

PART III. NATIONAL REPORTING GUIDELINES FOR CSD-14/15 THEMATIC AREAS

A. ATMOSPHERE/AIR POLLUTION

Government focal point(s): Martin Williams

Responding ministry/office(s): Department for Food, Environment and Rural Affairs

Decision-Making:

- Assessing ambient air quality and the levels of air pollution.
- Control of air pollution (e.g. for stationary, mobile, area and other pollution sources).
 - Analysis of costs and benefits
 - Institutional changes made.
- Plan(s) to deal with severe air pollution incidents.
- Programmes designed to reduce indoor air pollution.
- Policy measures taken to improve the quality of fuels.
- Specific policy measures designed to reduce the level of lead in gasoline.
- Policies promoting cleaner transportation measures and technology (e.g. vehicular technology, mass transit systems, reduced demand in vehicle-miles-traveled, modal shifts).
- Emission limits on vehicular exhaust.
- Role played by air pollution in urban planning, especially related to transportation.
- Economic and market-based incentives to meet national air quality goals.
- Nature and impacts of transboundary air pollution (including pollutants emitted within your country as well as those received from nearby countries).
- Programmes designed to reduce ozone-depleting substances and promote alternatives under the Montreal Protocol.

UK Action

- Assessing ambient air quality and the levels of air pollution.

The European Air Quality Framework Directive and Daughter Directives set a framework for how the Member States must monitor and report ambient levels of air pollution. The UK has transposed these Directives and implementation strategies are in place. More information on these Directives and other European policies can be found at the European Commission and the European Environment Agency web pages at: <http://europa.eu.int/comm/environment/air/ambient.htm> and <http://www.eea.eu.int/>.

Part of the UK Government's plans to ensure a better quality of life are Indicators of Sustainable Development. Air Quality Indicators measures the average number of days per site on which pollution levels were above National Air Quality Standards. The standards represent defined levels which avoid significant risks to health.

The indicator figure has changed over the period of 1987-2004. There is clearly improvement in urban areas with a downward trend in number of days with pollution levels above the Standards. For example, last year there were 22 days when air pollution levels in urban areas were moderate or higher compared with 47 days in 1994. In rural areas, there were 42 days when levels were poor compared with 44 in 1993. For rural areas there is no clear trend, mainly through levels of ozone which is a transboundary pollutant.

Whilst peak levels of ozone have declined, background levels are slowly rising, probably due to increases in hemispheric emissions of gases that lead to the formation of ozone. Many parts of the UK are affected by ozone which arises from sources in mainland Europe and elsewhere in the world. The Government is working with partners in European Union and at wider international level to tackle the sources of emissions of the precursor pollutants. A graph of the air quality headline indicator is at:<http://www.sustainable-development.gov.uk/indicators/headline/h10.htm> .

- Control of air pollution (e.g. for stationary, mobile, area and other pollution sources).

- **Analysis of costs and benefits**
- **Institutional changes made.**

The Government's Air Quality Strategy, published in 2000, and first Addendum issued in 2003, contains policies for improving air quality. The Strategy also set health based objectives for nine main air pollutants and objective dates for their achievement between 2003 and 2010.

Taking the strategy forward - concrete action is underway at national, international and local levels. Progressively tighter vehicle emission and fuel standards have been introduced leading to a substantial cut in air pollution; the EC are expected to propose tighter standards shortly. Government promotes the wider use of cleaner fuels and vehicles through grants and fiscal incentives.

Following a review of Ten Year Transport Plan, the Future of Transport White Paper, issued by Department for Transport in July 2004, announced work streams and initiatives which, as well as improving public transport and cutting traffic congestion will help reduce air pollution.

Industrial emissions have fallen significantly as progressively tighter controls on industrial process and installations by the Environment Agency and local authorities have taken effect.

Local authorities are also taking steps to improve air quality in their areas as part of their duties for air quality management.

