



## **So much hot air?**

**A report on the performance of the UK on energy and climate issues  
for the UK Green Group in the European Parliament**

September 2005

v. 1.0

*Royal Vauxhall balloon, historical artwork.* This balloon was launched from London in 1836, piloted by British balloonist Charles Green, and carrying two passengers. It travelled 770 kilometres in 18 hours to Weilberg, near Frankfurt in Germany. Published in *A system of aeronautics, comprehending its earliest investigations, and modern practice and art*, Philadelphia, 1850. Picture credit: Science, Industry & Business Library / New York Public Library / Science Photo Library

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*Association for the Conservation of Energy*  
Westgate House  
2a Prebend Street  
London N1 8PT  
UK

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## EXECUTIVE SUMMARY

This report aims to identify the impact that Tony Blair could make on European carbon dioxide emissions if he adopted a strong approach to opportunities arising during the UK Presidency.

The British Prime Minister is on record as saying that climate change is the most important environmental challenge we face. He has repeatedly reinforced the message that carbon dioxide emissions are a leading cause of climate change and that society must reduce its use of fossil fuels in order to reduce its impacts.

The European Community has set in progress a programme to address climate change and to achieve its Kyoto commitment of an 8% reduction in CO<sub>2</sub> emissions over 1990 levels by the 2008-2012 reporting period. This target has been distributed amongst the Member States; the target for the UK is 12.5% but it has set a domestic target of a 20% reduction by 2010, with a further reduction needed by 2020.

The Directives and other instruments developed through the European Climate Change programme and associated activity are addressed in this document. The progress of the UK in implementing these domestically is noted, and compared with other Member States where appropriate. The key points are:

<b>Energy Performance of Buildings Directive</b>	Adopted in January 2003, and due to begin implementation in January 2006, this directive aims to improve the energy efficiency of buildings and reduce carbon dioxide emissions, with expected savings of up to 45 MtCO <sub>2</sub> possible. Plans for implementation in the UK are subject to delay and the adoption of a minimalist approach, despite the willingness of the businesses consulted to take a more progressive approach. Many Member States whose regulatory and inspection schemes were at a similar level of development are adopting a more robust attitude to implementation.
<b>Energy End Use and Energy Services Directive</b>	This directive is due for its Second Reading in October 2005, then possibly for Conciliation under the UK Presidency. It aims to improve energy efficiency by incentivising energy suppliers. It also calls for binding annual improvement targets resisted by UK suppliers. The UK has a long-standing programme, the Energy Efficiency Commitment, which shows how mandatory targets in the residential sector for energy suppliers can work, as the current scheme has exceeded its targeted energy saving by over 40%.
<b>EU Emissions Trading Scheme</b>	The National Allocation Plan for the first round of Greenhouse Gas Emissions Trading was due in January 2005. The UK's submission has changed from a first draft representing an allocation based on 83% of 1990 levels up to 90% of 1990 levels. This is despite the UK's own scheme having been successful and British businesses being aware of how the system works.
<b>Framework Directive on Eco-design requirements for Energy Using products</b>	This directive was implemented in 2005 and seeks to improve the overall emissions and resource use of energy using products. Despite substantial experience of Market Transformation Programmes and proven energy labelling systems, only voluntary targets are called for, thus losing the opportunity to make real progress in industries where voluntary systems have not been popular, unlike those where energy labelling has already made real change.
<b>Cogeneration Directive</b>	In February 2004 this framework directive was adopted, calling only for a Combined Heat and Power (Cogeneration) strategy from all Member States. There is no requirement for any action to set or achieve any targets for

cogeneration: CHP in the UK is stagnating.

### **Green Paper on Energy Efficiency**

The Green Paper was launched June 2005 and aims to improve energy efficiency in all sectors. There is a consultation process in progress with calls for a number of communication events to take place in each Member State.

The overall response of the UK to these directives and other initiatives gives little confidence that the UK Presidency will take a leadership role in energy conservation, despite the emphasis placed on climate change in speeches. In order to demonstrate that reducing energy consumption is really the priority issue, Mr Blair must take the following actions to ensure that the legacy of his Presidency does not turn into so much hot air:

- **Ensure that the EPBD is implemented - not on a minimalist basis - but in a purposeful fashion, maximising opportunity**  
*Specifically, he should:*
  - Drive for early adoption of in-use energy performance certificates in all buildings visited by the public, not just publicly owned ones
  - Press for a schedule for completion of national registers of energy certificates of dwellings
  - Demand a dialogue for harmonising of building standard methodologies to allow comparison of energy efficiencies in dwellings across Europe, allowing for differences in climate and addressing the increase in air-conditioning
- **Drive for challenging and binding targets for energy demand reduction through the Energy Services Directive so that both business and the climate benefits**  
*Specifically, he should:*
  - Use the support of European and UK business leaders to set high standards and challenging targets that enable investment over a longer term
- **Drive for early review and strict improvements to the National Allocation Plans in the Emissions Trading Scheme**  
*Specifically, he should:*
  - commit to the early introduction of the next phase of the Scheme;
  - press for much tighter national allocations in Phase 2. The allocations must be challenging enough to make carbon trade at a significant price - and the value of saving must be recognised as being more than the value of polluting.
- **Drive for an end to the voluntary agreements for the Eco-design and End-use Products Directive**  
*Specifically, he should:*
  - Call for early review of achievement under the voluntary agreements
  - Set challenging targets for those sectors that have failed to make substantial progress in reducing energy demand of their products during this first phase
  - Ensure that whole life energy use is measured to avoid new products using more total energy through 'efficient' use for a longer time
- **Require early delivery of the cogeneration strategies with clear objectives and publicly reviewed progress reports for achieving them**  
*Specifically, he should:*
  - Make good on previous wasted opportunities and capitalise on the strong research basis for cogeneration potential in the UK in order to set challenging and binding targets, and in order to lead on the coordination of objectives for cogeneration across Europe.
- **Personally lead the public events to discuss the Energy Green Paper and ensure the wider understanding of the urgency of climate change and the need to conserve energy through all sectors of European society**  
*Specifically, he should:*
  - Engage in public debate through a series of events throughout the EU to raise awareness of the Green Paper and the need for change

