



Draft Climate Change Bill

Consultation Document

March 2007

Department for Environment, Food and Rural Affairs
Nobel House
17 Smith Square
London SW1P 3JR
Telephone 08459 33 55 77
Website: www.defra.gov.uk

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Patrick Erwin / James Hardy
Climate Change Legislation Team
Area 4/F5
Ashdown House
123 Victoria Street
London
SW1E 6DE

Email: climatechangeconsultation@defra.gsi.gov.uk

This document is also available on the Defra website.

Published by the Department for Environment, Food and Rural Affairs

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Forewords

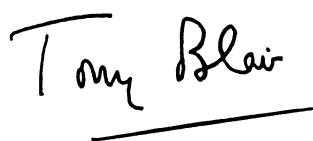
Prime Minister's Foreword

The threat from climate change is perhaps the greatest challenge facing our world. Without decisive and urgent action, it has the potential to be an economic disaster and an environmental catastrophe. This is why I have made it a top priority for this Government, both domestically and internationally.

While the threat is extremely serious, I believe there are also grounds for optimism. The world is waking up to the dangers we face. And just as human ingenuity has accidentally caused climate change, I believe it can play a huge role in helping us undo the damage. But we need to take action now, we need to take it collectively and for the richer nations to support the poorer ones.

This year gives us that opportunity. The reports by the Intergovernmental Panel on Climate Change (IPCC) provide overwhelming scientific evidence that climate change is underway and will become more severe. The G8 summit in June and the UN climate summit in December give us the chance to build on the growing international momentum for action. Our goal must be for the developed and emerging economies to work together towards a new binding and an inclusive post Kyoto framework.

Within this framework, each country, its businesses and its people must play their part. I am proud of the role that the UK has already played, through its action domestically and its international lead, in getting the world to focus on climate change. The Climate Change Bill, the first of its kind in any country, demonstrates our determination that this role will continue.

A handwritten signature in black ink that reads "Tony Blair". The signature is written in a cursive style and is underlined with a single horizontal line.

Tony Blair
Prime Minister

March 2007

Secretary of State's Foreword

There is no longer any real debate over the fact that climate change is happening and that man-made emissions are the main cause. The evidence is stark as to the serious and urgent nature of climate change and the consequences we face from our every-day actions. The decisions we make today will change the way we live in the future. We can, however, avert the worst global scenarios by acting decisively and collectively, without delay. As last year's Stern Review emphasised the longer we put off action, the more dramatic and costly the changes we will have to make.

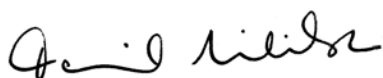
The UK has already taken a strong lead at home and abroad on climate change. The measures set out in the Climate Change Programme Review and Energy Review show our progress domestically and our intentions for the future. Internationally, we are on track to exceed our Kyoto target and are actively engaged in developing the European Emissions Trading Scheme. But there is still a way to go to raise the ambition and urgency of collective action.

The Climate Change Bill will create a strong new legal framework to underpin the UK's contribution to tackling climate change. It will put in place a clear and credible pathway to a statutory goal of a 60% reduction in carbon dioxide emissions through domestic and international action by 2050, with real progress by 2020. This will be based on a new system of "carbon budgets" set at least fifteen years ahead, and with progress reported annually to Parliament. This will provide real clarity on how emissions will be reduced, as well as the flexibility necessary to respond to factors outside our control (such as the weather and global fuel and energy prices).

The Bill will also create a new expert Committee on Climate Change to advise the Government on the best pathway to 2050 – one that achieves our environmental ambitions whilst maintaining a strong competitive economy, secure energy supplies and affordable fuel prices. Alongside this, there will be new powers to set up schemes to reduce emissions.

The Climate Change Bill will put the UK at the very front of global efforts to tackle climate change. We will be the first country in the world to establish such a legal framework. We look to others to follow suit.

Creating such a framework is an enormous challenge for Government and we would like you to join the debate and contribute your views, whatever your interest. The comments that you make will help to determine the final shape of our proposals to tackle climate change.



Rt Hon David Miliband
Secretary of State

March 2007

Summary

- i. The UK Government is committed to addressing both the causes and consequences of climate change and to that end is bringing forward proposals for a Climate Change Bill. The Bill will introduce a clear, credible, long-term framework for the UK to achieve its goals of reducing carbon dioxide emissions and ensure steps are taken towards adapting to the impacts of climate change. This consultation document discusses the context and rationale behind the Climate Change Bill and sets out the main reasons why the UK Government considers legislation in this area is required. It outlines the background to and the proposed contents of the Bill, summarising its key elements and how they are expected to fit together.
- ii. What is being proposed at present is a draft Bill; no final decisions have yet been made. This consultation therefore invites the views of anyone with an interest and forms a significant part of the process of shaping the Government's final policy proposals.

Context

- iii. The UK has been a consistent leader in the field of climate change and energy policy by setting bold targets and pursuing ambitious policies both domestically and internationally. The UK is committed to securing a strong multilateral agreement for the post-2012 period, while in Europe the UK is pushing hard for greater certainty on European plans for implementation of the EU Emissions Trading Scheme (EU ETS) Phase III. The UK has already shown progress in reducing domestic emissions and in order to move to a world that is increasingly "carbon constrained" the UK is committed to move to a low-carbon economy over time – this Bill intends to provide a legal framework for such a move.

Rationale for legislation

- iv. The Climate Change Bill is necessary to provide a clear, credible and long-term domestic framework for tackling climate change, whilst at the same time allowing the UK to demonstrate strong international leadership, which is key to helping achieve multilateral agreements. This consultation document proposes the creation of a framework to enable the UK to meet its international obligations, while maximising the social and economic benefits and minimising costs at home. A longer-term framework would provide greater clarity for UK industry to effectively plan and invest in the technology needed in order to move towards a low carbon economy.

Key elements of the Bill

The Bill provides a framework for reducing carbon dioxide emissions through the following four elements:

Setting targets in statute and carbon budgeting

- v. It is intended that the Bill will establish an economically credible emissions reduction pathway to 2050, 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 budget periods 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

- vi. The Bill proposes to create a new institutional framework within which to manage the transition to a lower carbon economy, through establishing a new independent body, the “Committee on Climate Change”, to advise Government on how to reduce emissions over time and across the economy. This expert body will advise on the optimum 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 how much effort should be made by sectors of the economy covered by cap and trade schemes and by other sectors.

Creating enabling powers

- vii. 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

- viii. The final 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 annual role in reporting publicly to Parliament on progress towards budgets and targets, with the Government required to lay before Parliament a response to this independent report.
- ix. The Bill will also set out a reporting procedure for assessing the risks of the impacts of climate change on the UK in order that we can work across Government, and with wider society to develop and implement measures to ensure we are adapting to these risks. The Bill will also allow Parliament to monitor progress of the Government’s proposals and policies for integrating adaptation to climate change into its work.

- x. Taken together the elements of this Bill would create a framework to achieve a more coherent approach to managing climate change in the UK – ambitious targets, powers to achieve them, a strengthened institutional framework and clear and regular accountability to Parliament. In tandem with the proposals in the energy review, shortly to be set out in the Energy White Paper, it will equip the UK with the conditions needed for a successful transition to a low carbon economy, and show strong leadership internationally.

Section 1: Introduction

1 Introduction

- 1.1 There is no longer any real debate over the fact that climate change is happening and that man-made emissions are the main cause.
- 1.2 The debate has now shifted to how much we need to do to stabilise the climate and the economic implications of doing this. The timing is therefore right for us to introduce legislation to strengthen our policy framework for tackling climate change.
- 1.3 The UK Government is committed to bring forward proposals for a Climate Change Bill that will introduce a clear, credible, long-term framework for the UK to achieve its long term goals of reducing carbon dioxide emissions. The Bill will also set out a reporting structure for an assessment of the risks of climate change and will enable us to monitor progress to help ensure the UK is better able to adapt to those risks.
- 1.4 This document explains the context and rationale behind the Climate Change Bill. It sets out the main reasons why the UK Government considers legislation in this area is required. It outlines the background to and the proposed contents of the Bill, summarising its key elements and how they are expected to fit together.
- 1.5 As announced in broad terms following the Queen's Speech in November 2006 there will be four key elements to the Bill – as set out below. Further detail on each element is provided in Section 5 of this document:
 - a. setting targets in statute and introducing carbon budgeting;
 - b. establishing a Committee on Climate Change;
 - c. creating enabling powers; and,
 - d. reporting requirements including on adaptation.
- 1.6 A Regulatory Impact Assessment (RIA) has been produced as part of this consultation that provides initial assessments on the impact of the proposals in the Bill.
- 1.7 We are seeking and welcome your views on all parts of this document, and in particular your responses to the specific questions posed throughout Section 5 and in the RIA.
- 1.8 Please note the closing date for responses is **12 June 2007**. We cannot guarantee that responses made after that date will be taken into account. Further information on how to respond to this consultation paper is provided in Section 6, which is followed by a complete list of the questions asked.

Devolution

- 1.9 All four countries of the UK are committed to working in partnership to combat climate change and to achieve the existing (non statutory) target of 60% reduction in carbon dioxide emissions by 2050.
- 1.10 The devolution settlement with respect to climate change policy is complex; while elements of energy policy¹ and international relations are reserved matters environmental policy is, to varying degrees, devolved to each of the Devolved Administrations.
- 1.11 This Bill has been drafted for consultation on a UK basis, in other words, drafted with all powers and duties appearing to rest with the Secretary of State. It has not yet been determined how the functions of the Bill would be performed, whether by the Secretary of State, the Devolved Administrations or jointly. This approach has been taken — with the agreement of each of the Devolved Administrations — to enable consultation and debate to proceed on this matter.
- 1.12 We recognise that significant further work remains to be done before introduction of a Bill to Parliament to clarify how these proposals would be implemented given the complex interplay of reserved and devolved issues. Examples of areas where there are devolved responsibilities which will need to be addressed include:
- the role of the Devolved Administrations in relation to setting, modification and achievement of the UK targets and the intervening carbon budgets;
 - their role in relation to agreeing to and implementing trading schemes;
 - their role in relation to the Committee on Climate Change, its reporting requirements and its funding; and,
 - the ability of the Scottish Parliament, Welsh Assembly and Northern Ireland Assembly to scrutinise matters affecting their devolved responsibilities.
- 1.13 The devolved administrations in Scotland, Wales and Northern Ireland will need to develop and agree their approach to issues raised in the Bill, for both the substance of the policy and the handling of the devolved issues. The latter will include the legislative route for devolved matters, which might mean separate devolved legislation or the consent of the devolved Parliament or Assembly to UK legislation. The Bill will be amended to take account of these decisions before introduction to the UK Parliament.
- 1.14 Publication of this Bill does not in any way affect the position of the Devolved Administrations, but aims to allow legislation to proceed as quickly as possible following consultation and pre-legislative scrutiny, whatever approach is decided to these policy and handling issues. Responses to the consultation will be shared with the Devolved Administrations and will inform further consideration of their position.

¹ Energy policy is not reserved for Northern Ireland.

2 Background: Science of Climate Change

- 2.1 There is an overwhelming body of scientific evidence highlighting the serious and urgent nature of climate change. The Intergovernmental Panel on Climate Change (IPCC) report, published in February 2007², shows conclusively that the debate over the science of climate has moved on from whether or not it is happening to what action we need to take.
- 2.2 Basic physics demonstrates that some gases in the Earth's atmosphere act like a blanket and trap heat near the surface. This 'greenhouse effect' keeps surface temperatures approximately 30°C higher than they would be if the major greenhouse gases were not present. These gases include water vapour, carbon dioxide, methane, nitrous oxide, ozone and several other trace gases. The release of additional greenhouse gases from changes in land use, burning fossil fuels and various industrial processes adds to the blanket, making it more efficient at trapping the sun's energy and leading to rising global average temperatures.
- 2.3 The IPCC report confirms that atmospheric concentrations of the major greenhouse gases, carbon dioxide, methane and nitrous oxide have all increased significantly since pre-industrial times because of human activities. For example, carbon dioxide concentrations have risen by just over one third from 280 parts per million (ppm)³ in around 1750, to 379ppm in 2005⁴. Including other major greenhouse gases, the total warming effect is equivalent to around 430ppm carbon dioxide⁵. This concentration is far higher than the natural range of 180-300ppm over at least the last 650,000 years, as determined from ice cores.
- 2.4 The impacts of emissions of greenhouse gases from human activities anywhere in the world are the same because the gases are well-mixed in the atmosphere and they effect the climate system as a whole. Similarly, emissions reductions anywhere have a positive impact, through reducing warming on a global scale.
- 2.5 Global mean temperatures have risen by 0.74°C over the past century, with 0.4°C of this warming occurring since the 1970s. In the UK, average annual central England temperatures are now higher than at any time since records began in 1659. The IPCC concludes that most of the increase in global temperatures since the mid-20th century is very likely due to the human-induced accumulation of greenhouse gases in the atmosphere. We are already

² Working Group I Contribution to the Fourth Assessment Report: *Climate Change 2007: The Physical Science Basis*, available from: <http://www.ipcc.ch>. The reports of the other working groups, and the Fourth Assessment Report (AR4) will be released in the course of 2007.

