# 7 PROTECTING THE ENVIRONMENT

**Sustainable development is vital to ensure a better quality of life for everyone, today and for generations to come. Economic growth and social progress must be balanced with action to protect and improve the environment. The Government is using a range of economic instruments to address the challenges posed by sustainable development, tackling local environmental threats and controlling and reducing emissions of the gases responsible for climate change and poor air quality. This Pre-Budget Report describes the next steps in the Government's strategy, including:**

- **the establishment of an Alternative Fuels Framework to guide the duty regime for alternative fuels, including a commitment to providing rolling three-year certainty on duty differentials for all alternative fuels. Consistent with this framework the Government is today announcing a gradual increase in the duty rate for Liquefied Petroleum Gas (LPG) to a level which better reflects its relative environmental benefits;**
- **the extension, subject to state aid approval and satisfactory negotiated agreements with the industry, of relief from the levy for aggregates used in processed products and virgin aggregate in Northern Ireland;**
- **announcing plans for changes to the eligibility criteria for climate change agreements that will provide better incentives for businesses to encourage energy efficiency;**
- **how it proposes to recycle landfill tax revenues to businesses; and**
- **a consultation in early 2004 on tackling diffuse water pollution, including a consideration of the pros and cons of economic instruments.**

## INTRODUCTION

**7.1** The Government is committed to delivering sustainable growth and a better environment. Environmental progress must go hand in hand with economic and social objectives, and policies should take account of the relationship between these different objectives. The Government believes economic instruments can help do this fairly and efficiently.

**7.2** The Government has made strong progress on this agenda and has introduced a range of economic instruments to help achieve environmental objectives in a cost effective way. The Climate Change Levy (CCL), introduced in 2001, provides businesses with incentives to be more energy efficient. This was followed in 2002 by the introduction of the world's first economy-wide emissions trading scheme. The aggregates levy, which tackles the environmental costs of aggregates extraction, was also introduced in 2002. On transport, progress has been made through the use of price differentials on fuels and vehicles, which reflect variations in environmental impact.

**A strategy for environmental taxes**

**7.3** These policies are based on a principled approach. In 1997, the Treasury published a Statement of Intent of Environmental Taxation, which set out the role that the tax system can play in delivering environmental objectives. The 2002 report, *Tax and the environment*: *using economic instruments*,[1] built on this by setting out a more detailed framework for developing and implementing environmental economic instruments. Key features of the approach include establishing the environmental objective, extensive consultation before decisions are made, giving early signals about the need to act, and providing households and business with sufficient opportunity to plan changes and invest appropriately. Within this framework, the Government will also explore the development of revenue-neutral proposals to reinforce responses to measures and reduce excessive impacts on those groups that face the greatest challenge in changing their behaviour.

**7.4** The Government's environmental tax strategy is consistent with its aim of creating an enterprising, flexible economy which provides opportunity for all. Environmental taxes and economic instruments allow people and businesses to choose how they respond to the incentives created. This approach is in accordance with the polluter pays principle, under which those that pollute more, pay more. As with all policy instruments, they must be well designed to protect the international competitiveness of UK industry and take account of distributional objectives. These instruments can also encourage innovation in environmental technologies and so promote enterprise.

**The Treasury's environmental objective**

**7.5** To reflect the importance of sustainable development, HM Treasury updated its central aim in 2002 and included a new objective: *to protect and improve the environment by using instruments that will deliver efficient and sustainable outcomes through evidence based policies*. This will result in greater weight being attached to quality of life and sustainable growth when developing policies.

**7.6** Despite considerable progress, the Government recognises that there are more opportunities and challenges ahead. Tackling the remaining environmental problems is vital to delivering a better quality of life for everyone, today and for future generations. This chapter sets out the action the Government is taking to meet these challenges by tackling climate change and air quality, improving waste management and protecting Britain's countryside and natural resources.

## TACKLING CLIMATE CHANGE AND IMPROVING AIR QUALITY

**7.7** The Government is committed to tackling climate change and improving air quality. This requires action across all sectors with a central role for environmental taxes and economic instruments such as the CCL and the EU Emissions Trading Scheme (EU ETS), which is due to be introduced in 2005.

**7.8** There is strong evidence that global temperatures are rising. Average global temperatures have increased by 0.6°C over the twentieth century and nine of the ten hottest years on record occurred between 1990 and 2003. Studies of temperature trends show that these increases are unlikely to be entirely natural in origin. Temperatures in the UK have followed the twentieth century global trend with annual average temperatures warming by about 1.0°C. By the end of this century, models predict that global temperatures will rise by a further 1.4°C to 5.8°C and UK temperatures by 2°C to 3.5°C. Sea levels are predicted to rise by 9 to 88 centimetres.

[1] *Tax and the Environment: using economic instruments*, HM Treasury, November 2002.

**7.9** The impacts of climate change could be wide-ranging and affect many parts of society. Some of the possible impacts of climate change in the UK include increased weather variability causing damage to infrastructure and leading to transport disruption; reduced reliability of the energy supply; higher costs for building repairs and refurbishment; and increased flooding in many lowland areas due to more frequent river flooding and more severe storm surges.[2]

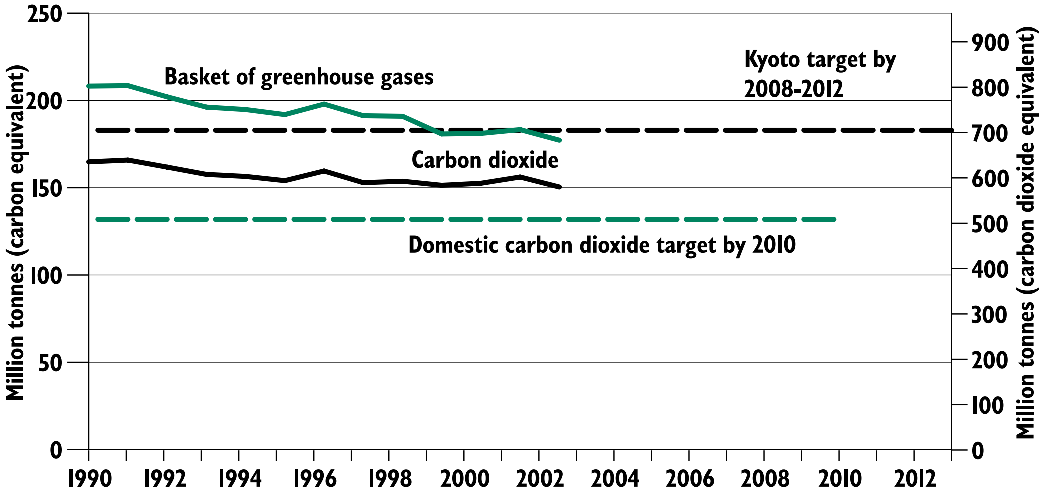
**Climate change programme**

**7.10** The Government is committed to reducing emissions of the gases responsible for global warming. The Kyoto Protocol commits the UK to reduce its greenhouse gas emissions to, on average, 12.5 per cent below 1990 levels between 2008 and 2012. The Government also has a national goal to move towards a 20 per cent reduction in carbon dioxide emissions below 1990 levels by 2010. Chart 7.1 sets out progress against these goals. The climate change programme consists of measures designed to reduce carbon emissions across all sectors of the economy and will be reviewed in 2004.