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## GLOSSARY

CBI	Confederation of British Industry	ECCP	EU Climate Change Programme
CHP	Combined Heat and Power	ETS	Emissions Trading Scheme.
Cogeneration	A system whereby an electricity generation process that produces heat as a by-product can be designed so that the heat is used in another process or system (same as CHP)		Companies who have exceeded their allowances can buy credits from those who have invested to reduce their emissions below their allowances
CO <sub>2</sub>	carbon dioxide	GHG	Greenhouse gases
Defra	Department for Environmental, Food and Regional Affairs. The UK responsible department for energy efficiency	Mt	Megatonne (1 million tonnes); MtC= Mt of carbon; MtCO <sub>2</sub> = Mt of carbon dioxide
DTI	Department of Trade and Industry. The UK responsible department for energy	NAP	National Allocation Plan; the total of allowances for trading in one MS for the EU ETS
EBPD	Energy Performance of Buildings Directive	ODPM	Office of the Deputy Prime Minister, The UK responsible department for housing, <i>inter alia</i>



# 1 SETTING THE SCENE: CLIMATE CHANGE AND ENERGY CONSERVATION POLICY IN EUROPE

## 1.1 Introduction

Commitments on climate change are under the spotlight: the UK holds the EU Council Presidency and Tony Blair has made it clear that climate change, and reduction in carbon dioxide emissions, are at the top of the agenda.

Events at the G8 summit showed that fine words can buckle under the strain of international negotiations. How firm a footing does the UK government have for its stance on carbon dioxide in the international context?

This paper examines the record of the UK government in delivering its promises on climate change in order to identify the specific opportunities for its Presidency. The actual performance against targets is not what is of most concern here. Blame can always be laid at the feet of other actors for failure to achieve the bold and challenging targets laid down. The greenhouse gas emissions reduction target under the Kyoto Protocol (12.5% by 2010) and the purely domestic carbon dioxide emissions goal (20% by 2010, 27-33% by 2020) are on the public record and are assessed regularly<sup>1</sup>. Many factors are blamed for the current trend towards falling short of the immediate goals. This paper does not seek to examine these factors, but rather takes a more fundamental view:

- What has the UK done to implement European policies designed to reduce carbon dioxide emissions, and has it really treated the issue with the priority stated?
- Has it actually implemented Directives in such a way that their potential can be fulfilled?
- Has it done its best to achieve the designed effects to mitigate climate change, or has it used other factors such as oil prices, uncertainty over energy security and industry concerns over competitiveness to draw back from the full commitment that it proposes in its speeches?

This report starts with a brief review of the main policy instruments applicable in the EU. It considers the expectations of the instruments, the key issues in each and considers the potential for carbon dioxide emissions reduction. It is followed in section 2 by an assessment of the UK approach to implementation and considers whether the manner in which implementation has progressed is consistent with the priority afforded to reducing carbon dioxide emissions in the international arena. Where appropriate, comparison is made with implementation in other Member States. Finally, in section 3, the implications of the approach to implementation are discussed, including the degree to which Mr Blair's actions speak as loudly as his words or whether his fine words are so much hot air.

## 1.2 Key European Policies

The instruments considered here are those developed and implemented since Mr Blair came to power in 1997. Limiting these to those affecting energy demand and climate change produces:

- The EU commitment to the UNFCCC Kyoto Protocol, as described in the European Climate Change Programme (2001), which aims to reduce greenhouse gas emissions
- The Energy Performance of Buildings Directive (January 2003, due to begin implementation January 2006), which aims to improve the energy efficiency of buildings and reduce carbon dioxide emissions
- The Energy End Use and Energy Services Directive (due for Second Reading in October 2005 then possibly for Conciliation under the UK Presidency), which aims to improve energy efficiency in buildings and transport
- The National Allocation Plan for the first round of Greenhouse Gas Emissions Trading (January 2005)

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<sup>1</sup> The 20% domestic CO<sub>2</sub> reduction goal (32.88 MtC or 120.56 MtCO<sub>2</sub>) exceeds the 12.5% international GHG reduction commitment (26.05 MtC or 95.52 MtCO<sub>2</sub>) by 6.83 MtC (25.04 MtCO<sub>2</sub>) or 26%.

- The Framework Directive on Eco-design requirements for Energy Using products (2005)
- The Directive for the promotion of cogeneration (February 2004)
- The Green Paper on Energy Efficiency (launched June 2005), which aims to improve energy efficiency in all sectors

### **1.2.1 The European Climate Change Programme**

At the European Council in Gothenburg in June 2001, it was confirmed that the European Union was determined to meet its commitments under the Kyoto Protocol and to ratify it so as to allow its entry into force. The European Climate Change Programme (ECCP) was therefore developed. Its main aim is to halve the difference between the projected emissions of the EU in 2010 and the target set at Kyoto i.e. an 8% global reduction in greenhouse gas emissions (Europa 2001a).

The ECCP has a number of strands, including the introduction of the Emissions Trading Scheme and four other types of measure - 'cross-cutting', energy, transport, and industry. The programme provides the basis for the Directives listed below and for the Green Paper. It also proposed an initiative on increased energy efficient public procurement which promotes demand for energy efficient technology from the public sector, and a public awareness campaign and campaign to disseminate the results of actions and spread best practices.

