

The UK has led the world in taking a strategic and long-term approach to the problem of climate change. Existing policies are already enabling £50 billion of low-carbon investment over the three years to 2011, and helping to support 900,000 jobs. Budget 2009 builds on these foundations and provides over £1.4 billion of extra targeted support in the low-carbon sector. Together with announcements made since last autumn, measures announced today will enable an additional £10.4 billion of low-carbon sector and energy investment over three years, securing new jobs and new business, and placing the UK at the forefront of a worldwide low-carbon recovery.

To strengthen the long-term policy framework and give UK industry the confidence to invest in low-carbon technologies, **Budget 2009 sets the world's first carbon budgets**, as required by the new Climate Change Act. These set a legally binding 34 per cent reduction in emissions by 2020, a new level of ambition for UK climate policy.

Saving energy is the easiest way to cut carbon emissions, saving households and businesses money on bills. Building on the one million homes insulated last year, Budget 2009 announces an additional **£375 million to support energy and resource efficiency in businesses, public buildings and households over the next two years, and £70 million for decentralised small-scale and community low-carbon energy**. Together, these measures will support employment, and save 380,000 tCO₂ and around £60 million in energy bills each year.

Meeting carbon budgets will require a transformation of the way the UK meets its energy needs. The Government's existing framework will enable a ten-fold increase in renewable investment by 2020. To protect investment and jobs in low-carbon energy, and to strengthen the long-term framework for a low-carbon energy future, Budget 2009 announces:

- **£405 million to support low-carbon industries and advanced green manufacturing**, to help make the UK a worldwide leader;
- **that UK renewable and energy projects stand to benefit from up to £4 billion of new capital from the European Investment Bank**, removing blockages in project financing;
- **an uplift in support for offshore wind investments that reach financial close between now and 2011 through the Renewables Obligation**. This is expected to support £9 billion of investment and power up to 2.8 million homes;
- **extending support for combined heat and power through climate change levy exemptions**, helping bring forward £2.5 billion of investment and 3 GW of capacity by 2015, and supporting employment; and
- **a new funding mechanism to support up to four carbon capture and storage demonstration projects, and £90 million to fund detailed preparatory studies**.

To support the public finances, while also driving the move to a low-carbon and resource-efficient economy, Budget 2009 announces:

- **an increase in fuel duty of 2 pence per litre on 1 September 2009, and of 1 penny per litre in real terms each year from 2010 to 2013**. This will contribute to medium-term fiscal consolidation, and save 2 MtCO₂ per year by 2013-14; and
- **a continued increase in the standard rate of landfill tax by £8 per tonne on 1 April each year from 2011 to 2013**, to reduce landfill in a sustainable way by encouraging further investment into alternative waste management options.

7.1 Climate change is one of the greatest global economic and environmental challenges. The recent international scientific congress in Copenhagen concluded that the risks of climate change were worsening, with increasing probabilities of abrupt or irreversible climate shifts. In a warmer world, changes to the climate system are likely to lead to serious food and water shortages, sea level rises threatening coastal cities and low-lying areas, and large-scale movements of population.

7.2 To avoid the most dangerous effects, global emissions need to peak in the coming decade and then reduce to at least half their current levels by 2050. The Government's strategy for action is to act internationally to build a coordinated response at the global level, while delivering ambitious cuts in carbon emissions at home to demonstrate leadership and meet the UK's commitments. Through the new Climate Change Act the world's first carbon budgets will put the UK on track to meet an 80 per cent reduction in emissions by 2050. Existing policies are already enabling £50 billion of investment in the low-carbon sector over the three years to 2011 (Box 7.1).

Box 7.1: £50 billion of low-carbon investment

Tackling climate change requires substantial levels of investment across all sectors of the economy. The Government's policy framework is enabling £50 billion of investment over the period of the Comprehensive Spending Review (2008-11). This figure brings together government spending, fiscal support and private investment driven by government regulation in energy efficiency, renewable energy and public transport. The estimated breakdown for the full three-year period is set out by theme below:

- **Energy efficiency (£8.9 billion)** – measures to help households, businesses and the public sector use less energy, made up of Carbon Emissions Reduction Target, the Community Energy Saving Programme, Warm Front, Decent Homes, the Energy Savings Trust, smart metering for SMEs and public sector sites, reduced VAT for energy savings materials, Landlords Energy Savings Allowance, incentives for thermal insulation in industrial installations, and the value of climate change levy exemptions;
- **Renewables support (£6 billion)** – helping to deliver a ten-fold increase in renewable energy to meet the UK 2020 renewables target, including through private sector investment in renewables and the Renewables Obligation;
- **Technology support (£1.7 billion)** – developing and deploying new low-carbon technologies, including through the domestic Environmental Transformation Fund, Research Councils, Technology Strategy Board, Carbon Trust, Energy Technologies Institute and enhanced capital allowances;
- Reducing greenhouse gas emissions from **waste (£2.4 billion)** including PFI, business and local authority waste reduction programmes;
- **Transmission and electricity distribution infrastructure (£7.6 billion)** including work to link low-carbon power generators to the National Grid; and
- **Public transport and low-carbon and electric vehicles (£23.2 billion)** including spending on rail and public transport, as well as spending on ultra-low carbon vehicles.

7.3 Budget 2009 builds on this framework to provide over £1.4 billion of targeted support during the downturn to families, businesses and low-carbon industries, while creating the right incentives to transform the UK's energy and transport infrastructure for the long term (Box 7.2). These policies build on the *Low-Carbon Industrial Strategy: A Vision*,¹ launched in March 2009, and the Government's wider industrial strategy set out in *Building Britain's Future*:

¹ *Low-Carbon Industrial Strategy: A Vision*, HM Government, March 2009.

*New Industry, New Jobs.*² They will place the UK at the forefront of a worldwide low-carbon economic recovery, providing an opportunity to create new jobs and business in sectors of the future through low-carbon growth. By 2015, the low-carbon and environmental sector in the UK is expected to grow by £45 billion, taking its total worth to £150 billion. By then, the sector could employ 1.3 million, up by 400,000 from today.³

Box 7.2: Targeting low-carbon and energy investment

Budget 2009 announces over £1.4 billion additional targeted support for the low-carbon sector over the forecast period. This comprises:

- £525 million support to offshore wind through reform of the Renewables Obligation;
- £375 million for energy and resource efficiency in business, public buildings and households,^a including £10 million for waste infrastructure;
- £405 million to support the development of a world-leading low-carbon and advanced green manufacturing sector in the UK;
- £60 million to fund engineering and design studies for carbon capture and storage;^b
- £70 million to support decentralised small-scale and community low-carbon energy.

