third budgets will also be required for the Committee's advice on the first budget. We also consider it is important that we signal clearly – from the start – that in the future the UK will be increasingly carbon constrained and that business must become accustomed to operating within a fifteen-year framework of carbon budgets.

61. Given the reasons set out by the Government, we are content that including broad enabling powers in the draft Bill is appropriate. We are somewhat surprised at the apparent vagueness in Government thinking as to the purposes for which these powers would actually be used. Clearer guidance should be produced describing a number of potential trading schemes and revisions to them, and explaining their prospective implications and benefits, to give Parliament and the public a better understanding of the scope of these powers. As for personal carbon trading schemes, while these would appear to have important potential, the major impacts that they might have on the economy and people's personal circumstances mean it is essential that these should only be introduced through primary legislation. (Paragraph 186)

We welcome the Joint Committee's support for the enabling powers contained in the Bill, and set out below further details regarding the kinds of schemes for which we envisage using these powers:

- The first application of the new powers will be to support the introduction of the Carbon Reduction Commitment;
- The powers may also be used to introduce a household energy supplier obligations, to succeed the Carbon Emissions Reduction Target (CERT) which ends in 2011;
- As the then Secretary of State explained during pre-legislative scrutiny, we do not envisage using the powers to support the introduction of personal carbon trading.

It is difficult to specify further at this stage how the powers might be used: their very purpose is to maintain flexibility in supporting activities which enable us to meet the targets set in the Bill.

62. We conclude that, to ensure adequate accountability to Parliament for the use of these enabling powers, the provisions concerning the way in which secondary legislation is to be scrutinised and passed ought to be strengthened. (Paragraph 187)

We note the Joint Committee's points and have addressed them in our responses to specific recommendations.

63. Clause 31(3) should provide for the specified cases of regulations to be subject, not to the affirmative resolution procedure, but to the super-affirmative procedure. (Paragraph 192)

We do not agree with the proposal to employ the super-affirmative resolution procedure, which we consider a disproportionate level of scrutiny intended for very specific applications under the Legislative and Regulatory Reform Act 2006.

The Bill already ensures proposals for new trading schemes are subject to full public consultation and the affirmative resolution procedure, which we consider to be sufficient to guarantee adequate consideration and oversight. In addition, we will also amend the Bill to require the Government to seek the advice of the Committee before establishing any trading scheme, to further strengthen the robustness and transparency of this process.

64. We recommend that the provision of enforcement powers, set out in paragraph 22 of Schedule 2, be added to the list of features in Clause 31(3). Regarding the uncertainty of language in the phrase "significantly more onerous", we are content with the argument presented by Defra's memorandum on the delegated powers in the draft Bill. (Paragraph 192)

We will amend the Bill so that all regulations which confer new enforcement powers are subject to the affirmative resolution procedure.

65. We conclude that the draft Bill should not contain a blanket provision to rule auctioning in or out for all trading schemes, but that rather this should be decided on a case by case basis through the annual Finance Bill. (Paragraph 194)

66. We are concerned by paragraph 5(3)(a) of Schedule 2, which states that regulations made under the draft Bill "must provide for the allowances to be allocated free of charge". This appears to be contradictory to the Government's intention to decide on auctioning on a case by case basis. (Paragraph 195)

67. Given that the provision in paragraph 5(3)(a) appears to be superfluous as well as problematic, we recommend that it be deleted. (Paragraph 196)

In response to recommendations 65, 66 and 67, we understand the wording in the draft Bill caused some discussion over the Government's approach to allocation of allowances in trading schemes. Auctioning or other procedures for the sale of allowances will be done on a case by case basis through the Finance Bill. We will clarify in the Bill that it does not authorise making the allocation of allowances conditional on the payment of consideration; however, payment may be required under other legislation (whether by auction or otherwise).

68. We recommend that paragraphs 9 and 17 of Schedule 2 be amended, to require the Secretary of State to seek the advice of the Committee on Climate Change before establishing or revising provisions that allow the use of any allowances, credits or certificates from one trading scheme in another, and these regulations ought to be added to the instruments subject to the super-affirmative resolution procedure. (Paragraph 200)

We will amend the Bill to require the Government to seek the advice of the Committee before establishing any trading scheme. This general duty will ensure the Committee is able to provide input on different aspects of trading scheme design and implementation, rather than just those relating to use of allowances, credits or certificates from another trading scheme.

As explained in response to recommendation 63, we do not consider use of the super-affirmative resolution procedure would be appropriate.

69. Above all, we are clear that while the Bill sets out what could potentially be an extremely effective framework for future climate policy, it will require successive governments to devise and introduce a range of sometimes controversial policies to actually deliver progress. The Government's work, in other words, will only be beginning with the passage of this Bill. (Paragraph 203)

We note the Joint Committee's points. The Bill requires that as soon as reasonably practicable after an order is made to set the carbon budgets, the Secretary of State lays before Parliament a report setting out the Government's proposals and policies for meeting the budgets. This provision will apply to successive Governments.

70. We welcome the inclusion of adaptation in the draft Bill. We recommend that adaptation be included in the long title of the Bill, to reflect its significance. (Paragraph 206)

We accept the Joint Committee's recommendation and intend to amend the Bill accordingly.

71. The Government should encourage greater inter-departmental co-operation in developing adaptation policies, including, if it considered necessary, further framework legislation. (Paragraph 208)

The Bill will be amended to require publication of an adaptation "programme" rather than "policies and proposals", with the aim of promoting an effective cross-Whitehall approach. This will support the ongoing work of the cross-Government adaptation group. The group's purpose is to develop interdepartmental approaches to dealing with adaptation and to ensure that we have a coherent approach when developing responses to climate risks. The group is currently drafting a cross-Government adaptation framework which will set out priority areas for action, which are those areas where Government Departments will have to work together in order to develop adaptation solutions.

72. We recommend that Clause 37 be amended to require the Secretary of State to report on adaptation policies and proposals at least every three years and that this report be debated in both Houses on a substantive and amendable motion. (Paragraph 209)

Adaptation requires a long-term approach. We do not believe that any potential benefits of three-yearly reports would justify the resources required in producing them; we would prefer to focus on following through each five-year programme. We do not propose to mandate a debate – please see our response to recommendation 32 for further details.

73. The Secretary of State should make a report on adaptation measures at a time that enables adaptation policy to be co-ordinated with measures for reducing carbon emissions in the five-year carbon budget. (Paragraph 210)

Consideration of the broader impacts of policies is a normal part of good policy-making. While the reports on carbon budgets and on adaptation will inform each other, they are not directly linked. We therefore do not believe that the additional restriction of aligning reporting timetables would add significant value.

74. As currently drafted, we do not feel that the draft Bill communicates the same sense of urgency in respect of adaptation measures as it does in respect of mitigation measures. We think that the Bill should be more explicit about the UK's strategy for addressing the need for adaptation measures. We recommend that the reporting duty should be strengthened to impose an adaptation duty on the Secretary of State to report on the risks, the policy proposals to address those risks and then to implement those proposals. (Paragraph 213)

The draft Bill included a requirement for Government to publish regular risk assessments and policies and proposals in relation to climate change adaptation in the UK. We recognise the need to ensure that the Bill provides the best possible support for adaptation to the impact of climate change; this needs to be balanced with maintaining flexibility to adapt in different ways as needs change in future years.

We propose to make some amendments to this part of the Bill, including a requirement for the Government to publish an adaptation programme, reflecting the principles of sustainable development, at least every five years. We are also considering further the many different and detailed policy suggestions put forward on this issue, and are looking at existing relevant legislation and where the most pressing needs are. We will bring forward any resulting proposals as soon as possible.

75. We consider that the single most important action the Government could take to encourage local authority action on climate change is to include it in the Comprehensive Performance Assessment process. (Paragraph 221)

We note the Committee's points. The Local Government White Paper set out a new performance framework for local authorities which the Government proposes to introduce in 2008/9. Each local authority will agree thirty-five priority performance indicators against which targets will be set.

There will be three indicators on climate change:

- CO₂ reduction from local authority operations
- Per capita CO₂ emissions in the local authority area
- Progress towards integrating climate change adaptation into local authority business.

76. We agree with the overwhelming view of submissions from local government and regional government bodies that, whether in the Bill or elsewhere, the Government must give far higher priority to addressing the issue of individual behaviour change, and the role of local government in achieving this in its capacity as a major community leader. We expect the Government to back efforts to change individuals' behaviour with major public information campaigns, appropriately funded, which may be required to continue over an extended period. (Paragraph 222)

We note the Joint Committee's points and agree that Government must take a leadership role in engaging the public on climate change. Earlier this year Government embarked on the £10 million multi-media *Act on CO₂* campaign designed to raise awareness of the contribution that everyday activities make to CO₂ emissions and therefore climate change.³³ The initiative was launched in March with a campaign aimed at raising awareness amongst motorists of what they can do to help reduce emissions.

As part of the campaign, the Government launched the Act on CO₂ carbon calculator in June 2007. The calculator provides an opportunity for individuals and households to calculate their carbon footprint based on a range of user data. The calculator also provides a tailored action plan to suggest areas where users can take action; many of these are behavioural related.

The Government has been working closely with local authorities encouraging them to add links to the Act on CO₂ carbon calculator to their website and to create calculators of their own based on the Government data underlying the calculator.

As part of the Act on CO₂ campaign, Government has produced "Climate Change: Your guide to inspiring action" which has been developed for climate change communicators and community leaders³⁴. This publication gives practical hints and tips to raise awareness of climate change together with video films and links to other material such as the carbon calculator. A large number of local authorities have already used this booklet to raise awareness of climate change amongst groups in their communities. We have also published a town and parish council guide on climate change which is specifically targeted at their needs and capacities.

Looking ahead, we are looking to develop Act on CO₂ into a generational campaign in which Government will:

- lead by example;
- provide clear and consistent information to guide people's choices;
- develop mass marketing publicity campaigns to inform, inspire and persuade;
- ensure a co-ordinated campaign across Government and other public sector organisations, including local and regional government; and
- work closely with third sector organisations and NGOs.

³³ See www.direct.gov.uk/en/Environmentandgreenerliving/actonco2/DG_067197

³⁴ See www.climatechallenge.gov.uk/multimedia/communicating_climate_change.pdf

The campaign and other policy issues are founded on a strong evidence base of research with the general public that explores awareness, attitudes and behaviour on climate change to understand the barriers and triggers to individual behaviour change. This has been developed in conjunction with the key delivery bodies and environmental NGOs so that as far as possible it represents the consensus view of these key specialist stakeholders.

This framework will help Government and delivery partners to improve the design and implementation of policy and to target marketing and communications more effectively, reflecting the relative ability and willingness of different people to act. The framework also recognises the complimentary roles of top down interventions (including mass communications) and more bottom up community-based action.

77. We urge Government to address the issue of the inclusion of the Devolved Administrations as a matter of urgency before the draft Bill is introduced into Parliament. (Paragraph 227)

We note the Joint Committee's points. As discussed in paragraphs 6.1-6.4 of this paper, we have now agreed a way forward with the Devolved Administrations.

Response to recommendations of the Environment, Food and Rural Affairs Committee

This part of the document sets out the Government's responses to the recommendations of the EFRA Committee in their Fifth Report of Session 2006-07.³⁵

Purpose of the draft Bill

- 1. Target setting alone cannot deliver policy objectives. However, enshrining one in law will strengthen the Government's resolve to achieve it, subject it to greater public accountability if it fails, and crucially give confidence and certainty to the business community whose mid- and long-term investment decisions are central to meeting the target. (Paragraph 10)**

We welcome the EFRA Committee's support for the intended purpose of the Climate Change Bill.

Terminology

- 2. There is inconsistency in the language within the Bill. Terms such as "UK carbon account" and "UK carbon dioxide emissions" are used seemingly interchangeably. We recommend that the Bill only use two terms, "carbon dioxide" or "carbon dioxide equivalent". To do otherwise will cause confusion. Not all greenhouse gases—as defined by the Kyoto Protocol—are carbon-based. Use of the word "carbon" in the Bill should be avoided to remove any further ambiguity. (Paragraph 19)**

Different terms in the draft Bill are used deliberately and do have distinct defined meanings, as set out in the "Interpretation" clauses. However, revised drafting will clarify the position regarding CO₂ and other greenhouse gases.

Cumulative emissions

- 3. We recommend that the Government should also incorporate within the Bill targets relating to cumulative emissions. These should address overall budgets to 2020 and to 2050 in quantitative terms (tonnes of CO₂eq) rather than only using annualised percentage reductions. This addition to target setting would help set the framework for each of the five-year budgets required by the Bill. (Paragraph 26)**

The Committee on Climate Change is being set up specifically to advise us on the optimum trajectory to 2050. Setting a cumulative target now would constrain the Committee's consideration of future budget levels, and would prevent it from taking into account any further developments in the science. In addition, the cumulative emissions between now and 2020 will depend on the budgets for the period 2008-22, which will be set shortly after the enacted Bill comes into force. Finally, cumulative emissions targets would be inconsistent with international practice (both within the UNFCCC and EU), which are based on percentage reduction targets.

³⁵ www.publications.parliament.uk/pa/cm200607/cmselect/cmenvfru/534/534i.pdf

2020 and 2050 targets

- 4. The Government sets much store by the Bill. We emphasise, however, that the Bill alone will not deliver the necessary emission reductions and note that CO₂ emissions in 2006 were a mere 5% below 1990 levels. As such, whilst we agree with the substantial amount of evidence calling for the 2050 target to be higher than 60%, we recognise that this target itself is still extremely ambitious. We are not in a position to suggest whether the 2050 target should be higher than 60%. However, we recommend that the first task of the Committee on Climate Change should be to assess the current state of knowledge regarding climate science in order to determine what the 2050 target should be and the trajectory for achieving it. (Paragraph 32)**

The Bill provides a legally binding framework for the UK to manage its domestic and international commitments but we agree that alone it is not enough. The net UK carbon account was 11% below the 1990 level in 2005 but we clearly need to do more, which is why the government has set out new policies and measures to cut emissions in the UK Climate Change Programme and Energy White Paper. It has also become apparent throughout pre-legislative scrutiny that a considerable body of scientific and public opinion considers that in order to avoid dangerous levels of climate change, the UK needs to reduce emissions by more than 60% by 2050.

The figure of 60% was arrived at by the Royal Commission on Environmental Pollution (RCEP) in 2000, following extensive research and analysis. However, much of the most recent scientific analysis does indeed suggest that 60% may not be enough. In spite of this, no comparable amount of research and analysis has been done since the RCEP report and there is no broad consensus around what the figure should be, if it is not 60%.

To address this issue we propose carrying out an early review of the 2050 target by the Committee on Climate Change, to ensure that any new target which is decided upon will have been reached following rigorous analysis. To add further weight to this process, we are amending the Bill to require the Government to seek and take into account the advice of the Committee before amending the target.

- 5. We are not convinced by the Secretary of State's arguments for designing a 'ball park' target. Whilst we agree that the target to reduce emissions by 26% below 1990 baseline levels by 2020 will be challenging, and welcome the medium-term indication of progress that the Government expects, we believe the Government is being unnecessarily prescriptive in placing an upper limit on the 2020 target. Having an upper limit serves no practical purpose. We recommend that Clause 3(1)(a) be amended by leaving out the words ", but no more than 32%,". This will bring it in line with the 2050 target to reduce emissions by "at least 60%". (Paragraph 38)**

The 2020 target is included in the Bill to provide a useful "way-point" on the path to the 2050 target. It helps to define the possible trajectory, and therefore cumulative emissions reductions, to 2050. It is clear that business welcomes this clear and credible interim target, given the long-term nature of the trajectory to 2050.

Each of the parliamentary committees has recognised that achieving the lower end of the 2020 target range (a 26% reduction in CO₂ emissions) is likely in itself to be

challenging. Including an upper limit to this range (a 32% reduction in CO₂ emissions) also serves to provide greater certainty to business as to the likely path of the trajectory to 2050. This should help facilitate the investment decisions that will be necessary to pave the way to a low carbon economy.

The importance of the 2020 target is important in driving investment decisions in the short-term can be demonstrated for instance in the fact that the UK will need around 20-25GW of new power stations by 2020 if we are to maintain levels of electricity generation capacity equivalent to those available today.³⁶ These new power stations will need to be built in good time to replace the closures of capacity and to meet increases in demand. As this plant will typically have a lifetime of some 25-60 years, decisions about how this capacity is provided will be crucial in setting our emissions reduction trajectory to 2050 and beyond. The predictability provided by a clear, stretching 2020 target will be important in ensuring that the need to tackle climate change is properly taken into account in these investment decisions.

In addition, the Bill does not rule out reducing emissions by more than 32% in 2020, as any surplus effort could be banked into the subsequent budget period. Although the Committee will examine this further as part of its review of the 2050 target, we would also note that initial analysis suggests the current 2020 range is consistent with progress towards both the existing 2050 target and a range of other possible 2050 target levels. For the reasons set out above, we therefore intend to retain the 2020 target range as set out in the draft Bill.

6. The Bill must make provision for the 2020 and 2050 targets to be revised, but we recommend that this provision be limited to an upwards revision only. We also recommend that the Committee on Climate Change be empowered to propose revisions to the mid- and long-term targets whenever it believes an amendment may be appropriate. (Paragraph 43)

As drafted the Bill allows for Government to increase the statutory emissions targets for 2020 and 2050, and we will ask the Committee to report on whether the 2050 target should be stronger still. We consider that to constrain future Governments to only allow them to increase these targets would reduce the flexibility provided in the Bill. Including emissions from international aviation and international shipping in our targets, for example, may impact on our ability to meet increased targets given the limited technological potential to reduce emissions in these sectors (at least in the short term). We are asking the Committee to examine the implications of including these emissions in our targets, as part of its overall review of the 2050 target. Moreover, it cannot be assumed that developments in our understanding of climate change science and economics will always point in the direction of more stringent targets.

Allowing the Committee to propose revisions to the targets when it likes would impact on the long term signals the targets in the Bill send and reduce certainty for business, and we therefore do not intend to accept this recommendation. The draft Bill stated that the targets may only be amended with regard to scientific knowledge about climate change or international law or policy, and under our new proposals amendments to the target would also be subject to the advice of the Committee. As any amendment to the targets would also be subject to parliamentary consent by the

³⁶ Source: *Meeting the Energy Challenge. A White Paper on Energy*; 2007. Available from: www.berr.gov.uk/files/file39387.pdf

affirmative procedure, we consider there are sufficient checks and balances to prevent inappropriate amendments to the targets.

Budgetary periods

7. We remain unconvinced that annual statutory targets should be used owing to inevitable fluctuations in energy demand and the unavoidable lag in reporting on progress. We accept the case for five-year budgetary periods, but we recommend that clear annual 'milestones' are set—and published—by the Committee on Climate Change in order that it may become apparent well before the end of a budgetary period whether or not policies are working. This also reflects the fundamental significance of cumulative emissions, and the trajectory involved, by which the five-year budgets are reached. (Paragraph 51)

The Bill creates a duty for the Government to set carbon budgets, defined as an amount for the net UK carbon account for a given period. Three carbon budgets must be in legislation at any one time, providing a clear ongoing fifteen-year trajectory which provides UK businesses and households with improved certainty for future planning and investment.

The five-year budgets will ensure that the first budget period, 2008-12, runs concurrently with international timescales: the first commitment period under the Kyoto Protocol and the second phase of the EU ETS. There is flexibility under the Bill to amend the length of budget periods if international practice changes.

We welcome the support of the EFRA Select Committee for the system of five-year budgets set out in the draft Bill. In addition, the degree of certainty provided by the proposed approach has been supported by businesses in responding to the consultation. This clear statement by the UK helps to mitigate the effects of current uncertainty about the international situation post-2012.

In response to the proposal for annual targets or milestones in addition to the five-year budgets, the Government believes strongly that a longer budget period is more appropriate. An annualised approach would be inconsistent with the UK's international obligations, which are based on five-year budgets. In particular, it would be impractical to manage annual budgets for those businesses covered by EU ETS, representing around half of the UK's emissions, since that system operates on five-year periods and firms can trade freely within the period and across the EU to meet their obligations.