### **1.2.2 Energy Performance of Buildings Directive**

The buildings sector accounts for over 40% of the EU's energy requirements. It offers the largest single potential for energy efficiency, as more than 20% of the present energy consumption and up to 45 MtCO<sub>2</sub> could be saved each year by 2010 by applying more ambitious standards when developing new or refurbishing existing buildings. This is a considerable contribution to meeting the Kyoto targets.

The Directive on the energy performance of buildings, in force since January 2003, builds on existing legal instruments, the Boiler Directive (92/42/EEC), the Construction Products Directive (89/106/EEC) and the buildings provisions in the SAVE Directive (93/76/EEC) with the aim of increasing the energy performance of public, commercial and private buildings in all Member States (Europa 2005a).

The requirements of the Directive can be summarised as:

- measurement and production of a certificate of the energy performance of buildings
- regular inspection of boilers above 20 kW
- regular inspection of air conditioning systems
- raised and regularly reviewed minimum standards for new buildings and refurbishments

Member States are due to implement the Directive from 4<sup>th</sup> January 2006. Progress towards this is reviewed in the next chapter.

### **1.2.3 Energy Demand Management**

The proposal for a Directive on the promotion of End-use efficiency and Energy Services (the Energy Services Directive) was introduced in 2003 and has been proceeding through the various legislative procedures since then. It is anticipated that agreement will be achieved during the UK Presidency, which has declared it a priority to be adopted by the end of 2005.

The proposal sets out clear mandatory targets for annual energy savings at Member States' level and for the share of energy efficient public procurement for the period 2006-2012. For the same period, strong incentives are given by the Directive for Member States to ensure that suppliers of energy offer a certain level of energy services. The most difficult area of negotiation has been whether these targets should indeed be mandatory. The UK indicates that voluntary targets could be sufficient.

### **1.2.4 The Greenhouse Gas Emissions Trading Scheme**

In alignment with the ECCP, Directive 2003/87/EC was adopted, which establishes an EU greenhouse gas emission trading scheme from 1 January 2005.

This scheme aims to enable the EU and its Member States to meet the commitments to reduce greenhouse gas emissions made in the context of the Kyoto Protocol. The major emissions producers are automatically included in the scheme: installations operating in the energy sector, iron and steel production and processing, the mineral industry and the paper and card industry.



Each Member State was required to draw up a national allocation plan indicating the allowances intended for the relevant period and how to allocate them to each installation. The final plans covering the initial three-year period (1 January 2005 to 1 January 2008) should have been published by 31 March 2004 at the latest. The volume of allowances in the initial period is nearly 6 billion tonnes of carbon dioxide. The aim of the scheme is to make it cheaper to achieve the Kyoto target.

#### **1.2.5 Energy Efficiency of End-use Equipment**

The Framework Directive proposed in the ECCP (under the Energy Directorate) was created independently of a proposed Eco-design Directive (under the Environment Directorate). After consultation the two were merged to create the *Framework Directive on Eco-design requirements for Energy Using products 2005/32/EC*.

Adopted by the Council and the European Parliament on 6 July 2005, it sets up the legal framework needed by the EU to set future standards on all environmental aspects of energy using products that can be influenced at the design stage (Europa 2005b).

#### **1.2.6 Combined Heat and Power**

Directive 2004/8/EC on the promotion of cogeneration based on useful heat demand in the internal energy market came into force on 21<sup>st</sup> February 2004.

The Commission's cogeneration strategy of 1997 sets an overall indicative target of doubling the share of electricity production from cogeneration to 18% by 2010. This was endorsed by the Member States in the form of a Council Resolution in December 1997. The indicative target was taken up in the Communication on CHP (COM(97)514 final) providing for an analysis of the barriers and strategies for its realisation. Projections showed that meeting this target could be expected to lead to avoided CO<sub>2</sub> emissions of over 65 MtCO<sub>2</sub>/year by 2010.

However, during the committee stages, it was decided that the indicative target value from the 1997 strategy was out-dated, so the Directive does not include targets. Instead it urges Member States to carry out analyses of their potential for high efficiency cogeneration. The rationale is based on the wide ranges of potential for Member States, and the Directive is therefore a "*framework for the promotion of this efficient technique in order to overcome still existing barriers, to advance its penetration in the liberalised energy markets and to help mobilising[sic] un-used potentials*" (Europa 2005c). In effect, all that the Directive requires is that the MSs carry out an analysis of potential for cogeneration and report on progress.

#### **1.2.7 The Green Paper on Energy Efficiency**

The Green Paper on Energy Efficiency, launched in June 2005, sets out ways to reduce energy consumption by 20% by 2020. The energy savings could lead to a saving of up to €60 billion per year - a saving of between €200 and €1,000 per household per year. The Paper focuses primarily on buildings and transport, highlighting the potential for cost saving actions by individual households. It also suggests reviewing tax systems to favour green products and services.

The Paper provides a list of key actions that might be taken to achieve the savings:

- Establishing Annual Energy Efficiency Action Plans at national level. Such plans might identify measures to be taken at national, regional and local level and subsequently monitor their success both in terms of improving energy efficiency and their cost-effectiveness. The plans could be complemented by a "benchmarking" and "peer review" process at European level, so that Member States can easily learn from the successes and mistakes of others and to ensure the rapid spread of best practice throughout the EU;
- Giving citizens better information, for example through better targeted publicity campaigns and improved product labelling;
- Improving taxation, to ensure that the polluter really pays, without however increasing overall tax levels;
- Better targeting of state aid where public support is justified, proportionate and necessary to provide an incentive to the efficient use of energy;
- Using public procurement to "kick-start" new energy efficient technologies, such as more energy efficient cars and IT equipment;

- Using new or improved financing instruments, both at Community and national level, to give incentives, but not aid, to both companies and householders to introduce cost-effective improvements;
- Going further regarding buildings, where the Energy Performance of Buildings Directive applies, possibly extending it to smaller premises in a manner that ensures cost-effectiveness and minimum additional bureaucracy;
- Using the CARS 21 Commission initiative to speed up the development of a new generation of more fuel-efficient vehicles.