The measures announced by the Government since September 2008, including in the Pre-Budget Report and this Budget, will enable a further £10.4 billion of low-carbon and energy investment over the next three years. In addition to the measures outlined above, and taking into account the impact of the Renewables Obligation reform only in 2011-12, this comprises:

- up to £2.3 billion of lending which could be enabled, including from the European Investment Bank (EIB), to support investment in the automotive sector which contributes towards meeting environmental and energy efficiency targets;
- up to £4 billion from the EIB for UK renewable and energy projects;
- £1.1 billion in additional Warm Front funding, and increased energy efficiency obligations on energy suppliers, as announced in September 2008;
- £1 billion of investment in combined heat and power facilities supported by the extension of the climate change levy exemption;
- £535 million in green stimulus measures announced in the 2008 Pre-Budget Report;
- £250 million to bring forward ultra-low carbon vehicles announced in January 2009, with further details set out in April 2009; and
- £120 million to ensure delivery of the Greater Manchester waste PFI project.

Employment in environmental sectors could be further boosted by the funds being allocated to local authorities and other partners to provide jobs, as set out in Chapter 5.

^a This includes £100 million of new funding to deliver energy efficient housing as set out in Chapter 5.

^b A further £30 million is being found within existing environment budgets.

² *Building Britain's Future: New Industry, New Jobs*, HM Government, April 2009.

³ *Low Carbon and Environmental Goods and Services: an industry analysis*, Innovas Solutions Ltd, March 2009.

REACHING A GLOBAL DEAL

Copenhagen 2009 7.4 As set out above, only a fully global response can deal with the challenge of climate change. The Government is committed to achieving a new ambitious global agreement. At Copenhagen later this year, the international community will negotiate the successor to the Kyoto Protocol. All major economies must now reduce or slow the growth of their emissions, including the advanced developing countries. This can be supported by international finance, especially by broadening and deepening the global carbon market, and by multilateral public funding, such as Climate Investment Funds. The international community must also support the most vulnerable countries to adapt to the impacts of climate change, some of which are already unavoidable.

London Summit 7.5 At the London Summit earlier this month, G20 Leaders reaffirmed their commitment to reach a global agreement on climate change in Copenhagen. They agreed to build an inclusive, green and sustainable recovery, and encouraged the World Bank and the other Multilateral Development Banks to play a strong role in providing investment for low-carbon development. Countries will now identify and work together on further measures to tackle climate change, including through discussions on international financing arrangements.

The EU 2020 Climate and Energy Package

7.6 In order to lead the effort to achieve a global deal, the EU committed at the December 2008 European Council to cut emissions by 20 per cent, or by 30 per cent as part of an international agreement. The UK was instrumental in the negotiation of this package, which sets the framework for a strengthened EU Emissions Trading Scheme (EU ETS), binding targets for Member States to reduce emissions, and a target for 20 per cent of the EU's energy to come from renewable sources by 2020.

EU Emissions Trading Scheme 7.7 The EU ETS remains fundamental to the delivery of carbon savings as well as to the establishment of a carbon price. It covers around 40 per cent of EU greenhouse gas emissions, making it the largest carbon market in the world. From 2012, the scheme will also include aviation, capping carbon emissions from this sector, while enabling cuts to be made in the most cost-effective way.

7.8 The revisions to the EU ETS agreed in December will make the scheme more environmentally ambitious. A central, EU-wide cap will ensure an annual reduction in emissions up to 2020, and will support the broadening and deepening of carbon markets as part of coordinated action towards a global deal.

Box 7.3: Auctioning carbon allowances

The UK was the first EU Member State to auction carbon allowances under Phase II of the EU ETS, holding two successful auctions and raising over £100 million. Auction revenue helps support public spending, including investment in public transport and energy efficiency. These auctions have helped secure London as the global centre of the carbon market, and demonstrate the Government's commitment to a robust, long-term carbon price.

In line with broader commitments to fair, stable and efficient financial markets, the Government is introducing legislation and new measures to improve the efficiency and accessibility of UK carbon auctions, including:

- a performance fee to compensate auction intermediaries for the services provided on behalf of the Government and to encourage wider participation;
- a bidding facility ensuring preferential access to carbon allowances for smaller firms; and
- measures to reduce legal risks and transaction costs for bidders.

A reliable auctioning system will become even more important to the stability and liquidity of the market as auctioning levels increase substantially in Phase III of the scheme.

INCREASING UK AMBITION – CARBON BUDGETS

7.9 The Government is committed to ensuring that the UK remains a world leader in its domestic response to climate change. The UK Climate Change Act is the first of its kind anywhere in the world, setting not only a long-term target for emissions reductions but also a legally binding trajectory towards this target. The Act requires the Government to set carbon budgets, fixing binding limits on greenhouse gas emissions over five-year periods. Carbon budgets put the transition to a low-carbon economy at the heart of economic decision-making. By providing the private sector with a clear and credible long-term framework, carbon budgets strengthen the signals needed to bring forward investment in the low-carbon sector.

First three carbon budgets **7.10** The Climate Change Act established an independent Committee on Climate Change (CCC) to advise the Government on the level of carbon budgets and potential for reducing emissions in the UK. The Committee's first report was published on 1 December 2008.⁴ **Budget 2009 announces that the Government will set the UK's first three carbon budgets at levels leading to a 34 per cent reduction in greenhouse gas emissions with respect to 1990 levels by 2020.**⁵ This represents a step change in UK ambition on climate change, consistent with the CCC's advice, and puts the UK on track to meet an 80 per cent reduction in emissions by 2050. The Government will increase the level of ambition of carbon budgets once a satisfactory global deal on climate change is reached.

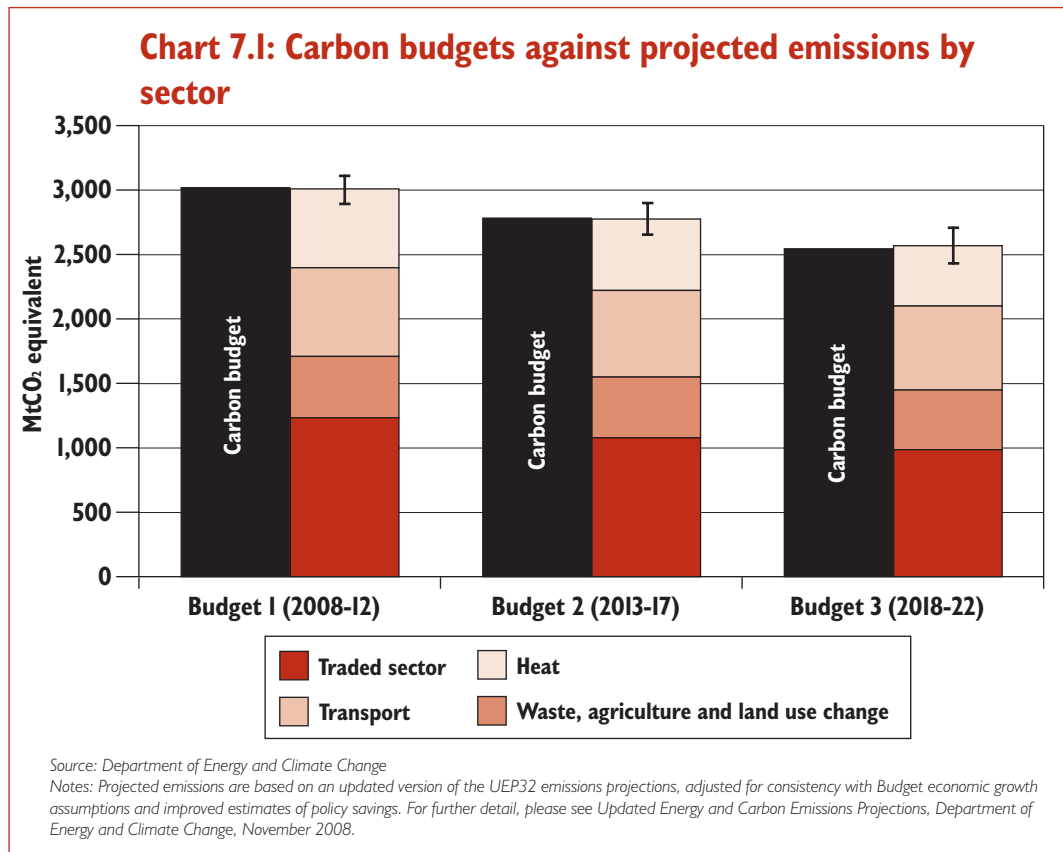
7.11 The UK is on track to meet its carbon budgets, with emissions expected to fall by around one-third by 2020 since 1990 (Chart 7.1). While there is some uncertainty in predicting the exact path of future emissions, the latest Government modelling shows that UK emissions should be lower than required for the first and second budget periods, and well within the range of uncertainty for the third budget period. In the summer, as required by the Climate Change Act, the Government will publish an energy and climate change strategy, setting out the policies that will deliver these budgets, and continuing progress towards 2050 goals. The strategy will strengthen the long-term policy framework, taking account of recent consultations on heat and energy saving, renewable energy and zero-carbon homes.

