

An effective Carbon Levy for the UK: A Consultation

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Foreword

Climate Change is one of the greatest challenges we face. As David Cameron has argued, and the Stern Report made clear, we need to take action now to reduce carbon emissions in order to mitigate the risk of disastrous consequences in the future. The fact that UK carbon emissions have risen since 1997 shows that Labour's approach is not working.

Environmental taxes, emissions trading and support for green technologies must all play a role in our efforts to halt climate change. I have said that the Conservative Party will rebalance the tax system away from jobs and families and towards pollution and carbon emissions – pay as you burn not pay as you earn.

Industrial and commercial sources account for over 40% of UK carbon emissions. There is a legitimate role for government in providing businesses with stable long-term incentives to invest in energy efficiency and carbon reduction. However, Labour's Climate Change Levy does not currently provide those incentives.

We fully support the principle of an environmental levy on carbon emissions by industry, but the design of the Climate Change Levy has been widely criticised by academics, business and environmental organisations. It is a tax on energy and not a tax on carbon.

The Climate Change Levy needs to be replaced by a Carbon Levy if we are to tackle the challenge of climate change effectively. This document sets out four principles that a reformed system should satisfy:

1. The rates of a Carbon Levy should be more closely linked to carbon emissions in order to provide the right incentives for investment in low-carbon technologies.
2. Any reforms should be revenue neutral overall for business, and should minimise the negative impact on the competitiveness of energy intensive sectors.
3. A Carbon Levy should continue to exclude the domestic sector.
4. The system should provide a stable framework over the long-term, including compatibility with the EU Emissions Trading Scheme and future schemes.

Together with our Quality of Life policy group, I want to consult with business and other groups to build a lasting consensus on how this can be achieved. This consultation document contains an analysis of the principle shortcomings of the current system, and sets out several options for reform. We welcome submissions from all interested parties on the points raised in the consultation, and will take all views into account as we develop a Conservative environmental tax strategy.

George Osborne MP
Shadow Chancellor of the Exchequer

1. Introduction

1.1 Climate change is one of the greatest challenges we face. As the Stern Report made clear, it makes economic sense to take action now in order to mitigate the risk of disastrous climate change in the future. Unfortunately, the current policy framework for reducing carbon emissions in the UK is inefficient and failing to deliver the necessary results.

UK greenhouse gas emissions

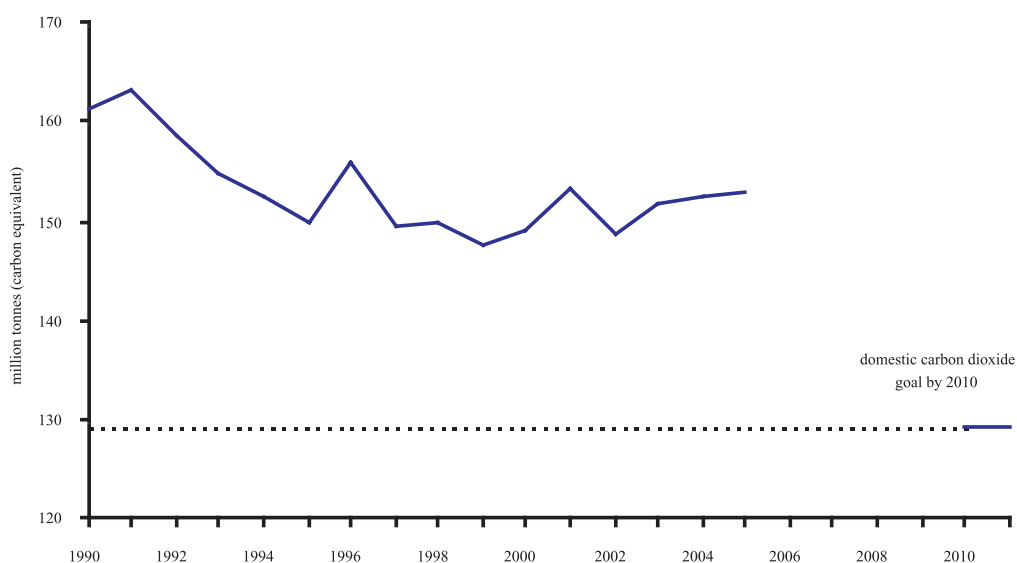
1.2 The UK has three climate change targets: an international target under the Kyoto Protocol to cut a combined basket of Greenhouse Gases by 12.5% below 1990 levels by 2008-2012; a domestic target to cut carbon emissions by 20% by 2010; and a further domestic target to cut carbon emissions by 60% by 2050.