The paper is a consultation document, containing a large number of questions that seek responses by March 2006 (the exact closing date is unclear and the process is described as 'iterative').

## 2 UK ACTION ON CLIMATE CHANGE

### 2.1 Approach to implementation

The priorities stated for the UK Presidency include:

#### “Climate change

Representing the EU at the UN Climate Change negotiations in December; developing a post-2012 strategy; international engagement, particularly with the growing economies of China and India; and addressing the impact of aviation on climate change” (FCO 2005)

Elsewhere, Prime Minister Tony Blair has confirmed and reconfirmed that he considers climate change and carbon dioxide emissions to be a threat. In a speech to HRH the Prince of Wales Business and the Environment Programme, he laid out the priorities for the UK, calling climate change “a challenge so far-reaching in its impact and irreversible in its destructive power, that it alters radically human existence” (Blair 2004b)

In the speech he listed the actions being taken in the UK . . . :

- “The Climate Change Programme and its review [started 2004]
- “The Carbon Trust is helping business ... to save almost 8 million tonnes of carbon ... by 2010, more than 10% of their emissions in 2000
- “renewables obligation ... to achieve a 15.4% contribution from renewables to the UK's electricity needs by 2015, [with] 20% contribution by 2020
- “minimum standard for the energy performance of new buildings raised by 25% in 2002; to be raised another 25% in 2005.”

. . .and what he wanted to do:

- “we have to do more to achieve our commitment to reduce carbon dioxide emissions by 20%”
- to advance work on promoting the development and uptake of cleaner energy technologies begun under the French Presidency in 2003
- to invest on a large scale in existing technologies and to stimulate innovation into new low carbon technologies for deployment in the longer term
- build an international consensus on how we can speed up the introduction of these technologies
- to establish a carbon trading market throughout the EU to change the way thousands of businesses think about their energy use
- ... environmental responsibility in consumer products to become as fundamental as health and safety is now
- to see aviation brought into the EU emissions trading scheme in the next phase of its development

It is true that the UK has set in process a number of policy instruments to promote renewable energy, energy efficiency and carbon dioxide emissions reductions. The approaches taken by the UK may have been ground-breaking, as demonstrated by the UK Emissions Trading Scheme and the Energy Efficiency Commitment - both of which could be seen as forerunners of the European equivalents for the EU ETS and the Energy Services Directive - but then also rely on third parties to deliver, thus requiring very little expenditure from the public purse. In many ways, the UK programmes could be described as early adoption of the inevitable, and where this was openly recognised, such as with the

Emissions Trading Scheme, there was some concern that there was risk of wasted effort in designing something that could - and did - turn out to be incompatible with the European approach.

## **2.2 The UK Climate Change Programme**

The text of the Kyoto Protocol was adopted unanimously in 1997, and this called, among other things, for targeted reductions in greenhouse gases. The EU agreed to reduce emissions by 8% by the 2008-2012 reporting period compared to 1990 levels, with the target to be apportioned throughout the Member States. Awareness of energy conservation and its role in reducing carbon dioxide emissions had not only been recognised, but carried considerable momentum with it. Climate change was an issue that was ripe for action by the new Labour government.

In June 1998, during the UK's Presidency, the EU agreed to redistribute its overall Kyoto target and as a result, the UK gained its commitment to reduce emissions by 12.5%. *Climate Change: The UK Programme* was published in November 2000. The goal to cut carbon dioxide emissions by 20% by 2010 was stated to be challenging but achievable. However, it was also stated that after 2010 emissions were forecast to begin rising, and longer term commitment to prevent climate change was thought to be needed. It estimated that by the policies and measures proposed it could cut greenhouse gases by 23% and carbon dioxide emissions by 19% by 2010 compared with 1990 levels (DETR 2000). The UK programme put into place carries a good deal of similarity to the European Climate Change Programme, and it could be said that this similarity is a reflection of the Government's desire to lead by example in the EU. It is therefore relevant to review how key elements of the programme are meeting its goals.

### **2.2.1 Domestic experience of carbon dioxide emissions reduction programmes**

#### **2.2.1.1 Energy Efficiency Commitment**

The Energy Efficiency Commitment was a revision and extension of the Energy Efficiency Standards of Performance which had been running since 1991. The intention of both programmes was to promote installation of energy saving measures in homes thus reducing energy demand. Whilst the concept of setting energy suppliers a collective target for energy savings from customers of 62 TWh over the initial period 2002-2005 was achieved, indeed surpassed, the second phase target for 2005-2008 has been the subject of controversy on many counts, in particular the methodology and changing the basis for calculating targets. It is also questionable whether the programme is really achieving the energy and carbon emissions reductions claimed for it, let alone those called for by the Climate Change Programme (House of Lords 2005). The Commitment is thought by the Government to be the basis for implementation of the End-use Efficiency and Energy Services Directive, so it is essential that it is sound before it is held up as an exemplar to other countries.

#### **2.2.1.2 Climate Change Levy**

The climate change levy (a tax on fuel use, with differential rates for gas and electricity, but not directly related to carbon emissions), was so removed from the day-to-day practice of most businesses that it has had no effect in driving down energy use amongst those paying the full tax, as a tax on energy use should. The Government even resisted it being identified clearly on fuel bills. Even more controversial was the 80% reduction in the levy for business sectors that negotiated 'Climate Change Agreements' with civil servants; the agreements were criticised as delivering little improvement over that which would be expected from normal cost-saving improvements and replacement of end-of-life plant (Waller 2001). Fortunately, they are at least delivering the levels of improvement agreed, so while it is heralded as a success by Government (FES 2005) there is far greater potential which should be tapped.