³ Parts per million (ppm) is the ratio of the number of greenhouse gas molecules to the total number of molecules of dry air.

⁴ Source: IPCC, 2007: *Climate Change 2007: The Physical Science Basis*

⁵ Also known as carbon dioxide equivalent, or CO₂e

committed to an additional global warming of 0.6°C by 2100 because of recent emissions.

- 2.6 The Stern Review recently stated that without intervention greenhouse gas levels will reach no less than 550ppm CO₂e by the middle of this century⁶. This level alone would commit the world to a warming of at least around 2°C above pre-industrial levels in the long term, with some recent studies suggesting up to a 20% probability that the warming could be greater than 5°C. A climatic change of this magnitude would be far outside the experience of human civilisation and comparable to the difference between temperatures during the last ice age and today.
- 2.7 The IPCC report estimates that without intervention greenhouse gas levels will rise to 600-1550 ppm CO₂e by 2100, depending on future emissions. This would be associated with a warming of between around 1.7 and 7.0°C above pre-industrial levels (or 1.1 to 6.4°C above 1990 levels) by the end of the century, and a further few degrees warming in the following century.
- 2.8 The report of the major international conference in 2005, *Avoiding Dangerous Climate Change*, noted a number of critical temperature levels and rates of change relative to pre-industrial times. These vary for the globe, specific regions and sensitive ecosystems. For example, a regional increase above present levels of 2.7°C may be a threshold that triggers melting of the Greenland ice-cap, while an increase in global temperatures of about 1°C is likely to lead to extensive coral bleaching.
- 2.9 Recent climate modelling research confirms that delaying action now would require greater action later for the same temperature target and that a delay of only 5 years could be significant. If action to reduce emissions is delayed by 20 years, rates of emission reductions may need to more than double to meet the same temperature target than if reductions were begun now.
- 2.10 The latest IPCC report emphasises that warming will be associated with many other changes in climate, such as rising sea levels, changes in rainfall patterns and increased frequency of heat waves and intense hurricanes. The impacts of these changes on human society and on biodiversity are likely to be very significant.
- 2.11 The wealth of evidence now available makes clear that some level of further climate change is unavoidable. We can avert the worst global consequences however, by acting decisively and collectively, without delay. The longer we put off action, the more dramatic and costly the changes we will have to make.

⁶ The Stern Review on the Economics of Climate Change, available from: http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm

3 Context: Domestic and International Action

- 3.1 Climate change is a global problem which demands a global solution, hence there exists a range of international frameworks to tackle the problem. 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 impacts of climate change. The UK has also benefited from continuous economic growth while emissions have fallen. But challenges remain: recent years have not seen the fall in carbon dioxide emissions needed to move the UK to a truly low carbon economy.

International Action

- 3.2 The UK played a major role in negotiating the Kyoto Protocol⁷, undertaking to make substantial cuts - we are one of a few countries on track to more than meet our Kyoto commitment. The UK is committed to securing a strong multilateral agreement for the post-2012 period that achieves the overarching UNFCCC objective of stabilising atmospheric concentrations of greenhouse gases and avoiding dangerous climate change.
- 3.3 The UK took a substantial lead in promoting climate change on the international agenda as part of our Presidencies of the G8 and EU in 2005. This led to an agreement at the G8 conference in Gleneagles for a new Dialogue on Climate Change with the leaders of China, India, Brazil, Mexico and South Africa which will report to the Japanese G8 Presidency in 2008.
- 3.4 Securing multilateral agreement is not in the UK's gift alone, but we and other developed countries can make it more likely by effectively influencing the actions and positions of others. We can also seek agreement for much more ambitious collaboration with emerging economies.
- 3.5 In the European context, the EU Emissions Trading Scheme (EU ETS) is a key plank of EU climate and energy policy, which tackles emissions from large point sources of emissions such as the electricity generation sector. A Commission-led review of EU ETS is currently ongoing which the UK is actively engaged in. This is intended to strengthen the scheme by analysing its functioning and design with respect to a number of specific issues, evaluating the impact of expanding the EU ETS to other sectors and gases, and understanding the impact of the EU ETS on competitiveness.
- 3.6 The UK will push hard for greater certainty on European plans for implementation of the EU ETS beyond 2012, as it is considered the most

⁷ See Box 1: International Framework for further details.

important mechanism for stimulating UK and international investment in low-carbon technology.

- 3.7 EU Ministers have already said that developed countries should consider greenhouse gas emissions reductions in the order of 15-30% by 2020⁸. The UK Government is now pushing for the EU to go further. At the launch of the Stern Review the Chancellor of the Exchequer announced the UK's proposal for a new European-wide emissions reduction target of 30% by 2020 and then at least 60% by 2050.
- 3.8 At the Spring European Council on 8/9 March 2007, EU Heads of Government agreed an ambitious, independent binding target to reduce Europe's greenhouse gas emissions by at least 20% by 2020 (compared to 1990 levels) and to increase this commitment to a 30% reduction as part of an international agreement. They also decided to: increase the use of renewable energy sources so that they make up 20% of EU energy consumption by 2020, with differentiated overall targets for Member States; ensure that a minimum of 10% of EU transport petrol and diesel consumption comes from bio-fuels by 2020; promote energy efficiency by reducing overall EU energy consumption by 20% by 2020; and stimulate the use of new technology on clean coal power stations, with the aim of bringing environmentally safe carbon capture and sequestration (CCS) to deployment with new fossil-fuel power plants, if possible by 2020.

Box 1: International Framework

The overarching goal of the United Nations Framework Convention on Climate Change (UNFCCC) is to stabilise global greenhouse gas (GHG) concentrations at a level that avoid dangerous climate change. The Kyoto Protocol strengthens the framework by committing developed countries to individual, legally binding targets that limit or reduce their emissions.

Based on the principle of "common but differentiated responsibilities" Kyoto sets out that the richest countries - historically responsible for the majority of global GHG emissions - take on targets to prevent, reduce and control atmospheric concentrations of these harmful gases.

The framework also allows abatement projects in developing countries to enable technology transfer and sustainable low carbon growth on the basis that where the emission abatement occurs is irrelevant environmentally.

Please see: <http://unfccc.int> for further details.

- 3.9 Adaptation is also being addressed at the international level⁹. While it is expected that adaptation will be more prominent in any agreement on how to tackle climate change post-2012, it is currently unclear what form this should take. The question of whether adaptation, which is best delivered at a local

⁸ Environment Council conclusions March 2006. Further information available from: <http://europa.eu/rapid/pressReleasesAction.do?reference=PRES/06/58&language=en>.

⁹ Article 4.4 of the UNFCCC commits developed countries to "assist the developing countries that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those effects." Further information is available from: <http://unfccc.int/adaptation/items/2973.php>

level, can be administered by a global, top-down instrument has yet to be tackled.

- 3.10 There is also work taking place at the European level. In 2006, the European Commission held a series of consultative meetings with different sectors to inform their work on impacts and adaptation. A green paper will be published in summer 2007 proposing how the EU should take forward this agenda and identifying the role they can play in promoting awareness and building capacity.

Domestic Commitments

- 3.11 Domestically, the UK has already put in place a wide range of measures to reduce its CO₂ and other greenhouse gas (GHG) emissions, and is considering the introduction of others, as set out in the Climate Change Programme Review¹⁰ and Energy Review¹¹.
- 3.12 The UK is already projected to reduce GHG emissions by nearly double its commitment under Kyoto¹², one of the best records of any Kyoto signatory. Conversely, the Government's domestic 2010 CO₂ target – to reduce CO₂ emissions by 20% on 1990 levels – presents a difficult challenge as **Figure 1** below illustrates. Although there has been considerable progress, with CO₂ emissions projected to be 16.2% lower than 1990 levels in 2010¹³, higher than anticipated levels of economic growth and the recent rise in global energy prices, has altered the relative prices of coal and gas. This has led to a switch from gas back to coal which has increased the UK's CO₂ emissions in recent years.

¹⁰ Available from: <http://www.defra.gov.uk/environment/climatechange/uk/ukccp/index.htm>

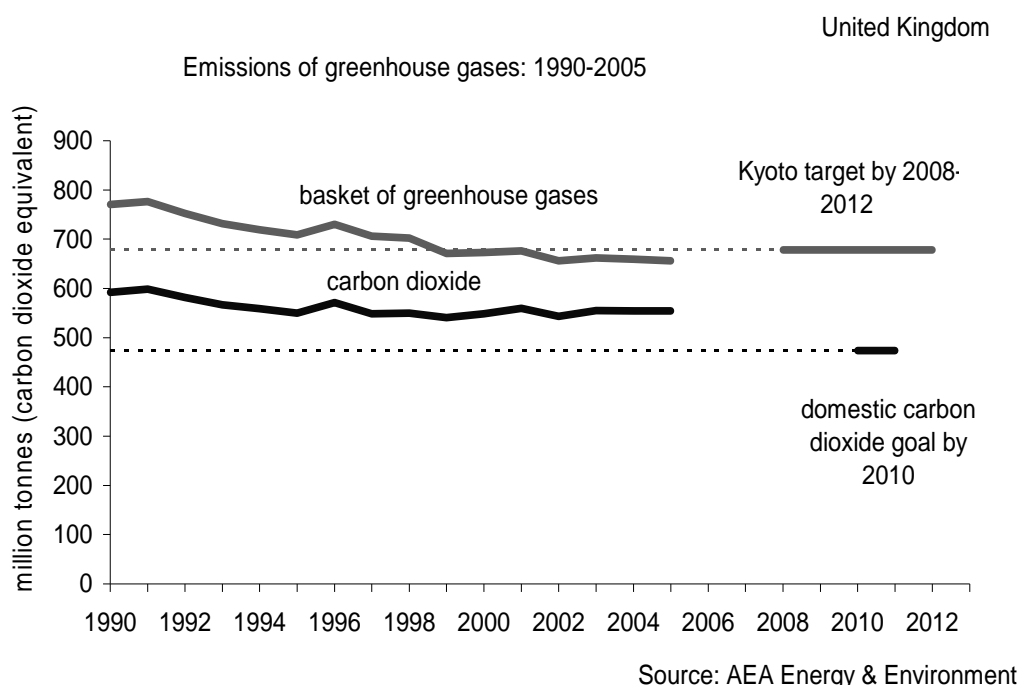
¹¹ Available from: <http://www.dti.gov.uk/energy/review/page31995.html>

¹² The UK's target under the Kyoto Protocol is to reduce greenhouse gas emissions by 12.5% below 1990 levels by 2008-12. The Protocol covers a "basket" of six greenhouse gases: carbon dioxide, nitrous oxide (N₂O), methane (CH₄), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆). Carbon dioxide is by far the largest component of the basket. Other greenhouse gases like chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) are not covered in this agreement since they are controlled by the Montreal Protocol. The Kyoto Protocol does not call for the phase-out of any greenhouse gases, only the overall reduction of the emissions. Countries are free to choose to reduce some gases more than others depending on their particular needs and circumstances.

¹³ UK energy and CO₂ emissions projections, July 2006 (UEP26), available from: <http://www.dti.gov.uk/files/file31861.pdf>

Figure 1

This shows total UK emissions for the 'basket' of greenhouse gases¹³ and specifically CO₂ since 1990, calculated in the format required by IPCC. Carbon dioxide emissions include those achieved overseas through purchasing emissions reduction credits.



3.13 The Government would therefore like to enshrine the commitments in the Energy White Paper 2003¹⁴ to reduce CO₂ emissions by 60% on 1990 levels by 2050; and to achieve “real progress” by 2020 (which would equate to reductions of 26-32%) towards the long-term goal within a new legal carbon management framework (outlined in Section 5).

3.14 In order to be prepared for a future in which the world is increasingly carbon constrained, and to make this outcome more likely, the UK Government is committed to moving towards a low carbon UK economy over time – consistent with the energy objectives set out in the Energy White Paper.

3.15 The UK is currently responsible for 2% of global GHG emissions and therefore is clearly unable to address the global problem of climate change alone. However, this point should not be used as an excuse for not taking further action. The major developed economies are responsible, collectively, for approximately three quarters of the increase in GHG concentrations above pre-industrial levels. There is therefore a moral obligation on those responsible to show leadership in addressing the challenge of climate change. Moreover, the UK’s responsibility for a small proportion of current emissions demonstrates the importance of achieving concerted international agreement to tackle climate change. If we can show that emissions can be significantly reduced in the UK in a way which balances environmental, economic and social concerns, this may

¹⁴ “Our Energy Future - Creating a Low Carbon Economy”, available from: <http://www.dti.gov.uk/files/file10719.pdf>

encourage other countries to take similar action and support a strong multilateral framework.