1.3 The UK met its Kyoto target in 1999, nine years ahead of schedule, largely as a result of the ‘dash to gas’ during the 1990s. As Figure 1 shows, between 1990 and 1997, UK CO₂ emissions dropped by over 6.3%.

1.4 However, the chart also shows that carbon emissions have risen since 1997. The result is that we will miss the domestic target of a 20% cut by 2010, as the Government admitted in March’s Climate Change Programme Review.

1.5 In addition, Figure 1 is based on the Government’s own data, which do not include rapidly growing emissions from aviation.

Figure 1: UK carbon dioxide emissions, 1990-2010



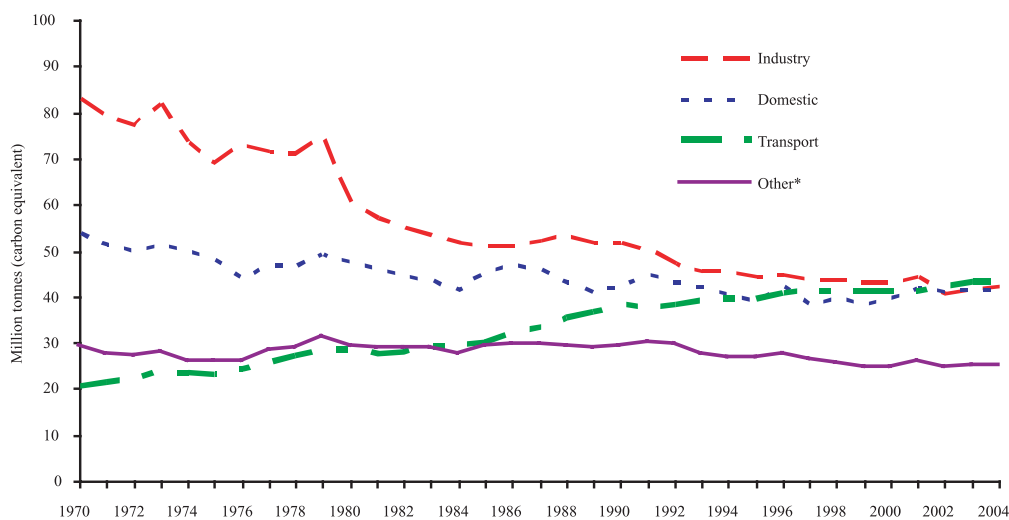
Note: Estimates for 2005 are provisional. Updated Aug 2006.

Source: Defra

1.6 Figure 2 shows carbon dioxide emissions by end user. Transport is the only sector where emissions have risen over the period. However, the rate of reductions from industry has also slowed in recent years.

1.7 Figure 2 makes it clear that policies to reduce emissions from transport are crucial if we are to be successful in meeting overall targets for emission reductions. There are a range of existing environmental policies and taxes specific to transport, and it is not clear that including transport within the Climate Change Levy would be either practical or desirable at this stage. We are considering a number of policy options aimed at reducing carbon emissions from transport, and will produce specific proposals in due course.