⁴ *Building a low-carbon economy: the UK's contribution to tackling climate change*, Committee on Climate Change, December 2008.

⁵ As required by the Climate Change Act 2008, an order setting the carbon budgets will be laid before Parliament today for approval. *Building a low-carbon economy: implementing the Climate Change Act 2008*, HM Treasury, HM Government, April 2009.

Carbon budgets and a global deal

7.12 The Climate Change Act allows the Government to meet its carbon budgets through the purchase of carbon credits corresponding to overseas emissions reductions. **The Government aims to meet the first three carbon budgets without purchase of overseas credits outside of the EU ETS, reserving possible credit purchase as a fallback option, as recommended by the CCC.** Under a global deal, the Government would expect purchase of credits to form an important part of the additional effort needed to meet more challenging carbon budgets. This commitment to planned credit purchase will contribute to the Government's efforts to secure a global climate deal and position the UK to influence development and reform of the international carbon market.



TARGETED SUPPORT FOR FAMILIES AND BUSINESS THROUGH THE DOWNTURN

7.13 The Government is committed to ensuring the long-term environmental ambitions set out by carbon budgets are not jeopardised by short-term economic conditions. Investment in low-carbon sectors also provides an opportunity to accelerate the transition towards a low-carbon economy by putting spare capacity in the economy to productive uses, creating and sustaining jobs, while saving families and businesses money on their energy bills through energy efficiency.

7.14 The 2008 Pre-Budget Report announced that the Government would bring forward £535 million of new and accelerated capital spending on energy efficiency, transport and adaptation measures (Box 7.4). Budget 2009 builds on this package with further targeted support to boost energy efficiency and low-carbon energy.

Box 7.4: Delivering the 2008 Pre-Budget Report green stimulus

As part of the 2008 Pre-Budget Report fiscal stimulus, the Government is providing £535 million of accelerated capital spending and additional resources over 2008-09 and 2009-10 to promote environmental objectives and support low-carbon growth. Delivery is well underway:

- 234,000 households were assisted by the Warm Front programme in 2008-09, including 35,000 helped by £50 million of new money provided in the Pre-Budget Report. This money is expected to reduce emissions by around 40,000 tCO₂ per year;
- the Department for Transport is procuring 200 new diesel carriages to boost rail capacity more quickly than would otherwise be possible. Bids from prospective suppliers have been received and are currently being considered by the Department. The carriages are expected to enter service by 2012. Rail journeys are substantially more carbon-efficient per passenger kilometre than cars and normal buses; and
- investment has been brought forward to sustain and accelerate the Decent Homes programme in 2008-09, including the provision of energy efficiency and heating measures in social housing.

Activity on Warm Front in 2009-10 is expected to provide early additional help to 49,000 households. Investment is also being brought forward to 2009-10 for Decent Homes, flood defences and the British Waterways canal network.

Reducing energy bills and carbon emissions

7.15 Improving energy efficiency is the most cost-effective way to reduce carbon emissions, while also saving money on bills, and freeing resources for investment elsewhere. However, households and businesses often hold off investing in energy efficiency because they may not have adequate information about the benefits or they are unable to afford upfront costs. Government action can help overcome these barriers, for example by providing advice, information and discounts to support households to install energy-saving products, as well as targeted public spending to help vulnerable and low-income households.

7.16 As part of these policies, the Government is implementing a major £6.9 billion Home Energy Saving Programme to retrofit the existing housing stock, including the £1 billion package of new measures announced last September. As a result of this package, and the work of energy suppliers, the insulation industry and householders themselves, more than one million houses are estimated to have been insulated over the past year, saving each household up to £250 a year on their energy bills.⁶ The Government is now consulting on how to further increase energy efficiency through a new heat and energy saving strategy, with the aim of retrofitting the entire housing stock by 2030 and reducing emissions from existing buildings to approaching zero by 2050.⁷

⁶ For an average three-bedroom semi-detached house installing both cavity wall and full loft insulation.

⁷ *Heat and Energy Saving Strategy Consultation*, HM Government, February 2009.

Energy efficiency **7.17** To make further progress against the Government's ambitions, Budget 2009 announces a substantial package of new spending, totalling £365 million for energy efficiency across the economy.⁸ These measures will reduce carbon emissions, save money, and also help employment:

- **£100 million extra to improve the insulation for 150,000 homes in the social sector** through the Decent Homes programme in England, saving each household on average £120 a year, and 120,000 tonnes of carbon dioxide (tCO₂) per year;
- **£100 million, as part of the new housing package, for the construction of new homes at higher energy efficiency standards** as set out in Chapter 5;
- **£100 million of new funding for low-cost loans**, delivered through the Carbon Trust in England, helping around 3,500 small and medium-sized businesses to make £23 million savings on bills, and leading to savings of up to 140,000 tCO₂ per year; and
- **£65 million of new funding for loans to install energy efficiency measures in public buildings**, delivered through the Carbon Trust Salix Scheme in England, supporting around 3,000 projects in schools, hospitals and other public sector institutions. This will help save £18 million a year and 100,000 tCO₂ per year.