We will work towards meeting the European limits of key air pollutants. The feasibility study on road pricing suggests that improving air quality could, in some circumstances, be a factor in the design of any road pricing scheme. Many transport policies which aim to reduce congestion or CO₂ emissions, will also help improve air quality. At a national scale we will also:

- Work with our European partners to develop tighter standards for both vehicles and fuels;
- Increase public awareness and improve driver training, for example for truck drivers, which can help reduce emissions;
- Facilitate the preparation of Airport Surface Access Strategies to be reflected in Regional Transport Strategies; and
- Co-ordinate national and international work to identify technological and operational means to control emissions at airports.

Some improvements, for example to local air quality hot spots, can only be delivered locally. To that end, we will work closely with local authorities to ensure that:

- Air Quality Action Plans are properly integrated into second-round Local Transport Plans in areas where transport has a significant impact on the local air quality;

- They promote better traffic management, which can help to reduce emissions by keeping traffic moving, in the next round of Local Transport Plans;
- Air quality comes to the fore in discussions on delivering shared priorities with local authorities; and
- There are more local targets on air quality.

- Programmes designed to reduce indoor air pollution.

Indoor air quality strategies

New COMEAP guidance

- The Department of Health's Committee on the Medical Effects of Air Pollutants published a document 'Guidance on the Effects on Health of Indoor Air Pollutants' in December 2004³.
- This document has no legal standing but is intended to provide background information to Environmental Health Officers in local authorities, architects designing buildings to optimise indoor air quality, manufacturers of products which release pollutants and any other groups concerned with the effects of indoor air pollutants on health
- Numerical guidelines are given for some pollutants, for other pollutants general guidance is given. ETS and radon are not covered.

Ventilation requirements in regulations for new buildings

- A document has been sent out for public consultation proposing amendments to the requirements for ventilation in regulations for new buildings
- The amendments were proposed due to a concern that improving energy efficiency in homes with new air tightness standards might have an adverse impact on indoor air quality
- Subject to agreement by Ministers, the new regulation should be in place by the end of the year
- The new regulations only apply to new buildings.
- Part F of the Building Regulations deals with ventilation of new buildings. It is being revised to ensure that buildings are still adequately ventilated now that they are being designed to be more airtight in order to save energy

Indoor air quality in schools

- The Building Regulations apply to all buildings in England and Wales, including schools.
- We are preparing a Building Bulletin 101 "Ventilation of school buildings" in support of Building Regulations giving revised indoor air quality performance standards. It draws on the guidelines in the COMEAP report.
- Reading University has just started, in February 2005, a 3 year EPSRC

³ <http://www.advisorybodies.doh.gov.uk/comeap/PDFS/guidanceindoorairqualitydec04.pdf>

funded research project into Ventilation in Schools. The objectives of the project are:

1. To determine the effect of indoor air quality (in terms of the concentrations of particulates and CO₂ as indicators) on pupil performance
2. To investigate the effects of ventilation rates and thermal comfort on pupils performance and health.
3. To recommend suitable ventilation rates for classrooms.
4. To examine the suitability of the air quality guidelines for classrooms using the results obtained in 1. and 2.

Construction and furnishing materials

- There are no regulations in the UK on emissions from building products and materials
- There is a voluntary scheme for emissions from paint.
- Volatile organic compounds (VOCs) can be released from materials – this has been allowed for indirectly in the Buildings Regulations by putting a lower limit on the ventilation rate which is sufficient to dilute the VOCs
- Installers of urea formaldehyde foam for cavity wall insulation, have to be third party approved.
- Emissions from furnishing materials are not regulated other than by the general product safety regulations. Some UK manufacturers may use voluntary labelling schemes agreed elsewhere e.g in Germany.