3.16 The Government has also made good progress on ensuring the UK becomes better adapted to the impacts of unavoidable climate change. We are currently developing a cross-Government framework regarding adaptation¹⁵. However, we recognise that we still need to do more to ensure that processes are consistent and that adaptation in one sector does not compromise the ability of another sector to adapt or mitigate. Much of this work is supported by the Defra-funded UK Climate Impacts Programme (UKCIP)¹⁶.

3.17 It is clear that to tackle climate change, we have to do more. This is why we are seeking to enshrine our emissions reduction framework and adaptation reporting framework in legislation. This is discussed in more detail in the following section.

¹⁵ This will be published in late 2007.

¹⁶ Please see: <http://www.ukcip.org.uk/> for further information.

Section 4: Rationale for Legislation

4 Rationale for Legislation

4.1 In headline terms the rationale for introducing climate change legislation is as follows:

Rationale for Legislation

- To demonstrate leadership by example to help foster collective international action.
- To create a clear and coherent framework to enable the UK to meet domestic and international commitments.
- To provide greater clarity and certainty for UK industry, households and individuals to effectively plan for and invest in a low carbon economy.
- To maximise social and economic benefits and minimise costs to the UK as we pursue these goals.
- To help the UK towards being better adapted to the impacts of unavoidable climate change.

4.2 Attitudes on climate change are shifting across the globe, driven by concerns over energy security (which is essential for maintaining economic security and prosperity), business calling for regulatory certainty, and an increasingly vigorous public debate. Climate change is a global problem and international co-operation is therefore essential to ensure the risks it presents to the environment are effectively managed while minimising the associated economic costs. Any action to tackle climate change needs to consider adaptation as well as mitigation.

4.3 Whilst it is likely that every nation will need to contribute to a co-ordinated response, leadership must come from the major developed economies – such as the UK – which have been responsible for the majority of the historic rise in greenhouse gas concentrations. Generally such countries have the necessary conditions to be leaders of change: high *per capita* emissions; relative prosperity and economic stability; established regulatory frameworks and relevant policy experience. In the UK we also have high public awareness of the issue of climate change.

4.4 The time is right for Governments wishing to show leadership to act to introduce effective frameworks for reducing emissions and adapting to the effects of unavoidable climate change, showing that a balance can be struck between

environmental, economic and social objectives, and there is more evidence than ever before that such leadership will encourage others to do the same. The UK's 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.

- 4.5 In anticipation of international agreement setting out a framework of binding, long-term greenhouse gas emissions reduction targets and adaptation policies post-2012, a clear and robust domestic framework which takes a rounded view of the approach to mitigating climate change is needed. The Bill will create such a framework, to enable the UK to meet domestic targets as well as ensuring the UK can meet its existing and future international commitments.
- 4.6 A strong, well-designed framework, should maximise the social and economic benefits and minimise the costs to the UK as we pursue our emissions reduction goals. In order to achieve this we intend to develop the Bill, and subsequent policy, in line with the Government's Better Regulation agenda. A high quality regulatory framework that enables improved decision making, minimises bureaucracy, and simplifies the legislative framework, will reduce business costs.¹⁷ The Government also welcomes the contribution from the Better Regulation Commission on "Regulating to Mitigate Climate Change: a Response to the Stern Review"¹⁸, and will be working to develop a response to this, for publication in May this year.
- 4.7 The Bill will need to ensure that the optimum low-carbon investment decisions can be taken now, while providing business with a clear view of the costs and benefits of early action and avoiding undue negative impacts on society, the UK economy and business competitiveness. It needs to take due account of the extent to which the UK is acting unilaterally. The framework will therefore need to be sufficiently flexible to absorb any short-term shocks and be able to take account of changing circumstances at home and abroad.
- 4.8 In addition to minimising mitigation costs, it is likely that delivering this framework will lead to benefits across parts of the UK economy, for example by driving innovation among domestic firms for low carbon solutions allowing "first mover" advantages to be realised. Reducing emissions is also likely to deliver a range of co-benefits including improved air quality, reduced reliance on imported fuel, and reduced fuel poverty.
- 4.9 The financial returns to investment in low carbon technologies are determined in part by Government intervention in markets using policies such as taxation, trading schemes or regulation. There is uncertainty surrounding the degree of climate change mitigation that will be undertaken in future due, in part, to: the absence, as yet, of an international agreement extending beyond 2012 (as a successor to Kyoto) as well as defined commitments as part of Phase III of the EU-ETS, and the perceived risk that existing non-statutory targets may be subject to change (with implications for the way in which policy is managed).

¹⁷ Detailed consideration is given to the costs and benefits for the proposals in the Regulatory Impact Assessment.

¹⁸ Please see <http://www.brc.gov.uk/>

- 4.10 This uncertainty is likely to reduce the willingness of households and particularly firms to invest in low carbon technologies and innovation. This uncertainty could increase the risk of 'lock in' to carbon intensive patterns of production and consumption, particularly in markets which are currently investing heavily and are dominated by long lived capital, such as electricity generation and buildings.
- 4.11 By proposing to enshrine domestic commitments in statute, the Government would increase certainty for UK households and particularly firms investing in the UK that there will be carbon constraints in the UK from now on and that these will progressively tighten.
- 4.12 This climate change legislation will therefore help address the issue in both the domestic and international contexts. It will provide UK business with greater long-term certainty to help plan cost-effectively for a low carbon future, by placing an economy-wide limit on carbon dioxide emissions covering all sectors, doing so in a way which balances environmental, economic and social factors, and, demonstrating to our international partners the need for ambitious and urgent action to deal effectively with the challenge at a global level.
- 4.13 As discussed in the next section, the Bill will propose statutory duties on Government relating to both mitigation of, and adaptation to, climate change.

Section 5: Key elements of the Bill

5 Key elements of the Bill

Introduction

5.1 As announced by the Secretary of State in November 2006, it is intended that the Climate Change Bill will comprise four overarching “pillars”:

- i. a system to establish a credible emissions reduction pathway to 2050, with the UK’s existing 60% target for 2050 placed in statute;
- ii. a strong institutional framework within which to manage the transition to a lower carbon economy, through establishing a new independent body, the Committee on Climate Change, to work with the Government on how to reduce emissions over time and across the economy;
- iii. powers to provide additional means with which to achieve emissions reductions; and,
- iv. a clear accountability framework, in particular in relation to Government’s reporting to Parliament on mitigation and adaptation.

5.2 Together these pillars form a strong coherent package: credible targets with a credible system to achieve them – respected institutions, open monitoring, transparent reporting and powers available to act where needed.

Targets and Budgeting

Setting statutory targets

5.3 The Government proposes that this Bill should put into statute the UK’s targets to reduce carbon dioxide emissions through domestic and international action by 60% by 2050 and 26-32% by 2020, against a 1990 baseline¹⁹.

5.4 Last year’s Stern Review of the economics of climate change stated that, in order to achieve a stabilisation of atmospheric greenhouse gases at a level which would avoid the more damaging effects of climate change, the world needs to reduce overall emissions by about 50% (stabilising within the range of 450-550ppm CO₂e)²⁰, compared to current levels. This means industrialised

¹⁹ Please note these are unilateral targets which we would only change in the event of significant developments in scientific knowledge about climate change or in international law or policy which made it appropriate to do so. NB: these do not include emissions from international aviation and shipping which are not currently part of the Kyoto targets or EU ETS.

²⁰ For the purposes of this Bill greenhouse gas emissions, reductions of such emissions and removals of greenhouse gases from the atmosphere, shall be measured or calculated in tonnes of carbon dioxide equivalent (CO₂e). 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 (calculated consistently with international carbon reporting practice).

countries such as the UK reducing their contribution to greenhouse gas emissions by at least 60%.

- 5.5 It is imperative that industrialised countries make a serious commitment to achieving these levels of emissions reductions, which is why we would like to put in statute a target to reduce the UK's contribution to global CO₂ emissions by 60% compared to our emissions levels in 1990. But there is a risk that a commitment for 2050 alone is too long-term; it might not encourage the action needed over the next few years that will be key to achieving our longer term goals. This is why we also want to put into statute a duty to ensure the trajectory to 2050 is consistent with a reduction in CO₂ emissions by 26-32% by 2020²¹, consistent with the trajectory to 2050. We believe this is achievable at acceptable cost with the right policies and actions.
- 5.6 Climate change is a global issue and we intend that by setting our unilateral 2050 and 2020 targets in legislation we will demonstrate our commitment to achieving a global solution to the problem. We anticipate that other industrialised countries or states may want to follow suit. California has already introduced state-wide emissions limits; the EU has called for a 30% reduction in GHG emissions by 2020 in the context of a new international framework post-2012²². Measured against both the EU's independent target of a reduction of at least 20% and the more challenging 30% target, it will be clearly evident from this Bill that the UK is committed to taking on its fair share.
- 5.7 With statutory targets in place we will have a more compelling case to drive forward an effective and binding multilateral agreement for the next phase of the Kyoto Protocol, starting in 2013. The UK may be prepared to go further than its unilateral targets in the context of an international agreement.
- 5.8 The emissions reduction targets do not currently apply to carbon dioxide emissions from international aviation and shipping. These emissions are not part of the Government's existing targets, nor are they part of the current Kyoto Protocol target or EU ETS. And there is currently no international agreement on how to include these emissions in national inventories. However, there is scope in the Bill to include these sectors in the legislative framework should international policy change.
- 5.9 We are focusing our emissions reduction goals on carbon dioxide as we have made less progress in reducing this gas than other greenhouse gases. CO₂ is by far the most significant of the greenhouse gases, accounting for some 77% of global greenhouse gas emissions in 2000. Anthropogenic activity has led to a significant increase in its atmospheric concentration from pre-industrial times (since 1750), and the scientific debate on climate change has reached a consensus, largely through agreement on the extent of the correlation between CO₂ emissions and global temperature changes.

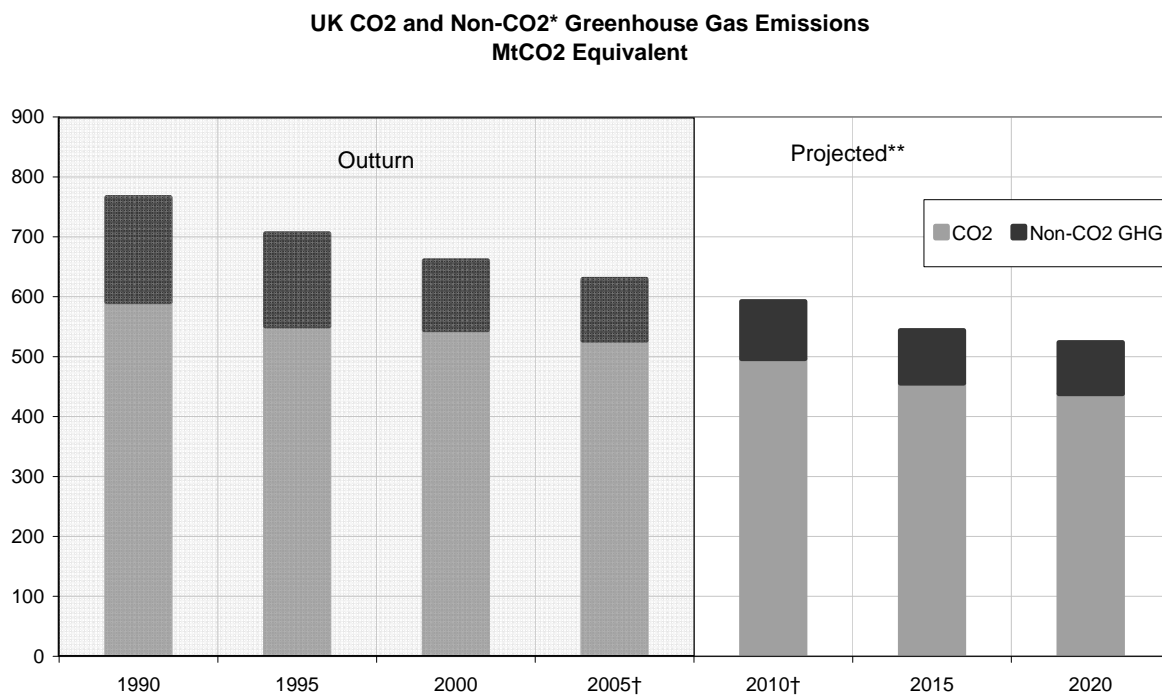
²¹ This will mean a reduction in all GHGs in the order of 32-37% by 2020.