Small-scale renewable and community energy **7.18** The UK target to generate 15 per cent of energy from renewable sources by 2020 will need more energy to be generated and supplied by small-scale renewable energy technologies (such as solar power and heat pumps) and community heating schemes, where heat is generated centrally and transmitted via pipes. These can be a cost-effective way of generating low-carbon energy. Budget 2009 announces further measures to support decentralised small-scale renewable and community energy:

- **an additional £45 million for small-scale renewable electricity and heat technologies, primarily through the Low-Carbon Buildings Programme.** This will help to bring forward around 13,000 installations, and prepare the renewable supply chain to benefit from future opportunities when feed-in tariffs and the renewable heat incentive are introduced in 2010 and 2011 respectively; and
- **£25 million in funding for low-carbon community heating schemes**, allowing at least 10 communities to benefit from cleaner, locally produced energy. This will help deliver savings of 20,000 tCO₂ and support employment.

Energy prices **7.19** A competitive and efficient energy market has an important role to play in keeping energy prices low. The Government has committed to ensure that consumers benefit from lower prices and that their interests, particularly those of the vulnerable, are protected. In particular, the Government wants consumers to benefit from the significant falls in wholesale energy prices from their peaks in 2008. The Pre-Budget Report announced that Ofgem would produce quarterly reports on retail energy prices to ensure transparency over the extent to which suppliers are passing on price reductions to consumers. The first of these reports was published on 2 March 2009.⁹ All of the six major supply companies have now announced some price reductions.

⁸ This UK-wide figure includes consequential funding for the devolved administrations. It will be for the devolved administrations to determine their own priorities. In addition a further £10 million of new grants for businesses will be provided for waste infrastructure (see paragraph 7.62).

⁹ *Ofgem Quarterly Wholesale/Retail Price Report*. Ofgem, March 2009.

7.20 The Government also supports strong regulation in this area. Ofgem has concluded that existing powers are insufficient to prevent abuse of market power, and is now consulting on options to deal with this issue. In addition, Ofgem is consulting on licence changes to prevent unfair price discrimination and to help consumers engage more effectively in the market. The Government stands ready to consult on legislation to tackle unfair pricing differentials between different methods of payment for energy if there is not a speedy and satisfactory resolution of these issues.

OPPORTUNITIES FOR NEW LOW-CARBON INDUSTRY AND JOBS

7.21 The transition to a low-carbon economy will mean a transformation of the economy, requiring new services, technologies and industries. Such a change will provide an opportunity to invest for growth in these sectors, creating new openings for business, and the development of highly skilled jobs in the UK.

7.22 The Government wants to make the UK a world leader in the low-carbon and environmental sector, which is worth £3 trillion globally. By 2015 the sector could be worth £150 billion in the UK alone, and employ around 1.3 million people. The existing £50 billion of low-carbon investment, enabled by Government policies, has helped establish the UK's innovation and manufacturing base in these areas. Budget 2009 builds on this to provide further support for a low-carbon economy. The Government will publish further details on the low-carbon industrial strategy tomorrow. Employment in environmental sectors could be further boosted by the funds being allocated to local authorities and other partners to provide jobs, as set out in Chapter 5.

Building a low-carbon energy future

7.23 The UK will need investment in new generation capacity of up to 35 GW, almost half of current capacity, over the next two decades to replace ageing power stations and meet growing electricity demand.¹⁰ To ensure this new investment supports low-carbon energy, the UK has put in place a long-term policy framework, including the EU ETS, which places a firm cap on emissions from the power sector, and the Renewables Obligation, which requires electricity suppliers to source an increasing percentage of electricity from renewable sources. This will help to drive a ten-fold increase in renewable electricity over the next ten years to meet the UK's renewable energy targets.¹¹ The UK has already trebled electricity from renewable sources and become the world leader in offshore wind. Five more offshore wind farms are currently under construction so in 2009 the UK will have doubled its capacity.

7.24 Falls in carbon and energy prices, tight finance conditions and exchange rate fluctuation create risks for renewables and other infrastructure investment. Delays or failures of particular projects could also impact on the supply chain or on confidence in the sector overall. The Government is therefore acting to help protect investment in energy and renewables projects.

7.25 Action to support the economy as a whole through the downturn will help the energy sector. For example, recapitalisation of the banks and other macro policy initiatives, such as the Asset Purchase Facility and first-year allowances announced in this Budget, should help support energy investment.

¹⁰Meeting the Energy Challenge: A White Paper on Energy, Department of Trade and Industry, May 2007.

¹¹UK Renewable Energy Strategy Consultation, Department for Business, Enterprise and Regulatory Reform, June 2008.

Renewables financing **7.26** The UK is already the world-leader in offshore wind. To ensure that investors are able to secure an appropriate level of return in the current economic climate, and that the UK remains an attractive destination for wind investment, **Budget 2009 announces a banding review with the intention of increasing the banding of Renewables Obligation Certificates (ROCs) from 1.5 to 2.0 for offshore wind projects meeting specified completion criteria if they place new orders in 2009-10, and then 1.75 in 2010-11.** This is expected to provide £525 million support from 2011 to 2014, protecting 3 GW of proposed investment over the next two years, enough to power an estimated 2.8 million homes.

7.27 Energy projects seeking bank lending can experience difficulties in raising the necessary finance in current conditions. **Budget 2009 announces that UK renewable and energy projects stand to benefit from up to £4 billion of new capital from the European Investment Bank (EIB)** through direct lending to energy projects and intermediated lending to banks. The Government is bringing together the EIB, banks and developers to ensure this new framework lending and other products deliver rapid and sustained investment for UK renewable energy. The Government believes that this initiative can bring forward £1 billion of consented small and medium-sized UK renewables projects to deployment.

Investing in the UK low-carbon sector **7.28** As set out in *Building Britain's Future: New Industry, New Jobs*, a thriving low-carbon industry will need investment in technology development, infrastructure and supply chains. **Budget 2009 announces that the Government will allocate £405 million to support the development of a world-leading low-carbon energy and advanced green manufacturing sector in the UK.**¹² The funding will support the development and deployment of low-carbon technologies such as wind and marine energy (for example through building facilities to test prototype models), and will help attract and protect investment in the UK's low-carbon supply chain. Funding will be delivered through existing programmes such as the Environmental Transformation Fund and as part of the Strategic Investment Fund, as set out in Chapter 4. These measures will help establish the UK as a market leader in renewables technology and advanced green manufacturing.

7.29 This funding should allow the UK to develop expertise in particular low-carbon sectors such as offshore wind and marine power in which it has an advantage, through strength of natural resources, combined with technology, engineering and finance skills.

Strengthening the framework for energy investment

7.30 As the economy recovers, a range of low-carbon energy sources will be needed to meet the associated increase in energy demand. In addition to policies to support the low-carbon sector through the downturn, Budget 2009 strengthens the long-term policy framework to enable the UK to meet future carbon budgets at a lower cost, and at the same time improve the UK's security of energy supply.

Carbon capture and storage **7.31** The deployment of carbon capture and storage (CCS) will be key to the move towards a low carbon energy supply. CCS is the process of capturing carbon dioxide from fossil fuels and storing it instead of releasing it into the atmosphere. CCS could reduce carbon dioxide emissions from fossil fuel power stations by 90 per cent.