**The Energy White Paper**

**7.11** The Energy White Paper, published in February 2003, restates the Government's commitment to its climate change goals. It also sets out long-term strategies and shorter-term policies which aim to put the UK on the path to a 60 per cent reduction in greenhouse gas emissions from current levels by 2050 as recommended by the Royal Commission for Environmental Pollution. The Government's priorities are to strengthen renewables and energy efficiency.

**Chart 7.1: UK emissions of greenhouse gases**




*Note: Estimates for 2002 are provisional.*
*Source: National Environmental Technology Centre and DEFRA.*

**7.12** UK data on the emissions of greenhouse gases show a clear downward trend. Between 1990 and 2001 greenhouse gas emissions fell by 12 per cent. Provisional data for 2002 show that UK emissions of greenhouse gases fell by between 14 and 15 percent between 1990 and 2002 and carbon dioxide emissions fell by 8.8 per cent during this period. Between 2000 and 2001 carbon dioxide emissions actually increased by 2.3 per cent, but decreased by 3.7 per cent between 2001 and 2002, based on provisional data for 2002.

[2] Full details available in the *UK Climate Change Impacts Programme* at www.ukcip.org.uk/scenarios.

**Energy Products Directive**

**7.13** The Energy Products Directive (EPD) was formally adopted by the European Council of Ministers in October 2003. The Directive will come into force on 1 January 2004 and will provide a Community framework for taxation on energy products. It will increase the existing minimum rates of duty on hydrocarbon oils and introduce minimum rates of duty for the taxation of other energy products, including electricity, natural gas, coal and other solid fuels. Those Member States that do not currently tax these fuels, will be required to introduce such taxes. However, the minimum rates in the EPD will not affect the UK's oil duty rates, the CCL, or the UK's right to exempt domestic and charity non-business use of energy from the CCL.

**Climate change levy**

**7.14** The CCL and its associated measures seek to encourage businesses to use energy more efficiently and to reduce emissions of carbon dioxide. The levy package is expected to reduce emissions by the equivalent of at least 5 million tonnes of carbon by 2010. The package is broadly revenue neutral for business, with CCL revenues recycled back to business through a 0.3 percentage point reduction in employer national insurance contributions (NICs) introduced at the same time as the levy, and support for energy-efficiency and low-carbon technologies.

**CCL exemptions**

**7.15** In Budget 2002 the Government announced that, subject to state aid approval, it would introduce an exemption from CCL for electricity generated from coal mine methane sold via licensed electricity suppliers. Using coal mine methane to generate electricity delivers environmental gains and provides economic benefits to former coalfield areas. State aid clearance has been received and the exemption was introduced with effect from 1 November 2003.

**Negotiated agreements**

**7.16** Budget 2003 announced that the Government would review the current eligibility criteria for climate change agreements (CCAs), under which energy-intensive sectors can obtain 80 per cent discounts from the CCL if they agree to increase their energy-efficiency and reduce emissions. Under the agreements 88 per cent of sites were certified as having met their first targets earlier this year. Eligibility to such agreements is currently related to the Pollution Prevention Control Regulations 2000, with the aim of protecting the competitiveness of UK industry. The Government believes that, in keeping with this original principle and with the EPD now agreed, there is scope to widen this eligibility while still providing strong incentives to encourage energy-efficiency. Following detailed discussion with industry, the Government has decided that, **subject to further consultation with energy-intensive sectors and state aid approval, it will extend the eligibility criteria for climate change agreements during 2004**. Therefore, in addition to the existing criteria, the Government will consider CCAs for sectors which meet a specific energy-intensity threshold, and will look to take account of any competitive distortions in those sectors. Further consultation with industry will take place ahead of Budget 2004 on the level at which the energy intensity threshold should be set, on competition issues, and on the practicalities, including the administrative burden of such a system.

**Emissions trading**

**7.17** The UK Emissions Trading Scheme (ETS), the world's first economy-wide trading scheme, was launched in April 2002 and has made a very encouraging start. In the first year of the scheme around 600,000 allowances were traded and overall participants reduced emissions by 4.6 million tonnes of carbon. This was against a commitment to reduce emissions by 1.1 million tonnes of carbon a year by 2006. Companies participating in the scheme now face an economic cost for every tonne of carbon they emit, which ensures that environmental impact is taken into account in future financial and investment decisions. The ETS will also play an important role in helping to deliver the goals set out in the Energy White Paper and facilitating entry into the EU ETS.

**7.18** The EU ETS is due to be introduced in 2005. The Government is working to develop a national allocation plan for the UK and has consulted with stakeholders from across the economy. Subject to further decisions about the plan, the Government will consult again shortly on details of the allocations to different sectors. In deciding these allocations, the Government will aim to ensure that the introduction of the EU ETS:

- is consistent with the UK's long-term emissions policy goals expressed in the Energy White Paper;
- is coherent with complementary measures which provide equivalent incentives across sectors to reduce emissions;
- is as simple as possible to operate for business – administration, compliance and transition costs should be kept to a minimum; and
- minimises impacts on international competitiveness and on fuel poverty.

**7.19** The EU ETS will operate alongside a number of existing climate change policy instruments. To ensure the success of the EU ETS, the Government has considered how these policies should function together. One of the main tools of climate change abatement has been the use of CCAs, which tie reductions in the CCL to negotiated agreements, and which have already delivered substantial carbon savings. Taking account of this, the Government has decided to create a level playing field between CCAs and the EU ETS, and **will introduce the equivalent CCL discount for those installations in CCAs who would like to enter into the EU ETS instead, once the scheme is up and running**.

**Investment in energy saving technologies**

**7.20** Enhanced capital allowances (ECAs) for investments in approved energy-saving technologies were introduced in 2001 and currently cover more than 6,000 approved products. Administration of the ECA scheme is managed by the Carbon Trust, an independent not-for-profit company funded principally from revenues recycled from the CCL.

**7.21** In Budget 2003 the Government announced the addition of automatic monitoring and targeting equipment to the ECA scheme for energy-saving equipment. Further technologies were also added to the existing boiler, compressed air and refrigeration categories, effective from August 2003. The addition of these groups will be worth £5 million during their first full financial year. The Government believes that ECAs can be an effective method of helping business overcome financial barriers to installing energy-efficient technologies and continues to consider the case for additional technologies.