Safer heating and cooking systems

- The Government published reports on emissions of pollutants from flueless gas appliances in October 2004⁴
- These showed that, under certain conditions, levels of some pollutants may exceed outdoor air quality standards.
- The Department of Health's Committee on the Medical Effects of Air Pollutants advised that the outdoor air quality standards for nitrogen dioxide and carbon monoxide were relevant to indoor exposure⁵
- In response, the Government stated that it will:
 - push for amendment to European standards for gas appliances to ensure reduced emissions of nitrogen oxides and carbon monoxide
 - push for amendment of UK Installation Standards to ensure concentrations of these pollutants are reduced
 - review the provisions for ventilation in the Buildings Regulations to ensure buildings are well designed for use of flueless gas appliances

⁴ www.hse.gov.uk/research/rrhtm/index.htm

⁵ www.advisorybodies.doh.gov.uk/comeap/statementsreports/no2coindoors.htm

- reinforce advice to the public on the safe use of flueless gas appliances (a leaflet is planned).
- This issue has been raised at the European Gas Appliances Test Bodies meeting with European Trade Associations.
- The UK has also raised the issue at a Member States Working Group for the Gas Appliances Directive. The Commission is considering the issue.

Long standing policies to guard against carbon monoxide poisoning continue with increasing efforts to increase awareness of the medical profession to the symptoms of poisoning. A leaflet is in preparation.

The Department for Environment, Food and Rural Affairs, and the Department of Health are jointly supporting a £1 million three year research programme to investigate exposure to air pollutants in the indoor, non-occupational environment. Some areas covered by the research include:

- exposure to indoor air pollution and the risk of upper and lower respiratory tract disease in asthmatic children and their mothers;
- carbon monoxide and nitric oxide exposure in the vulnerable elderly;
- an epidemiological study of the effect of damp and other aspects of poor housing on adult health;
- an examination of the distribution of carboxyhaemoglobin levels in the elderly;
- the use of passive sampling techniques to estimate exposure to particles in a nonworkplace environment; and
- an examination of indoor-generated particles and their biological toxicity.

- Policy measures taken to improve the quality of fuels.

We launched the 'Powering Future Vehicles' Strategy in July 2002. The objectives of the strategy are to:

- ? promote the development, introduction and uptake of clean, low carbon vehicles and fuels; and
- ? ensure the full involvement of the UK automotive industry in the new technologies.

A number of measures are in place to achieve these objectives, including:

- ? fiscal incentives for consumer and business take-up of cleaner, more efficient vehicles and fuels; and
- ? research, development and demonstration funding for new technologies.

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It also sets challenging Government targets that by 2012:

- ? 10 per cent of new cars sold in the UK will be low-carbon vehicles, defined as 100 or fewer grams of CO₂ per km at the tailpipe (compared with the current new car average of 172gm); and
- ? 600 new buses joining the fleet yearly (around 20 per cent) will also be low-carbon.

Since the publication of the PFV strategy, the Government has initiated action with industry and other stakeholders to launch the Low Carbon Vehicle Partnership (LowCVP). Since its launch in January 2003, the LowCVP has become an established and high-profile organisation in the transport and environment arena – both in the UK and abroad. Its work is overseen by a Board, comprising senior representatives from the automotive and oil industries as well as from other key sectors. A small secretariat co-ordinates the LowCVP's activities.

The LowCVP has produced some important outputs, engaging the breadth of expertise across its six working groups which include [partnership action on buses, passenger cars, fuels, R&D, commercial vehicles and supply chains](#).

The passenger cars working group was instrumental in achieving a Government, Industry and NGO consensus on the introduction of our new colour-coded energy-efficiency label for new passenger cars. The labels will start appearing in UK showrooms this summer, sending clear signals to consumers about the CO₂ impact of their vehicle choice.

Towards a UK strategy for Biofuels

Biofuels are liquid transport fuels produced for the most part from plant material or recycled vegetable oils. Because the crops used to make the fuel take in CO₂ when they grow, biofuels can help reduce the transport sector's contribution to climate change. They also help conserve our reserves of fossil fuels and contribute to diversity and security of energy supply. Biodiesel is already available in some parts of the UK as a 5 per cent blend with conventional diesel, which allows it to be used in all standard diesel vehicles. Bioethanol (a petrol substitute) may become available in the UK from 2005, as a result of the fuel duty incentives we have introduced.

