

Climate Change
The UK Programme 2006

TOMORROW'S CLIMATE
Today's Challenge



Climate Change The UK Programme 2006

Presented to Parliament by the
Secretary of State for the Environment,
Food and Rural Affairs
by Command of Her Majesty

Presented to the Scottish Parliament by the Scottish Ministers:

Presented to the Northern Ireland Assembly:

Placed with the Welsh Assembly library

March 2006

©Crown Copyright 2006

The text in this document (excluding the Royal Arms and departmental logos) may be reproduced free of charge in any format or medium providing that it is reproduced accurately and not used in a misleading context. The material must be acknowledged as Crown copyright and the title of the document specified.

Any enquiries relating to the copyright in this document should be addressed to the Licensing Division, HMSO, St Clements House, 2-16 Colegate, Norwich, NR3 1BQ, Fax 01603 723000 or e-mail: licencing@cabinet-office.x.gsi.gov.uk

Prime Minister's Foreword

Climate change is probably the greatest long-term challenge facing the human race. That is why I have made it a top priority for this government, at home and internationally.

The scientific evidence is now overwhelming. Since 1990, global temperatures have risen by 0.2C and atmospheric carbon dioxide concentrations have increased from 354 parts per million to over 380 parts per million and are still rising. If the anticipated growth in emissions is left unchecked, global average temperatures could be as much as 5.8C higher by the end of this century, with a devastating impact on our economy and natural world, in the UK and, above all, in the most vulnerable developing countries.

We have to accept that some climate change is now inevitable. We must adapt to this and provide greater support for the poorest nations. We can, however, avert the worst global scenarios if the world acts decisively, but there can be no delay. The longer we put off action, the more dramatic and costlier the changes we will have to make.

Our 2000 Climate Change Programme has already helped put us on track to meet our Kyoto greenhouse gas reduction commitment. Indeed, we are projected to go significantly beyond our Kyoto commitment and reduce our greenhouse gas emissions by 23-25 per cent by 2010, one of the best records of any Kyoto signatory. Without the measures introduced since 1997 and the package of new measures being announced today, we estimate that carbon dioxide emissions in 2010 might only be about 1 per cent lower than in 1990, rather than 15 to 18 per cent lower. But we are not complacent. This programme contains further commitments to help achieve our national goal of reducing carbon dioxide by 20 per cent below 1990 levels by 2010 and, in the long-term, reduce emissions by 60 per cent by 2050.

Domestic action is essential, not least to underline the fact that emissions reductions and prosperity can go hand-in-hand. But national action can only be part of a much bigger strategy. The UK is responsible for 2 per cent of global emissions, and this figure is falling. Climate change is a global problem that requires a global solution. That is why our new programme sets out our strategy for both international and national action.



The UK has already taken a strong lead internationally on climate change. We played a major role in negotiating the Kyoto Treaty. In the Hadley Centre, we have one of the world's leading climate change research centres. We have also taken a policy lead, through the climate change levy and UK emissions trading scheme.

In 2005 we took this to a new level, through our Presidencies of the G8 and EU. We made important progress. Crucially, the G8 countries agreed to a new Dialogue with the Leaders of China, India, Brazil and other emerging economies that will hold meetings annually and culminate in 2008 when it reports to the Japanese G8 Presidency. The progress made at the G8 and in our EU Presidency helped to secure a positive outcome to the UN Climate Change Conference in Montreal.

But the progress made last year has, in truth, simply got the world to the starting blocks for the real race – to secure agreement to the long-term goal of global action on climate change and on the action needed to deliver that goal.

This document sets out our plans for working, with other countries, to secure agreement on the scale needed. They include a strong focus on a stabilisation goal to frame future international action, progress through the UN Framework on Climate Change and the G8 Dialogue, and a much greater role for the European Union.

We will work with our EU partners to take further action both internally and internationally. The UK will push hard for greater certainty on European plans for implementation of the EU Emissions Trading Scheme beyond 2012. The scheme remains the most important mechanism for stimulating international investment in low-carbon technology. We will also seek agreement for much more ambitious collaboration with emerging economies. Our EU Summits with China and India in 2005 were a useful step forward. But again we need to go much further, to scale up these actions to make a real difference.

We will also work with the G8 and developing countries through the Dialogue to accelerate the deployment of clean technologies and provide incentives for investment in low carbon technologies. We will co-operate closely with the World Bank and other multilateral development banks to deliver an effective framework for investment in clean energy, and with the International Energy Agency.

Targets matter, at home and abroad. But recent events have shown that no government can control emissions in any one year, due to factors such as changes in international fuel and energy prices that are outside our control. Our approach seeks to secure steady emissions reductions over time, through a framework that recognises the importance of maintaining our economic competitiveness and our responsibilities to all members of society – particularly those experiencing fuel poverty.