**Renewable energy**

**7.22** The Government is committed to generating 10 per cent of electricity from renewable sources by 2010, subject to the costs being acceptable to the consumer, with the aspiration of doubling that percentage by 2020. The Renewables Obligation (RO) was introduced in April 2002 and requires energy suppliers to supply progressively higher proportions of energy from renewable sources each year to 2010. In December 2003, the Department for Trade and Industry (DTI) announced a five-year extension to the RO which will require suppliers to supply 15.4 per cent of power from renewable sources by 2015-16. In 2005-06 the Government will review progress and will elaborate a strategy for the remaining years to 2020. This will take account of the experience of carbon prices arising from the EU ETS and of the costs of renewable technologies. The Northern Ireland Office plans to introduce a Northern Ireland Renewables Obligation from April 2004.

**Domestic energy efficiency**

**7.23** The Government consultation on specific economic instruments to promote household energy-efficiency closed in October 2003 and a summary of responses is published today. Measures under consideration included reducing VAT on energy-saving materials and energy-efficient products, capital allowances for businesses to lease energy-saving equipment to domestic households and registered social landlords, and a domestic business tax allowance.

**7.24** As the consultation document made clear, the proposed measures on reduced rates of VAT for the purchase of energy-saving materials for DIY installation and energy-efficient products were subject to a successful outcome of the negotiations with EU partners on a review of EU rules governing reduced VAT rates. Although it remains the Government's objective to achieve a reduced rate of VAT, where it can effectively deliver improvements in energy-efficiency, including for the purchase of energy-saving materials for DIY installation, the future of these negotiations is uncertain. In the short term, these negotiations are unlikely to deliver an opportunity for VAT rates to be used to promote energy-efficiency, beyond the existing provisions. The proposed capital allowance for the leasing of energy-efficient equipment will be examined in the context of the review of corporation tax.

**7.25** The Government agrees that there is a case for the use of economic instruments as part of a package of measures to promote energy-efficiency. Therefore, taking into account the responses to the consultation document, and in the light of the Corporation Tax Review and the negotiations with EU partners on VAT reduced rates, the Government will give further detailed consideration to measures to promote energy-efficiency, including the case for a domestic business tax allowance. A further announcement will be made in Budget 2004.

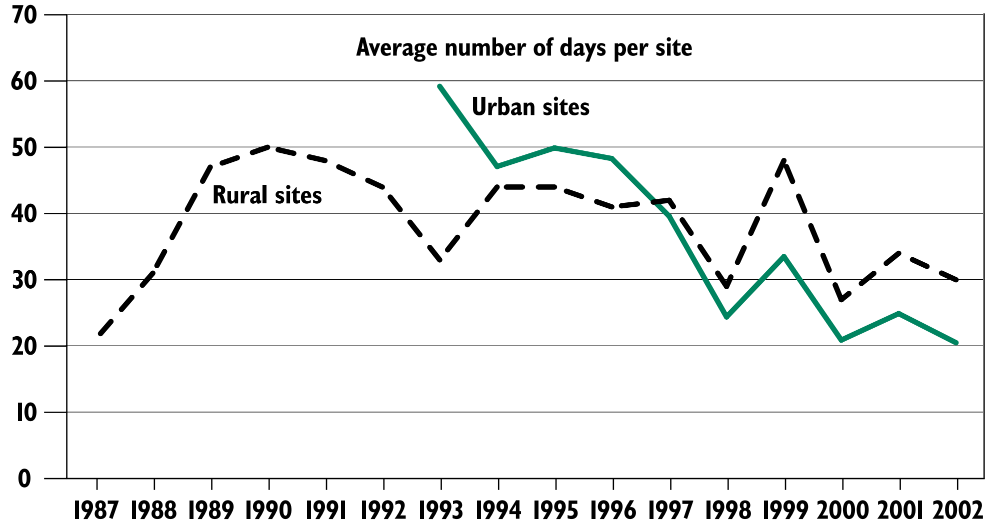
**Air quality**

**7.26** The Government's policies on improving air quality are set out in the *Air Quality Strategy for England, Scotland, Wales and Northern Ireland* and its first addendum published in February 2003.[3] These strategies set health–based air quality standards for nine key pollutants and target dates for their achievement across the UK between 2003 and 2010.

**7.27** As Chart 7.2 indicates, air quality in urban areas has improved significantly over the last decade, largely as a result of progressively tighter EU standards for new vehicles and fuels, supported by the use of economic instruments and the continuing reduction in total emissions from industry. To a certain degree, the level of UK air pollution is outside the control of the Government. Significant fluctuations in annual levels of air pollution can be caused by differences in weather conditions. Air pollution levels in rural areas can be particularly influenced by levels of ozone, which is a trans-boundary pollutant. The average number of days of moderate or poor air quality in urban areas of the UK has fallen from 59 days in 1993 to 20 days in 2002, and in rural areas from 50 days in 1990 to 30 days in 2002.

[3] Available at www.defra.gov.uk/environment/airquality.

## Chart 7.2: Days when air pollution was moderate or higher




*Source: DEFRA, National Environment Technology Centre (NETCEN).*

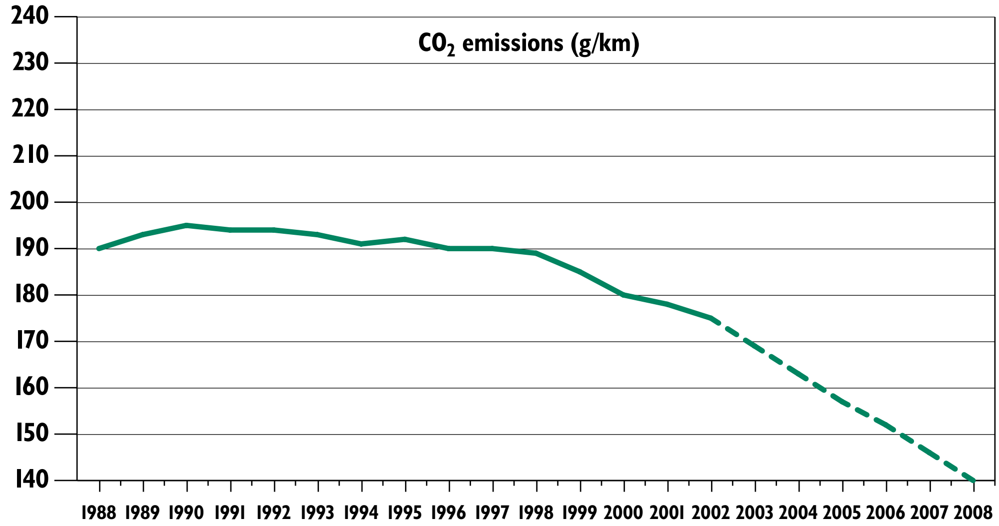
**7.28** The UK is on course to meet the Government's air quality targets for the majority of pollutants. In 2002, targets had been met for benzene, carbon monoxide, lead, sulphur dioxide and 1,3-butadiene. However, despite major reductions, on the basis of current policy measures it is unlikely that the Government will meet its targets for nitrogen dioxide and particulates, particularly in some urban areas including parts of London. In order to tackle these pollution hot spots and achieve further general air quality improvements, the Government is currently reviewing the measures set out in the Air Quality Strategy and the Ten Year Plan for Transport.