Figure 2: Carbon dioxide emissions by end user, 1970-2004



* Mainly commercial and public sectors

Source: Defra

The need for certainty

- 1.8 One reason for slow progress in reducing emissions from industry is the lack of certainty. The nature of the challenge of climate change means that no business can be expected to bear the upfront costs of energy efficiency or investing in green technology unless they can guarantee that their competitors will also have to bear similar costs.
- 1.9 To give the market the certainty it needs, it is therefore crucial that any Government shows a firm commitment to a carbon price over the long term. Targets alone are not enough: the market needs confidence that these targets are meaningful.
- 1.10 The Conservatives have therefore proposed a Climate Change Bill with annual targets leading up to a cut of at least 60 per cent from 1990 levels by 2050. The targets would be set and monitored by an independent body made up of scientists, economists and representatives from business and finance. This body would publish a report each year, examining progress towards the targets and recommending how best the Government can cut emissions in the year ahead. The Secretary of State would be legally obliged to respond to this report, and to accept – or give good reasons for rejecting – the body’s recommendations. Such measures would provide both accountability and scrutiny.
- 1.11 We have also made provision for an independent body to set sectoral targets, to ensure that key areas of the economy play their part. The challenge is to design the right policies to ensure that these targets are met. Along with emissions trading, a Carbon Levy would be a key mechanism for reducing carbon emissions within the business sector.

The current structure of the Climate Change Levy

- 1.12 The Climate Change Levy (CCL) is a tax on the supply of energy to business. It is a ‘downstream’ tax paid by the consumers of energy rather than generators, with the rate varying according to fuel and energy content. Electricity generated from renewables, waste solids and Combined Heat and Power (CHP) systems is exempt from the levy.
- 1.13 This energy tax is supplemented by a system of Climate Change Agreements (CCAs) that provide energy-intensive sectors with the opportunity to reduce their CCL tax bills by 80% in exchange for entering into agreements to meet energy efficiency targets. There are currently 43 of these agreements in force.¹

¹ See <http://www.defra.gov.uk/environment/ccl/agreements.htm> for the full list

- 1.14 Industries with CCAs have also been able to participate in the UK Emissions Trading Scheme (UK ETS) to help meet their targets. Although this scheme is ending at the end of this year, CCA holders will continue to be able to trade amongst themselves. On top of this, some companies with CCAs also have obligations under the EU Emissions Trading Scheme (EU ETS).
- 1.15 Revenues from the tax peaked at £887 million in 2002-03 and are now estimated at £700 million in 2006-07. About three quarters of revenues from the CCL come from electricity, and about one from quarter natural gas, with smaller proportions from coal and other fuels. The tax rates have remained unchanged since the introduction of the CCL in 2001, so current values are about 13% lower in real terms than the introductory rates.² The 2006 Budget indicated that the rates would increase in line with inflation from April 2007.

² Leicester (2006)

2. Problems with the Climate Change Levy

2.1 While the need for a tax on carbon emissions by business is now generally accepted, the current structure has been widely criticised by academics, business and environmental organisations. The Climate Change Levy is in need of reform.

Not a carbon tax

2.2 The key problem is that the rates paid by businesses on their energy use do not reflect the carbon emissions from that energy. This does not provide the right incentives for businesses to switch to low carbon sources of energy. This is the reason the Royal Commission on Environmental Pollution called the CCL a “blunt instrument” that would “not be effective in reducing carbon dioxide emissions”.³

2.3 The same criticism has been made by many other commentators, including David Miliband’s special adviser and long time adviser to the Labour Party on environmental policy Tony Grayling, who has written that the CCL “does not provide an incentive to switch to lower carbon fossil fuels”.⁴

2.4 The pre-eminent environmental economist David Pearce also wrote in a paper for the OECD that “if the purpose of the tax is to achieve a climate target for the UK, then the CCL appears to be inefficient.”⁵

2.5 Table 1 below shows the current tax rates per megawatt-hour, and the implied rate per tonne of carbon emissions. It shows that on the basis of carbon emissions, the CCL rate for gas is higher than for liquefied petroleum gas (LPG) and nearly double that for coal. In a study for the IPPR, Tony Grayling has suggested that this is “part of the reason that coal use increased after its introduction”.⁶

Table 1: CCL rates per megawatt-hour and per tonne of carbon

Fuel	Rate per mWh	Rate per tCe
Coal	£1.50	£16
Gas	£1.50	£30
LPG	£0.70	£22
Electricity	£4.30	£31 ⁷

Source: Pearce (2005)

2.6 This mismatch seriously reduces the effectiveness of the CCL in reducing carbon emissions. The single rate for electricity under the CCL provides no incentives for electricity generators to reduce the carbon content of the electricity they supply, unless they make the full switch to renewables.