The sales of biodiesel are being encouraged by a 20p per litre duty differential, which is guaranteed for the next three years and this contributed to sales of nearly 10 million litres of biofuel in the UK in May, 2005. The Government is currently conducting a feasibility study and consultative process on a possible renewable transport fuels obligation. An obligation would require fuel suppliers to ensure that a set percentage of their aggregate sales was from biofuels or other renewable sources.

In essence, an obligation would require specified sections of the road transport fuel industry to demonstrate that a specified proportion of their aggregate fuel sales were 'renewable transport fuels'. The RTFO could provide a mechanism to ensure the gradual substitution of fossil fuels for biofuels - and other renewable fuels - over the long term. The concept is that this proportion would start at a low level, say 1%, and increase annually.

Hydrogen

In the longer term, it is possible that hydrogen will play a key role in delivering clean, low carbon transport. If used in highly efficient fuel cell vehicles, the only emission from the tailpipe is pure water. Hydrogen can be generated from a wide variety of different sources, which could reduce reliance on imports of mineral oil. If produced using renewable electricity such as that from wind and waves, or from biomass material such as crops or organic wastes, hydrogen fuel cell vehicles offer the prospect of zero-carbon, pollution-free motoring. This would

mean improved local air quality and reduced impacts on climate change, with the additional benefits of improved diversity and security of energy supply.

The Government has already put in place a number of measures to support the development of hydrogen fuel cell vehicles. We are supporting research into fuel cells, and funding the trialing of hydrogen-powered vehicles, including £15m funding over four years for demonstrations of fuel cell and hydrogen energy technology and £7.5m funding for a Low Carbon and Fuel Cell Technologies Centre of Excellence, which will help coordinate research and development of hydrogen fuel cell technologies. We have also pledged to exempt hydrogen from fuel duty for a limited period in the future to encourage its early development and uptake..

Sulphur content

The sulphur content of diesel, which influences the amount of particles emitted by vehicles, has been progressively reduced in recent years. All road diesel and most petrol now contains 50 parts per million (ppm) sulphur compared to a maximum sulphur content of 2000 ppm prior to 1996. Legislation reducing maximum sulphur content of all road petrol and diesel to 10 ppm from 1 January 2009 has been enacted. .

- Specific policy measures designed to reduce the level of lead in gasoline.

Sales of leaded petrol in the UK fell significantly in the UK from the late 1980's following the introduction of a duty incentive in favour of unleaded petrol. Requirement for all new cars to be able to run on unleaded petrol and emission standards requiring the fitting of catalytic convertors (for which lead is a poison) to new cars increased this trend from the early 1990's. From 2000, general sale and distribution of leaded petrol was banned as required under directive 98/70/EC.

- Policies promoting cleaner transportation measures and technology (e.g. vehicular technology, mass transit systems, reduced demand in vehicle -miles-traveled, modal shifts).

We have made considerable progress in reducing harmful emissions from new road vehicles, through the European Union adopting higher standards of manufacture, and implementing our Powering Future Vehicles strategy (see above). In recent years, the fuel efficiency of new cars in the UK has been improving by around 1 to 2 per cent a year.

We have also introduced a package of financial and tax incentives that is delivering cleaner vehicles and fuels. Company car tax and vehicle excise duty have been reformed and linked to vehicle CO₂ emissions.

We are also working to reduce harmful emissions from public transport. We have made up to £3 million of funding available to support demonstrations of up to 150 low carbon buses. These grants will help cover the additional initial costs of manufacturing, maintaining and operating such buses while the market is growing. We have also set a target in our Powering Future Vehicles Strategy to ensure that, by 2012, at least 600 new buses coming into operation each year will be clean, low-carbon vehicles, with fuel efficiency about one third better than an average bus today.

Air travel is a growing source of CO₂ emissions and air pollution. Progress has been made on mitigating the impacts of air travel. We have been actively involved in International Civil Aviation Authority (ICAO) negotiations to agree more stringent standards for NO_x emissions for new aircraft from 2008 and

continue to push at the international and EU level for well designed and cost-effective economic instruments to tackle aviation's climate change impacts.