In addition, a carbon budget makes very clear that every year's emissions count towards the overall budget. There are no consequences for high emissions in an individual year, as long as the aggregate emissions for the five-year period do not exceed the limit set out in the budget. This provides essential flexibility within the system, as annual emissions figures will vary naturally from year to year. Evidence shows for instance that annual fluctuations in the weather can have big impacts on emissions, as people turn up their heating. Lower temperatures in 1996 and 2001, for example, correlated with increases in emissions of around 3-4% compared to the years either side. It would be illogical for the UK to "miss its target" as a result of such normal annual variation; this would undermine the credibility of the system.

In addition, there are considerable time-lags in the availability of emissions data which would make annual targets or milestones even more impractical. Provisional emissions figures are not available until after the year in question has already finished, and the final emissions figures are not available until more than a year later. Given these time-lags and uncertainties, and the circumstantial fluctuations outlined above, annual targets or milestones would increase the risk of greater mitigation costs (for example, costly policies might be rushed through towards the end of a year to achieve short-term reductions, or international emissions credits might need to be purchased after the year had already finished), when effort might instead be more effectively deployed in ensuring that emissions are reduced more smoothly over time to ensure that the budget as a whole was met.

However, we recognise and strongly agree with the need for the Government to be held accountable on an annual basis for progress against the budget. The five-year budgets will therefore be backed by a strong annual emissions reporting system which builds on our existing EU and international commitments. In addition, every year the Committee will be required to give its independent report on progress towards meeting the targets and budgets, and every year the Government must respond to these reports. Both the Committee's report and the Government's response must be laid before Parliament, to ensure a high level of scrutiny. Furthermore, when setting each budget, Government must also produce a report on its policies and proposals for ensuring that the required emissions reductions are made. And after the end of each budget, the Committee will be required to give its independent assessment of the way in which the budget was or was not met.

The concept of five-year budgets for national emissions reductions is already ground-breaking, as has been widely recognised. It is also a credible approach, providing a good balance between predictability and flexibility, while avoiding costly one-off reductions in target years only. And we will back it up with an enhanced framework of annual Government accountability to Parliament, scrutinised by the independent Committee. We therefore do not believe that annual targets or annual milestones are either necessary or helpful.

8. We recommend that once the Bill becomes law, the Government should publish a sectoral breakdown of its national emission reduction targets to help different sectors of the economy and society—including Government, businesses, communities, households and individuals—appreciate what action they will have to take if the UK as a whole is to achieve its emission reduction objectives. (Paragraph 52)

We do not consider it appropriate that Government should set out indicative figures for reductions in each sector. While it may be argued that a sectoral breakdown would enhance transparency and show how much effort each sector of the economy would need to make to meet the targets and budgets, it reduces the Government's flexibility regarding where effort should be made. It also risks increasing costs for individual sectors.

9. The provision to amend a budget more than a year after the end of a budgetary period makes a nonsense of the entire concept of budgetary periods, and would render any sanctions completely unworkable. This is simply wrong. Subsection (5) of Clause 13 should be removed in its entirety. (Paragraph 55)

On reflection, we agree with the EFRA Committee, and we propose to remove the clause in question from the revised Bill.

Purchasing credits from overseas

10. We recommend that the facility to purchase credits from overseas should only be exercised as a last resort. The Government should ensure that any purchases of credits from overseas do not prejudice a country's attempts to meet its own environmental objectives. Because of the serious implications of over-utilising this facility in terms of the UK's credibility on the international stage, combined with the potential for unforeseen consequences and the importance of public opinion, we recommend that this provision be strictly limited to a quantifiable amount to be advised by the Committee on Climate Change for each budgetary period. It should be for the Committee on Climate Change to determine if and when the purchase of overseas credits is appropriate. (Paragraph 64)

The Bill includes trading of international emissions credits within the UK net carbon account, just as is done for the Kyoto Protocol, including allowing Government to trade international emissions reduction credits as part of its approach to meeting the targets and budgets. We believe it is important that the Government and UK organisations can make effective use of international mechanisms for achieving emissions reductions at least cost to avoid making our targets needlessly expensive. The Kyoto Protocol's "flexible mechanisms" and the EU ETS are based on this principle to provide this option, and to act as a means of securing and coordinating international action and as a way of helping developing countries achieve low carbon economies.

We agree that it is essential that any credits bought by the UK represent real emissions reductions which would not have taken place otherwise. For this reason we are working hard at international level to support continued improvement in the procedures for the international mechanisms, such as in the setting of baselines and for the establishment of additionality. Increased transparency and public scrutiny can also play an important role in ensuring high standards are met.

Regarding calls for a limit to be set on the number of credits that can be purchased overseas, we have given this proposal careful consideration, acknowledging that one of the Bill's key aims is to set a framework for domestic action. There is considerable potential for cost-effective measures to reduce emissions in the UK and bring benefits to the UK economy, and the Government's detailed policies and proposals for meeting each five-year budget will be set out in a report to Parliament.

We consider that the key factor in determining how far emissions are reduced under the Bill will be the level of the UK's targets and budgets. In terms of the balance between domestic and international action, the Committee will advise on the use of international emissions reduction credits when making recommendations on each budget, and we anticipate that this advice will take into account the most recent international circumstances and best practice. We would also note that the UK

remains strongly committed to the international principle of complementarity, which states that “the use of the [Kyoto] mechanisms shall be supplemental to domestic effort and...domestic action shall thus constitute a significant element of the effort made by each Party...”. We therefore envisage that the final decision on the level of credits purchased will need to be taken in the context of the Government’s overall policy framework for meeting targets and budgets: given the existing international rules on complementarity and on the use of overseas credits in the EU ETS, we do not believe that it would be appropriate to place further limitations in the Bill on the number of credits that can be purchased overseas.

In response to concerns about the transparency and accountability with which the use of emissions credits will be reported, there are a number of provisions within the Bill which ensure a high level of transparency and accountability in relation to the purchase of credits. The Committee will report annually to Parliament on progress towards meeting the budget, including the amount and type of credits used in doing so.

There were also concerns raised about the level of parliamentary scrutiny of the framework for using credits. As recommended by the House of Lords Delegated Powers Committee we will require the first set of regulations on credits and debits to be subject to the affirmative procedure, thereby ensuring transparency and robustness.

Enforcement

11. Although sanctions may not be either likely or real, we recognise that having an Act of Parliament has its own merits. By institutionalising the targets, the political pressure to achieve them will be increased. The Government of the day will also be subject to 'the court of public opinion'. (Paragraph 72)

Although we consider that the sanctions in the Bill are both likely and real, we welcome the EFRA Committee’s point that the Bill will itself increase political pressure for the target to be met – this is reflected in the Bill’s proposed approach to enforcement and sanctions.

12. If a target is missed, we recommend that a debate on a remedial action plan is held on the Floor of the House on an amendable Government motion subsequent to the publication of the Government's response to the annual progress report by the Committee on Climate Change. (Paragraph 73)

We anticipate a debate will be very likely once the Government lays its response to the Committee’s report, although we consider that it would be very unusual to stipulate the need for these on the face of the Bill. While the Government is sympathetic to the idea of regular debates on climate change, this is an issue for Business Managers to consider through the usual channels. The Bill will be amended to require the Government to provide an explanation to Parliament for any failure to meet budgets, providing improved transparency and accountability.

The Committee on Climate Change

13. The Committee on Climate Change should not be a policy-making or delivery body. It should be focussed on the provision of advice with regard to the budgets, and the publication of progress reports, but it must not be prevented from advising the Government on any policy matters that may come to its attention while carrying out its duties. (Paragraph 85)

We agree that the Committee is not a policy-making or a delivery body. While the Committee will need to look at the potential to reduce emissions in each sector to inform its advice on budgets and targets and the progress towards meeting them, it should not be able to offer unsolicited advice on individual policies at any time.

14. In order to establish the independence of the Committee on Climate Change, the Secretary of State should be required to accept its recommendations without further debate. This would position the Committee's advice alongside that of the Monetary Policy Committee whose interest rate decisions are not challengeable by the Chancellor of the Exchequer except under very extreme circumstances. (Paragraph 86)

This recommendation would make the Committee on Climate Change a de facto policy making body. The role of the Committee on Climate Change is to provide expert advice and the role of the Secretary of State is to make decisions taking proper account of that advice. To strengthen accountability, we intend to amend the Bill to require the Committee to give reasons for its advice on the level of carbon budgets and to require the Secretary of State to explain why if this advice has not been accepted.

15. We do not see that the Bill prevents the Committee on Climate Change from recommending the mid- and long-term targets, but it is not clear that the Committee will have this power. We recommend that by 2009 the Committee should review and recommend to the Secretary of State what the 2020 and 2050 target should be. We would not expect these to be less than 26% and 60%, respectively, below 1990 levels. In addition, the Committee should have the power and responsibility to make recommendations to the Secretary of State at any time regarding the mid- and long-term targets. (Paragraph 88)

As discussed in response to recommendation 4, we propose carrying out an early review of the 2050 target, asking the Committee on Climate Change to report by autumn 2009 on whether the target should be strengthened to ensure that any new target which is decided upon will have been reached following rigorous analysis. To add further weight to this process, we are amending the Bill to require the Government to seek and take into account the advice of the Committee before amending the target.

We feel the proposal that the Committee may make recommendations at any time on the targets is not appropriate as this could undermine the certainty and stability we are seeking to provide to business (see also our response to recommendation 6).

16. It is right that the Committee on Climate Change should be composed of experts rather than representatives. Although the essential expertise required of the Committee is not explicitly listed in order of importance, the way it is listed in the Bill appears to suggest that economic interests are

going to be more heavily represented than environmental ones. The schedule should be redrafted to dispel this impression (for example, by using alphabetical order). We also recommend that the impact of climate change upon biodiversity be added. (Paragraph 93)

We agree with the recommendation to list the desired membership of the Committee in alphabetical order, to avoid giving any impression of priorities.

On the inclusion of biodiversity as one of the areas of expertise desirable in the overall composition of the Committee, we consider that it would be very difficult for the Committee to assess the impact of different UK budget levels on biodiversity in a meaningful and robust way in its advice on the level of the carbon budget. Where biodiversity may be relevant to any advice given by the Committee, it will (as a public body) already be under a statutory duty under section 40 of the Natural Environment and Rural Communities Act to “*have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity*”.³⁷ We do not, therefore, intend to amend the Bill to include biodiversity as an area of expertise for the Committee, but would like to reassure the EFRA Committee that this is fully considered in the development of Government policy.

17. It is not in anybody's interest to have a strict fixed-term appointment of five years such that the entire Committee on Climate Change is potentially replaced at the end of every budgetary period. We recommend that appointments are for five years at least, and could be longer to allow their contracts to expire at different times. The Government should make them non-renewable so as to underpin members' independence of Government. (Paragraph 95)

We agree with both the EFRA Committee and the Joint Committee that there is logic in aligning the appointments to marry with the carbon budget cycle. We are now looking into how appointments are staggered to ensure there is sufficient continuity between budget periods so that members' contracts will not all expire at the same time. However, we also note that it is possible that the length of carbon budgets may need to change (reflecting changes in international practice), and there are therefore risks around stipulating precise terms of appointment in the Bill.

Resources

18. It is imperative that the staff and information resources available to the Committee on Climate Change are completely independent of Government. We recommend that independent consultants be asked by the Government to recommend the correct level of resources available to the Committee in order to establish that it is properly resourced. This should ensure that it can be truly independent of Government interests in conducting the analysis and research which it believes necessary to help ensure that the targets set out in the Bill are met. (Paragraph 101)

We do not consider it appropriate to ask independent consultants to recommend the level of the Committee's budget, as the secretariat and Government analysts will have a much clearer picture of the type of analysis it requires. The initial estimate put

³⁷ Section 40 of the Natural Environment and Rural Communities Act 2006; available from: www.opsi.gov.uk/acts/acts2006/pdf/ukpga_20060016_en.pdf

forward in the draft RIA totalled £820k as ongoing costs for the secretariat, based on 10-15 analysts. While it is only an estimate at this stage, our scoping exercise suggests that the analytical resources available to the Committee should be increased by around 50%. We continue to believe that the proposed ongoing research budget is sufficient, especially given the substantial increases envisaged for the secretariat. It is also likely that the Committee's research budget will need to be increased in the short-term, to support its review of the 2050 target which was announced by the Prime Minister in September. In addition, as the former Secretary of State indicated in his evidence to the Joint Committee, we will invite the shadow Committee to comment on the proposed budget arrangements before they are finalised.

19. Given that the emissions forecasting model used by the DTI is adapted from its energy model, and the delays experienced in publishing the Government's Review of the Climate Change Programme, we question whether the current forecasting model is suitable for use by the Committee on Climate Change in drawing up budgets three budgetary periods (15 years) in advance. Our evidence suggests that the resources proposed for the Committee on Climate Change may quickly prove to be inadequate. We recommend that adequate resources are made available to the Committee on Climate Change for a 'bespoke' emissions forecasting model to be developed. Given the importance that Defra attaches to climate change, we are sure the Department will be able to find the relatively small sums involved by reprioritising from elsewhere within its budget. (Paragraph 106)

It will be for the Committee and its secretariat to consider whether this is necessary. We continue to believe that the proposed ongoing research budget is sufficient, especially given the substantial increases envisaged for the secretariat. We will also invite the shadow Committee to comment on the proposed budget arrangements. It is conceivable, however, that in future the Committee may want to develop and enhance its own in-house models to supplement the outputs of the Government's energy and transport models.

20. We recommend that the work of the Committee on Climate Change—including its minutes and advice given—should be posted on its website within one month of transmission to the Secretary of State. (Paragraph 112)

We agree that it is important that the Committee be as transparent as possible and are proposing to amend the Bill to require the Committee to publish minutes of its meetings, its advice on budgets and the reasons for it.

21. We strongly recommend that the Government commits to holding an annual debate on a substantive amendable motion on the Floor of the House, subsequent to the publication of the Government's response to the annual report produced by the Committee on Climate Change. (Paragraph 113)

We imagine that it is highly likely that there will be parliamentary debates on the Government's response to the annual reports of the Committee, but it would be very unusual to stipulate the need for one on the face of the Bill. While the Government is sympathetic to the idea of regular debates on climate change, this is an issue for Business Managers to consider through the usual channels.

Trading schemes

22. We recommend that the Government explains more clearly—prior to the final version of the Bill being produced—which trading schemes will be introduced using the enabling powers within the legislation. (Paragraph 117)

We set out below further details regarding the kinds of schemes for which we envisage using these powers:

- The first application of the new powers will be to support the introduction of the Carbon Reduction Commitment.
- The powers may also be used to introduce a household energy supplier obligation, to succeed the Carbon Emissions Reduction Target (CERT) which ends in 2011.
- As the then Secretary of State explained during pre-legislative scrutiny, we do not envisage using the powers to support the introduction of personal carbon trading.

It is difficult to specify further at this stage how the powers might be used: their very purpose is to maintain flexibility in supporting activities which enable us to meet the targets set in the Bill.

23. We recommend that the requirement for allowances to be allocated free (Schedule 2, Section 5 (3)) be removed from the Bill so as to avoid any unnecessary confusion, particularly for those industries and sectors that will be subject to these schemes. (Paragraph 121)

We understand the wording in the draft Bill caused some discussion over the Government's approach to allocation of allowances in trading schemes. Auctioning or other procedures for the sale of allowances will be done on a case by case basis through the Finance Bill. We will clarify in the Bill that it does not authorise making the allocation of allowances conditional on the payment of consideration; however, payment may be required under other legislation (whether by auction or otherwise).

International aviation and shipping

24. The inclusion of the UK's share of emissions from international aviation and shipping will have significant implications for the validity of the 2050 target. We recommend that the Committee on Climate Change should be required to report on the UK's emissions from international aviation and shipping, whether or not they are counted as part of the statutory target, in order more accurately to inform its recommendations regarding budgets and targets which will affect all other sectors of the economy. Pursuant to this, the Government must make every effort to achieve international agreement as soon as possible on allocation mechanisms so that the powers provided for in Clause 15 (3) can be exercised. We further recommend that once international agreement is reached, the Committee on Climate Change should include the UK's share of emissions from international aviation and shipping in its recommendations for the targets. (Paragraph 128)

The UK is pressing internationally to establish an agreed basis for allocating international aviation emissions and for international aviation to be brought within a

global post-2012 framework for addressing climate change, as an international solution would be the ideal way to address this issue.

However, we acknowledge that global agreement in relation to international aviation emissions may be difficult to achieve. While we want to allow time for these discussions to take place, and potentially for agreement to be reached, we cannot afford to wait indefinitely.

As the Committee recognises, including international aviation and international shipping emissions in the UK's targets could have an impact on both the level of the targets and on other sectors of the economy. We will therefore ask the Committee on Climate Change to examine the implications of including these emissions in the UK's targets, as part of its overall review of the 2050 target.

To include international aviation emissions in the UK's targets, we would need a workable methodology to calculate "the UK's share" of these emissions, and one which took account of international progress. In addition, given that aviation emissions are likely to be included in the EU ETS soon, any methodology to include these emissions in the UK's targets would also need to be compatible with the way that emissions and credits are allocated under the EU ETS rules.

Therefore, once the EU ETS rules have been finalised, we will ask the Committee for their advice on whether there is a methodology for including international aviation emissions which was workable and compatible with the EU ETS and takes account of progress in the UNFCCC and the wider international context, and on the impacts of adopting it.

In the meantime, the UK is continuing to press for the inclusion of aviation in the EU ETS as soon as possible, ideally within Phase II (2008-2012). The UK has led this debate within Europe since the UK Presidency of the EU in 2005 when, under our chairmanship, the EU Environment Council agreed that emissions trading seemed to be the best way forward and called upon the European Commission to produce a legislative proposal by the end of 2006.

The issues regarding international shipping are also complex, and given the difficulties in identifying a coherent trend in shipping emissions figures or the key drivers behind them, the Government does not currently forecast the UK's international shipping emissions. Our current "best estimate" of future emissions from bunker fuel sales is a continuation of the current "long-term average", although we would not describe such an estimate as a forecast as it contains a significant degree of uncertainty.

However, to ensure greater transparency, we also intend to place a requirement on the Secretary of State to report annually to Parliament on emissions from international aviation and international shipping in line with UNFCCC practice.

Response to recommendations of the Environmental Audit Committee

This part of the document sets out the Government's responses to the recommendations made in the EAC's Seventh Report, *Beyond Stern: From the Climate Change Programme Review to the Draft Climate Change Bill*.³⁸

The 2050 target

16. The Government's policy towards the UK's 2050 target is clearly incoherent. The Government remains committed to limiting global warming to a rise of 2°C; but it also acknowledges that, according to recent scientific research, a cut in UK emissions of 60% by 2050 is now very unlikely to be consistent with delivering this goal. While the Office of Climate Change was justified in telling us that the "at least 60%" target in the draft Bill is within the range discussed in the Stern Review, this is clearly the minimum in emissions reductions which the Stern Review sets out. In fact, Stern states that this would correspond to a 63%-99% chance of exceeding a warming of 2°C, and describes this level of global warming as "a dangerous place to be, with substantial risks of very unpleasant outcomes". We recommend that the 2050 be strengthened to reflect current scientific understanding of the emission cuts required for a strong probability at stabilising warming at 2°C. (Paragraph 69)

The figure of 60% was arrived at by the Royal Commission on Environmental Pollution (RCEP) in 2000, following extensive research and analysis. We recognise the significant recent advances in scientific understanding, but also note that no comparable cross-cutting research and analysis has been done since the RCEP report and there is no broad consensus around what the figure should be, if it is not 60%.