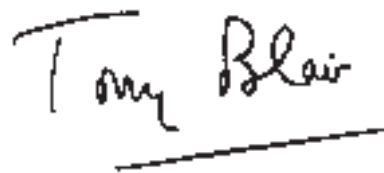
This programme will take us close to our domestic target. But it is by no means the last word. We are launching the consultation today on the UK's approach to the next phase of the EU emissions trading scheme, which will provide a vital signal to business of the parameters from 2008–12. I am a strong supporter of the scheme. We look forward to hearing people's views prior to our final

decision this summer. We will also be considering other future policy options through the Energy Review and the annual Budget process. We will report to Parliament annually on emissions, future projections, the impact of these measures and forward plans.

Government will play its part and give the necessary lead. But we won't succeed without the support and active participation of all sectors of society.

If every household and business took measures to reduce its carbon dioxide emissions, by reducing energy used in the home, in buildings, and by changing how journeys are made, we could achieve our 20 per cent target. We can and will help make this happen. We are putting more funding into a new initiative to raise consumer demand for energy efficiency. The Carbon Trust and the Energy Saving Trust will this year run awareness campaigns on what companies and individuals can do to help. Our Climate Change Communications Initiative will do more to inform the public of the threat and how we can together overcome it.

Our emissions goals require leadership and action, by government and by us all. This programme will move us closer, and we will go further. But the solution is in the hands of us all – as businesses, citizens and consumers. Let's achieve this together.

A handwritten signature in black ink that reads "Tony Blair". The signature is written in a cursive style and is positioned above a solid horizontal line.

Tony Blair
Prime Minister
March 2006

Contents

Executive Summary	3
Section 1 – The international challenge	7
1. What is climate change and why does it matter?	8
2. International framework for action	15
Section 2 – Delivering emissions reductions	23
1. UK emissions inventory and projections	24
2. Strategy to reduce UK emissions	30
3. Energy supply	32
4. Business	44
5. Transport	61
6. Domestic	74
7. Agriculture, forestry and land use management	90
8. Public sector	104
9. Stimulating action by individuals	117
10. Bringing it all together	124
11. Monitoring and review	126
Section 3 – Adapting to the impacts of climate change	129
1. Adaptation	130
Section 4 – Action by the devolved administrations	143
1. Scotland	144
2. Northern Ireland	153
3. Wales	163

Section 5 – Annexes	169
Annex A – Emissions projections	170
Annex B – Carbon dioxide	174
Annex C – Methane	176
Annex D – Nitrous oxide	178
Annex E – HFCs, PFCs and SF ₆	180
Annex F – Carbon sequestration	183
Annex G – Carbon capture and geological storage	187
Annex H – List of greenhouse gases	188
Annex I – Review of the 2000 Climate Change Programme	190
Glossary of terms	191

Executive Summary

This Government believes that climate change is the greatest long-term challenge facing the world today. There is strong and indisputable evidence that climate change is happening and that man-made emissions are its main cause. The ten warmest years globally since formal records began in 1861 have all occurred since 1994. If left unchecked, climate change will have profound impacts on our societies and way of life, affecting agriculture and food security, leading to water shortages, triggering population movements and impacting on our economies, and our security. So action is needed now.

The UK has already taken significant steps to meet this challenge. The Government has led the way with innovative policies, such as the Climate Change Levy and agreements, Renewables Obligation and Energy Efficiency Commitment. Equally, we have built on our experience of domestic policy to foster greater action at the international level – most notably with the successful introduction of the EU Emissions Trading Scheme which draws many elements from our domestic emissions trading scheme. The combination of these measures has had a substantial impact on greenhouse gas reduction in the UK. It is for this reason that the UK is one of very few countries on track to meet our commitment under the Kyoto Protocol to reduce emissions of greenhouse gases by 12.5 per cent below 1990 levels by 2008-12. And we have made progress beyond this commitment, with our greenhouse gas emissions projected to be almost 20 per cent below 1990 levels in 2010 even without the new measures in this programme.

We want to go further. This Climate Change Programme sets out our policies and priorities for action in the UK and internationally. Climate change is a global problem, so we will strive to secure global action on the scale needed to tackle it. But we will also take further action at home, to meet our commitments and demonstrate that climate change can be tackled without damaging our economy.

The UK is already at the forefront of the fight against climate change. Our Presidencies of the G8 and the EU in 2005 and this made a powerful impact. At the Gleneagles Summit in July 2005, the G8 leaders agreed that climate change was a serious and long-term challenge caused by human activity, and that urgent action was needed. The Gleneagles Action Plan and the

commitment by G8 leaders and leaders of other countries to launch a Dialogue on “climate change, clean energy and sustainable development” were a major signal of renewed political will. The Montreal UN Conference in December 2005 was an important step forward for the whole international community.