²² With a reduction of at least 20% proposed in the absence of an international framework.

5.10 Climate change mitigation will not be possible without specific actions focused on reducing CO₂ emissions. This means moving to lower carbon technologies across the economy. It is intended that this Bill relates to CO₂ rather than other GHGs in order that this focus is maximised.

5.11 Carbon dioxide emissions currently make up a large part of UK GHG emissions: for example, in 2005 CO₂ made up slightly less than 85% of all UK GHG emissions – **figure 2** shows that current and projected CO₂ emissions will continue to form a large majority of UK GHG emissions.

Figure 2



Source: 2006 Climate Change Programme Review, Defra News Release - "Greenhouse gas statistics" - January 2007, DTI Updated Emission Projections, July 2006 (UEP26)²³

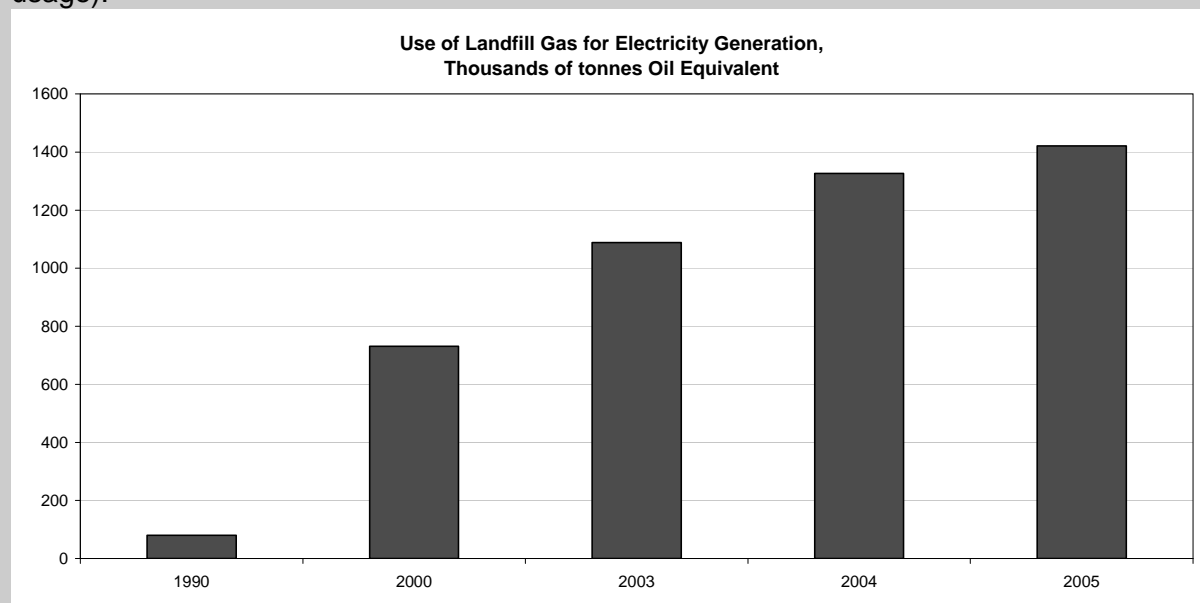
5.12 Through a range of measures (some listed in Box 2 below) the UK has been successful in reducing emissions from non-CO₂ greenhouse gases; in 2005 emissions had fallen 44% since 1990 and are projected to fall 50% by 2050 (below the 1990 baseline). Further non-CO₂ emissions reductions can be very difficult and/or costly, for example as concluded in a recent study on non-CO₂ emissions reductions from certain activities²⁴.

²³ Notes: *Non-CO₂ refers to the "basket" of gases as set out in the Kyoto Protocol – see footnote 8; **CO₂ emissions projections based on Updated Energy Projections (UEP) 26 (July 2006) plus central expectations of emission savings from July 2006 Energy Review, including 29.3MtCO₂ (8MtC) savings from EU ETS, plus additional savings from announcements made since. As published in reporting of Greenhouse Gas House statistics, January 2007. 2005 includes net purchases of allowances made under the EU ETS Phase I.

²⁴ AEAT report for Defra: "Mechanisms from reducing Methane and HFC emissions from four selected sectors", October 2005. Available from: <http://www.defra.gov.uk/environment/climatechange/trading/uk/pdf/aeat-reducing-emissions-report.pdf>

Box 2: Tackling Non-CO₂ Emissions

Methane emissions from landfill, which constituted slightly below 60% of all methane emissions in 1990, have fallen 60% by 2005, largely due to use of landfill gas in electricity generation, which by 2005 had risen 18-fold from 1990 levels (based on oil equivalent usage).



Source: UK Energy in Brief: 2006, DTI June 2006, <http://www.dti.gov.uk/energy/statistics/publications/in-brief/page17222.html>

Emissions from **Agriculture, Forestry and other Land Management sectors** were the source of around 8% of GHG emissions in 2004²⁵ (taking account of differing Global Warming Potential of the different gases). However, these sectors are the source of two-thirds of nitrous oxide emissions and over a third of the methane emissions in the UK. As expressed in the Climate Change Programme Review 2006, the Government is committed to “*examining the scope and feasibility of a market based mechanism to facilitate trading of greenhouse gas (GHG) reductions from agriculture, forestry and other land management sectors*”.

European regulation has been a key element in introducing a suite of policies designed to reduce non-CO₂ GHG emissions, for example the fluorinated gas regulations introduced in May 2006²⁶. From July 2006, these regulations prohibit the placing of products and equipment containing, or whose functioning relies upon, fluorinated greenhouse gases on the market. In addition, the regulations mandate prevention and repair of leakages; arrangements for gas recovery when capital equipment is recycled, reclaimed or destroyed; and the introduction of a system of labelling to identify type and quantity of F-gases in specified products. From July 2007, these regulations prohibit the use of sulphur hexafluoride (or preparations thereof) in vehicle tyre production and magnesium die-casting (from July 2008).

5.13 Taking account of these arguments in favour of an exclusive focus on CO₂ at this stage, a broader target encompassing all of the principal greenhouse gases

²⁵ Source: UK Climate Change Programme 2006, available from:

<http://www.defra.gov.uk/environment/climatechange/uk/ukcccp/index.htm>

²⁶ Regulation (EC) No 842/2006 of the European Parliament and of the Council of 17 May 2006 on certain fluorinated greenhouse gases. Available from:

http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/l_161/l_16120060614en00010011.pdf

Initial guidance on the Regulation is available from:

<http://www.defra.gov.uk/environment/climatechange/uk/fgas/pdf/fluorgasreg-guidance.pdf>

could also have benefits. The Kyoto protocol, as a global agreement, reflects the fact that it is the combined effect of greenhouse gases which causes global warming, and there may be merit in the UK taking on a wider greenhouse gas target. The Government has also called for the EU to consider whether to expand the EU ETS to cover gases other than CO₂ in the post-2012 period. Such a change could require the Government's carbon budgets to expand similarly. However the decision on whether to enshrine in statute a CO₂-only target, or whether to consider the wider basket of greenhouse gases, is clearly a complex one – it is certainly something that the legislation should provide for as a specific area for ongoing review.

Question 1: Is the Government right to set unilaterally a long-term legal target for reducing CO₂ emissions through domestic and international action by 60% by 2050 and a further interim legal target for 2020 of 26-32%?

Question 2: Is the Government right to keep under review the question of moving to a broader system of greenhouse gas targets and budgets, and to maintain the focus at this stage on CO₂?

Carbon budgeting

- 5.14 Our overall contribution to global greenhouse gas concentrations is determined by our emissions into the atmosphere over time. Meeting specific targets in specific years is therefore less relevant than the total level of emissions over time. For this reason, in addition to our commitments for 2050 and 2020, we are proposing to set in statute a system focussing on total emissions over time as we move towards these longer term goals. This will make the proposed pathway towards achieving our targets far clearer and help to ensure that action to meet our longer term goals happens early and (drawing on expert advice) in an economically efficient way.
- 5.15 Our proposed method of expressing this trajectory is through a system of “carbon budgeting”. A carbon budget is, quite simply, a limit on the total quantity of carbon dioxide emissions over a specified period of time (as explained further in Box 3). We propose that each carbon budget period should be five years long, starting from the beginning of 2008. This ensures that the first budget period, 2008-12, runs concurrently with the first Kyoto protocol commitment period and the second phase of the EU ETS. We believe that a five-year carbon budget 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 and make a series of annual targets impractical²⁷. Indeed, 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. The concept of carbon budgets is not new; the architects of the Kyoto protocol have already recognised the merits of such

²⁷ Paragraphs 5.9-5.13 discuss in more detail why CO₂ targets rather than GHG targets are being proposed.

budgets, and this is why the commitment period of 2008-12 is actually a budget with a limit on total greenhouse gas emissions over this period.

- 5.16 Of course, five years provides insufficient certainty for many businesses making longer term investment decisions. For this reason we are proposing to set a target for 2050 into statute, and provide additional short and medium term clarity by proposing that the trajectory to our 2020 target should be represented by setting in place three five-year carbon budgets, for the periods 2008-12, 2013-17, and 2018-22. This would provide a full fifteen year horizon of expected CO₂ emissions reductions, and a strong, clear signal about the subsequent direction. Future carbon budgets would then be set to ensure that there were always three budget periods' worth of carbon budgets in statute, giving medium-term clarity whilst recognising that it is not realistic to guess conditions more than fifteen years in advance.

Box 3: What is “Carbon Budgeting”?

Akin to a financial budget, a “Carbon Budget” refers to the aggregated quantity of CO₂ emissions which are permitted during a specified time period, in this case five years long. For example the first budget which would cover the years 2008-12 would be expressed as “x million tonnes of CO₂”.

The diagram below provides an indicative illustration of how the first three carbon budgets may work. **Figure 3a** shows a trajectory whereby the level of emissions permitted by the carbon budget is reduced over time. **Figure 3b** presents the detail of how emissions within a five-year budget period may fluctuate, providing the aggregate for the five years does not exceed the limit set out in the budget. Thus a system of five-year budgets provides for increased year-on-year flexibility whilst still ensuring an emissions reduction trajectory results.

Figure 3a: Indicative levels of first three budgets

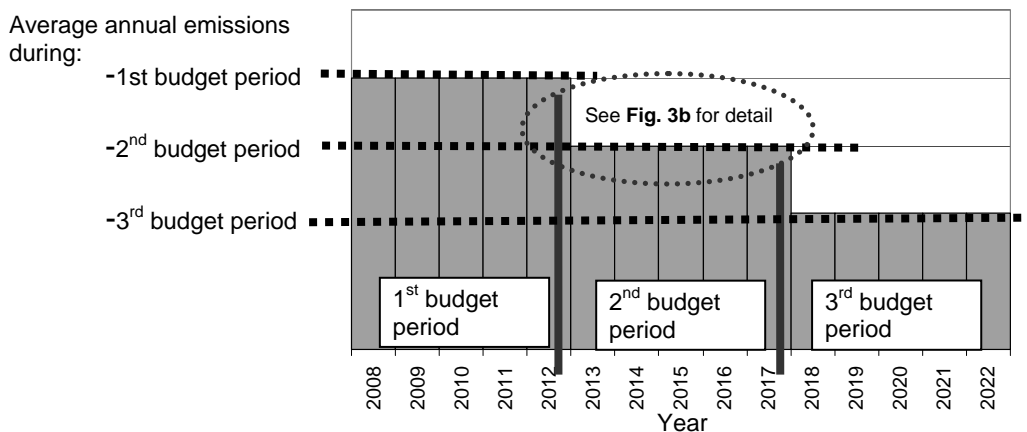
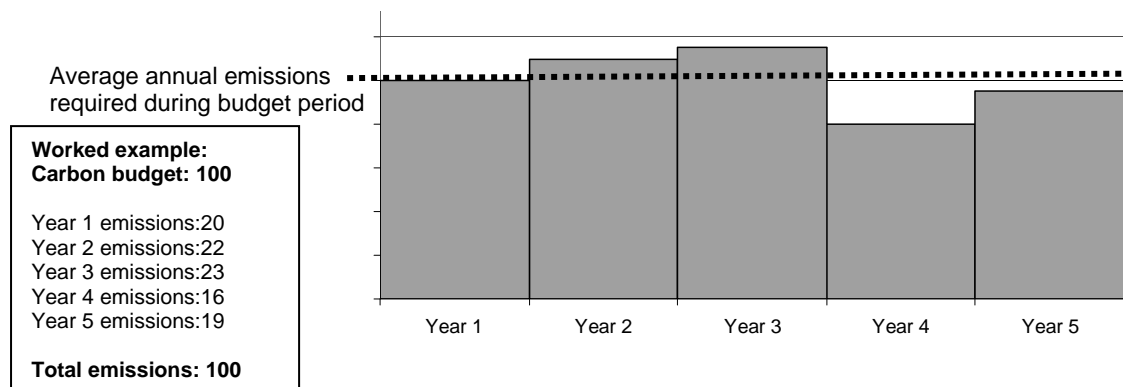


Figure 3b: detail of the effect of aggregate emissions within budget period



5.17 It is proposed that carbon budgets should be set with regard to a number of factors. They should provide a trajectory to meeting our 2050 target and 2020 interim target²⁸, whilst being consistent with international law. They should also be set by taking into account a number of factors, including:

- scientific knowledge about climate change;
- technology relevant to climate change;
- economic circumstances, and in particular the likely impact of the decision on the economy and the competitiveness of particular sectors of the economy;
- fiscal circumstances, and in particular the likely impact of the decision on taxation, public spending and public borrowing;
- social circumstances, and in particular the likely impact of the decision on fuel poverty;
- energy policy, and in particular the likely impact of the decision on energy supplies and the carbon and energy intensity of the UK; and,
- international circumstances.