7.32 The Government has been instrumental in driving forward proposals in the EU to provide funding for CCS projects, leading to agreement at the European Council in December 2008 to allocate 300 million allowances from the EU ETS to part fund up to 12 CCS demonstrations worth around €9 billion. The UK is also one of the first countries in the world to be developing detailed regulatory arrangements for the storage of carbon dioxide, under the Energy Act 2008.

¹²£250 million through BERR and £155 million through DECC.

7.33 The increasing urgency of the climate change challenge and lessons learned from the competition to date mean that the Government now considers a new and more ambitious policy on CCS is appropriate. **Budget 2009 announces that it is the Government's intention to put in place a mechanism to deliver up to four CCS demonstration projects, including both pre- and post-combustion coal projects.**

7.34 Subject to receiving suitable bids and being able to reach appropriate terms, it remains the Government's intention to proceed with the current competition to contract award. As with any long-term procurement, final funding approval for this will depend on decisions taken at the next Spending Review.

7.35 To maintain momentum in bringing forward CCS, **Budget 2009 announces that £90 million is being allocated to fund companies in the current competition to undertake detailed preparatory studies for CCS**, with £60 million of this transferred from existing transport budgets. These studies will reduce technological risk for CCS projects and give greater clarity on costs. They will also ensure that preparations for construction start at the earliest possible date. It would be a requirement of funding that information from the studies is made available to promote global understanding of CCS.

Combined heat and power 7.36 Combined heat and power (CHP) delivers significant carbon emissions reductions within the UK. In recognition of this, the Government has put in place a range of regulatory and fiscal measures to encourage CHP investment, including support through the EU ETS. The Government's long-term strategy to support this sector will be set out in the heat and energy saving strategy, later in 2009.

7.37 However, in order to provide certainty to bring forward future investment, **the Government today announces that it will extend the climate change levy exemption for indirect sales of CHP electricity to 2023, subject to State aid approval. The Government will also commit to continuing other existing levy exemptions for CHP.** These measures will bring forward future investment in CHP of around £2.5 billion, which will increase electrical generating capacity by 3 GW by 2015, and promote employment opportunities in the sector. By 2020, these measures have the potential to deliver around 7 GW of new CHP electrical generating capacity, and reduce emissions by 3.2 million tonnes of carbon dioxide (MtCO₂). **Budget 2009 can also announce that climate change levy rates will remain at the current levels in 2010-11.**

Nuclear 7.38 The Government recognises that nuclear is a secure form of low-carbon energy generation with an important role to play alongside renewables and CCS. The Office for Nuclear Development has been established to help give potential developers clarity about the steps they need to take in order to bring forward new nuclear. The recent acquisition of British Energy by one of the world's leading nuclear operators demonstrates that the Government is succeeding in establishing the UK as one of the most attractive locations for new nuclear investment.

North Sea infrastructure and cushion gas 7.39 To maximise the potential of existing infrastructure, **Budget 2009 announces reforms to remove fiscal barriers to projects that reuse North Sea oil and gas infrastructure for other activities**, potentially benefiting gas storage, CCS, and wind energy projects. In addition, to provide industry with the certainty needed to bring forward gas storage projects, which will increase security of supply and help smooth energy price fluctuations, **Budget 2009 confirms that cushion gas is eligible for plant and machinery capital allowances.**

A SUSTAINABLE FUTURE FOR TRANSPORT

7.40 Transport plays an important role in the economy, but it can also have adverse environmental impacts. Road transport alone currently accounts for around one-fifth of total UK greenhouse gas emissions. The Government is committed to moving towards a low-carbon transport system, through supporting the development of green technologies and providing the right signals to encourage efficiency.

7.41 The Government has therefore been a strong proponent of tougher vehicle emissions standards. Significant progress has been made here since the Pre-Budget Report. In December 2008, the EU agreed to set binding targets on the carbon dioxide emissions from new cars, including a long-term target – as championed by the UK – of 95g CO₂ per km by 2020. This is one of the most ambitious targets in the world, and should save 7.6 MtCO₂ per year in 2020 in the UK.

7.42 Budget 2009 builds on this to move further towards a low-carbon transport system and help meet carbon budgets, introducing new measures to:

- encourage investment in the development and take-up of vehicles with lower carbon emissions, including ultra-low carbon vehicles; and
- support the public finances while promoting environmental ambitions, using fuel duty and Vehicle Excise Duty (VED) to help create the right incentives to reduce emissions.

7.43 The Government is also taking forward temporary measures to support the transport sector during the downturn. Chapter 4 sets out the details of a car scrappage scheme. Its primary purpose is to provide a boost to new car sales to help the industry in the current downturn. The scheme will encourage replacement of ageing vehicles by newer models with generally lower emissions, and is expected to have a neutral or modestly positive environmental impact.

Supporting the development of low-carbon vehicles

7.44 Improvements to vehicle technology have a critical role to play in moving to a low-carbon transport system. The way in which vehicles are built and powered needs to change. In the short term through improvements to existing technologies, and in the longer term through new, cleaner technology.

Ultra-low carbon vehicles

7.45 The Government is committed to supporting the shift to ultra-low carbon vehicles, including early electric and plug-in hybrid cars. In addition to direct funding, the Government is also providing support through the tax system, with electric vehicles paying no fuel duty or VED. To further support this transformation, £250 million of funding was announced in January 2009, and in April *Ultra-Low Carbon Vehicles in the UK*¹³ announced that:

- up to £20 million will be available to support the roll-out of charging infrastructure needed to grow the market for ultra-low carbon cars. Cities and regions, in conjunction with the private sector, will be able to bid for this seed funding; and
- the majority of the £250 million will be used to reduce up-front costs of early electric and plug-in hybrid cars by between £2,000 and £5,000. The Government will begin discussions with the automotive and finance industries, as well as other key stakeholders, to explore how best to deliver this incentive from 2011.

¹³ *Ultra-Low Carbon Vehicles in the UK*, DfT, BERR, DIUS, April 2009.

Box 7.4: Ultra-low carbon vehicles in the UK

The Government's ambition for the road transport sector is two-fold: to reduce the environmental impact of transport and for UK business to benefit from this transformation. To meet this dual challenge, the Government will work with the private sector to bring forward emerging new, cleaner technology including electric and plug-in hybrid cars.

Kilometre for kilometre, an electric vehicle powered with electricity generated from the current UK grid can emit up to 40 per cent less carbon than a conventional petrol vehicle. Electric vehicles will also improve local air quality as they have zero emissions at the tail pipe.

The main car manufacturers are already working to bring electric vehicles to the market. However, there are considerable challenges to overcome before large-scale take-up of ultra-low carbon vehicles can be achieved. Despite significantly lower running costs, these vehicles will initially be more expensive than conventional vehicles due to the battery costs. This is why the Government is committed to supporting the uptake of these early vehicles and helping consumers to access this technology.