But there is a long way to go. So we will continue to play a leadership role in 2006 and beyond through the European Union, G8 and UN Framework Convention processes, and find ways to reach global agreement to action on the scale needed to avert dangerous climate change.

We have also set ourselves a more challenging domestic target to reduce carbon dioxide emissions by 20 per cent below 1990 levels by 2010. Although we have made significant progress, higher than anticipated levels of economic growth and the recent rise in global energy prices, which has altered the relative prices of coal and gas, have led to increases in our carbon dioxide emissions in recent years. As a result, achieving our domestic target has become more challenging since our last Climate Change Programme in 2000. We have therefore used this Review to assess both the impact of existing policies and the potential contribution of new policy options.

This new Climate Change Programme will take us close to our domestic target, and ensure that the UK can make the real progress by 2020 towards the long-term goal to reduce carbon dioxide emissions by some 60 per cent by about 2050 that we committed to in the 2003 Energy White Paper. The package of existing and new policy measures in the Programme are projected to reduce carbon dioxide emissions to 15-18 per cent below 1990 levels – the new measures saving 12 million tonnes of carbon by 2010. This is very good progress. Our overall emissions of greenhouse gas emissions are now projected to be 23-25 per cent below 1990 levels in 2010 – around double our Kyoto target.

This Programme is not the final word. The projections and policies set out in this Programme will change over time. There is more that government will do both to influence emissions directly and to encourage action by others. The 2010 carbon target is still within reach. Further contributions could be made by the Energy Review, the ODPM review of buildings and other government policy processes over the coming years.

Executive Summary

Recent experience has proven the need to assess progress towards our medium and long-term goals on a more frequent and regular basis. We will therefore in future report annually to Parliament on our progress at reducing the UK's greenhouse gas emissions. Building on this, the Review of the Economics of Climate Change, led by Sir Nick Stern, will consider other aspects of recent proposals for the introduction of "carbon budgeting". This analysis will inform the Energy Review.

So this Climate Change Programme sets out the Government's commitments both at international and domestic levels to meet the challenge of climate change. It also sets out our approach to strengthening the role that individuals can play. We will encourage individuals as citizens, consumers, motorists and business people to take the action needed to help meet our goals. There is no choice to be made between action at international, national and personal levels. We regard all as essential.

The primary elements of our programme at all levels are summarised below.

Internationally we will:

- work to build consensus on the scale of action needed to stabilise the climate and avoid dangerous climate change, and build on the progress made at the G8 Summit in Gleneagles and the Montreal climate change conference to strengthen the international regime;
- work with EU partners to secure agreement to further action in the EU, in particular by extending and strengthening the Emissions Trading Scheme and the Clean Development Mechanism to make them key regional and global tools for emissions reductions beyond 2012;
- in partnership with the EU, enhance our efforts to help India, China, Brazil and other large emerging countries evolve as low-carbon economies;
- work with the World Bank and the multilateral development banks to ensure that the proposed Clean Energy Investment Framework delivers significant new investment in low carbon energy sources, energy efficiency and adaptation to climate change in developing countries;

- support international collaboration and coordination to ensure the successful expansion of new technologies, through action in key areas such as product standards and research and development; and
- help poorer developing countries to adapt to changes in climate already occurring and to make their economies more resilient to future changes.

Domestically we will:

- report annually to Parliament on emissions, our future plans and progress on domestic climate change; and
- set out our adaptation plan for the UK, informed by additional research on the impacts of climate change.

In the energy supply sector we will:

- consult now on a National Allocation Plan for the second phase of the EU Emissions Trading Scheme to achieve carbon savings of between 3 and 8 MtC;
- spend £80m in the next three years to support microgeneration technologies, with the aim of encouraging manufacture at higher scale leading to lower costs;
- provide £35m over four years for the development of carbon abatement technologies, and consult on the barriers to wide-scale commercial development of carbon capture and storage (CCS) in the UK and the potential role of economic incentives in addressing those barriers;
- continue to support electricity from renewables under the Renewables Obligation and address barriers to take-up; and
- fully consider the treatment of CHP in the UK's National Allocation Plan for the second phase of the EU Emissions Trading Scheme.

In the business sector we will:

- continue to use the climate change levy and associated climate change agreements to encourage businesses to improve the efficiency with which they use energy;

Executive Summary

- maintain a strong package of support, advice and information measures to help businesses improve their energy efficiency;
- continue to make the EU Emissions Trading Scheme a central element of the business sector's contribution to our national goal; and
- keep the current policy mix under review to ensure that it continues to represent the most effective use of policy instruments to deliver emissions reductions.