It is important that the 2050 target is set at a level which reflects all these considerations and which is based on thorough, expert and independent analysis. As the Prime Minister announced on 24 September 2007, we will therefore ask the independent Committee on Climate Change *"to report on whether the 60% reduction in emissions by 2050, which is already bigger than most other countries, should be even stronger still."*

We believe that this is the most thorough and credible means of ensuring that the target remains both ambitious and realistic. The Committee will have the independence and the right expertise and resources to carry out a review, and will be able to provide a robust set of scientific and economic analyses to underpin a different target. Armed with this technical evidence, Ministers will be in a position to take a balanced view of the most appropriate level, taking account of progress at international level.

We intend that the Committee should undertake this work as soon as it has made recommendations on the first three budgets, and should report by autumn 2009. This will ensure that the first carbon budgets are in legislation as soon as possible, and that these budgets act as a cap on UK emissions from the earliest possible stage. By the time the Committee reports, we will hopefully have a clearer picture of the direction of

³⁸ www.publications.parliament.uk/pa/cm/cmenvaud.htm

travel internationally, which will provide additional context for the Committee's analysis.

17. We recommend that the Government publishes the rationale for its 2020 and 2050 targets, preferably including the central formula upon which they are based, in the Climate Change Bill. This rationale should make clear the size of complementary caps on annual emissions required of other blocs of nations, the stabilisation target for global atmospheric concentrations of greenhouse gases, and the resulting projected temperature rises, which are implied by the Bill's targets for annual emissions from the UK, as well as the central assumptions used by the Government in making these correlations. The Bill should state that if the Secretary of State proposes to revise these targets, he must publish the rationale for the new target in like manner. (Paragraph 70)

We recognise that understanding of both the science and the economics of climate change has improved significantly since the 60% target was originally set in 2003. The Working Group reports of the Intergovernmental Panel on Climate Change (IPCC) which have been published this year confirm that atmospheric concentrations of the major greenhouse gases have all increased significantly since pre-industrial times. The reports show that CO₂ concentrations have risen by over one third between 1750 and 2005, to 379 parts per million (ppm); when the other major greenhouse gases are taken into account this is equivalent to around 430ppm CO₂e.

The Stern review of the economics of climate change, published last year, estimated that the costs of inaction on climate change significantly outweigh the expected costs of co-ordinated global action. Without efforts to tackle climate change, Stern predicts that it could cost the global economy between 5% and 20% of gross domestic product (GDP) now and forever, compared to much lower estimated costs of global action to stabilise atmospheric concentrations (at 550ppm CO₂e) of around 1% of GDP by 2050, within a range of +/-3%.

In considering the most appropriate way forward, we are also mindful of the fact that climate change is a global problem which demands a global solution. The UK has been a consistent leader in the field of climate change and energy policy by setting bold targets and pursuing policies, both domestically and internationally, relating to mitigating and adapting to the impact of climate change. Ultimately, co-ordinated global action will be essential to tackling the problem.

The UK is therefore committed to securing a strong multilateral agreement for the post-2012 period that achieves the overarching UNFCCC objective of avoiding dangerous climate change. Securing multilateral agreement is not in the UK's gift alone, and the outcome is difficult to predict, but we and other developed countries can make it more likely by effectively influencing the actions and positions of others. The UK has successfully pressed for ambitious action at EU level, with agreement at the 2007 Spring European Council on the emissions reduction targets required by both 2050 and 2020. The targets in the Bill are consistent with these stated ambitions.

In considering the level of the 2050 target, the Government also needs to take account of the economic costs and benefits of any new target. Initial analysis, to be published alongside the revised Bill, indicates a potentially increased impact on GDP for a higher 2050 target, but this would clearly depend on the trajectory towards the target and the policies implemented to reach it. However, this analysis is very preliminary, and

limitations within the model used mean that a far more sophisticated exploration is needed of the potential impacts of different 2050 targets.

As the Prime Minister announced on 24 September 2007, we propose to ask the independent Committee on Climate Change to report on whether the 60% reduction in emissions by 2050, which is already bigger than most other countries, should be even stronger still. The Committee's workings will be published as far as possible. We do not believe that it is appropriate to legislate for the Government to publish further details of the rationale for the current long-term target, or for any new target in the future.

18. Above all, the Government must draw attention, at home and abroad, not just to percentage targets for the annual emissions in a certain year, but even more to the absolutely crucial issue of the cumulative total budget of greenhouse gases that the world can afford to emit by 2050 if it is to have a reasonable chance of holding global warming to 2°C. (Paragraph 71)

19. In terms of the way in which this cumulative global budget is divided up among individual nations, we recommend that the Government explicitly endorses, and promotes internationally, the Contraction and Convergence method, or a method similar to it. (Paragraph 72)

We note the points made in recommendations 18 and 19. The UK Government would support an allocation method or combination of methods that could achieve global acceptability, be recognised as fair by all parties and had sufficient flexibility to be able to take into national circumstances, e.g. energy mix and availability of natural resources, climatic conditions.

20. The Tyndall Centre for Climate Change Research have made a very strong argument that the UK ought to make carbon reductions of 70% by 2030 and 90% by 2050. We recommend that the Government respond to Tyndall's recommendations; and if it is rejecting them, explain why. (Paragraph 73)

As the Prime Minister has announced, we will carry out an early review of the 2050 target based on independent advice from the Committee on Climate Change, which they will provide by autumn 2009. We will also amend the Bill to require Government to seek the advice of the Committee before amending the targets in the Bill. This will ensure any amendments to the 2020 and 2050 targets are informed by expert, independent advice.

In advance of receiving the Committee's advice we do not consider it would be worthwhile for Government to comment on individual research relating to other potential outcomes for 2050.

21. While we note that the Government has included a "trigger clause" in the draft Bill for amending the 2050 target, it states that the Secretary of State "may only" revise the target if one or both of its specified qualifications are met. We are concerned that this may put fetters on the ability of future Governments to respond to the threat of climate change. It is perhaps possible that the wording of this clause may encourage or make it easier for opponents of a tougher target to mount a political or legal challenge, based around the test of whether there truly have been "significant developments", in the event that a Government decides to raise the target above 60%. We

recommend that the power to amend the target be significantly less circumscribed. (Paragraph 74)

It is important to strike the right balance between ensuring that our targets are kept up to date and reflect the latest climate science and international developments, and providing certainty for business as to our long-term direction of travel. Our assessment is that the triggers in the Bill achieve this.

As discussed above, we propose amending the Bill so that Government will be required to seek and take into account the advice of the Committee before amending the Bill's targets. This will ensure the targets in the Bill – and any amendments to them – take into account the independent, expert advice of the Committee. We will also amend the Bill to clarify that developments in climate change science since the publication of the Royal Commission on Environmental Pollution's 22nd report in 2000, which is the basis for the existing 2050 target, can be taken into account, not just developments after the Bill comes into force.

The 2020 target

22. The Government should set out in detail where the UK needs to be in terms of emissions reductions by 2020 in order to be on track to meet other possible, and more challenging targets, for 2050. Especially given that some have suggested that that the 26%-32% target for 2020 would have to be increased in order to meet a more stringent target for 2050, we recommend that the restrictions in the draft Bill on amending the 2020 target be taken out. We are also concerned that setting a target range in practice encourages people to aim for the bottom end of the range, as this requires the least effort while still achieving compliance. For this reason, we recommend that the 2020 target be amended to read “at least 32%”, rather than “26- 32%”. (Paragraph 78)

The 2020 target is included in the Bill to provide a useful “way-point” on the path to the 2050 target. It helps to define the possible trajectory, and therefore cumulative emissions reductions, to 2050. It is clear that business welcomes this clear and credible interim target, given the long-term nature of the trajectory to 2050.

Each of the parliamentary committees has recognised that achieving the lower end of the 2020 target range (a 26% reduction in CO₂ emissions) is likely in itself to be challenging. Including an upper limit to this range (a 32% reduction in CO₂ emissions) also serves to provide greater certainty to business as to the likely path of the trajectory to 2050. This should help facilitate the investment decisions that will be necessary to pave the way to a low carbon economy.

The importance of the 2020 target in driving investment decisions in the short-term can be demonstrated for instance in the fact that the UK will need around 20-25GW of new power stations by 2020 if we are to maintain levels of electricity generation capacity equivalent to those available today.³⁹ These new power stations will need to be built in good time to replace the closures of capacity and to meet increases in demand. As a plant will typically have a lifetime of some 25-60 years, decisions about how this capacity is provided will be crucial in setting our emissions reduction

³⁹ Source: *Meeting the Energy Challenge. A White Paper on Energy*; 2007. Available from: www.berr.gov.uk/files/file39387.pdf

trajectory to 2050 and beyond. The predictability provided by a clear, stretching 2020 target will be important in ensuring that the need to tackle climate change is properly taken into account in these investment decisions.

In addition, we would note that the Bill does not rule out reducing emissions by more than 32% in 2020, as any surplus effort could be banked into the subsequent budget period. Although the Committee will examine this further as part of its review of the 2050 target, we would also note that initial analysis suggests the current 2020 range is consistent with progress towards both the existing 2050 target and a range of other possible 2050 target levels. For the reasons set out above, we therefore intend to retain the 2020 target range as set out in the draft Bill.

23. It is clear to us that the Government will have to introduce more radical policies into its Climate Change Programme very soon if it is to meet even the 2020 target as currently set. Current measures, including those introduced by the recent Energy White Paper, are only projected to get us nearly to the bottom end of 2020 target range – and this at what the Office of Climate Change described to us as “the upper end of optimism”. The Government has thus far consistently overestimated the impact of its carbon reduction policies, while underestimating the upward trend in emissions from social and economic developments. The lesson of the UK’s failure to meet its 2010 target is that the Government must aim to overachieve its target for 2020. We recommend therefore that the Government introduce other measures projected to achieve at least the top end of the 2020 target, a reduction of 32%. (Paragraph 80)

We note the Committee’s points. The strategy set out in the 2006 Climate Change Programme and 2007 Energy White Paper, which has the EU emissions trading scheme at its centre, will form the basis for meeting our carbon budgets, including ensuring we reduce our CO₂ emissions to 26-32 per cent below 1990 levels over the period 2018-22, as required by the Bill. However, we are not complacent and the Energy White Paper recognised that we may need to do more and identified some options for further emissions reductions. In accordance with the requirements of the Bill, as soon as reasonably practicable after making orders to set the first three carbon budgets, including the budget for 2018-22, the Secretary of State will lay before Parliament a report setting out our proposals and policies for meeting them. As part of this process, we will keep under review options for additional measures to reduce emissions including through international mechanisms.

International aviation and shipping

24. Overall, we are unimpressed by the Government’s arguments for excluding international aviation and shipping emissions from the UK’s carbon reduction regime. While the draft Bill contains provisions that allow these emissions to be included in the future, we recommend that they be included immediately. Despite the arguments of the Secretary of State, we do not believe the Government needs to wait until the terms under which aviation will enter the EU ETS are fully confirmed before doing this. There already is an internationally agreed methodology for attributing and recording these emissions as memo items to national Kyoto accounts; the Government should simply use this to track these emissions within the UK’s carbon budgets. This, in turn, means the Government should only count the simple weight of CO₂ from international aviation within these carbon budgets, rather than multiplying it by a factor of 2 or more to reflect the wider global

warming impacts of flying. These extra impacts should not be ignored, however, but merit additional policy responses. (Paragraph 96)

As an international industry, aviation should ideally be dealt with at international level. However, there is currently no agreement on how to allocate these emissions to individual countries. The UK is therefore pressing internationally to establish an agreed basis for allocating international aviation emissions and for international aviation to be brought within a global post-2012 framework for addressing climate change.

However, we acknowledge that global agreement in relation to international aviation emissions may be difficult to achieve. While we want to allow time for these discussions to take place, and potentially for agreement to be reached, we cannot afford to wait indefinitely.

The Government believes that there are a number of important issues which need to be addressed here, and we are already taking steps to do so. Including additional emissions in the UK's targets could have an impact on both the level of the targets and on other sectors of the economy. We will therefore ask the Committee on Climate Change to examine the implications of including international aviation and shipping emissions in the UK's targets, as part of its overall review of the 2050 target.

In addition, to include these emissions in the UK's targets, we would need a workable methodology to calculate "the UK's share" of these emissions, and one which took account of international progress. In addition, given that aviation emissions are likely to be included in the EU Emissions Trading Scheme soon, any methodology to include these emissions in the UK's targets would also need to be compatible with the way that emissions and credits are allocated under the EU ETS rules.

Therefore, when the EU ETS rules have been finalised, we will also ask the Committee for their advice on whether there is a methodology for including international aviation emissions which was workable and compatible with the EU ETS and takes account of progress in the UNFCCC and the wider international context, and on the impacts of adopting it.

In the meantime, the UK is continuing to press for the inclusion of aviation in the EU Emissions Trading Scheme as soon as possible, ideally within Phase II (2008-2012). The UK has led this debate within Europe since the UK Presidency of the EU in 2005 when, under our chairmanship, the EU Environment Council agreed that emissions trading seemed to be the best way forward and called upon the Commission to produce a legislative proposal by the end of 2006.

In addition, as recommended by the Joint Committee, we intend to place a requirement on the Secretary of State to report annually to Parliament on the UK's international aviation emissions as part of the annual statement of UK emissions. We will also publish revised aviation emissions forecasts before the end of the year.

With respect to international shipping emissions, international discussions are less far advanced than in the aviation sector, data are uncertain and the methodological issues are also more complex, as ships have far greater capacity than planes to store fuel bought elsewhere (rather than refuelling in every port) and can also refuel from tankers in international waters. There are therefore considerable issues which would

need to be addressed before these emissions could be included in the UK's carbon reduction regime.

25. If the inclusion of international aviation and shipping has to be delayed, the Bill should be more prescriptive about and when they are to be included. The flexibility currently there in the draft Bill threatens to undermine the UK's overall emissions targets. The draft Bill's qualification that a future Secretary of State "may only" include these emissions if there has been an international agreement on them seems potentially to tie the hands of future Governments for no good purpose, and should be removed. (Paragraph 97)

It is proposed to amend the Bill to enable the Secretary of State to include international aviation or international shipping emissions if there is a change in EU or international policy or international law. In view of the international nature of the aviation and shipping industries, we believe that this is the most appropriate approach to take.

As noted above, we will ask the Committee to examine the impacts of including international aviation and international shipping emissions in the UK's targets, as part of its overall review of the 2050 target. In addition, when the rules for the inclusion of aviation in the EU ETS have been finalised, we will ask the Committee for their advice on whether there is an allocation methodology which was workable and compatible with the EU ETS and takes account of progress in the UNFCCC and the wider international context, and on the impacts of adopting it.

26. Finally, if these sectors are not included from the outset, then the Government figures for the UK's annual emissions and forecasts of future emissions should clearly indicate what the level of these emissions and progress towards meeting national carbon budgets and targets would be, once international aviation and shipping were included. This would aid transparency, and focus attention on the effects that an ongoing upward trajectory in aviation emissions has on progress towards the UK's short, medium and long term targets. In order to do this, projections of future emissions from aviation and shipping must be improved, frequently updated, and fully integrated into the Government's Updated Emissions Projections papers. (Paragraph 98)

As noted above, we will ask the Committee on Climate Change to examine the implications of including international aviation and shipping emissions in the UK's targets, as part of its overall review of the 2050 target. To ensure greater transparency, we also intend to place a requirement on the Secretary of State to report annually to Parliament on international aviation and shipping emissions, in line with UNFCCC practice. We will also publish revised aviation emissions forecasts before the end of the year.

Given the difficulties in identifying a coherent trend in international shipping emissions figures or the key drivers behind them, the Government does not currently publish forecasts of the UK's international shipping emissions..

Use of emissions trading

27. We have concerns as to the scope in the draft Bill for the UK's carbon reduction targets to be partly met by purchasing carbon credits from other countries. The Government must ensure that carbon credits are not used to forestall the early transition in the UK to low carbon infrastructure in power generation, buildings and transport, as this could mean that the country is locked into carbon-intensive lifestyles for decades to come. At the same time, we certainly recognise the potential importance of trading in providing funds for low carbon infrastructure in the developing world. We would simply argue that this must not become an "either/or": the Government should ensure that the UK's targets are sufficiently challenging that they drive decisive emissions reductions at home and abroad. (Paragraph 106)

The Bill includes trading of international emissions credits within the UK net carbon account, just as is done for the Kyoto Protocol, including allowing Government to trade international emissions reduction credits as part of its approach to meeting the targets and budgets. We believe it is important that the Government and UK organisations can make effective use of international mechanisms for achieving emissions reductions at least cost to avoid making our targets needlessly expensive. The Kyoto Protocol's "flexible mechanisms" and the EU ETS are based on this principle to provide this option, and to act as a means of securing and coordinating international action and as a way of helping developing countries achieve low carbon economies.

The pre-legislative scrutiny process and consultation on the draft Bill raised concerns about the purchase of international credits in relation to targets in the Bill. Some questioned the quality and genuine "additionality" of these credits.⁴⁰ We agree that it is essential that any credits bought by the UK represent real emissions reductions which would not have taken place otherwise. For this reason we are working hard at international level to support continued improvement in the procedures for the international mechanisms, such as in the setting of baselines and for the establishment of additionality. Increased transparency and public scrutiny can also play an important role in ensuring high standards are met.

Other respondents called for a limit to be set on the number of credits that can be purchased overseas (as is the case in the EU ETS). We have given this proposal careful consideration, acknowledging that one of the Bill's key aims is to set a framework for domestic action. There is considerable potential for cost-effective measures to reduce emissions in the UK and bring benefits to the UK economy, and the Government's detailed policies and proposals for meeting each five-year budget will be set out in a report to Parliament. However, as the EAC recognises, this is a complex area.

We agree with the EAC's view that the key factor in determining how far emissions are reduced under the Bill will be the level of the UK's targets and budgets. In terms of the balance between domestic and international action, the Committee will advise on the use of international emissions reduction credits when making recommendations on each budget, and we anticipate that this advice will take into account the most recent international circumstances and best practice. We would also note that the UK remains strongly committed to the international principle of complementarity, which

⁴⁰ This pertains to whether the project reduces emissions more than would have occurred in the absence of the project.

states that “the use of the [Kyoto] mechanisms shall be supplemental to domestic effort and...domestic action shall thus constitute a significant element of the effort made by each Party...”. We therefore envisage that the final decision on the level of credits purchased will need to be taken in the context of the Government’s overall policy framework for meeting targets and budgets: given the existing international rules on complementarity and on the use of overseas credits in the EU Emissions Trading Scheme, we do not believe that it would be appropriate to place further limitations in the Bill on the number of credits that can be purchased overseas.

In response to concerns about the transparency and accountability with which the use of emissions credits will be reported, a number of provisions within the Bill ensure a high level of transparency and accountability in relation to the purchase of credits. The Committee will report annually to Parliament on progress towards meeting the budget, including the amount and type of credits used in doing so.

There were also concerns regarding the level of parliamentary scrutiny of the framework for using credits. As recommended by the House of Lords Delegated Powers Committee, we will require the first set of regulations on credits and debits to be subject to the affirmative procedure, thereby ensuring strong transparency and robustness.

28. Where emissions trading is used to meet UK targets, it is essential that the Government distinguishes clearly between emissions reductions achieved within the UK and emissions reductions funded by the UK but taking place abroad. Thus far, in reporting the relationship of the EU ETS to UK emissions, the Government has been less than transparent. The problem with this is that it might foster a false sense of complacency about the progress and policies required to decarbonise the UK. The Government ought to adopt a code of practice for reporting UK emissions, and the Committee on Climate Change should audit Government press and statistical releases. (Paragraph 107)

The improved framework for annual reporting by Government and the independent Committee, which the Bill will introduce, is intended to enhance the transparency of reporting on progress.

However, we see no need for a further code of practice or audit arrangements as Government figures are produced in line with NAO requirements.