A network of charging infrastructure is also necessary to ensure that drivers can recharge their vehicles. This is already emerging, with charging points starting to be installed around the country: 100 charging points are expected in London by the end of May 2009 alone. Although around 60 per cent of journeys by car are under 25 miles, charging points will be needed for longer journeys and for those drivers who cannot recharge at home. The Government is committed to supporting the targeted roll-out of this infrastructure to support this new technology.

Demonstration projects to showcase and trial these new and emerging technologies are already underway. For example, a competition run through the Technology Strategy Board will put over 200 ultra-low carbon vehicles on the road within 18 months. The Government is also showing public sector leadership in its procurement decisions, including through the Low Carbon Vehicle Procurement Programme, which focuses on vans. This aggregates the demand for electric and low-carbon vans from the entire public sector: manufacturers will receive larger orders and the public sector participants are insulated from the additional costs.

- EIB European Clean Transport Facility** **7.46** In the Pre-Budget Report, the Government called on the EIB to double its financial support for the next generation of greener cars by making available €8 billion over the next two years. The EIB announced a doubling of its Clean Transport Facility last December, and UK-based manufacturers will benefit from this.
- Automotive Assistance Programme** **7.47** Chapter 4 also sets out the further support provided for the car industry via the UK Automotive Assistance Programme. This will offer guarantees on EIB and other lending to ensure continued new green investment. To be eligible, projects need to deliver investment that secures jobs, skills or technology, and contribute towards meeting environmental and energy efficiency targets, for example reducing carbon emissions or achieving higher environmental protection standards.
- Light commercial vehicles** **7.48** Following the introduction of binding EU targets for new car CO₂ emissions, the European Commission is developing a similar proposal for van emissions. Light commercial vehicles account for around 15 per cent of road transport emissions. The Government will engage with the Commission as they take forward this work. Building on progress already made in protecting the environment, the Government will continue to work with business to investigate opportunities to encourage the use of ultra-low carbon light commercial vehicles.
- Bus industry support** **7.49** To improve the environmental performance of buses, the Government is reforming the Bus Service Operators Grant (BSOG) as announced in the 2008 Pre-Budget Report. **Budget 2009 confirms that operators will now only receive an increase in their rate of BSOG if they achieve fuel efficiency improvements.** Furthermore, with effect from this month, operators will receive per-kilometre payments for the low-carbon buses that they operate to incentivise their introduction.

A long-term framework for transport tax

7.50 Transport taxes support the public finances while also playing a significant role in incentivising fuel-efficient driving and reducing emissions. As part of the Government's plans for securing medium-term fiscal consolidation, the Government will use transport taxes to ensure that the burden of taxation falls in such a way as to support the transition to a low-carbon economy.

Fuel duty 7.51 As announced in Budget 2007 and confirmed in the 2008 Pre-Budget Report, main fuel duty rates rose by 1.84 pence per litre on 1 April this year. To support fiscal consolidation, **Budget 2009 announces that main fuel duty will increase by 2 pence per litre on 1 September 2009 and by 1 penny per litre in real terms on 1 April each year from 2010 to 2013.** This will save 2 MtCO₂ per year by 2013-14. Rebated oils duty will rise in proportion to main fuel duty increases on the same dates. Details of road fuel gas rates in these years are set out in Chapter A.

Vehicle excise duty 7.52 The 2008 Pre-Budget Report set out reforms to vehicle excise duty (VED) for cars registered from 1 March 2001 onwards, to incentivise the purchase and manufacture of lower-carbon cars. Budget 2009 confirms these reforms, which include:

- from May 2009, an increase in the number of VED bands from seven to thirteen. This will provide a greater incentive for drivers to choose a lower-carbon version of car within their preferred class;
- from April 2010, the Government will further separate out the thirteen different bands, in order to strengthen the environmental signal; and
- from April 2010, differential First-Year Rates of VED for new vehicles will be introduced. These will provide a stronger signal to consumers at the point of purchase.

7.53 To ensure that new VED rates and bands are clearly understood by motorists, the Department for Transport has worked with the Low Carbon Vehicle Partnership to update the fuel economy label for new vehicles, and is continuing to work with industry to develop a fuel economy label for the second-hand car market.

7.54 **Budget 2009 also announces changes to the VED rules on refunds, six-month licences and imported vehicles** during the first year of vehicle licensing, from April 2010, as a consequence of the introduction of First-Year Rates, as well as general changes to the treatment of imported vehicles. Details are set out in Chapter A.

Taxation of business travel 7.55 Company car tax (CCT) was reformed in 2002 and is now based on carbon emissions, encouraging the take-up of more fuel-efficient cars in company fleets. In recognition of advancing vehicle technologies, **Budget 2009 announces that, with effect from 6 April 2011:**

- **the basic threshold for the 15 per cent band of CCT will be reduced by 5g CO₂ per km**, so that this band applies to cars emitting between 121 and 129g CO₂ per km. The percentage of list price subject to tax will continue to increase by 1 percentage point with every 5g per km increase in CO₂ emissions, to a maximum of 35 per cent;
- **the cap on car list prices used to calculate the taxable benefit arising from company cars will be abolished**, so that drivers of expensive cars will be subject to a fair level of tax; and

- to ensure that CCT continues to reward the final carbon emissions of vehicles and is technology neutral as new low-emitting vehicles are developed, **discounts currently available for early uptake Euro 4-standard diesel cars, higher-emitting hybrid cars and alternative fuel company cars will be abolished.** Hybrid cars emitting 120g CO₂ per km or less will continue to fall within the 10 per cent band of CCT and electric cars will continue to be subject to the 9 per cent band, the lowest for any type of company car.

7.56 Since April 2008, there has been a 10 per cent band for cars emitting 120g CO₂ per km or less but by 2012, as new technology develops and the EU targets for carbon dioxide from cars come into force, the Government expects many more vehicles to fall within this category. To continue to provide an incentive to purchase the lowest emitting vehicles on the market, the Government intends to remove this category in 2012 and instead extend the system of CCT bands so that they increase by 1 percentage point with every 5g CO₂ per km increase in emissions, from 10 per cent. Details of specific rates and thresholds for 2012 will be announced in future Budgets. The Government is also considering the case for abolishing the diesel supplement in company car tax for diesel cars that comply with the future Euro 6 emissions and air quality standards.

Heavy goods vehicles and road freight 7.57 Budget 2009 confirms that VED rates for heavy goods vehicles will be frozen in 2009-10, to support the UK haulage industry. The Euro V vehicle emissions standard for new heavy goods vehicles will become mandatory on 1 October 2009. As a result, Reduced Pollution Certificates (RPCs) for vehicles achieving early compliance with this standard will no longer be available for new vehicles from that date. **The Government will introduce measures to incentivise the choice of Euro VI vehicles,** once the full details of the standard have been established by the European Commission. As outlined in Chapter 4 the Government is also introducing a temporary increase in capital allowances for new investment in 2009-10. Haulage operators can benefit from the first-year allowance of 40 per cent for new investment.