#### **2.2.1.3 UK Emissions Trading Scheme**

The UK pioneered carbon emissions trading by launching, after due consultation, its own trading scheme in 2002. It is the only carbon scheme to have received significant Government funds. This scheme was open to any business that wished to take part, and attracted industries as wide ranging as chemical manufacturers, retail food businesses, property development, local authorities, museums and airports. Thirty-one organisations committed to emission reduction targets of 11.88 MtCO<sub>2</sub> against 1998-2000 levels over the life of the scheme (2002-2006). Companies that had negotiated Climate Change

Agreements could also participate. The aim was to reduce carbon dioxide emissions by promoting early adoption of new technologies. The results of three years are now available and appear to be on track (Defra 2005a), whilst a review of the first two years indicated that there was a trend for companies to rely on their own reductions rather than trading, but it was too early for the full impact of trading to be seen (NERA 2004). There has been considerable criticism that some of the principal beneficiary companies, which have profited from the scheme, have done so even whilst undertaking improvements required already under statute.

### **2.2.2 Official view of progress on the Climate Change Programme**

Despite concerns that energy use and carbon dioxide emissions have started to rise again, the Government remained firm that “the UK was on track to meet its Kyoto commitment - one of the few industrial countries to do so - and was also committed to meeting its ambitious domestic targets” (Morley 2005). Others take a different view, even regarding the Kyoto commitment - and with respect to the domestic target, the Government itself admits that it “will not, on the basis of current policies alone, achieve [its] ambitious 2010 domestic goal of a 20 per cent cut in carbon dioxide emissions” (Beckett 2004). Carbon levels have not declined at all since Mr Blair became Prime Minister in 1997.

The savings from the Climate Change Programme are used to update the projections for 2010 and were published in 2004 as part of the background data for the National Allocation Plans in respect of the EU Emissions Trading Scheme (q.v.). In this document (Defra 2005b), the projected savings for 2010 are estimated at 14.5 MtC (53 MtCO<sub>2</sub>).

A review of the Climate Change Programme is currently in progress.

## **2.3 UK support for key EU policies**

The elements of the UK programme described above have direct relevance to the influence of the UK in the European Union. The UK approaches to testing the mechanisms for emissions trading, for raising climate change awareness such as the ideas in the EU Green Paper, for direct taxation and indirect home energy efficiency improvements provide exemplars and experiences that are potentially vital to improve the design of climate change mitigation instruments for Europe. Yet the performance in implementing and supporting such instruments is inconsistent.

### **2.3.1 Implementation of the Energy Performance of Buildings Directive**

At the time of this report, the process of implementation of the Directive in England and Wales has become very confused, particularly as the Office of the Deputy Prime Minister (ODPM), that has responsibility for housing, building regulations, urban policy and regeneration *inter alia*, seems to have low awareness of climate change and its implications, and even less understanding of the role of the built environment in delivering the energy or carbon dioxide savings so urgently needed by DTI and Defra.

For the implementation of the Energy Performance of Buildings Directive, a lengthy consultation has taken place prior to amending the regulations for standards of domestic heating (April 2005) and to take account of the requirements for refurbishment of existing dwellings and non-dwellings (other buildings such as offices and shops) due to be implemented by January 2006, but likely delayed until April 2006. The 2004 Blair speech quoted in 2.1 promised a 25% improvement during 2005, whereas it is now likely just an 18% improvement some time in 2006. The extent of the lack of coordination within government, and the lack of attention to key issues relating to climate change, was demonstrated by the announcement by the new Housing Minister that she would drop requirements for energy improvements of all buildings being refurbished (Brown 2005).

Nevertheless, the ODPM is carrying out a review of the Building Regulations as required by the Directive. It has also made progress on the requirements for energy performance certification in owner-occupied homes, through the introduction of the Home Information Pack (ODPM 2005). Despite the previous pilots of energy surveys within the house buying process, there is further prevarication, with introduction on a voluntary basis in 2006 before becoming compulsory later in 2007. Any suggestion that this should be extended to owner-occupied houses that are not subject to a market transaction has been strongly resisted. Firm proposals for the implementation of certification in social housing or in private rented accommodation, or in commercial property, have yet to be published.

In the consultation on this issue, the ODPM were surprised to find that more than 60% of responses disagreed with its interpretation of the preamble to the Directive concerning the meaning of buildings visited by the public (which are required to publicise their energy

performance). However, the Department is abandoning the opportunity to promote improvement of whole house energy performance when an extension is built, and seems determined to carry on interpreting the phrase “public buildings and buildings regularly visited by the public” as ‘public buildings and public buildings’, rather than private buildings to which the public has access.

Whether the implementation of the Directive will achieve anywhere near the carbon savings anticipated for the UK is highly doubtful. The lack of a robust inspection and enforcement procedure on building standards means that a large percentage of new homes currently does not meet the minimum standards stated (BRE 2004). Rather than take action to improve this lamentable state of affairs the ODPM seems to prefer to reduce the stringency of the Building Regulations, by watering down proposals requiring pressure testing by the developers of new buildings to prove that they are fit for purpose. In respect of commercial buildings the weakness of the approach means that full certification is unlikely to occur until 2021 (Guertler *et al* 2005) and actual change in refurbishment practice unlikely to be promoted. Mr Blair’s message that climate change is the most important challenge seems to fall on deaf ears in this department.

Member States are due to implement the Directive from 4<sup>th</sup> January 2006. It is unlikely that the UK will comply with any part of this Directive at this stage other than having regularly reviewed building standards: already the Scottish Executive has announced it will not.

#### *2.3.1.1 Comparison with progress in other Member States*

Each of the Member States is coming to the implementation of the Directive from a different starting point; most needed at least some primary legislation to be passed for various aspects to be implemented, most need to revise building codes and standards, most are developing or waiting for others to develop a calculation methodology for energy performance. Few have existing certification schemes, most require some sort of regulation or legislation to require certification and none are requiring display of energy certificates for non-public buildings (Janssen 2005).