2.7 The IPPR study recommended that the tax rate for electricity should vary according to the fuel mix of the supplier based on carbon emissions.⁸ This would encourage investment in new clean coal technologies that produce more electricity per tonne of coal burned, as well as new sources of renewable energy and efficient gas-powered plants.

³ See <http://www.rcep.org.uk/news/99-2.htm> for the full text

⁴ Grayling, Lawrence and Gibbs (2005)

⁵ Pearce (2005)

⁶ Grayling, Lawrence and Gibbs (2005)

⁷ Based on prevailing fuel mix for non-renewable electricity generation in 1999

⁸ Grayling, Lawrence and Gibbs (2005)

The rates of the CCL do not reflect the true cost of carbon

- 2.8 Several commentators have pointed out that the current rates of the CCL do not reflect the true social cost of carbon. For example, Tony Grayling recommended in the IPPR study that the rates should be increased towards £70 per tCe, the official figure for the social cost of carbon used by the Department for the Environment, Food and Rural Affairs. However, there is considerable uncertainty over the correct figure for the social cost of carbon. Any move in this direction could be implemented as part of a revenue neutral reform.
- 2.9 When considering the optimal rates of a Carbon Levy it will also be important to take into account the interaction with other policies aimed at reducing emissions, particularly emissions trading schemes. This issue is discussed further in later sections.

CCAs have not been binding

- 2.10 Several commentators have expressed concerns that the targets set out in CCAs have not been sufficiently ambitious and that as a result emissions have not been significantly lower than they would have been in the absence of the CCAs. For example, in a study for the OECD, David Pearce suggested that the targets have been weak, requiring little more action than business as usual. As he points out, a powerful source of evidence for this is that trades under the UK ETS “have taken place at a very low carbon price, further suggesting that participants have found it relatively easy to make emissions reductions.”⁹
- 2.11 A recent study by the Institute for Fiscal Studies also concludes that CCA targets were too lenient and that “firms would have achieved their targets in any case and as such were enjoying a reduced-rate CCL for effectively doing what they would have done.”¹⁰
- 2.12 Another study by Cambridge Econometrics and the Policy Studies Institute found that “only for one sector did we find that the CCA target would have been missed had no CCL ever existed.”¹¹
- 2.13 Finally, a study commissioned by DEFRA found that emissions from sectors covered by CCAs actually increased between 2002 and 2004.¹²
- 2.14 This weight of accumulated evidence throws the Government’s claims over the effectiveness of the CCL and CCAs into serious doubt. Any reformed system must be designed so that emissions reductions are encouraged that go beyond what would have happened anyway.

Interactions between different policies are extremely complex

- 2.15 Finally, it is still not clear how UK policies will interact with other policies to reduce carbon emissions, particularly the EU ETS. Several commentators have expressed concern over the complexity of the resulting system, with overlapping obligations from different policies and some firms being subject to up to 10 different policy instruments.¹³
- 2.16 Incompatibility between different policies introduces a number of problems, including different sectoral coverage, double regulation, and inconsistent treatment of electricity generation. In addition, when carbon taxes are combined with emissions trading this could potentially lead to so-called ‘carbon leakage’. This could occur when carbon reductions made by a firm as a result of a carbon tax are sold in the form of emission permits to firms not subject to the tax, resulting in no overall reduction in carbon emissions.
- 2.17 Any reform of the current system needs to take account of the whole picture, and particularly the interactions between the CCL, CCAs and emissions trading schemes. Complexity and uncertainty over the future structure of policy inevitably reduce the effectiveness of the current system.

9 Pearce (2005)

10 Leicester (2006)

11 Cambridge Econometrics and Policy Studies Institute (2005)

12 Future Energy Solutions (2005)

13 Sorrell (2002)

3. Taxes and emissions trading schemes

- 3.1 Of course, taxes are not the only tool available for reducing carbon emissions. Other policy options include emissions trading schemes, product standards, subsidies for energy efficient investments, and support for new technologies.