## TRANSPORT

**7.29** A safe, clean and efficient transport system is crucial to sustaining economic growth, generating higher productivity and safeguarding the environment. Over recent decades, rising economic activity and incomes have increased the demand for personal travel and the transport of goods and services. The increase in road traffic has led to a major increase in congestion, which has also exacerbated the environmental impacts of transport. As described in Chapter 6, the Department for Transport (DfT) is currently considering priorities for reform, including on road congestion, which will help deliver environmental improvements as well as the economic benefits of a more efficient transport system.

**7.30** The Government has taken a number of steps to advance its environmental objectives, encouraging take-up of the most efficient fuels and vehicles, and promoting the development of greener forms of transport and fuels in the future. Box 7.1 in this chapter sets out a proposed Alternative Fuels Framework that outlines the rationale for decisions on Government support for alternative fuels to meet environmental objectives. The Government's long-term goal is to support the switch to a low-carbon economy, including zero-emissions transport. Chart 7.3 shows how carbon dioxide emissions from new cars in the UK have fallen in recent years and are expected to fall further by 2008 in light of the voluntary agreement between the European Commission and car manufacturers, underpinned by environmentally-focused vehicle taxes.

## Chart 7.3 Carbon dioxide emissions from new cars




*Source: Data from 1995 to 2001 are based on DVLA monitoring. Data prior to 1995 are estimated from average new car fuel consumption figures. The petrol average new car consumption data are from Transport Statistics Great Britain. An equivalent diesel figure was calculated for 1994 at 22 per cent better than petrol fuel consumption. This figure was used for all previous years in this chart, in the absence of other data.*

**Fuel duties**

**7.31** In accordance with the Budget 2003 announcement, the Government made the delayed increase for the main road fuel duties on 1 October 2003. Future decisions on duty levels will continue to take into account all relevant economic, environmental and social factors.

**Sulphur-free fuels**

**7.32** Sulphur-free fuels offer further environmental benefits over ultra-low sulphur fuels, delivering greater long-term reductions in carbon dioxide emissions when used in new engine technologies and further air quality improvements. As announced in Budget 2003, to bring forward the availability of this fuel, **the Government will introduce a duty differential for sulphur-free fuels of 0.5 pence per litre relative to the rates for ultra-low sulphur fuels from September 2004**.

**Biofuels**

**7.33** The Government has already introduced a number of changes to encourage the growth of a successful biofuels industry in the UK. A biodiesel duty differential was introduced in July 2002, triggering sales which are now around two million litres per month from over 130 outlets in the UK. **In addition, Budget 2003 committed the Government to the introduction of a similar duty rate for bioethanol from January 2005**.

**Box 7.1: Alternative Fuels Framework**

**The Government recognises the contribution that alternative fuels can make in delivering environmental objectives. This is reflected through the significant support that the Government has given to the sector over recent years.**

**With this framework, the Government goes further. The purpose of the framework is to ensure that policy continues to reflect the environmental benefits that alternative fuels can deliver and to establish a clear rationale for decisions on Government support. This approach is based on the principles set out in the Treasury document, *Tax and the Environment: Using Economic Instruments*, published alongside the 2002 Pre-Budget Report. The principal application of this framework is to policy on duty differentials for alternative fuels but the approach is equally relevant to decisions on the full range of potential economic instruments.**

**Statement of principles**

- **Policy must be environmentally sustainable. Levels of support should reflect the full environmental impact of the fuel.**
- **Policy must be economically sustainable. The Government should not support an industry whose long-term survival is dependent on excessive levels of subsidy unjustified by environmental benefit.**
- **Policy must be socially sustainable. Support should reflect broader considerations of social impact and fairness.**
- **Policy must be affordable and provide value for money. Where fuels fulfil the criteria set, support will be given where it is both cost effective and affordable.**

**The Importance of Certainty:**

- **the Government recognises the importance of providing as much certainty as it can on duty differentials, to help provide the necessary stability, confidence and market conditions for investors. The Government will therefore commit to a rolling three-year period of certainty on the differentials in duty rates for alternative fuels.**

**The Environmental Case:**

- **the central priority will continue to be on environmental gains, with the emphasis being on quantified benefits that are based on the life-cycle carbon performance of the fuel. Recognising the comparatively high cost of carbon reduction in the transport sector, the Government will nevertheless seek to meet key environmental objectives in a cost-effective way; and**
- **the Government will take account of fuels that have additional environmental benefits by, for example, improving air quality and reducing waste.**

**The Economic and Social Case:**

- **the Government will only offer support beyond that justified by environmental benefit if there is clear evidence that this support will result in enhanced future benefit;**
- **in assessing the level and types of support available, the Government may also take into account other benefits to the economy arising from the use of alternative fuels; and**
- **where there is a direct link to Government priorities, and clear and well-established evidence of benefit.**

**General Application:**

- **This framework sets out principles which can be applied to all types of support for the take up of greener road fuels. Duty incentives alone can be a very blunt instrument, so where there are clear reasons for incentives to be more focused on specific objectives, the Government will also consider other means of support, such as capital incentives, grants or regulatory solutions which may be more suitable, better targeted and better value for money.**

**7.34** In line with the principles set out in the Alternative Fuels Framework and consistent with the Government's commitments in previous Budgets, the Government today announces further measures to support investment in the biofuels sector, including:

- **a commitment to providing future market stability for alternative fuels,** with the Government committing to rolling three-year certainty on the differentials in duty rates on alternative fuels; and
- **a commitment to consider ways of focusing the duty regime on input taxation in addition to product-based taxation.** This would allow the duty regime to better incentivise more environmentally and economically efficient fuel manufacturing processes.

**Road fuel gases**

**7.35** The duty on road fuel gases has not increased since Budget 2001, in line with the Government's commitment to freeze these duties until 2004 at the earliest. Budget 2003 announced a consultation on how best to ensure that future support for road fuel gases continues to reflect environmental and other policy objectives. Following this extensive consultation, the Government has decided that the environmental benefits offered by liquefied petroleum gas (LPG) no longer justify the level of duty differential it currently receives, while the long period of high duty support has allowed the necessary infrastructure to be developed. **The Government will gradually increase the duty rate for LPG over the next three years, setting duty differentials on a path towards a level commensurate with the fuel's environmental benefits. Consistent with the Government's commitment to give three-year certainty on duty differentials for alternative fuels, future differentials for the next three years will be announced in Budget 2004**.