If the UK is to achieve the deep cuts in carbon emissions from the transport sector that may be necessary to help us meet our long-term goals to reduce CO₂ emissions, we are likely to have to move beyond today's vehicle and fuel technologies to radically different alternatives. These might include vehicles powered by hydrogen fuel cells, or fuels produced entirely from energy crops or other forms of biomass.

We have also introduced a package of financial and tax incentives that is delivering cleaner vehicles and fuels. Company car tax and vehicle excise duty have been reformed and linked to vehicle CO₂ emissions. And we have notified the European Commission that we intend to run TransportEnergy Grants to incentivise the development of clean, efficient vehicles, which will be commenced once we have received confirmation that they are compliant with state aid rules.

Making smarter choices

The Department for Transport published a guide 'Making Smarter Choices Work' in December 2004 to help and encourage local authorities to recognise the potential benefits of 'soft' transport measures and make them an integral part of their transport strategies, so reducing congestion and giving people genuine travel choices.

The research on which the document was based: 'Smarter Choices – Changing the way we travel' was published in July 2004 and showed the benefits to be gained from a range of measures such as workplace and school travel plans, personalised travel planning, public transport information and marketing, travel awareness campaigns, car clubs and car sharing, teleworking, teleconferencing and home shopping. Whilst the primary focus of these measures is to help reduce congestion, they can also help meet other Government objectives such as improving health, access to jobs and services, improving air quality and reducing carbon emissions.

The research concluded that an intensive smarter choices programme over 10 years could cut car use significantly:

- Urban peak-hour traffic could be cut by 21% and off-peak traffic by 13%
- Non - Urban Peak hour traffic could be cut by 14% and off-peak traffic by 7%; and
- Nationally, traffic volumes could be cut by 11%

The Government is encouraging the take up of smarter choices through the promotion of a number of sustainable initiatives, such as:

- Providing £50 million over 2004/2006 to support the Travel to School Initiative. This is paying for 250 school travel advisers in local authorities and regional co-ordinators, together with capital funding for schools to spend on measures identified in their travel plans (typically £5,000 - £10,000 per school).
- Running a 5 year, £10 million 'Sustainable Travel Towns' project. This aims to transform Darlington, Peterborough and Worcester into showcase sustainable travel towns by implementing intensive, comprehensive and strategic packages of soft and hard measures to promote more

walking, cycling and bus use. The towns should provide models for and encourage other local authorities to develop programmes in their towns and cities.

- Researching and disseminating best practice, and providing free consultancy advice to help employers develop and implement travel plans.

Industrial

Particle emissions from industry in England, Scotland and Wales will be further controlled through the regulations made in 2000 implementing the EU Directive on Integrated Pollution Prevention and Control (IPPC). The regulations extend pollution control to a wider range of industrial installations and cover an increased amount of environmental effects. The EU Waste Incineration Directive, adopted in December 2000, will among other measures, impose stringent limits on emissions to air and water, controls on residues and operating conditions, and appropriate monitoring requirements. The Directive will have effect for new plant two years after adoption, and existing plant five years after adoption.

EU legislation under the Acidification Strategy is expected to make a significant contribution to reducing emissions of pollutants that lead to the formation of secondary particles. The Sulphur Content of Certain Liquid Fuels Directive, sets three stages of sulphur limits for heavy fuel oil and gas oil, and has now been brought into force in England, Scotland, Wales and Northern Ireland.

The National Emission Ceilings Directive sets limits on total emissions of pollutants, some of which lead to particle formation. Significant reductions will be needed across EU Member States to reduce emissions of sulphur dioxide, oxides of nitrogen, ammonia and volatile organic compounds by 2010.