Emissions trading schemes

- 3.2 Emissions trading schemes will play a crucial role in any attempt to reduce carbon emissions. By allowing a given emissions target to be achieved in the most cost-effective way they can potentially provide an efficient policy framework. Emissions trading also provides a potential framework for international action to tackle climate change.
- 3.3 We believe that action is needed to improve our use of emissions trading schemes in three ways. First, the EU ETS must be improved to provide a credible framework for emissions reduction. The current scheme has suffered from a fluctuating carbon price and insufficient auctioning of permits. These deficiencies must be addressed in the second phase of the scheme, set to run from 2008-12. In particular the proposed National Allocation Plans are subject to many of the problems experienced in the first phase. A recent evaluation by the Government's own Carbon Trust concluded that "the current allocation plans will not deliver the robust and stable carbon price that is necessary for efficient business investment in low carbon solutions."¹⁴
- 3.4 Second, we have proposed a cap and trade scheme for the domestic electricity generation sector.¹⁵ Given the deficiencies of the EU ETS, domestic electricity generators need a stable and long term framework to support investment in lower carbon energy sources.
- 3.5 Third, the ultimate goal should be to create a global trading scheme with a wide sectoral coverage. We have proposed an independent body that would work like, and in parallel with, the World Trade Organisation.

The role of a Carbon Levy

- 3.6 In this context, it is reasonable to ask whether there is still any need for unilateral taxation in order to achieve emissions targets. However, as argued by the Stern Report and others, there are strong theoretical and practical arguments why environmental taxes should be used alongside emissions trading and regulation in a coherent policy package.
- 3.7 First, only a minority of permits issued under existing emissions trading schemes are auctioned. As the Stern Report argues, "increasing the use of auctioning is likely to have strong benefits for efficiency, for distribution and for the public finances."¹⁶ In contrast, the so-called 'grandfathering' of permits violates the Polluter Pays Principle, which states that the social cost of pollution should be borne by polluters. This is an important principle, and taxation can play a role in correcting for the excessive use of grandfathering.

¹⁴ Carbon Trust, 2006, http://www.carbontrust.co.uk/about/presscentre/071106_euets.htm

¹⁵ Interim Findings of the Conservative Party's Energy Review, <http://www.conservatives.com/pdf/energyreview.pdf>

¹⁶ Stern (2006)

- 3.8 Second, taxes can help to reduce uncertainty over the future price of carbon. As emphasised by Stern, “in order to influence behaviour and investment decisions, investors and consumers must believe that the carbon price will be maintained into the future.” Emissions trading schemes have been vulnerable to large fluctuations in the price of carbon, so taxation can help to provide a floor beneath which the price of carbon will not fall.
- 3.9 Third, taxes can be used to cover areas of the economy where the regulation and inspection burden required by emissions trading would be too high. In the business context this applies particularly to small and medium sized businesses which are generally not covered by trading schemes.
- 3.10 Finally, revenue from environmental taxes can be used to reduce other harmful taxes. This can potentially result in a ‘double dividend’ of lower carbon emissions and faster economic growth. This is why we have said that we want to rebalance the tax system away from jobs and families and towards pollution and carbon emissions.

4. Principles underlying reform

4.1 We believe that a reformed system should conform to the following principles.

The rates of a Carbon Levy should be more closely linked to carbon emissions in order to provide the right incentives for investment in low carbon technologies

4.2 The most significant criticism of the existing system is that it does not provide consistent incentives to reduce the carbon content of energy consumption. Any reformed system must correct this failing through different levy rates and a more sophisticated treatment of electricity consumption.

4.3 Partly to address the deficiencies of the EU ETS, and uncertainties over its future performance, we have proposed a domestic cap and trade scheme for the electricity generation sector in order to meet the target of reducing carbon dioxide emissions by 60% by 2050. This would be a long term scheme extending beyond the lifetime of the existing EU ETS and with binding caps on emissions. However, as argued above there are several practical and theoretical reasons for a carbon levy to coexist with emissions trading. In this case there would also not be any risk of carbon leakage since both the trading scheme and the levy would be limited to domestic emissions.

Any reforms should be revenue neutral overall for business, and should minimise the negative impact on the competitiveness of energy intensive sectors

4.4 The introduction of the CCL was presented as revenue neutral for business since it was accompanied by a reduction in employers' national insurance contributions. However, since then national insurance has been significantly increased so that any offsetting reductions have been more than cancelled out. A Carbon Levy should not be an excuse to raise more revenues from business, and any additional revenues should be offset by reductions in other business taxes.