5.18 The aim in considering all such relevant factors when setting carbon budgets is to achieve the optimal pathway to the 2020 and 2050 targets; a pathway which is consistent with the environmental outcome we want whilst maximising benefits and minimising costs.

5.19 At the same time as any new budgets are set, we propose that the Government has a legal duty to set out in a published report its proposals and policies for meeting the budgets for the three periods ahead. By providing a clear indication of its intentions the Government should reinforce business and public confidence that plans are in place to ensure budgets will be achieved.

Question 3: Should the UK move to a system of carbon management based upon statutory five-year carbon budgets set in secondary legislation?

²⁸ Strictly speaking, the legislation intends to incorporate the 2020 target into statute by requiring that the average annual emissions during the carbon budget containing the year 2020 (i.e. the period 2018-22) should be at least 26%, and not more than 32%, lower than the 1990 baseline level of emissions.

Question 4: Do you agree there should be at least three budget periods in statute at any one time?

Reviewing targets and budgets

- 5.20 Internationally, the commitments enshrined in the Kyoto protocol are only binding until the end of 2012. Negotiations to reach a consensus for the post-2012 period are currently underway and it is essential that agreement is reached in 2009.
- 5.21 Ahead of such an international agreement, it would be prudent for the UK to allow sufficient flexibility in its domestic framework so that it will not be inconsistent with the eventual multilateral context. This means that the statutory targets and carbon budgets that the UK sets itself as part of this legislation should be open to review, should there be significant developments in relevant circumstances.
- 5.22 The targets for 2050 and for the 2018-2022 budget are intended to provide long and medium term clarity over the direction of Government policy. As the key fixed points of the legislation, it is appropriate that they can only be adjusted in limited circumstances and with the approval of Parliament. For reviewing the 2050 and 2020 targets these factors would be:
- scientific knowledge about climate change – for example if significant new evidence emerges on the impacts of global warming which might require higher or lower rates of emissions reductions internationally, then this may need to be reflected in our domestic targets; and,
 - international law and policy – for example if a new multilateral agreement requires the UK to act differently²⁹ then the national target should be amended to reflect this.
- 5.23 In addition, it is imperative that a sustainable emissions reduction pathway is associated with continued strong economic growth and opportunities for all. The Government is committed to strong action to tackle climate change, but recognises there are some additional risks and costs potentially associated with acting unilaterally, and is determined to ensure that the UK does not suffer significant shocks as a result of its unilateral commitments, particularly shocks imposing short term costs which deliver comparatively little by way of long term environmental benefit. It therefore considers that five year carbon budgets specifically should also be subject to review and possible amendment to ensure that environmental goals are always being achieved in the most proportionate way, taking account of significant changes affecting the basis upon which the budgets were set (see paragraph above for details on the factors making up this basis).

²⁹ For example: if the UK were compelled to adopt more stringent emissions reduction targets; or if emissions from international aviation and/or shipping are included in emissions reductions targets in the future.

5.24 It is intended that budgets would only be reviewed where there were significant changes in circumstances³⁰, in order to maintain the certainty they provide in terms of the emissions reduction trajectory. We also propose that budgets should only be amended following open and transparent advice from the independent Committee on Climate Change and with the agreement of Parliament, via the affirmative resolution procedure.

5.25 This differentiated level of flexibility is intended to ensure the integrity of the framework, striking a balance between certainty and flexibility. Too rigid, and the unilateral framework risks being too costly and possibly have to be significantly amended in future; too flexible, and there will be insufficient clarity in the Government's intentions. The Government believes these arrangements strike the right balance.

Question 5: Do you agree there should be a power to review targets through secondary legislation, to ensure there is sufficient flexibility in the system?

Question 6: Are there any factors in addition to, or instead of, those already set out that should enable a review of targets and budgets?

Counting overseas credits towards the budgets and targets

5.26 A strong message from last year's Stern Review is that co-ordinated multilateral action is important and the cost of emissions reductions can be substantially reduced by allowing trading of emissions reductions as the means to utilise least cost abatement opportunities without environmental costs. This is the principle behind the various flexible mechanisms found in the Kyoto Protocol, as described in Box 4.

³⁰ For example inclusion of CO₂ emissions from aviation within the EU ETS; or a significant long term shift in fuel prices which changed the basis of the emissions forecasts on which the budget(s) had initially been set.

Box 4: The Kyoto Protocol and flexible mechanisms

The Kyoto Protocol³¹ provides countries that have adopted targets with a number of ways to meet them, through international emissions trading and 'flexible' mechanisms (explained below). Through these mechanisms the Protocol creates a system whereby emissions reductions may occur at the least cost location, the net effect being a reduction in global greenhouse gas emissions.

The Kyoto flexible mechanisms, the Clean Development Mechanism (CDM) and Joint Implementation (JI), allow for countries with a Kyoto target to participate in projects that abate emissions in another country. The credits generated (where each is worth one tonne of CO₂e abated) can then be used to meet the participating country's Kyoto target.

The CDM provides for countries with a Kyoto target ("Annex I" countries) to carry out projects in developing countries which do not have a reduction commitment ("non-Annex I" countries). These projects reduce emissions and may have additional sustainable development benefits. The 2006 DfID White Paper on International Development³² set out the Government's objectives regarding deployment of low-carbon technology in developing countries and CDM projects play an important role in this regard.

JI allows a country with a reduction target under Kyoto to purchase credits generated by a project to reduce emissions in another country covered by a Kyoto target.

Further information on CDM and JI is available from the Defra website:

- <http://www.defra.gov.uk/environment/climatechange/internat/kyotomech/cdm.htm>
- <http://www.defra.gov.uk/environment/climatechange/internat/kyotomech/ji.htm>

5.27 The EU, with a strong lead from the UK, has built on the Kyoto Protocol to take the world's most significant step in that direction by establishing the EU Emissions Trading Scheme. The UK is committed to building on the EU ETS as its main way of pricing carbon in the economy, to ensure that emissions are effectively limited. The scheme already covers approximately half of the UK and EU's CO₂ emissions, including emissions from electricity production. Its introduction in 2005 has led to the creation of a growing carbon market, valuing carbon by placing a limit on the overall quantity of carbon dioxide which can be emitted. In 2006 the carbon market was estimated to be worth €22.5bn globally, and €18.1bn for the EU ETS. The scheme is described in further detail in Box 5.

³¹ Please see http://unfccc.int/kyoto_protocol/items/2830.php for further details.

³² "Eliminating World Poverty: making governance work for the poor". Available from: <http://www.dfid.gov.uk/wp2006/default.asp>

Box 5: The EU Emissions Trading Scheme (EU ETS)

The EU ETS is one of the key policies introduced by the European Commission to help meet the EU's 8% greenhouse gas emissions reduction target under the Kyoto Protocol. The Scheme covers energy activities (e.g. boilers, electricity generation, CHP); production and processing of ferrous metals; mineral industries; pulp and paper industries.

The EU ETS uses a market-based mechanism to incentivise the reduction of greenhouse gas emissions in a cost-effective and economically efficient manner. The Scheme operates through the allocation and trade of greenhouse gas emissions allowances throughout the EU, where one allowance represents one tonne of CO₂ equivalent. An overall limit or "cap" is set by each Member State on the total number of allowances to issue to installations in the Scheme, based on the member state's Kyoto and/or national emissions reduction target.

At the end of each year, the scheme's participants (i.e. individual companies) are required to ensure they have sufficient allowances to account for their installation's actual emissions. They have the flexibility to buy additional allowances above their allocation, or to sell any surplus allowances generated by reducing their emissions below their allocation. The buying and selling of allowances takes place on an EU-wide market, and under the rules of the Scheme there is no restriction placed on where within the EU allowances are sourced, or how many may be purchased to cover actual emissions. All transfers are recorded in electronic national registries.

The Linking Directive amends the EU ETS Directive and provides for the use of credits from the Kyoto Protocol's flexible mechanism for compliance purposes in the EU ETS. Use of these credits are required to be restricted up to the limit set out in each member state's national allocation plan.

Further information on the EU ETS is available from the following web pages:

- Defra: <http://www.defra.gov.uk/environment/climatechange/trading/eu/index.htm>
- European Commission: <http://ec.europa.eu/environment/climat/emission.htm>

5.28 Kyoto's flexible mechanisms and the EU ETS are very important in terms of achieving emissions reductions at least cost, as well as providing a means of co-ordinating international action, and a conduit for helping developing countries achieve low carbon economies. It is important that the targets and budgets in this Bill do not restrict the UK or UK organisations from using these mechanisms. We therefore propose that the Bill should allow emissions reductions achieved overseas but paid for by UK entities to be counted towards the targets and budgets.

5.29 This does not mean that all (or an unlimited amount of) emissions reduction effort should or would be achieved overseas. There is considerable potential for cost-effective measures to reduce emissions in the UK, and the Government is actively pursuing programmes such as the Energy Efficiency Commitment to help deliver these. Guidance on the degree to which emissions reductions should be achieved domestically are contained in the international principle of 'supplementarity'³³ which states that:

³³ Located in the **Marrakesh Accords** - a set of agreements reached at the [Conference of the Parties 7 \(COP7\)](#) meeting in [2001](#) on the rules of meeting the targets set out in the [Kyoto Protocol](#).

*“...the use of the [Kyoto project] mechanisms shall be **supplemental** to domestic action and...domestic action shall thus constitute a significant element of the effort made by each Party...”*

- 5.30 This principle is primarily intended to demonstrate to developing countries that industrialised countries are willing to take positive action domestically and make real efforts to reduce their own emissions, rather than expecting others to make all the reductions for them. The principle also guards against the possibility of rich developed countries buying the least cost emissions reductions from countries which may in the future take on their own targets, but for which few or no cheap and easy emissions reductions remain.
- 5.31 There is a lack of clarity over what precisely the supplementarity principle means in terms of a quantitative limit on emissions reduction effort which can be achieved overseas. For one thing, no quantitative limit is explicitly given in the guidance. For another, the principle refers only to Kyoto project mechanisms (CDM and JI) for complying with Kyoto obligations, whereas it is also the case that EU ETS allowances purchased overseas are strictly speaking international rather than domestic effort. As stated in Box 5 there is no limit on the degree to which organisations within the EU ETS system can reduce their emissions through purchasing allowances, many or all of which could come from other EU Member States.
- 5.32 As noted above, the Stern Review pointed to the environmental and economic advantages of international carbon trading in ensuring that ambitious reduction targets can be delivered at least cost, and noted the advantages of distinguishing between the overall level of responsibility for reducing global emissions that each country undertakes, rather than the emissions reductions that are required to physically occur within its borders, commenting that this distinction can drive investment flows globally that can make it possible for developing countries to limit their emissions far below the levels they would otherwise be expected to reach. This is one of the reasons the Government believes it appropriate to adopt a target based on the “net UK carbon account.”
- 5.33 Allowances and credits may be purchased from overseas by a range of entities – organisations, individuals, and the Government. The Government may deem it appropriate to purchase credits from overseas itself, in order that it can count these credits towards meeting the UK’s targets and budgets. Several other governments are already adopting this approach. In addition to those UK entities that are already able to purchase credits, the Government is therefore seeking authorisation in the Bill to spend money on overseas credits and allowances, to help the UK to remain within budget if necessary.
- 5.34 As well as how much effort is allowed to be achieved overseas, there is uncertainty regarding the post-2012 international framework, in terms of what *types* of credits may be counted as legitimate emissions reductions. In the future new types of overseas credits (in addition to those currently specified) may become available for use under a new framework. Furthermore, an increasing number of countries and regions are developing and proposing emissions

trading schemes (e.g. Norway, Switzerland, Japan and state-level schemes in the US and Australia). Properly constructed links to such schemes would increase the liquidity of the carbon market, and benefit all participants and the wider public interest. It is not yet clear how these links would be made, but it will be important for the UK to support such global efforts and allow UK organisations to benefit from them.

