Parliamentary Office of Science and Technology

postnote

January 2004 Number 213

CLIMATE CHANGE AND BUSINESS

The Government's Climate Change Programme (CCP) is aimed at reducing UK emissions of carbon dioxide (CO_2) by a fifth, against 1990 levels, by 2010. Several of the measures included in the programme specifically target emissions from business. This briefing outlines those elements of the CCP relevant to business and their impact on reducing CO_2 emissions. It also discusses how the business community has responded to the CCP and outlines options to make policies more effective.

Key points:

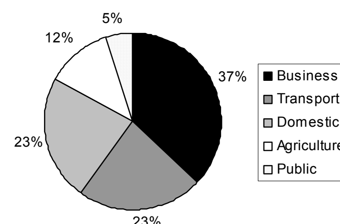
- **Business has significantly reduced its CO_2 emissions since the introduction of the CCP**
- **It may not be possible to achieve the reductions necessary to meet long term government aspirations**
- **There is a range of options available to policy makers to improve the current situation**
- **UK policy depends on international developments, most directly the EU emissions trading scheme**
- **Long term success depends on convincing businesses, their financial stakeholders, and their customers, that there are gains to be made by moving towards low carbon options.**

Background

Scientific evidence linking global climate change to increased emissions of greenhouse gases, mainly CO_2, from human activities is well documented. Governments have responded through the Kyoto Protocol which, if it came into force, commits developed countries to emission reduction targets. Developing countries, with fewer emissions per capita, have no Kyoto commitments.

The EU's target under Kyoto is to reduce emissions by 8% in the period 2008-2012. This 'burden' was shared out between member states; with the UK adopting a target of 12.5%. EU countries aim to help meet their targets through an emissions trading scheme to be launched in 2005 (this is discussed further below).

UK greenhouse gas emissions by sector, 2000



Source: Department for Environment, Food and Rural Affairs

Internationally, the business sector is one of the most significant emitters of greenhouse gases. Emissions originate in two key ways:

- directly, for example through combustion on site
- indirectly, for example through emissions associated with purchased gas and electricity.

In the UK, government figures show that business emissions of greenhouse gases accounted for just over one third of total UK emissions in 2000. By 2010, the business sector's absolute emissions would be 4% lower than in 2000. This is due to 'business as usual' factors such as the replacement of old equipment with new, usually more energy efficient equipment. However, because of growth in production, emissions from business would begin to rise again towards 2020.

The UK Climate Change Programme

To combat emissions from various sectors, including business, the UK Government introduced its Climate Change Programme (CCP) in 2000. This included a

domestic commitment to reduce CO_2 emissions by 20% by 2010. The government will review the CCP in 2004, but the measures it contains are expected to form the foundations for a long term commitment to reduce CO_2 emissions by 60% by 2050, as announced in the 2003 energy White Paper.

At the heart of the CCP are various 'economic instruments', policies which are designed to reflect the cost of the environmental damage from climate change in the pricing of goods. One such instrument, aimed specifically at the business sector, is the Climate Change Levy (CCL). The Levy is the focus of this briefing as it is the cornerstone of business-related climate change policy. It has also been the target of much criticism, particularly from the business community.

The Climate Change Levy (CCL)

The CCL is a tax on energy used by businesses, with the aim of providing a clear incentive to improve energy efficiency. For example, faced with higher energy bills a firm may decide to manage its energy use better and increase investment in low carbon technologies. To encourage companies to choose low carbon energy options, some energy sources are not taxed. These include fuel for combined heat and power and electricity generated from new renewable sources and coal mine methane. The Levy is intended to be 'revenue neutral', with revenue recycled back to business through both general tax relief and also a 'package' of measures which directly support the Levy. These are discussed below.

Climate Change Agreements

Climate Change Agreements (CCAs) are negotiated targets on energy efficiency that apply to certain 'energy intensive' business sectors. There are 44 such sectors which are selected according to Integrated Pollution Prevention and Control (IPPC) guidelines.[1] Examples include cement production and steel manufacture. Targets are either set on the absolute levels of CO_2 emitted by companies or on the overall amount of energy companies use. Companies signing up to the agreements receive an 80% discount on the Climate Change Levy. They can only continue to get the 80% discount if they achieve the targets set out in the agreements.