**7.36** The emissions evidence for natural gas (NG) vehicles suggests that they offer considerable additional environmental benefits over conventional fuels, particularly in terms of air quality. Given that conversions are focused on fleet vehicles, buses and HGVs, which are generally more polluting than other vehicles, there is a stronger case for maintaining a larger fuel differential reflecting the additional environmental benefits. **Therefore, consistent with the Government's commitment to give three-year certainty on duty differentials for alternative fuels, the Government has decided that the differentials for NG will be held constant for a further three years.**

**Hydrogen**

**7.37** As announced in the Energy White Paper, the Government is currently undertaking an assessment of the overall energy implications of a hydrogen economy and large scale biomass-based fuels. A website is in place to provide information on progress and enable open access for comment and input into the assessment.[4] In addition, a two-year trial of three hydrogen buses will begin shortly. The buses benefit from support from the new vehicle technology fund and will operate as part of the London buses fleet.

**Rebated oils**

**7.38** In Budget 2003 the Government announced it would consult producers, distributors and users of red diesel and fuel oil, as well as environmental groups, to establish whether preferential duty rates for rebated oils with a lower sulphur content would deliver worthwhile environmental benefits. In July 2003 the Government published a consultation document, *Duty Differentials for more Environmentally Friendly Rebated Oils*. Initial work done in this area suggests that there would be measurable environmental benefits from the introduction of low sulphur rebated oils in certain uses. **The Government therefore believes that it should introduce a modest duty differential in favour of red diesel with a sulphur content of less than 0.005 per cent and fuel oil with a sulphur content of less than 0.5 per cent. The level of this duty differential and any other conclusions from the consultation will be announced at Budget 2004**.

**Vehicle excise duty**

**7.39** The Government has introduced a series of reforms to the vehicle excise duty (VED) system. These provide motorists with incentives to choose more environmentally-friendly vehicles and continue the shift towards taxing vehicle usage rather than ownership. The DfT has commissioned market research to find out the public perception of graduated VED as an environmental incentive to motorists. Together with company car taxation reform, the graduated VED system is designed to help drivers to choose cleaner vehicles. However, more work needs to be done to publicise the VED scheme and to influence consumer choices and the Government is now exploring how it can improve the effectiveness of the scheme.

**Company car tax**

**7.40** Budget 2003 announced that the Inland Revenue would be conducting a comprehensive evaluation of the company car tax system, which was reformed in April 2002. The reform has resulted in fewer business miles being travelled and a shift to more fuel efficient cars, resulting in a significant reduction in carbon dioxide emissions from company cars. The reform has also saved business money through lower year-on-year administration costs. **The Government will analyse further the impact of the reform in making decisions about company car tax in future years**.

**Company vans**

**7.41** Budget 2003 announced that the Government was reviewing the taxation system for company vans and would consult on options for reform, taking into account environmental benefits, fairness and modern working practices. The Government will announce the outcome of this review at Budget 2004.

**Lorry road-user charging**

**7.42** Since the publication of *Lorry Road-User Charge – Progress Report Two* in May 2003, the Government has been working to refine the requirements of the charge. Discussions with the Road Haulage Forum and with other industry representatives have led to the development of technical proposals that better reflect operators' advice and experience. Developing technical requirements has helped refine understanding of the pathway to implementation, and this has been reinforced by consideration of the experiences of other countries. The Government intends to issue **a further progress report next year to update on the work to date and give more detail about plans for implementation**.

[4] Available on the DTI website at www.dti.gov.uk

**Aviation** **7.43** The Government recognises the significant contribution that aviation makes to the UK and global economy. Budget 2003 announced that the Government would be holding a series of discussions with key stakeholders following the publication of a discussion paper, *Aviation and the environment: using economic instruments*, which sets out the principles of the Government's approach in this area. These discussions have now been completed and a summary can be found on the DfT website. Details of how the Government intends to tackle the impacts of aviation will be announced in the Air Transport White Paper, due to be published shortly.

**Box 7.2: Sustainable growth in aviation**

**The Government believes that a sustainable aviation industry must strike the necessary balance between promoting the clear economic benefits from aviation and ensuring that the environmental impacts of the industry are factored into behavioural incentives and long-term plans. The forthcoming Air Transport White Paper aims to establish a sustainable development path for the industry over the next 30 years, including the location of any new airport capacity. The growth in demand for aviation brings with it enormous benefits but also significant costs to the environment. By 2020, aviation is projected to be responsible for 10 to 12 per cent of UK carbon dioxide emissions, up from 5 per cent today. In addition to these global issues, there are also significant local environmental impacts such as local air pollutants like oxides of nitrogen and noise, which impact particularly on those communities located near airports.**

**Meeting these environmental challenges while delivering sustainable economic growth is one of the biggest tasks facing the industry. There are a number of ways to help the sector rise to this challenge. One of these is the use of economic instruments to encourage and reward behaviour that tackles environmental impacts. It is important that policy developments take account of the international nature of the industry, the need for international and long term solutions to global problems and the implications for the competitiveness of UK airlines.**

## IMPROVING WASTE MANAGEMENT

**Waste strategy** **7.44** Efficient use of resources and the effective management of waste are essential features of an environmentally-sustainable economy. The waste stream contains resources that can be re-used or recycled to deliver economic value, resulting in greater resource efficiency. Waste also has impacts on the environment both at a global level, due to emissions of greenhouse gases, and at the local level.

**7.45** In response to the Cabinet Office Strategy Unit's report *Waste Not Want Not*, in May 2003 the Government set out its plans for a Sustainable Waste Management Programme. This focuses on improving waste minimisation, recycling and composting and researching new technologies for dealing with wastes which are not readily reduced, reused or recycled.

**7.46** The Government commissioned an independent review of the existing literature on the evidence on the health and environmental effects of waste mangement options. The first of two stages of the work is currently being reviewed, with the aim of publishing the complete study in the spring. This review will inform the development of policy relating to waste management and debate by all interested parties, including local authorities. As the Government encourages a shift away from landfill through policies, such as significant increases to the standard rate of landfill tax and through the tradable landfill allowances following the passing of the Waste Emissions Trading Act (2003), it is continuing to expand its evidence-basis for the way waste from households and all sectors of the economy should be managed. This involves balancing environmental, health, economic and social considerations, and ensuring there is a strong incentive for individuals and business to minimise the waste they generate.