4.5 Our complex and rising business taxes are already doing significant harm to our international competitiveness and economic growth. Any changes to the CCL and system of CCAs should also be aimed at simplification.

4.6 Energy-intensive sectors are those where most action is needed in order to reduce carbon emissions. However, any reforms to the CCL should be designed so that powerful incentives to improve energy efficiency do not also have disastrous consequences for international competitiveness. The system of CCAs is one way of addressing this concern, but there may be alternative approaches that could have more impact than the weak incentives imposed by CCAs.

A Carbon Levy should continue to exclude the domestic sector

4.7 Several commentators have highlighted the fact that a domestic carbon tax runs the risk of falling most heavily on the poorest. An influential study commissioned by the Joseph Rowntree Foundation concluded that "although redistributing the revenues from a carbon tax through means-tested benefits would certainly be progressive overall... no way of effecting such a redistribution was found that would not also worsen fuel poverty for those who are already most badly affected by it."¹⁷

4.8 In addition, any attempt to reduce the regressive impact of a domestic carbon tax through an extension of means-testing would do further damage to work incentives and ultimately harm many of those it was intended to help.

¹⁷ Ekins and Dresner (2004)

- 4.9 Continuing an exemption for the domestic sector is likely to require that the basic ‘downstream’ nature of the CCL be retained under any reformed system. The main reason for designing the CCL as a downstream tax is that an upstream tax would have made it difficult to exempt the household sector.

The system should provide a stable framework over the long-term, including compatibility with the EU ETS and future schemes

- 4.10 The current system of CCL and CCAs is complex and it is not clear how it will continue to interact with the EU ETS. Any reform should aim to provide certainty and stability for businesses making long-term investment decisions. The current framework is in a state of considerable flux. For example, the Department for the Environment, Food and Rural Affairs has recently launched a consultation on a new domestic trading scheme, the Energy Performance Commitment, to cover the public sector and businesses not covered by the EU ETS or CCAs.¹⁸

¹⁸ See <http://www.defra.gov.uk/corporate/consult/carbon-emissions/>

5. Questions for consultation

5.1 We welcome submissions from business, academics, environmental organisations and other interested groups on the following questions:

Q1 How could the structure of the existing system be altered so that incentives are more closely aligned to carbon content?

5.2 For example, in a study for the IPPR, Tony Grayling has suggested that the rates for coal and LPG should be increased so that the cost per tonne of carbon is the same as that for gas. The study also suggests making the electricity rate a function of the fuel mix of the supplier. What practical considerations could affect the implementation of such a policy?

Q2 Should the rates of the CCL be raised as part of a revenue neutral reform?

5.3 Tony Grayling and others have suggested that the current rates do not reflect the true social cost of carbon emissions. Does this justify an increase in the rates of the levy as part of a revenue neutral reform? And how does the existence of other policies such as emissions trading schemes affect the optimal rates?

Q3 How could the system of CCAs be reformed to provide more binding incentives for reducing carbon emissions?

5.4 For example, the problem could potentially be remedied by simply setting tougher targets, setting absolute rather than relative targets, or the targets could be set by an independent body. Alternatively it might be necessary to replace the CCAs with a different approach that produces better results.

Q4 How could the existing system be made compatible with emissions trading schemes and other policies over the long term?

5.5 The interactions between different policies are particularly complex in this area. Any sustainable reform needs to take these into account. For example, in the case of the EU ETS, would the possibility of carbon leakage justify an exemption or lower rate of levy for facilities covered by the EU ETS?

Q5 Are there more fundamental changes to the existing structure that would improve the effectiveness of the system while meeting the principles described above?

5.6 We are open to innovative ideas on how the existing structure could be changed more fundamentally. Are there alternative structures that could address the deficiencies described earlier on while still providing powerful incentives for reducing carbon emissions?

6. Timing and next steps

- 6.1 The closing date for responses to this consultation is Monday 26 February 2007.
- 6.2 Responses should be sent to:
Climate Change Levy consultation
Office of the Shadow Chancellor, George Osborne MP
House of Commons
London
SW1A 0AA
- 6.3 Responses to this consultation will be used to inform our policy review process.

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