The Large Combustion Plants Directive agreed in 2001 will reduce emissions from large combustion plants, mostly power stations, refinery boilers and large boilers in industry, over the next 15-20 years. The Directive builds on the original 1988 Large Combustion Plants Directive under which the UK is committed to reducing sulphur dioxide and oxides of nitrogen from industrial plants to agreed levels by 2003. [shouldn't there be another heading here since this is not industrial?]

Emissions of PM10 from road transport have reduced considerably in recent years primarily as a result of progressively tighter EU vehicle emission and fuel quality standards (the so-called Euro standards), despite an overall increase in traffic of 15% since 1990. The maximum permitted emissions of particles from a new diesel car bought in 2001, and meeting the Euro III standards, for example, are five times less than the maximum permitted emissions of one bought 10 years ago meeting pre-Euro I standards. Euro IV standards, which should be mandatory for new diesel vehicles in 2006, will reduce emissions of particles still further, with some diesel car manufacturers already introducing particle filters to their latest models, thereby effectively eliminating particle emissions from these vehicles.

Technological developments will make a significant contribution to reducing emissions over the long-term but are unlikely to provide a complete solution, partly because of the large number of older vehicles that will remain on the roads and partly because traffic growth is expected to continue. The UK Government and the devolved administrations have therefore sought to address emissions from road transport in a number of ways beyond European regulation.

The UK Government's White Paper 'The Future of Transport' published in 2004 underlines the Government's commitment to improve public transport, cut traffic congestion, reduce pollution and boost choice through sustained investment over the long term. It includes fiscal and grant incentives for consumer and business take-up of cleaner, more efficient vehicles and fuels,

The Scottish Executive's *Transport Delivery Report* for Scotland sets out its plan for tackling traffic congestion and reducing pollution over the next 10 – 15 years. The Report sets out the key challenges facing government, the policy tools at the Executive's disposal and a range of options for tackling the challenges. An improvement to public transport and encouraging modal shift away from cars and vans is a priority. Ongoing support will be provided to fund the conversion of vehicles to use cleaner fuels and widen access to alternative fuels in rural areas.

The Welsh Assembly Government issued its Transport Framework for Wales in November 2001. This seeks to create minimum standards for accessibility to transport, the quality of public transport and information services. It seeks to achieve a change in the way people choose to travel, particularly when commuting to work and to encourage people, wherever possible, to take the more sustainable option.

The *Regional Transportation Strategy for Northern Ireland 2002 – 2012* will contribute to air quality improvements in Northern Ireland. It aims to further develop policies and measures to reduce the adverse environmental impacts of transport, and contribute to sustainable patterns of development and movement, through support for public transport, walking and cycling, and a more responsible use of the car.

- Emission limits on vehicular exhaust.

EC limit values transposed into UK legislation by [Air Quality Limit Value Regulations 2003 \(PDF, 50kb\)](#).

The UK is, of course, subject to all of the European Union air quality directives. We are up to date with transposition of all these directives that have come into force and we are on track to meet transposition requirements for emerging ones. The directives include:

- National Emission Ceiling Directive 2001/81/EC
- Integrated Pollution Prevention and Control Directive 1996/61/EC
- Large Combustion Plant Directive 88/609/EEC
- Revised Large Combustion Plant Directive 2001/80/EC
- Solvent Emissions Directive 1999/32/EC
- Volatile Organic Compounds Directive 2004/42/EC
- Quality of Petrol and Diesel fuels Directive 2003/17/EC
- Sulphur Contents of Liquid Fuels Directive 1999/32/EC
- Petrol Vapour Recovery I 1994/63/EC
- Emissions from light vehicles directive 98/69/EC
- Emissions from heavy vehicles directive 1999/96/EC

- Role played by air pollution in urban planning, especially related to transportation.

The planning system is key to achieving sustainable development. The Government's new planning policy statement 'Delivering Sustainable Development' (PPS 1) sets out our vision for planning in

England and the key policies which will underpin it. PPS1 makes clear that sustainable development is at the heart of the planning system. It sets the framework for reflecting the duty in the Planning and Compulsory Purchase Act 2004 for regional and local plans to be prepared with a view to contributing to sustainable development. Other planning policies, set out in the Government's Planning Policy Statements and Planning Policy Guidance notes, complement PPS1 in delivering sustainable development:

Other national policies ensure that new developments are located in areas such as town centres which are accessible by means of walking, cycling and public transport thereby reducing reliance on the private car.