**7.47** The most effective way of dealing with waste is ensuring that less is created in the first instance. One of the key outcomes of the World Summit on Sustainable Development, held in 2002, was a commitment to promote a ten-year framework in support of more sustainable patterns of consumption and production. In September 2003, the Government launched its framework which set out the economic and environmental case for tackling sustainable production and consumption and explained how the Government intends to meet its commitment. The Government's approach involves breaking the link between economic growth and environmental pollution, improving resource efficiency and examining the life-cycle of a product, through design, production, use and disposal, to help reduce its impact on the environment. The Government will examine using a variety of tools – including economic instruments, voluntary agreements, regulation and information campaigns – to work with business to achieve its objectives. The Government is also consulting on indicators which can measure the effectiveness of the planned actions and drive forward long-term improvements.

**Landfill tax**

**7.48** The landfill tax encourages efforts to minimise the amount of waste generated and to develop more sustainable waste management techniques. It contributes to the achievement of the Government's waste strategy targets through the diversion of waste away from landfill. The standard tax rate is currently £14 per tonne. In line with the five-year escalator announced in 1999, this rate will increase to £15 per tonne on 1 April 2004. Thereafter, as announced in Budget 2003, the rate for an active tonne of waste will be increased by £3 per tonne in 2005-06, and by at least **£3 per tonne in the years thereafter to a medium- to long-term rate of £35 per tonne**. The Government will also be examining whether there would be benefits in extending simplified accounting to landfill tax.

**Recycling landfill tax revenues to business**

**7.49** As stated in Budget 2003, increases in the standard rate of landfill tax will be introduced in a way that is revenue neutral to business as a whole and to local government. Since Budget 2003, the Government has consulted stakeholders and commissioned research to examine how revenue could be best recycled to help businesses tackle their waste management challenges.

**7.50** The Government believes that there is a need for a range of waste management financing options and recognises that different financing options will work better in different circumstances. It proposes **a package of measures that will include grants and other financial support measures. The Government also believes that there is a need to extend the promotional and capacity building services to support a broader range of commercial and industrial sectors.** The Government does not think there is a strong case for recycling the increases in landfill tax revenue through any further tax cuts.

**7.51** The Government is still considering the best delivery mechanisms for providing financial support through a package of measures. Stakeholders will be consulted on this in the run up to Budget 2004 and the next Spending Review.

**Improving local waste management**

**7.52** Budget 2003 announced that the Waste Minimisation and Recycling Challenge Fund should be reformed into a local authority Waste Management Performance Fund in England, which will provide non-ringfenced incentives for local government to deliver a step-change in sustainable waste management performance. In August 2003 the Government announced that the new Fund will be introduced in 2005-06. In its first year, the Performance Fund will run in parallel with the Challenge Fund and will have £45 million available to reward good management performance, rising to £90 million in 2006-07. The Government will be consulting shortly on the detailed design of the Performance Fund, including options for the performance criteria against which rewards will be granted. The Government will in due course be announcing how the landfill tax increases from 2005-06 onwards will be made revenue neutral to local authorities.

**Landfill tax credit scheme**

**7.53** The Government has improved the landfill tax credit scheme following consultation with stakeholders. Regulations have been expanded to cover projects that conserve or promote biodiversity in natural habitats, providing more support for species and habitats in the vicinity of landfill sites. The administration of the scheme has been streamlined, not only to reflect the smaller funding base but also to make it easier to manage. This will include a fast track application system for small grants. The changes will provide greater transparency and accountability, while adding effective project evaluation and evidence of value for money.

## PROTECTING BRITAIN'S COUNTRYSIDE AND NATURAL RESOURCES

**7.54** The Government's overall rural policy objective is to enhance opportunity and tackle social exclusion. It is committed to improving the productivity performance of the less well performing quartile of rural areas and to improving the accessibility of services for rural people.

### Agriculture

**7.55** Over 75 per cent of land in the UK is used for agricultural purposes, so the environmental impact of agricultural practice is an important determinant of the UK's environmental performance. Good agricultural practice can help preserve and improve the natural environment. However, agriculture is also the potential source of a range of environmental problems, including water pollution from the use of fertilisers and pesticides and the impact of methane and carbon dioxide emissions on climate change.

**7.56** The Government believes that the reform of the Common Agricultural Policy (CAP), agreed in June 2003, could go some way to mitigating some negative environmental impacts associated with agriculture. Work is proceeding on the development of new agri-environment schemes under the Sustainable Food and Farming Strategy and pilots were launched in four areas in August 2003. However, the Government believes that it may be necessary to do more to tackle pressing environmental impacts.

**Box 7.3: Reform of the Common Agricultural Policy**

**In June 2003, the EU Council of Agricultural Ministers agreed a reform package for the Common Agricultural Policy. The main elements of the reform package, which take effect from 2005, include:**

- **decoupling – breaking the link between subsidies and production in order to reconnect farmers to their markets and reduce damaging environmental impacts;**
- **cross-compliance – to make subsidies dependent on meeting minimum environmental standards; and**
- **financial discipline – a mechanism will trigger action to reduce subsidies of CAP when expenditure looks in danger of exceeding agreed ceilings.**

**7.57** Recent improvements in the biological and chemical quality of the UK's rivers are showing signs of levelling off and further action is needed to address the quality of the UK's rivers, lakes and groundwater. In particular, more action is required to address diffuse pollution from agriculture and other sources. The Government is taking forward the priorities set out in *Directing the Flow*,[5] published in November 2002. This emphasised the need for more integration of water policies with other policies, including land-use planning, tourism and regeneration. River basin management plans, to be developed under the EU Water Framework Directive, involving active participation of stakeholders, will be an important means of strengthening these links.

**Diffuse water pollution**

**7.58** The Government has been considering the scope for using economic instruments to address the most pressing environmental issues associated with agriculture. The Department for the Environment, Food and Rural Affairs (DEFRA) published a discussion paper on tackling diffuse water pollution in April 2003. **The Government will be consulting formally on options to tackle diffuse water pollution in early 2004, including a consideration of the pros and cons of a role for economic instruments**.

**7.59** The Government is committed to reducing the adverse environmental impacts of pesticide use. An industry voluntary initiative on measures to reduce the environmental damage caused by the agricultural use of pesticides was launched in April 2001. The Government values the work already completed by the signatories and will continue to press for more rapid progress. Provided that this voluntary initiative is fully implemented, the Government believes it should be the most effective way of reducing the environmental impact of pesticides and remains committed to this approach.

**7.60** Signatories to the voluntary initiative expect that crop assurance schemes will soon require their members to register spray operators and recommend they develop crop protection management plans. This would be a step forward in increasing farmer uptake of the initiative. Work has also been taken forward, in consultation with stakeholders, on developing a national plan for pesticides. The Government is continuing to examine options for a tax or economic instrument should the voluntary initiative fail to deliver agreed objectives within a reasonable timescale.