7.58 Government policies also aim to support the road haulage industry to increase safety and environmental performance. Recent examples of this commitment include:

- the Graduated Fixed Penalty and Deposit Scheme, which came into force on 1 April 2009. This allows authorities to enforce road traffic law against all offenders with on-the-spot fines, even if they reside outside of the UK;
- £24 million of enforcement funding, announced in April 2008, which has already delivered 120 additional enforcement staff, who will carry out 108,000 extra checks annually; and
- the 2008 increase in funding for the Freight Best Practice programme – which helps the industry to improve operational efficiency and reduce fuel consumption – and the extension of the scheme to Scotland in November 2008 and Northern Ireland in December 2008.

NATURAL RESOURCES

7.59 Each year, households and businesses generate around 100 million tonnes of waste. Two-thirds of this waste currently ends up in landfill, leading to increased emissions of methane, a powerful greenhouse gas, and loss of material that could be put to more productive uses through re-use and recycling.

7.60 The Government is committed to promoting sustainable waste management practices that will help to protect the natural environment and also deliver carbon savings. Over the period from 1990 to 2007, emissions in the waste sector have declined by nearly 45 per cent. Budget 2009 takes further steps to strengthen the environmental signals already in place.

Landfill tax 7.61 Landfill tax remains a cornerstone of waste management policy in the UK. By increasing the costs of sending waste to landfill, the tax encourages use of, and investment in, sustainable alternative treatment options, such as sorting machinery, recycling and anaerobic digestion. **Budget 2009 announces that the standard rate of landfill tax will continue to increase by £8 per tonne on 1 April each year from 2011 to 2013**, so that the tax continues to incentivise investment in more sustainable alternatives to reduce reliance on landfill, delivering emissions savings equivalent to 0.7 MtCO₂ per year. **Budget 2009 also announces that the lower rate applying to inactive wastes will be frozen at £2.50 per tonne for 2010-11.**

Waste infrastructure 7.62 Continued investment in waste infrastructure will ensure local authorities have the capacity to divert biodegradable waste from landfill. The Government is taking steps to ensure that waste investment is not hindered by the lack of access to capital or tightening in the credit markets:

- the Government plans to commit more than £2 billion of Private Finance Initiative credits, to allow investment in waste handling projects. The Treasury Infrastructure Finance Unit (TIFU) launched in March 2009 will support projects that are struggling to raise debt finance at acceptable terms to ensure this investment is not slowed by current conditions in the credit markets. A £120 million loan from the TIFU has already helped the Greater Manchester Waste Delivery Authority reach financial close on its £635 million programme of construction, supporting new green jobs and leading to diversion of over 700,000 tonnes of waste from landfill each year from 2013; and
- in addition, **Budget 2009 announces £10 million of new grants for businesses in 2009-10** to deliver anaerobic digestion and in-vessel composting infrastructure. This will provide capacity to remove 316,000 tonnes of waste each year from landfill, reducing local government and business waste disposal costs.

7.63 At the same time, the Government is taking steps to ensure that the legislation and administrative arrangements underpinning landfill tax remain robust. **The Government is legislating in Finance Bill 2009 to protect revenue following the Waste Recycling Group judgment last summer.** This legislation, from 1 September 2009, will ensure that certain specified uses of material on a landfill site will be subject to tax and will remove redundant provisions. **Today the Government is also launching a consultation on reforms to modernise landfill tax legislation in the longer term.**

7.64 In addition, the Government is assessing the case for introducing further restrictions on the landfilling of biodegradable wastes and recyclable materials. Targeted restrictions on landfill could be a cost-effective means of achieving carbon and energy savings from waste. Defra and devolved administrations have commissioned further research on the options for such restrictions in the UK, including the costs, benefits and practical implications. The Government aims to consult on these options by the end of this year.

Landfill communities fund 7.65 The landfill communities fund invests in projects that aim to improve communities around a landfill site. Earlier this year, contributions from landfill site operators to the fund reached £1 billion, benefiting over 24,000 projects over the past 12 years. To ensure the fund continues to benefit local communities affected by the disamenities of landfill, **the Government today announces that the maximum amount that operators can claim against their annual landfill tax liability will remain unchanged at six per cent.** This should result in a £2 million increase to bring the value of the fund to £72 million of credit claimable for 2009-10.

Carrier bags 7.66 Budget 2008 announced that the Government would introduce legislation to impose a charge on single-use carrier bags if there was not sufficient progress on a voluntary basis. The Government has taken powers to do this in the Climate Change Act. In December, the Government and the British Retail Consortium agreed a 50 per cent cut in the number of carrier bags given out by spring 2009. Recent figures show that retailers have exceeded a previous voluntary target. Since 2007 retailers have delivered a 40 per cent reduction in the environmental impact of carrier bags. In the longer term, the Government and retailers have a shared aspiration to achieve a 70 per cent reduction in the number of carrier bags handed out.

Aggregates levy 7.67 The aggregates levy was established to make the price of aggregates better reflect the environmental costs of quarrying, encouraging the use of recycled aggregates and alternative materials. The levy has been a significant factor in reducing sales of virgin aggregates in England by around 18 million tonnes between 2001 and 2005, with an estimated increase in the use of recycled aggregate of nearly six million tonnes. As announced in Budget 2008, the levy was increased from £1.95 per tonne to £2.00 per tonne from 1 April 2009 to maintain its environmental effectiveness. **The aggregates levy will be frozen at £2.00 per tonne in 2010-11** to ease pressure on the sector facing difficulties under the downturn of the construction market.

Adaptation

7.68 The Government is committed to preparing the UK for the challenges posed by the impacts of a changing climate and the increased incidence of extreme weather events such as heat waves, storms and floods. In the summer, the Government will release new UK Climate Projections showing how temperatures, rainfall patterns and sea levels could change in the coming decades. Understanding these changes is central to helping businesses and the public sector adapt to the changing climate.

Floods 7.69 Flooding is one of the most significant risks of climate change facing the UK. The Government has provided substantial uplifts in spending reviews to fund flood defences and adaptation measures. £20 million of investment will be brought forward to 2009-10, delivering earlier protection for 27,000 homes. The draft Floods and Water Bill, published on 21 April 2009, will deliver improved management of flood risk and streamline current legislation.

Water 7.70 Similarly, making more efficient use of water resources is key to adapting to future changes in the climate. It will become increasingly important to find ways to allocate, treat and use water more efficiently. The Government therefore welcomes the final report of the independent *Cave Review: Competition and Innovation in Water Markets*,¹⁴ published today, which aims to ensure more competitive prices, more choice and better service for business customers, as well more efficient and sustainable use of water. More detail is provided in Chapter 4.

¹⁴*Cave Review: Competition and Innovation in Water Markets*, Defra, April 2009.