**Denmark**, having had an energy certification process in place since 1996 is the most advanced in this respect. They have learned much from the development of labels and the response of the public, yet whether these lessons are being drawn upon in the development of UK labels is questionable. A new law for energy saving in buildings in Denmark was approved in June 2005. This included certification and public display of labels for public buildings and large commercial (trade and services) and domestic buildings (apartment blocks) updated every five years.

**Hungary** has introduced a building certification programme that includes energy performance, and no building may be commissioned without a certificate from July 2006. From January 2007, no building may be sold without such a certificate. **Latvia** already uses building certificates in order to measure existing energy consumption and stimulate dialogue on improvements. New buildings in **the Netherlands** already require energy performance certificates (for construction, sale or rental) and there is a quality assurance scheme in place to ensure both assessment and compliance.

In **France**, the national energy efficiency plans published in 2000 require a 15% increase in efficiency in existing domestic buildings and 40% increase in non-domestic building efficiency.

**Slovenia** has recognised that considerable benefits are to be had from energy efficiency refurbishment in buildings and is commencing a retrofitting programme for existing building stock.

**Belgium** has revised its building codes to cover energy performance and indoor climate and set new minimum standards. In **Finland**, new standards have the effect of a 30% increase in energy efficiency for new buildings.

In **Germany** important progress has been made by requiring thermal optimising, i.e. looking at how the whole heating and cooling, passive and active systems work together to achieve optimum indoor climate and energy consumption. This should achieve 25-30% improvement in energy consumption in new buildings. For public buildings, the approach has led to between 29 and 44% improvements for refurbishment of major administrative buildings in examples to date.

Although it must be said that progress towards implementation of the Buildings Directive across Member States is patchy, the UK is no better than many and arguably less well prepared in a number of areas compared with those MSs that have a similar background in building codes, similar climates and economic issues. Certainly the UK cannot make any

claims on implementing this Directive that support its stance on leading the way on climate change.

### **2.3.2 End-use Efficiency and Energy Services Directive**

The role of the UK in the development of this Directive seems to be two-fold; the role model provided by the Energy Efficiency Commitment (and previously the Energy Efficiency Standards of Performance) which enables the UK to at least consider that it has influenced the process; and the timing, in which negotiations could be concluded under the UK Presidency if sufficient political will is brought to bear.

One of the chief concerns at present is the desire for binding targets; even within the UK opinions are divided on this, with some politicians and business leaders calling for them, and some civil servants and business associations seeing them as a threat. In this respect there is the danger that the influence of the civil servants and business associations will succeed in watering down any agreement, as they did with the National Allocation Plans, in this case for compliance to become purely voluntary. If so, the Blair rhetoric supporting measures against climate change will be dealt a severe blow.

### **2.3.3 National Allocation Plan - EU Emissions Trading Scheme**

The process leading up to the submission of the National Allocation Plan (NAP) included assessment of the industries covered, updating of the emissions projections and negotiation over the relationship between the EU ETS and the UK one. Defra identify on their web site that "the UK published and submitted a provisional National Allocation Plan (NAP) to the European Commission in May 2004. This made clear that the details it contained ... were subject to revision, following the completion of work on the Updated Energy Projections (UEP) and Climate Change Agreements (CCA) targets." They go on to state that other submissions were made in June, September, November and December 2004, and February and March 2005 (Defra 2005b).

This is interesting, because the original UK draft NAP was published in January 2004, a publication which is no longer noted on the Defra website. At this stage the plan was ambitious, at 83.7% of 1990 levels or 726 MtCO<sub>2</sub>. As the first Member State to publish its plan, the UK was setting the standard. The Prime Minister publicly challenged the Commission to examine thoroughly the submissions of other countries, the inference being that they were likely to be far too generous.

Unfortunately, it would appear that this brave UK stance has since led to considerable backsliding; those industries affected successfully put their case that they would be disadvantaged in Europe, citing risks to competitiveness. The original NAP was increased, in May by 10 MtCO<sub>2</sub> to 736 or 84.8% of 1990 levels, then in October up to 756 MtCO<sub>2</sub> after further pressure from the CBI and "revised forecasts" from DTI, the government department responsible for energy forecasts and for industry issues (including the mantra "competitiveness"). Other MS NAPs emerged that were more cautious, so that the final UK NAP, at 778 MtCO<sub>2</sub>, was no more than a reflection of the domestic energy measures already in place, and is the subject of a court challenge between the Commission and the UK Government. In the space of 15 months, the Plan grew from allocating 726 to 778 MtCO<sub>2</sub>, an increase of seven per cent, and limiting the target to only 10% below 1990 levels.

It could be said that the UK is no worse than other MSs in drawing up its NAP. But equally, it is no better, which is hardly a demonstration of leadership. Thus despite the experience and understanding the UK had developed in the process of emissions trading, through the domestic scheme, it has failed to take up the opportunities for real progress towards the carbon reduction targets.

### **2.3.4 Eco-design of End-use Products**

Originally the draft directive on Energy Efficiency of End-use Equipment had been incorporated into an approach to integrated product policy that leads to the requirements for voluntary minimum standards for energy using equipment. The UK's role in this has been far from strong. The experience that they could have brought to this, based on the Market Transformation Programme<sup>2</sup> and its predecessors, has been lost. It is clear that some voluntary agreements have worked to drive down energy use in products such as white goods (fridges, freezers, washing machines), but there is clearly no market incentive for the other energy using products to redesign for lower energy use, or they would have already commenced the process. Voluntary agreements in this case are fraught with

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<sup>2</sup> A Government initiative that helps inform policy decisions relating to the environmental impact of products.

danger and, as with the UK experience of the Climate Change Levy (see above), the minimum standards agreed are likely to be doing little more than follow natural business trends.