29. Above all, the Government should address the question: if all countries will have to meet challenging emissions targets by mid-century, how many are going to beat their targets and thus be able to offer surplus carbon credits to the rest? The Government has pointed to the research in the Stern Review which concludes that in order to meet a global 450-550ppm CO₂e target, all developed nations would have to make emissions cuts of at least 60%-90%, with many developing world countries allowed only a modest increase or a small decrease; but Stern clearly says that these figures “do not incorporate international emissions trading”. The Government should clarify what these targets would be once emissions trading is taken into account, under a range of scenarios. In doing this, the Government should be explicit about the maximum range of the UK’s carbon budget to 2050 which could be made up by buying emissions credits from abroad, and still be consistent with Stern’s global stabilisation targets. (Paragraph 108)

The UK Climate Change Bill will help us lead by example internationally and help raise the ambition and urgency of collective action post-2012, following the end of the first Kyoto period. The overarching long-term goal enshrined in the Bill will guide our approach at international level, and emissions trading will play an important part in allowing this goal to be reached cost-effectively.

As the Prime Minister has said, we will ask the Committee on Climate Change to report on whether the 60% reduction in emissions by 2050 should be even stronger still. This report will also look at the implications of including other greenhouse gases in our targets, and at the costs and benefits of different scenarios for any different target. As part of its role in advising on each budget, the Committee will also have to advise on the extent to which the budget should be met through UK emissions reductions or by action overseas.

Carbon budgets and reporting

30. We welcome the Government's proposals to introduce a national carbon budgeting system. Setting successive five year carbon budgets will help to span the gap between annual emissions figures and the target for 2020. We hope that these carbon budgets will ensure that there is constant political pressure to meet them every five years. They should also help define the pathway of emissions reductions through time that the UK will need to follow in order to meet its medium and longer term targets. In addition, the introduction of rigorous annual reports to Parliament on trends in emissions and on the impacts of carbon reduction policies, as well as reports setting out the suite of policies and their projected impact for each budgetary period, will show whether the UK is managing to follow its required emissions pathway, and should lead to a timely revision of policies if progress is slipping off track. (Paragraph 117)

We welcome the Committee's support for five-year carbon budgets, reports to Parliament on proposals and policies to meet the budgets and annual reports to Parliament on progress.

31. It makes sense for each carbon budget to run for longer than one year, to allow for unforeseen variations in emissions from year to year. But the Government should still set out an indicative target for UK emissions in each year, so as to apply continual pressure to reduce emissions. We also recommend that the successive series of carbon budgets should extend out all the way to 2050, so that all carbon budgets are consistent with the UK's overarching emissions objective. (Paragraph 118)

The Bill creates a duty for the Government to set carbon budgets, defined as an amount for the net UK carbon account for a given period. Three carbon budgets must be in legislation at any one time, providing a clear ongoing fifteen-year trajectory which provides UK businesses and households with improved certainty for future planning and investment.

The five-year budgets will ensure that the first budget period, 2008-12, runs concurrently with international timescales: the first commitment period under the Kyoto Protocol and the second phase of the EU ETS. There is flexibility under the Bill to amend the length of budget periods if international practice changes.

The degree of certainty provided by the proposed approach has been supported by businesses in responding to the consultation. This clear statement of intent at UK level helps to mitigate the effects of current uncertainty about the international situation post-2012.

In response to the proposal for annual targets or milestones in addition to the five-year budgets, the Government believes strongly that a longer budget period is more appropriate. An annualised approach would be inconsistent with the UK's international obligations, which are based on five-year budgets. In particular, it would be impractical to manage annual budgets for those businesses covered by EU ETS, representing around half of the UK's emissions, since that system operates on five-year periods and firms can trade freely within the period and across the EU to meet their obligations.

In addition, a carbon budget makes very clear that every year's emissions count towards the overall budget. There are no consequences for high emissions in an individual year, as long as the aggregate emissions for the five-year period do not exceed the limit set out in the budget. This provides essential flexibility within the system, as annual emissions figures will vary naturally from year to year. Evidence shows for instance that annual fluctuations in the weather can have big impacts on emissions, as people turn up their heating. Lower temperatures in 1996 and 2001, for example, correlated with increases in emissions of around 3-4% compared to the years either side. It would be illogical for the UK to "miss its target" as a result of such normal annual variation; this would undermine the credibility of the system.

There are also considerable time-lags in the availability of emissions data which would make annual targets or milestones even more impractical. Provisional emissions figures are not available until after the year in question has already finished, and the final emissions figures are not available until more than a year later. Given these time-lags and uncertainties, and the circumstantial fluctuations outlined above, annual targets or milestones would increase the risk of greater mitigation costs (for example, costly policies might be rushed through towards the end of a year to achieve short-term reductions, or international emissions credits might need to be purchased after the year had already finished), when effort might instead be more effectively deployed in ensuring that emissions are reduced more smoothly over time to ensure that the budget as a whole was met.

However, we recognise and strongly agree with the need for the Government to be held accountable on an annual basis for progress against the budget. The five-year budgets will therefore be backed by a strong annual emissions reporting system which builds on our existing EU and international commitments. In addition, every year the Committee will be required to give its independent report on progress towards meeting the targets and budgets, and every year the Government must respond to these reports. Both the Committee's report and the Government's response must be laid before Parliament, to ensure a strong level of scrutiny. Furthermore, when setting each budget, Government must also produce a report on its policies and proposals for ensuring that the required emissions reductions are made. And after the end of each budget, the Committee will be required to give its independent assessment of the way in which the budget was or was not met.

The concept of five-year budgets for national emissions reductions is already groundbreaking, as has been widely recognised. It is also a credible approach, providing a

good balance between predictability and flexibility, while avoiding costly one-off reductions in target years only. And we will back it up with an enhanced framework of annual Government accountability to Parliament, scrutinised by the independent Committee. We therefore do not believe that annual targets or annual milestones are either necessary or helpful.

Regarding setting budgets out to 2050, we consider there is little point in setting a trajectory too far in the future on a statutory basis, as there are too many uncertainties and the budgets would likely need to be revised very significantly as they approached. We feel the 2050 target itself provides sufficient long-term certainty in terms of the trajectory for the next forty years, especially when considered alongside the setting in statute of the interim 2020 target and the fact that three budgetary periods must be set at any one time.

32. Earlier budgets should contain steeper reductions: as the Stern Review made clear, early cuts in emissions are disproportionately beneficial. The Government should also examine the feasibility of introducing sector-specific emissions pathways to be defined to 2050, notably for power generation, buildings, and transport; this would help to identify in more detail the scale, timing, and nature of the developments needed in order for the UK as a whole to meet its targets. (Paragraph 119)

While it may be argued that a sectoral breakdown would enhance transparency and show how much effort each sector of the economy would need to make to meet the targets and budgets, it would reduce the Government's flexibility regarding where effort should be made. It would also risk leading to increased costs for individual sectors.

33. One further aspect of the provisions in the draft Bill which we welcome is the proposed introduction of five-yearly reports on the impacts of climate change in the UK and policies for adaptation. We recommend that this requirement is accompanied by a Government programme of action on adaptation in the UK. The Government should incorporate into such a formal programme of action an international development strategy which identifies and works to address the impact of climate change on the world's poorest and most vulnerable communities. Following our recent suite of reports on the Government's approach to trade, development, and the environment, we may look more closely at the adaptation proposal in this draft Bill and any wider initiatives it develops in the future. (Paragraph 120)

We accept the proposal to publish a Government programme of action on adaptation.

We recognise the need for international action to address the impact of climate change in vulnerable developing countries. However, this Bill creates a framework to support action in the UK on both mitigation and adaptation, and we do not believe it is an appropriate vehicle for policy measures primarily concerned with international development.

We note the relevance here of the International Development (Reporting and Transparency) Act 2006, which requires Government to report annually on

expenditure on international aid and on progress towards meeting the Millennium Development Goals.⁴¹

Committee on Climate Change

34. We support the Government's proposal to establish an independent Committee on Climate Change. The creation of such an independent body should make a significant contribution to the quality and transparency of Government climate change policy. One particularly valuable aspect of the Committee's work would be in providing challenge to, and public reporting on, Government forecasting and policy analysis. As part of the Committee's proposed statutory role to report to Parliament on UK emissions and the progress made in reducing them each year, it should be given a duty to audit the Government's publication of emissions statistics to ensure these are transparent, differentiating between emissions reductions made in this country and those funded abroad. It should also have a duty to comment annually on the assumptions and modelling used by the Government to forecast future emissions and estimate the impact of individual policies. Furthermore, the Committee should be able to make detailed policy recommendations to Government. (Paragraph 131)

We welcome the EAC's support for the establishment of a new, independent advisory Committee on Climate Change. However, we do not agree that the Committee should be given oversight of Government modelling as this could undermine the Committee's independence and potentially blur its responsibilities. Similarly, we do not accept the need for the Committee to have an audit role on the publication of emissions statistics. The emissions inventory publication currently produced on the Government's behalf is respected, subject to peer-review, and supplied according to international guidelines.⁴² It would be costly and potentially confusing if the Committee were to duplicate this work.

However, we also recognise that the Committee will be experts in their field and, as noted by the EAC, will be in a unique position to provide independent feedback on the Government's policy appraisals and modelling. We are therefore considering how best to ensure a constructive dialogue on these issues – for instance, by involving members of the Committee secretariat in relevant analytical groups, in a similar way to how other expert NDPBs contribute on these issues. We also expect that the Committee may wish to set out its views on the analysis it has used, when setting out the reasons for its advice on the level of the carbon budget, which will be publicly available.

35. There has been much discussion of the parallels between the Committee on Climate Change and the Bank of England's Monetary Policy Committee. The latter illustrates the advantages that can be gained by devolving key responsibilities to a non-party political committee of experts. At the same time, the issues involved in climate change policy are bigger and more complex than those devolved to the MPC. We conclude that, while the Committee on Climate Change could make some detailed recommendations, the Government must still choose which policies to implement. The virtue of the Committee will be that the Government must respond to it; and if

⁴¹ www.opsi.gov.uk/acts/acts2006/20060031.htm

⁴² The UK's greenhouse gas emissions inventory is available from the National Atmospheric Emissions Inventory website: www.naei.org.uk/reports.php

Ministers reject any of the Committee’s recommendations, they will have to set out why, and propose others to deliver equivalent emissions savings. (Paragraph 132)

We agree that responsibility for developing policy to deliver the carbon budgets should remain firmly with the Government. To ensure that the budget-setting process is fully transparent, we intend to amend the Bill so that, in the event that the Secretary of the State rejects the Committee’s advice on the level of a carbon budget and sets it at a different level, the Government must give a full, public explanation of the reasons for reaching a different decision.

36. These virtues, of course, depend on the Committee’s enjoying—and being seen to enjoy—a very high level of both subject expertise and independence. We consider that, as the conditions for membership are set out in the draft Bill, “climate science” is not given enough prominence. We recommend that this should be spelt out as the most important area for the Committee to understand and take into account. We further recommend that the Committee be given a duty to consider the wider environmental aspects of sustainable development. (Paragraph 133)

We are accepting the EFRA Committee’s recommendation that the list of desired membership for the Committee is presented in alphabetical order to avoid appearing to give any one area prominence over the others.

We also believe that sustainable development is already covered in substance as an issue for the Committee to consider in its advice on budgets, because budget-setting is inherently about environmental protection (in its widest sense). In addition, the list of factors which the Committee must take into account in its advice on budgets includes social and economic issues as well as climate science and technology relevant to climate change.

37. In order to strengthen the independence of the Committee—and public perceptions of its independence—it is essential that members be appointed for their individual expertise, and serve in a personal capacity, rather than as representatives of different stakeholder groups. The appointment process itself should be open and transparent, preferably in accordance with the recommendations of the Nolan Report. To increase transparency and perceptions of independence, and in view of the importance of their role, all new appointees to the Committee should first be required to appear before the Environmental Audit Committee, to provide assurance to Parliament as to their suitability, and to highlight their thinking on tackling climate change. (Paragraph 134)

Our proposed approach for recruitment does not prevent this, but we need to consider further in the light of the recent Government Green Paper, *The Governance of Britain*.⁴³

⁴³ CM7175. Available from: www.official-documents.gov.uk/document/cm71/7175/7175.asp

Relationship of the Committee on Climate Change to the Office of Climate Change

38. We conclude that the Office of Climate Change is doing valuable work, and will help to improve the quality of Government climate change policy. Its main role appears to be to provide a resource which individual Departments can access for discrete pieces of research on climate change policy. It remains to be seen, however, whether it will have the remit to design truly cross-cutting policies, or the influence to ensure that all Departments build climate change into their thinking at an early stage. The OCC's lack of responsibility for considering fiscal policies is a sign that this is not the case. Also, it cannot, by itself, ensure that Government policies are joined up, so that major policy programmes—for instance, DfT's airport expansion programme—do not run directly counter to the effort to reduce carbon emissions. This requires a joint effort of Ministerial will. (Paragraph 138)

The Government welcomes the EAC's supportive comments on the role of the Office of Climate Change (OCC).

As the Government has stated in its memorandum to the EAC, as part of its inquiry into *'The Structure and Operation of Government and the challenge of Climate Change'*, the OCC does undertake time-limited policy-focussed projects, providing good, focussed analytical support to other Government departments.

The EAC is right to highlight the need for effective co-ordination of Government programmes and policy. This is why the OCC was also asked to review the co-ordination of policy and management of the Government's climate change programme. Following a review earlier this year, at official level, policy is directed by a cross-Government Strategy Board which also manages the OCC work programme. This includes representatives from HM Treasury, as well as the main policy departments, Cabinet Office and Number 10. The secretariat for this Board is provided by the OCC, working with the main interested departments. Supporting this Board are the International and Domestic Programme Boards, which provide detailed management of the climate change and energy programme, across all interested Government departments.

The Strategy and Programme Boards complement the Environment and Energy (EE) Cabinet Sub Committee, chaired by the Chancellor of the Exchequer, which reports to the Committee on Economic Development. Its terms of reference are "to consider international and domestic policy on environment and energy issues; and report as necessary to the Committee on Economic Development and the Committee on National Security, International Relations and Development." Responsibility for delivering key elements of the programme rests with the relevant Government departments.

This clear governance structure at Ministerial, senior official and working levels, across all relevant departments, collectively manages the Government's climate change and energy programmes. There is therefore clear accountability, coupled with collective decision-making and assurance.

The Government will continue to review how its programmes are managed and policies developed – and the views of the EAC and other parliamentary select

committees are welcomed – and will consider any improvements that are necessary to deliver its objectives.

39. The Government is right to seek to ensure that the Committee on Climate Change, the Office of Climate Change, and relevant parts of Government share resources and do not unnecessarily duplicate each other’s work. But the Committee on Climate Change must have the resources to ensure that its work is wholly independent, and does not merely have to rely on the conclusions given to it by individual Departments. This point is underlined by the way in which, in the Climate Change Programme Review, the Interdepartmental Analysts Group only supplied decision makers with one scenario for each potential policy, thus preventing the CCPR from considering the impacts of different scales and combinations of policies. Given the importance of the Committee it needs a high quality secretariat which is adequate to support all its work and a budget for commissioning external research. (Paragraph 141)

We agree that the Committee must be adequately resourced. Since the publication of the draft Bill, a scoping exercise suggests that the analytical resources available to the Committee should be increased by around 50%. We also believe that the proposed ongoing research budget is sufficient (especially given the substantial increases envisaged for the secretariat), and note that it is also likely that the Committee’s research budget will need to be increased in the short-term, to support its review of the 2050 target which was announced by the Prime Minister in September.

Part C

Responses to the schedule of comments given in evidence to the Joint Committee on the Draft Climate Change Bill

Responses to the schedule of comments given in evidence to the Joint Committee on the Draft Climate Change Bill

Clause	Original text	Change/comment	Source	Government response
Title and introduction		<p>The Bill should specifically refer to adaptation in the long title; it should not be relegated to “connected purposes”.</p> <p>The overall aim of limiting average global temperature increase to 2°C should be stated on the face of the Bill.</p>	<p>Lord Hunt of Chesterton, CCB 08</p> <p>Christian Aid, CCB 64, para 9</p>	<p>Adaptation has been added to the long title of the Bill.</p> <p>There is no simple relationship between any long-term stabilisation goal and the pathway required to get there, and addressing overall global temperature rise requires a multilateral approach. The Bill demonstrates the UK’s determination to make emissions reductions by putting in place a clear long-term legal framework within which decisions can be taken on spreading effort across the economy, linking UK to international action.</p>
1 and 2	Targets and budgets	<p>The targets should be set by reference to cumulative emissions over the target period rather than by reference to the percentage level of reductions in one year, which can only provide an indicator.</p> <p>The draft Bill should not set legal targets unilaterally; there needs to be international agreement in order to protect UK competitiveness</p>	<p>Dr Rhys, CCB 29, para 4</p> <p>Mid Yorkshire Chamber of Commerce, CCB 83, paras 1 – 2</p>	<p>The use of long-term percentage reduction targets is in line with our international obligations. Over the budget periods, the level of cumulative emissions envisaged may be broadly inferred by the budget level that Government sets.</p> <p>The Bill provides a framework of statutory unilateral targets and budgets, intended to demonstrate international leadership and help create the conditions for deeper international co-operation. The framework also incorporates a number of mechanisms which allow for flexibility in relation to emissions reductions. In addition, it provides for active participation in the international</p>

				<p>emissions reduction markets which should ensure all costs are minimised. These mechanisms have been developed carefully in order to maximise the certainty needed by UK households and by businesses which are making investment plans.</p> <p>We are one of only a few mature market economies set to meet our emissions reduction commitment under the Kyoto Protocol. The action we have taken to cut our greenhouse gas emissions while maintaining economic growth makes the UK an exemplar to other countries. This legislation builds on our success so far and demonstrates to others our clear commitment to tackling climate change cost-effectively.</p>
			<p>The Bill should replace the target based approach with a single and clear objective of achieving the maximum reductions in UK greenhouse gas emissions for the minimum amount of expenditure.</p>	<p>A key aim of the Bill is to enable cost-efficient emissions reductions. Its target-based framework provides additional clarity and predictability, as well as demonstrating our intentions internationally.</p>
			<p>The Bill should place the Secretary of State under a statutory duty to achieve the Government's CHP target.</p> <p>There should be a similar statutory duty to achieve the Government's targets for energy efficiency, commercial and public services, combined heat and power, and renewables.</p>	<p>The Bill sets a framework for supporting UK policy action in relation to climate change. In meeting the targets and budgets in the Bill, Government will need to consider the implications for its existing targets and develop a coherent overarching policy approach. Defining targets in the Bill that were sector-specific or pursued specific policy objectives would run counter to the overall flexibility the Bill provides in cost-effectively meeting the 2050 target.</p>
1(1)	Duty to ensure at least a 60%		<p>The target should be increased to between 80-90% in light of the most</p>	<p>The Climate Change Bill will make the UK the first country in the world to have a long term legal framework for managing our</p>