Table 7.1: The environmental impacts of measures in Budget 2009¹

Total sector savings in 2020 and measures by sector ²	Environmental impact ³
Introduction of carbon budgets which set legally binding five-year limits on greenhouse gas emissions from the UK economy	Carbon budgets will require a 34 per cent reduction in greenhouse gas emissions with respect to 1990 levels by 2020.
Power Sector and Heavy Industry (EU ETS) – 99 MtCO₂⁴	
Mechanism to meet demonstration costs of carbon capture and storage (CCS) projects and funding for companies that undertake preparatory studies	CCS has the potential to reduce CO ₂ emissions from power stations by up to 90 per cent. Demonstration of CCS on each 300 MW of post-combustion coal will deliver savings of 1 MtCO ₂ per year by 2020. In addition, demonstration of CCS on each 450 MW pre-combustion coal will deliver savings of 1.2 MtCO ₂ per year by 2020. These will contribute to achievement of the EU ETS cap.
European Investment Bank: up to £4 billion lending which could be enabled	This package will ensure that planned investment in energy and low-carbon projects continues to happen, contributing to achievement of the EU ETS cap.
Extension of climate change levy exemptions for combined heat and power (CHP)	These measures will have the potential to deliver around 7 GW of new CHP electrical generation capacity by 2020, saving 3.2 MtCO ₂ . Most of these savings will be covered by the EU ETS cap.
Increasing support for offshore wind under the Renewables Obligation	Designed to protect 3 GW of planned investment over the next 2 years, contributing to achievement of the UK's renewable energy target in the electricity sector.
£405 million in funding to provide support for low-carbon technology and manufacturing	This measure will help accelerate the development of low-carbon technologies and attract inward investment in low-carbon energy manufacturing to the UK, thereby ensuring the UK is a low-carbon technology and manufacturing hub and contributing to achievement of the EU ETS cap in the future.
Renewables – 21.5 MtCO₂⁵	
Providing £45 million for small scale renewable electricity and heat, primarily through the Low Carbon Buildings Programme	Expected lifetime savings are around 0.3 MtCO ₂ in heat and 0.1 MtCO ₂ in electricity. This will contribute to the savings expected from the achievement of the UK renewable energy target in the electricity and heat sectors.
Business and Public Sector Energy Saving - 1.6 MtCO₂⁶	
£100 million in funding for loans to SMEs for energy efficiency measures	Reduced energy use through energy efficiency measures. Estimated savings are 0.14 MtCO ₂ in 2011-12. Some savings will be covered by the EU ETS cap.
£65 million in funding for loans to public sector for energy efficiency measures	Reduced energy use through energy efficiency measures. Expected savings are 0.1 MtCO ₂ in 2010-11. Some savings will be covered by the ETS cap and the Carbon Reduction Commitment.
Maintaining Climate Change Levy (CCL) rates	CCL is estimated to reduce energy demand in the business and public sector by nearly 15 per cent per year in 2010.
Household Energy Saving – 7.9 MtCO₂⁷	
£100 million in funding to provide cavity wall insulation for social housing	Reduced energy use as a result of improved insulation. Expected savings will be 0.12 MtCO ₂ per year in 2011-12. Some savings will be covered by the EU ETS cap.
£25 million in funding to provide support for community heating schemes	More energy efficient/low-carbon heating systems will save 0.02 MtCO ₂ per year in 2010-11.
£100 million for new energy efficient housing	Reduction in carbon emissions compared to current building regulations.
Transport – 7.6 MtCO₂⁸	
Increases in fuel duty of 2 ppl in September 2009 and 1 ppl above inflation in each year from 2010 to 2013	Fuel duty increases are expected to result in emissions savings of 2 MtCO ₂ per year by 2013-14.
Reforms to Vehicle Excise Duty (VED) including increase in bands in 2009 and introduction of First-Year Rates in 2010	VED reforms are estimated to result in a cumulative saving of around 1 MtCO ₂ by 2020. This assessment only includes impacts in the new car market but the measure will also apply in the second-hand market. The reforms will help deliver the savings from the EU Regulation on new car CO ₂ emissions.
Lower CO ₂ emissions thresholds in Company Car Tax (CCT)	Strengthening the incentive in CCT for businesses to own the lowest-emitting cars will reward manufacturers of the cleanest vehicles, helping them to meet new EU car emissions standards.
£250 million funding for ultra-low carbon cars (£20 million to cover infrastructure and the remainder to fund consumer incentives of £2,000 – £5,000 per car)	Funding will help bring forward new, cleaner technology, including electric and plug-in hybrid cars. Electric vehicles powered with electricity generated from the current UK grid can emit up to 40 per cent less carbon than a conventional petrol vehicle.
Reforms to Bus Service Operators Grant (BSOG)	BSOG reforms cut the link between fuel used and subsidy paid and will pay 6p per km for low-carbon buses, which use less fuel. This will incentivise the uptake of low-carbon buses in the future.
Car scrappage scheme, primarily aimed at supporting industry	Scheme expected to have a neutral or modestly positive environmental impact.
Lending could be enabled for the automotive sector through EIB and other funding as part of the Automotive Assistance Programme (AAP)	The primary aim of the AAP is to ensure continued new green investment which is vital to ensure that the auto industry emerges from the current downturn with the skills and technology base needed to be competitive in the global automotive market.
Natural Resources	
Standard rate of landfill tax to increase by £8 per tonne on 1 April each year from 2011 until 2013	Landfill tax is expected to save up to 0.7 MtCO ₂ e each year by 2013-14.
£10 million in funding to help divert waste from landfill in 2009-10	Funding will help deliver anaerobic digestion and in-vessel composting infrastructure that will remove 316,000 tonnes of biodegradable waste from landfill each year.

¹ The UK-wide figures for spending include consequential funding for the devolved administrations. It will be for the devolved administrations to determine their own priorities.² Savings in 2020 are based on an updated version of the UEP32 emissions projections, adjusted for consistency with Budget economic growth assumptions and improved estimates of policy savings. Savings are relative to a pre-Energy White Paper baseline projection which reflects the impact of the Climate Change Programme policy package, and does not include a carbon price. For further detail of the UEP32 please see Updated Energy and Carbon Emissions Projections, DECC, November 2008.³ All CO₂ savings come from Government modelling.⁴ Based on the UK's share of the EU ETS cap, including domestic aviation. Savings from the EU ETS are supported by many other Government policies including the Supplier Obligation, Carbon Reduction Commitment, products policy and the Renewable Energy Strategy, which contribute to achievement of the EU ETS cap.⁵ Savings come from renewable heat and transport emissions reductions outside the EU ETS cap. Savings based on meeting an ambitious 15 per cent renewable energy target for the UK, comprising 32 per cent in the electricity sector, 14 per cent in the heat sector and 10 per cent in the transport sector from biofuels.⁶ Savings outside the EU ETS cap include the Carbon Reduction Commitment, business smart metering, Energy Performance of Buildings Directive, products policy and carbon neutral government.⁷ Savings outside the EU ETS cap include the Supplier Obligation, Zero-Carbon Homes, Energy Performance of Buildings Directive, products policy and better billing. A further supplier obligation will replace the Carbon Emissions Reduction Target (CERT) when it comes to an end in 2011, and the level of ambition is committed to be equal to that under CERT. Savings assume rate of new house building will be in line with the Government's projected house building estimates to 2016.⁸ Updated central estimate of savings from the EU Regulation on new car CO₂ emissions, including savings from a long-term new car CO₂ target of 95g CO₂ per km by 2020.