- 5.35 The Bill therefore contains a duty on Government to produce regulations setting out the types of overseas credits that can count towards the UK carbon budget and emissions reduction targets, and the amount of carbon dioxide emissions reductions that each type of credit represents. This measure will provide clarity as to what limits there are on the types of emissions reduction credits that can be counted towards the UK's legislated targets and budgets. In addition, it is proposed that the Committee on Climate Change should have a duty to advise the Government, as part of its advice on the level of carbon budgets, on the optimal balance between domestic and overseas effort to inform the Government's decision-making.

Question 7: Do you agree that, in line with the analysis in the Stern Review and with the operation of the Kyoto Protocol and EU ETS, effort purchased by the UK from other countries should be eligible in contributing towards UK emissions reductions, within the limits set under international law?

Banking

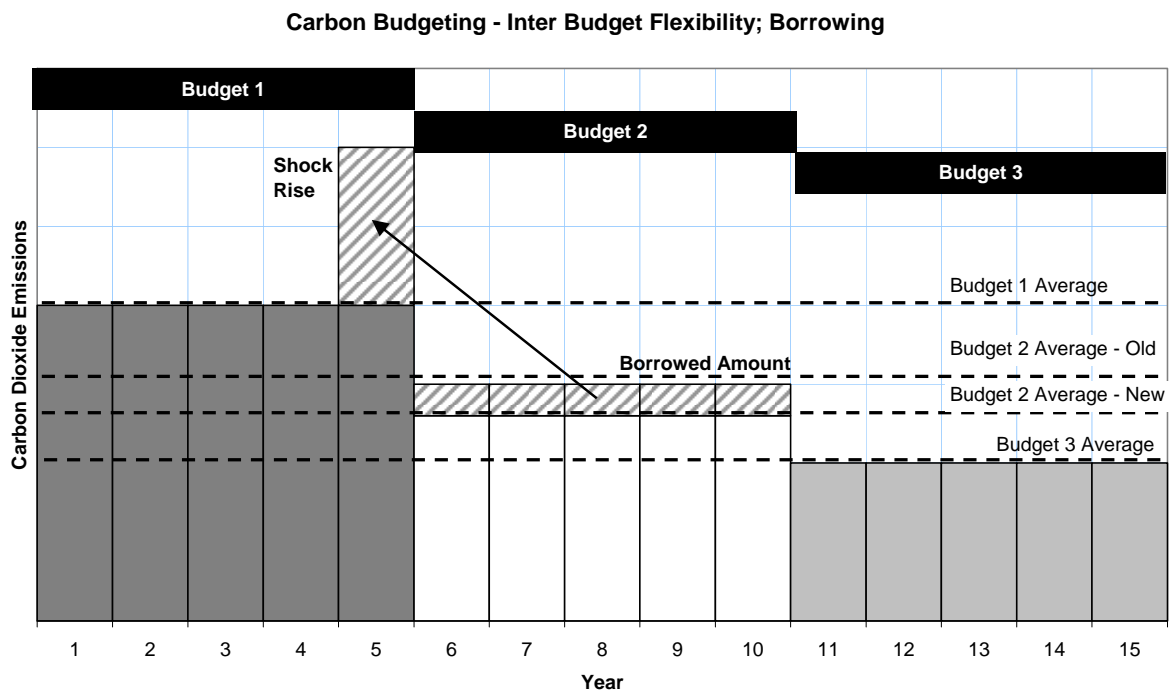
- 5.36 The Stern Review emphasises the importance of flexibility when designing policies to reduce the impact of climate change. In general, some flexibility in the timing of emissions reductions is desirable in order to respond to unforeseen circumstances.
- 5.37 As discussed above, this flexibility is a key driver behind the decision to propose five year carbon budgets as opposed to a trajectory of specific CO₂ emissions targets for each year.
- 5.38 Building on this, we believe that any emissions reductions which exceed those budgeted for could be "banked", for use in the next budget period. This would make it easier to meet the next budget and provide an incentive for early action and over-performance in earlier budget periods. In essence, banking provides an incentive to achieve continuous emissions reductions, and avoids losing the benefits of over-performance between budget periods. The Kyoto Protocol currently follows this principle and allows some unused emissions rights to be banked for future use (see section 5 in the RIA).

Question 8: Do you agree it should be permissible to carry over any surplus in the budget? Are there any specific circumstances where you consider this provision should be withdrawn?

Borrowing

- 5.39 As set out above, we believe that the system of carbon management should have a degree of flexibility in order to accommodate inevitable uncertainties about the future. This is particularly important when acting unilaterally.
- 5.40 In any budget period the Government considers it should be able to borrow a limited quantity of emissions rights from the subsequent period. In practice this means increasing the current budget by a certain amount, and reducing the next period's budget by the same amount.
- 5.41 This would 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, as a result of which there could be increased CO₂ emissions due to increased gas demand, and insufficient time to compensate for this before the end of the budget period (at least not without taking measures which would impose very high costs, for comparatively small long term environmental benefit). Another scenario in which limited borrowing might be appropriate would be to make end of period adjustments, for example where data changes occurred after the close of a budget period (when final validated data becomes available for the final two years of the budget period that could differ from provisional data). Borrowing provides the flexibility to deal with such unexpected events whilst not affecting cumulative emissions.
- 5.42 As an illustration, figure 4 shows how the excess emissions in budget one are covered by borrowing emissions from 'budget two'. 'Budget two is as a result lowered to reflect the amount borrowed. If the actual emissions in budget two are less than its new (lower) limit, then total emissions over budgets one and two remain unchanged. Borrowing maybe attractive as it allows time to introduce new actions and policies to respond to unexpected events.

Figure 4



5.43 On the other hand, borrowing should be strictly limited to ensure the budget from which emissions are borrowed is not unduly diminished, and certainty in the level of future budgets not undermined. Our analysis indicates (as set out in the RIA) that a borrowing limit of 1% of the subsequent budget period would provide sufficient flexibility to accommodate such variations, whilst at the same time not making future budgets unduly difficult to meet. The decision to borrow would obviously not be taken lightly as it is important to maintain the credibility and integrity of the framework. We therefore propose that the Government should first seek, and take account of, advice from the independent Committee on Climate Change (see following section for details). Furthermore, the ability to borrow would be constrained by the necessity of meeting the targets laid down for the 2018-2022 budget and for 2050, targets which can only be altered in very limited circumstances.

Question 9: Do you agree that limited borrowing between budget periods should be allowed?

Compliance with Carbon Budgets and Targets

5.44 This legislation puts a legal duty on the Government to ensure that the UK meets its targets and stays within the limits of its carbon budgets (subject to provisions on banking and borrowing). This legal duty would mean that a Government which fails to meet its targets or stay within budget would be open to Judicial Review (JR).

5.45 In addition to this specific legal consequence, the legislation also seeks to create a transparent reporting framework within which the Government's activity and actions towards meeting its targets and keeping to budget can be continually monitored, and which makes the Government continually accountable to the public and to Parliament. The precise measures constitute the 'Reporting' element of the Bill (see below for further details).

5.46 With this system in place, both this Government and future Governments should have clear incentives to carry out the necessary actions to keep to their targets and within their budgets.

Question 10: Is it right that the Government should have a legal duty to stay within the limits of its carbon budgets?

Devolution

5.47 Targets and carbon budgets will affect all parts of the UK and impact on both devolved and reserved policies. In developing the final Bill the Government and the Devolved Administrations will need to consider how this should be reflected in the process of agreeing and revising budgets and targets.

The Committee on Climate Change

The need for an independent analytical organisation

- 5.48 There are a number of different emissions reduction pathways to our long term target of 60% CO₂ emissions reduction by 2050. Choices between these paths must balance the need for urgent action to tackle climate change and the UK's desire to show international leadership, with the need to maintain a strong economy.
- 5.49 The Government already produces very detailed analysis on a number of climate change issues, including a detailed Emissions Inventory and projections to 2020 to fulfil its international reporting commitments, and policy appraisals to show the cost-effectiveness and impact of different policy measures.
- 5.50 Balancing these considerations is a complex and technical task. It is therefore important that, in formulating scenarios of how the UK will achieve its emissions reductions goals, Government, businesses, the public and other stakeholders have access to expert independent analysis. It is imperative that this analysis is clear, transparent and independent of Government so that – irrespective of the Government of the day – the analysis is seen as objective and free from political interference, which would otherwise potentially damage its credibility.
- 5.51 We therefore propose to establish a new non-departmental public body (NDPB), the Committee on Climate Change, to independently assess how the UK can optimally achieve its emissions reductions goals³⁴.

Question 11: Do you agree that establishing an independent body will improve the institutional framework for managing carbon in the economy?

Functions of the Committee on Climate Change

- 5.52 It is intended that the Committee on Climate Change will advise Government on the level of carbon budgets appropriate to meeting its legislated targets. In recommending the level of the first three carbon budgets, the Committee on Climate Change would also be required to advise the Government on whether its recommended budget for 2008-12 is consistent with the Government's existing 2010 target of a 20% CO₂ emissions reduction compared to 1990 levels, and the costs and benefits of achieving such a budget. The 2010 target to cut CO₂ emissions by 20% (which was designed to be far more stretching than our Kyoto commitment of a 12.5% GHG emissions reduction) remains a Government objective, albeit one which now looks very challenging to meet. It is therefore important that the Government receive advice from the Committee as to whether the optimal pathway towards achieving the medium and long term targets set in statute by this Bill are consistent with this 2010 target.
- 5.53 The Committee will also advise on:

³⁴ It is proposed that the Committee on Climate Change will also be responsible for independently assessing the UK's progress towards meeting its goals, as discussed in the reporting section below.

- The extent to which carbon budgets should be met by domestic emissions reductions versus emissions reductions purchased overseas (as discussed in paragraphs above);
- the respective contributions towards meeting the budgets of those sectors of the economy covered by trading schemes; and,
- the contribution towards meeting the budget of those sectors not covered by trading schemes.

5.54 Furthermore, the Committee would advise Government publicly before it sought to use banking or borrowing facilities (as outlined above), and could be required to provide any other advice relating to climate change on request from the Government. A specific example of this regards advice to the Government about whether to provide for targets and budgets for emissions of GHGs other than CO₂ (as discussed in above). The Committee will perform a technical (or analytical) role which in broad terms will consider how to achieve CO₂ emissions reductions as cost-effectively as possible.

Question 12: Do you agree that the Committee on Climate Change should have an advisory function regarding the pathway to 2050?

Question 13: Do you agree with the proposal that the Committee on Climate Change should have a strongly analytical role?

Factors for the Committee on Climate Change to consider

5.55 The Committee will be tasked with providing its assessment of the optimum abatement pathway which is consistent with the 2020 and 2050 targets and the UK's international obligations. Clearly the optimal pathway will depend on the objectives that should be achieved in reducing emissions. This means that the Committee should be asked to take specific factors into account in order that the positive impacts on these factors be maximised, and negative impacts minimised, in setting the emissions reduction pathway. These factors (as detailed in above) are:

- (a) scientific knowledge about climate change;
- (b) technology relevant to climate change;
- (c) economic circumstances, and in particular the likely impact of the decision on the economy and the competitiveness of particular sectors of the economy;
- (d) fiscal circumstances, and in particular the likely impact of the decision on taxation, public spending and public borrowing;
- (e) social circumstances, and in particular the likely impact of the decision on fuel poverty;
- (f) energy policy, and in particular the likely impact of the decision on energy supplies and the carbon and energy intensity of the UK; and,
- (g) international circumstances.

Question 14: Are these the right factors for the Committee on Climate Change to take into account in assessing the emissions reduction pathway? Do you consider there are further factors that the Committee should take into account?

Membership and composition

- 5.56 We would like the Committee on Climate Change to have a Chair and a Board comprising 5-8 members, supported by a standing secretariat of staff to conduct in-depth analysis into the issues being considered. The Chair would be consulted on the appointment of the members.
- 5.57 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, and will be supported by a secretariat with a strong analytical skills base. The following list provides an indication of the types of expertise that will be desirable in the overall composition of the Committee:
- (a) economic analysis and forecasting;
 - (b) business competitiveness;
 - (c) financial investment;
 - (d) technology development and diffusion;
 - (e) energy production and supply;
 - (f) climate science;
 - (g) emissions trading; and,
 - (h) climate change policy in particular its social impacts.

Question 15: Do you agree the Committee on Climate Change should be comprised of technical experts rather than representatives of stakeholder groups?