### **2.3.5 Combined Heat and Power**

The strategy for Combined Heat and Power was published in April 2004 (Defra 2004b). The Strategy endorses the target set in 2000 to have 10 GW<sub>e</sub> of “good quality” CHP installed by 2010, but research by independent forecasters (Cambridge Econometrics 2003) places doubt on whether the target will be achieved. The main reason given for the failure of CHP to capitalise on the momentum of the 1990s is the low price of gas and the low purchase price of electricity from CHP to the grid. Yet the government regulator has set the rules for distributed generation, and has ensured that these promote centralised generation over other models. In the UK distributed generation will only develop if it can overcome barriers presented by a centralised market. This contrasts with the approach in Germany, where the prescriptive approach places the onus on the distribution system to adjust in order to deliver the benefits accrued from CHP and micro-generation (Biermann 2003).

This is an example of the UK’s failure to capitalise on the momentum achieved through the CHP Directive. Since targets have not been set in the Directive, there appears to be no push to achieve domestic targets, despite fulfilling the simple requirements of a directive that promised so much, but has delivered so little.

### **2.3.6 Energy Green Paper**

The UK has considerable experience of consultation events through a wide variety of stakeholder organisations. Consultations by the Performance and Innovation Unit (now the Prime Ministers Strategy Unit) produced an Energy Review in 2002 (PIU 2002) to inform the development and delivery of the Energy White Paper (DTI 2003), which in turn was followed by the Energy Efficiency Action Plan (Defra 2004a). Each was preceded by a formal consultation exercise. A consultation as part of the review of the UK Climate Change Programme has just been completed. The Government has announced it will fund a communications initiative with the aim of “changing public awareness, attitudes and ultimately behaviour ... to achieve our climate change goals” (Defra 2005c). The issues raised by the EU Green Paper need to be communicated with more than solely organisations with an interest in climate change and its effects, in order to ensure that strategies to change energy use behaviour are successful. Just one event has so far been organised, from which several Ministers previously scheduled have withdrawn. This engagement with the public is the type of activity that should be promoted Europe-wide during the UK Presidency, and the opportunity must not be lost.

## **2.4 English Regional approaches**

Although the Government Offices for the Regions were charged with responsibility for delivering carbon dioxide reductions through the Energy White Paper (DTI *op. cit.*) it is clear that many have taken the issue far further than required, in conjunction with Regional Development Agencies and other actors. Targets are embraced and, despite lack of central funding, innovative ways to drive forward energy efficiency and zero carbon emission programmes are widespread.

Both the South West and North East regions have undertaken substantial studies to develop strategies for developing renewable energy systems and energy efficiency improvements in the home. The South West strategy calls for sub-regional plans and these are already in place in many areas. East Midlands is another region where, despite being a net exporter of energy, energy efficiency and renewables are important parts of economic activity. The municipalities are no less involved, committing to the Nottingham Declaration on Climate Change, a UK initiative of members of the international climate network ICLEI, and participating in European campaigns calling for early display of energy labels on public buildings (Energie-Cités, 2005). This type of commitment has given rise to local and regional plans that promote low energy developments, with the London Borough of Merton creating a precedent by calling for a minimum percentage of the energy requirements for new developments to be provided by renewable energy sources, now adopted London-wide by the Mayor of London. This is in stark contrast to the slow progress in the minimum standards required of the national Building Regulations, and the total lack of progress in agreeing the required specification for low and zero carbon developments. Indeed the strategies developed by the South East, the South West and by London promote low carbon emissions solutions with targets at least as ambitious as those of “solar cities” such as

Barcelona. London has a particularly challenging target as with a fully urban environment, strong economic competition as a financial centre and a population of 7 million inhabitants and 10 million workers, its energy strategy compares with some smaller Member States (GLA 2004) in terms of its scale and ambition. It has also demonstrated its commitment to driving down transport emissions through the introduction of the congestion charge, in spite of considerable opposition.

It is clear that the English regions are ready, willing and able to set challenging targets to achieve real improvement in climate change mitigation. They deserve a UK Presidency that supports their actions in more than words.

### **3 OPPORTUNITIES FOR LEADERSHIP**

It is clear that there is a dichotomy between the words and actions of the UK Government under Tony Blair when approaching energy conservation and climate change mitigation, even when Europe gives a lead. The words are clearly spoken and often repeated - but time after time opportunities to turn words into action have been squandered. The clearest example of this has been the UK Government's schizophrenic attitude to its own domestic CO<sub>2</sub> reduction target. The Labour Party manifesto of 1997 - on the strength of which Tony Blair and his Party were swept to power - gave an unequivocal commitment to a binding "target" to reduce CO<sub>2</sub> emissions by 20% by 2010. Since then, this commitment has been consistently downgraded. By the time the UK Government published its Climate Change Programme in November 2000, the "target" had become a mere "goal". By February 2003 and the Energy White Paper, the Government was only prepared to commit itself to a "national goal to move towards a 20% reduction in carbon dioxide emissions below 1990 levels by 2010" (DTI 2003).

The UK Government's willingness to abandon its own target is all the more reprehensible given the trend in UK carbon dioxide emissions since 1997. Since Tony Blair came to power, CO<sub>2</sub> emissions have risen in no fewer than five out of the last seven years for which figures are available. And the trend looks set to continue: Friends of the Earth has calculated that carbon dioxide emissions from January to June 2005 increased to such an extent that, if this carries on, then the UK's contribution to climate change for 2005 could be the worst since 1992, and could yet mean that the UK will fail to meet its Kyoto targets (FoE 2005).