	<p>reduction</p>	<p>recent scientific evidence and the targets adopted by other nations, including France, Germany and California. Any lower target will be inconsistent with limiting average global temperature rises to no more than 2°C.</p> <p>Recent analysis from the IPCC and others suggests that a faster trajectory in the reduction of carbon emissions needs to be achieved. As a result it would be better to require a 60% reduction by 2025, which mirrors the goal in the Mayor's Climate Change Action Plan.</p> <p>The targets should amount to at least 3% reductions per year between now and 2050.</p>	<p>CCB58, para 2.9; ClientEarth, CCB 23, para 5</p> <p>Mayor of London, CCB 10, para 4.2</p> <p>Sustrans, CCB 90</p>	<p>domestic and international emissions reduction commitments and the transition to a low carbon economy. No other country has yet matched the UK in terms of legally binding carbon budgets and targets for 2020 and 2050. Aspirations, declaratory or conditional targets do not compare with legally binding targets.</p> <p>The UK has been a consistent leader in the field of climate change and energy policy by setting bold targets and pursuing policies, both domestically and internationally, relating to mitigating and adapting to the impact of climate change. Ultimately, co-ordinated global action will be essential to tackle the problem. In that context, we recognise that understanding of both the science and the economics of climate change has improved significantly since the 60% target was originally set in 2003. The Stern Review of the economics of climate change, published last year, estimated that the costs of inaction on climate change significantly outweigh the expected costs of co-ordinated global action.</p> <p>It is important that the 2050 target is set at a level which reflects all these considerations and which is based on thorough, expert and independent analysis. As the Prime Minister announced on 24 September 2007, we will therefore ask the independent Committee on Climate Change to report on whether the 60% reduction in emissions by 2050, which is already bigger than most other countries, should be even stronger still.</p> <p>We believe that this is the most thorough and credible means of ensuring that the target remains both ambitious and realistic. The Committee will have the independence and the right expertise and resources to carry out a review, and will be able to provide a robust set of scientific and economic analyses to</p>
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		<p>There needs to be a long-term statutory goal rather than a statutory target due to the complexity of the problem and the difficulties of enforcement.</p>	<p>Brian Jones, CCB 11, paras 2-4</p>	<p>Mr Jones’s submission to the Joint Committee proposes that a non-statutory goal, as currently exists, is sufficient. We believe that setting the target in legislation is important in showing the UK’s determination to make emissions reductions, putting in place a clear long-term legal framework within which decisions can be taken on spreading effort across the economy. The</p>

				framework will provide a firm basis on which business, Government and individuals can plan, helping to maximise the potential benefits and minimise the costs of change.
	Duty on the Secretary of State	The Bill should make the targets legally binding on all the departments and agencies involved in addressing climate change.	Fuel Poverty Advisory Group, CCB 20, para 10	Everyone in the UK, including all public authorities and private companies, have a role to play in tackling climate change. It is not possible or appropriate to legislate on this broad a scale, and legal responsibility has to be defined somehow. We therefore believe it is appropriate to retain the Secretary of State's ultimate responsibility in relation to the target as he will take the lead in introducing the policies and measures that will reduce emissions by the required amount.
1(3)	Power to amend the 2050 target	There should be a requirement for compulsory and periodic reviews of the Bill's targets given the evolving nature of climate science	London Assembly Environment Committee, CCB 35, para 2.7	Please see our response to the proposals on the "Duty to ensure at least a 60% reduction".
		Targets should be periodically reviewed and, as necessary, altered to take into account their impact on the competitiveness of UK businesses	British Cement Association, CCB 18, para 1	As noted in our response to the proposals on the "Duty to ensure at least a 60% reduction", we propose an early review of the target. In advising on the level of the targets and budgets, the Committee will be required to consider competitiveness issues.
		The Secretary of State should be required to consult the Committee on Climate Change before amending the statutory targets.	Royal Society for the Protection of Birds, CCB 49, para 6.1	We agree that the Secretary of State should be required to consult the Committee before amending the targets, and intend to amend the Bill accordingly.
		The power to reduce carbon budgets creates a risk for those considering investment in low-carbon technology.	EDF Energy, CCB 62	The system of five-year budgets in the Bill has been carefully designed to take into account the need for certainty and flexibility, as well as the international context. We believe that

		There should be additional safeguards to those provided.		retaining limited flexibility around budgets is essential in order to allow for responding to significant changes since the budget was set.
1(4)	The 2050 target can only be amended in light of significant developments in climate science or international circumstances	The term “significant” should be defined to help clarify what can trigger a change to the targets.	City of London Corporation, CCB 46, para 4	The Secretary of State’s decision on whether a change is “significant” is subject to normal public law principles, so the decision must be reasonable (in the Wednesbury sense), take everything relevant into account and be unbiased.
		There should be an economic trigger which allows amendments in light of economic or technological developments as well as climate science and international developments; the power must be restricted in a way that supports stability and confidence.	EEF, CCB 54, paras 10 to 12	We intend to change the Bill to require Government to seek and take into account the advice the Committee before amending the target. The Committee will consider a range of factors, including economic circumstances, when formulating its advice.
1(5)	The power to amend is subject to the affirmative resolution procedure	The power to amend should be subject to the super-affirmative resolution procedure to ensure that such a decision is subject to extensive parliamentary scrutiny and that both House are satisfied with the changes that are proposed.	Lord Norton of Louth, CCB 91	We consider the super-affirmative procedure to be a disproportionate level of scrutiny intended for very specific applications under the Legislative and Regulatory Reform Act 2006. We propose that any decision to amend the target is based on advice from the Committee which, combined with the affirmative procedure in Parliament, we consider to provide sufficient checks and balances to prevent inappropriate amendments to the targets.
2	Carbon budgets			
2(1)(a)	Duty to set five yearly carbon budgets	Annual targets should be used instead of a five year budget as they would help to ensure rapid early emission	ClientEarth, CCB 23, para 9	The system of five-year budgets in the Bill has been carefully designed to take into account the need for certainty and flexibility, as well as the international context. The first budget

		<p>reductions and will not be undermined by spanning different governments.</p> <p>There need to be rolling annual targets that cover the next 20 years to support structural level investment decisions. The targets for years 1 to 5 should only be alterable in exceptional circumstance, while targets for years 5 to 10 could be reviewed annually and targets for years 10 to 20 should be best estimates.</p> <p>There should be three yearly budgets with annual milestones in between to monitor performance during the period.</p> <p>The carbon budgets should last for four years to match the length of an average Government.</p> <p>There should be a duty to set annual milestones that indicate the level of emission reductions expected in each year; this would increase accountability and, in particular, diminish concern that a carbon budget may cross different governments.</p>	<p>Dr Fleming, CCB 74, para 10</p> <p>World Development Movement, CCB 26, para 3</p> <p>NHS Confederation, CCB 82</p> <p>Friends of the Earth, CCB 58, para 3.2</p>	<p>period, 2008-12, runs concurrently with the first commitment period of the Kyoto Protocol and the second phase of the EU ETS.</p> <p>A five-year carbon budget also provides the right balance between the certainty needed about how much CO₂ should be emitted during a period of time, and the flexibility needed to accommodate inevitable annual variations in factors such as fuel prices and weather conditions which have a direct effect on CO₂ emissions.</p> <p>We believe that for this reason a system of five-year carbon budgets is the best method of ensuring that emissions reductions occur continuously, with the avoidance of costly one-off reductions in target years only. We rejected proposals for annual targets in the draft Bill, and continue to believe that an annualised approach would be impractical.</p> <p>An annualised approach would be inconsistent with the UK's international obligations, which are based on five-year budgets. In particular, it would be impractical to manage annual budgets for those businesses covered by EU ETS, representing around half of the UK's emissions, since that system operates on five-year periods and firms can trade freely within the period and across the EU to meet their obligations.</p> <p>In addition, a carbon budget makes very clear that every year's emissions count towards the overall budget. There are no consequences for high emissions in an individual year, as long</p>
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				<p>commitments. In addition, every year the Committee will be required to give its independent report on progress towards meeting the targets and budgets, and every year the Government must respond to these reports. Both the Committee's report and the Government's response must be laid before Parliament, to ensure a high level of scrutiny. Furthermore, when setting each budget, Government must also produce a report on its policies and proposals for ensuring that the required emissions reductions are made. And after the end of each budget, the Committee will be required to give its independent assessment of the way in which the budget was or was not met.</p> <p>The concept of five-year budgets for national emissions reductions is already ground-breaking, as has been widely recognised. It is also a credible approach, providing a good balance between predictability and flexibility, while avoiding costly one-off reductions in target years only. And we will back it up with an enhanced framework of annual Government accountability to Parliament, scrutinised by the independent Committee. We therefore do not believe that annual targets or annual milestones are either necessary or helpful.</p>
	Sectoral budgets	There should be a duty to set targets for individual sectors of the economy, which would avoid the risk that some sectors fail to make a sufficient	South East Climate Change Partnership, CCB 73, para 2.2 Natural England, CCB 13, para 8	<p>Please see the response above on annual milestones.</p> <p>Government will be required to set out policies and proposals for how it intends to meet each budget. However, we do not consider it appropriate that Government should set targets for reductions in each sector. While it may be argued that a</p>

		<p>contribution and would establish a clearer trajectory.</p> <p>There need to be targets for each sector as many businesses will be unable to translate a national target into financially relevant indicators.</p> <p>The built environment should be treated as a sector and set a target to reduce emissions.</p> <p>The budgets should clearly state the level of contribution to be made by local authorities.</p>	<p>Carbon Trust, CCB 56</p> <p>British Property Federation, CCB 37</p>	<p>sectoral breakdown would enhance transparency and show how much effort each sector of the economy would need to make to meet the targets and budgets, it reduces the Government's flexibility regarding where effort should be made. It also risks increasing costs for individual sectors.</p>
	<p>Local budgets</p>		<p>London Councils CCB 53, para 5</p>	<p>The Local Government White Paper set out a new performance framework for local authorities which the Government proposes to introduce in 2008/9. Each local authority will agree thirty-five priority performance indicators against which targets will be set.</p> <p>There will be three indicators on climate change:</p> <ul style="list-style-type: none"> • CO₂ reduction from local authority operations • Per capita CO₂ emissions in the local authority area • Progress towards integrating climate change adaptation into local authority business
<p>2(2)</p>	<p>Requirement to set the initial three carbon budgets by 31 December 2008 and to set all others no less than 11 and a half years before the period begins.</p>	<p>The carbon budgets need to be set more than 15 years in advance to support investment in low carbon technology which can have a life span of 25 to 60 years and can take up to 10 years to develop.</p>	<p>EDF Energy, CCB 62</p>	<p>The long-term target aims to provide additional predictability. We believe that 15 years strikes a suitable balance, providing certainty within a realistic assessment of future conditions.</p>

3(1)	Carbon budgets for the years 2020, 2050 and any later year	<p>The domestic target for 2010 (i.e. 20% reductions against 1990 levels) should be included in the draft Bill as well as targets for 2020 and 2050.</p> <p>Many investment decisions are made over a 40 year period, which makes it essential to set an interim target for 2030 and 2040 as well as 2020.</p>	<p>Mayor of London, CCB 10, para 5.4</p> <p>British Energy, CCB 60, paras 3, 15</p>	<p>The Bill ensures the Committee will consider the costs and benefits of setting the 2008-12 budget in line with the 2010 target. This will ensure Government has clear sight of whether the 2010 target is consistent with the optimum trajectory to meet the 2020 target, as this advice will be provided at the same time as advice on the first three budgets. The budgets themselves will effectively set the level of targets in 2030 and 2040; it would unduly restrict the work of the Committee to set out what emissions should be in these years at this stage.</p>
3(1)(a)	Target for 2020 of “at least 26% but not more than 32%”	<p>The target for 2020 should be increased to at least a 40% reduction in light of the most recent scientific evidence; this would follow Germany’s lead.</p> <p>In light of the EU’s 30% target for 2020 (if international agreement can be reached) the target needs to be increased to 35-40% reductions if the UK is to make its share of the reductions as a significant emitter.</p> <p>The Government should match London’s target of 60% reductions by 2020</p>	<p>World Development Movement, CCB 26, para 9</p> <p>Dr Dlugolecki, CCB 38, para 9</p> <p>Mayor of London, CCB 10, para 4.2</p>	<p>Each of the parliamentary committees has recognised that achieving the lower end of the 2020 target range (a 26% reduction in CO₂ emissions) is likely in itself to be challenging. Including an upper limit to this range (a 32% reduction in CO₂ emissions) also serves to provide greater and earlier certainty to business as to the likely path of the trajectory to 2050. This should help facilitate the investment decisions that will be necessary to pave the way to a low carbon economy.</p> <p>In addition, the Bill does not rule out reducing emissions by more than 32% in 2020, as any surplus effort could be banked into the subsequent budget period. Although the Committee will examine this further as part of its review of the 2050 target, we would also note that initial analysis suggests the current 2020 range is consistent with progress towards both the existing 2050 target and a range of other possible 2050 target levels. For the reasons set out above, we therefore intend to retain the 2020 target range as set out in the draft Bill.</p> <p>The Bill sets out a clear way of assessing whether the 2020 target has been met, by requiring the annual equivalent for the 2018-22 budget to be between 26% and 32% lower than 1990 levels.</p>
		<p>The year 2020 will fall in the middle of a five year carbon budget if they start in 2008; it would be better to have a clear way of determining whether a target for 2020 had been met.</p>	<p>The Society of Motor Manufacturers and Traders,</p>	

		There should be no upper limit to the target for 2020 in case it is possible to make faster progress.	CCB 31, para 5 Operation Noah, CCB 42, para 16	The upper limit is useful in providing certainty to business over what level of reductions is expected. The banking provisions ensure that if emissions were reduced by more than 32% no penalty would result, as the surplus could be carried forward.
		There should be a specific target instead of a range of 26-32% reductions to prevent the Government from being able to pursue the lower end of the scale. The 2020 target should be "at least 32%".	Environmental Industries Commission, CCB 22. South East Climate Change Partnership, CCB 73, para 5.3	Please see response to the related recommendations from the World Development Movement and the Mayor of London, above.
4	Setting carbon budgets to take into account the target for 2050, international obligations and the advice of the Committee on Climate Change	There should be an express requirement to set targets by reference to the overall aim of delivering the UK's share of global cuts necessary to have a realistic chance of limiting average global temperature rises to 2°C.	Friends of the Earth, CCB 58, para 2.4	Please see response to Christian Aid's recommendation on the title.
4(3)	The Secretary of State must take into account the advice of the Committee on Climate Change when setting	Where the Government chooses to reject or materially depart from the Committee's advice it should be required to lay a statement before Parliament explaining the reasons for its decision and engage in debate on the issue.	EDF Energy, CCB 62	We will amend the Bill so that Government must explain to Parliament why the advice of the Committee on the level of carbon budgets is not being taken, where this is the case. We do not, however, consider it is appropriate to legislate for debates. While the Government is sympathetic to the idea of regular debates on climate change, this is an issue for Parliamentary Business Managers to consider through the

	carbon budgets			usual channels.
5(2)	List of matters to be taken into account when advising upon or setting a carbon budget	The Committee should not have to take into account any of the listed factors other than climate science. As an advisory committee it should be acting with scientific conviction; the other issues require a political assessment and blur the role of the Committee. The factors should not be given equal weight; there should be particular focus on climate science, technology, energy policy, and economic circumstances (i.e. subsections (a), (b), (c), and (f)). The Committee should be required to take into account the issue of sustainable development.	William Wilson, CCB 04 Dr Rhys, CCB 29 Woodlands Trust, CCB 45, para 6.3	The Committee will be required to take a number of factors into account when advising on the level of carbon budgets. We do not feel that focussing exclusively on climate science would constitute a sufficiently balanced approach. It will be for the Committee to decide how to balance the range of factors in its analysis. Government is strongly committed to policies on the environment, including sustainable development. However, we question whether these are issues which can be considered in a meaningful way by the Committee in advice on the level of the carbon budget. The Government's view is that sustainable development can be more fully addressed in the development of specific policies to achieve the carbon budgets; there are already measures in place for all Government Departments to ensure this is achieved.
5(2)(a)	Duty to take into account scientific knowledge on climate change	The Committee should also be required to consider scientific knowledge on the impacts of climate change, their social and economic costs and the availability of technology to address the impacts.	Association of British Insurers, CCB 59, para 17	We consider that the existing elements of expertise listed for the Committee go sufficiently far in this area.
5(2)(c)	Duty to take into account	The Bill recognises the risk to competition but it should also	Dr Dlugolecki,	We consider that the duty to take into account economic circumstances, including competitiveness, requires an appraisal

	economic circumstances, including competitiveness	recognise the opportunity to businesses by becoming a leader in low carbon technologies.	CCB 38, para 1.6	of both the risks and opportunities in this regard.
5(2)(d)	Duty to take into account fiscal circumstances	Fiscal circumstances should not be taken into account by the Committee; it is an issue that should only be considered by Government subject to the accountability of Parliament.	Association of British Insurers, CCB 59, para 18	We consider fiscal circumstances are a relevant factor to take into account given that the Committee will need to look at the economic implications of different targets and budgets, and these will inevitably be linked to spending decisions.
5(2)(e)	Duty to take into account social circumstances, including fuel poverty	The sub-section should be re-drafted as “the decision on energy production, supply and utilisation”.	Dr Rhys, CCB 29	Eliminating fuel poverty is a particular policy goal of this Government, and we consider it is a significant area that needs to be considered when providing advice on or setting the level of carbon budgets.
		There should be an explicit reference to the Government’s fuel poverty targets, not just to the issue of fuel poverty, in order to make sure that they are taken into account.	Fuel Poverty Advisory Group, CCB 20, para 5	We do not consider it is appropriate to legislate for fuel poverty targets in this Bill, which instead provides an overarching framework for the policy actions needed to meet the emissions reduction targets and budgets. We consider the appropriate degree of attention is paid to fuel poverty issues by requiring Government and the Committee to consider them in advising on and setting the levels of budgets.
5(2)(f)	Duty to take into account energy policy	The security of energy supplies should be given greater emphasis than other factors.	Confederation of UK Coal Producers, CCB 16, para 7	We do not consider emphasising one factor over another would be helpful: the Committee will balance separate factors as is most appropriate.
6	Duty to report on proposals and policies as soon as reasonably practicable after setting a carbon	The frequency and content of the reports should be determined by an impact assessment.	NHS Confederation, CCB 82	The policies and proposals contained in budget reports will already have been consulted on and assessed through an impact assessment. The frequency is determined by the timing of budgets themselves.
		When the targets are set and the policies are outlined, the Government	Fuel Poverty Advisory	This will be standard practice as part of the impact assessment carried out for all new policies.