[5] Available on the DEFRA website at www.defra.gov.uk

**Water conservation**

**7.61** As announced in Budget 2003, the Government has introduced 100 per cent first-year enhanced capital allowances (ECA) for business investments in five groups of technologies that can reduce water use: flow controllers, metering and monitoring equipment, leak detection equipment, efficient toilets and efficient taps. The technology criteria list was published in July 2003, and the Technology Product List, which lists those products that are eligible for an ECA, was launched by DEFRA in November 2003.[6]

## Sustainable land-use

**7.62** The Government's approach to creating and maintaining sustainable communities is discussed in Chapter 3. The Government's strategy places key housing, planning and regeneration policies in the context of wider requirements for sustainable communities including employment, quality public services, transport, a safe and healthy local environment, and sound local government. The interim report of the Barker review of the factors affecting the elasticity of housing supply in the UK is published today and is discussed in Chapter 3.

**Sustainable forestry**

**7.63** The Haskins Review, published in November 2003, recommended that forestry policy should be transferred from the Forestry Commission and brought within DEFRA's wider remit while its regulatory function should be closely aligned with the new Land Management Agency. DEFRA is considering how best to implement Lord Haskin's recommendations.

## Aggregate extraction

**Aggregates levy**

**7.64** The extraction of aggregates imposes a range of environmental costs. Introduced in April 2002, the aggregates levy seeks to incorporate these costs into the price of virgin aggregate and encourages the use of alternative materials, such as wastes from construction and demolition, that would otherwise be disposed of to landfill. It also promotes greater efficiency in the use of virgin aggregate and the development of alternative materials, such as waste tyres. In the light of independent research, the levy was set at a rate of £1.60 per tonne on virgin aggregate commercially exploited in the UK.

**7.65** The Government continues to monitor the impact of the levy to ensure that it is achieving its objectives. There are early indications that extraction of virgin aggregate has decreased since the levy's introduction and that construction companies are using more construction and demolition waste rather than sending it to waste disposal sites. However, the Government is aware of concerns expressed by the aggregate and construction industries about the impact of the levy on localised markets. The Government will also be examining whether there would be benefits in extending simplified accounting to the aggregates levy.

**7.66** The Government has examined with the aggregates industry and others a range of issues relating to the scope of the levy in order to clarify the liability of certain materials, protect revenue and ensure that the levy continues to fulfil its environmental objectives. **Following consultation with the industry in 2003, the Government has concluded that there is no case at present for an exemption from the levy for waste material arising from aggregate extraction**. However, in keeping with our established practice regarding the impact of environmental taxation, the Government is continuing to discuss the issue with industry.

[6] Further detail can be found under www.eca.gov.uk

**Aggregates levy in Northern Ireland**

**7.67** Since Budget 2003, the Government and the aggregates and construction industries in Northern Ireland have worked hard to improve the analysis of the operation of the levy and the aggregates market, including an independent study *The assessment of the state of the construction aggregates sector in Northern Ireland*, that the Government commissioned and is publishing alongside the Pre-Budget Report.[7] The Government has also examined proposals for an extension to the current five year scheme which provides relief from the levy for aggregate used in processed products in Northern Ireland. Following discussions with stakeholders and the evidence from the study and subject to state aid approval, **the Government intends to extend the scope and length of the current relief for aggregates in Northern Ireland, providing that aggregates businesses in Northern Ireland that wish to benefit from the extended relief agree to implement environmental improvements to their operations**. The relief will continue to cover aggregate in processed products and be extended to cover virgin aggregate, coming into effect during 2004 and fixed at the current level of 80 per cent of the full rate until 31 March 2012. The environmental improvements that quarry operators will need to sign up to will be regularly monitored and reviewed and enforcement activity will be stepped up.

**Sustainability Fund**

**7.68** DEFRA has completed a review of the operation of the Aggregates Levy Sustainability Fund. This concluded that there are strong economic arguments to support the continuation of the Fund as a targeted intervention to address the environmental costs of aggregates extraction. In its first year, the Fund distributed £29.3 million to help finance over 200 environment, heritage and access projects. **The Fund will therefore be continued for a further three years with the current level of funding, with a review to be carried out in the final year.** The existing bodies will be used for distributing the Fund for 2004-05 and the option of additional organisations for future years will be considered further.

## ENVIRONMENTAL APPRAISAL OF POLICY MEASURES

**7.69** The Government is committed to appraising the environmental impact of Budget measures and will continue to make available the methodology underpinning the figures presented in the appraisal tables. Table 7.1 shows how Budget measures sit alongside other policies as part of the Government's approach to the environmental elements of sustainable development. Table 7.2 sets out the environmental impact of measures introduced in recent Budgets which have a significant effect on the environment or which serve an environmental purpose. The Government aims to ensure that policy design, appraisal and evaluation take account of costs and benefits, the precautionary principle and the need to internalise costs by making the polluter pay.

**7.70** To increase transparency and public reporting of key performance indicators, the environmental appraisal tables are now available on the Treasury website. The tables will be updated regularly to reflect ongoing monitoring of environmental indicators and further evaluation of specific schemes.