Sustainable transport measures will allow people to see alternatives to the car as attractive and viable choices. Measures include walking and cycling action plans, promoting school and workplace travel plans and publicity and information provision on public transport services. For example, school travel plans are an effective way by which schools and local authorities can encourage more children to walk, cycle or get the bus to school. The Government's aim is for every school in England to have an active travel plan in place by 2010. Collectively sustainable transport measures aim to reduce air pollution and congestion, improve access to services, increase physical activity and improve safety for pedestrians and cyclists.

The Government will tackle poor air quality in line with the outcomes of a review of the Air Quality Strategy and by advising local authorities to incorporate air quality action plans into their local transport plans where transport is a contributory factor.

- Economic and market-based incentives to meet national air quality goals.

The Government's thinking on using economic instruments to tackle environmental issues were most recently set out in 'Tax and the Environment: using economic instruments' (HM Treasury 2002). This document sets out the key principles that Government will apply when determining whether there is a role for economic instruments to tackle particular environmental issues. Environmental taxes are fundamentally different to most other taxes; their principal aim is to deliver more efficient and better environmental outcomes, not necessarily to raise revenue. So the way in which environmental taxes should be applied is also different.

The following initiatives provide examples of economic incentive schemes which contribute to improving air quality:

EU Emissions trading scheme

The EU ETS is one of the policies being introduced across Europe to tackle emissions of carbon dioxide and other greenhouse gases and combat the serious threat of climate change. The scheme commenced on 1 January 2005. The first phase runs from 2005-2007 and the second phase will run from 2008-2012 to coincide with the first Kyoto Commitment Period. For further information on the scheme see: <http://www.defra.gov.uk/environment/climatechange/trading/eu/index.htm>

Vehicle Excise Duty reductions

Vehicle excise duty (VED) was originally created to finance the cost of road developments in the 1920s. Over time it became a general revenue-raiser for government spending. Since 1997 the Government has sought to use VED to send signals to consumers about more environmentally-

friendly vehicles. For example, Budget 2000 reformed car VED to relate it to carbon dioxide emissions and provide incentives for more efficient cars. Budget 2001 reformed lorry VED to provide incentives to use cleaner and less damaging lorries, based on an independent environmental evaluation of the impact of different lorries. Budget 2002 has reformed van and motorcycle VED along the same lines.

We have also reformed company car tax in 2002 to remove the distortionary tax incentive for company car drivers to undertake additional business miles. Instead, the tax is based upon the carbon dioxide emissions of cars. This has provided a further incentive to choose more efficient cars, which is important as company cars account for around a half of all new cars.

Road pricing

Road pricing or road user charging is designed to influence the behaviour of road users, to encourage them to avoid driving at busy times and places in order to allow traffic to flow more freely. The Government welcomed the findings of the road pricing feasibility study, which found that a carefully constructed road pricing scheme could make a valuable contribution to reducing the environmental impacts of roads and traffic as well as its prime objective of managing traffic to reduce congestion. The study found that a carefully constructed scheme could help to reduce greenhouse gas emissions as well as help with more localised emissions, but the impact is not entirely clear cut and would depend on the precise nature of the scheme.

In line with its manifesto commitments, the Government will examine the potential of moving away from the current system of monitoring taxation towards a national system of road pricing. It will look carefully at potential environmental impacts as work on road pricing is taken forward, alongside the potential benefits arising from other measures to improve the management and use of the road network.

More detailed work is now being taken forward to allow a decision to be made about whether national road pricing should be introduced and what form it should take.

- Nature and impacts of transboundary air pollution (including pollutants emitted within your country as well as those received from nearby countries).