To what can we attribute this lack of political will in the face of climate change - acknowledged by Tony Blair himself to be "the most important environmental issue facing the world today" (Blair 2005a)? One of the most obvious factors, as we have seen, is a lack of courage in the face of opposition from businesses unwilling to adopt new practices, or to acknowledge that enhancing their environmental performance is the key to improving their future competitiveness and viability.

The best businesses, by contrast, are calling for challenging targets so that they can commit their development strategies knowing that there will be an element of support for their actions (EIBI 2005a). Lord Oxburgh, Chairman of Royal Dutch Shell, has publicly stated that industry needs certainty: "Indicative targets are a waste of space. What industry would like is very clear targets and a very clear time scale... and make it mandatory." (in Harvey, 2005). Politicians must not be allowed to duck their responsibilities merely because the worst businesses refuse to recognise the consequences of their actions upon the economy and, more importantly, the planet. In doing so, they are failing in their duty of care to their electorate as well as the countries that depend on Europe to lead towards a sustainable future. That future is a fragile entity; it is recognised that the weak initial Kyoto targets need to be developed in order to make real progress against climate change in future. Cities and countries that are threatened with rising sea levels cannot wait. Extreme climate events happen ever more increasingly, and when they occur in western economies, the burden on the insurance industry is increasing.

This is the stark context of the UK Presidency and its role in developing and implementing strong EU Directives and other policy initiatives. Until the end of this year Tony Blair has a unique - and hugely important - opportunity to demonstrate that, in spite of his disappointing record at home, he really is serious about reducing energy consumption and



tackling climate change. With the opportunity to shine on the European stage he should grasp the opportunities currently presented:

- **Ensure that the EPBD is implemented - not on a minimalist basis - but in a purposeful fashion, maximising opportunity**  
*Specifically, he should:*
  - Drive for early adoption of in-use energy performance certificates in all buildings visited by the public, not just publicly owned ones
  - Press for a schedule for completion of national registers of energy certificates of dwellings
  - Demand a dialogue for harmonising of building standard methodologies to allow comparison of energy efficiencies in dwellings across Europe, allowing for differences in climate and addressing the increase in air-conditioning
- **Drive for challenging and binding targets for energy demand reduction through the Energy Services Directive so that both business and the climate benefits**  
*Specifically, he should:*
  - Use the support of European and UK business leaders to set high standards and challenging targets that enable investment over a longer term
- **Drive for early review and strict improvements to the National Allocation Plans in the Emissions Trading Scheme**  
*Specifically, he should:*
  - Commit to the early introduction of the next phase of the Scheme;
  - Press for much tighter national allocations in Phase 2. The allocations must be challenging enough to make carbon trade at a significant price - and the value of saving must be recognised as being more than the value of polluting.
- **Drive for an end to the voluntary agreements for the Eco-design and End-use Products Directive**  
*Specifically, he should:*
  - Call for early review of achievement under the voluntary agreements
  - Set challenging targets for those sectors that have failed to make substantial progress in reducing energy demand of their products during this first phase
  - Ensure that whole life energy use is measured, to avoid new products using more total energy through 'efficient' use for a longer time
- **Require early delivery of the cogeneration strategies with clear objectives and publicly reviewed progress reports for achieving them**  
*Specifically, he should:*
  - Make good on previous wasted opportunities and capitalise on the strong research basis for cogeneration potential in the UK in order to set challenging and binding targets, and in order to lead on the coordination of objectives for cogeneration across Europe.
- **Personally lead the public events to discuss the Energy Green Paper and ensure the wider understanding of the urgency of climate change and the need to conserve energy through all sectors of European society**  
*Specifically, he should:*
  - Engage in public debate through a series of events throughout the EU to raise awareness of the Green Paper and the need for change

Only this strong action will deliver the potential encapsulated in the EU Climate Change Programme and its subsequent Directives. Without such action, the legacy of the UK Presidency will turn out to be so much hot air.

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## TIMELINE

EU Directive UK policy		Climate Change Programme	Emissions Trading Scheme	Energy Performance of Buildings	Energy Using Products	Energy Services	Combined Heat and Power	Energy Efficiency Policy	
2000	Q1	Draft Climate Change programme	Proposals for UK scheme submitted	Home Energy Efficiency Scheme (HEES)	Market Trans'n prog since 1998	Research to develop an approach for Energy Services			
	Q2								
	Q3				ACEP report				
	Q4				UK COP				
2001	Q1	Development of the EU programme	Consultation on UK ETS	Warm Front, Warm Deal etc replace HEES	Much activity on labelling: EU & UK	UK develop EEC from EESoP			
	Q2								
	Q3				Framework and rules announced				
	Q4				Energy Star adopted				
2002	Q1		Launch of UK ETS	Development of the EPB Directive	Further activity on labelling including vol. agreements	EEC starts	1997 potential assessment rejected in Committee stages		
	Q2								
	Q3								
	Q4								
2003	Q1		Adoption of Directive	EIF (04.01.03)		Development of draft Directive		Energy White Paper	
	Q2								
	Q3								
	Q4								
2004	Q1		Submission of National Allocation Plans		Draft directive	Publication of Directive	BF (21.02.04)		
	Q2								
	Q3								Negotiation of Plans
	Q4								
2005	Q1	Review of UK Climate Change Programme		Consultation and enactment into UK law	Consultation and enactment into UK law	Consultation		Energy Efficiency Action Plan	
	Q2								
	Q3								
	Q4								
2006	Q1		First period of trading		Adopted (06.07.05)	First Reading (07.06.05)		Green Paper published	
	Q2								
	Q3								
	Q4								
2007	Q1			Implementation		2nd Reading (October)		Consultation	
	Q2								
	Q3								
	Q4								
	Q1					Due into force (by 30.06.06)		Report on consultation outcome (followed by action plan)	
	Q2								
	Q3								
	Q4								
	Q1								
	Q2								
	Q3								
	Q4								