[7] Available on HM Customs and Excise website at www.hmce.gov.uk

## Table 7.1: The Government's policy objectives and Budget measures

| Policy objective | Sustainable development indicator[1] and recent trend data | Recent Government measures |
|---|---|---|
| Tackling climate change and improving air quality. | *Emissions of greenhouse gases*<br>UK greenhouse gas emissions were between 14 and 15 per cent below 1990 levels in 2002.[2]<br>*Days when air pollution is moderate or higher*<br>Number of days with moderate or high air pollution decreased from 25 to 20 in urban areas and from 34 to 30 in rural areas between 2001 and 2002.<br>*Road traffic*<br>Between 1998 and 2002, total traffic volume rose by nearly 6 per cent, however, road traffic intensity (vehicle kilometres per GDP) fell by almost 4 per cent between 1998 and 2002. | Government measures<br>• Climate Change Programme, DETR, November 2000.<br>• UK Emissions Trading Scheme, DEFRA, August 2001.<br>• Energy Efficiency Commitment, DEFRA, April 2002.<br>• Renewables Obligation, DEFRA, April 2002.<br>• National Air Quality Strategy, DETR, January 2000 and Addendum, DEFRA, February 2003.<br>• Integrated Pollution, Prevention and Control Regime, DEFRA, 2002.<br>• Ten Year Plan for Transport, DETR, July 2000, and Review, DfT, 2003.<br>• Powering Future Vehicles, DfT et al, July 2002.<br>Specific Budget measures<br>• Climate change levy package.<br>• Green Technology Challenge.<br>• Reduced rate of VAT on the installation of energy saving materials.<br>• Road fuel duty.<br>• Reforms to car, lorry, van and motorcycle VED.<br>• Company car tax and fuel scale charge reform, and authorised mileage allowance payments.<br>• 100 per cent first-year allowances for cars with low carbon dioxide emissions, and hydrogen and natural gas refuelling infrastructure. |
| Improving waste management. | *Household waste and all waste arisings and management*<br>Household waste increased from 22.5 million tonnes in 1996-7 to 25.6 million tonnes in 2001-2. However, over the same period the proportion of household waste being recycled increased from 7.5 per cent to 12.4 per cent.[3] | Government measures<br>• Waste Strategy 2000, DETR, May 2000.<br>• Waste Implementation Programme, DEFRA, 2002.<br>• Waste Management Performance Fund.<br>Specific Budget measures<br>• Landfill tax and landfill tax credit scheme.<br>• Sustainable waste delivery programme. |
| Regenerating Britain's towns and cities. | *New homes built on previously developed land*<br>In 2002, 64 per cent of new housing was on previously developed land, increasing from around 54 per cent in the early 1990s.[4] | Government measures<br>• Urban White Paper, DETR, November 2000.<br>• Package of measures to tackle abandoned vehicles.<br>Specific Budget measures<br>• Capital allowances for flats over shops.<br>• Tax relief for cleaning up contaminated land.<br>• Stamp duty exemption for disadvantaged areas.<br>• Reforms to the VAT treatment of conversion and renovation activity. |
| Protecting Britain's countryside and natural resources. | *Populations of wild birds*<br>In 2000 the decline in farmland birds – the number of which has almost halved since 1977 – continued to level off. Woodland birds increased to their highest level since 1990.<br>*Chemical river quality and biological river quality*<br>By 2002, 94 per cent of rivers in England were of good or fair chemical quality. In England, 95 per cent of river lengths were of good or fair biological quality in 2002 compared with 89 per cent in 1990; 68 per cent were of good biological quality in 2002 compared with 60 per cent in 1990. | Government measures<br>• Rural White Paper, DETR, November 2000.<br>• Strategy for Sustainable Farming and Food, DEFRA, December 2002.<br>Specific Budget measures<br>• Aggregates levy and Aggregates Levy Sustainability Fund. |

[1] *Achieving a Better Quality of Life, DEFRA January 2002 – latest data from www.sustainable-development.gov.uk.*
[2] *The main six greenhouse gases are: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perflourocarbons, sulphur hexaflouride.*
[3] *Municipal Waste Management Survey, 2000-01, DEFRA. As the headline waste sustainable development indicator has not yet been updated this currently relates to the core indicator on household waste.*
[4] *The figure for 2002 is provisional.*

## Table 7.2: The environmental impacts of Budget measures

| Budget measure | Environmental impact[1] |
|---|---|
| Climate change levy package. | Savings of at least 5 MtC per year by 2010.[2] |
| Road fuel duty differentials.[3] | The shift to ULSP from ordinary unleaded is estimated to have reduced nitrogen oxide emissions by 1 per cent, carbon monoxide emissions by 4 per cent and emissions of volatile organic compounds by 1 per cent per year between 2001 and 2004.<br>The shift to ULSD from ordinary diesel is estimated to have reduced emissions of particulates by 8 per cent and nitrogen oxides by up to 1 per cent per year between 2001 and 2004.<br>The reduced rate for biodiesel could save up to 0.2 MtC per year by 2010.[4]<br>The reduced rate for bioethanol could save a total of 0.5 MtC by 2010.<br>The duty free differential for sulphur-free fuels will lead to a reduction in emissions of carbon dioxide and local air pollutants. |
| Reforms to car, lorry, van and motorcycle VED. | Reductions in emissions of carbon dioxide and local air pollutants. |
| Company car tax reform. | Estimated carbon dioxide emissions savings of 0.15 to 0.2 MtC in 2003. In the long run it is forecast that carbon dioxide savings will be between 0.5 and 1 MtC per year.[5] |
| Fuel scale charge reform. | Programme of increases over five years in the fuel scale charge between 1997/98 and 2002/03 is estimated to have reduced the number of drivers in receipt of free fuel by around 300,000.[5] It is expected that the programme has reduced carbon dioxide and local air pollutant emissions due to fewer private miles travelled where fuel has been paid for by drivers and not their employers. Restructuring the fuel scale charge in 2003 to relate it to carbon dioxide emissions and to include the same discounts and premiums as in the company car tax system will further reduce emissions of carbon dioxide and local air pollutants. |
| Authorised mileage allowance payments. | Introduction of statutory single rate from April 2002 is expected to lead to reductions in emissions of carbon dioxide and local air pollutants. |
| 100 per cent first-year allowances for cars with low carbon dioxide emissions, and hydrogen and natural gas refuelling infrastructure. | Reductions in emissions of carbon dioxide and local air pollutants. |
| Air passenger duty (APD). | Reductions in emissions of carbon dioxide and local air pollutants. |
| Green Technology Challenge. | Reductions in energy and water use by business. |
| Capital allowances for flats over shops. | Bringing empty space over shops back into the residential market, helping to create greater urban diversity while reducing the pressure for new greenfield development. |
| Tax relief for cleaning up contaminated land. | Increases in the clean up of contaminated land. |
| Stamp duty exemption for disadvantaged areas. | Regeneration and improved functioning of property markets in Britain's most disadvantaged areas. |
| Reforms to the VAT treatment of conversion and renovation activity. | Reduced pressure on greenfield site development due to the better use of existing buildings. |
| Aggregates levy and Aggregates Levy Sustainability Fund. | Reductions in noise and vibration, dust and other emissions to air, visual intrusion, loss of amenity and damage to wildlife habitats. |
| Landfill tax. | Encourages waste producers and the waste management industry to switch away from landfill towards waste minimisation, re-use, and other waste management options. |
| Landfill tax credit scheme. | A scheme supporting local community and environmental projects in the vicinity of landfill sites. |

[1] *These estimates are subject to a wide margin of error.*
[2] *Based on the DTI energy model. There are a number of difficulties involved in estimating the emissions savings from the individual components of the climate change levy, including the need to avoid double counting. Of the 5MtC (million tonnes of carbon) per year by 2010, the levy and exemptions account for 2.0 MtC, the negotiated agreements account for 2.5 MtC and energy efficiency measures account for 0.5 MtC. A related measure, the emissions trading scheme, involves 31 direct participants who have undertaken binding commitments to deliver emissions reductions of 1.1 MtC by 2006.*
[3] *Using NETCEN emissions models – further detail on the methodology used is provided in NETCEN's January 2000 report, UK Road Transport Emissions Projections. Between 1997 and 1999, the fuel duty escalator is forecast to have reduced emissions by 1 to 2.5 MtC per year by 2010. The reductions in fuel duty in Budget 2001 are estimated to have increased emissions by between 0.1 MtC and 0.2 MtC per year by 2010.*
[4] *DfT modelling.*
[5] *Based on Inland Revenue modelling.*