The Carbon Trust

This is a not-for-profit company set up by government to take the lead on low carbon technology and innovation. It is funded through CCL receipts, receiving approximately £50 million each year. The Trust's work includes running the following schemes:

- **Action Energy Programme** - designed to provide independent information and impartial advice for energy users in the non-domestic sector.
- **Enhanced Capital Allowances (ECA) scheme** - entitles companies to tax relief when they invest in certain qualifying energy efficient technologies. The current list of qualifying technologies includes combined heat and power and pipe insulation. With ECAs, businesses can write off 100% of the cost of energy saving equipment against their taxable profits within the first year of investment.
- **Low Carbon Innovation Programme** - provides funding for the development and deployment of a range of low carbon technologies. Projects cover both energy efficiency technologies and renewables.

Other Climate Change Programme measures

The Renewables Obligation

Under the CCP the Government introduced the Renewables Obligation (RO), a legally binding target for electricity supply companies. When the RO was first introduced, 10.4% of electricity was to be generated from renewable sources by 2010.[2] To give industry a greater sense of certainty when thinking about whether to invest in renewable energy, in December 2003, the Government announced that the obligation would be extended to 15% by 2015.

Transport initiatives

The CCP reformed company car taxation to encourage the use of more fuel-efficient vehicles. It also prioritised the development of cleaner fuels. This position has since been strengthened, most recently in the pre-budget report which announced a three-year rolling commitment to the duty differentials between the main road fuels and all alternative fuels. The relative rates are to be announced in 2004.

Improved building regulations

The CCP highlighted the importance of high standards for energy efficiency in building regulations. UK building regulations were updated in 2002 and raised standards for domestic, public and commercial sector buildings. The Energy White Paper from 2003 stated that work would start immediately on the next set of regulations with an aim to bring them into effect in 2005.

Company reporting

DEFRA offers practical help to companies who wish to report on emissions, either in the annual financial report or in a separate environmental report. This was promoted in the CCP. Currently, companies are only required by law to report information considered 'material' to operations. The Operating and Financial Review Working Group has been set up to examine how 'materiality' should be interpreted. Many NGOs argue that environmental issues should be covered.

Other policies

There are a number of other policy initiatives relevant to business which operate alongside the Levy package. Emissions trading is one of the key additional elements of the Climate Change Programme (other relevant policy measures are outlined in the box above). The UK Emissions Trading Scheme (UK-ETS) went live in April 2002. The scheme is centred around 31 'Direct Participants', mainly businesses. They volunteered to make absolute annual reductions in emissions and receive an incentive payment from government to participate in the scheme. The total amount of incentive money to be paid out by government is £215 million.

Companies making reductions beyond their targets are able to sell the excess in the form of 'credits'. These can be bought by companies who find it more difficult to reduce their emissions. Companies with Climate Change Agreements are also able to trade in the market. Emissions trading is one of the key mechanisms outlined in the Kyoto Protocol for reducing emissions internationally and an international trading system is

therefore envisaged. As noted, the most significant international development in the shorter term is the launch of the EU Emissions Trading Scheme in 2005. Government is currently consulting on how the scheme can be implemented practically.

Business response

Businesses, both through trade associations and the Confederation of British Industry (CBI), have expressed a range of concerns about the CCP. In particular, there is unease over what is perceived to be unfair targeting of particular sectors and the potentially negative impact on competitiveness due to increased costs.

Impact on different sectors

In a recent report the CBI suggested that policies under the CCP affect companies differently, depending on sector and size.[3] For example, one way in which revenue from the Levy is recycled to business is through a 0.3% reduction in employers' National Insurance Contributions (NICs). Companies in the service sector often employ a large number of staff relative to the size of operations, therefore receiving a large proportion of revenue through NICs recycling. By contrast, manufacturing companies with automated plant and few employees receive less money through NICs recycling, although their relative energy use and Levy payment may be higher. This situation is seen as unfair. As NICs have been raised since the CCP was introduced, the CBI has also argued that business generally has seen reduced benefit from the NICs recycling initiative.