	budget	<p>should also estimate the resources that will be required to implement the policies and achieve the targets; this approach has helped progress towards meeting the fuel poverty targets.</p> <p>The reports should include emission limits for each sector and outline the policy instruments that will be used to stay within budget.</p> <p>Where a change in the policies that are being implemented means that investments and assets become stranded, there should be a system that provides compensation in order to maintain investor confidence.</p> <p>The Secretary of State should be under a similar duty to develop policies that protect the environment.</p>	<p>Group, CCB 20, para 10</p> <p>Association for the Conservation of Energy, CCB 84</p> <p>British Energy, CCB 60, para 17</p> <p>Royal Society for the Protection of Birds, CCB 49, para 6.2</p> <p>William Wilson, CCB 04</p> <p>Fuel Poverty Advisory Group, CCB</p>	<p>Budget reports will set out policies and proposals for meeting the carbon budgets: this will necessarily mean outlining the policy instruments used to stay within budget. As explained previously (in response to the points on sectoral budgets), we do not propose to set specific sectoral limits.</p> <p>The Bill sets a framework for action rather than focussing on specific policy issues.</p> <p>We do not consider this is appropriate for a dedicated Climate Change Bill. However, Government is committed to a wide range of environmental protection policies: further information can be found at www.defra.gov.uk</p> <p>The Defra website maintains up-to-date information on climate change negotiations. For further details please see: www.defra.gov.uk</p> <p>The Warm Homes and Energy Conservation Act 2000 places a statutory duty on the Secretary of State to “prepare and publish...a strategy setting out...policies for ensuring...that as</p>
	International report	<p>The Secretary of State should be required to report on negotiations and action taking place at the European and international level, via an updated website; this would increase public and parliamentary participation.</p>	<p>William Wilson, CCB 04</p>	<p>The Defra website maintains up-to-date information on climate change negotiations. For further details please see: www.defra.gov.uk</p>
7	Annual statement	<p>The Secretary of State should be required to report on progress towards achieving the fuel poverty targets as</p>	<p>Fuel Poverty Advisory Group, CCB</p>	<p>The Warm Homes and Energy Conservation Act 2000 places a statutory duty on the Secretary of State to “prepare and publish...a strategy setting out...policies for ensuring...that as</p>

		part of the reporting process.	20, para 5	<p>far as is reasonably practicable persons do not live in fuel poverty." In England, an interim target has been set to "end fuel poverty for vulnerable households as far as reasonably practicable by 2010."</p> <p>The Government already produces annual progress reports which provide an update on the actions taken over the last twelve months across and outside Government, to tackle fuel poverty. We therefore do not intend to introduce further reporting requirements through the Bill.</p> <p>All emissions data is independently scrutinised by the UNFCCC. The latest UNFCCC review of the UK inventory accepted all UK emissions statistics without adjustment (along with only two other countries' statistics).</p>
		There needs to be independent monitoring and verification of emissions in order to ensure the kind of transparency and accountability that is crucial to public trust and confidence; the proposed role of the Committee will not ensure this will happen.	Natural England, CCB 13, para 8	
	Annual projections statement	There should be a duty to update projections for the emissions of all sectors of the economy on an annual basis. The Government should also consult the relevant sectors on those emissions each year.	British Cement Association, CCB 18, para 2	The Government updates emissions projections on a regular basis, and aims to publish the next set in summer 2008. The most recent (May 2007) projections are available at www.berr.gov.uk/files/file39580.pdf
8	Banking and borrowing	It is appropriate to allow banking and borrowing across years within a budgetary period, but there should be no power to bank or borrow from one budgetary period to another.	Mayor of London, CCB 10, para 5.2	By its nature the five-year budget system already allows banking and borrowing within a budget; the reason for allowing banking and limited borrowing between budgets is to increase the system's flexibility. In the case of banking, this will reward early action; borrowing will smooth out unexpected events towards the end of a budget period e.g. a severe winter leading to higher energy demand and more emissions.
		Banking and borrowing should be	Association	The concept of rolling budgets is interesting, but in practice

		limited to rolling five year periods to enable smoothing and encourage early investment in anticipation of subsequent shocks.	of British Insurers, CCB 59, para 15	<p>ends up being similar to annual targets. Once in the fourth year, if the Government started to go off target or there was a spike in emissions, it would have very little time to do something about it before the determination.</p> <p>Similarly, if in the fifth year actual emissions in the four previous years of the budget period turn out to be higher than predicted, in effect the next budgetary period would only be a year long so if Government were to borrow it would simply make the next budget difficult, if not impossible, to achieve. Therefore if we were to go down this route we would need to allow for much more borrowing.</p> <p>In addition, this approach would not fit in with the Kyoto five-year commitment period and the EU ETS.</p>
8(1) and (2)	Borrowing up to 1% of the subsequent carbon budget	There should be no power to borrow from a subsequent carbon budget given the availability of overseas carbon credits.	Environment Agency, CCB 69	<p>The limited borrowing provision will help to ensure that a carbon budget would not be missed due to, for example, an unexpectedly cold winter in the last year of the budget. This could result in increased CO₂ emissions due to increased heating demand, and insufficient time to compensate for this before the end of the budget period without taking draconian or unnecessarily expensive measures which would have comparatively little environmental benefit. Borrowing also helps to address the fact that we will not know our exact emissions for a budget period until some time after the budget has ended. For example it could be used if it looked as though (according to latest available estimates) we were on course to meet a budget, but outturn data later confirmed that we had over-emitted by a small amount.</p>
		The ability to borrow should be limited to circumstances where there has been an external shock, such as severe	Association of British Insurers,	That is the intention in the Bill, where borrowing is limited to 1% of the subsequent budget.

		weather.	CCB 59, para 15	
8(3)	Banking	Banking should be limited due to the risk that it could result in the stagnation or reversal of emission reductions that are not discovered until after the banked emissions have been used. Where the power to borrow is exercised, the Government should be required to report on the reasons why it was needed and the action that has been taken to increase the emission reductions in the next budget.	Environment al Industries Commission, CCB 22 Environment al Industries Commission, CCB 22	We consider banking to be useful for providing additional flexibility as to where and when emissions reductions may be made. In essence, it provides an incentive to achieve continuous emissions reductions, and avoids losing the benefits of over-performance between budget periods. Use of borrowing is subject to the advice of the Committee, thereby ensuring transparency in its application.
11	Response to Committee's report on progress	There should be provision for an annual debate in Parliament on the annual statement. The draft Bill should lead to a Parliamentary convention that the Prime Minister responds to the annual progress report in Parliament.	Friends of the Earth, CCB 58, para 4.3. Environment Agency, CCB 69	We imagine that it is highly likely that there will be Parliamentary debates on the Government's response to the progress reports of the Committee, but it would be very unusual to stipulate the need for one on the face of the Bill. While the Government is sympathetic to the idea of regular debates on climate change, this is an issue for Business Managers to consider through the usual channels. Traditionally the Secretary of State has been named in legislation because it is Secretaries of State acting through their departments who actually carry out functions on a day to day basis. Although the Prime Minister has been named in legislation, this is not in the form of substantive duties. The implementation of emissions reductions policies is resource-intensive work which would be carried out by departments.
11(4)	The response to the Committee's report can be delayed by an	This power should be subject to the super-affirmative resolution procedure.	WWF-UK, CCB 63	We are rejecting all proposals to employ the super-affirmative procedure, which we consider a disproportionate level of scrutiny intended for very specific applications under the Legislative and Regulatory Reform Act 2006.

	order subject to the negative resolution procedure				
13(4)	Power to amend a carbon budget after the end of the budgetary period.	There is not a sufficiently clear justification for allowing a carbon budget to be altered after the end of the period, particularly given the significance of the budget on the economy and for society more generally.	House of Lords Delegated Powers and Regulatory Reform Committee, CCB 19, para 3	Taking the Delegated Powers Committee's views into account, we intend to remove the relevant provisions from the Bill.	
		There should be no power to amend a carbon budget once it has begun, except in the most extreme circumstances. Even before a budget has begun it should only be altered upon the recommendation of the Committee on Climate Change.	Environment Agency, CCB 69	We agree with the view that a budget may only be amended following significant changes. The Bill requires Government to seek and take into account the advice of the Committee before altering a budget, and the consent of Parliament through the affirmative resolution procedure.	
15	Emissions from international aviation or shipping	Emissions from international shipping and aviation should be included within the targets and budgets from the outset.	Anne Fielding, CCB01	With regard to international aviation emissions, there is not yet international agreement on how to allocate these emissions to individual countries. To include these emissions in the UK's targets, we would therefore need a workable methodology to calculate "the UK's share" of these emissions, and one which took account of international progress. In addition, given that aviation emissions are likely to be included in the EU ETS soon, any methodology to include these emissions in the UK's targets would also need to be compatible with the way that emissions and credits are allocated under the EU ETS rules.	Therefore, once the EU ETS rules have been finalised, we will

				ask the Committee for its advice on whether there is a methodology for including international aviation emissions which was workable and compatible with the EU ETS and takes account of progress in the UNFCCC and the wider international context, and on the impacts of adopting it. In addition, we will ask the Committee to examine the implications of including international aviation and shipping emissions in the UK's targets, as part of its overall review of the 2050 target. In the meantime, as recommended by the Joint Committee, we intend to place a requirement on the Secretary of State to report annually to Parliament on the UK's international aviation emissions as part of the annual statement of UK emissions.
15(2)	Secretary of State's power to define "international aviation and shipping".	The definition of "international aviation and shipping" will determine the scope of the clause as a whole. Although the Secretary of State's power is subject to international obligations and the prospect of judicial review, it may nonetheless be a controversial issue which should use the affirmative resolution procedure rather than the negative procedure.	House of Lords Delegated Powers and Regulatory Reform Committee, CCB 19, para 4.	As the Delegated Powers Committee notes, this power is subject to international obligations and the prospect of judicial review: we therefore believe that negative resolution is appropriate and sufficient.
16	Carbon credits and debits	There should be no power to allow credits to be counted unless they are generated within a capped scheme that is sufficiently ambitious and is subject to robust verification; otherwise the genuine contribution of credits to UK emission reductions will be undermined.	Friends of the Earth, CCB 58, para 3.3 to 3.6	This proposal would run counter to the flexible mechanisms under the Kyoto Protocol. Credits sourced from the Clean Development Mechanism and Joint Implementation are subject to a UN-approved process for verifying that they represent additional emissions saving before approving their issue. Under international law we are required to ensure the use of such credits is supplemental to domestic action.

16(2)	Requirements for carbon credits	Only carbon credits that are purchased from another capped scheme should be allowed to count toward the carbon budgets; otherwise the integrity of the targets will be damaged.	Centre for Alternative Technology and Public Interest Research Centre, CCB 79, para 6	Please see our response to the Friends of the Earth recommendation above.
17(3)-(6)	Use of affirmative or negative resolution procedure when making regulations on carbon credits and debits	The Secretary of State's power to regulate carbon credits and debits should be subject to the affirmative resolution procedure on the first occasion that it is used in order to ensure that the basic framework is satisfactory. Subsequent occasions can be subject to the negative procedure with the exception of sub-para (3).	House of Lords Delegated Powers and Regulatory Reform Committee, CCB 19, para 5	We agree with this recommendation and intend to amend the Bill to this effect.
Part 2				
20(1)(a)	Duty to advise on the level of the carbon budget	The Committee should be able to set, monitor and enforce carbon budgets to remove the process from the political arena.	Environment al Industries Commission, CCB 22	This approach would give unacceptable power to an unelected body at the expense of the Government of the day. However, we do intend to amend the Bill to require the Committee to publish both its advice and the analysis informing it and to require the Secretary of State to explain why if this advice is not accepted.
	Advice and / or monitoring of policy on mitigation	The Committee on Climate Change should be responsible for monitoring Government's mitigation policy and advising on policy options for the short, medium and long term. This role should include a review of the best way to co-ordinate or integrate existing	Lord Hunt of Chesterton, CCB 08	The Committee's role will not be to advise on policy. It will advise on both the level of the carbon budgets and the balance of effort between traded and non-traded sectors, but the responsibility for developing policy to meet carbon budgets will remain with Government. In developing new policy Government will carry out public consultations and it is expected that the Committee will play a key role in engaging in this process.

		effort.			
	Policy making powers	The Committee should be given power to influence climate change policy by setting a minimum carbon price or by establishing other mechanisms that encourage investment in low carbon solutions.	The Institution of Civil Engineers and the Institution of Mechanical Engineers, CCB 67, para 7	Please see responses above.	
20(1)(c)	Advice on sectors	<p>The Bill should identify the main sectors of importance, including transport.</p> <p>The Committee should be required to advise on the respective contributions that should be made by each sector of the economy individually. This would help to ensure that all sectors play a full part and identify where the most cost-effective reductions can be achieved.</p>	<p>Merseytravel, CCB 24</p> <p>EEF, CCB 54, para 24</p>	Sectoral targets may provide increased certainty, but in our view would be overly restrictive in terms of options to reduce emissions cost-effectively (see also our response to the sectoral budgets points). The Committee will advise on the appropriate balance of effort between the traded and non-traded sectors.	
	Advice on contributions by local authorities	The Committee should be required to advise on the contribution to be made by local authorities; in the absence of local targets there will be little incentive at the local government level to achieve emission reductions.	City of London Corporation, CCB 46, para 13	The new local government performance framework will include climate change outcomes. As discussed above, the Committee will not advise on sectoral targets.	
	Advice and / or	The Committee on Climate Change	Lord Hunt of	The Committee is being established to provide independent	

	monitoring of policy on adaptation	<p>should be responsible for monitoring Government's adaptation policy and advising on policy options for the short, medium and long term. This role should include a review of the best way to co-ordinate or integrate existing effort.</p> <p>The Committee should be given a role in establishing adaptation measures, which should be reflected in its terms of reference and the expertise of its members.</p>	<p>Chesterton, CCB 08</p> <p>Natural England, CCB 13, para 7</p>	<p>advice to Government on how to best achieve its emissions reductions goals, and we do not consider it appropriate to detract from this clear but already broad remit by giving it a role in establishing adaptation measures. Its membership would need to change and expand substantially to take on adaptation as well. We therefore do not propose to include adaptation within the Committee's remit, but are giving further consideration to possible alternatives.</p> <p>Please see above.</p>
	Advice on target for 2020 and 2050	<p>The Committee should be given a role in advising Government on the appropriateness of the targets for 2020 and 2050. In particular, the Committee's annual report should state whether the targets remain appropriate.</p>	<p>EEF, CCB 54, para 25</p>	<p>Please see our response on the "Duty to ensure at least a 60% reduction".</p>
	Rejection of advice	<p>Whenever the Government rejects or materially departs from the Committee's advice there should be a duty to lay a statement before Parliament containing the reasons and there should be a willingness to engage in debate on the issue.</p>	<p>EDF Energy, CCB 62</p>	<p>We intend to amend the Bill so that, in the event that the Secretary of the State rejects the Committee's advice on the level of the carbon budget and sets the budget at a different level, the Government must give a full explanation of the reasons for reaching a different decision. This document will be made publicly available.</p> <p>The Government is sympathetic to the idea of regular debates on climate change, but this is an issue for Business Managers to consider through the usual channels.</p>
21	Reporting on progress	<p>The Committee should not be reliant on departmental data to verify</p>	<p>Renewable Energy</p>	<p>We do not accept the need for the Committee to have an audit role on the Government's emissions statistics. The emissions</p>

		emissions. The task should be managed and audited by a properly funded and independent body, preferably the Committee.	Foundation, CCB 57, paras 12 - 13.	inventory publication currently produced on the Government's behalf is respected, subject to peer-review, and supplied according to international guidelines. It would be costly and potentially confusing if the Committee were to duplicate this work. However, the Committee will be made up of experts in their field and will be in a unique position to provide independent feedback on the Government's modelling and data. We are therefore considering how best to ensure a constructive dialogue on these issues – for instance, by involving members of the Committee secretariat in relevant analytical groups.
		Existing cap and trade schemes do not value carbon directly, which can lead to market distortions. The Committee should be given a role in monitoring the distortions among trading schemes to help make sure that it does not lead to problems.	Renew Tees Valley Ltd, CCB 30, para 2	The Committee is being established to provide independent advice to Government on how to best achieve its emissions reductions goals, and we do not consider it appropriate to detract from this clear remit by giving it a role in monitoring distortions in trading schemes.
21(1)	Annual report on progress	The Committee should be required to report on progress towards achieving the fuel poverty targets as part of the annual reporting process. The annual report should also be required to cover progress reports on the use of technology and progress on improving energy efficiency and conservation.	Fuel Poverty Advisory Group, CCB 20, para 5.	As discussed above, the Committee has been given a clear remit and we do not wish to give it additional duties which will detract from this.
23	Ancillary powers of the Committee	The ancillary powers should be broad enough to allow the Committee to compel information to be provided by any business or organisation.	Mid Yorkshire Chamber of Commerce and Industry,	Such a power could potentially be very wide-ranging and we consider it to be neither necessary nor proportionate.

			CCB 83, para 7	
	Duty of co-operation	The draft Bill should impose a duty on the Environment Agency, RDAs, local authorities and industry to provide assistance to the Committee as necessary.	Combined Heat and Power Association, CCB 76, para 4.4.3	We are not clear as to why such a duty would be necessary. The Committee will undoubtedly need to consult with stakeholders, and we anticipate that these organisations will be willing to work with the Committee where they are able.
	Stakeholder engagement	There should be a mechanism that allows the Committee to interact with stakeholders.	South East Climate Change Partnership, CCB 73, para 6.2	We agree that it is very important for the Committee to consult properly with stakeholders. It will be for the Committee to decide how best to do this, and if it considers it necessary, it may establish sub-committees (including people who are not members of the Committee) through which it can discuss and consult on particular issues.
24	Secretary of State's power to make grants to the Committee	The Committee must receive sufficient funding to allow it to scrutinise government forecasting and to develop independent forecasts. The Committee should not be placed in the same position as the broadly analogous Fuel Poverty Advisory Group, which has been dependent on the goodwill of Ministers and officials as well as voluntary assistance, and has not been able to conduct the research and analysis that it would have liked due to a lack of resources.	EDF Energy, CCB 62; EEF, CCB 54, para 27 Fuel Poverty Advisory Group, CCB 20, para 12-14	We agree that it is essential that the Committee has the ingredients for success right from the start. While it is only an estimate at this stage, our scoping exercise suggests that the analytical resources available to the Committee should be increased by around 50%. We anticipate that the secretariat will consist of about 20 people, representing a larger and more senior secretariat than envisaged in the draft Climate Change Bill, similar to the team that carried out the Stern Review.
25 and 26	Secretary of State's power to issue guidance or directions to	The Committee should be fully independent and should not be subject to guidance or directions. It would be better to follow models such as the	William Wilson, CCB 04	The Government's intention is for the Committee to be fully independent. There may, however, be some issues (e.g. the format of the Committee's annual report) on which it would be helpful to the Government to issue guidance and therefore we

	the Committee	Monetary Policy Committee or the Expert Panel on Air Quality Standards. Any guidance or directions that are issued should be made publicly available.	EEF, CCB 54, para 26	intend to retain provision in the Bill to do this. It is our intention that the relationship between Government and the Committee will be as transparent as possible.
Part 3				
28	Trading Schemes			
28(1)	Power to introduce trading schemes	It should not be possible to introduce personal carbon trading by delegated legislation. The draft Bill should only allow personal carbon trading to be introduced where: there is an effective system of carbon-rated fuels; units are allocated to every individual with extra units being obtained under a regulated tender process; and budgets are set 20 years ahead with in built flexibility to be amended depending on the circumstances. There should be no power to introduce significant trading schemes by delegated legislation; the power should be incapable of introducing schemes that, for example, are intended to achieve more than 10% of the planned reductions over a period.	Dr Dlugolecki, CCB 38, para 11 Dr Fleming, CCB 74, para 5 Dr Dlugolecki, CCB 38, para 11	We do not envisage using the powers in this Bill to support the introduction of personal carbon trading. The Government is looking separately into the potential value of personal carbon trading, as just one of a number of potential long term options being explored for making individuals better informed about, and involved in, tackling climate change. Following an initial scoping study, Government is now conducting a one-year pre-feasibility study designed to show whether or not personal carbon trading is a realistic and workable policy option. A decision will then be taken on whether or not to devote more time and resources to this potential policy area. All new proposals will be consulted on, with strong Parliamentary scrutiny arrangements.