Air Quality Framework Directive 1996/92 and its four Daughter Directives set mandatory limit/target values for 11 air pollutants which Member States are obliged to meet. In addition the National Emissions Ceiling Directive and Integrated Pollution Prevention and Control influence transboundary air pollution.

[Note EC is reviewing all of the EU's present air quality legislation under the CAFÉ process and is due to come forward with proposals in 2005].

- Programmes designed to reduce ozone-depleting substances and promote alternatives under the Montreal Protocol.

The UK does not have any specific programmes designed to reduce ODS or promote alternatives, however, these objectives are achieved through the implementation of the requirements of the Montreal Protocol, which is implemented in the EU through EC Regulation 2037/2000, and our domestic Regulations 'The environmental protection (controls on ozone depleting substances) regulations 2002'. The Protocol and Regulation require ODS to be phased out in line with the timetables stated.

Capacity-Building, Information, Research and Development:

- Availability of data concerning: a) the impacts of air pollution on human health and ecosystems; and b) the levels of *pollution in different industries*.
- Capacity to carry out air dispersion modeling.
- Programmes designed to increase citizens' awareness about the impacts of indoor air pollution.
- Internet websites related specifically to the issues contained in these Atmosphere/Air Pollution Guidelines, providing homepage addresses (URL).
- R & D programmes in the areas of: atmospheric conditions; air quality management; air pollution control technology; clean fuels technology; environmental economics; environmental impact assessment; and remote sensing.

UK Action

- Availability of data concerning:

a) the impacts of air pollution on human health and ecosystems;

A public facing website has been made available to enable users to view their local authority's progress on local air quality management, the website can be found at: www.airquality.co.uk/archive/laqm/laqm.php. The website also provides links to information about impacts of air pollution on health.

In addition national and regional air quality data is available from the Governments sustainable development website at:

General information on UK actions towards Air quality can be found on the defra website at: <http://www.defra.gov.uk/environment/airquality/index.htm> and the Environment Agency website at: http://www.environment-agency.gov.uk/subjects/airquality/?lang=_e

b) the levels of *pollution in different industries*.

The National Atmospheric Emissions Inventory can be found at <http://www.naei.org.uk/>. Some sectoral information can be found on this site.

- Capacity to carry out air dispersion modelling.

The Air Quality modelling and assessment unit, (AQMAU) is the national focus of expertise on air quality modelling and assessment within the Environment Agency providing both leadership and operational support. Computer modelling has become a powerful tool and takes into account a number of influences including meteorology, physics, chemistry, geology and other factors. It has helped to influence policy formation and contributing to research and development programmes. http://www.environment-agency.gov.uk/subjects/airquality/236092/?version=1&lang=_e

- Internet websites related specifically to the issues contained in these Atmosphere/Air Pollution Guidelines, providing homepage addresses (URL).

- Department for Environment, Food and Rural Affairs air quality pages (including national strategy and Addendum): <http://www.defra.gov.uk/environment/airquality/index.htm>
- Summary of EU Legislation on air quality/pollution: <http://europa.eu.int/scadplus/leg/en/s15004.htm>
- EC limit values transposed into UK legislation by Air Quality Limit Value Regulations 2003: <http://www.sustainable-development.gov.uk/documents/key/august-air-quality.pdf>
- The Air Quality archive (sponsored by Defra): <http://www.airquality.co.uk/archive/index.php>
- The National Atmospheric Emissions Inventory: <http://www.naei.org.uk/>
- Environment Agency air quality pages: http://www.environment-agency.gov.uk/subjects/airquality/?lang=_e

- R & D programmes in the areas of: atmospheric conditions; air quality management; air pollution control technology; clean fuels technology; environmental economics; environmental impact assessment; and remote sensing

The air quality archive website contains a wealth of information on various research programmes in the UK: http://www.airquality.co.uk/archive/reports/research_info.php

Financing

- Financing for related programmes from bilateral or multilateral sources.

Cooperation

- Efforts to establish or participate in regional, multilateral or bilateral agreements to address transboundary air pollution concerns.