Competitiveness

Some companies, such as BP, have claimed that the CCP has had a positive impact by encouraging energy efficiency. However, cost increases as a result of the policies in place have led others to claim that the impact on competitiveness has been negative. There are fears that companies may be forced to move some or all of their operations to countries with less strict (or non existent) climate change regulation. Apart from damaging the UK manufacturing base this means that CO_2 emissions could be exported. As CO_2 is a global pollutant, while this would help the UK meet its targets, it does nothing to address climate change itself.

In some cases, competition issues have been exacerbated by the way in which different companies are exposed to different policy instruments. For example, in the area of packaging, the plastics packaging sector is not classified as energy intensive and does not qualify for the 80% discount on the Climate Change Levy. However, competing sectors such as aluminium and glass packaging do. This has resulted in considerable controversy, and it has been argued that all sectors, regardless of their energy use, should have the opportunity to negotiate Climate Change Agreements (CCAs) which entitle them to the 80% discount. The Government took a step towards extending eligibility for CCAs in the recent Pre-Budget Report. It will now consider allowing more companies to enter CCAs if they meet certain criteria, yet to be specified.

The controversy over increased costs has intensified recently with announcement of the Government's current consultation on the implementation of the EU Emissions Trading Scheme. Some companies are concerned that the plans require greater emissions reductions than those strictly necessary to comply with the Kyoto Protocol. They argue that this creates a competitive disadvantage compared to the rest of the EU. It has been countered that many European countries are further from meeting their Kyoto targets than the UK, meaning that businesses in those countries face far higher costs.

Investment and innovation

The first period of the Climate Change Agreements (2001-2002) resulted in reduced emissions from businesses of 13.5 million tonnes of CO_2. However, it is difficult to identify the proportion of the reduction attributable to the policy measures currently in place. Total emissions reductions are likely to have been significantly affected by the collapse in UK production of steel producer Corus, the UK's biggest single industrial emitter of CO_2. It is also possible that companies have bought forward 'easy wins' in order to meet early targets.

Many businesses claim that, although current policy has encouraged them to improve the management of energy, it has not made investing in low carbon energy solutions significantly more attractive. However, it is widely understood that business investment in innovative technology is crucial if emissions reductions are to be sustained in line with long term government aspirations. An assessment of the impact of current environmental policies on innovation is given in POSTnote 212.

Policy Development

Building on existing policies

Representatives from NGOs, academia and business have argued that government needs to clarify the signal from the policy measures currently in place. They contend that this would stimulate business investment in low carbon technologies and improve energy efficiency. Various policy options have been put forward including:

- **Altering tax levels to shift investment margins**. Some environmental NGOs suggest that higher levels of taxation would encourage increased investment in energy efficient technologies. Business organisations disagree however, claiming that increasing taxation could exacerbate negative impacts on competitiveness.
- **Replacing the Levy with a carbon tax**. It is argued that taxing energy obscures the message that it is carbon emissions, rather than energy use itself, that companies need to address. A carbon tax would convey this message more clearly.
- **Applying the same policies to all companies**. As discussed above, many business leaders believe that negotiated targets for emissions reductions should be available for all companies. Other organisations argue that extending negotiated agreements results in disproportionately high administration costs. They would prefer a system where the taxation of energy or carbon is applied equally to all businesses. The

campaign group Green Alliance, for example, suggests phasing out Levy exemptions over a five-year period.
- **Simplifying Enhanced Capital Allowances**. Many businesses claim that this scheme is administratively complex and that the range of technologies covered is not comprehensive. They argue that these problems undermine the scheme's potential to encourage investment in low carbon technologies. Some business leaders favour a simpler scheme, for example direct grants for buying energy saving equipment.
- **Targeted recycling of Levy revenues**. In 2002, the CCL generated £837 million. A recent analysis estimated that government reinvested ~£70 million into direct funding for business-related schemes encouraging low carbon energy choices (such as Action Energy).[4] The remainder is mainly recycled through fiscal measures. In some cases, such as NICs, there is no focus on energy. Both business organisations and NGOs agree that recycling revenue in this way does little to make investment in energy efficiency more attractive. Hence, it is argued that the impact of the Levy could be improved if more revenue were directly targeted at energy-related schemes.