		There should be a requirement to use the power to review and rationalise the existing trading schemes to reduce the burden on industry and increase transparency.	British Cement Association, CCB 18, para 4.19	No additional legislation would be needed to do this.
31	Procedure for making regulations	<p>The Secretary of State is given very broad powers to introduce regulations on trading schemes. The technical nature of the schemes may make them unsuited to primary legislation, but consideration should be given to requiring a higher level of parliamentary scrutiny and control than is offered by the affirmative resolution procedure.</p> <p>The powers should be subject to the super-affirmative resolution procedure to ensure that such a decision is subject to extensive parliamentary scrutiny and that both House are satisfied with the changes that are proposed.</p>	<p>House of Lords Delegated Powers and Regulatory Reform Committee, CCB 19, paras 6-9</p> <p>Lord Norton of Louth, CCB 91</p>	<p>Having considered this issue carefully, we do not consider more stringent levels of parliamentary scrutiny would be appropriate. We consider the super-affirmative procedure, for example, to be a disproportionate level of scrutiny intended for very specific applications under the Legislative and Regulatory Reform Act 2006. Applying this approach to the regulations making trading schemes would undermine the proposed approach in the Bill whereby trading schemes could be implemented more promptly through these powers.</p> <p>As the Bill ensures proposals for new trading schemes are subject to full public consultation and the affirmative resolution procedure, we consider there is an appropriate degree of parliamentary consideration and oversight before new schemes are implemented. However, to further strengthen the transparency and scrutiny of these powers, we also intend to amend the Bill so that, before making regulations in this area, Ministers must obtain, and take into account, the advice of the Committee.</p>
31(3)(d)	Meaning of “significantly more onerous”	The term “significantly more onerous” is uncertain and leads to a risk of judicial review proceedings; it should be better defined.	House of Lords Delegated Powers and Regulatory Reform Committee, CCB 19,	We consider the power to make regulations using the negative resolution procedure where they do not make the overall requirements of a scheme significantly more onerous is justified because it is a proportionate way of dealing with minor amendments to a scheme, such as procedural changes. There are adequate procedural safeguards in place, because there would have to be consultation and advice from the Committee on Climate Change. There is also Parliamentary scrutiny by two

				para 10	Committees (the Joint Committee on Statutory Instruments and the House of Lords' Merits of Statutory Instruments Committee) and the opportunity for debate in either House and ultimately for the regulations to be voted down. In addition to that, any person making a scheme would consider very carefully which parliamentary procedure was applicable, and would take a cautious approach in view of the risks of making the wrong decision.
Part 4					
37(1)(a)	The adaptation report must outline the risks and impacts of climate change	<p>The adaptation reports should include a set of indicators to help measure the impacts of climate change and the progress made towards adapting to those changes, such as those set out in the Government Climate Change Programme (2005).</p> <p>Other indicators should include the UK Biodiversity Action Plan targets.</p> <p>More general indicators should include the impact of flood risk, soils, carbon sinks, water quality, natural resources and the potential for sequestration.</p>	<p>Mayor of London, CCB 10, para 12.3</p> <p>Royal Society for the Protection of Birds, CCB 49, para 12.3</p> <p>Woodlands Trust, CCB 45, para 1.8</p>	<p>We believe that a robust but flexible approach is the best way to approach adaptation within the Bill. The revised Bill therefore requires the regular publication of a risk assessment and sustainable adaptation programme, but without setting down specific components which might prove restrictive in future years. The programme will give details of objectives, measures and timelines.</p>	
37(1)(b)	The adaptation report must set	<p>The adaptation report should include specific information that is aimed at supporting adaptation measures at the local and regional level.</p> <p>There should be statutory targets for adaptation in addition to the mitigation</p>	<p>Mayor of London, CCB 10, para 12.3</p> <p>Natural England,</p>	<p>Please see above.</p> <p>The diverse nature of climate change impacts means that it is difficult to define individual adaptation targets. We believe that</p>	

	<p>out the Government's proposals and policies in relation to adaptation</p>	<p>targets.</p> <p>There should be enabling powers that allow Government to set specific targets or milestones identifying the progress that needs to be achieved; this would help strengthen the reporting process and to allow individual departments to create adaptation strategies and priorities.</p> <p>There should be a duty to implement the policies and proposals on adaptation to support the reporting duty.</p> <p>The adaptation reports should include a strategy to ensure that the impact on the natural environment is minimised.</p> <p>The report should set out the action being taken by Government to support adaptation within vulnerable communities and ecosystems abroad.</p> <p>The content of the reports should be determined by an impact assessment.</p> <p>The report should set out a national strategy that develops a cross-sector approach to adaptation and looks as</p>	<p>CCB 13, para 2 Environment Agency, CCB 69</p> <p>Environment Agency, CCB 69</p> <p>Natural England, CCB 13, para 1.4</p> <p>Royal Society for the Protection of Birds, CCB 49, para 12.3</p> <p>NHS Confederation, CCB 82</p> <p>National Trust, CCB 72, paras 11</p>	<p>the proposed approach provides a strong underpinning framework for action.</p> <p>A duty to implement policies would be extremely unusual in legal terms and in the case of adaptation to climate change, which requires a complex mix of policies and measures delivered by a variety of organisations, would be likely to be a recipe for endless litigation rather than getting on with the job.</p> <p>Please see response above on individual policies.</p> <p>The Bill applies to domestic climate change issues, and we therefore do not propose to extend it to cover overseas adaptation.</p> <p>There will be a risk assessment; the impacts of individual policies within the programme will be subject to separate impact assessments as part of normal policy-making practice.</p> <p>The timescale of the adaptation programme will be set according to what is realistic and appropriate.</p>
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		far as 100 years ahead.	- 16	
		Section 40 of the Natural Environment and Rural Communities Act 2006 and the Countryside & Rights of Way Act 2000 should be amended by the draft Bill to include a duty to prepare a strategy on wildlife adaptation; the Secretary of State's report on adaptation should be required to address progress in relation to meeting that duty.	Wildlife Trusts, CCB 77, para 20	Please see above our approach to specific policy measures.
37(2)(a)	Duty to prepare the first report within three years of the Act coming into force	There should be an initial report on adaptation as soon as possible in order to establish a baseline; the report should identify the risks for the NHS.	NHS Confederation, CCB 82	The initial risk assessment will be carried out within three years of the Bill's enactment. The precise format of each risk assessment will be determined according to conditions at the time.
37(2)(b)	There must be an adaptation report at least every five years	The Bill does not adequately reflect the importance of adaptation – it should require an updated programme of action to be prepared and implemented every three years together with an annual report on progress. There should be independent scrutiny of Government's adaptation measures and annual reports on progress. Adaptation reports should be prepared by the Government every two years. There should be interim targets and progress reports within the five year	Woodlands Trust, CCB 45, para 1.5 to 1.7 Environment Agency, CCB 69 Mayor of London, CCB 10, para 12.4 National Trust, CCB	We believe that a five-yearly minimum interval is appropriate, given the long-term nature of adaptation requirements. We have not amended the scrutiny requirements in the revised Bill, but are giving this issue further consideration. We believe that a five-yearly minimum is appropriate, given the long-term nature of adaptation requirements. Please see response above.

		period.	72, para 13	
		There frequency of the reports should be determined by an impact assessment.	NHS Confederation, CCB 82	Please see response above.
		There should be an obligation to report on adaptation three to four months in advance of the decision to set a carbon budget in order to inform the decision making process.	Environment Agency, CCB 69	There is no <u>direct</u> link between UK domestic mitigation measures and adaptation needs, and we therefore do not propose to require a link between the two reports.
		It should be a requirement that the report is published in advance of the Comprehensive Spending Review so that the implications are taken into account when spending decisions are made.	Wildlife Trusts, CCB 77, para 19	Spending reviews take place on a periodic basis and are not a statutory requirement.
		Adaptation and mitigation are linked and the reports need to be prepared in a co-ordinated way; otherwise there can be conflicts in mitigation and adaptation measures. For example, increasing housing density can assist mitigation but create a greater risk of flash floods.	Association of British Insurers, CCB 59, para 2 – 5, 8, 21	Consideration of the broader impacts of policies is a normal part of good policy-making. The reports on carbon budgets and on adaptation will inform each other, but are not directly linked. We do not believe that the additional restriction of aligning reporting timetables would add significant value.
		The Government should establish an advisory body on adaptation – either the Committee on Climate Change or a separate expert body.	Environment Agency, CCB 69	The Government is not proposing to set up a new adaptation body at this stage. However, we are looking in more detail at existing provisions on adaptation, including provision of advice.
	Advisory body and adaptation	The Government should establish a Commission on Adaptation that makes	Wildlife Trusts, CCB	

		recommendations on adaptation strategy and reports on impacts and progress; the draft Bill should require the Secretary of State to respond to the recommendations and progress reports.	77, para 18	
		The Committee should have a role in developing adaptation measures and, to support this, its membership should include those with knowledge of climate change impacts and adaptation.	Natural England, CCB 13, para 7	The Committee is being established to provide independent advice to Government on how to best achieve its emissions reductions goals, and we do not consider it appropriate to detract from this clear remit by giving it a role in establishing adaptation measures.
Schedule 1	The Committee on Climate Change			
Sched 1, para 1(1)(b)	There shall be between 5 to 8 members in addition to a chairperson	The maximum number of representatives will need to be increased beyond 8 in order to represent the broad range of expertise that will be needed.	Royal Academy of Engineering, CCB 50, para 9	The draft Bill proposes that the Committee will consist of 5-8 members and a Chair. We believe that this strikes the right balance between ensuring that all the desirable expertise is represented, and creating a committee which is focused and dynamic. In case the Committee – once established – considers it necessary to increase its size, we have made provision in the Bill for the Secretary of State to amend the number of Committee members.
	Appointments shall be made by Secretary of State	The Committee on Climate Change would be more credible if the appointments were made on a cross-party basis.	Dr Dieter Helm, CCB 07, para 4	The Chair and Members of the Committee will be appointed by the Secretary of State, in agreement with Ministers in the Devolved Administrations, following a fair and transparent recruitment process, following OCPA procedures.
		Appointments should be approved by the Environmental Audit Committee.	Woodlands Trust, CCB 45, para 6.3	Our proposed approach for recruitment does not prevent either of these approaches, but we need to consider further in the light of the recent Government Green Paper, <i>The Governance of Britain</i> .
		Appointments should be scrutinised by	Royal	

		an appropriate select committee.	Society for the Protection of Birds, CCB 49, para 6.1	
Sched 1, para 1(3)	Requirement for members to have a range of experience and knowledge			
	Too broad	<p>The range of factors should be narrowed; otherwise the Committee will represent such wide interests that it will be difficult to reach collective conclusions.</p> <p>The range of expertise is too wide; it would be very difficult to select members who reflect the full range of experience.</p>	<p>British Energy, CCB 60, para 23</p> <p>Dr Freund, CCB 06, para 17</p>	<p>For the Committee to be credible, and to ensure that it is able to clearly and rationally present the economics of the costs, benefits and risks of abatement decisions, it is important that its members should have a range of experience and knowledge.</p>
	Priority	<p>Climate science and competitiveness should be prioritised among the other factors.</p> <p>There should be greater emphasis on heavyweight scientific disciplines including chemistry, engineering and statistics in order to balance the advice that is given.</p> <p>An expert on climate modelling should be included in addition to experts on climate science more generally. Other</p>	<p>Operation Noah, CCB 42, para 24</p> <p>Renewable Energy Foundation, CCB 57, para 10</p> <p>Natural Environment Research</p>	<p>It will be for the Committee to decide how to balance the range of factors in its analysis.</p>
	Additional expertise			<p>The list of desirable expertise for the Committee is not exhaustive.</p>

				Following discussions with the Devolved Administrations, we are amending the Bill to ensure that the Committee's overall composition should also include an awareness of the differences across the UK and the devolved context of climate change policy. With this amendment, we believe that the list of expertise desirable for the Committee will be comprehensive and cover all relevant factors.
	skills and areas of expertise should include carbon budgeting, risk assessment, ecosystem services, resource valuation, sustainable development and international affairs.	Council, CCB 47, para 13		
	There should be additional factors including grid stability, waste usage, energy efficiency, distributed energy, hydrogen development and fuel cells.	Renew Tees Valley Ltd, CCB 30, para 10		
	The Committee should include experts on land management and water resources.	CLA, CB 52, para 7		
	The Committee should include a technical expert on the rural or land-based sector.	National Farmers' Union, CCB 43, para 7.1		
	The members should include an expert on environmental policy.	Royal Society for the Protection of Birds, CCB 49, para 6.1		
	The Committee should include public health experts who can advise on the contribution that needs to be made by the NHS and the public health implications of climate change.	NHS Confederation, CCB 82		
	There should be a requirement to include a fuel poverty expert.	Eaga Plc, CCB 61		

	Stakeholders	<p>The Committee should include stakeholder representatives, including business and environmental groups.</p> <p>Although stakeholders should not be represented on the Committee, there should be provision for stakeholders to be consulted.</p> <p>The Committee should have a stakeholder group that allows stakeholders to contribute their expertise.</p>	<p>Renew Tees Valley Ltd, CCB 30, para 9; Anne Fielding, CCB01</p> <p>British Energy, CCB 60, para 20</p> <p>CLA, CCB 52, para 7</p>	<p>To ensure its credibility it is important that the Committee is able to clearly and rationally present the economics of the costs, benefits and risks of abatement decisions. This means that the Committee's members should be experts in their field, rather than representing specific stakeholder groups. Responses to the consultation showed that 76% agreed with this approach.</p> <p>The Government agrees that it is important for the Committee to engage effectively with stakeholders. It will be for the Committee to decide how best to do this.</p> <p>An example of how this is provided for is the power for the Committee to establish sub-committees.</p>
	Sector experts	<p>The Committee should include sectoral experts, such as experts on transport.</p>	<p>Merseytravel, CCB 24</p>	<p>Please see our response on 'Additional Expertise' above.</p>
	Regional and local representation	<p>There should be local authority and regional representation on the Committee</p> <p>Representatives of cities should be included, particularly as they are the largest emitters nationally and internationally.</p> <p>Local authorities should have a representative on the Committee due to their role in delivering emission reductions.</p>	<p>Combined Heat and Power Association, CCB 77, para 2.2.6</p> <p>Mayor of London, CCB 10, para 3.3</p> <p>Local Government Association, CCB 36,</p>	<p>Please see our response on 'Stakeholders' above.</p>

			para 1.2; London Councils, CCB 53, para 6	
Representatives of the Devolved Administrations	The Committee should represent Devolved Administrations and include an overlap of members from Committee's established in the Devolved Administrations.	WWF-UK, CCB 63	We are amending the Bill to ensure that the Committee's overall composition should also include an awareness of the differences across the UK and the devolved context of climate change policy, and also to ensure that the Committee takes into account economic, social and other variations across England, Wales, Scotland and Northern Ireland when considering their advice.	
Policy Options	The Committee should include expertise on the type of policies or mechanisms that need to be implemented to deliver emission reductions.	Mayor of London, CCB 10, para 7.3	We consider that this falls within the current expertise list (which is not intended to be exhaustive).	
Public delivery	If the Committee is given a broader role to monitor government policies and to develop strategies for mitigation and adaptation (see above), at least one member should have public administrative and political experience to advise the other members on what will or will not work in the public sector.	Lord Hunt, CCB 08	The Committee is not being given this role.	
Consumers and low income	There Committee should include, as a separate category, representatives of consumers and low income groups.	Fuel Poverty Advisory Group, CCB 20, para 6	Please see our response to 'Stakeholders' above.	
Developing world	The Committee should include experts on international development.	ClientEarth, CCB 23,	Please see our response to 'Additional Expertise' above.	

		The members should include an expert on the impacts of climate change on poor people in developing countries, as well as one or more experts on environmental taxation, regulation, subsidies and incentives.	para 13 World Development Movement, CCB 26, paras 36 and 40	
	Adaptation	The Committee should include experts on adaptation.	Association of British Insurers, CCB 59, para 25	The Committee already has a broad remit and many factors to take into account. Its membership would need to change and expand substantially to take on adaptation as well. We therefore do not propose to include adaptation within the Committee's remit, but are giving further consideration to possible alternatives.
	Some sub-committee	Where an enlarged range of skills and expertise would make the Committee too large, there could be specific sub-committees to address particular issues. Natural Environment Research Council, CCB 47, para 13	Natural Environment Research Council, CCB 47, para 13	The Bill allows the Committee to establish sub-committees, including persons who are not members of the Committee, if it chooses to do so.
Sched 1, para 1(3)(e)	Experience or knowledge in energy production and supply	The reference to "energy production and supply" should be extended to expressly include energy efficiency and use reduction.	Natural Environment Research Council, CCB 47, para 13	The list of desirable expertise is not exhaustive, and is meant to broadly mirror the factors which the Committee has to take into account. This should not be taken as restricting the matters that the Committee may take into account.
Sched 1, para 3	Terms of Office	There should be a limit on the term of office of the Chair and the members.	Natural Environment Research Council, CCB 47, para 14.	The Committee will exist as an upper-tier statutory advisory NDPB following Royal Assent. In practical terms this means that the appointments are restricted to two terms (with re-appointment subject to satisfactory performance assessment) and that overall these terms cannot exceed ten years.
		The members should be appointed for a maximum 2 year terms to prevent	Environmental Industries	

		special interests becoming entrenched.	Commission, CCB 22	
		The members should be appointed for 5 to 10 year terms.	British Cement Association, CCB 18, para 4.21	
		The terms of reference of the members should be publicly available.	EEF, CCB 54, para 26	The Committee's governance documents will be available publicly.
Sched 2, para 5(3)(a)	Allowances must be issued free of charge	There should be provision within the Bill to allow the auctioning of allowances or carbon reduction contracts to permit the introduction of schemes such as EDF's proposed carbon hedge mechanism.	EDF Energy, CCB 62	We do not envisage using the powers to provide for a carbon hedge mechanism.
		Auctioning is an important part of making trading schemes an efficient way of reducing emissions; it should be treated holistically in the draft Bill rather than separated as a finance issue.	Ofgem, CCB 51, para 8	Auctioning provisions have been updated in the revised Bill.
Sched 2, para 19	Monitoring compliance	The draft Bill should include an enabling power allowing the Secretary of State to introduce mandatory reporting, independent of the trading schemes provisions in Schedule 2. The power should be broad enough to require all FTSE 250 companies to include greenhouse gas emissions in their annual statement of accounts. There should also be a firm timetable for introducing such a procedure.	WWF-UK, CCB 63	The Government has recently improved the framework for disclosures by quoted companies in the Companies Act 2006. These require information on environmental matters where necessary for an understanding of the business. The Government does not believe that it is currently appropriate to mandate further reporting requirements. It welcomes steps being taken to improve voluntary disclosure and is supporting international efforts to develop consistent and appropriate standards which will help firms meet their new reporting obligations and provide meaningful and cost-effective information for both their shareholders and the wider

		<p>The Committee on Climate Change should be given powers to develop disclosure standards that should be supported by enabling powers allowing Government to introduce mandatory reporting.</p> <p>Carbon auditing is in its infancy and is substantially more difficult than financial auditing. A transparent and comprehensive system must be developed, which will require considerable scientific expertise.</p>	<p>Christian Aid, CCB 64</p> <p>Renewable Energy Foundation, CCB 57, paras 10 – 11</p>	<p>stakeholder community.</p> <p>Any proposal for further mandatory disclosure requirements would need robust cost benefit analysis to identify clear business and environmental benefits which outweigh the compliance and other costs, consistent with the Government's better regulation policies.</p>
<p>Sched 2, paras 22- 25</p>	<p>Enforcement arrangements, penalties, offences.</p>	<p>The enforcement has not yet been justified. There needs to be a strong case for allowing any of the following: a power to create intrusive enforcement mechanisms subject to anything less than the affirmative resolution procedure; the power to impose financial penalties without specifying or containing a mechanism to limit the maximum amount; the power to create offences without specifying the mode of trial or the maximum sentence.</p>	<p>House of Lords Delegated Powers and Regulatory Reform Committee, CCB 19, para 11</p>	<p>We have introduced mechanisms to limit maximum fines and sentences, in accordance with precedents in existing environmental legislation.</p>
<p>Sched 2, para 25</p>	<p>Appeals</p>	<p>Appeals should not be determined by the Secretary of State because there is a conflict with the Secretary of State's interest in securing emission reductions and the power to issue directions to the scheme administrator</p>	<p>House of Lords Delegate Powers and Regulatory Reform</p>	<p>It is not necessarily the case that there will be a conflict of interest in every situation, so we intend that appeals should be dealt with on a case by case basis. The Human Rights Act requires us to ensure a fair procedure in relation to all appeals.</p>

		under clause 33.	Committee, CCB 19, para 12	
		It is questionable whether the Bill should permit, but not require, a right of appeal to be established for decisions or civil penalties.	House of Lords Delegate Powers and Regulatory Reform Committee, CCB 19, para 12	Our view is that it would be inappropriate to require the right to appeal to apply to decisions made in relation to a trading scheme, as this could potentially cover any number of minor issues. Instead, we consider that the current drafting allows sufficient flexibility for a new trading scheme to confer rights of appeal where necessary. In establishing a new trading scheme the existing raft of human rights legislation would in any case have to be adhered to in regard to participants' (and others') rights to appeal, which we consider to be a sufficient check.
Other issues				
Legal Enforcement		<p>The Secretary of State's duty under clauses 1(1) and 2(1)(a) is not legally enforceable. Specifically, the court is likely to consider it a duty to use best endeavours; unlikely to grant a declaration; and very unlikely to require the Secretary of State to take specific remedial action by making a mandatory order. It is essentially a political duty rather than a legally enforceable duty.</p> <p>The draft Bill should include an enforcement mechanism that is independent of the courts: (a) there should be a duty to make up for failure to meet a carbon budget; (b) the</p>	<p>Professor Forsyth, CCB 92</p> <p>Environment Agency, CCB 69</p>	<p>The Bill puts the Government's ambitions to cut emissions on a statutory footing. Ministers have a duty to abide by the law and this fact in itself gives the targets and budgets very great importance. As the EFRA Committee recognised, there will be political pressure on Government beyond the legal framework itself: <i>by institutionalising the targets, the political pressure to achieve them will be increased. The Government of the day will also be subject to 'the court of public opinion'</i>.</p> <p>Our view is that the duties in the Bill – including the requirement to meet the targets and budgets – are stringent and legally enforceable. The statutory basis means that any failure to meet a target or budget carries the risk to Government of judicial review, with sanctions at the discretion of the courts. No Government will take this risk lightly.</p>