Question 16: Are these the appropriate areas of expertise which should be considered? Do you consider there are further areas that should be considered or any areas that are less important?

Devolution

- 5.58 The advice of the Committee on Climate Change will cut across areas of devolved responsibility and the UK Government and the Devolved Administrations will need to consider how this should be reflected in the arrangement for the oversight and governance of the Committee on Climate Change.

Enabling Powers

- 5.59 Government policies to date have succeeded in keeping CO₂ emissions lower than they might otherwise have been given the growth we have experienced in the economy. However we need to do more to deliver the emissions reductions needed to meet the targets in the Bill. The Government is therefore working to implement further policies to ensure that the UK reduces its emissions and meets the long-term targets in the Bill. Details of these will be set out in the forthcoming Energy White Paper.

5.60 The scale and long-term nature of the challenge and continuing evolution in understanding of how to tackle climate change, however, means that new policies and changes to existing policies are likely to be needed over the coming decade and beyond. Some elements of policy can already be introduced and reviewed relatively quickly. The Government reviews taxation policy every year in the Budget, followed by an annual Finance Bill. But the Government is not able to act equally quickly in relation to other measures. Therefore a key element of the Bill is the creation of new powers to introduce new policies to help us stay within our carbon budgets and meet our targets. These will thus form a key part of the framework created by this Climate Change Bill to manage greenhouse gas emissions over time and across the economy.

Types of policies to reduce emissions

5.61 There are a range of policies available to achieve reductions in emissions. These include tax, voluntary agreements, traditional regulations, awareness raising and trading schemes³⁵. All these instruments have a role to play in reducing emissions but have different characteristics. For example tax can be increased on specific activities to reflect the cost of emissions and, where relevant, other negative impacts which they produce and therefore discourage the emissions. This gives certainty that the cost of emissions (and in some cases other negative impacts) is being taken into account but does not guarantee a fixed level of emissions.

5.62 As GHG emissions have an equal impact on global emissions irrespective of where they are created, climate change policy lends itself to the use of trading schemes as a way of achieving environmental objectives at the least cost.

Box 6: What are trading schemes?

These type of policies fix a policy objective but allow participants to determine the cheapest and easiest way to meet it. For example, in ‘*cap and trade*’ schemes where an emissions cap has been imposed on all participants, an individual company might reduce their emissions by reducing their consumption of fuel (by reducing waste or by developing new technology), or they might trade with another participant who can reduce their emissions more cheaply. Similarly where participants are given an *obligation* to supply a specific percentage of their fuel from renewable sources, they can either chose to meet this obligation or trade with others who can meet the obligation more cheaply.

5.63 There are two main potential advantages of this type of policy mechanism. Firstly, there is certainty about the level of carbon dioxide emissions that will be achieved as the outcome is fixed and mechanisms are in place to avoid the outcome not being achieved. This is particularly the case for “cap and trade” schemes. Secondly, trading allows participants to reduce emissions where it is cost-effective to do so and trade where it is cheaper for others to do so therefore reducing emissions at least cost, so long as the costs of participating in administering and enforcing the scheme are proportionate. This type of mechanism has also proved successful in other policy areas. For example, a

³⁵ Please see Box 6 for further details of trading schemes.

tradable permit regime was introduced to limit oil discharges in the UK offshore gas and oil industry as this was felt to be the best option for minimising costs while still giving a high degree of certainty that the UK's international obligations will be met. The scheme was fully supported by the industry.

- 5.64 In deciding the most appropriate policies for controlling and pricing emission, the Government takes account a range of factors including:
- the relative cost-effectiveness of emissions reductions;
 - social objectives, including reducing fuel poverty;
 - the impact on the competitiveness of the UK economy and firms within it;
 - the optimal balance for raising the revenue needed to fund public services from across the economy; and,
 - the availability of benefits in other policy areas – for example in terms of security of energy supply, or in reductions in emissions of air quality pollutants.

How can trading schemes be applied?

- 5.65 The majority of carbon dioxide emitted by the UK comes from burning fossil fuels (principally oil, gas and coal) for three activities – to create electricity, to power vehicles and to provide heat. A reduction in the amount emitted can be achieved by reducing demand for energy, reducing the amount of carbon dioxide released for each unit of energy consumed or a combination of both.
- 5.66 Trading schemes can be applied to different points in the fuel supply chain depending on the outcome sought and optimal administrative arrangements. So policies can be applied *upstream* at the point at which fuel is sold for combustion or supplied into the market or *downstream* at the point of final consumption of the fuel. Different policies can simultaneously be placed up and downstream in the same sector where this is judged to address particular market failures and uncover additional carbon savings.
- 5.67 Emissions from both upstream and downstream consumers can also be both direct and indirect. So for example a consumer will directly emit carbon dioxide when powering their car and heating their home but indirectly emit carbon dioxide when using electricity (as the emissions occur at the point at which electricity was created rather than consumed).

Extending the suite of domestic trading schemes

- 5.68 There are a number of domestic trading schemes already in place across the UK economy, as shown in Box 7.

Box 7: Existing UK trading schemes

The **EU Emissions Trading Scheme** puts a cap on emissions by electricity producers and others including ferrous metals, mineral and pulp and paper industries, while the **Renewables Obligation** puts an obligation on electricity producers to supply a specific amount of electricity from renewable sources. **Climate Change Agreements** negotiated with energy intensive sectors set out emissions reduction targets. The **Energy Efficiency Commitment** puts an obligation on electricity and gas suppliers to offer energy efficiency measures to their customers. The proposed Energy Performance Commitment would put a cap on emissions from non-energy intensive commercial and industrial users.

All these policies with the exception of the Renewables Obligation also apply to parts of the heat sector, although coverage is less comprehensive than in the electricity sector.

The **Renewable Transport Fuel Obligation (RTFO)** is due to be introduced into the transport sector in 2008. It will be similar to the Renewables Obligation. The RTFO will require the road transport and fuel suppliers to ensure that a proportion of their road fuel sales are from a renewable source, like bio fuels.

- 5.69 Government's long-term aim is to build on the EU ETS by extending the application of the scheme to cover new sectors and gases³⁶. However it is not certain that all sectors will be appropriate for inclusion or that the EU will reach agreement. Government may want to take domestic action ahead of the EU where it is cost effective and necessary to reduce UK emissions and will help sectors to prepare for inclusion in ETS. Government may also wish to supplement EU level action and introduce its own policies to uncover efficiencies and support clean technologies.
- 5.70 Such policies might or might not be in the form of trading schemes, but it is possible that in coming years Government may consider implementing *upstream* schemes to supplement the EU ETS, implementing schemes for emissions on downstream energy use and implement schemes to support cleaner technologies and fuels. Government is also likely to need to make improvements to existing schemes as our understanding of climate change develops.
- 5.71 Government is therefore proposing to take **enabling powers** to make it easier to implement new trading schemes as well as consolidate, and extend trading schemes more easily.

Question 17: Do you agree with the principle of taking enabling powers to introduce new trading schemes?

³⁶ http://www.hm-treasury.gov.uk/media/98D/4B/environment_emissionstrading301006.pdf

Benefits and structure of enabling powers

- 5.72 The building blocks of trading schemes in different sectors and to meet different objectives are very similar and therefore make it possible to take broad powers to introduce them through secondary rather than primary legislation. Taking these powers will make policy-making more responsive by avoiding the need for new and separate primary legislation to introduce any future schemes. This does not mean less analysis, scrutiny or consultation before a decision to implement a new scheme but will reduce the time and cost to the UK of developing and scrutinising the same building blocks again and again. This frees up time to consider the policy itself.
- 5.73 Taking powers does not mean a presumption against the use of taxes or non-traded policy instruments where they are more appropriate. Nor does it compel Government to introduce specific policies. It simply addresses a gap in existing powers: changes to the taxation system can be introduced quickly through the annual Finance Bill process, and EU measures can be implemented using the European Communities Act 1972 without the need for new legislation. These proposed enabling powers would enable other climate change mechanisms to be established (or adjusted) to a similar timeframe.
- 5.74 The powers in the Bill cover the following design elements and would enable the Government to:
- introduce trading schemes to uncover carbon savings;
 - define persons to which the scheme applies;
 - set targets / level of obligations;
 - define units to be traded;
 - allocate tradable units to participants without charge;
 - define trading periods;
 - create compliance mechanisms and appropriate penalties;
 - establish an appeals process;
 - appoint an administrator and / or regulator for the scheme;
 - set out provisions should participants exit from the scheme;
 - link to other domestic and global trading schemes; and,
 - allow the administrator to obtain data to verify emissions.
- 5.75 The Government is investigating the feasibility of taking a power to allow scheme administrators to access data already collected by Government for different purposes but currently protected by legal restrictions. This power could help reduce the administrative costs of trading schemes for both Government and participants.

5.76 The allocation of allowances within a trading scheme can happen in a number of ways. Powers in the Climate Change Bill would permit the allowances to be allocated free of charge, whilst allocation by auction or otherwise for value is intended to be taken forward on a case by case basis in the annual Finance Bill, starting with provisions for auctioning within the EU Emissions Trading Scheme in the 2007 Finance Bill. Powers to introduce measures that generate revenue in some way - such as auctioning - are traditionally taken in the Finance Bill, and there is no need to create new powers in the Climate Change Bill. Each decision about whether to use auctioning will be taken on a case by case basis. As has been the case in the past, the possibility that revenues could be balanced in some way with other measures to benefit participants will be considered during the design stages of any policy, taking into account the wider public interest, including the need to ensure the optimal balance for funding public services from across the economy.

Question 18: Do you consider that these powers are sufficient to introduce effective new policies via secondary legislation? If not, what changes would you make?

Devolution

5.77 The devolved administrations have a role to play in existing trading schemes, for example the powers under which the EU ETS is transposed are largely devolved. The role of the devolved administrations in the proposed new powers will need further consideration.

Reporting

The need for regular, independent monitoring of the UK's progress

5.78 The Government is already legally required to produce an annual assessment of its progress on greenhouse gas emissions reductions, under Section 2 of the Climate Change and Sustainable Energy Act 2006³⁷. We would like to provide for the Committee on Climate Change to become involved in this annual reporting process, so as to maximise the independence and credibility of the reporting framework.

5.79 We therefore propose that the Committee on Climate Change should produce an annual report on the UK's progress towards both its budgets and targets, produced in the summer of each year and including the latest data on emissions in the UK. The report would be placed before Parliament for maximum transparency, and the Government would be required to respond to this report, explaining its actions and outlook on progress in the light of the Committee on Climate Change's report.

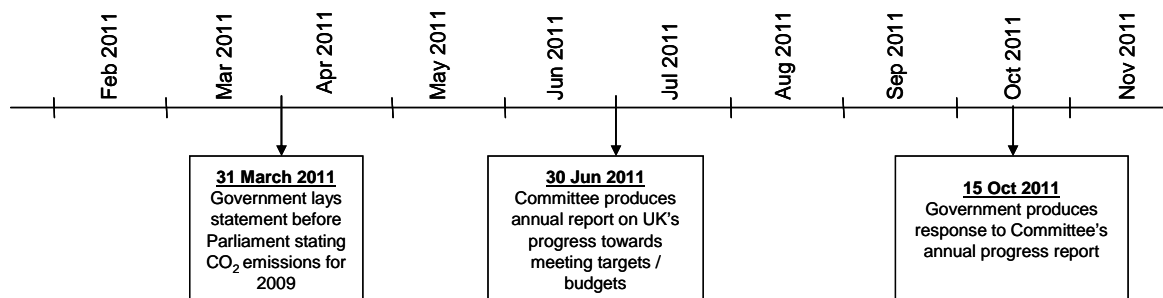
³⁷ Available from: <http://www.opsi.gov.uk/ACTS/acts2006/20060019.htm>

5.80 In addition, every five years, following the release of the final, validated data to show emissions in the last year of a budget period³⁸, the Government should lay before Parliament a compliance statement of whether the budget was met. This statement would take account of the Government's decision to offset overseas credits against domestic emissions, as well as any decision to borrow or bank emissions rights. The Committee on Climate Change should then include in its annual report for that year an assessment of the validity of the Government's compliance statement, and the implications of this for current and future actions to stay on track to meet the legislated targets. Figure 5 below outlines the precise reporting timetable.