There is wide agreement that the CCP is overly complex. It is also unclear how many of the measures will operate alongside the EU Emissions Trading Scheme. As noted previously, DEFRA plans to review the CCP in 2004, once arrangements for EU emissions trading have been finalised. It has been argued that this provides an ideal opportunity to consider some of the above options.

A broader approach to climate change policy

Although the majority of commentators have focused on how to improve the measures currently in place, some business leaders and NGOs go further and argue that government needs to shift the focus of business-related climate change policy. They argue that current policy focuses almost exclusively on operational business emissions (i.e. those from on-site energy use and combustion). However, most companies have a much broader range of impacts. For example, there are CO_2 emissions associated with the sourcing, manufacture and transport of materials and products throughout the supply chain. There are also emissions associated with the use of products and services by consumers.

It is argued that to extend the scope for emissions reductions beyond the factory walls more use should be made of tools such as Life Cycle Analysis and Eco-Design. These take into account the impacts of products and services from the raw material stage to final disposal. It has also been suggested that government needs to actively develop the market for low carbon goods and services, particularly by increasing awareness amongst consumers about the long-term impacts of climate change. It is hoped that this would encourage businesses to think fundamentally about the compatibility of their existing projects and products with the envisaged low carbon economy. Some argue that the most effective way to develop the market for low carbon products would be to introduce a tax on domestic energy. Government has taken initial action in a number of areas:
- educating businesses and households
- developing energy efficiency standards for products
- extending product labelling schemes on white goods
- extending fiscal incentives, such as tax-breaks
- setting strict procurement standards.[5]

External pressure

External organisations, such as NGOs and those in the financial sector, are also exerting pressure on businesses regarding climate change. They act by scrutinising and benchmarking company performance. Many NGOs contend that government should introduce mandatory reporting for business on issues such as climate change to facilitate this process. They argue that this would directly impact on the reputation of companies and brands, promoting positive action. Recent developments in mandatory reporting are outlined in the box on page 2.

In the financial sector, it is argued that greater transparency in company reporting would help financial companies to estimate the risks posed to their interests by climate change. For example, shareholder value could be affected if a company has to make large reductions in emissions under domestic or international legislation. Increasing concern from those in the City is represented by initiatives such as the Carbon Disclosure Project (CDP). This is a group of 88 leading institutional investors, representing some $9.4 trillion in assets, who have collectively written to the 500 largest companies, asking what they are doing to reduce emissions.

The CDP has shown that the risks from climate change can be significant and that not all companies in the same sector will be affected to the same degree. It has also raised concerns over the potential for litigation if business and financial leaders fail to consider the impacts of climate change. Groups such as the Institutional Investors Group on Climate Change have suggested that there is scope for them to work with policy makers to make the assessment of climate change amongst investors a more mainstream activity. Such consultation could, for example, result in unambiguous guidance for pension fund trustees on the climate change issue.

Endnotes

1. An 'energy intensive' sector is defined in relation to industrial processes regulated under Integrated Pollution Prevention and Control Regulations (2000).
2. See POSTnote 164.
3. *The Climate Change Levy: First Year Assessment,* CBI, 2002.
4. Wordsworth, A and Grubb, M, Quantifying the UK's Incentives for Low Carbon Investment, *Climate Policy,* pp. 77-88, 2003.
5. See POSTnote 212.

POST is an office of both Houses of Parliament, charged with providing independent and balanced analysis of public policy issues that have a basis in science and technology. POST is grateful to Sophy Bristow and Imperial College for assisting in the preparation of this briefing note.

Parliamentary Copyright 2004

The Parliamentary Office of Science and Technology, 7 Millbank, London SW1P 3JA Tel 020 7219 2840

www.parliament.uk/post