		<p>shortfall should be achieved by either purchasing a capped number of overseas credits, retiring EU ETS allowances, or paying money to a carbon reduction fund that would distribute money to domestic emitters that competitively bid to make additional reductions.</p> <p>The draft Bill should incorporate a compliance mechanism based on the Kyoto Protocol procedure, which requires 1.3 times the excess to be made up in the next period and suspends the country from trading allowances in the meantime.</p> <p>Alternatively, non-compliance should trigger a duty to increase spending on climate change mitigation.</p> <p>Where a carbon budget or annual milestone is missed, the Committee on Climate Change should be required to advise on the corrective action that is necessary.</p> <p>The failure to meet a carbon budget should be reflected in the trajectory of the subsequent carbon budget.</p>	<p>CLA, CCB 52, para 8</p>	<p>We intend to enhance the Bill's leverage further by introducing a new duty on the Secretary of State to report to Parliament explaining the reasons for not accepting the advice of the Committee on Climate Change, where this is the case. We agree with the Joint Committee that this mechanism will "increase the Government's level of accountability within Parliament". We also intend to amend the Bill to require Government to provide an explanation to Parliament in the event that the targets and/or budgets in the Bill are not met, thereby enhancing the role that political and public embarrassment will have in compelling Government to comply with these duties.</p> <p>The duty to explain to Parliament is not intended to be an alternative to compliance with the targets and budgets in the Bill. Judicial review could still be sought against the Secretary of State for failing to comply with the Bill's requirements, and the court would still be able to order an appropriate remedy.</p> <p>We do not consider that other compliance mechanisms which have been proposed would, in reality, strengthen the framework introduced by the Bill. In addition, some of them (for instance, a proposal to suspend the right of the Government and UK business to participate in international emissions trading) could run counter to the rules of the EU ETS. Furthermore, attempting to set out specific sanctions within the Bill itself carries a risk that whatever sanction is specified might be less stringent than one which could be prescribed by a court of law.</p> <p>The revised Bill therefore reflects our strongly-held view that the duties in the Bill are legally enforceable and that the threat of judicial review is an appropriate sanction to ensure the</p>
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				obligations in the Bill are adhered to.
	Where there has been a failure there should be a prompt and independent review of the reasons in order to allow remedial action to be taken.	Dr Dlugolecki, CCB 38, para 7	The revised Bill will include a duty on the Secretary of State to explain to Parliament the reasons in the event of overshooting a budget.	
	Where the Government has fallen or is falling behind there should be a duty on the relevant minister to report on the additional policies that will be pursued and to confirm that those policies are sufficient to remedy the situation. There should also be annual debates in Parliament on progress and any such report could be the subject of a vote to determine whether the proposals are satisfactory.	Friends of the Earth, CCB 58, para 4.3		
	Financial penalties should be imposed on Government if it fails to achieve the targets and budgets.	Woodland Trust, CCB 45, para 7.1	We do not consider this is an appropriate sanction, as it would constitute an unsecured financial liability for Government.	
Greenhouse gas emissions other than carbon dioxide	The draft Bill should include greenhouse gas emissions other than carbon dioxide from the outset. The failure to include other gases is a missed opportunity and wrongly moves us away from the international multi-gas approach which, as the IPCC has confirmed, can minimise the costs of mitigation.	Natural England, CCB 13, para 4	We recognise the logic for including all greenhouse gases: a number of anthropogenic greenhouse gases contribute to climate change. International negotiations and abatement mechanisms are based on a "basket" of gases, reflecting the broader picture. And including a wider basket of gases within the target would allow for the most cost-effective abatement options to be considered.	
	Non-carbon dioxide greenhouse gases should either be included or,	Environmental Industries	The draft Bill focussed on CO ₂ because this is where the deepest cuts are needed. In 2005 CO ₂ made up slightly less than 85% of all UK greenhouse gas emissions, and climate	

		<p>alternatively, the 60% target (which stemmed from an original target that covered all greenhouse gases) should be increased to compensate for the narrow focus.</p> <p>There should be statutory targets for non-carbon dioxide greenhouse gas emissions that are long-lived and that are mainly produced by industrial processes which make them amenable to measurement and control, such as the gases covered by the Montreal Protocol and fluorocarbons. Other greenhouse gases such as Methane and N₂O can be difficult to measure and control by industry and agriculture. The government should set goals rather than statutory targets for these gases.</p> <p>Carbon dioxide is the main problem and should be the main focus. If other greenhouse gases are included then there should be separate targets for each rather than one global amount to ensure that there is a specific target for carbon.</p> <p>The initial targets should relate to CO₂ but the draft Bill should make provision for reviewing and introducing non-CO₂ targets.</p>	<p>Commission, CCB 22</p> <p>Dr Freund, CCB 06, paras 4-6</p> <p>British Energy, CCB 60, paras 10 - 11</p> <p>NHS Confederation, CCB 82</p>	<p>change mitigation will not be possible without specific actions focussed on reducing CO₂ emissions. We therefore believe that introducing the Bill on a CO₂-only basis remains a credible approach, and note that the Joint Committee also agreed with this approach. In addition, there is still significant uncertainty about the cost-effective abatement potential for non-CO₂ gases, particularly in the longer term.</p> <p>However, to ensure that we are able to move quickly to include other greenhouse gases in our targets, we intend to amend the Bill so that it is possible to include other greenhouse gases in the target in future. We will also ask the Committee, as part of their analysis of the 2050 target, to consider the implications of including other gases on the level of the target.</p> <p>In addition, as recommended by the Joint Committee, we intend to report annually to Parliament on emissions of all greenhouse gases, to ensure maximum transparency.</p>	<p>Use of international</p> <p>We believe it is important that the Government and UK organisations can make effective use of international</p>
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<p>credits</p>		<p>as they are difficult to verify and could lead to limited efforts within the UK; developing countries should be supported in addition to domestic efforts.</p>	<p>Movement, CCB 26, paras 3 and 21-28</p>	<p>mechanisms for achieving emissions reductions at least cost to avoid making our targets needlessly expensive. The Kyoto Protocol’s “flexible mechanisms” and the EU ETS are based on this principle to provide this option and act as a means of securing and coordinating international action and as a way of helping developing countries achieve low carbon economies.</p> <p>We agree that it is essential that any credits bought by the UK represent real emissions reductions which would not have taken place otherwise. For this reason we are working hard at international level to support the continued improvement in the procedures for the setting of baselines, and for the establishment of additionality. Increased transparency and public scrutiny can also play an important role in ensuring high standards are met.</p> <p>The UK remains strongly committed to the international principle of complementarity, which states that “the use of the [Kyoto] mechanisms shall be supplemental to domestic effort and...domestic action shall thus constitute a significant element of the effort made by each Party...”. There is considerable potential for cost-effective measures to reduce emissions in the UK, and the Government’s detailed policies and proposals for meeting each five-year budget will be set out in a report to Parliament.</p> <p>We consider that the key factor in determining how far emissions are reduced under the Bill will be the level of the UK’s targets and budgets. In terms of the balance between domestic and international action, the Committee will advise on the use of international emissions reduction credits when making recommendations on each budget, and we anticipate that this advice will take into account the most recent</p>
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		<p>If the Government is to demonstrate international leadership there must be a limit on the use of overseas credits and an emphasis on domestic action.</p> <p>Overseas credits have a role in reducing emissions at least cost, but the Bill must cap their use by setting the minimum level of domestic action. Otherwise it will undermine the UK's credibility and industry may adopt a strategy of purchasing credits rather than reducing emissions. When setting a limit, the Government must take into account that reliance on overseas credits exposes the UK to carbon price shocks caused by volatility in the carbon markets.</p> <p>The draft Bill should aim for 100 per cent of the effort to be achieved through domestic reductions; credits should be subject to a tight limit.</p> <p>The Committee on Climate Change should be given power to set limits on the use of overseas credits.</p> <p>Any decision to purchase carbon credits should be transparent and it</p>	<p>Mayor of London, CCB 10, paras 6.1 - 6.2</p> <p>EDF Energy, CCB 62</p> <p>Association for the Conservation of Energy, CCB 84</p> <p>Christian Aid, CCB 64, paras 20 to 29</p> <p>E.ON UK, CCB 44,</p>	<p>international circumstances and best practice.</p> <p>The Committee is to advise Government on the balance between domestic action and use of overseas credits in each budget. Use of overseas credits is to be in accordance with the internationally agreed notion of supplementarity.</p> <p>As it is an advisory body we do not consider it appropriate that the Committee should set a limit on the use of international credits. However, as discussed above, its advice on each budget must set out the balance between domestic effort and use of overseas credits.</p> <p>See above for our approach to the purchase of credits. We do not intend to specify an advance notice period.</p>
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		should have to be notified well in advance to minimise the risk of destabilising the carbon price.	para 18	
Local Government		The Bill should have addressed the role of local government given the significance of local action. It should provide a mechanism for funding local initiatives aimed at measures such as such as energy saving, efficient use of transport and planning control. It will also be important to give local authority power to take action by controlling matters such as the use of air conditioning, transport etc.	Lord Hunt, CCB 08	The Local Government White Paper set out a new performance framework for local authorities which the Government proposes to introduce in 2008/9. Each local authority will agree thirty-five priority performance indicators against which targets will be set. There will be three indicators on climate change: <ul style="list-style-type: none"> • CO₂ reduction from local authority operations • Per capita CO₂ emissions in the local authority area • Progress towards integrating climate change adaptation into local authority business
		The draft Bill should set a collective target for local authorities; there may not be action in the absence of a statutory requirement.	Association for the Conservation of Energy, CCB 84	
		There should be a delegated power in the draft Bill allowing Government to impose duties on local authorities in relation to climate change.	The Royal Society for the Protection of Birds, CCB 49, para 3.3	
		The draft Bill should clarify the role of local government and explain how the existing local measures, such as offset projects, will fit into the local approach.	City of London Corporation, CCB 46, para 9	
		Local authorities should be placed	Woodlands	

		under a duty to take action on climate change.	Trust, CCB 45, para 3.2	
The Committee's relationship with other bodies and agencies		<p>The relationship between the Carbon Committee and a range of other environmental bodies needs to be considered more fully, in particular the Environment Agency, Energy Savings Trust and the Carbon Trust. The Environment Agency has air pollution duties and plays an important role in the EU ETS. It should be reformed to focus on water and waste, with further thought on which body should be responsible for air pollution. Consideration should be given to creating a broad Energy Agency responsible for ensuring security of supply and the achievement of climate change targets. The body should incorporate the Energy Savings Trust, the Carbon Trust and Ofgem.</p> <p>The Committee on Climate Change should not replicate the role of existing agencies, but should find ways of integrating them together to develop joined up strategic planning.</p>	<p>Professor Dieter Helm, CCB 07, para 4</p> <p>Lord Hunt, CCB 08</p>	<p>We agree that the Committee will need to work closely with key stakeholders including the delivery bodies listed. It will be for the Committee to decide how best to do this.</p> <p>We acknowledge that there are arguments for rationalising policy and delivery responsibility within Government. However, the degree of political independence suggested in an Energy Agency is unlikely to be achievable in practice, since an agency would ultimately still need some degree of accountability to Ministers. In addition energy policy comprises many different objectives, targets and instruments, and therefore public oversight and direction, in the form of elected representatives, is needed. Finally, in energy, most of the policy objectives and instruments are international in nature, and an un-elected Energy Agency would not have the authority to lead on them.</p>
Publication of the Committee's advice		The draft Bill should require the advice of the Committee on Climate Change to be made public.	Natural Environment Research Council, CCB 47, para 16	The Bill will be amended to require publication of the Committee's advice on budgets, including its reasons for that advice.

General policy instruments		The Bill should include enabling powers to support the introduction of broader fiscal and regulatory measures, as well as policies to support behaviour changes, which will be needed to meet the statutory targets.	ClientEarth, CCB 23, para 17.	Fiscal measures can be introduced through the annual Finance Act. Other policies relating to climate change, including regulatory measures and those needed to support behaviour change, are potentially of an extremely broad nature, so it would be difficult to frame appropriate enabling powers which provided for all eventualities.
Specific policy instruments		There should be specific measures in the draft Bill to support public transport in order to link the aims of the Bill with the need for specific action in that sector.	Merseytravel, CCB 24.	We do not consider the Bill should target particular sectors; as it provides the framework to reach the targets in the Bill. It is more important to maintain a flexible approach whereby emissions are reduced as cost-effectively as possible. Various transport policies and measures have been implemented to address climate change, as set out for instance in Chapter 7 of the Energy White Paper (available at www.berr.gov.uk/files/file39571.pdf).
Consultation on enabling powers		The draft Bill should include measures to encourage technological developments, such as CCS.	City of London Corporation, CCB 46, para 4	Overarching targets in the Bill will provide clarity in the long term context whereby emerging technologies such as CCS may become more attractive to investors.
Consultation on enabling powers		The exercise of all enabling powers aimed at reducing emissions should be subject to a statutory requirement to consult the public and the Committee on Climate Change. In particular, it will help to minimise the risk from environmental lobbying and to take into account all the negative environmental impacts of emission reduction measures, such as the effect upon biodiversity or energy security.	Professor Dieter Helm, CCB 07, para 5	Any new trading schemes will be developed in consultation with relevant stakeholders and the public. We propose amending the Bill to require Government to seek and take account of the Committee's advice before implementing trading schemes.

		<p>The local government sector should be consulted on the development of all policy instruments aimed at reducing emissions to make sure they are suitable and compatible with existing efforts. Similarly, if there is a trading scheme aimed at local government it should be developed in partnership with local leaders.</p>	<p>Local Government Association, CCB 36, para 6</p>	
<p>Behaviour change</p>		<p>The draft Bill should include enabling powers to support behaviour change and promote best practice, for instance to support workplace environmental representatives.</p>	<p>TUC, CCB 78, para 3.5</p>	<p>While we agree that Government must take a leadership role in engaging the public on climate change, we do not consider it appropriate for legislation to deal with these issues. The <i>Act on CO₂</i> campaign launched earlier this year is designed to raise awareness of the contribution that everyday activities make to CO₂ emissions and therefore climate change.</p> <p>We are looking to develop <i>Act on CO₂</i> into a generational campaign in which Defra will:</p> <ul style="list-style-type: none"> • lead by example; • provide clear and consistent information to guide people's choices; • develop mass marketing publicity campaigns to inform, inspire and persuade; • co-ordinate the campaign across Government and other public sector organisations, including local and regional government; • work closely with third sector organisations and NGOs; and • consider options for legislative intervention where necessary. <p>The Committee may create sub-committees on areas of its choosing; it is not appropriate for Government to dictate which particular sub-committees may be created.</p>
		<p>The Committee on Climate Change should include a sub-committee to address behaviour change, with</p>	<p>Natural Environment Research</p>	

		members who understand behavioural psychology.	Council, CCB 47, para 13	
New advisory body		The draft Bill should establish an Energy Commission to provide independent and co-ordinated recommendations on energy policy and progress reports.	TUC, CCB 78, para 3.3	Please see response to Professor Dieter Helm's related point above.
Devolution		There should be a UK wide approach to prevent "leakage" between four separate systems and give a stronger collective negotiating position at the international level.	Dr Fleming, CCB 74, para 17	The revised Bill clearly sets out the roles of the Devolved Administrations within a UK-wide approach. It will be accompanied by a Concordat on detailed devolution arrangements.
		Where nations in the UK have different targets, it will be important to have a system that publicly documents which nation is responsible for delivering what reductions.	WWF-UK, CCB 63	Please see above.

Glossary of terms and abbreviations

Adaptation	Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
Additionality	This is the consideration as to whether an overseas project to reduce emissions or enhance emissions removals achieves more than would have occurred in the absence of the project.
Bunker fuel	Fuels consumed for international marine and air transport.
CO₂	Carbon dioxide.
CO₂e	Carbon dioxide equivalent. A tonne of carbon dioxide equivalent means one metric tonne of carbon dioxide or an amount of any other greenhouse gas with an equivalent global warming potential (see below), calculated consistently with international carbon reporting practice. For the purposes of the Bill, greenhouse gas emissions, reductions of such emissions and removals of greenhouse gas from the atmosphere, shall be measured or calculated in tonnes of carbon dioxide equivalent.
Cumulative emissions	The total amount of emissions over a particular period.
Devolved Administrations	The regional governments of Scotland, Wales and Northern Ireland.
EU ETS	European Union Emissions Trading Scheme. For further details please see: http://www.defra.gov.uk/environment/climatechange/trading/eu/index.htm
GDP	Gross Domestic Product.
Greenhouse gas	Under the Kyoto Protocol to the UNFCCC these are carbon dioxide (CO ₂), methane (CH ₄), nitrous oxide (N ₂ O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF ₆).
Global Warming Potential (GWP)	A measure of how much a given mass of a greenhouse gas is estimated to contribute to global warming. It is a relative scale which compares the gas in question to that of the same mass of carbon dioxide (whose GWP is by definition 1). GWP figures are provided and reviewed by the IPCC.
GW	Gigawatt. 1 GW is equivalent to 1 billion Watts.
HMRC	HM Revenue & Customs.
ICAO	International Civil Aviation Organization.
IMO	International Maritime Organization.
IPCC	Intergovernmental Panel on Climate Change. A UN body set up to “ <i>assess on a comprehensive, objective, open and transparent basis the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts and options for adaptation and mitigation.</i> ” For further details please see: http://www.ipcc.ch/
Judicial review	A type of court proceeding in which a judge reviews the lawfulness of a decision or action made by a public body.

Kyoto Protocol	The Kyoto Protocol to the UNFCCC. Negotiated in Japan in 1997, it came into force in February 2005. Among other things, the Protocol sets binding targets for the reduction of greenhouse gas emissions by industrialised countries.
Kyoto mechanisms or “flexible” mechanisms	<p>Collective term for international emissions trading, the Clean Development Mechanism (CDM) and Joint Implementation (JI).</p> <p>International emissions trading is provided for under Article 17 of the Kyoto Protocol.</p> <p>CDM is provided for under Article 12 of the Kyoto Protocol. It enables projects in developing countries which reduce emissions of greenhouse gases or enhance sinks.</p> <p>JI is provided for under Article 6 of the Kyoto Protocol. It enables projects to be undertaken in developed countries with Kyoto targets which reduce emissions of greenhouse gases or enhance sinks.</p>
Marrakesh Accords	UNFCCC agreements reached in 2001 which set out the detailed provisions for aspects of the Kyoto Protocol, including those relating to supplementarity, CDM and JI.
Mitigation	In the context of climate change, action which reduces emissions of greenhouse gases to the atmosphere, or enhances "sinks" (e.g. forests and other vegetation) which remove greenhouse gases from the atmosphere.
NAO	National Audit Office.
NDPB	Non-Departmental Public Body. A body which has a role in the processes of national government but is not a government department, or part of one, and which accordingly operates to a greater or lesser extent at arm's length from Ministers.
OCPA	The Office of the Commissioner for Public Appointments.
ppm	Parts per million. Measurement of atmospheric concentration of greenhouse gas.
RIA	Regulatory Impact Assessment.
Stern Review	A review led by Sir Nicholas Stern on the economics of climate change which reported in October 2006. The Review, supporting papers and additional research are available from: http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm
Supplementarity	The principle that the use of the Kyoto mechanisms should be supplemental to domestic action to reduce greenhouse gas emissions.
Sustainable development	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
UNFCCC	United Nations Framework Convention on Climate Change. 189 countries around the world have joined this international treaty that sets general goals and rules for confronting climate change. The Convention sets an ultimate objective of stabilizing greenhouse gas emissions "at a level that would prevent dangerous anthropogenic (human induced) interference with the climate system." As a "framework" document it is something to be amended or augmented over time. Further information is available from: http://unfccc.int



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