In the transport sector we will:

- introduce the Renewable Transport Fuel Obligation from 2008 to increase the uptake of biofuels and ensure a long term framework which promotes additional investment;
- continue to use fiscal instruments such as Vehicle Excise Duty and Company Car Tax to give incentives to purchase less polluting vehicles;
- maintain momentum in the EU to secure agreement to the inclusion of aviation in the EU Emissions Trading Scheme from 2008 or as soon as possible thereafter;
- work strongly to achieve further commitments from vehicle manufacturers to improve fuel efficiency; and
- continue to promote carbon offsetting and lead by example to offset emissions arising from central Government air travel.

In the domestic sector we will:

- continue to take forward significant improvements already made and update the Building Regulations in April 2006 to raise energy standards of new build and refurbished buildings;
- introduce the Code for Sustainable Homes which will have minimum standards for energy and water efficiency at every level of the Code, with the lowest levels raised above the level of mandatory building regulations;
- building on substantial progress to date, seek to achieve substantially higher carbon savings from the Energy Efficiency Commitment in 2008-11, working with stakeholders to examine the scope to provide greater flexibility and incentive in the design of the

scheme and to enable it to encourage consumers to reduce their energy demand;

- achieve 250,000 additional subsidised installations of home insulation over the next two years over and above existing commitments;
- launch a major new initiative designed to strengthen consumer demand for energy efficiency, working closely with energy suppliers and through local authorities, with funding of £20m over the next two years;
- provide more reliable consumer product information and set effective standards for energy-using products via voluntary agreements, in particular a new initiative with major retailers on consumer electronics, the Eco-design of Energy Using Products Directive and other national, EU and international policy measures and initiatives, including public procurement;
- consider how to enable consumption feedback to households via improved billing and metering, including the Budget 2006 announcement of £5m to help co-finance with energy companies a pilot study in the use of "smart" meters and associated feedback devices;
- maintain the Energy Efficiency Commitment, Warm Front and Decent Homes schemes to deliver energy efficiency measures in low income households to help meet our fuel poverty targets; and
- continue to support the activities of the Energy Saving Trust and the Climate Change Communications Initiative to raise awareness about climate change and the action individuals can take to help tackle it.

In the public sector and local government we will:

- introduce a package of measures to drive additional action for local authorities to include an appropriate focus on action on climate change;
- set up a new revolving loan fund of £20m for the whole of the public sector, to finance investment in energy efficiency; and
- introduce new strategic targets for the central government estate in summer 2006.

In the agriculture, forestry and land management sector we will:

- promote resource efficient farm management in order to reduce agriculture's contribution to greenhouse gas emissions; and
- examine the scope and feasibility of an emissions trading scheme for the agriculture and forestry sector.

And to encourage personal action we will:

- introduce further measures and initiatives to encourage and enable individuals to understand their role and responsibility in tackling climate change;
- continue to support the essential work of the Energy Saving Trust and Carbon Trust and other organisations that provide information and advice to individuals, businesses and local authorities;
- set out a plan for action on sustainable consumption by the end of 2006, in response to the Sustainable Consumption Round Table report due in Spring 2006;
- establish a new online information service (working title: Environment Direct) to provide information on the environmental impact of a range of everyday products and services, and practical advice on sustainable lifestyle choices;
- provide up to £4m over three years to roll out a new package of measures to help thousands of community groups across England to take action on sustainable development, including climate change; and
- enhance our new Climate Change Communications Initiative, to change public attitudes toward climate change, above all at local, grass roots and regional level.



Llywodraeth Cynulliad Cymru
Welsh Assembly Government



SCOTTISH EXECUTIVE



Published by TSO (The Stationery Office) and available from:

Online

www.tsoshop.co.uk

Mail, Telephone, Fax & E-mail

TSO

PO Box 29, Norwich, NR3 1GN

Telephone orders/General enquiries: 0870 600 5522

Fax orders: 0870 600 5533

E-mail: book.orders@tso.co.uk

Textphone 0870 240 3701

TSO Shops

123 Kingsway, London, WC2B 6PQ

020 7242 6393 Fax 020 7242 6394

68-69 Bull Street, Birmingham B4 6AD

0121 236 9696 Fax 0121 236 9699

9-21 Princess Street, Manchester M60 8AS

0161 834 7201 Fax 0161 833 0634

16 Arthur Street, Belfast BT1 4GD

028 9023 8451 Fax 028 9023 5401

18-19 High Street, Cardiff CF10 1PT

029 2039 5548 Fax 029 2038 4347

71 Lothian Road, Edinburgh EH3 9AZ

0870 606 5566 Fax 0870 606 5588

TSO Accredited Agents

(see Yellow Pages)

and through good booksellers

ISBN 0-10-167642-5



9 780101 676427