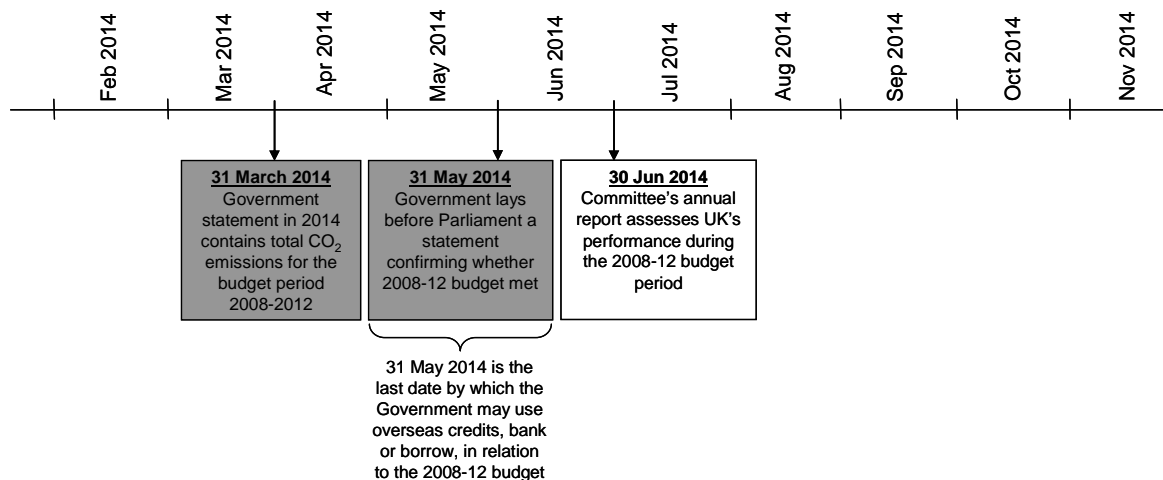
³⁸ Due to the international reporting framework there is a two-year time lag on the publication of this final, validated data. Hence for the 2008-12 budget period the comprehensive assessment report would be published in spring 2014.

Figure 5

Annual reporting process (using 2011 as an example)



Five-yearly reporting process (using 2014 as an example)



5.81 We believe that this regular and comprehensive reporting regime will help to strengthen accountability for achieving emissions reductions; and thereby raise expectations that budgets will be met, which in turn will reinforce confidence amongst businesses, households and other stakeholders.

Question 19: Do you agree that the Committee on Climate Change should be responsible for an independent annual report on the UK's progress towards its targets which would incorporate reporting on a completed budget period every five years?

Devolution

5.82 The Scottish Parliament, National Assembly for Wales and Northern Ireland Assembly may also wish to have a role in assessing progress.

Adaptation

5.83 There are currently no legal requirements on the Government to report on or monitor the risks of climate change and the progress the Government is making

in adapting to these risks, but there is growing recognition of the need for a more coherent approach³⁹.

- 5.84 To help ensure a transparent framework and a consistent approach to adaptation we are proposing that the Government undertakes a quinquennial review of the risks posed by the impacts of climate change to the UK. This will then help to inform the proposals and policies that Government should develop to ensure that adaptation is integrated into its work.
- 5.85 In addition to a risk assessment, it is proposed that this report will also outline progress made by Government on developing and implementing measures related to adaptation. The reporting process will allow Government to state its priorities on adaptation (taking into account developments in science, and the current economic and social context), outline measures it is using to incorporate adaptation into its work, and enable stakeholders to see clearly what Government is doing to address adaptation. This will provide a national context to their own adaptation efforts.
- 5.86 A statutory reporting requirement allows a public examination of the Government's work in this area, without imposing prescriptive measures that risk constraining adaptation activities or even leading to maladaptation as understanding of climate science and the economic situation develops. A Government report to Parliament would allow this flexibility whilst ensuring full public scrutiny and examination of the measures being taken.

Question 20: Is statutory reporting the best way to drive forward progress on adaptation while at the same time ensuring Government is able to develop flexible and appropriate measures reflecting developments in key policy areas?

³⁹ The overwhelming response to a Government consultation in 2005 on the development of an adaptation policy framework was that this would be useful in helping to co-ordinate adaptation action, both at local level and across Government. It was also felt that the time was right for a national framework to provide strategic direction, outline priority areas for action and develop methods for trying to avoid cross-sectoral inconsistencies

Section 6: Next Steps and how to respond to this consultation

6 Next Steps and how to respond to this consultation

- 6.1 The UK Government is working to achieve the best means for responding to climate change and this document is designed to stimulate ideas to facilitate that.
- 6.2 This consultation document forms the core of a 13 week consultation exercise that is being conducted to seek the views of all of those with an interest in a broad range of climate change issues that the UK Government is considering for a Climate Change Bill. This document explains our thinking around the proposed Bill and invites your contributions and comments.
- 6.3 Following the close of this consultation period on **12 June 2007**, the UK Government and the Devolved Administrations will carefully consider all responses to this consultation exercise when further developing proposals for the Bill. Relevant documents, background to our work on a Climate Change Bill, details of supporting activities and latest updates on progress are all available on <http://www.defra.gov.uk/corporate/consult/climatechange-bill/>

What consultees are invited to do

- 6.4 You are welcome to comment on all aspects of this document but there are some specific issues on which we would particularly value your input and these are highlighted by questions throughout the document. It would be helpful if, when you respond, you indicate clearly the specific questions to which your answers relate.
- 6.5 To aid you in responding, a complete list of the questions asked in this document is presented at **Annex A**. We are also seeking your views on analysis contained within the partial Regulatory Impact Assessment, in particular on: both the high level benefits, costs and uncertainties surrounding the delivery of the proposed system of statutory targets and budgets (outlined in Section 4 of the RIA) as well as the analysis of the options considered as part of the detailed development of the proposed measures (which can be viewed at <http://www.defra.gov.uk/corporate/consult/climatechange-bill/>).
- 6.6 When responding to the consultation you may wish to comment on this analysis of costs and benefits, giving supporting evidence wherever possible.
- 6.7 **The consultation period runs from 13 March 2007 until 12 June 2007.** Please ensure that your response reaches us by **12 June 2007**. We cannot guarantee that responses made after that date will be taken into account. If you would like further copies of this consultation document it can be found at <http://www.defra.gov.uk/corporate/consult/climatechange-bill/>

Alternatively please call: **08459 33 55 77** or e-mail:
climatechangeconsultation@defra.gsi.gov.uk to request a copy.

- 6.8 When responding to this consultation please state whether you are responding as an individual or representing the views of an organisation. If responding on behalf of a larger organisation please make clear who the organisation represents and where applicable, how the views of members were assembled.
- 6.9 It will help us if you send your response using the electronic form that is available at <http://www.defra.gov.uk/corporate/consult/climatechange-bill/> although any electronic / written format (Microsoft Word is preferable) will be accepted. Please send responses to: E-mail:
climatechangeconsultation@defra.gsi.gov.uk

Alternatively, responses can be sent by post to the following address:

Patrick Erwin / James Hardy
Climate Change Legislation Team
Area 4/F5
Ashdown House
123 Victoria Street
London
SW1E 6DE

Confidentiality

- 6.10 In line with Defra's policy of openness, at the end of the consultation period copies of the responses we receive will be made publicly available through the Defra Information Resource Centre, Lower Ground Floor, Ergon House, 17 Smith Square, London SW1P 3JR. The information they contain will also be published in a summary of responses.
- 6.11 If you do not consent to this, you must clearly request that your response be treated confidentially. Any confidentiality disclaimer generated by your IT system in e-mail responses will not be treated as such a request. You should also be aware that there may be circumstances in which Defra will be required to communicate information to third parties on request, in order to comply with its obligations under the Freedom of Information Act 2000 and the Environmental Information Regulations.
- 6.12 The library will supply copies of consultation responses to personal callers or in response to telephone or e-mail requests (tel: 020 7238 6575, email: defra.library@defra.gsi.gov.uk Wherever possible, personal callers should give the library at least 24 hour notice of their requirements. An administrative charge will be made to cover photocopying and postage costs.

6.13 If you have any comments or complaints about the consultation process, as opposed to the content in the consultation paper, please address them to Marjorie Addo, Defra's Consultation Co-ordinator, Area 7B Nobel House, 17 Smith Square, London SW1P 3JR, or email: consultation.coordinator@defra.gsi.gov.uk.

Annex A: Consultation Questions

Consultation Questions

Consultation questions are asked in **Section 5** of this document. To aid you in responding, a complete list of the questions asked is presented below, referenced by question number.

Targets and Budgets

Setting statutory targets

1. Is the Government right to set unilaterally a long-term legal target for reducing CO₂ emissions through domestic and international action by 60% by 2050 and a further interim legal target for 2020 of 26-32%?
2. Is the Government right to keep under review the question of moving to a broader system of greenhouse gas targets and budgets, and to maintain the focus at this stage on CO₂?

Carbon budgeting

3. Should the UK move to a system of carbon management based upon statutory five-year carbon budgets set in secondary legislation?
4. Do you agree there should be at least three budget periods in statute at any one time?

Reviewing targets and budgets

5. Do you agree there should be a power to review targets through secondary legislation, to ensure there is sufficient flexibility in the system?
6. Are there any factors in addition to, or instead of, those already set out that should enable a review of targets and budgets?

Counting overseas credits towards the budgets and targets

7. Do you agree that, in line with the analysis in the Stern Review and with the operation of the Kyoto Protocol and EU ETS, effort purchased by the UK from other countries should be eligible in contributing towards UK emissions reductions, within the limits set under international law?

Banking

8. Do you agree it should be permissible to carry over any surplus in the budget? Are there any specific circumstances where you consider this provision should be withdrawn?

Borrowing

9. Do you agree that limited borrowing between budget periods should be allowed?

Compliance with carbon budgets and targets

10. Is it right that the Government should have a legal duty to stay within the limits of its carbon budgets?

The Committee on Climate Change

The need for an independent analytical organisation

11. Do you agree that establishing an independent body will improve the institutional framework for managing carbon in the economy?

Functions of the Committee on Climate Change

12. Do you agree that the Committee on Climate Change should have an advisory function regarding the pathway to 2050?
13. Do you agree with the proposal that the Committee on Climate Change should have a strongly analytical role?

Factors for the Committee on Climate Change to consider

14. Are these the right factors for the Committee on Climate Change to take into account in assessing the emissions reduction pathway? Do you consider there are further factors that the Committee should take into account?

Membership and composition

15. Do you agree the Committee on Climate Change should be comprised of technical experts rather than representatives of stakeholder groups?
16. Are these the appropriate areas of expertise which should be considered? Do you consider there are further areas that should be considered or any areas that are less important?

Enabling Powers

Extending the suite of domestic trading schemes

17. Do you agree with the principle of taking enabling powers to introduce new trading schemes?

Benefits and structure of enabling powers

18. Do you consider that these powers are sufficient to introduce effective new policies via secondary legislation? If not, what changes would you make?

Reporting

The need for regular, independent monitoring of the UK's progress

19. Do you agree that the Committee on Climate Change should be responsible for an independent annual report on the UK's progress towards its targets which would incorporate reporting on a completed budget period every five years?

Adaptation

20. Is statutory reporting the best way to drive forward progress on adaptation while at the same time ensuring Government is able to develop flexible and appropriate measures reflecting developments in key policy areas?

Annex B: Glossary of terms and abbreviations

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.
Anthropogenic	'Human activity' - usually used when explaining man-made emissions.
Clean Development Mechanism (CDM)	The project mechanism provided for under Article 12 of the Kyoto Protocol. These are projects in developing countries which reduce emissions of greenhouse gases or enhance sinks.
CO₂	Carbon Dioxide.
CO₂e	For the purposes of this 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. 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 (calculated consistently with international carbon reporting practice).
EU ETS	European Union Emissions Trading Scheme.
GDP	Gross Domestic Product
G8	Group of 8 of the world's major industrialised economies (Canada, France, Germany, Italy, Japan, Russia, UK, USA), with the European Commission also represented at meetings.
GHG	Greenhouse gas. Under the Kyoto Protocol these include CO ₂ , methane (CH ₄), nitrous oxide (N ₂ O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF ₆).
IPCC	Intergovernmental Panel on Climate Change: A UN body set up to "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." For further details please see: http://www.ipcc.ch/
Joint Implementation (JI)	The project mechanism provided for under Article 6 of the Kyoto Protocol. These are projects undertaken in developed countries with targets which reduce emissions of greenhouse gases or enhance sinks.
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 industrialized countries.
Marrakesh Accords	Agreements reached in 2001 which set out the detailed provisions building on provisions of the Kyoto Protocol, including those relating to complementarity, CDM and JI.

Mitigation	An anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases.
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.
ppm	Parts per million: measurement of atmospheric concentration of greenhouse gas.
Project mechanisms	Collective term for CDM and JI.
RIA	Regulatory Impact Assessment
Sinks	Any process, activity, or mechanism that removes carbon dioxide from the atmosphere.
Supplementarity	The principle that the use of the project mechanisms should be supplemental to domestic action to reduce greenhouse gas emissions.
Trading schemes	These type of policies fix a policy objective but allow participants to determine the cheapest and easiest way to meet it, for example, ' <i>cap and trade</i> ' schemes.
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

